



Cactaceae of South America: The Ritter Collections

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Cactaceae of South America:
The Ritter Collections

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Introduction

The name *Friedrich Ritter* does not need an introduction amongst those who work with South American *Cactaceae* – his collecting activities during some 20 years between the early 50ies and the early 70ies and the numerous new taxa described by him and others on the basis of this material left a lasting impact on the taxonomy and classification of this family.

The massive listing of herbarium specimens of ‘Ritter material’ which follows is the result of a project initiated back in 1990, when the *International Organization for Succulent Plant Study* (IOS) discussed a request submitted to Dr. David Hunt by Mélica Muñoz Schick, head of the Sección Botánica of the National Museum of Natural History at Santiago, Chile (SGO), to mount the Ritter specimens stored there, and to produce an inventory. A project was subsequently submitted to the Swiss National Science Foundation jointly by Prof. K. U. Kramer (†) of the Institute of Systematic Botany of Zürich University (Z), and D. J. Supthut, Director of the Municipal Succulent Collection Zürich (ZSS).

With funding from IOS and other sponsors (see acknowledgment section), the work on the actual specimens at SGO was started, putting them into transparent plastic containers and adding the SGO accession numbers. After the project was accepted by the Swiss National Science Foundation (project no. 31-29931-90), the inventory was begun during a first visit of U. Eggli and B. Leuenberger to Santiago during November/December 1991. This first phase of inventory work at SGO was greatly facilitated by the continued use of a database which contained all data associated with the Ritter specimens held at the ZSS herbarium, which on one hand is the result of an earlier Swiss National Science Foundation Project, and on the other hand resulted from daily curatorial work at the Municipal Succulent Collection Zürich (ZSS).

During the project, which soon became known as the ‘Ritter Project’, this database was continuously expanded with relevant associated data, i.e. on the specimens in SGO, which were inventorized during the visit in 1991 and a second visit in January/February 1993. In the meantime, information on the material lodged at the Utrecht Herbarium (U), including much type material, was also added to this database by the first author.

During this time, it became known that the Ritter archive, which rests in custody with the Kassel Branch of the German Cactus Society (DKG) according to Ritter’s last will, contained a set of some 1600 original seed samples all labelled by Ritter. Following negotiations with the officers of the Kassel Branch, this unique seed collection was very generously given on permanent loan to ZSS in order to be included in the list of Ritter herbarium specimens.

The nature of the material on one hand, but even more so Ritter’s difficult method of labelling his collections on the other hand, made the task of compiling and standardizing this list a very difficult one. Although much care was taken, the result which is presented here without doubt still contains some inconsistencies and errors. Some of the problems we had to overcome during our work are discussed more fully in one of the following chapters. None the less, it

is hoped that the inventory of all known preserved Ritter material will be of help for future studies of South American *Cactaceae* – not only to inform about the whereabouts of relevant specimens, but also to elucidate at least to some degree the working methods of Friedrich Ritter and the problems inherent to his collection numbering system.

Acknowledgements

The authors feel deeply grateful to K. U. Kramer and D. J. Supthut (both Zürich) for submitting and guiding this project during the past years, as well as to D. R. Hunt for initially presenting the idea to IOS. K. U. Kramer's help in solving the many nomenclatural problems occurring during the project has been invaluable. The Swiss National Science Foundation has very generously funded all necessary travels associated with this inventory and we are very grateful for this contribution. Substantial funding for curatorial and inventory work at SGO has been received from the IOS Research Fund, from the Cactus and Succulent Society of America (CSSA), from the German Cactus Society (DKG), from the British Cactus and Succulent Society (BCSS), from Internoto and from the Arbeitskreis Notokakteen (former German Democratic Republic) as well as from (in alphabetical order) G. Barad, H. Britsch, J.-M. Chalet, J. Hovens, E. Kirschnek, S. Linden, W. Röhre, and W. Uebelmann.

The decision of the officers of the Kassel Branch of the German Cactus Society (DKG) to present the original Ritter seed samples as a permanent loan to ZSS has enabled a much more complete inventory, and we are very grateful for their help. A word of thanks goes especially to W. Müller (Kassel) who was instrumental in the relevant negotiations and who also brought the important material to Zürich.

Detlev Metzger (Germany) has made available his preliminary list of Ritter specimens at U which was extremely useful during the compilation of the present inventory. Simón, Tiarella and Iván Moreira Muñoz have taken care of delicate work of mounting and the organization of the specimens at SGO, which allowed an efficient inventory work later. Jimena Arriagada Torres (SGO) has been collaborating in checking the SGO collections against the Ritter list. Silvia Arroyo-Leuenberger (Germany) has contributed to the standardization of geographical names, translations, and corrections.

The present project would have been impossible without the generous support granted by the Museo Nacional de Historia Natural, Santiago de Chile, the Botanic Garden and Botanical Museum Berlin-Dahlem and the Municipal Succulent Collection Zürich and the City Parks Department of Zürich. The heads of these institutions, Prof. Luis Capurro, Prof. Dr. Werner Greuter and Dipl.-Ing. Diedrich J. Supthut, kindly allowed the utilization of infrastructure, and in the case of the last-mentioned, computer equipment.

Vorwort

Der Name *Friedrich Ritter* braucht all denen nicht vorgestellt zu werden, die sich mit südamerikanischen *Cactaceae* befassen – seine Sammeltätigkeit während gut 20 Jahren zwischen den frühen 50er- und den frühen 70er-Jahren und die zahlreichen neuen Taxa, die er und andere auf Grund von diesem Material beschrieben haben, hinterliessen einen bleibenden Eindruck auf die Taxonomie und Klassifikation dieser Familie.

Die umfangreiche Liste der Herbarbelege der Ritter-Aufsammlungen ist das Resultat eines Projektes, das 1990 entstanden ist. Damals erhielt die *Internationale Organisation für Sukkulente-Forschung* (IOS) via Dr. David Hunt von Frau Mélica Muñoz Schick, Leiterin des National-Herbars in Santiago de Chile (SGO), die Bitte, sich an einem Projekt zur Aufarbeitung und Inventarisierung des Ritter-Herbars zu beteiligen, das in SGO aufbewahrt wird. In der Folge wurde beim Schweizerischen Nationalfonds gemeinsam von Prof. K. U. Kramer (†), Institut für Systematische Botanik, Universität Zürich (Z), und von D. J. Supthut, Leiter der Städtischen Sukkulente-Sammlung Zürich (ZSS), ein entsprechendes Projekt eingereicht.

Dank der Finanzierung durch die IOS und anderer Sponsoren (siehe die Verdankungen im englischen Vorwort) konnte das Material in SGO aufgearbeitet und in transparente Plastikdosen überführt werden, unter gleichzeitiger Vergabe einer Akzessionsnummer. Nach Bewilligung des Gesuchs durch den Schweizerischen Nationalfonds (Projekt No. 31-29931.90) konnte die Inventarisierung schliesslich in den Monaten November-Dezember 1991 mit einem ersten Besuch von U. Eggli und B. Leuenberger in Santiago de Chile gestartet. Die erste Phase der Inventarisierung der Ritter-Belege in SGO wurde sehr erleichtert durch die Möglichkeit, eine während eines früheren Nationalfonds-Projekts erstellte Datenbank zu benutzen, die in der Zwischenzeit durch die täglichen Arbeiten in der Städtischen Sukkulente-Sammlung Zürich weiterentwickelt wurde. Diese Datenbank enthielt die vollständigen Daten der Ritter-Belege im Herbarium ZSS.

Während des bald unter dem Namen 'Ritter Projekt' bekannten Projektes wurde diese Datenbank fortlaufend mit den entsprechenden relevanten Daten erweitert, einerseits im Zusammenhang mit der Inventarisierung der Belege in SGO während des Besuchs in 1991 und eines zweiten Besuchs in den Monaten Januar-Februar 1993, andererseits auch mit den Angaben zu den Belegen im Herbar in Utrecht, einschliesslich des dort deponierten Typmaterials.

Unterdessen wurde bekannt, dass das Ritter-Archiv, das sich gemäss Ritters Testament in der Obhut der Ortsgruppe Kassel der Deutschen Kakteen Gesellschaft (DKG) befand, auch ungefähr 1600 Original-Samenproben enthielt, alle mit Originaletiketten von Ritter. Nach dem erfolgreichen Abschluss der Verhandlungen mit den Vorstandsmitgliedern der Ortsgruppe Kassel wurde diese einmalige Samensammlung grosszügigerweise als permanente Leihgabe an das Herbar ZSS übergeben, um ebenfalls in die Liste der Ritter-Belege eingearbeitet zu werden.

Das Zusammenstellen und Standardisieren der Liste wurde durch die

Beschaffenheit des Materials und besonders durch die komplizierte Art und Weise der Beschriftung der Belege durch Ritter erheblich erschwert. Trotz grosser Sorgfalt bei der Arbeit enthält die vorliegende Belegliste sicher noch einige Widersprüche und Fehler. Einige der Probleme, die sich während der Inventarisierung stellten, werden in den folgenden Abschnitten etwas genauer besprochen. Trotz aller Unzulänglichkeiten hoffen wir aber, dass dieses Inventar aller bekannt gewordenen Herbarbelege von Ritter zukünftige Studien an südamerikanischen *Cactaceae* erleichtern wird, nicht nur durch Informationen über die Aufbewahrungsorte relevanter Belege, sondern auch als Einblick in die Arbeitsmethoden Friedrich Ritters und in die damit verbundenen Probleme. Die detaillierten Verdankungen an alle, die dieses Projekt unterstützt haben, finden sich am Schluss des englischen Vorwortes.

Introducción

El nombre de Friedrich Ritter no necesita introducción para quienes han trabajado alguna vez en *Cactaceae* de Sudamérica. Sus colecciones desde comienzos de la década del 50 hasta comienzos del 70 son el resultado de alrededor de 20 años de actividad. En base a estas colecciones, numerosas especies han sido descritas por él o por otros, las cuales tienen una gran influencia en la taxonomía y clasificación de esta familia.

La voluminosa lista de especímenes de herbario del material de Ritter, es el resultado de un proyecto iniciado en 1990, cuando el Secretario de la Organización Internacional para el Estudio de Plantas Suculentas (IOS), Dr. David Hunt, acogió la solicitud de uno de los autores, Jefe de la Sección Botánica del Museo Nacional de Historia Natural de Santiago de Chile (SGO), para realizar el montaje e inventario de los especímenes de Ritter depositados en dicho herbario. El proyecto fue presentado al congreso de la IOS en 1990 y luego a la Fundación Nacional Suiza de Ciencias por el Profesor K. U. Kramer (†) del Instituto de Botánica Sistemática de la Universidad de Zurich (Z) y el Señor D. J. Supthut, director de la Colección Municipal de Suculentas de Zurich (ZSS).

Con el apoyo de la IOS y con la ayuda de diversas instituciones y privados (ver agradecimientos en la introducción en inglés), se inició en SGO el trabajo de separación y montaje de cada ejemplar bajo la dirección de Mélica Muñoz, colocándolos en envases de plástico transparente, con la numeración correspondiente de SGO. Luego que el proyecto fuera aceptado por la Fundación Nacional Suiza de Ciencias (Proyecto nº 31-29931.90), comienza el inventario computarizado de la colección en SGO, en noviembre / diciembre 1991 con la llegada a Chile de U. Egli y B. Leuenberger.

Dicho trabajo se inició confrontando la información de las etiquetas en SGO con una base de datos producida durante un proyecto anterior apoyado por la Fundación Nacional Suiza de Ciencias (los tipos de *Cactaceae* en herbarios Suizos) y por el trabajo diario de herbario en ZSS, que cuenta con información sobre tipos de Ritter.

Durante el desarrollo del trabajo, conocido como 'Proyecto Ritter', la base de datos aumentó considerablemente con la incorporación de la información de los especímenes en SGO; el inventario de esta colección finalizó en la segunda visita en enero / febrero 1993. A su vez el material depositado en Utrecht (U), que cuenta con mucho material tipo, fue incluido en el inventario por el primer autor.

Durante ese tiempo, se tuvo un mejor conocimiento del archivo de Ritter, que, de acuerdo a su voluntad, fué depositado en custodia de la Asociación Regional de Kassel de la Sociedad Alemana de Cactáceas (DKG). El mismo contiene alrededor de 1600 muestras de semillas, etiquetadas por Ritter.

Después de negociaciones con los representantes de la Asociación Regional de Kassel, esta singular colección de semillas de Ritter fué generosamente dada en préstamo permanente a ZSS, con el fin de incluir estos materiales tan valiosos en el presente catálogo.

La naturaleza del material por un lado y por otro el método de Ritter de etiquetar sus colecciones, hizo difícil la tarea de estandarización y recopilación de la información. No obstante todo el cuidado puesto en la elaboración de la lista, no cabe duda que aún persisten errores e inconsistencias.

Algunos de los problemas surgidos durante el trabajo se discuten con más detalle en los capítulos siguientes. No obstante, es de esperar que el inventario de todo el material conservado de Ritter sea de ayuda tanto para el estudio de las *Cactaceae* en Sudamérica, como para dilucidar el método de trabajo de Friedrich Ritter, los problemas inherentes a su sistema de numeración, y la información relacionada con la ubicación de sus especímenes.

Al final de la introducción en inglés se agradece en forma detallada a las personas e instituciones que han apoyado este proyecto.

Biographical Notes on Friedrich Ritter (1898 – 1989)

By Beat Ernst Leuenberger

Friedrich Ritter was born on May 9, 1898 as son of a parson at Quentel, a lonesome village in the forest about four hours' walking distance from Kassel, Hessen, Germany (1, 2). Ritter had seven brothers and sisters (2). The family lived in Quentel, later in Frankenberg (Eder), and in Heckershausen near Kassel; Ritter went to High School (Gymnasium) in Bad Hersfeld and studied six semesters of biology, geology, and palaeontology at the university of Marburg.

In 1920 Ritter's parents, together with Friedrich and some of his brothers and sisters, emigrated to Mexico. They departed from Amsterdam on the steamship "Frisia" to Veracruz. In Mexico the parents participated in a dubious settlement company in which they soon lost their fortune (2). Through contacts to Germans in Mexico Friedrich Ritter got a job as an ore assayer in a lead, silver and goldmine of the Ortiz family, installed in February 1921 at Campo Morado, near Pezuapan, Guerrero. He stayed there from 1921 to 1924.

From May 1922 onwards Ritter made excursions around Campo Morado in his free time. He also prospected abandoned mines. In September 1922 he was in Mexico City to apply for a mining concession to exploit a gold prospect at Pericotepec, Guerrero. In November 1924 he participated in the ascent of the Popocatepetl together with members of the German colony in Mexico. In September 1925 he went to Iguala, Guerrero, to apply for a mining concession for a claim at Cacalotepec, which he had prospected in summer 1925. Until March 1927 Ritter lived most of the time alone in a wooden hut on this prospect. Adventures, the dangers of life, and his personal view of the people and civilization in these remote mining areas were later described in his published diary (2).

At the age of 29, Ritter went to Saltillo, Coahuila, Mexico (2), where he became interested in cacti. From 1928 to 1932 he explored several regions of Mexico in search of *Cactaceae* together with his brother Elmar and a companion (Lorenz Werner), collecting cacti and cactus seeds for amateurs and nurseries in Germany (2). Numerous interesting new cacti were discovered by Friedrich Ritter. He became a member of the German Cactus Society (DKG) in 1928 (4). In 1929 Ritter's sister Hildegard Winter of Frankfurt-Fechenheim, Germany, advertised in the monthly journal of the German Cactus Society cacti exported by Ritter, including his own discoveries such as *Ariocarpus scapharostrus*, *Aztekium ritteri* and attractive species like *Mammillaria hahniana* and *M. herrerae* (3). Importation of field-collected cacti boomed in these years in Germany, as the advertisements and catalogues of numerous dealers show (3).

From November 1930 to May 1931, Ritter made a journey to South America. Upon arrival at Callao, Peru, he travelled by train to Lima, Chosica, Matucana, and Oroya. His itinerary on the way to coffee plantations on the eastern slope of the Andes and to mission stations in the lowland tropical forest included Tarma,

San Ramón, Río Oxabamba (Oxapampa), La Merced, San Luis de Shuaro, San Juan, Metraró, and Suchiqui. Returning to Tarma, Oroya, and Lima, he suffered from a malaria attack. At Callao Ritter boarded the steamship "Mapocho" to Mollendo. From there he visited Arequipa and Puno by train and continued to La Paz, Bolivia (2). In February 1931 he was in Tupiza, Bolivia, and continued to Argentina and Chile, arriving back at Callao, Peru, in May 1931. On the Japanese steamship "Heiyo-Maru" he returned to Mexico (2). The seed collections of Ritter's trip to South America were advertised by H. Winter in Germany in the same year (3).

In October 1931, back in Saltillo, Ritter made an exploration and collecting trip to Sonora and Baja California together with his later brother-in-law Heinrich Berghoff. The seed collections went again for sale in Germany (3). On the return trip through California and Arizona, Ritter had a car accident. In 1931 an advertisement of a "Cactus and Seed Exporting Association" based in Saltillo, Coahuila, appeared in Germany (3), without name but possibly related with Ritter's activities. A strong competition occurred at that time between German cactus nurseries and dealers importing thousands of field-collected plants and large quantities of seeds. According to Haage (7), seeds were advertised by H. Winter as cactus seed sale in favor of poor emigrants. Ritter sent plants to specialists in Germany for identification, the globular species to Friedrich Bödeker, the columnar to Wilhelm Weingart and the opuntias to Alwin Berger (12).

In 1932 Ritter obtained the right to exploit a mine near Campo Morado, Guerrero, and from July 1933 onward he managed the mine alone and later with his brother-in-law and employee Hermann Schulz. The mine was operated with workers from Campo Morado in three daily shifts. The ore was transported on donkey and mule-back to the nearest train station and shipped to a foundry in Monterrey in northern Mexico.

In 1936 Ritter decided to close his mine, which at the end had employed 170 workers. From December 1936 to January 1937 he made a 37-day vacation tour alone on horseback through the remote areas of the Sierra Madre del Sur and the lower Balsas basin in Guerrero, including the ascent of the Teotepéc mountain (2). Due to problems and social unrest resulting from the closing down of the mine, he secretly left Campo Morado in August with his belongings and returned to Saltillo (2).

After an excursion to the Sierra de Paila, Ritter travelled to Mexico City by bus and from there by train to Veracruz, where he boarded the steamer "Iberia". He arrived in Hamburg, Germany, on October 20, 1937.

According to his own biographical notes he lived in Germany from 1937 to 1952. In "Berlin, Tübingen, and in Baden-Baden in the Black Forest" he passed "many years pursuing thorough studies on the basic questions of life" (1). The result of these studies were privately published by Ritter in 1951/52 in a three-volume work in German "Das offenbarte Leben" (The revealed life) with the subtitles "Lebensschöpfung und Vernunftfrevel!" (creation of life and violation of reason), "Schmarotzerzüchtung und Erbpöpfung" (breeding of parasitism and sacrifice of heritage), and "Nietzsche, der gerechtfertigte Seher" (Nietzsche, the vindicated prophet). In the last years of World War II he served in France

and Italy for the German army. According to H. Winter (8), Ritter lived in his own house in Baden-Baden, Germany, but lost his property due to the war. Even though there are no autobiographical notes on the time between 1937 and 1952, the strong and persisting influence of the German political ideology of that time remains evident in his later publication (2).

In 1952 Ritter emigrated to South America, according to his own notes, almost without personal funds. On December 7, 1952, he left Marseille (France) on the steamer "Provence" with 1150 passengers third class and arrived in Rio de Janeiro on December 18, where he made his first seed collection numbered in the FR number series, *Rhipsalis baccifera* (FR 1) from a tree in a private garden in a residential area of Rio de Janeiro (2). On December 23, he arrived in Buenos Aires, from where he started his exploration and collecting trips through Argentina, Bolivia and Chile, which he personally described as "three years of gypsy-like life" without permanent residence (1).

The itinerary of this and the following journeys is taken from Ritter's published extracts of his diary (2) and, where possible or necessary, complemented by data available from the herbarium labels of the collections listed in the main part of this work. A complete chronology of Ritter's field activities was neither attempted nor possible for the purpose of this study. This would have to be based on his 74 note books with over 5000 manuscript pages (kept in the archives of the Kassel Branch of the German Cactus Society).

From December 1952 to February 1953 Ritter was in Argentina, in the provinces of San Luis, Mendoza, San Juan, Catamarca, Salta, Jujuy (7. 2. 1953 La Quiaca), from February to July 1953 in Bolivia: 7. 2. Villazón; Tarija; 13. 2. Chorcocoya - Villazón; 14. 2. Curque (a "cactus paradise" visited by Ritter 22 years before), 23. 2. Carrizal - Oroya - Montes - Mal Paso, 24. 2. Camargo, 27. 2. Las Carreras; 7. 3. Chiguana - Ollagüe, 10. 3. Chiguana, Cerro Chiguana; 19. 3. Charaña - Río Mauri (Río Desaguadero) 4000 m, 19. 3. Caripe - Charaña, 21. 3. La Paz; 2. 4. Palca (Illimani), Hacienda Calchani; end of April in Sorata; 10. 5. Palca - Hacienda Iquico, Chunuavi - Lambate, 7. 6. Chulumani - Ocobaya (Sud-Yungas); 22. 6. Unduavi; 4. 7.-8. 7. La Paz gorge - Angostura, 9. 7. La Paz - Hacienda Tirata; 11.-17. 7. Consata-basin, Ayata, Consata-valley, Río Llorca - Sorata; in La Paz application for a visa to Peru; 20. 7. La Paz - Charaña; 23. 7. Arica. From July to November 1953 Ritter made numerous collections in southern and central Peru. The diary mentions: 5. 9. Acoria (train station, Dept. of Huancavelica) - Acobamba - Marcas - Río Lircay - Marcas, 13. 9. Mantaro-river - La Mejorada, 15. 9. Huancayo, 1. 12. Chala - Quicacha. In December 1953 Ritter was in northern Chile.

From January to August 1954 Ritter travelled extensively in Chile, in January from Antofagasta to Ovalle, in February he visited the Maule-gorge and Mina Dolomita east of Talca and continued south to Puerto Montt, where he boarded a steamship taking him to Puerto Aisén. On March 12, 1954, he was in Chile Chico and Puerto Ibañez. In the dry Patagonian area around Lago Buenos Aires he hoped to locate the southernmost cacti of Chile (which are still unconfirmed). In April 1954 he visited Laguna del Laja, Chacay, and Los Angeles (Bío Bio-region, south central Chile) (2). In the same month, Ritter exchanged letters from Valparaiso with Hans Krainz of the Municipal Succulent Collection

Zürich, concerning evaluation and identification of his collections, and he mailed specimens to the same institution (8, 13). In May 1954 Ritter collected in central Chile and in June he travelled north through Vallenar and Taltal to Antofagasta, from where he again mailed specimens to H. Krainz. From Arica (23. 6. 1954) he wrote to Krainz that he was going to leave Chile to search for cacti in Peru, giving a temporary address in Lima, Peru and pointing out that he was travelling without car and without taxi (13).

The itinerary of his trip to northern Peru in August and September 1954 included: 6. 8. Tumbes, 7. 8. San Carlos, Matapolo (on the frontier to Ecuador), 8. 8. Olmos, 5. 9. Trujillo. Other localities in the north were Huancabamba and Jaén. From Lima (10. 9. 1954), Ritter wrote again to Krainz, mentioning a shipment of living plants from Peru and asking for cooperation and identification of specimens (13).

In 1954, the H. Winter cactus nursery in Frankfurt am Main, Federal Republic of Germany, issued the first (undated) seed catalogue based primarily on Ritter collections (9a). The seeds of a broad variety of taxa from South America collected by Ritter allowed collectors in Germany and other countries to rebuild the collections, of which many had been lost or damaged during the war.

Because of the bureaucratic problems Ritter encountered in trying to obtain the necessary visa for travelling from one country to another during this journey, his sister in Germany tried to provide him with letters of recommendation from Krainz and from university professors, providing argument that Ritter was poor since due to World War II he had lost his considerable property acquired in his mining operations (27. 11. 1954, 8). Ritter's sister asked Krainz to dedicate new species of cacti to some of her customers, a request, which prompted irritations in the beginning cooperation between Ritter and Krainz (Krainz to Ritter, 21. 2. 1955, 8), in which Krainz was to identify material, search for literature and edit publications of new species based on the notes provided by Ritter.

From September 1954 to March 1955 Ritter travelled in Bolivia and Argentina. The itinerary in Bolivia included: 28. 9. La Paz, 2. 10. Irupana - La Plazuela - Irupana, 9.-19. 10. Consata-basin - La Paz - Ayata - Bacobamba - Ayata - Mollopampa - Río Llorca - Mollopampa - Río Palhuaya - Chacajahuira - Achacachi, 26. 10. Inquisivi, 22. 11. Uncia, 12. 12. Sucre - Totora - Aiquile - (Río Grande) - Surina (Zurima?) - Chuquichuqui, 14. 12. Sucre. From September 1954 to January 1955, localities in all departments from La Paz and Santa Cruz southward are mentioned. At the end of January 1955 Ritter was in Salta, Argentina, reporting to Krainz (31. 1. 1955) that he had mailed specimens of Peruvian and Bolivian cacti from La Paz to Zürich (13). He had great difficulties in mailing a parcel with seeds, which was not accepted in the post offices in Jujuy, Salta, Tucumán, and Córdoba. Ritter therefore travelled to Buenos Aires (8. 2. 1955), where he could mail the parcel, and from where he travelled on to visit the provinces of San Luis, La Rioja, Córdoba, Catamarca (1. 3. 1955), Mendoza, and Neuquén before returning to Chile.

On April 20 and 22, Ritter was in Valparaiso, Chile, reporting to Krainz on collections made in Chile between 28° and 40° S latitude (13). In a letter to Krainz dated April 25, 1955, Ritter commented on problems of cooperation, e.g. differing views on the circumscription of species or interpretation of names, and

stated his goal: "to solve, as far as possible, the classification of cacti, which is only possible through travelling to the countries of origin and by careful studies of the occurrence in situ" (8). Ritter decided to do the taxonomic treatment alone (12, p. 1). In May and June 1955, Ritter made nearly one hundred collections (particularly of *Pyrrhocactus*) in central Chile.

In the same year, Ritter obtained a modest room as permanent residence in the house of the German family Nevermann in Arica, Chile (1). In August 1955, Ritter was in Santiago to buy a Ford, model 1931, in his own words almost a museum piece, which he used for collecting trips. The delays caused by breakdowns approached in total time nearly that spent for driving (1). Nevertheless, it enabled him to be independent of public transport. From September to December 1955, Ritter explored central Chile from San Fernando and Santiago to El Tofo, north of La Serena.

In January and February 1956 he visited numerous localities and made over 70 collections in north central and northern Chile, many at Caldera and Chañaral. The diary mentions: 7. 1. Totoral - Castilla, 22. 1. Copiapó - the salt basin of Maricunga - El Salado, 17. 2. Paposo, 19. 2. Antofagasta. In March and April 1956 several collections were made in northern Chile. A journey to Peru by car followed in June 1956: 13. 6. Atico - Chala, 28. 7. Chilete - San Pablo. About 60 collections were made in various departments from Arequipa to Cajamarca. At the end of 1956, Ritter ordered a new Ford truck model 1956 directly from the United States to the free port of Arica. On Christmas 1956 Ritter was in Saucache near Arica with the Nevermann family, and on the same day he left for a journey by train to Bolivia. The itinerary included: 26. 12. La Paz, 8. 1. 1957 Molinos - Cruce - Oruro; 15. 1. Uyuni - Tupiza, 17. 1. Villazón on the frontier to Argentina, 20. 1. Tupiza - Uyuni - Chiguana.

Returning to Chile, Ritter stayed in Saucache near Arica, and in April received the new car at Arica. For his first journey by car to Peru, a guarantee of the equivalent of 10000 German marks was necessary at Chilean customs (2). On this collecting trip to Peru from April to July 1957 Ritter was accompanied by his nephew, Dr. Wigbert Winter of Frankfurt, Germany (2). Numerous provinces from Arequipa to Amazonas were visited during this journey, and places mentioned in the diary are: 20. 5. Bellavista - Paita - Pucará, 10. 6. Recuay - Rahuapampa (collection of *Espostoa ruficeps*), 13. 6. Chavin - Recuay, 8. 7. Cuzco, 13. 7. Saxahuanán.

From August to December 1957 Ritter was back in Chile. In October 1957 he mailed herbarium specimens from Arica to Zürich (8) and visited localities in northern Chile: 15. 10. Saucache near Arica - Chaca, 17. 10. Quillagua, 18. 10. Antofagasta, 19. 10. Cerro Coloso.

In November and December 1957 he made numerous collections in north central Chile. Proceeding further south, on December 18, 1957, he made a trip from Talca to the Campanario (Río Maule) searching for *Austrocactus*. Localities visited thereafter in northern Chile were: 28. 12. Castilla, 29. 12. Chañaral.

In the first two months of 1958, Ritter visited few localities in northern Chile: 11. 1. Puritama, Calamá, 12. 1. Chuquimata, 13. 1. Guanillos (Iquique). At the end of February 1958 Ritter was in Arica and planned a journey to Bolivia, which he made without his car for economic reasons. Localities mentioned in his

itinerary, mainly in southern Bolivia but some also in the departments of La Paz, Cochabamba, and Santa Cruz are: 13. 3. Las Carreras - Palos Blancos, 4. 4. Pilcomayo-river, 8. 4. Tacuarandi (Tacuyandi?), 10. 4. Narvais (Narvaez), 14. 4. Junacas - Cajas - Río Pilayo (affluent of upper course of Río Pilcomayo), Colpana, 20. 4. Tarija, 27. 4. Hacienda Oroya near Carrizal (Potosí) - El Monte - Torata - Impora, 29. 4. Las Carreras (note that Ritter suffered from malaria), 3. 5. Las Carreras - La Torre - Las Carreras, 4. 5. Villa Abecia; 12. 5. Culpina - Ingahuasi - Culpina, 15. 5. Salitre - Cueva (Río Pilaya), Challamarca-river, 18. 5. Camargo, 19. 5. Camargo - San Pedro - Culpina - Camargo, 20. 5. Camargo - Potosí, 22. 5. Sucre, 29. 5. La Paz - Irupana - Plazuela (Río La Paz), 1. 6. La Paz; 7. 6. Sorata, 9. 6. Mecapaca - La Paz; 21. 6. Santa Rosa - Santa Rosa-river - Independencia, 23. 6. Río Santa Rosa - Río Sacabaya, 28. 6. Tuini - Quillacollo, 29. 6. Cochabamba; 11. 7. Valle Grande, 12. 7. lower course of Río Mizque, Juntas, Marqueza; 16. 7. Santa Ana - Vallegrande; Saipina - Pérez, 23. 7. Aiquile, Yamparaez; 14. 8. Hacienda Sotomayor on the Pilcomayo-river; 22. 8. Oruro - La Paz. From this journey of five months, about 200 herbarium samples are extant.

In 1958 Ritter published privately a review of Backeberg's publication on new cacti from Peru (14), in which he criticized the lack of careful field studies.

In November 1958, Ritter visited southern Peru in his own car: 6. 11. Tacna - Montalva, Tambo-gorge, 17. 11. Arequipa - Puno. He then spent a month in Bolivia: 21. 11. Desaguadero, 27. 11. Plazuela - La Paz-river, 29. 11. Irupana - La Paz, 12./13. 12. Chullas - Mizque-river - Aiquile, Lecori, 24. 12. Camargo.

In January 1959, Ritter continued to NW Argentina, where he spent two months. Numerous herbarium samples were collected in the provinces of Salta and Catamarca, some also in Jujuy and Tucumán. The itinerary included: 29. 1. Belén, mountains to the west, 5. 2. La Puerta - Varela, 8. 2. Tafí del Valle; 13. 2. Cerrillos - Cachi, 16. 2. Cachi, 17. 2. Salta, 19. 2. Salta - Campo Quijano - Salta - Jujuy - Purmamarca, 20. 2. Tres Morros - San Antonio de los Cobres, 21. 2. Puerta Tastil, 23. 2. San Antonio - Tres Morros - Purmamarca, 25. 2. Jujuy - Pocitos. Ritter returned to Bolivia and arrived in Villa Montes on February 28, where he left his car and from where he continued to Santa Cruz (Bolivia) by air plane. Then he travelled by bus to Cochabamba and back to Santa Cruz and by plane to Corumba, Brazil (18. 3. 1959). From there he travelled to Ponta Porã and crossed the border to Paraguay and visited the nearby Sierra de Amambay.

Ritter spent the following four weeks in eastern and southeastern Brazil. On March 27 he took a train from Rio de Janeiro to Corinto and Diamantina (Minas Gerais), and on March 31 a bus to Itamarandiba. From Itamarandiba he went to the Serra do Ambrosio, Penha da França, and Mercês, returning to Diamantina, where he took an air plane to Montes Claros. On April 4 he was at Januária, on April 5 at Montes Claros. His return trip was through southeastern Brazil, 19. 4. Canela, 20. 4. Rolante near Porto Alegre (Rio Grande do Sul), from where he continued through the province of Corrientes (Argentina) to Resistencia in the province of Chaco, Argentina. In his diary Ritter complained on bad train connections for his return trip to Bolivia. His itinerary was: 5. 5. Resistencia, 6. 5. Anatuya, 7. 5. Tucumán - Jujuy, 9. 5. Jujuy - Pocitos, crossing over to Bolivia. From Villa Montes, Ritter returned by car to Chile via Lllallagua, Huanumi,

Oruro. In May 1959 he made some collections in Peru on the way from Tacna to Charaña.

For the period between July and December of 1959 nothing definite is known about Ritter's journeys. There are solitary collections recorded to have been made in July in Argentina, in September in Chile, and in December in Bolivia, but these data may be erroneous.

From December 1959 to February 1960, Ritter stayed in northern Chile. Localities visited were, e.g.: 9. 12. La Serena - Juan Soldado, 27. 12. Cachita, Taltal, 30. 12. 1959 Taltal - Paposo, 6. 1. 1960 Antofagasta.

On February 12, 1960 Ritter left Arica for another journey by car to Peru. His itinerary included: 21. 2. Lima - Chosica; 6. 4. El Pallar - Cajabamba, 7. 4. Río Crisnejas, 13. 4. Cajamarca - Celendín, 14. 4. Balsas; Jaén, Hacienda Valor on the Marañón - Milagro - Aramayo - Milagro; 28. 4. Quebrada Honda, 29. 4. Hacienda Valor, 5. 5. Trujillo, Santa, Chimbote (car accident, delay), 28. 5. Yaután, 13. 6. Trujillo, 19. 6. Chimbote. In September and November 1960, Ritter was in Chile. Arica - Zapiga and Saucache are places mentioned, and collections exist from Chapiquiña in northern Chile.

In 1961, only localities in Chile occur among his collections, which he made particularly in October in north central Chile. In the same year (as well as in 1962) the catalogue of H. Winter in Frankfurt contained not only seeds but also plants imported from Peru (9b, p. 19; 9c, p. 19). Numerous publications of new species discovered by Ritter appeared from 1961 onward (to 1970, and again in 1977) in the journal "Kakteen und andere Sukkulanten" in Germany.

In March 1962 Ritter made a seed collecting trip by car to Bolivia and Argentina. Localities visited according to his diary were: 20. 3. Villazón, 21. 3. Tupiza, 24. 3. Las Carreras - Mal Paso, 28.-31. 3. Impora (there, he spent two and a half days harvesting and cleaning seed of *Oreocereus trollii*). Nearly 50 collections made between March and May 1962 exist from northwestern Argentina, the provinces of Jujuy, Catamarca, La Rioja, San Luis, and Mendoza. According to the address change in his publications, Ritter changed his residence or at least his postal address from Arica, c/o Nevermann, to Correo Olmué in Central Chile in May 1962. In October 1962, Ritter was in northern Chile, spending 13 days around Antofagasta. In November 1962 he left Chile by car for a journey of more than four months through Bolivia. His itinerary included: 1. 11. Chiguana, San Juan - Colchac (Nor-Lipez), 2. 11. Colchac - saltbasin - Colchani - Uyuni, 3. 11. Uyuni; 21. 11. Cotagaita, 23. 11. Tupiza - Mal Paso; La Paz; 8. 12. San Antonio - Paicho-gorge - Caña Cruz - San Antonio; 29. 12. Tarija; 5. 1. 1963 Palos Blancos - Villa Montes, 6. 1. Villa Montes; 17. 1. Boyuibe - Camiri - Villa Montes, 22. 1. Villa Montes - Tihuipa - Tarija - Junacas - Polla - (Cajas-gorge), 4. 2. Tarija, Salitre - Cueva; 22. 2. Culpina, 7. 3. Potosí, 9. 3. Potosí, 10. 3. Challapata. 12. 3. Sevaruyo, 13. 3. transport of the car on the train from Sevaruyo to Uyuni and onwards to Chile.

In 1963 Ritter undertook a longer journey (without car) to Paraguay and Brazil. Dates and places mentioned for Paraguay are: 18. 9. Asunción - Filadelfia, Cerro León, 3. 10. Concepción - Sierra de Amambay, Guazú, 9. 10. Ypane-river - Aquidaban-river, 14. 10. Cerro Corá, 16. 10. Concepción - Arroyo Aceite, 29. 10. Yhú, 6. 11. Asunción, 16. 11. Asunción - Nueva Italia, 19. 11. Asunción.

From there he travelled to eastern Brazil via Goiânia on December 4; from Brasília he flew to Carolina (Maranhão) on December 7, and to Floriano (Piauí) on December 15.

In January 1964 he explored Bahia (5. 1. Iaçu, 7. 1. Urandí, 11. 1. Mutás, 13. 1. Palma de Monte Alto - Mutás, 16. 1. Guanambí) and northern Minas Gerais (3. 2. Montes Claros, 10. 2. Belo Horizonte). On February 12 he was in Rio de Janeiro, and in March 1964 in Rio Grande do Sul. The collections are mostly from Bahia, Minas Gerais, and Rio Grande do Sul, few from the states of Goiás, Maranhão, Mato Grosso, Pernambuco, Piauí, and Rio de Janeiro.

In the same year (1964), Ritter became a honorary member of the German Cactus Society (DKG). The society honoured Ritter for his restless exploration of cacti and seed collecting in South America and for the numerous new taxa he had found and described. A bibliography was planned but postponed for its numerous entries (15). A report on his life, written by Ritter himself on request of the society, was published in the journal "Kakteen und andere Sukkulente" (1).

From July to September 1964, Ritter took off by car for another seed collecting trip to central and northern Peru: 27. 7. Cajamarca, 16. 8. Rahuapampa, 21. 8. and 22. 8. Catac (near Recuay). Local children were contracted to collect fruit of *Thrixanthocereus*, and Ritter himself commented on the difficulties and dangers involved (2 p. 293).

From November 1964 to February 1965 Ritter was collecting in eastern and southeastern Brazil: 4. 11. Belo Horizonte - Penha da França, 16. 11. Mercedes, 1. 12. Montes Claros, 3. 12. Bom Jesus, 11. 12. Caetité - Tanhaçu, three day walking tour through the Serra da Sincorá, 17. 12. Brumado, 19. 12. to 25. 12. Ourives (an area particularly rich in cacti); 15. 1. 1965 Caratinga; Arraial do Cabo - Sacarema; 22. 1. Niteroi - Rio de Janeiro, 23. 1. Rio de Janeiro; Ilhabela - São José dos Campos, 31. 1. São José dos Campos, 4. 2. Piedade (São Paulo) - São Paulo, 7. 2. Itapoa, 8. 2. Porto Alegre, 7. 2. Itapoa, 15. 2. Montenegro. According to his collections, he also visited Uruguay (Rivera, on the border to Brazil) in 1965. A visit to Paraguay (without any known collections) in the same year is mentioned in his adventure book (2, p. 304), where he states that, on April 11, 1965, he arrived back in Chile returning from a journey to Paraguay and Brazil. In Granizo near Olmué, where he lived, he was locally known as "Don Federico". Visitors described his home as solitary, on dry hills not far from Villa Alemana, on the south slope of Cerro de la Campana (10).

His journeys in 1966 are unknown, but dated collections exist from Argentina (1 collection), Bolivia (5), Chile (1) and Brazil (numerous collections from Rio Grande do Sul).

In 1967 Ritter published a theoretical article on the definition of the ranks of species, variety (termed 'race'), and form, as used by him in *Cactaceae*. He also commented on general problems encountered with the delimitation of taxa, the insufficiency of old descriptions for diagnostic use in taxonomical studies, and on the exaggerated production of names in this family.

Also in 1967, Ritter published new species in the Dutch journal "Succulenta". In the same year, he was in Bolivia again (8. 3. Villa Abecia - Río Pilaya - Villa Abecia) and later spent some time in an area without cacti in south central Chile

(11.-16. 4. Río Puelo, Prov. Llanquihue). Very few herbarium collections dated 1967 exist, mainly from Chile but including one each from Brazil and Argentina; however, these dates may be erroneous.

At the end of December 1968, A. F. H. Buining and his wife stayed with Ritter in Granizo. Buining noted the cacti planted around Ritter's house at Granizo. In January and February 1969, they undertook a two months' trip through Chile and Peru with Ritter, on which Buining later reported (6). The itinerary of this journey in 1969 included in Chile: 9. 1. Granizo - La Serena - Copiapó - Chañaral - Taltal; 19. 1. the locality of *Copiapoa hypogaea* - Antofagasta - Tocopilla - Iquique - Arica, and in Peru: Tacna - Moquegua - Arequipa - Puno - Cuzco - Urcos; 19.2. Ocoña - Atico - Chala - Nazca - Ica - Pisco-valley - Cañete - Chosica - Rimac-valley - Eulalia-valley. On this collecting trip, living plants were collected, which were shipped to the Netherlands (6, p. 39). One single herbarium sample dated 1968 from Peru has been recorded (FR 1308a).

In 1969, A. Lau visited Ritter at Granizo (10). Some collections dated 1969 are known from Chile, and few from Peru.

In 1970 Ritter went to northern Peru. Localities mentioned are: 1. 6. Chocope, north of Trujillo - Contazuma, 4. 6. Trujillo. No collections made in 1970 in Peru have been recorded, and only few from southeastern Brazil. The single collection (FR 1471 loc. 2) reported from 1970 from Bolivia may have an erroneous date, although it appears on the original seed sample at ZSS.

In 1971, Ritter travelled for the last time to Brazil. On November 25, he searched without success for flowers and seeds of one of his earlier discoveries, *Coleocephalocereus flavisetus*. From the locality 11 km south of Engeneiro Caldas he had to walk back all the way in the rain without obtaining transport. It was during this walk that he decided to give up cactus collecting. According to his diary, he concluded that, after so many years of risking his life for the discoveries to the benefit of the cactophiles of the world, this was to be his last day to run after cacti (2, p. 309).

Ritter himself calculated the total time in South America spent exclusively travelling and making field studies to be 6 years and ten months. He had spent 28 months travelling in Chile, 21 in Bolivia, 18 in Peru, more than 7 in Argentina, more than 5 in Brazil, and 2 in Paraguay (1).

In 1972, Ritter for political reasons left Chile with all his belongings, except his herbarium, and took residence in Paraguay until 1976 (5). He deposited his herbarium specimens in the Museo Nacional de Historia Natural in Santiago de Chile (11, 2, p. III). Two herbarium samples dated 1973 from Paraguay are known (FR 1006 loc. 10, and FR 1490).

In 1976, Ritter returned to Germany, and lived with his sister in Spangenberg, south of Kassel (5). In 1977, he published a book in German, "40 Jahre Abenteuerleben und die wilde Weisheit" ("40 years of adventure and the wild wisdom"), a compilation of extracts from his diary with comments added between 1974 and 1976. Although this book was eagerly awaited by cactophiles, Ritter's principal aim, besides providing an autobiographical adventure story depicting his restless, self-disciplined and ascetic life as a plant hunter, was apparently to convey his world view. A strong racial point of view accompanied and even dominated both his observations made during his journeys as well as

his comments added later (1, 2). A subject index at the end of his book concentrates exclusively on his view of civilization, customs, human character, race and heredity (2).

In Spangenberg, Ritter worked on his four-volume publication on the *Cactaceae* of South America, which appeared between 1979 and 1981 (12 a-d). He had left practically all his herbarium collections in Santiago de Chile in 1972 with the exception of (holo-)types, which had been deposited at Utrecht in the sixties. It has to be assumed that Ritter had no collections other than seed samples available for re-examination during the preparation of the final manuscript. Ritter deposited a small number of additional type specimens at Utrecht in 1980 following correspondence on material missing there (11). Ritter's comprehensive work with the subtitle "Ergebnisse meiner 20jährigen Feldforschungen" ("Results of my 20 years of field studies") is a taxonomic synthesis on the cacti of Brazil, Paraguay, Argentina, Bolivia, Chile, and Peru, providing detailed descriptions of many taxa, comments and photographic illustrations, but no keys. It is based primarily on his very detailed field notes (often with data from literature added in parenthesis) and also contains a certain amount of polemic comments on the work of contemporary cactologists, particularly Backeberg, Buxbaum, and Rauh. Like his earlier books, Ritter published this work privately and distributed it mostly through cactus book dealers and nurseries.

In 1981, Ritter sent a large part of his slides on loan to the editors of the journal *Literaturschau Kakteen* in the German Democratic Republic (GDR), where his books could not be obtained. An edited list of his FR-numbers was published and illustrated by numerous colour and black and white illustrations (16, 17, 18). In the same year, the Nordhessische Kakteenfreunde (Kassel) (North Hessian Cactus Friends), a local branch of the German Cactus Society (DKG) changed their name in honour of Ritter to "Kakteenfreunde Friedrich Ritter Nordhessen" (4).

In 1982, Ritter left Germany for a new residence on the Canary Islands, in Puerto de la Cruz, Tenerife. There, he dedicated himself exclusively to the philosophical question "space and mankind" (4). In October 1982, Ritter donated his field notes, various lists and documents, as well as his complete seed collection (now received at ZSS for permanent custody), to this local branch of the society.

Friedrich Ritter died on April 9, 1989 at the age of nearly 91 years (4).

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Biographische Notizen zu Friedrich Ritter (1898 – 1989)

Von Beat Ernst Leuenberger

Friedrich Ritter wurde am 9. Mai 1898 als Sohn eines Pfarrers in Quentel geboren, in einem einsamen Walddorf etwa vier Stunden zu Fuss von Kassel entfernt (1, 2).¹ Ritter hatte sieben Geschwister (2). Die Familie lebte zuerst in Quentel, später in Frankenberg (Eder) und in Heckershausen bei Kassel. Ritter ging in Bad Hersfeld ins Gymnasium und studierte danach sechs Semester Biologie, Geologie und Paläontologie an der Universität Marburg.

Im Jahre 1920 wanderten Ritters Eltern zusammen mit Friedrich und einigen seiner Geschwister nach Mexiko aus. In Amsterdam schifften sie sich auf dem Dampfer Frisia nach Veracruz, Mexiko ein. In Mexiko beteiligten sich die Eltern Ritters an einer dubiosen Siedlungsgesellschaft, in der sie ihr Vermögen verloren (2). Durch Vermittlung deutscher Landsleute in Mexiko bekam Friedrich Ritter Arbeit als Hüttenwardein in einer Blei-, Silber- und Goldmine der Familie Ortiz, die im Februar 1921 in Campo Morado bei Pezuapan, Guerrero installiert wurde. Ritter blieb dort von 1921 bis 1924.

Ab Mai 1922 machte Ritter in seiner Freizeit Fusstouren und Ritte zu Pferd in der Umgebung von Campo Morado. Er prospektierte auch verlassene Minen. Im September 1922 ging er nach Mexiko-Stadt, um das Mutungsrecht für eine Golderzlagstätte in Pericotepec, Guerrero, zu beantragen. Im November 1924 nahm er mit anderen Mitgliedern der deutschen Kolonie an einer Besteigung des Popocatepetl teil. Im September 1925 ging er nach Iguala, Guerrero, um das Mutungsrecht für eine Mine in Cacalotepec zu beantragen, welche er im Sommer 1925 prospektiert hatte. Bis März 1927 lebte Ritter grösstenteils allein in einer Holzhütte auf dieser Schürfstelle. Seine Abenteuer, die Gefahren des Lebens und seine persönlichen Ansichten über Land und Leute in diesen abgelegenen Bergbaugebieten beschrieb er in seinem in Auszügen veröffentlichten Tagebuch (2).

Im Alter von 29 Jahren zog Ritter nach Saltillo, Coahuila (2), wo er sich für Kakteen zu interessieren begann. Von 1928 to 1932 durchstreifte er verschiedene Regionen von Mexiko auf der Suche nach Kakteen, und er sammelte zusammen mit seinem Bruder Elmar und einem Begleiter namens Lorenz Werner Kakteen und Samen für Kakteenliebhaber und Gärtnereien in Deutschland (2). Viele interessante Neuheiten wurden von Friedrich Ritter entdeckt. 1928 wurde er Mitglied der Deutschen Kakteen-Gesellschaft (DKG) (4). 1929 veröffentlichte Ritters Schwester Hildegard Winter aus Frankfurt-

¹ Das Quellenverzeichnis für diesen biographischen Abriss findet sich am Ende der englischen Version.

Fechenheim in der Monatsschrift der DKG Inserate mit Angeboten von Importkakteen, darunter Ritters Neufunde *Ariocarpus scapharostrus*, *Aztekium ritteri* und andere begehrte Arten wie *Mammillaria hahniana* und *M. herrerae* (3). Der Import von Standortpflanzen hatte in jenen Jahren in Deutschland einen Höhepunkt, wie aus Anzeigen und Handelskatalogen zahlreicher Händler hervorgeht (3).

Von November 1930 bis Mai 1931 machte Ritter eine Reise nach Südamerika. Nach Ankunft im Hafen von Callao, Peru, reiste er mit der Eisenbahn nach Lima, Chosica, Matucana und Oroya. Sein Reiseweg führte weiter zu Kaffeepflanzungen am Ostabhang der Anden und zu Missionsstationen im Amazonastiefland, u. a. über Tarma, San Ramón, Río Oxabamba (Oxapampa), La Merced, San Luis de Shuaro, San Juan, Metraro und Suchiqui. Auf dem Rückweg von Tarma nach Oroya und Lima litt er unter Malaria. In Callao ging Ritter an Bord des Dampfers Mapocho mit Bestimmungsort Mollendo. Von dort aus besuchte er Arequipa und Puno per Eisenbahn und reiste weiter nach La Paz, Bolivien (2). Im Februar 1931 war er in Tupiza, Bolivien und reiste via Argentinien und Chile im Mai 1931 zurück nach Callao, Peru. Auf dem japanischen Dampfer Heiyo-Maru kehrte er nach Mexiko zurück (2). Die gesammelten Samen seiner Südamerikareise wurden von H. Winter in Deutschland im gleichen Jahr zum Verkauf angeboten (3).

Im Oktober 1931 machte Ritter von Saltillo aus zusammen mit seinem späteren Schwager Heinrich Berghoff eine Forschungs- und Sammelreise nach Sonora und Niederkalifornien. Die Samen wurden wiederum in Deutschland verkauft (3). Auf dem Rückweg via Kalifornien und Arizona erlitt Ritter einen schweren Verkehrsunfall. 1931 findet sich in der Monatsschrift der DKG, Heft 4, S. 10, eine Anzeige einer "Kakteen und -samen-Exportgesellschaft aus Saltillo, Coahuila", ohne Hinweis auf Ritter, aber möglicherweise im Zusammenhang mit seiner Tätigkeit (3). Zu jener Zeit gab es eine scharfe Konkurrenz zwischen den Handelsgärtnereien in Deutschland, die Tausende von Importpflanzen und grosse Mengen von Importsamen anboten. Nach Haage (7) machte die Firma Winter Reklame für den Verkauf von Kakteensamen zur Unterstützung armer Auswanderer. Ritter sandte Pflanzen zur Bestimmung an Spezialisten in Deutschland, die Kugelkakteen an Friedrich Bödeker, die Säulenkakteen an Wilhelm Weingart und die Opuntien an Alwin Berger (12).

1932 erwarb Ritter das Mutungsrecht für die Ausbeutung einer Mine bei Campo Morado, Guerrero. Von Juli 1933 an leitete er die Mine zuerst allein und später mit seinem Schwager Hermann Schulz als Angestellten. Das Erz wurde mit Arbeitern aus Campo Morado im Schichtbetrieb in drei Schichten abgebaut, mit Esel- und Maultierkarawanen zur nächstgelegenen Bahnstation und von dort per Bahn zur Schmelzhütte in Monterrey in Nordmexiko transportiert.

1936 entschied sich Ritter für die Schliessung der Mine, welche zuletzt 170 Arbeiter beschäftigte. Von Dezember 1936 bis Januar 1937 unternahm er eine 37-tägige Urlaubsreise zu Pferd allein durch die entlegenen Gegenden der Sierra Madre del Sur und das untere Balsas-Becken in Guerrero einschliesslich einer Besteigung des höchsten Gipfels, des Teotepec (2). Wegen Drohungen und sozialen Unruhen infolge der Schliessung der Mine verliess Ritter im August 1937 heimlich mit Hab und Gut Campo Morado und kehrte nach Saltillo zurück.

Nach einer Fusswanderung in die Sierra de Paila reiste Ritter Ende September per Bus nach Mexiko Stadt und von dort mit der Eisenbahn nach Veracruz, von wo aus er an Bord des Dampfers Iberia nach Deutschland reiste. Am 20. 10. 1937 kam er in Hamburg an.

Nach seinen eigenen biographischen Angaben lebte Friedrich Ritter von 1937 bis 1952 in Deutschland, wo er "in Berlin, Tübingen und bei Baden-Baden im Schwarzwald vieljährige gründliche Studien über die Wesensfragen des Lebens betrieb und deren hauptsächlichste Ergebnisse publizierte" (1). Ritter publizierte im Selbstverlag 1951/52 ein dreibändiges Werk mit dem Titel "Das offenbarte Leben" (Band 1, "Lebensschöpfung und Vernunftfrevl"; Band 2, "Schmarotzerzüchtung und Erbpferung" und Band 3, "Nietzsche, der gerechtfertigte Seher"). In den letzten Jahren des zweiten Weltkriegs war Ritter nach seinen Angaben "in Frankreich und Italien im militärischen Einsatz". Nach H. Winter (8) lebte Ritter in seinem Haus in Baden-Baden, verlor aber seinen Besitz durch den Krieg. Obwohl über die Zeit von 1937 und 1952 keine weiteren autobiographischen Notizen vorliegen, bleibt der starke und nachhaltige Einfluss der damals in Deutschland herrschenden Weltanschauung auch in Ritters späteren Publikationen überdeutlich (2).

1952 wanderte Ritter nach Südamerika aus, nach seinen eigenen Angaben "fast ohne Barmittel". Am 7. Dezember 1952 verliess er Marseille auf dem Dampfer "Provence" mit 1150 Passagieren 3. Klasse und kam am 18. 12. in Rio de Janeiro an, wo er seine erste in der FR-Nummernserie numerierte Samenprobe sammelte: *Rhipsalis baccifera* (FR 1) von einem Baum in einem Privatgarten in einem Wohnviertel von Rio de Janeiro (2). Am 23. 12. 1952 kam er in Buenos Aires an, von wo er zu seinen mehrjährigen Sammelreisen durch Argentinien, Bolivien und Chile aufbrach, welche er selbst als "drei Jahre Zigeunerleben" bezeichnete (1).

Die Reiserouten der ersten und der nachfolgenden Reisen sind den von Ritter veröffentlichten Auszügen seines Tagebuches (2) entnommen und wo möglich oder notwendig anhand von Daten von Herbaretiketten (vgl. FR-Nummernliste) ergänzt. Eine vollständige Chronologie wurde nicht angestrebt und war im Rahmen dieser Studie auch nicht möglich. Sie müsste auf einer Auswertung der 74 Notizbücher mit über 5000 Seiten handschriftlicher Eintragungen Ritters beruhen, welche sich im Archiv der Kakteenfreunde "Friedrich Ritter" Nordhessen in Kassel befinden.

Von Dezember 1952 bis Februar 1953 hielt sich Ritter zunächst in Argentinien auf, in den Provinzen San Luis, Mendoza, San Juan, Catamarca, Salta, Jujuy (7. 2. 1953 im Grenzort La Quiaca), von Februar bis Juli 1953 in Bolivien: 7. 2. Villazón, Tarija, 13. 2. Chorcoya - Villazón - 14. 2. Curque (ein "Kakteenparadies", das Ritter schon 22 Jahre vorher besucht hatte), 23. 2. Carrizal - Oroya - Montes - Mal Paso, 24. 2. Camargo, 27. 2. Las Carreras, 7. 3. Chiguana - Ollagüe, 10. 3. Chiguana, Cerro Chiguana, 19. 3. Charaña - Río Mauri - Río Desaguadero - Caripe - Charaña, 21. 3. La Paz, 2. 4. Palca (Illimani), Hacienda Calchani, Ende April in Sorata, 10. 5. Palca - Hacienda Iquico, Chunuavi - Lambate, 7. 6. Chulumani - Ocobaya (Sud Yungas), 22. 6. Unduavi, 4. 7.-8. 7. La Paz-Schlucht - Angostura, 9. 7. La Paz - Hacienda Tirata, 11.-17. 7. Consata-Becken, Ayata, Consata-Tal, Río Llorca - Sorata, in La

Paz Gesuch um Visum für Peru, 20. 7. La Paz - Charaña, 23. 7. Arica. Von Juli bis November 1953 machte Ritter zahlreiche Aufsammlungen in Süd- und Zentral-Peru. Das Tagebuch erwähnt: 5. 9. Acoria (Bahnhofstation, Département Huancavelica) - Acobamba - Marcas - Río Llircay - Marcas, 13. 9. Mantaro-Fluss - La Mejorada, 15. 9. Huancayo, 1. 12. Chala - Quicacha. Im Dezember 1953 hielt sich Ritter in Nord-Chile auf.

Von Januar bis August 1954 machte Ritter viele Reisen in Chile, im Januar von Antofagasta nach Ovalle. Im Februar besuchte er die Maule-Schlucht und die Mina Dolomita östlich von Talca. Von dort reiste er weiter nach Süden. In Puerto Montt nahm er einen Dampfer nach Puerto Aisén. Am 12. März 1954 war er in Chile Chico und Puerto Ibañez. In den patagonischen Trockengebieten am Lago Buenos Aires hoffte er die südlichsten Kakteen Chiles zu finden, welche bis heute nicht nachgewiesen sind. Im April 1954 besuchte er die Laguna del Laja, Chacay und Los Angeles in der Region Bio Bío im südlichen Zentral-Chile (2). Im gleichen Monat begann er von Valparaiso aus einen Briefwechsel mit Hans Krainz von der Städtischen Sukkulentsammlung in Zürich, in dem es um die Bestimmung und Auswertung von Ritters Sammlungen ging. Ritter sandte Kakteenbelege nach Zürich (8, 13). Im Mai 1954 sammelte Ritter in Zentral-Chile und im Juni reiste er nordwärts über Vallenar und Taltal nach Antofagasta, von wo aus er wieder Pflanzen an Krainz schickte. Von Arica aus schrieb er am 23. 6. 1954 an Krainz, dass er Chile verlasse und nach Peru auf Kakteensuche gehe. Er gab eine temporäre Adresse in Lima an und wies darauf hin, dass er ohne Wagen oder Taxi Peru bereise (13).

Das Tagebuch von Ritters Reise nach Nord-Peru im August und September 1954 erwähnt: 6. 8. Tumbes, 7. 8. San Carlos, Matapolo (an der Grenze zu Ecuador), 8. 8. Olmos, 5. 9. Trujillo. Andere von ihm besuchte Orte im Norden waren Huancabamba und Jaén. Von Lima aus schrieb Ritter am 10. 9. 1954 wiederum an Krainz mit Hinweis auf eine weitere Sendung von lebenden Pflanzen und der Frage nach der Bereitschaft zur Bearbeitung des Materials (13).

1954 gab die Kakteengärtnerei H. Winter in Frankfurt a. M. den ersten (undatierten) Samenkatalog heraus, der vor allem von Ritter gesammelte Samen enthielt (9a). Diese Samenangebote einer grossen Auswahl verschiedenster Gattungen aus Südamerika ermöglichte Kakteenfreunden in Deutschland und anderen Ländern den Wiederaufbau der Sammlungen, von denen viele im Krieg verloren gegangen waren oder gelitten hatten.

Wegen Schwierigkeiten, die Ritter mit der Beschaffung von Visa für Reisen von einem südamerikanischen Land ins andere hatte, versuchte seine Schwester, ihm Empfehlungsschreiben von Krainz und Universitätsprofessoren zukommen zu lassen mit dem Hinweis, dass Ritter arm sei und durch den Krieg sein beträchtliches Vermögen verloren habe (27. 11. 1954, 8). Ritters Schwester bat Krainz auch um die Benennung von neuen Arten nach einigen ihrer Kunden, ein Ansinnen, das Irritationen in der beginnenden Zusammenarbeit zwischen Krainz und Ritter hervorrief (Krainz an Ritter, 21. 2. 1955, 8). Ursprünglich sollte Krainz Pflanzen bestimmen, Literatur beschaffen und Veröffentlichungen neuer Arten anhand von Ritters Feldnotizen herausgeben.

Von September 1954 bis März 1955 sammelte Ritter in Bolivien und Argentinien. Das Tagebuch erwähnt für Bolivien: 28. 9. La Paz, 2. 10. Irupana -

La Plazuela - Irupana, 9.-19. 10. Consata-Becken - La Paz - Ayata - Bacobamba - Ayata - Mollopampa - Río Llorca - Mollopampa - Río Palhuaya - Chacajahuira - Achacachi, 26. 10. Inquisivi, 22. 11. Uncia, 12. 12. Sucre - Totora - Aiquile - (Río Grande) - Surina (Zurima?) - Chuquichuqui, 14. 12. Sucre. Von September 1954 bis Januar 1955 werden Orte in allen Departamenten von La Paz und Santa Cruz südwärts erwähnt. Ende Januar 1955 war Ritter in Salta (Argentinien) und schrieb am 31. 1. 1955 an Krainz, dass er peruanische und bolivianische Kakteen von La Paz aus per Post nach Zürich geschickt habe (13). Er hatte grosse Schwierigkeiten, ein Paket mit Samen zu senden, welches auf den Postämtern in Jujuy, Salta, Tucumán und Córdoba nicht angenommen wurde. Ritter reiste deshalb nach Buenos Aires (8. 2. 1955), von wo aus er das Paket schliesslich absenden konnte. In Argentinien besuchte er danach die Provinzen San Luis, La Rioja, Córdoba, Catamarca (1. 3. 1955), Mendoza und Neuquén, bevor er nach Chile zurückkehrte.

Am 20. und 22. 4. 1955 war Ritter in Valparaiso, Chile, von wo er Krainz über die in Chile zwischen dem 28. und 40. Breitengrad gemachten Sammlungen berichtete (13). In einem Brief an Krainz datiert vom 25. 4. 1955 machte Ritter Bemerkungen über die Probleme der Zusammenarbeit, z. B. hinsichtlich unterschiedlicher Ansichten über die Abgrenzung von Arten oder der Auslegung von Namen, und er erklärte sein Ziel: "die Kakteen-systematik, soweit es mir möglich sei, zu klären, was nur durch Bereisung der Heimatgebiete und sorgfältiges Studium der Vorkommen an Ort und Stelle möglich ist." (8). Ritter entschied sich schliesslich für die taxonomische Bearbeitung im Alleingang (12, p. I). Im Mai und Juni 1955 machte Ritter fast 100 Aufsammlungen (hauptsächlich von *Pyrrhocactus*) in Zentral-Chile. Im selben Jahr fand Ritter eine einfache aber ständige Unterkunft im Haus der deutschen Familie Nevermann in Arica, Chile (1). Im August 1955 war Ritter in Santiago de Chile, um einen Ford Modell 1931 zu erwerben, nach seinen eigenen Worten schon fast ein Museumsstück, mit dem er künftig seine Sammelreisen unternahm. Durch Pannen und Reparaturen verlor er aber fast ebensoviel Zeit wie mit dem Fahren (1). Dennoch war er dadurch unabhängig von öffentlichen Transportmitteln. Von September bis Dezember 1955 durchforschte er Zentral-Chile von San Fernando und Santiago bis El Tofo nördlich von La Serena.

Im Januar und Februar 1956 besuchte er viele Standorte und sammelte über 70 Proben im nördlichen Zentral-Chile und in Nord-Chile, besonders in Caldera und Chañaral. Das Tagebuch erwähnt: 7. 1. Totoral - Castilla, 22. 1. Copiapó - die Salzpflanze von Maricunga - El Salado, 17. 2. Paposo, 19. 2. Antofagasta. Im März und April 1956 machte er mehrere Aufsammlungen in Nord-Chile. Es folgte eine Reise per Auto nach Peru im Juni 1956: 13. 6. Atico - Chala, 28. 7. Chilete - San Pablo. Etwa 60 Herbarproben stammen aus verschiedenen Provinzen von Arequipa bis Cajamarca. Ende 1956 bestellte Ritter über den Freihafen von Arica direkt aus den USA einen neuen Ford Kastenwagen. An Weihnachten 1956 war Ritter in Saucache bei Arica bei der Familie Nevermann und gleichentags reiste er per Zug nach Bolivien. Das Tagebuch erwähnt: 26. 12. La Paz, 8. 1. 1957 Molinos - Cruce - Oruro, 15. 1. Uyuni - Tupiza, 17. 1. Villazón an der Grenze zu Argentinien, 20. 1. Tupiza - Uyuni - Chiguana. Zurück in Chile hielt sich Ritter wieder in Saucache bei Arica auf, und im April

erhielt er seinen bestellten Wagen im Freihafen von Arica. Für die erste Fahrt mit dem neuen Wagen nach Peru verlangte der chilenische Zoll eine Garantiesumme in Höhe von umgerechnet 10'000 Deutschen Mark (2). Auf seiner Sammelreise nach Peru von April bis Juli 1957 wurde Ritter von seinem Neffen Dr. Wigbert Winter aus Frankfurt a. M. begleitet (2). Die Fahrt ging durch mehrere Departamente von Arequipa bis Amazonas. Unter den im Tagebuch erwähnten Orten befinden sich: 20. 5. Bellavista - Paita - Pucará, 10. 6. Recuay - Rahuapampa (Sammeln von *Espostoa ruficeps*), 13. 6. Chavin - Recuay, 8. 7. Cuzco, 13. 7. Saxahuanán.

Von August bis Dezember 1957 war Ritter wieder in Chile. Im Oktober 1957 schickte er Herbarbelege von Arica nach Zürich (8) und besuchte Standorte in Nord-Chile: 15. 10. Saucache bei Arica - Chaca, 17. 10. Quillagua, 18. 10. Antofagasta, 19. 10. Cerro Coloso.

Im November und Dezember 1957 machte er zahlreiche Aufsammlungen im nördlichen Zentral-Chile. Weiter südlich machte er am 18. 12. 1957 eine Sammeltour von Talca aus zum Campanario (Río Maule), um *Austrocactus* zu suchen. Weitere besuchte Orte waren danach in Nord-Chile am 28. 12. Castilla und am 29. 12. Chañaral.

In den ersten zwei Monaten des Jahres 1958 besuchte Ritter wenige Orte in Nord-Chile: 11. 1. Puritama, Calamá, 12. 1. Chuquimata, 13. 1. Guanillos (Iquique). Ende Februar 1958 war Ritter in Arica und plante eine Reise nach Bolivien, welche er aus Kostengründen ohne Auto durchführte. Im Tagebuch erwähnte Orte, hauptsächlich im Süden Boliviens, einige auch in den Departamenten La Paz, Cochabamba, und Santa Cruz sind: 13. 3. Las Carreras - Palos Blancos, 4. 4. Pilcomayo-Fluss, 8. 4. Tacuarandi (Tacuayandi?), 10. 4. Narvais (Narvaez), 14. 4. Junacas - Cajas - Río Pilayo (Nebenfluss am Oberlauf des Río Pilcomayo), Colpana, 20. 4. Tarija, 27. 4. Hacienda Oroya bei Carrizal (Potosí) - El Monte - Torata - Impora, 29. 4. Las Carreras (mit Notiz über Erkrankung an Malaria), 3. 5. Las Carreras - La Torre - Las Carreras, 4. 5. Villa Abecia, 12. 5. Culpina - Ingahuasi - Culpina, 15. 5. Salitre - Cueva (Río Pilaya), Challamarca-Fluss, 18. 5. Camargo, 19. 5. Camargo - San Pedro - Culpina - Camargo, 20. 5. Camargo - Potosí, 22. 5. Sucre, 29. 5. La Paz - Irupana - Plazuela (Río La Paz), 1. 6. La Paz, 7. 6. Sorata, 9. 6. Mecapaca - La Paz, 21. 6. Santa Rosa - Santa Rosa-Fluss - Independencia, 23. 6. Río Santa Rosa - Río Sacambaya, 28. 6. Tuini - Quillacollo, 29. 6. Cochabamba, 11. 7. Valle Grande, 12. 7. Unterlauf des Río Mizque, Juntas, Marqueza, 16. 7. Santa Ana - Vallegrande, Saipina - Pérez, 23. 7. Aiquile, Yamparaez, 14. 8. Hacienda Sotomayor am Pilcomayo-Fluss, 22. 8. Oruro - La Paz. Von dieser fünfmonatigen Reise existieren etwa 200 Herbarbelege.

1958 Ritter veröffentlichte Ritter im Selbstverlag kritische Bemerkungen zu Backeberg's Publikation über neue Kakteen aus Peru und beanstandete das Fehlen von sorgfältigen Feldstudien (14).

Im November 1958 besuchte Ritter im eigenen Wagen Süd-Peru: 6. 11. Tacna - Montalva, Tambo-Schlucht, 17. 11. Arequipa - Puno. Danach verbrachte er einen Monat in Bolivien: 21. 11. Desaguadero, 27. 11. Plazuela - La Paz-Fluss, 29. 11. Irupana - La Paz, 12./13. 12. Chullas - Mizque-Fluss - Aiquile, Lecori, 24. 12. Camargo.

Im Januar 1959 setzte Ritter seine Reise in NW-Argentinien fort, wo er sich zwei Monate aufhielt. Viele Herbarbelege wurden von ihm in den Provinzen Salta und Catamarca, einige auch in Jujuy und Tucumán gesammelt. Besuchte Orte waren z. B.: 29. 1. Belén (Catamarca), Berge im Westen, 5. 2. La Puerta - Varela, 8. 2. Tafí del Valle, 13. 2. Cerrillos - Cachi, 16. 2. Cachi, 17. 2. Salta, 19. 2. Salta - Campo Quijano - Salta - Jujuy - Purmamarca, 20. 2. Tres Morros - San Antonio de los Cobres, 21. 2. Puerta Tastil, 23. 2. San Antonio - Tres Morros - Purmamarca, 25. 2. Jujuy - Pocitos. Ritter kehrte dann nach Bolivien zurück und kam am 28. 2. in Villa Montes an, wo er seinen Wagen stehen liess und per Flugzeug nach Santa Cruz (Bolivien) weiterreiste. Von dort aus besuchte er per Bus Cochabamba, kehrte nach Santa Cruz zurück und flog von dort nach Corumbá, Brasilien (18. 3. 1959). Er reiste weiter nach Ponte Porã und überquerte die Grenze nach Paraguay, um die nahegelegene Sierra de Amambay zu besuchen.

Ritter verbrachte die folgenden vier Wochen im östlichen und südöstlichen Brasilien. Am 27. 3. reiste er mit der Eisenbahn von Rio de Janeiro nach Corinto und Diamantina (Minas Gerais) und am 31. 3. per Bus nach Itamarandiba. Von Itamarandiba aus ging er in die Serra do Ambrosio, nach Penha da França und Mercedes und kehrte nach Diamantina zurück, von wo er nach Montes Claros flog. Am 4. 4. war er in Januaria, am 5. 4. in Montes Claros. Seine Rückreise führte durch Südost-Brasilien: 19. 4. Canela, 20. 4. Rolante bei Porto Alegre (Rio Grande do Sul). Von dort fuhr er durch die argentinische Provinz Corrientes nach Resistencia in der Provinz Chaco (Argentinien). In seinem Tagebuch beklagte sich Ritter über die schlechten Zugverbindungen für die Rückreise nach Bolivien. Seine Reiseroute war: 5. 5. Resistencia, 6. 5. Anatuya, 7. 5. Tucumán - Jujuy, 9. 5. Jujuy - Pocitos, Grenzübergang nach Bolivien. Von Villa Montes fuhr Ritter im eigenen Wagen über Llallagua, Huanumi und Oruro nach Chile zurück. Im Mai 1959 machte er einige Aufsammlungen in Peru auf dem Weg von Tacna nach Charaña.

Aus der Zeit von Juli bis Dezember 1959 ist nichts Genaueres über Ritters Reisen bekannt. Es gibt vereinzelte Belege datiert vom Juli 1959 aus Argentinien, vom September 1959 aus Chile und vom Dezember 1959 aus Bolivien, aber diese Daten sind möglicherweise falsch.

Von Dezember 1959 bis Februar 1960 hielt sich Ritter in Nord-Chile auf. Besuchte Orte waren z. B.: 9. 12. La Serena - Juan Soldado, 27. 12. Cachita, Taltal, 30. 12. 1959 Taltal - Paposo, 6. 1. 1960 Antofagasta.

Am 12. 2. 1960 verliess Ritter Arica für eine weitere Reise im eigenen Wagen nach Peru: 21. 2. Lima - Chosica, 6. 4. El Pallar - Cajabamba, 7. 4. Río Crisnejas, 13. 4. Cajamarca - Celendin, 14. 4. Balsas, Jaén, Hacienda Valor am Marañón - Milagro - Aramayo - Milagro, 28. 4. Quebrada Honda, 29. 4. Hacienda Valor, 5. 5. Trujillo, Santa, Chimbote (Autounfall, Verzögerung), 28. 5. Yaután, 13. 6. Trujillo, 19. 6. Chimbote.

Im September und November 1960 war Ritter in Chile. Arica - Zapiga und Saucache sind erwähnte Orte, Aufsammlungen existieren aus Chapiquiña in Nord-Chile.

Aus dem Jahre 1961 sind nur Belege aus Chile bekannt, vor allem aus dem nördlichen Zentral-Chile im Oktober. Im gleichen Jahr und auch 1962 enthielt

der Katalog der Firma H. Winter in Frankfurt nicht nur Samen sondern auch Importpflanzen aus Peru (9b, p. 19, 9c, p. 19). Viele Publikationen neuer Arten, die von Ritter entdeckt worden waren, erschienen von 1961 an bis 1970 (und wiederum 1977) in der Zeitschrift *Kakteen und andere Sukkulente* in der Bundesrepublik Deutschland.

Im März 1962 machte Ritter eine Samensammelreise im eigenen Wagen nach Bolivien und Argentinien. Im Tagebuch erwähnte Orte sind: 20. 3. Villazón, 21. 3. Tupiza, 24. 3. Las Carreras - Mal Paso, 28.-31. 3. Impora (dort verbrachte er zweieinhalb Tage mit dem Sammeln und Reinigen von Samen von *Oreocereus trollii*). Fast 50 Aufsammlungen wurden von März bis Mai 1962 im Nordwesten Argentiniens in den Provinzen Jujuy, Catamarca, La Rioja, San Luis und Mendoza gemacht. Wie aus der Adressänderung in seinen Publikationen hervorgeht, wechselte er seinen Aufenthaltsort oder wenigstens die Postadresse im Mai 1962 von Arica, c/o Nevermann, nach Correo Olmue in Zentral-Chile. Im Oktober 1962 war Ritter wieder in Nord-Chile, wo er 13 Tage in Antofagasta und Umgebung verbrachte. Im November 1962 verließ er Chile per Auto für eine mehr als viermonatige Reise durch Bolivien: 1. 11. Chiguana, San Juan - Colchac (Nor-Lipez), 2. 11. Colchac - Salzpflanze - Colchani - Uyuni, 3. 11. Uyuni, 21. 11. Cotagaita, 23. 11. Tupiza - Mal Paso, La Paz, 8. 12. San Antonio - Paicho-Schlucht - Caña Cruz - San Antonio, 29. 12. Tarija. 5. 1. 1963 Palos Blancos - Villa Montes, 6. 1. Villa Montes, 17. 1. Boyuibe - Camiri - Villa Montes, 22. 1. Villa Montes - Tihuipa - Tarija - Junacas - Polla - (Cajas-Schlucht), 4. 2. Tarija, Salitre - Cueva, 22. 2. Culpina, 7. 3. Potosí, 9. 3. Potosí, 10. 3. Challapata, 12. 3. Sevaruyo, 13. 3. Transport des Wagens mit der Eisenbahn von Sevaruyo nach Uyuni und weiter nach Chile.

1963 unternahm Ritter noch eine längere Reise ohne Auto nach Paraguay und Brasilien. Daten und Orte in Paraguay waren: 18. 9. Asunción - Filadelfia, Cerro León, 3. 10. Concepción - Sierra de Amambay, Guazú, 9. 10. Ypane-Fluss - Aquidaban-Fluss, 14. 10. Cerro Corá, 16. 10. Concepción - Arroyo Aceite, 29. 10. Yhú, 6. 11. Asunción, 16. 11. Asunción - Nueva Italia, 19. 11. Asunción. Von dort reiste er über Goiânia (4. 12.) nach Ost-Brasilien. Von Brasilia flog er am 7. 12. nach Carolina (Maranhão) und am 15. 12. nach Florianópolis (Piauí).

Im Januar 1964 durchforschte er Bahia (5. 1. Iaçú, 7. 1. Urandí, 11. 1. Mutás, 13. 1. Palma de Monte Alto - Mutás, 16. 1. Guanambí) und das nördliche Minas Gerais (3. 2. Montes Claros, 10. 2. Belo Horizonte). Am 12. 2. war er in Rio de Janeiro und im März 1964 in Rio Grande do Sul. Belegmaterial existiert vor allem aus Bahia, Minas Gerais und Rio Grande do Sul, wenig aus den Staaten Goiás, Maranhão, Mato Grosso, Pernambuco, Piauí und Rio de Janeiro.

Im gleichen Jahr (1964) wurde Ritter zum Ehrenmitglied der Deutschen Kakteen-Gesellschaft (DKG) ernannt. Die Gesellschaft ehrte Ritter für seine unermüdliche Forscher- und Samensammlertätigkeit und für die zahlreichen Neufunde und Neubeschreibungen von Kakteen aus Südamerika. Eine Bibliographie wurde in Aussicht gestellt (15). Gleichzeitig wurde ein auf Bitte der DKG von Ritter selbst verfasster Beitrag über sein Leben, seine Forschungs- und Sammelreisen in der Zeitschrift "Kakteen und andere Sukkulente" veröffentlicht (1).

Von Juli bis September 1964 unternahm Ritter im eigenen Wagen eine

Samensammelreise nach Zentral- und Nord-Peru: 27. 7. Cajamarca, 16. 8. Rahuapampa, 21. 8. und 22. 8. Catac (bei Recuay). Kinder wurden als bezahlte Helfer beim Sammeln von *Thrixanthocereus*-Früchten eingesetzt, und Ritter beschrieb selbst die damit verbundenen Schwierigkeiten und Gefahren (2, p. 293).

Von November 1964 bis Februar 1965 sammelte Ritter im östlichen und südöstlichen Brasilien: 4. 11. Belo Horizonte - Penha da França, 16. 11. Mercedes, 1. 12. Montes Claros, 3. 12. Bom Jesus, 11. 12. Caetité - Tanhaçú (mit dreitägiger Wanderung durch die Serra da Sincorá), 17. 12. Brumado, 19. 12. bis 25. 12. Ourives (eine besonders kaktéenreiche Gegend), 15. 1. 1965 Caratinga, Arraial do Cabo - Sacarema, 22. 1. Niteroi - Rio de Janeiro, 23. 1. Rio de Janeiro, Ilhabela - São José dos Campos, 31. 1. São José dos Campos, 4. 2. Piedade (São Paulo) - São Paulo, 7. 2. Itapoa, 8. 2. Porto Alegre, 7. 2. Itapoa, 15. 2. Montenegro.

Nach den Herbarbelegen zu urteilen, besuchte er 1965 auch Uruguay (Rivera, an der Grenze zu Brasilien). Ein Besuch in Paraguay im gleichen Jahr (nicht durch Herbarmaterial belegt) ist in seinem Abenteuerbuch erwähnt (2, p. 304). Demnach kehrte er am 11. 4. 1965 von einer Reise durch Paraguay und Brasilien nach Chile zurück. Ritter lebte in Granizo bei Olmue und war lokal als "Don Federico" bekannt. Besucher beschrieben sein Haus als einsam, auf trockenen Hügeln fast am Südhang des Cerro la Campana nicht weit von Villa Alemana gelegen (10).

Ritters Reisen im Jahre 1966 sind unbekannt, aber es gibt so datierte Herbarbelege aus Argentinien (1 Probe), Bolivien (5), Chile (1) und Brasilien (viele aus Río Grande do Sul).

1967 publizierte Ritter neue Arten in der holländischen Zeitschrift "Succulenta". Im gleichen Jahr war er wieder in Bolivien (8. 3. Villa Abecia - Río Pilaya - Villa Abecia). Später verbrachte er einige Zeit in einer Gegend ohne Kaktéen im südlichen Zentral-Chile (11.-16. 4. Río Puelo, Prov. Llanquihue). Nur sehr wenige Herbarbelege sind mit 1967 aus Chile datiert, ferner je einer aus Brasilien und Argentinien, doch erscheinen diese Daten zweifelhaft.

Ende Dezember 1968 hatte Ritter in Granizo Besuch von A. F. H. Buining und seiner Frau. Buining erwähnt die rund um das Haus gepflanzten Kaktéen. Im Januar und February 1969 unternahmen sie gemeinsam eine zweimonatige Sammelreise durch Chile und Peru, über welche Buining später berichtete (6). Das Itinerar erwähnt für 1969 in Chile: 9. 1. Granizo - La Serena - Copiapó - Chañaral - Taltal, 19. 1. Fundort von *Copiapoa hypogaea* - Antofagasta - Tocopilla - Iquique - Arica, und in Peru: Tacna - Moquegua - Arequipa - Puno - Cuzco - Urcos, 19.2. Ocona - Atico - Chala - Nazca - Ica - Pisco-Tal - Cañete - Chosica - Rimac-Tal - Eulalia-Tal. Während dieser Reise wurden lebende Pflanzen gesammelt, welche nach Holand geschickt wurden (6, p. 39). Der einzige Herbarbeleg aus Peru, datiert 1968, ist die Nummer FR 1308a.

1969 wurde Ritter von Alfred Lau in Granizo besucht (10). Einige Aufsammlungen, datiert 1969, sind aus Chile und wenige aus Peru bekannt.

1970 ging Ritter nach Nord-Peru. Erwähnte Orte sind: 1. 6. Chocope, nördlich von Trujillo - Contazuma, 4. 6. Trujillo. Von 1970 sind aus Peru keine Aufsammlungen bekannt, wenige aus Südost-Brasilien. Die einzige Samenprobe

(FR 1471 loc. 2) von 1970 aus Peru hat möglicherweise ein falsches Datum, obwohl dieses auf der Original-Samenprobe in ZSS vermerkt ist.

1971 reiste Ritter ein letztes Mal nach Brasilien. Am 25. 11. suchte er ohne Erfolg nach Blüten und Samen von einer seiner früheren Entdeckungen, *Coleocephalocereus flavisetus*. Von diesem Fundort 11 Kilometer südlich von Engeneiro Caldas musste er den ganzen Weg im Regen zurückstapfen ohne Aussicht auf ein Verkehrsmittel. Dort kam er auf den Gedanken und fasste den Beschluss, dass dies nach sovielen Jahren entbehrungsreicher und riskanter Sammeltätigkeit zum Nutzen der Kakteenfreunde in aller Welt der letzte Tag sei, an dem er hinter Kakteen hergelaufen sei (2, p. 309).

Ritter berechnete die insgesamt auf Sammel- und Forschungsreisen verbrachte Zeit in Südamerika auf 6 Jahre und 10 Monate. Davon entfallen etwa 28 Monate auf Chile, über 21 auf Bolivien, etwa 18 auf Peru, über 7 auf Argentinien, über 5 auf Brasilien und 2 Monate auf Paraguay (1).

Aus politischen Gründen verliess Ritter 1972 Chile mit Hab und Gut, jedoch unter Zurücklassung seines Herbariums und nahm bis 1976 in Paraguay Wohnsitz (5). Er deponierte das Herbarmaterial im Museo Nacional de Historia Natural in Santiago de Chile (11, 2, p. III). Aus der Zeit seines Aufenthalts in Paraguay liegen zwei Herbarbelege datiert 1973 vor (FR 1006 loc. 10, and FR 1490).

1976 kehrte Ritter nach Deutschland zurück. Er lebte bei seiner Schwester in Spangenberg, südlich von Kassel (5).

1977 veröffentlichte Ritter einen Auszug aus seinen Tagebüchern als Buch mit dem Titel "40 Jahre Abenteuerleben und die wilde Weisheit" ergänzt mit Anmerkungen aus den Jahren 1974 bis 1976. Von den Kakteenfreunden lange erwartet, brachte dieses Buch allerdings neben autobiographischen Abenteuer geschichten mit Einblick in Ritters ruhelose, selbstdisziplinierte und asketische Lebensweise in erster Linie eine Schilderung von Ritters Weltanschauung. Ein ausgeprägt rassistische Sichtweise begleitet und dominiert alle seine Beobachtungen und später eingefügten Anmerkungen (1, 2). Ein Sachverzeichnis am Schluss des Buches konzentriert sich ausschliesslich auf seine Ansichten über Zivilisation, Sitten, menschliche Eigenschaften, Rasse und Vererbung (2).

In Spangenberg arbeitete Ritter an seinem vierbändigen Werk über die Kakteen Südamerikas, welches von 1979 bis 1981 erschien (12a-d). Ritter hatte 1972 praktisch sein gesamtes Herbarmaterial mit Ausnahme der Samensammlung und der in den Sechzigerjahren in Utrecht deponierten Holotypen in Santiago de Chile zurückgelassen. Man muss davon ausgehen, dass Ritter während der Niederschrift der Endfassung seines Manuskripts keine Sammlungen mit Ausnahme der Samen mehr vorliegen hatte. Eine Anzahl zusätzlicher Typusbelege wurde von Ritter im Anschluss an einen Briefwechsel über in Utrecht fehlendes Typusmaterial 1980 dort deponiert (11).

Ritters umfassendes Werk mit dem Untertitel "Ergebnisse meiner 20jährigen Feldforschungen" ist eine taxonomische Bearbeitung der Kakteen von Brasilien, Paraguay, Argentinien, Bolivien, Chile und Peru, welche detaillierte Beschreibungen vieler Taxa, Kommentare und photographische Abbildungen, jedoch keine Bestimmungsschlüssel enthält. Es basiert in erster Linie auf Ritters

sehr ausführlichen Feldnotizen. Angaben aus der Literatur sind oft in Klammern beigefügt. Das Werk enthält auch einen gewissen Anteil an polemischen Bemerkungen über die Arbeiten zeitgenössischer Kakteenspezialisten wie Backeberg, Buxbaum und Rauh. Wie seine früheren Buchveröffentlichungen publizierte Ritter dieses Werk im Selbstverlag und vertrieb es insbesondere über Kakteenbuchhandlungen und Kakteengärtnereien.

1981 sandte Ritter einen grossen Teil seiner Diapositive leihweise an die Herausgeber der Zeitschrift "Literaturschau Kakteen" in der damaligen Deutschen Demokratischen Republik, wo seine Bücher nicht erhältlich waren. Eine überarbeitete Liste der FR-Nummern mit zahlreichen Farb- und Schwarzweissbildern erschien 1982 in dieser Zeitschrift (16, 17, 18).

1981 gaben sich die Nordhessischen Kakteenfreunde, eine Ortsgruppe der Deutschen Kakteen-Gesellschaft, in Würdigung der Verdienste Ritters den Namen "Kakteenfreunde Friedrich Ritter Nordhessen" (4). Im Oktober 1982 schenkte Ritter seine gesamten Feldnotizen, Listen und andere Dokumente sowie seine komplette Samensammlung (jetzt zur dauerhaften Verwahrung in ZSS) dieser Ortgruppe.

1982 verliess Ritter die Bundesrepublik Deutschland und nahm Wohnsitz in Puerto de la Cruz auf der Insel Teneriffa (Kanarische Inseln). Dort beschäftigte er sich ausschliesslich mit der philosophischen Frage "Weltall und Mensch" (4). Friedrich Ritter starb am 9. April 1989 im Alter von nahezu 91 Jahren (4).

The Ritter-Collections – Introduction to their Problems – Conventions Adopted

General Problems Associated with the Ritter-Collections

- Ritter did not use collection numbers in the usual sense but employed *de facto* 'taxon numbers' (Ritter 1979: ii [cited below as KS; see also below for a list of abbreviations used]); his numbers therefore do not relate to a single collection made at a single date at a single location, but as many as 10 or more different gatherings (from different localities) are covered by one and the same number. In order to differentiate between various gatherings under one and the same number, an addition or extension in the form of *loc. x* has been added by the present authors to the number, where *x* is a sequential number starting with 1. It should be noted that this *extension* of the Ritter collection numbers is purely arbitrarily chosen. A chronological or geographical order could not be established due to the fact that the material belonging to one FR-number was stored in different herbaria. Hence it could not be arranged and compared in sequential order before starting the inventory. In the specimen list to follow, some of these *loc.* numbers appear to be missing from the series because no herbarium specimens have been found for them. Such 'missing' numbers might relate to living material (predominantly cultivated at ZSS) or to a locality only recorded from the literature or from correspondence.
- Original labels in Ritter's handwriting are present for most of the collections at SGO, but hardly ever at U and ZSS (with the exception of the original Ritter seed samples where original labels are present). Localities as copied from such original labels (or from secondary sources such as archived letters) are given in *double quotes* ("") in the specimen list to follow. Material without a directly associated locality (i.e., no original label present and no secondary evidence from correspondence, etc.) is normally associated with the locality published with the protologue and/or in KS, but such information is not given in double quotes. Ritter's usage of 'collection numbers' often made it necessary for him to change these numbers whenever his concept of a taxon changed. This is especially apparent on the original labels preserved with the specimens at SGO.
- Ritter's unorthodox numbering system makes the typification of his newly described taxa very difficult. Our interpretation of specimens as representing type material and our assignment of type status (holotype, isotype, syntype, type number) has to be regarded as a *preliminary suggestion* only. In the case of 'type numbers' with many different localities recorded in this list, the status of 'type number' is only associated with the specimens collected from the type locality or its immediate vicinity, as far as this can be ascertained. Other collections under 'type numbers' are not given any special status. To

save space, no comments identifying ‘type numbers’ as such are included with the individual collections. To aid with the interpretation of type status, the type for new taxa published by Ritter (or the material which served as basis) is indicated, together with other nomenclatural information.

Under no circumstances are we trying to select a given specimen as holo- or lectotype. In addition, we would like to point out that we as compilers of this list do not accept any name which might be interpreted as having been validated here.

- The classification used in the following list is according to the field number list in KS 4, i.e., Ritter’s own classification. Exceptions are made for the illegitimately used generic names *Piptanthocereus* (covered under *Cereus*), and *Platyopuntia* (covered under *Opuntia*).
- The dates associated with various collections are to be interpreted with caution. In the case of material deposited at U and ZSS, the date on record frequently appears to be the date of shipment or the date of accession, not the date of collecting. On the other hand, it seems that Ritter collected at different dates or years in the same places (cf. *Ritter 197 loc. 3* at SGO; *Ritter 243 loc. 5* and *Ritter 243 loc. 6*; *Ritter 225b loc. 2* and *Ritter 225b loc. 5*). Numerous original seed samples at ZSS have two or even more different dates on the original labels and further illustrate the problems associated with collection dates.
- The localities as recorded on the original labels frequently differ only slightly from one collection to another with the same collection number. They sometimes even differ between the two (or more) labels present in most collections at SGO. In some cases (e.g., *Ritter 633 loc. 3*) a sample even comprises a range of collections from different altitudes. Separate entries have been made (i.e., different loc.-numbers have been assigned) when such labels can be attributed to different specimens.
- There are sometimes conflicting details, e.g., for *Ritter 662 loc. 2*, which was collected before the year reported as the time of discovery of the taxon.
- For most of the material at ZSS (with the exception of the original Ritter seed samples) and for part of the material at U, no original labels have been preserved. At SGO, there are also some collections without locality data. In such cases, the published locality information (mostly from the protologue or from KS 1-4) or information taken from Ritter correspondence (mostly archived at ZSS) is used instead but not given in quotes. If there is no evidence that all the material has been collected in the same region, material without original information or information from secondary sources is treated as ‘sine loco’.
- Ritter’s usage of autonyms for typical varieties and subspecies was inconsistent in the field-number list in KS 4, which is used as primary source for the identification of his collections. Therefore, no subspecies or varietal epithets are given for the typical subspecies or varieties in the specimen lists to follow. An appropriate comment is made where necessary.

- Sometimes Ritter's identifications of his collections in the field number list in KS 4 are tentative only. This is covered by comments in the specimen list.

Scope of the Taxonomic Information Given in the List

The taxonomic information used for the taxon list is based on the taxonomic database maintained at ZSS, itself predominantly based on the annual *Repertorium Plantarum Succulentarum* (RPS) published by IOS since 1950. Some of the comments included for certain taxa relate to this publication, especially when entries have been corrected in comparison with the published version.

As a consequence of the use of this database, author names are given in full (complemented by initials where necessary, following Brummitt & Powell 1992), literature citations are separated from author names by a dash, and abbreviations generally follow BPH and TL-2, partly also a new specialized bibliography (Eggl 1985).

This database, which is continuously expanded to cover more names, also contains typification information. This information is included in the present list for basionyms, whenever it is recorded. It is always included for the Ritter basionyms but not for names published by others.

The present taxonomic list of the Ritter collections includes a great number of homotypic synonyms, as far as these are combinations (or basionyms) of the names used by Ritter. They are included in a cross-referenced way (see appendix) to facilitate the usage of the specimen list, but coverage is not completely exhaustive.

Ritter is responsible for a plethora of *provisional names*, either used by him directly or in the seed catalogues issued by his sister, H. Winter. Many of these have been relegated to synonymy by Ritter when he published KS 1-4. For the remaining names we attempt to list the collection number on which they are based. As provisional names are not validly published under the ICBN (Greuter et al. 1988, 1994), they have no standing under the Code and accordingly cannot have types. Therefore, material of such numbers is not treated in a special way or assigned 'type status'.

The taxon - collection number cross-reference index includes all basionyms and/or (depending on the case) later combinations of the names included. It was generated automatically from the information recorded in the database. As heterotypic synonymy is always based on interpretation and personal concepts, we have not included any such synonyms. This is also true of a few names published by Ritter which were later placed in the synonymy of some other taxon by himself.

Geographical Standardization

The geographical names used by Ritter to indicate his localities have been standardized as far as possible from internal evidence, i.e. employing

information supplied by Ritter on original labels, in protologues of relevant taxa, and in KS 1-4 as well. For many localities, several variant spellings have been used by Ritter. Frequently, diacritical signs have been omitted completely or in part. More difficulties were presented by information on major and minor administrative units (provinces, departments, etc.), which are sometimes indicated by Ritter, sometimes not. For some collections, the information supplied by Ritter is in conflict with the modern cartographical sources and gazetteers consulted.

We have tried to verify the localities given as far as possible. Corrections in spelling and expansion of abbreviated names are normally given in the translated locality data. Cases where uncertainties have remained are commented within angular brackets ({}). For the standardization of geographical names, the series of *Ornithological Gazetteers* published by the Bird Department of the Museum of Comparative Zoology of Harvard University have proved invaluable (Paynter 1985, 1988, 1989, 1992; Paynter & Traylor 1991; Rand & Paynter 1981; Stephens & Traylor 1983). Additional geographical sources are listed in the reference section. Department and/or province names have been added to the localities predominantly from these sources in those cases where they were not already provided by Ritter himself (either on the labels, which is only rarely the case for early collections, or in protologues or other publications by him). We have not attempted to add such information for Ritter's collections from Chile as he himself mostly omitted province and department names in these cases.

Ritter Specimens at SGO

- For most specimens at SGO, the original labels are still conserved. There are usually two labels associated with each specimen, one derived from the outer newspaper wrapping, the other originally included in the package with the specimen (and mostly written on the white margin of newspaper pages, rarely on regular writing paper). When the specimens were transferred to jars by SGO staff, the inner label was glued on a piece of cardboard carrying the SGO accession number on the reverse side.
- A small number of specimens seems to derive from cultivated material. It appears that Ritter sometimes collected cuttings or small plants to cultivate them in his garden at his house at Olmué, Chile, or to give them to friends for cultivation (see e.g. seed sample at ZSS of *Ritter 537 loc. 2*). If necessary, such cases are covered by comments, when the material is interpreted as being from cultivation.
- Some specimens, mostly pressed flowers, were very probably supplied by H. Winter from material cultivated in Germany. In very few cases H. Winter has also supplied comments (e.g. *Ritter 540 loc. 1*).
- Original comments by Ritter on the labels frequently express doubts on the identity of the material. This is especially problematical in the case of 'type'

collection numbers. Such material is therefore normally not treated as having type status.

- Ritter ascertains (by correspondence with B. Leuenberger, dated 10. June 1980) that the material which was eventually deposited at SGO did not contain any types. However, at least one specimen (*Ritter 322 loc. 2*) has been found which is annotated as 'type' by Ritter himself.

Ritter Collections at U

- The material at U was, as far as known, received in part via A. F. H. Buining. The dates associated with the specimens are to be interpreted very cautiously, as in most cases they might relate to the accession date.
- Only part of the specimens was properly accessioned at U, as testified by the U accession number. The remaining specimens have no accession numbers.
- Original labels are present for most specimens. They frequently lack any indication of a collection number, this number then being inferred from the identification and the locality. Unfortunately, sometimes no locality is given either. All such cases are covered by appropriate comments.
- Only a minority of the (type) specimens at U are annotated as to type status by Ritter himself (being denoted as 'Holotypus', 'Typus', etc.). In the remaining cases, material at U is interpreted as constituting the holotype if the type was indicated for U and if there is only a single specimen present. An appropriate comment is made in each case.

Ritter Collections at ZSS

- The Ritter specimens at ZSS (with the exception of the original Ritter seed samples) have no original Ritter labels preserved, and all information on localities is derived either from the non-original labels attached to the specimens or from secondary sources, mostly from the specimen lists associated with the herbarium, from index cards associated with seed samples, and from Ritter correspondence.
- Only part of the specimens were supplied to the herbarium directly by Ritter (indicated by the comment 'leg. Ritter'). A large volume of material is derived from cultivated plants, or from plants which died in cultivation. It appears that the material sent by Ritter as type specimen was sometimes inadvertently placed in cultivation, and specimens were frequently only prepared later (e.g., *Ritter 671*).
- In addition, much of the material with Ritter numbers cultivated at ZSS derives from other sources than Ritter directly. The most prominent source of such material was the firm of H. Winter which (exclusively ?) supplied seeds. In addition, other sources supplied material to ZSS as well, and the status of such material (often coming from horticultural firms) is

questionable in many cases. It is here included (mostly with the status of 'type number', or without type status) for the sake of completeness.

- In the fall of 1993, ZSS received Ritter's original set of seed samples (some 1600 envelopes) for permanent custody (referred to as *original Ritter seed samples* in this list). These seed samples, all with original labels in Ritter's handwriting, were part of the Ritter archives kept according to Ritter's last will by the Kassel branch of the German Cactus Society (DKG).
This collection of original Ritter seed samples is very valuable in the context of completing the inventory of known collection localities. This seed collection is kept separate from the other seed collections at ZSS, which is reflected in the SR prefix (for Seeds Ritter) used with the ZSS herbarium accession numbers.
- In some cases, the holotype is cited for ZSS in the protologue, but none of the several specimens present has been selected as holotype. Such material has been assigned the status of 'type collection'.
- ZSS has a small number of specimens with erroneous duplicate Ritter numbers (e.g., *Ritter 445*). All evidence points to Ritter as the source of this error, and no material under these erroneous numbers is found elsewhere. These numbers are covered by adding the suffix 'p.p.(2)', to distinguish them from ordinary 'loc.' numbers.
- There are numerous original accessions directly received from F. Ritter (as cuttings or more commonly as seeds) growing up to the present in the greenhouses and frames at ZSS. In addition, a large number of material grown from seed collected by F. Ritter and ordered from the catalogues of H. Winter or supplied by other sources is also grown, and additional herbarium specimens are continually being prepared as material becomes available and time permits. The ZSS holdings of Ritter material are therefore still expanding by the addition of specimens derived from cultivated material.

Ritter Collections at B

- The Berlin-Dahlem herbarium possesses only herbarium specimens of F. Ritter plants prepared after 1980 from cultivated material grown in the Berlin Botanic Garden from seeds ordered from the seed catalogues of H. Winter in the period 1957-1961. These specimens are kept in the Garden Herbarium which is separate from the main herbarium (indicated by herbarium numbers prefixed with 'GH').
- Although the Ritter number had not been registered in the accession lists and on the labels, it can usually be inferred from the name and the indication of the catalogue year (e.g., 'Winter 1957'). Normally, only one seed offer (either from collections by F. Ritter or from other sources) is given for any one name in the Winter catalogues. Since Ritter numbers represent species

and not collections, the numbers can be assigned to the names in the cases which refer exclusively to Ritter seed collections.

- Material is only cited under those Ritter numbers for which herbarium material is extant. Of the c. 265 currently living accessions which can be attributed to Ritter collections, 150 are at present documented in the Garden Herbarium by a specimen (often only a flower combined with a photograph of the plant). More material will be added as it becomes available in the future, as indicated for ZSS above.

Missing Types

A relatively small number of holotype specimens indicated for U are missing as far as it was possible to ascertain, and this is indicated accordingly for each taxon. In most of these cases, type material (although frequently only in the form of seed samples at ZSS) is available elsewhere, and accordingly, the relevant typification information is available for these taxa.

For the taxa listed below, no type nor other material could be traced, and these names are therefore absent from the lists to follow in the main part of this publication:

Hymenorebutia tiegeliana var. *dimorphipetala*
Lobivia tuberculosa
Loxanthocereus yauyosensis
Maihueiniopsis ovata fa. *calva*
Maihueiniopsis ovata fa. *sterilis*
Pereskia stenantha
Piptanthocereus calcirupicola var. *pluricostatus*
Rebutia lanosiflora
Rebutia mamillosa var. *orientalis*
Rhipsalis hohenauensis

References

Note: The references exclusively used for the biographical sketch of Friedrich Ritter and for compiling his itineraries are listed at the end of the biography-chapter.

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Die Ritter-Belege – Einführung in die Problematik – Verwendete Konventionen

Allgemeine mit den Ritter-Aufsammlungen verbundene Probleme

- Ritter verwendete keine Sammelnummern im üblichen Sinne, sondern benutzte *de facto* ‘Taxon-Nummern’ (Ritter 1979: ii¹ [untenstehend als KS zitiert; vgl. die Liste der verwendeten Abkürzungen]). Entsprechend bezeichnen Ritters Nummern keine einzelnen, an einem Ort und zu einem Zeitpunkt gemachten Aufsammlungen, sondern umfassen bis zu 10 und mehr verschiedene Aufsammlungen (von verschiedenen Lokalitäten). Um zwischen den verschiedenen Aufsammlungen unter ein und derselben Nummer unterscheiden zu können, wird durch die Autoren der vorliegenden Liste ein Zusatz der Form *loc. x* eingeführt, wobei *x* eine sequentielle mit 1 beginnende Numerierung bezeichnet. Es ist zu beachten, dass dieser *Zusatz* zu den Ritter-Sammelnummern weder zur Chronologie der Aufsammlungen noch zu den Lokalitäten eine Beziehung hat. Da das Ritter-Material sich auf verschiedene Herbarien verteilt, war es unmöglich, vor Beginn der Inventarisierung eine sequentielle Ordnung zu erarbeiten. In der Liste der Ritter-Belege fehlen einige dieser *loc.*-Nummern, da zu diesen Aufsammlungen keine Belege existieren. Derartige ‘fehlende’ Nummern beziehen sich einesteils auf Lebendmaterial (v.a. in ZSS kultiviert), anderenteils auf Lokalitäten, die nur aus der Literatur oder aus Korrespondenz bekannt sind.
- Für fast alle Belege in SGO existieren Originaletiketten in Ritters Handschrift; derartige Etiketten fehlen aber fast ausnahmslos für das Material in U und ZSS (mit Ausnahme der Original-Samenbelege). Fundortangaben, die entweder direkt von solchen Originaletiketten oder aus Sekundärquellen wie archivierten Briefen entnommen wurden, sind in der Belegliste in *doppelte Anführungszeichen* ("") gesetzt. Material, das nicht direkt mit einer Fundortangabe verbunden ist (d.h. in Fällen, wo keine Originaletiketten mehr vorhanden sind, und wo keine Hinweise in archivierten Briefen, etc., aufzufinden sind), wird in der Regel den im Protolog oder in KS zitierten Fundortangaben zugeordnet, aber diese Informationen werden ohne doppelte Anführungszeichen aufgelistet. Ritters Art der Verwendung seiner ‘Sammelnummern’ brachte es mit sich, dass er diese Nummern immer dann ändern musste, wenn er sein Konzept eines bestimmten Taxons änderte. Dies wird vor allem auf den Originaletiketten der Belege in SGO deutlich.

¹ Das Quellenverzeichnis für diesen Abschnitt findet sich am Ende der englischen Version.

- Verursacht durch die unorthodoxe Verwendung von 'Sammelnummern' gestaltet sich die Typisierung der von Ritter neubeschriebenen Taxa sehr schwierig. Unsere Interpretation der Belege in Bezug auf ihren Typstatus sowie die Kennzeichnung als Holotyp, Isotyp, Syntyp oder Typnummer muss deshalb lediglich als *vorläufiger Vorschlag* betrachtet werden.
Im Falle der 'Typnummern', bei denen in der Belegliste mehrere verschiedene Lokalitäten aufgelistet sind, wird der Status als '*type number*' nur für die Belege von der publizierten Typlokalität sowie deren unmittelbaren Umgebung (soweit nachvollziehbar) akzeptiert. Weitere Aufsammlungen unter den 'Typnummern' erhalten keinerlei besonderen Status. Um Platz zu sparen, werden die einzelnen derartigen Aufsammlungen auch nicht mehr weiter gekennzeichnet. Um die Interpretation des Typstatus der einzelnen Aufsammlungen zu erleichtern, werden für die von Ritter neubeschriebenen Taxa jeweils die Typen (bzw. das zugrundeliegende Material) zusammen mit den übrigen nomenklatorischen Angaben angegeben.
Unter keinen Umständen ist damit beabsichtigt, einen bestimmten Beleg als Holo- oder Lectotyp auszuwählen. Zusätzlich möchten wir auch mit aller Klarheit darauf hinweisen, dass wir als Bearbeiter der Belegliste keinen Namen akzeptieren, der allenfalls in der Liste validiert worden sein könnte.
- Die in der Belegliste verwendete Klassifikation folgt weitgehend der Liste der Sammelnummern in KS 4, d.h. Ritters eigener Klassifikation. Ausnahmen werden für die illegitimen Gattungsnamen *Piptanthocereus* (unter *Cereus* behandelt) und *Platyopuntia* (unter *Opuntia* behandelt) gemacht.
- Die mit den einzelnen Aufsammlungen verknüpften kalendarischen Daten müssen mit Vorsicht interpretiert werden. Im Falle des in U oder ZSS deponierten Materials handelt es sich bei den Daten auf den Etiketten offenbar häufig um das Versanddatum der Belege oder um das Datum der Akzession, jedoch nicht um das eigentliche Sammeldatum. Andererseits scheint es, dass Ritter zu verschiedenen Zeitpunkten oder Jahren an denselben Örtlichkeiten sammelte (vgl. *Ritter 197 loc. 3* in SGO; *Ritter 243 loc. 5* und *Ritter 243 loc. 6*; *Ritter 225b loc. 2* und *Ritter 225b loc. 5*). Zahlreiche Original-Samenproben in ZSS verfügen auf ein und demselben Originaletikett über zwei (gelegentlich sogar mehrere) Datumsangaben, was die mit den Sammeldaten verbundenen Probleme weiter illustriert.
- Die auf den Originaletiketten angegebenen Fundortangaben unterscheiden sich zwischen den verschiedenen Aufsammlungen innerhalb einer Sammelnummer oft nur geringfügig. Manchmal existieren auch Unterschiede zwischen den Angaben auf den im Falle der Belege in SGO oftmals vorhandenen zwei (oder mehr) Etiketten. In einigen Fällen (z.B. *Ritter 633 loc. 3*) umfasst ein einziger Beleg Aufsammlungen aus ganz verschiedenen Höhenlagen. Wenn solche Etiketten mit unterschiedlichen Angaben verschiedenen Belegen zugeordnet sind, wurden in der Belegliste separate Einträge gemacht (d.h. es wurden unterschiedliche loc.-Nummern vergeben).

- Manchmal stolpert man auch über gegensätzliche Angaben. Dies ist z.B. für *Ritter 662 loc. 2* der Fall, denn das Sammeldatum des Beleges ist älter als das für das Taxon genannten Entdeckungsjahr.
- Für die Mehrheit des Materials in ZSS (mit Ausnahme der Original-Samenproben) und für Teile des Materials in U existieren keine Originaletiketten mehr. In SGO liegen einige Belege ohne Fundortangaben. In solchen Fällen wird in der Belegliste die publizierte Information (meistens aus dem Protolog oder aus KS 1-4) verwendet, oder wir stützen uns auf Angaben in Briefen von Ritter (mehrheitlich im ZSS-Archiv). Derartige Angaben werden jedoch nicht in doppelte Anführungszeichen gesetzt. Wenn es jedoch wahrscheinlich erscheint, dass unter der Sammelnummer Belege von verschiedenen Lokalitäten vereinigt sind, so wird Material ohne Originaletiketten oder Hinweise aus Sekundärquellen als 'sine loco' behandelt.
- Ritter verwendete Autonyme für die Typus-Varietäten und -Unterarten inkonsistent (vgl. Nummernliste in KS 4, die als Primärquelle für die Identifikation seiner Aufsammlungen verwendet wurde). Entsprechend werden in diesen Fällen in der Belegliste keine Unterarts- oder Varietäts-Epitheta genannt. Wo notwendig wird dies entsprechend kommentiert.
- Einige Identifikationen Ritters in der Nummernliste in KS 4 haben nur vorläufigen Charakter. Auch dies wird in der Belegliste entsprechend kommentiert.

Umfang der taxonomischen Angaben in der Belegliste

Die taxonomischen Angaben in der Belegliste basieren auf der Taxonomie-Datenbank, die in ZSS unterhalten wird und hauptsächlich auf dem von der IOS seit 1950 jährlich herausgegebenen *Repertorium Plantarum Succulentarum* beruht. Die Kommentare bei einigen Taxa beziehen sich auf diese Publikation, v.a. wenn die Einträge im Vergleich zur veröffentlichten Version korrigiert wurden.

Die Verwendung dieser Datenbank hat zur Folge, dass die Autornamen ungekürzt wiedergegeben werden (soweit nötig ergänzt durch die Initialen nach Brummitt & Powell 1992), dass die Literaturzitate vom Autorzitat durch einen Bindestrich getrennt sind, und dass die Abkürzungen BPH und TL-2, teilweise aber einer neuen Spezialbibliographie (Egglı 1985) folgen.

Die genannte Datenbank, die laufend mit zusätzlichen Namen ergänzt wird, enthält auch Angaben über die Typisierung. Diese Angaben werden in der Belegliste soweit in der Datenbank vorhanden jeweils für die Basionyme genannt. Typen werden für alle von Ritter publizierten Namen genannt, fehlen aber in anderen Fällen teilweise.

Die zahlreichen homotypischen Synonyme, die mit den Ritter-Aufsammlungen verbunden sind, werden in einem Appendix alphabetisch aufgelistet mit den entsprechenden Querverweisen zu den von Ritter verwendeten Namen und seinen Sammelnummern. In dieser Liste sind (allerdings nicht völlig umfassend)

sämtliche Kombinationen enthalten, die auf von Ritter publizierten Namen beruhen, sowie die Basionyme der anderen von ihm verwendeten Namen. Ritter ist für eine grosse Zahl von *provisorischen Namen* verantwortlich, die er entweder selbst verwendet hat, oder die in den von seiner Schwester H. Winter veröffentlichten Samenlisten auftauchen. Viele dieser Namen wurden von Ritter selbst in KS 1-4 in die Synonymie verwiesen. Für die verbleibenden Namen wurde der Versuch unternommen, die Sammelnummern anzugeben, auf denen sie basieren. Da provisorische Namen unter dem ICBN nicht gültig veröffentlicht sind (Greuter et al. 1988, 1994), haben sie unter dem Code auch keinen formalen Status und können auch keinen Typus haben. Entsprechend wird das solchen Namen zugrundeliegende Material weder speziell behandelt noch mit 'Typstatus' bezeichnet.

Der Index mit den Querverweisen Taxa - Sammelnummern enthält alle Basionyme und/oder (je nach Fall) späteren Kombinationen der in der Belegliste verwendeten Namen. Die Liste wurde automatisch aus der Datenbank generiert. Da heterotypische Synonymien immer mehr oder weniger auf Interpretation und persönlichen Anschauungen beruhen, wurden sie in diesem Index nicht berücksichtigt. Dies betrifft auch eine kleine Anzahl von Namen, die Ritter selbst publizierte, aber später in die Synonymie anderer Taxa verwies.

Geographische Standardisierung

Soweit möglich wurden die von Ritter für seine Fundortangaben verwendeten geographischen Namen aufgrund interner Vergleiche standardisiert (d.h. unter Verwendung von Angaben von Originaletiketten, in den Protologen, oder in KS 1-4). Für zahlreiche Namen werden von Ritter verschiedene Schreibweisen verwendet. Häufig wurden diakritische Zeichen teilweise oder völlig weggelassen. Weitere Schwierigkeiten ergeben sich aus der nur gelegentlichen Nennung von über- und untergeordneten administrativen Einheiten (Provinzen, Departemente, etc.) durch Ritter. Bei einigen Aufsammlungen ergeben sich Widersprüche zwischen den Angaben von Ritter und den moderneren kartographischen Quellen und Ortsverzeichnissen, die beigezogen wurden.

Soweit möglich wurde versucht, die Fundortsnamen zu verifizieren. Korrekturen der Schreibweise sowie das Ausschreiben von Abkürzungen werden in der Regel in den übersetzten Fundortangaben vollzogen. Wo Unklarheiten verblieben, werden diese in eckigen Klammern ([]) kommentiert.

Für die Standardisierung der geographischen Namen wurde auf die vom Bird Department of the Museum of Comparative Zoology of Harvard University herausgegebene Reihe von *Ornithological Gazetteers* zurückgegriffen (Paynter 1985, 1988, 1989, 1992; Paynter & Traylor 1991; Rand & Paynter 1981; Stephens & Traylor 1983). Weitere verwendete Quellen werden unter den Literaturangaben genannt. Die Namen der Departemente und Provinzen wurden hauptsächlich auf der Grundlage der eben erwähnten Quellen zugefügt, wenn Ritter sie nicht selbst genannt hat (sei es auf den Originaletiketten, sei es im Falle vor allem der früheren Aufsammlungen im Protolog oder anderen Veröffentlichungen). Im Falle der Aufsammlungen aus Chile unterblieb dies

jedoch, da Ritter fast immer ebenfalls darauf verzichtet hat und das Beibringen der Ergänzungen ausserordentlich zeitaufwendig gewesen wäre.

Die Ritter-Belege in SGO

- Für die meisten Belege in SGO sind Originaletiketten vorhanden. Meist existieren für jeden Beleg zwei Etiketten. Das eine stammt von der zum Einwickeln verwendeten Zeitung, das andere war jeweils zusammen mit dem Belegmaterial im Paket vorhanden (und meist ebenfalls auf den weissen Rand von Zeitungsseiten geschrieben). Als die Belege von Mitarbeitern von SGO ausgepackt und in Plastikgefässe transferiert wurden, wurde das innere Etikett auf ein Stück Halbkarton geklebt, welches auf der Rückseite die SGO-Akzessionsnummer enthält.
- Eine geringe Anzahl von Belegen scheint auf kultiviertem Material zu beruhen. Es scheint, dass Ritter gelegentlich Stecklinge oder kleine Pflanzen sammelte und sie dann im Garten seines Hauses in Olmué, Chile, kultivierte, oder Freunden zur Kultur überliess (vgl. z.B. Samenmuster von *Ritter 537 loc. 2* in ZSS). Wenn nötig werden solche Fälle mit einem Kommentar gekennzeichnet.
- Einige Belege (vorwiegend gepresste Blüten) wurden vermutlich von H. Winter aufgrund von in Deutschland kultiviertem Material angefertigt und an Ritter gesandt. In einigen Fällen sind auch Kommentare von H. Winter vorhanden (z.B. *Ritter 540 loc. 1*).
- Häufig enthalten die Etiketten Originalkommentare von Ritter, in denen er Zweifel über die Identität des Materials zum Ausdruck bringt. Dies ist vor allem im Falle von 'Typnummern' sehr problematisch. Entsprechend werden solche Belege in der Regel nicht als 'Typ-Status' bezeichnet.
- In Korrespondenz mit B. Leuenberger (Brief datiert vom 10. Juni 1980) stellt Ritter klar, dass das schliesslich in SGO deponierte Material keine Typen enthalte. Trotzdem existiert wenigstens ein Beleg (*Ritter 322 loc. 2*), der von Ritter selbst als 'Typus' bezeichnet wurde.

Die Ritter-Belege in U

- Soweit bekannt wurde das Material in U wenigstens teilweise via A. F. H. Buining erhalten. Die mit den Belegen verbundenen Datumangaben müssen mit grosser Vorsicht interpretiert werden, da sie sich vermutlich in den meisten Fällen auf das Akzessionsdatum in U beziehen.
- Nur ein Teil der Belege in U wurde formell akzessioniert und mit einer U-Akzessionsnummer versehen. Die übrigen Belege haben keine derartige Nummer.
- Originaletiketten sind für die meisten Belege vorhanden. Allerdings enthalten sie in vielen Fällen keinerlei Hinweise auf die Sammelnummer. Entsprechend wurde die Sammelnummer aufgrund der Ritter'schen

Identifikation und der Fundortangaben rekonstruiert. Leider wird in einigen Fällen auch keine Fundortangabe gemacht. Alle derartigen Fälle werden in der Belegliste entsprechend kommentiert.

- Nur eine Minderheit der Typbelege in U wurden von Ritter selbst als Typen bezeichnet (in der Regel als 'Holotypus' oder 'Typus'). In den übrigen Fällen wurde das Material in U als Holotyp identifiziert, wenn der Typ für U angegeben wird und nur ein einziger Beleg vorhanden ist. Dies wird jeweils entsprechend kommentiert.

Die Ritter-Belege in ZSS

- Mit Ausnahme der Original-Samenproben sind für die Ritter-Belege in ZSS keine Originaletiketten vorhanden, und alle Angaben über Fundorte entstammen entweder den nicht originalen Etiketten der Belege, oder sekundären Quellen (v.a. aus der Liste der Herbarbelege, aus Karteikarten für Samenproben und aus Ritter-Korrespondenz).
- Nur ein Teil der in der Belegliste zitierten Belege wurde von Ritter direkt an das Herbar gesandt (gekennzeichnet mit dem Kommentar 'leg. Ritter'). Zahlreiche Belege entstammen kultiviertem Material oder bestehen aus Pflanzen, die in Kultur gestorben sind. Es scheint, dass auch Material, das von Ritter als Typusbeleg gesandt wurde, irrtümlich in Kultur gelangte und die entsprechenden Belege erst später präpariert wurden (z.B. *Ritter 671*).
- Ein wesentlicher Teil des auf Ritter-Nummern beruhenden Kulturmaterials in ZSS stammt nicht von direkt von Ritter erhaltenen Aufsammlungen. Die wichtigste Quelle war zweifellos die Firma von H. Winter, die (exklusiv ?) Ritter-Sämereien vertrieb. Material kam aber auch aus anderen Quellen, und der Status ist oft zweifelhaft (z.B. Material aus gärtnerischen Quellen). Diese Belege werden aus Gründen der Vollständigkeit in die Belegliste aufgenommen (meistens ohne Typstatus, oder als 'type number' bezeichnet).
- Im Herbst 1993 erhielt ZSS die Sammlung von Original-Samenproben (rund 1600) aus dem Nachlass Ritters zur permanenten Aufbewahrung (in der Belegliste als *original Ritter seed samples* bezeichnet). Diese Samenproben verfügen alle über ein Originaletikett in Ritters Handschrift und entstammen dem Ritter-Archiv, das entsprechend seinem Testament von der Ortsgruppe Kassel der Deutschen Kakteen-Gesellschaft (DKG) verwaltet wird. Diese Sammlung von Original-Samenproben ist im Zusammenhang mit einem kompletten Inventar der bekannten Sammelorte Ritters sehr wertvoll. Sie wird von den übrigen Samensammlungen in ZSS getrennt gehalten, was bei den ZSS Herbar-Akzessionsnummern durch die Voranstellung des Codes SR (für Seeds Ritter) verdeutlicht wird.
- In einigen Fällen wird der Holotyp im Protolog für ZSS genannt, aber bei Vorhandensein von mehreren Belegen ist keiner als Holotyp gekennzeichnet. Solches Material wird in der Belegliste als 'type collection' bezeichnet.

- In ZSS existiert eine geringe Zahl von Belegen mit fälschlich doppelt vergebenen Ritter-Nummern (z.B. *Ritter 445*). Alle verfügbaren Hinweise deuten darauf hin, dass diese Doppelnummerierung Ritter selbst zuzuschreiben ist. Nirgendwo sonst ist bisher Material unter falschen Ritter-Nummern aufgetaucht. In der Belegliste werden die entsprechenden Nummern mit einem Suffix der Form 'p.p.(2)' gekennzeichnet, um sie von den gewöhnlichen 'loc.'-Nummern abzutrennen.
- In Kultur in ZSS befinden sich zahlreiche Original-Akzessionen, die direkt von F. Ritter erhalten wurden (in Form von Stecklingen oder meistens als Samen). Zusätzlich existiert umfangreiches Kulturmaterial, das aus Samen gezogen wurde, die aus den Katalogen von H. Winter bestellt wurden, oder aus anderen Quellen stammen. Soweit Zeit verfügbar ist, werden weitere Herbarbelege angefertigt, wenn Pflanzen mit Ritter-Nummern dies erlauben. Entsprechend vergrößert sich die Sammlung von Ritter-Belegen im Herbar ZSS laufend mit Belegmaterial, das kultivierten Pflanzen entnommen wird.

Die Ritter-Belege in B

- Das Herbar in Berlin-Dahlem verfügt nur über Herbarmaterial von Ritter-Pflanzen, das nach 1980 von kultiviertem Material aus dem Botanischen Garten Berlin präpariert wurde. Das kultivierte Material wurde aus Samen aufgezogen, die in den Jahren 1957-1961 aus den Katalogen von H. Winter bestellt wurden. Diese Belege werden im Gartenherbar getrennt vom Hauptherbar B aufbewahrt. Die Herbarnummern dieser Belege werden in der Liste mit einem vorgestellten 'GH' gekennzeichnet.
- Leider wurde die Ritter-Nummer in den Akzessionslisten des Gartens in der Regel nicht notiert, aber gewöhnlich kann sie aus dem Artnamen und dem Katalog-Jahr (z.B. 'Winter 1957') rekonstruiert werden, denn normalerweise enthält jeder Katalog nur ein Angebot für jeden Namen (entweder von Ritter gesammelt, oder aus anderen Quellen). Da die Ritter-Nummern eigentlich Taxon-Nummern darstellen, können die Nummern deshalb bei FR-Samen aus dem Namen abgeleitet werden.
- Nur Herbarmaterial wird in der Belegliste zitiert. Von den zur Zeit rund 265 lebenden Akzessionen, die auf Ritter-Material zurückgeführt werden können, sind erst ungefähr 150 auch im Gartenherbar mit einem Beleg (oft nur eine Blüte zusammen mit einem Foto der Pflanze) dokumentiert. Die verbleibenden Akzessionen sollen in Zukunft ebenfalls mit Belegen im Gartenherbar dokumentiert werden, soweit Material verfügbar ist (wie oben für ZSS beschrieben).

Vermisste Typen

Soweit festgestellt werden konnte, ist eine relativ geringe Anzahl von Holotyp-Belegen verloren gegangen, welche für U angegeben wurden. Dies wird bei den

betreffenden Taxa in der Belegliste entsprechend vermerkt. In den meisten dieser Fälle ist anderswo Typmaterial vorhanden (allerdings häufig nur in Form von Samenproben in ZSS). Die Belegliste enthält auch hier einen entsprechenden Eintrag.

Für die unten aufgelisteten Taxa konnte jedoch weder Typmaterial noch anders Material gefunden werden, und diese Namen fehlen somit in der Belegliste:

Hymenorebutia tiegeliana var. *dimorphipetala*
Lobivia tuberculosa
Loxanthocereus yauyosensis
Maihueniopsis ovata fa. *calva*
Maihueniopsis ovata fa. *sterilis*
Pereskia stenantha
Piptanthocereus calcirupicola var. *pluricostatus*
Rebutia lanosiflora
Rebutia mamillosa var. *orientalis*
Rhipsalis hohenauensis

Las Colecciones "Ritter" – Introducción a sus problemas – Convenciones adoptadas

Problemas generales asociados con las colecciones de Ritter

- Los números de Ritter no son números de colectas en el sentido convencional sino que él empleó números de taxones (Ritter 1979: ii¹ [citado más adelante como KS, ver también lista de abreviaturas]), por lo tanto un mismo número puede incluir hasta 10 o más localidades diferentes de un mismo taxón. Para poder diferenciar entre varias colectas de un mismo número, los autores han agregado *loc. x*, donde *x* es un número secuencial partiendo del número 1. Se aclara que esta *adición* es un número arbitrario, elegido sólo para una mejor ordenación. No se pudo elegir un orden cronológico o geográfico, por el hecho que el material perteneciente a un mismo número FR puede estar depositado en diferentes herbarios, por lo tanto no podía ser arreglado ni comparado en orden secuencial antes de iniciar el inventario. En el catálogo realizado, no aparecen algunos números de la serie, esto se debe a que no se encontró ningún ejemplar de herbario para ellos. Estos números 'faltantes' pueden haberse referido a material vivo en cultivo (predominantemente en ZSS) o a una localidad sólo indicada en la literatura o por correspondencia personal.
- Las etiquetas originales manuscritas por Ritter se encuentran en la mayoría de la colección depositada en SGO, pero rara vez en aquella de U o ZSS (con excepción de su colección de semillas que cuenta con etiquetas originales). Las localidades de estas etiquetas originales (o aquellas de otras fuentes como archivos de cartas) se presentan en el Catálogo entre *comillas* ("").
El material sin localidad (ya sea porque no hay etiqueta original o no hay otra fuente de los datos) se asoció generalmente a la localidad publicada en el protólogo o en KS, pero esa información no va entre comillas.
El uso de Ritter de ese sistema no convencional de numeración en sus colecciones, determinó que Ritter cambiara el número cada vez que cambiaba su concepto respecto a un taxón. Este cambio es observable en las etiquetas originales de la colección depositada en SGO.
- El sistema de numeración de Ritter hace muy dificultosa la tipificación de sus taxones nuevos, por lo tanto nuestra interpretación de los especímenes que representan material tipo y nuestra designación como holótipo, isótipo, síntipo, número del tipo, debe ser considerada como una *sugerencia preliminar* solamente. El caso del 'número del tipo' con varias localidades

¹ Véase lista de referencias al final de la versión en inglés.

diferentes, la denominación 'número tipo' se asocia solamente con los especímenes colectados en la localidad típica o una muy inmediata, si es que esto pudo asegurarse. A otras colecciones que llevan el 'número del tipo' no se les indica ningún status especial. Para ayudar con la interpretación del status del tipo, se indica el tipo (o el material que sirvió de base) para los nuevos taxones publicados por Ritter, junto a otra información nomenclatural.

Bajo ninguna circunstancia tratamos de seleccionar un ejemplar como holótipo o lectótipo. Aun más, queremos aclarar que no aceptamos ningún nombre que se pueda interpretar como validado en este Catálogo.

- La clasificación usada en el Catálogo está basada en la lista del propio Ritter que aparece en KS 4, con excepción del uso ilegítimo de nombres genéricos como *Piptanthocereus* (aquí bajo *Cereus*) y *Platyopuntia* (aquí bajo *Opuntia*).
- Las fechas asociadas con colecciones varias se deben interpretar con precaución. En el caso de material depositado en U y ZSS, la fecha indicada es frecuentemente la del envío o la del ingreso al herbario, no la de colección. Por otra parte parece que Ritter colectó en fechas o años diferentes en los mismos lugares (ver *Ritter 197 loc. 3* en SGO; *Ritter 243 loc. 5* y *Ritter 243 loc. 6*; *Ritter 225b loc. 2* y *Ritter 225b loc. 5*). Numerosas muestras originales de semillas en ZSS tienen dos o más fechas diferentes en la etiqueta original, lo que ilustra los problemas asociados con las fechas de colección.
- Las localidades de las etiquetas originales muchas veces difieren levemente entre una y otra colección con el mismo número. A veces difieren un poco las dos o más etiquetas de ejemplares presentes en la colección en SGO. En algunos casos (ver *Ritter 633 loc. 3*) una muestra comprende ejemplares de colecciones de diferentes altitudes. Se han hecho entradas separadas (esto es asignando diferentes números de localidades) cuando las etiquetas pudieron atribuirse a diferentes especímenes.
- A veces hay detalles que inducen a confusión, como *Ritter 662 loc. 2*, que se colectó antes del año indicado como de descubrimiento del taxón.
- La mayoría del material en ZSS (con excepción de la colección de semillas de Ritter) y parte del material en U, no tiene etiquetas originales. En SGO algunos ejemplares tampoco presentan la localidad. En éstos casos se anota (sin comillas) la localidad publicada (tomada del protólogo o en KS 1 - 4) o la información extraída de la correspondencia de Ritter (en su mayoría en ZSS). Cuando no hay información original o no hay otras fuentes de información, y no hay evidencia que todo el material ha sido coleccionado en la misma región, entonces es tratado como 'sine loco'.
- El uso que hace Ritter de autótonos para variedades y subespecies típicas es inconsistente en la lista numérica de KS 4, que se usó como primera fuente para la identificación de sus colecciones. Por lo tanto, en el presente Catálogo no se dan epítetos a las subespecies o variedades típicas. Se incluye

un comentario apropiado cuando ha sido necesario.

- Algunas veces la identificación de sus colecciones, en la lista numérica que aparece en su KS 4, es tentativa solamente. Esto está explicado en comentarios en el presente Catálogo.

Información taxonómica presentada en el Catálogo

La información taxonómica presentada en la lista de taxones es tomada de la base de datos taxonómica existente en ZSS, que a su vez se basa en el Repertorium Plantarum Succulentarum (RPS) anual publicado por la IOS desde 1950. Algunos de los comentarios indicados para ciertos taxones se relacionan a esta publicación, especialmente cuando los nombres han sido corregidos al compararlos con la versión publicada.

Como consecuencia del uso de esta base de datos, los nombres de los autores se dan en forma completa (complementadas con iniciales cuando es necesario, siguiendo a Brummitt & Powell 1992), las citas bibliográficas se separan del nombre de los autores con un guión, y las abreviaturas generalmente siguen el BPH y TL-2, y en parte también una nueva bibliografía especializada (Eggl 1985).

Esta base de datos, la cual continuamente es puesta al día, también contiene información de tipificación. Cuando disponible, se incluyó esta información para basónimos de Ritter, pero no en el caso de nombres publicados por otros autores.

La presente lista taxonómica de las colecciones de Ritter incluye un gran número de sinónimos homotípicos, siempre que sean combinaciones (o basónimos) de los nombres usados por Ritter. Ellos se presentan como referencia cruzada (ver apéndice) para facilitar el uso de la lista de especímenes, pero el registro no es completo.

Ritter es responsable de una gran cantidad de nombres provisorios, usados ya sea por él o en los catálogos de semillas proporcionados por su hermana H. Winter. Muchos de ellos fueron relegados después a sinonimia cuando publicó su KS 1-4. Para los nombres restantes intentamos listar el número de colección en que ellos se basaron. Como los nombres provisorios no son válidos de acuerdo al ICBN (Greuter et al. 1988, 1994), tampoco pueden tener tipos.

El índice de referencia cruzada de taxón - número de colección, incluye todos los basónimos y/o (dependiendo del caso) combinaciones posteriores de los nombres tratados. Esto se generó automáticamente de la información ingresada en la base de datos. Como la sinonimia heterotípica siempre se basa en interpretación y conceptos personales, no la incluimos. Esto también incluye algunos nombres publicados por Ritter que luego él mismo pasó a otros taxones.

Estandarización geográfica

Los nombres geográficos usados por Ritter para indicar sus localidades se han tratado de estandarizar, usando la información de las etiquetas originales, de los

protólogos de taxones relevantes, y del mismo KS 1-4. En muchas localidades Ritter usó ortografía variada y en gran parte omitió los signos diacríticos. Mayores dificultades se presentan con las unidades administrativas (provincias, departamentos, etc.) las cuales sólo a veces son indicadas por Ritter; en algunos casos los datos de Ritter difieren de los mapas y diccionarios geográficos consultados.

Se ha tratado de verificar las localidades, se ha corregido la ortografía y expandido las abreviaturas, anotándolas en los datos traducidos de localidades. Los casos dudosos se han dejado entre paréntesis cuadrado ([]). Para la estandarización de los nombres geográficos, se utilizaron las series de *Ornithological Gazetteers* publicado por el Bird Department of the Museum of Comparative Zoology de la Universidad de Harvard (Paynter 1985, 1988, 1989, 1992; Paynter & Traylor 1991; Rand & Paynter 1981; Stephens & Traylor 1983). Las fuentes geográficas adicionales se citan en las Referencias. Se han agregado los Departamentos y/o Provincias a las localidades, especialmente en los casos no dados por el propio Ritter (ya sea en las etiquetas, lo cual es raro en las primeras colecciones, o en los protólogos o en otras de sus publicaciones). En el caso de Chile esta información no la hemos agregado ya que él omitió, en la mayoría de los casos, la provincia y el departamento.

Los especímenes de Ritter en SGO

- Salvo muy escasos ejemplares, la colección de Ritter en SGO conserva las etiquetas originales. Generalmente existen dos etiquetas con cada ejemplar, una la que estaba escrita en los bordes del papel de diario o en blanco que envolvía cada ejemplar (que contiene su numeración y localidad a veces) y la otra incluida en el envoltorio con el ejemplar (que contiene toda la información). Cuando los ejemplares se incluyeron en los pots de plástico transparentes se pegó esta última etiqueta en una cartulina que en el dorso lleva el número de ingreso correspondiente de SGO.
- Existe un pequeño número de ejemplares que al parecer proviene de material cultivado, ya que Ritter colectaba pequeños especímenes o parte de ellos para cultivarlos en el jardín de su casa en Olmué, Chile, o para regalarlos a sus amistades (ver muestra de semillas de *Ritter 537 loc. 2* en ZSS). En estos casos aparece un comentario en el presente Catálogo.
- Algunos especímenes, en su mayoría flores prensadas, fueron probablemente proporcionadas por su hermana H. Winter de material cultivado en Alemania. En unos pocos casos ella proporciona comentarios (ver *Ritter 540 loc. 1*).
- Los comentarios originales en las etiquetas de Ritter muchas veces señalan dudas en la identificación del material. Esto es especialmente problemático en el caso de los números para especies tipo. Este material no es tratado con status de tipo.

- Ritter asegura (por carta a B. Leuenberger, de fecha 10 Junio 1980) que el material depositado en SGO no contiene tipos; posteriormente encontramos al menos un 'tipo' anotado por él mismo (*Ritter 322 loc. 2*)

Las colecciones de Ritter en U

- El material en U fue, de acuerdo a lo que se sabe, recibido en parte a través de A. F. H. Buining. Las fechas asociadas con los especímenes deben interpretarse con sumo cuidado ya que pueden referirse más bien a la fecha de ingreso.
- Solamente parte de los especímenes en U se incorporaron en el herbario con un número de accesión, el resto no tiene número de ingreso.
- Existen etiquetas originales para la mayoría de los especímenes. Frecuentemente falta el número de colección, por lo tanto ese número se deduce de la identificación y de la localidad. Desafortunadamente a veces la localidad no está presente. Todos estos casos llevan comentarios.
- Sólo una minoría de los ejemplares tipo está marcado en U como tipo por el propio Ritter (anotado como Holótipo, Tipo, etc.). En los casos restantes, el material se interpreta como holótipo siempre que se haya indicado que el tipo estaba en U y que haya un solo ejemplar presente. Se incluye un comentario en cada uno de estos casos.

Las colecciones de Ritter en ZSS

- Los especímenes de Ritter en ZSS (salvo aquellos de la colección de semillas) no tienen etiquetas originales, y toda la información de las localidades se deriva de las etiquetas no originales junto a los ejemplares o de fuentes secundarias como la lista de especímenes asociada al herbario, del fichero asociado a las muestras de semillas o de la correspondencia de Ritter.
- Sólo una parte de los ejemplares fueron entregados directamente por Ritter (indicado como 'leg. Ritter'). Una gran cantidad de material proviene de plantas cultivadas o de aquellas que murieron en cultivo. Al parecer el material enviado como ejemplares tipo fue de vez en cuando inadvertidamente puesto en cultivo, y los especímenes de herbario se prepararon más tarde en base a ellos (ver *Ritter 671*).
- Por otra parte, muchos ejemplares con números de Ritter que se cultivan en ZSS provienen de otras fuentes, sobre todo de la empresa de H. Winter la cual proveía (exclusivamente ?) semillas. Los materiales provenientes de otras fuentes son en muchos casos de origen cuestionable; se incluyen en el presente Catálogo (en su mayoría con el status de número tipo o sin status), sólo como complemento.

- En el otoño de 1993, se recibió en ZSS un set original de semillas (cerca de 1600 sobres) para custodia permanente (referida aquí como *muestras originales de semillas de Ritter*). Estas muestras, con etiquetas manuscritas de Ritter, eran parte del archivo Ritter que de acuerdo a sus últimos deseos, se guarda en la Asociación Regional de Kassel de la Sociedad Alemana de Cactáceas (DKG). Esta colección de semillas es muy valiosa para completar el inventario de sus localidades; se conserva separada de las otras colecciones de semillas y se le agrega el prefijo SR (*Seeds Ritter*) al número de ingreso en el herbario ZSS.
- En algunos casos, el holótipo se cita para ZSS en el protólogo, pero ninguno de los varios especímenes presentes se ha seleccionado como holótipo. A ese material se le ha asignado el status de ‘colección tipo’.
- En ZSS existe una pequeña cantidad de especímenes con número duplicado de Ritter erróneo (ver *Ritter 445*), lo que al parecer provino del propio Ritter y no se encontró otro material con este mismo número errado. Estos números se anotan agregando el sufijo ‘p.p.(2)’, para distinguirlos de los otros números de ‘loc.’
- Hay numerosos ingresos de material original recibido directamente de F. Ritter (como vástagos o como semillas) que están todavía cultivados en los invernaderos y almacigueras en ZSS. Se cultiva además una gran cantidad de material coleccionado por Ritter y pedidos a través de los catálogos de H. Winter y de otras fuentes, por lo que continuamente se agrega material de Ritter al herbario en ZSS.

Las colecciones de Ritter en B

- El herbario Berlin-Dahlem posee material preparado a partir de 1980 de plantas cultivadas en este Jardín Botánico, de semillas pedidas a través de los catálogos de H. Winter en el período 1957-1961. Estos especímenes se conservan en el Herbario del Jardín (con numeración que lleva en el Catálogo el prefijo ‘GH’) y que está separado del Herbario principal.
- Aunque el número Ritter no se registró en la lista de ingreso ni en las etiquetas, puede ser deducido del nombre del taxón y la indicación del año del catálogo (p.ej. ‘Winter 1957’). Normalmente, en los catálogos de H. Winter existía una sola oferta de semillas (ya sea de colecciones de Ritter u otras fuentes) bajo cada nombre. Ya que los números de Ritter representan especies y no colecciones, cuando se trata de colecciones de semillas de Ritter, los números pueden asignarse a los nombres.
- El material se cita solamente para aquellos números de Ritter con material de herbario existente. De las 265 accesiones actuales vivas que se pueden atribuir a colecciones Ritter, 150 están representadas en el Herbario del Jardín con un espécimen (con frecuencia es sólo una flor, combinada con una

fotografía de la planta). Se agregará más material en el futuro, a medida que esté disponible, tal como se indica para ZSS.

Tipos faltantes

Por lo que se pueda asegurar, sólo falta un reducido número de especímenes holótipos anotados para U. Eso se indica en cada taxón donde corresponde. En la mayoría de los casos, algún material tipo (aunque con frecuencia exclusivamente en la forma de muestras de semillas en ZSS) está disponible en otro herbario. La información relevante de tipificación para estos taxones está incluida en cada caso.

Para los nombres de la lista que se indica a continuación, no se encontró material tipo ni otro, por lo tanto estos nombres están ausentes del Catálogo.

Hymenorebutia tiegeliana var. *dimorphipetala*
Lobivia tuberculosa
Loxanthocereus yauyosensis
Maihueniopsis ovata fa. *calva*
Maihueniopsis ovata fa. *sterilis*
Pereskia stanantha
Piptanthocereus calcirupicola var. *pluricostatus*
Rebutia lanosiflora
Rebutia mamillosa var. *orientalis*
Rhipsalis hohenauensis

Abbreviations Used / Verwendete Abkürzungen / Abreviaturas

Herbarium Acronyms / Herbar-Abkürzungen / Siglas de Herbario

- B Berlin (Botanic Garden and Botanical Museum Berlin-Dahlem)
 SGO Santiago de Chile (National Museum of Natural History)
 U Utrecht (State University of Utrecht)
 ZSS Zürich (Municipal Succulent Collection)

Extent of Herbarium Material / Umfang des Herbarmaterials / Contenido del Material de Herbario

- rad radix = root / Wurzel / raíz
 corp corpus = body / Körper / cuerpo
 ar areola = areole / Areole / aréola
 sp spina = spine / Dorn / espina
 ceph cephalium = cephalium / Cephalium / cefalio
 infl inflorescentia = inflorescence / Blütenstand / inflorescencia
 al alabastra = bud / Knospe / yema
 fl flos = flower / Blüte / flor
 fr fructus = fruit / Frucht / fruto
 sem semen = seed / Same / semilla
 ic icones = illustration / Abbildung / ilustración

Note: Plant parts enumerated within brackets () denote fragments.

Hinweis: In Klammern () aufgezählte Pflanzenteile bezeichnen Fragmente.

Nota: Partes de plantas entre paréntesis () indican fragmentos.

Geographical Data / Geographische Angaben / Indicaciones Geográficas

- E East / Ost / Este
 N North / Norden / Norte
 S South / Süden / Sur

W West / Westen / Oeste**Typification / Typisierung / Tipificación**

- ISO Isotype / Isotypus / Isótipo
 L Lectotype / Lectotypus / Lectótipo
 N NEO = Neotype / Neotypus / Neótipo
 S SYN = Syntype / Syntypus / Síntipo
 T HOLO = Holotype / Holotypus / Holótipo

Other Abbreviations / Weitere Abkürzungen / Abreviaturas Adicionales

- acc. accessioned, received / erhalten, aufgenommen / recibido, incorporado
 BPH Botanico Periodicum Huntianum (ed. G. H. M. Lawrence et al., Hunt Botanical Library, 1968), incl. supplement publ. 1991.
 cult. ex sem. cultivated from seeds / aus Samen kultiviert / cultivado de semillas
 ex cult. from cultivation / aus Kultur / cultivado
 ex nat. from nature / aus der Natur / de la naturaleza
 FR F. Ritter (esp. for Ritter's collection numbers / v.a. für Sammelnummern von F. Ritter / especialmente para los números de colección de F. Ritter)
 KS F. Ritter, Kakteen in Südamerika. 1-4.
 leg. legit = has collected / sammelte / recolectó
 RPS Repertorium Plantarum Succulentarum
 s.a. sine anno = without year / ohne Jahr / sin año
 s.n. sine numero = without number / ohne Nummer / sin número
 TL2 Taxonomic Literature, ed. 2 (F. A. Stafleu & R. S. Cowan, 1976 et seq.).

The Ritter Collections By Number

Ritter 1: *Rhipsalis cassutha* Gaertner – De Fruct. Sem. Pl. 1: 137, t. 28, 1788.
(The specific epithet is frequently mis-spelled 'cassytha'.)

loc. 1: Peru: Amazonas ?; "Rio Marañon" = Río Marañón. – / 8. / 1954.
ZSS B4285 – (rad, corp) (Leg. F. Ritter.)

loc. 2: Bolivia: "Corinata". – / 10. / 1954.
ZSS B4286 – (corp) (Leg. F. Ritter.)

loc. 3: Brazil: Rio de Janeiro; "Corcovado". – / 1. / 1965. – The original label has the collection number as "FR 1 cf."
ZSS SR14616 – sem

loc. 4: Brazil: Rio de Janeiro; "Corcovado Nr. 2". – / 1. / 1965. – The original label has the collection number as "FR 1 cf."
ZSS SR14617 – sem

loc. 5: Brazil: Rio de Janeiro; "Rio de Janeiro". – / 12. / 1952.
ZSS SR14618 – sem

Ritter 2: *Rhipsalis paradoxa* Salm-Dyck – Cact. Hort. Dyck. 1844, 39, 1845.
(Probably based on *Lepismium paraxodum* Salm-Dyck ex Pfeiffer 1837.)

loc. 1: Brazil: Santa Catarina; "Florianopolis, Nr. 4".
SGO 125542 – corp, ar, sp

loc. 2: Brazil: São Paulo; "Santos". – / 12. / 1952.
ZSS SR14619 – sem

Ritter 3: *Acanthocalycium spiniflorum* (K. Schumann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 226, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina: San Luis; mountains NE of Villa Mercedes.
ZSS S10091 – sem (Leg. F. Ritter 1955. According to a note on the index card associated with this specimen, the seeds have been replaced in 1966, but the source of these replacement seeds is unknown.)
ZSS T4287 – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: San Luis; "Juan Llerena, San Luis". – / – / 1952.
ZSS SR13627 – sem

Ritter 4: *Notocactus submammulosus* (Lemaire) Backeberg – Backeberg & Knuth, Kaktus-ABC, 255, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina: San Luis; Juan Llerena, N of Villa Mercedes. – / 2. / 1955.
ZSS T4288 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4289 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: San Luis; "Juan Llerena". – Locality data according to original Ritter seed sample at ZSS and to Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10180 – sem (Leg. F. Ritter 1955.)

ZSS SR13628 – sem (Dated "1952" on the original envelope.)

Ritter 5: *Hymenorebutia aurea* (Britton & Rose) F. Ritter – Kakt. Südamer. 2: 467, 1980.

loc. 1: Argentina: San Luis; Juan Llerena, N of Villa Mercedes. – / 2. / 1955.
ZSS T4290 – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: San Luis; "Juan Llerena". – Locality data according to Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10181 – sem (Leg. F. Ritter 1955.)

Ritter 6: *Gymnocalycium villamercedense* F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 2: 477, 1980. (Published as provisional name.)
Based on Ritter 6.

loc. 1: Argentina: San Luis; Juan Llerena, N of Villa Mercedes. – / 2. / 1955.
ZSS S10092 – sem (Leg. F. Ritter 1955.)
ZSS S9879 – sem (Ex cult. ZSS s.n.)
ZSS T4291 – (corp), ar, sp (Leg. F. Ritter.)
ZSS T4292 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: San Luis; "Juan Llerena". – / – / 1952.
ZSS SR15001 – sem

Ritter 7: *Trichocereus formosus* (Pfeiffer) F. Ritter – Kakt. Südamer. 2: 450, 1980.

loc. 1: Argentina: Mendoza; sine loco, frequent in the mountains. – / – / 1953. – Distributed as *Soehrensia* sp. (cf. letter dated 22. 4. 1955 in ZSS archives).
ZSS B4293 – (corp), ar, sp (Leg. F. Ritter.)
ZSS S10093 – sem (Leg. F. Ritter 1955.)

loc. 2: Argentina: Mendoza; "oberhalb Potrerillos" = above Potrerillos.
SGO 121846 – (corp), ar, sp

loc. 3: Argentina: Mendoza; "Mendoza". – / – / 1952.
ZSS SR13629 – sem

Ritter 8: *Trichocereus candicans* (Gillies ex Salm-Dyck) Britton & Rose – The Cact. 2: 142, 1920.

loc. 1: Argentina: San Luis; "Sierra südl. Quines" = sierra S of Quines / "Sierra Quines". 1300 m.
SGO 121155 – (corp), ar, sp

loc. 2: Argentina: Mendoza; "Challao".
SGO 121163 – (corp), ar, sp

Ritter 8a: *Trichocereus candicans* (Gillies ex Salm-Dyck) Britton & Rose fa. *rubriflorus* F. Ritter – Kakt. Südamer. 2: 440-443, 1980.
Typus (T): Ritter 8a (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: La Rioja; "Famatina nach Ost" = Famatina towards the East.
SGO 121207 ISO – (corp), ar, sp ("rotblühend" = red-flowering / "Fotoexemplar" = specimen of the photograph.)

- loc. 2:** Argentina: La Rioja; "Famatina".
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen at U.)
- loc. 3:** Argentina: La Rioja; "Chilecito". – / 4. / 1962. – "(immer rotblüh. ?)" = always red-flowered ?
ZSS SR13630 – sem

Ritter 9: *Pyrrhocactus catamarcensis* (F. A. C. Weber) Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 262, 1936. (Kattermann (Succ. Pl. Res. 1: 136, 1994) attributes such a combination (treated as nom. illeg. Art. 64) to (Spegazzini) Ritter 1959, but Ritter cited the Backeberg combination with Spegazzini as bracket author.)

- loc. 1:** Argentina: Mendoza; mountains around Mendoza, "Villavicencio". 2500 m. – / 3. / 1955. – Locality data according to Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10094 – sem (Leg. F. Ritter 1955 (sub *Pyrrhocactus strausianus*.)
ZSS T4294 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Mendoza; "Estancia El Plata oberh. Potrerillos" = Estancia El Plata above Potrerillos.
SGO 121451 – (corp), ar, sp, (fl, fr)
- loc. 3:** Argentina: La Rioja; "Famatina, nach West" = Famatina, towards the West.
SGO 121452 – (corp), ar, sp
- loc. 4:** Argentina: Mendoza; "Challao". – / 5. / 1962.
ZSS SR13631 – sem
- loc. 5:** Argentina: Mendoza; "Potrerillos". – / – / 1952.
ZSS SR13632 – sem

Ritter 10: *Denmoza rhodacantha* (Salm-Dyck) Britton & Rose – The Cact. 3: 79, 1922.

- loc. 1:** Argentina: Mendoza; "Challao".
SGO 121696 – (corp), ar, sp
- loc. 2:** Argentina: La Rioja; "Famatina, nach Ost" = Famatina, towards the East.
SGO 121697 – (corp), ar, sp
- loc. 3:** Argentina: Catamarca; "Tinogasta".
SGO 121698 – (corp), ar, sp
- loc. 4:** Argentina: Mendoza; "Potrerillos + Challao". – / – / 1952. – The locality "+ Challao" was obviously added later on the original envelope.
ZSS SR13633 – sem

Ritter 10a: *Denmoza rhodacantha* (Salm-Dyck) Britton & Rose – The Cact. 3: 79, 1922.

- loc. 1:** Argentina: La Rioja; "Famatina, Nr. 13". – Identified as '*Denmoza rhodacantha* var.' in KS 4: 1019.
SGO 121699 – (corp), ar, sp ("Jüngerer Expl." = younger specimen.)
ZSS S9886 – sem (Leg. F. Ritter. 1955. No locality data associated with this specimen.)

- loc. 2:** Argentina: La Rioja; "Famatina nach West" = Famatina towards the W. - / 4. / 1962. - Identified as '*Denmoza rhodacantha* var.' in KS 4: 1019.
ZSS SR13634 - sem

Ritter 11: *Echinopsis leucantha* (Gillies ex Salm-Dyck) Walpers - Rep. Bot. 2: 324, 1843.

- loc. 1:** Argentina: sine loco. - No locality data published in KS.
ZSS S9887 - sem (Leg. F. Ritter 1955.)
ZSS T4295 - (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Mendoza; "Mendoza".
SGO 121446 - (corp), ar, sp
- loc. 3:** Argentina: Salta; "20 km über Cafayate" = 20 km above Cafayate.
SGO 121447 - (corp), ar, sp
- loc. 4:** Argentina: Córdoba; "Villa Dolores".
SGO 121448 - ar, sp
- loc. 5:** Argentina: Salta ?; "Miraflores".
SGO 121449 - (corp), ar, sp ("Langwüchsig" = of elongate growth.)
- loc. 6:** Argentina: Catamarca; "11 km östl. Mazan" = 11 km E of Mazán.
SGO 121450 - (corp), ar, sp

Ritter 12: *Gymnocalycium gibbosum* (Haworth) Pfeiffer ex Mittler - Taschenb. Cactusliebhaber 2: 124, 1844. (Sphalm. 'Gymnocalycium'. Republished by Pfeiffer, Abb. Beschr. Cact. 2: t. 1, 1845.)

- Argentina: Mendoza; "Campo de Los Andes" [= Campo Los Andes]. - / - / 1952.
ZSS SR13635 - sem

Ritter 13: *Trichocereus strigosus* (Salm-Dyck) Britton & Rose - The Cact. 2: 143, 1920.

- Argentina: Mendoza; "Challao". - / - / 1953. - Collection date according to original Ritter seed sample at ZSS.
SGO 121205 - (corp), ar, sp
ZSS SR13636 - sem

Ritter 13a: *Trichocereus strigosus* (Salm-Dyck) Britton & Rose - The Cact. 2: 143, 1920.

- Argentina: Catamarca; "östl. Mazan" = E of Mazan / "31 km über Mazan Richtg. Chumbicha" = 31 km above Mazan towards Chumbicha. - Identified as "*Trichocereus strigosus* var." in the field-number list in KS 4.
SGO 121206 - corp, ar, sp

Ritter 14: *Pterocactus* sp.

- Argentina: San Juan ?; "San Juan, Pié de Palo". - / - / 1953.
ZSS SR13637 - sem

Ritter 15: *Stetsonia coryne* (Salm-Dyck) Britton & Rose - The Cact. 2: 64,

1920.

- loc. 1:** Paraguay: Boquerón; "Filadelfia".
SGO 121285 – (corp), ar, sp (Includes a small seedling with roots.)
ZSS SR13585 – sem
- loc. 2:** Argentina: Catamarca; "Chumbicha".
SGO 125518 – (corp), ar, sp
- loc. 3:** Bolivia: Tarija: Gran Chaco; "Palmar Grande". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 125519 – (corp), ar, sp
ZSS SR14154 – sem (The original label was first numbered "FR 872", now put in brackets. FR 872 is set equal to FR 15 in the field-number list in KS 4.)
- loc. 4:** Argentina / Bolivia?: sine loco.
ZSS S9888 – sem (Leg. F. Ritter 1955.)
- loc. 5:** Argentina: Catamarca; "Catamarca (Catam.)". – / 1. / 1953.
ZSS SR13638 – sem

Ritter 16: *Eriocereus bonplandii* (Parmentier ex Pfeiffer) Riccobono – Boll. Reale Orto Bot. Palermo 8: 238, 1909.

- Argentina: Salta; Betania.
ZSS T4296 – corp, ar, sp (Leg. F. Ritter. Det. D. C. Zappi 1991 as *Harrisia guelichii*.)

Ritter 17: *Trichocereus terscheckioides* F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 2: 446, figs. 299, 301, 1980. (Based on two syntypes, *Ritter 17* and *Ritter 993*. Erroneously included as valid in RPS 31.)

- loc. 1:** Argentina: sine loco. – Locality published as 'Famatina' in KS.
ZSS AX4232 SYN – corp, ar, sp (Leg. F. Ritter; ex cult. ZSS s.n.)
- loc. 2:** Argentina: Tucumán; "31 km nördl. Tucuman" = 31 km N of Tucumán.
SGO 121218 SYN – (corp), ar, sp (Labelled as *Trichocereus terscheckioides* var. *lariojensis* (*nom. nud.*) on the original label.)
- loc. 3:** Argentina: La Rioja; "Famatina".
SGO 125520 (in 2 parts) SYN – (corp), ar, sp

Ritter 18: *Hymenorebutia aurea* (Britton & Rose) F. Ritter var. *depressicostata* F. Ritter – Kakt. Südamer. 2: 468, fig. 316, 1980.

Typus (T): Ritter 18 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Catamarca; "Catamarca, unten" = Catamarca, below. – / – / 1953.
SGO 121443 ISO – corp, ar, sp
ZSS SR13639 ISO – sem
- loc. 2:** Argentina: Catamarca; "Catamarca, tiefe Lagen" = Catamarca, lower altitudes. – / – / 1953.
U HOLO – (corp), ar, sp (Collection number and type status inferred.)

- loc. 3:** Argentina: Catamarca; "Catamarca". – Locality according to Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10182 **Type number** – sem (Leg. F. Ritter 1955 (sub *Pseudoechinopsis cylindrica*)).

Ritter 19: *Cleistocactus baumannii* (Lemaire) Lemaire – Ill. Hort. 8(Misc.): 35, 1861.

- loc. 1:** Argentina?: sine loco.
ZSS A4258 – ar, sp, fl (Leg. F. Ritter 1959. Ex cult. ZSS s.n.)
- loc. 2:** Argentina: Catamarca; "Catamarca".
SGO 124759 – corp, ar, sp
ZSS SR13640 – sem ("rotbraune u. gelbe Varietäten" = red-brown and yellow varieties.)

Ritter 19a: *Cleistocactus baumannii* (Lemaire) Lemaire – Ill. Hort. 8(Misc.): 35, 1861.

- Argentina: Catamarca; "Chumbicha". – / 2. / 1959. – "(gelb)" = yellow [-spined].
ZSS SR13641 – sem

Ritter 19b: *Cleistocactus baumannii* (Lemaire) Lemaire – Ill. Hort. 8(Misc.): 35, 1861.

- Argentina: Catamarca; "Chumbicha". – "15 - 17 Rippen." = 15 - 17 ribs.
SGO 124760 – corp, ar, sp

Ritter 19c: *Cleistocactus baumannii* (Lemaire) Lemaire – Ill. Hort. 8(Misc.): 35, 1861.

- loc. 1:** Argentina?: sine loco.
ZSS A4271 – fl, fr, sem (Ex cult. ZSS s.n.)

Ritter 19d: *Cleistocactus baumannii* (Lemaire) Lemaire – Ill. Hort. 8(Misc.): 35, 1861.

- Argentina: Catamarca; "Chumbicha". – / 2. / 1959. – "(schwarzst.)" = black-spined.
ZSS SR13642 – sem

Ritter 20: *Cereus forbesii* Otto – in Förster, Handb. Cact.-kunde, 398, 1846.

- loc. 1:** Argentina: Córdoba; Villa Dolores. – / 2. / 1955. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS S10183 – sem (Leg. F. Ritter 1955.)
ZSS T4297 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Salta; "Betania". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121766 – (corp), ar, sp

loc. 3: Argentina: Catamarca; "Catamarca". – / 3. / 1962. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR13643 – sem

Ritter 21: *Gymnocalycium saglionis* (Cels) Britton & Rose – The Cact., 3: 157, 1923. (This spelling of the epithet is correct though not recommended (cf. Rec. 60C2), and not correctible to 'saglionii' or 'saglione'.)

loc. 1: Argentina: Catamarca; sine loco. – / 1. / 1953.
ZSS AX4243 – corp, ar, sp (Leg. F. Ritter 1956. Ex cult. ZSS s.n. (as *Gymnocalycium saglionis* var. *albispinum*).)
ZSS S9889 – sem (Leg. F. Ritter 1955.)
ZSS T4298 – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: Catamarca; "Catamarca".
SGO 124636 – (corp), ar, sp
ZSS SR13644 – sem

Ritter 21a: *Gymnocalycium saglionis* (Cels) Britton & Rose var. *tilcarensis* Backeberg (*nom. inval.* Art. 36.1) – in Backeberg & Knuth, Kaktus-ABC, 295, 1936. (Dated 1935, publ. Febr. 1936. Validly published 1942 as *Brachycalycium tilcarensis* Backeberg.)

– Argentina: Jujuy; "Maimará". – / 1. / 1953. – Collection date according to one of the original Ritter seed samples at ZSS.
SGO 124638 – (corp), ar, sp
ZSS S12604 – sem (Leg. H. Winter (Cat. 1961/62). No locality data directly associated with this specimen.)
ZSS SR13645 – sem
ZSS SR15002 – sem (This sample is dated "I. 59" on the original label.)

Ritter 22: *Gymnocalycium guanchinense* Schütz – Zpravy Ceskos. Kakt. Spolec. 1947(2): 21-23, ill., 1947. (Based on a catalogue name of Fric (*Gymnocalycium* sp. Guanchin). The description is probably based on a cultivated plant; no type is explicitly cited.)

loc. 1: Argentina: Catamarca; near town of Catamarca. – / 2. / 1955. – Identified as "*Gymnocalycium guanchinense* var." in KS 4: 1619.
ZSS S10184 – sem (Leg. F. Ritter 1955. Locality simply given as "Catamarca".)
ZSS T4299 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4300 – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: Catamarca; "Catamarca, Nr. 13". – / 2. / 1959. – Identified as "*Gymnocalycium guanchinense* var." in KS 4: 1619.
SGO 124637 – (corp), ar, sp

loc. 3: Argentina: Catamarca; "Catamarca (Catam.)". – Identified as "*Gymnocalycium guanchinense* var." in KS 4: 1619.
ZSS SR13646 – sem

Ritter 22a: *Gymnocalycium guanchinense* Schütz var. *tinogastense* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 477, 1980. (Published as provisional name.)

Based on Ritter 22a.

loc. 1: Argentina: Catamarca; "Tinogasta".
SGO 124639 – (corp), ar, sp

loc. 2: Argentina: Catamarca; "31 km über Belen Richtg. Tinogasta" = 31 km above Belén towards Tinogasta.
SGO 124640 – (corp), ar, sp

loc. 3: Argentina: Catamarca; "54 km über Belen" = 54 km above Belén.
SGO 124664 – (corp), ar, sp

loc. 4: Argentina: Catamarca; "31 km westl. Belen" = 31 km W of Belén. – / 2. / 1959.
ZSS SR15003 – sem

Ritter 22b: *Gymnocalycium guanchinense* Schütz var. *robustius* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 477, 1980. (Published as provisional name.)

Based on Ritter 22b.

loc. 1: Argentina: Catamarca; "94 km über Sta. Maria nach Süd" = 94 km above Santa Maria towards the South.
SGO 124641 – (corp), ar, sp

loc. 2: Argentina: Catamarca; "94 km südl. Sta. Maria" = 94 km S of Santa Maria. – / 2. / 1959.
ZSS SR13647 – sem

Ritter 23: *Gymnocalycium bodenbenderianum* (Hosseus) Backeberg – Kaktusar 1934: ..., 1934. (See *Gymnos* 5(10): 80 (1988, publ. 1989) for a critical remark on the author citation. If not validly combined in the reference here given, a valid combination has been published by Backeberg in Backeberg & Knuth, *Kaktus-ABC*, 286, 1936 (dated 1935).)

loc. 1: Argentina: Catamarca; Catamarca. – / 2. / 1955. – Locality data according to index card associated with the seed sample at ZSS, collection date from ZSS specimen list.

ZSS S10360 – sem (Leg. F. Ritter 1957.)

ZSS T4301 – rad, corp, ar, sp (Leg. F. Ritter.)

loc. 2: Argentina: Salta ?; "Miraflores".
SGO 124642 – (corp), ar, sp

loc. 3: Argentina: Catamarca; "Catamarca, Nr. 12". – / 2. / 1959.
SGO 124643 – (corp), ar, sp

loc. 4: Argentina: Catamarca; "Catamarca (Catam.)".
ZSS SR13648 – sem

Ritter 24: *Parodia catamarcensis* Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 269, 416, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina: Catamarca; Catamarca. – / 2. / 1955. – Locality data according to Ritter letter dated 22. 4. 1955 (ZSS archives); collection date according to material at ZSS.

ZSS B4302 – (corp, ar, sp) (Leg. F. Ritter.)

ZSS S10095 – sem (Leg. F. Ritter 1955 (sub *Parodia microsperma*)).

loc. 2: Argentina: Catamarca; "Catamarca". – / 3. / 1962. – Collection date according to original Ritter seed sample at ZSS.

SGO 125378 – rad, corp, ar, sp

ZSS SR13649 – sem

Ritter 25: *Eriocereus bonplandii* (Parmentier ex Pfeiffer) Riccobono – Boll. Reale Orto Bot. Palermo 8: 238, 1909.

loc. 1: Argentina: Corrientes; "Montes Caseros, Nr. 3".

SGO 121702 – (corp), ar, sp ("4 - 5 Rippen" = 4 - 5 ribs.)

loc. 2: Paraguay: Boquerón; "Filadelfia, Nr. 10".

SGO 121703 – (corp), ar, sp

loc. 3: Argentina: Salta; "Betania". – / 1. / 1953. – Collection date according to original Ritter seed sample at ZSS.

SGO 121704 – (corp), ar, sp

ZSS SR13650 – sem

loc. 4: Brazil: Mato Grosso do Sul; "Corumba".

SGO 121705 – (corp), ar, sp ("4-rippig" = with 4 ribs.)

loc. 5: Argentina: Catamarca; "Chumbicha".

SGO 121706 – (corp), ar, sp

loc. 6: Argentina: San Luis; "Lujan".

SGO 121707 – (corp), ar, sp

loc. 7: Paraguay: "Rosario". – Identification of material is doubtful, the specimen consists of 2 thin-stemmed seedlings or cuttings (B. E. Leuenberger).

SGO 121708 – rad, (corp), ar, sp

loc. 8: Paraguay: "Wasserstelle 40 km nördl. km 220" = water hole 40 km N of km 220.

SGO 121709 – corp, ar, sp (Includes juvenile plant growth.)

loc. 9: Argentina: Catamarca; "Catamarca". – The original envelope is dated "I. 1953. + III. 1962"; the 1962-date was added later and is the only date present on the original label in the envelope.

ZSS SR13651 – sem

loc.10: Argentina: Corrientes; "Montes Caseros". – / 5. / 1959.

ZSS SR13652 – sem

Ritter 26: *Trichocereus terscheckii* (Parmentier) Britton & Rose – The Cact. 2: 140, 1920.

loc. 1: Argentina: Salta; "Betania".

SGO 121208 – (corp), ar, sp ("jung. Exemplar" = young specimen.)

loc. 2: Bolivia: Tarija; O'Connor; "Tacuarandi". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 121219 – (corp), ar, sp

ZSS SR14155 – sem

- loc. 3:** Argentina: Salta; "60 km südl. Salta" = 60 km S of Salta. – "Übergang zu *terscheckioides*" = transitional to *terscheckioides*.
SGO 121220 – (corp), ar, sp

Ritter 28: *Trichocereus thelegonus* (F. A. C. Weber) Britton & Rose – The Cact. 2: 130, 1920.

- loc. 1:** Argentina: Salta; "Betania".
SGO 121193 – (corp), ar, sp
- loc. 2:** Argentina: Salta; "101 km südl. Salta" = 101 km S of Salta.
SGO 121221 – (corp), ar, sp

Ritter 29: *Gymnocalycium pflanzii* (Vaupel) Werdermann – Blüh. Kakt., t. 94 + text (Juli 1935), 1935.

- loc. 1:** Argentina / Bolivia ?: sine loco.
ZSS S10096 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palos Blancos". – Both original labels first had the number "FR 397" which is *Gymnocalycium pflanzii* var. *albipulpa* according to KS.
SGO 124644 – (corp), ar, sp
- loc. 3:** Argentina: Salta; "Betania".
SGO 124645 – (corp), ar, sp
ZSS SR14158 – sem
- loc. 4:** Argentina: Salta; "Rio Juramento" / "Lumbreras".
SGO 124646 – (corp), ar, sp
- loc. 5:** Bolivia: Tarija: O'Connor ?; "Margarita + Río Cajas". – / 4. / 1958. – The original label was first numbered as "FR 397", which is identified as *Gymnocalycium pflanzii* var. *albipulpa* in the field-number list in KS 4.
ZSS SR15004 – sem
- loc. 6:** Bolivia: Chuquisaca: Azurduy; "Capajtala + Sotomayor". – / 8. / 1958. – The original label was first numbered as "FR 397", which is identified as *Gymnocalycium pflanzii* var. *albipulpa* in the field-number list in KS 4.
ZSS SR15005 – sem

Ritter 32: *Pyrhocactus umadeave* (Fric ex Werdermann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 264, 1936. (Dated 1935, published Febr. 1936.)

- loc. 1:** Argentina: sine loco. 3000 m.
ZSS B4303 – (ar, sp) (Leg. F. Ritter.)
ZSS S10097 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Argentina: Salta; "Strasse P. Tastil nach San Antonio" = road from Puerta Tastil to San Antonio.
SGO 121453 – (corp), ar, sp
- loc. 3:** Argentina: Salta; "Puerta Tastil (Salta)".
ZSS SR13653 – sem

Ritter 33: *Gymnocalycium spegazzinii* Britton & Rose – The Cact. 3: 155,

1922.

- loc. 1:** Argentina: Salta; "Cafayate". – / 1. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 124647 – (corp), ar, sp
ZSS SR15006 – sem
- loc. 2:** Argentina: Salta; "22 km vor Cachi" = 22 km before Cachi / "22 km östl. Cachi" = 22 km E of Cachi.
SGO 124648 – (corp), ar, sp
- loc. 3:** Argentina: Salta; "39 km vor Cachi, Nr. 5" = 39 km before Cachi / "39 km östl. Cachi" = 39 km E of Cachi.
SGO 124649 – (corp), ar, sp
- loc. 4:** Argentina: Catamarca; "33 km über Sta. Maria" = 33 km above Santa Maria / "33 km südl. Sta. Maria" = 33 km S of Santa Maria.
SGO 124650 – (corp), ar, sp
- loc. 5:** Argentina: Salta; sine loco.
B GH19354 – ic (corp) (Ex cult. BG Berlin, 8. 1. 1986 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
- loc. 6:** Argentina: Catamarca; "33 km über Sta. Maria nach Süd" = 33 km above Santa Maria towards the South. – / 2. / 1959.
ZSS SR14156 – sem
- loc. 7:** Argentina: Salta; "Puerta Tastil (Salta)".
ZSS SR14157 – sem

Ritter 34: *Parodia stuemeri* (Werdermann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 272, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Argentina: sine loco.
ZSS T4304 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4305 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Salta; "oberhalb Puerta Tastil, hohe Lagen, bei 3000 m." = above Puerta Tastil, great altitudes. 3000 m. – The original label is no longer present but has been copied previously.
SGO 125379 – rad, corp, ar, sp
- loc. 3:** Argentina: Salta; "auf dem Weg P. Tastil - San Antonio bei ca. 3400 m Höhe" = along path P. Tastil - San Antonio / "höchste Lage" = uppermost altitude. 3400 m.
SGO 125380 – rad, corp, ar, sp
- loc. 4:** Argentina: Salta; "Puerta Tastil, 2600 m.". 2600 m.
SGO 125381 – (corp), ar, sp
- loc. 5:** Argentina: Salta; "Chorrillos". – / 2. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125382 – rad, corp, ar, sp
ZSS SR13654 – sem
- loc. 6:** Argentina: Salta; "Puerta Tastil, hohe Lagen, ca. 2800 m." = Puerta Tastil, high altitudes. 2800m. – / 2. / 1959.
ZSS SR13655 – sem

- loc. 7:** Argentina: Salta; "Puerta Tastil (Salta), tiefe Lagen" = Puerta Tastil, low altitudes. – "tiefe Lagen" obviously added later to the original envelope.
ZSS SR13656 – sem

Ritter 35: *Parodia* sp.

- loc. 1:** Argentina: Salta; Puerta Tastil. 3000 m.
ZSS S9890 – sem (Leg. F. Ritter (sub *Parodia stuemeri*, cf. Cat. Winter 1953).)
ZSS T4306 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4307 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Salta; "Puerta Tastil (Salta)".
ZSS SR13657 – sem

Ritter 36: *Opuntia retrorsa* Spegazzini – Anal. Mus. Nac. Buenos Aires 4: 517, 1905.

- Argentina: Salta; "Betania (Salta)". – / 1. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter. The original label also has the number " = 388" added later; the two number are set equal in the field-number list in KS 4.
ZSS SR13658 – sem

Ritter 37: *Opuntia quimilo* K. Schumann – Gesamtb. Kakt., 746, 1898.

- loc. 1:** Bolivia: Cochabamba; "Pte. Arce, Nr. 1" = Puente Arce, Nr. 1. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122001 – (corp), ar, sp
- loc. 2:** Bolivia: Tarija; Mendez; "Rio Pilayo, Nr. 3" / "Colpana". – The jar contains several slightly different fragments. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122019 – ar, sp, (fr)
- loc. 3:** Argentina: Catamarca; "Catamarca (Catam.)". – / 1. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR13659 – sem

Ritter 38: *Opuntia sulphurea* Salm-Dyck – Hort. Dyck. 1834, 360, 1834.

(Usually attributed to "G. Don ex Loudon, Hort. Brit., 196, 1830" but no description is given there apart from some horticultural symbols.)

- loc. 1:** Bolivia: Tarija; Mendez; "Carrizal". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122002 – (corp), ar, sp
- loc. 2:** Bolivia: Tarija; Mendez; "Cajas, Nr. 12". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122003 – corp, ar, sp ("Ausnahmepflanze" = exceptional plant.)
- loc. 3:** Argentina: Salta; "60 km südl. Salta" = 60 km S of Salta / "Gral. Moldes" = General Moldes. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125317 – (corp), ar, sp, fr

loc. 4: Argentina: Catamarca; "Catamarca (Catam.)". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR13660 – sem

Ritter 39: *Rhipsalis lumbricoides* (Lemaire) Lemaire – Ill. Hort. 6(Misc.): 88, 1859. (Sometimes erroneously attributed to K. Schumann 1898.)

loc. 1: Bolivia: Tarija; "östl. Entre Ríos" = E of Entre Ríos. – / – / 1963.
SGO 125543 – corp, ar, sp

loc. 2: Bolivia: Tarija; O'Connor; "Tapecua" / "Tapécua".
SGO 125544 – rad, corp, ar, sp

loc. 3: Bolivia: Tarija; "Entre Ríos, Nr. 2". – / 3. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 125545 – corp, ar, sp

ZSS SR14159 – sem (The original label was first numbered "FR 885".
FR 885 is set equal to FR 365 in the field-number list in KS 4 where
FR 365 is identified as *Rhipsalis lumbricoides* var. *leucorhaphis*.)

loc. 4: Bolivia: Santa Cruz: Florida; "Abstieg nach Mataral" = descent to Mataral / "oberh. Mataral" = above Mataral.
SGO 125546 – corp, ar, sp

loc. 5: Bolivia: Tarija: Arce; "zw. La Merced und Rio Negro" = between La Merced and Río Negro / "Merced, Boliv.". – One of the original labels first had the collection number "FR 885", now crossed out. FR 885 and FR 39 are both said to equal FR 365 which is identified as *Rhipsalis lumbricoides* in KS 4.
SGO 125547 – corp, ar, sp

loc. 6: Bolivia: Tarija: O'Connor; "Tacuarandi, Nr. 14". – One of the original labels first had the collection number "FR 885", now crossed out. FR 885 and FR 39 are both said to equal 365 which is identified as *Rhipsalis lumbricoides* in KS 4.
SGO 125548 – rad, corp, ar, sp

loc. 7: Paraguay: Presidente Hayes; "Chaco-i".
SGO 125549 – rad, corp, ar, sp

loc. 8: Paraguay: Guairá; "Cerro Pelado, Nr. b [sic]".
SGO 125550 – corp, ar, sp

loc. 9: Paraguay: "Colonia Friesland" / "Friesland".
SGO 125551 – rad, corp, ar, sp

loc.10: Argentina: Salta; "25 km von Salta. Oststrasse nach Jujuy" = 25 km from Salta. E road to Jujuy / "östl. Salta" = E of Salta.
SGO 125552 – rad, corp, ar, sp

loc.11: Argentina: Jujuy; "36 km über Jujuy Richtg. Ledesma" = 36 km above Jujuy towards Ledesma / "nordöstl. Jujuy" = NE of Jujuy.
SGO 125553 – rad, corp, ar, sp

loc.12: Argentina: Salta; "ca. 44 südl. Jujuy, Prov. Salta" = c. 44 [km] S of Jujuy / "südl. Jujuy" = S of Jujuy.
SGO 125554 – rad, corp, ar, sp

loc.13: Argentina: Salta; "Rio Rosario bei Rosario" = Río Rosaria near Rosario / "Rosario".
SGO 125555 – rad, corp, ar, sp

Ritter 40: *Rhipsalis tucumanensis* F. A. C. Weber – Rev. Hort. 64: 426-427, 1892.

loc. 1: Argentina: Jujuy; sine loco.

ZSS S10002 – sem (Leg. F. Ritter 1955.)

ZSS S12598 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 2: Argentina: Tucumán; "25 km von Montaros [Monteros ?] nach Tafi" = 25 km from Monteros towards Tafi del Valle / "östl. Tafi d. V." = E of Tafi del Valle.
SGO 125556 – corp, ar, sp

loc. 3: Argentina: Salta ?; "43 km südl. Jujuy" = 43 km S of Jujuy / "südl. Jujuy" = S of Jujuy.

SGO 125557 – corp, ar, sp

loc. 4: Argentina: Jujuy; "Jujuy (Jujuy)". – / 1. / 1953.

ZSS SR13661 – sem

loc. 5: Argentina: Tucumán; "zw. Acheral u. Tafi d. Valle" = between Acheral and Tafi del Valle. – / 2. / 1959.

ZSS SR13662 – sem

Ritter 40a: *Rhipsalis tucumanensis* F. A. C. Weber – Rev. Hort. 64: 426-427, 1892.

loc. 1: Bolivia: Santa Cruz: Florida; "Samaipata". – One of the original labels first had the collection number as "FR 115 cf.", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.

SGO 125558 – corp, ar, sp

loc. 2: Bolivia: Tarija: Gran Chaco; "Tapecua, westl. Palos Blancos, Höhen" = Tapecua, W of Palos Blancos, altitudes / "Tapecua". – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.

SGO 125559 – corp, ar, sp

loc. 3: Bolivia: Tarija: Gran Chaco; "24 km westl. Palos Blancos" = 24 km W of Palos Blancos / "Palos Blancos" = W of Palos Blancos.

SGO 125560 – corp, ar, sp

loc. 4: Bolivia: Santa Cruz: Valle Grande; "Comarapa". – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.

SGO 125561 – corp, ar, sp

loc. 5: Bolivia: Santa Cruz: Cordillera; "15 km südl. Camiri" = 15 km S of Camiri / "südl. Camiri" = S of Camiri. – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.

SGO 125562 – corp, ar, sp

- loc. 6:** Bolivia: Santa Cruz: Cordillera; "westl. Camiri" = W of Camiri. – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.
SGO 125563 – corp, ar, sp
- loc. 7:** Bolivia: Chuquisaca; "Pte. Acero" = Puente Acero. – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.
SGO 125564 – corp, ar, sp
- loc. 8:** Bolivia: Tarija; "Yacuiba". – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.
SGO 125565 – corp, ar, sp
- loc. 9:** Bolivia: Tarija: O'Connor; "Entre Rios". – One of the original labels first had the collection number as "FR 115", now crossed out. FR 115 is said to be equal with FR 40 in the field number list in KS 4.
SGO 125566 – rad, corp, ar, sp
- loc.10:** Bolivia: Santa Cruz: Florida; "Mairana, Nr. 23". – /7./ 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 125567 – rad, corp, ar, sp ("Gemischt mit *boliviana* FR 115? von ebenda" = mixed with [*Rhipsalis*] *boliviana* FR 115+ from the same place. FR 115 and FR 40a are set equal to FR 40 in the field-number list in KS 4.)
ZSS SR14160 – sem ("Same hohl" = seeds hollow.)

Ritter 41: *Trichocereus shaferei* Britton & Rose – The Cact. 2: 144, 1920.

- loc. 1:** Argentina: Jujuy; near town of Jujuy. – /- / 1955. – Locality data from correspondence with F. Ritter (ZSS archives, letter 12. 2. 1955, p. 31). First identified as *Trichocereus schickendantzii*.
B GH14420 – fl, ic (corp, fl) (Ex cult. BG Berlin, 23. 6. 1983 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS B270 – ar, sp, fl (Ex cult. Univ. California BG Berkeley 55.257, prepared 10. 5. 1961 by P. C. Hutchison.)
ZSS S10003 – sem (Leg. F. Ritter 1955 (sub *Trichocereus schickendantzii*)).
ZSS T4449 – (corp), ar, sp (Leg. F. Ritter.)
ZSS T5116 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Argentina: Jujuy; "10 km südl. Volcán" = 10 km S of Volcán / "Leon". – There are two labels in the jar with the conflicting locality information as given above; the 2 fragments also differ.
SGO 121222 – (corp), ar, sp

Ritter 42: *Echinopsis polyancistra* Backeberg – Kakteenfreund 1933: 18, 1933. (The place of first description is in some sources cited as Backeberg in Backeberg & Knuth, Kaktus-ABC, 223, 1936 (dated 1935).)

- loc. 1:** Argentina: Jujuy; Nähe der Stadt Jujuy. – See Ritter letter 12. 2. 1955, p. 28 (ZSS archives) for locality data.
ZSS S10004 – sem (Leg. F. Ritter 1955.)

loc. 2: Argentina: Jujuy; "43 km südl. Jujuy" = 43 km S of Jujuy.
SGO 121445 – rad, corp, ar, sp

Ritter 43: *Pfeiffera ianthothele* (Monville) F. A. C. Weber – in D. Bois, Dict. Horticult., 944, 1898.

loc. 1: Bolivia / Argentina?: sine loco.
ZSS S9891 – sem (Leg. F. Ritter 1955.)

loc. 2: Argentina: Jujuy?; "38 km von Jujuy Richtg. Salta" = 38 km from Jujuy towards Salta / "südl. Jujuy" = S of Jujuy.
SGO 125368 – corp, ar, sp

loc. 3: Argentina: Jujuy; "Palpalá (Jujuy)".
ZSS SR13663 – sem

Ritter 43a: *Pfeiffera ianthothele* (Monville) F. A. C. Weber var. *boliviana* F. Ritter – Kakt. Südamer. 2: 503, figs. 352, 360, 1980.
Typus (T): Ritter 43a (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija: O'Connor; "Entre Ríos" = Entre Ríos. 1300 m. – / – / 1962.
– Collection date according to specimen at U. Altitude according to the protologue.
SGO 125372 ISO – corp, ar, sp
U HOLO – corp, ar, sp (Collection number and type status inferred.)

loc. 2: Bolivia: Tarija: O'Connor; "östl. Entre Ríos" = E of Entre Ríos.
ZSS SR14162 – sem

loc. 3: Bolivia: Tarija: Gran Chaco; "14 km östl. Palos Blancos" = 14 km E of Palos Blancos.
ZSS SR14161 – sem

Ritter 44: *Oreocereus trollii* (Kupper) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 187, 1936. (Dated 1935, publ. Febr. 1936.)

– Argentina: Jujuy; "Iturbe (Jujuy)". 22. / 2. / 1953.
ZSS SR13664 – sem

Ritter 44a: *Oreocereus trollii* (Kupper) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 187, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina / Bolivia?: sine loco. 4000 m.
ZSS S10098 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

loc. 2: Bolivia: La Paz: Avilez; "Abstieg von Copacabana, km 11" = descent from Copacabana, km 11 / "Copacabana".
SGO 125302 – (corp), ar, sp

loc. 3: Bolivia: Potosí: Sud-Chichas; "Mal Paso".
SGO 125303 – rad, corp, ar, sp (Seedling plant.)

loc. 4: Bolivia: Potosí; "Pulacayo". – / 1. / 1957.
ZSS SR14163 – sem

Ritter 45: *Parodia chrysacanthion* (K. Schumann) Backeberg – Blätt. Kakt.-forsch. 1935(3): [unpaged], 1935.

- loc. 1:** Argentina: Jujuy; "Volcán, Südwestberge" = Volcán, SW mountains.
SGO 125383 – rad, corp, ar, sp
- loc. 2:** Argentina: Jujuy; "von Maimará und Volcán (Jujuy, Argent.)" = from
Maimará and Volcán. – / 1. / 1953.
ZSS SR13665 – sem

Ritter 46: *Parodia maassii* (Heese) A. Berger var. *shaferi* F. Ritter – Succulenta
1963(12): 179, 1963.

Typus (T): Ritter 46 (U 160409B, SGO [status ?], ZSS [status ?]).

- loc. 1:** Argentina: Jujuy; "von La Quiaca" = from La Quiaca. – / – / 1963. –
Collection date according to specimen at U.
U 160409B **HOLO** – (corp), ar, sp (Labelled as "Neotypus" by Ritter.
Collection number inferred.)
- loc. 2:** Bolivia: Potosí: Sud-Chichas; "Villazón". – / 1. / 1959. – Collection date
according to original Ritter seed sample at ZSS.
ZSS S10099 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.
Locality according to Ritter letter dated 12. 2. 1955 (ZSS archives).)
ZSS SR14165 **Type number** – sem
- loc. 3:** Bolivia: Potosí: Sud-Chichas; "Tupiza". – / 3. / 1958. – Collection date
according to original Ritter seed sample at ZSS.
SGO 124496 **Type number** – (corp), ar, sp
ZSS SR14164 **Type number** – sem
- loc. 4:** Bolivia: Potosí: Nor-Chichas; "Cotagaita" / "Cotagaita, Höhen" = Cotagaita,
altitudes.
SGO 124498 **Type number** – (corp), ar, sp
- loc. 5:** Argentina: Jujuy; "Iturbe (Jujuy)". – / 1. / 1953.
ZSS SR13666 – sem

Ritter 46a: *Parodia fulvispina* F. Ritter – Cactus (Paris) 17(76): 54-55, ill.,
1962.

Typus (T): Ritter 727 (U 116924B, ZSS [status ?]).

- Bolivia: Tarija: Mendez; Carrizal. – / – / 1953. – Originally distributed as
Parodia maassii var. *auricolor* Ritter (*nom. nud.*). – The field numbers 46a
and 727 seem to have identical locality data and are equalled with one
another in KS 2: 525.
ZSS AX3630 – corp, ar, sp (Ex cult. ZSS s.n.)
ZSS S9892 – sem (Leg. F. Ritter 1955.)

Ritter 46b: *Parodia rubida* F. Ritter – Succulenta 43(3): 43-44, 1964.

Typus (T): Ritter 725 (U 160788B, SGO, ZSS [status ?]).

- loc. 1:** Bolivia: Potosí: Sud-Chichas; Villazón (frontier region to Argentina). – / – /
1954.
ZSS B4438 – ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: Potosí: Sud-Chichas; "Mal Paso".
SGO 124631 – (corp), ar, sp

Ritter 46c: *Parodia maassii* (Heese) A. Berger var. *carminatiflora* F. Ritter –

Succulenta 1963(12): 179-180, 1963.

Typus (T): Ritter 46c (U 160281B, SGO, ZSS [status ?]).

loc. 1: Argentina: Salta; "von südlich Tres Morros" = from S of Tres Morros. - / - / 1959. - Collection date according to the protologue; the specimen at U is dated "1963".

U 160281B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

ZSS T5150 **Type number** - corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1983.)

loc. 2: Argentina: Salta; "26 km südl. Tres Morros" = 26 km S of Tres Morros / "Tres Morros".

SGO 125384 **ISO** - (corp), ar, sp

loc. 3: Argentina: Salta; "Prov. Salta". - / 2. / 1959.

ZSS SR13667 **Type number** - sem

Ritter 46d: *Parodia maassii* (Heese) A. Berger var. *albescens* F. Ritter -
Succulenta 1963(12): 179, 1963.

Typus (T): Ritter 46d (U 160289B, SGO [status ?], ZSS [status ?]).

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "von zwischen Puente San Pedro und Culpina" = from between Puente San Pedro and Culpina. - / - / 1963. -
Collection date according to specimen at U.

U 160289B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; "Berge südl. Culpina" = mountains S of Culpina / "Culpina, Südberge" = Culpina, southern mountains.

SGO 124499 **Type number** - (rad), corp, ar, sp ("Vielleicht auch
Mischformen nach *Parodia subterranea* hierunter" = probably
including intermediates towards *Parodia subterranea*.)

ZSS SR14166 **Type number** - sem (The locality is simply given as
"Berge südl. Culpina".)

loc. 4: Bolivia: Chuquisaca: Sud-Cinti; "Passhöhe Sn. Pedro - Culpina" =
culmination of pass San Pedro - Culpina / "östl. Pte. San Pedro" = E of Puente
San Pedro.

SGO 124632 **Type number** - rad, corp, ar, sp

loc. 5: Bolivia: Chuquisaca: Sud-Cinti; "Pässe der Strasse S.n Pedro - Culpina" =
culmination of passes of road San Pedro - Culpina. - / 5. / 1958.

ZSS SR14167 **Type number** - sem

Ritter 46e: *Parodia maassii* (Heese) A. Berger var. *intermedia* F. Ritter -
Succulenta 1963(12): 179, 1963.

Typus (T): Ritter 46e (U 160796B, SGO, ZSS [seeds only]).

- Bolivia: Tarija: Mendez; "von Cieneguillas" = from Cieneguillas. - / 4. /
1962. - Collection date according to original Ritter seed sample at ZSS.

SGO 124500 **ISO** - (corp), ar, sp

U 160796B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred. Dated "1963".)

ZSS SR14168 **ISO** - sem

Ritter 46f: *Parodia maassii* (Heese) A. Berger fa. *distortihamata* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 516, 1980. (Published as provisional name only.)

Based on Ritter 46f.

- Bolivia: Potosí: Sud-Chichas; "Mal Paso". – / 3. / 1962.
ZSS SR14169 Type collection – sem

Ritter 46g: *Parodia maassii* (Heese) A. Berger var. *rectispina* Backeberg – Cact. Succ. J. (US) 23(3): 84, 1951.

Typus (*N*): Ritter 46g (U 160385B [neo], SGO) (Neotype designated by Ritter, Succulenta 1963: 180, 1963.).

loc. 1: Bolivia: Potosí; "von Betanzos" = from Betanzos. – / – / 1963. – Collection date according to specimen at U.

SGO 124497 **ISONEO** – (corp), ar, sp

U 160385B **NEO** – (corp), ar, sp (Labelled as "Neotypus" by Ritter. Collection number inferred.)

loc. 2: Bolivia: Potosí; "Don Diego + Betanzos". – / 12. / 1959.
ZSS SR14170 – sem

Ritter 46h: *Parodia maassii* (Heese) A. Berger – Kakteen, 204, 1929.

- Bolivia: Tarija: Mendez; "von Escayachi" = from Escayachi. – / – / 1963. – Identified as *Parodia maassii* var. *maassii* in KS 4: 1620. Collection date according to specimen at U.

SGO 124501 – (corp), ar, sp

U 160345B – (corp), ar, sp (Labelled as "Neotypus" by Ritter, but this neotypification was never published as far as known. Collection number inferred.)

Ritter 47: *Parodia tilcarensis* (Werdermann & Backeberg) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 268, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina: Jujuy; "Maimará".

SGO 125387 – rad, corp, ar, sp

ZSS S10100 – sem (Leg. F. Ritter (ex Fa. Winter) 1955. Locality according to Ritter letter dated 12. 2. 1955 (ZSS archives).)

ZSS SR13668 – sem (The original envelope is dated "I. 53".)

ZSS SR13669 – sem ("(Same grösser als im 1953)" = seeds larger than in 1953. The original label is dated "IV 1962".)

loc. 2: Argentina: Jujuy; "Strasse Purmamarca nach Tres Morros bei 3000 m." = road Purmamarca to Tres Morros / "westl. Purmamarca" = W of Purmamarca. 3000 m.

SGO 125385 – (corp), ar, sp, (fl)

loc. 3: Argentina: Jujuy; "unterh. Huacalera" = below Huacalera. – "(+ Übergänge zu *Par.* unterh. Humahuaca)" = plus intermediates to *Parodia* from below Humahuaca.

SGO 125386 – (corp), ar, sp

Ritter 48: *Parodia schuetziana* Jajo – Zpravy Ceskosl. Kakt. Spolecn. 1947(March): 25-26, ill., 1947. (Sphalm. 'Schütziana'.)

loc. 1: Argentina: Jujuy; Volcán. – Locality data according to KS 2: 422.
ZSS S10101 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Parodia tilcarensis* var.))

loc. 2: Argentina: Jujuy; "Volcán". – / 1. / 1953. – Collection date according to original Ritter seed sample at ZSS.
SGO 125388 – (corp), ar, sp
ZSS SR13670 – sem

loc. 3: Argentina: Jujuy; "Berge südwestl. von Volcán" = mountains SW of Volcán.
SGO 125389 – rad, corp, ar, sp

Ritter 49: *Trichocereus atacamensis* (Philippi) W. T. Marshall var. *pasacana* (F. A. C. Weber ex Rümpler) F. Ritter – Kakt. Südamer. 2: 447, 1980.

loc. 1: Argentina: Jujuy; "Volcán".
SGO 121209 – (corp), ar, sp

loc. 2: Argentina: Jujuy; "Humahuaca".
SGO 125521 – (corp), ar, sp

loc. 3: Argentina: Salta; "Cachi".
SGO 125522 – corp, ar, sp

loc. 4: Argentina: Jujuy; "Maimará (Jujuy)". – / 1. / 1953.
ZSS SR13671 – sem

Ritter 49a: *Trichocereus eremophilus* F. Ritter – Kakt. Südamer. 2: 559, figs. 433, 435, 1980.

Typus (T): Ritter 49a (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Potosí: Nor-Lipez; "Colchac". – The spelling used for the locality in KS 2: 559 and on the original label of the specimen at U is "Colchak".
SGO 121151 **ISO** – (corp, ar, sp) (Probably a seedling plant.)
U **Type number** – (corp), ar, sp (This is probably the holotype, but designation as such is deferred, because the specimen consists of 2 dissimilar fragments, probably young and old. Collection number inferred.)

loc. 2: Bolivia: sine loco.
ZSS S10102 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Trichocereus pasacana* var. *boliviensis*)).

loc. 3: Bolivia: Potosí: Nor-Lipez; "südl. Colchac" = S of Colchac.
SGO 125523 **Type number** – (corp), ar, sp

loc. 4: Bolivia: Potosí; "von Chiguana (Potosí)" = from Chiguana. – / 3. / 1953.
ZSS SR14171 – sem

Ritter 49b: *Trichocereus atacamensis* (Philippi) W. T. Marshall var. *pasacana* (F. A. C. Weber ex Rümpler) F. Ritter – Kakt. Südamer. 2: 447, 1980.

- Bolivia: Oruro; Oruro. – / 10. / 1954. – Originally identified as *Trichocereus pasacana* var. *boliviensis*.
ZSS T4439 – ar, sp (Leg. F. Ritter.)

Ritter 49c: *Trichocereus atacamensis* (Philippi) W. T. Marshall var. *pasacana* (F. A. C. Weber ex Rümpler) F. Ritter – Kakt. Südamer. 2: 447, 1980.

- Bolivia: La Paz; Yaco. – / 10. / 1954. – Originally identified as *Trichocereus pasacana* var. *boliviensis*.
ZSS T4440 – corp, ar, sp (Leg. F. Ritter.)

Ritter 50: *Weingartia neumanniana* Werdermann var. *aurantia* Backeberg (*nom. inval.* Art. 9.5) – Descr. Cact. Nov. 3: 15, 1963. (Erroneously included as valid in RPS 14. Based on *Ritter 50* according to F. Ritter.)

- loc. 1:** Argentina: Jujuy; Iturbe. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives). The ZSS specimens have all been annotated later as coming from "Bolivia, 4000 m".

ZSS A4259 – corp, ar, sp, fl (Ex cult. ZSS s.n.)

ZSS B4441 – corp, ar, sp (Leg. F. Ritter.)

ZSS S10103 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

ZSS T4442 – rad, corp, ar, sp (Leg. F. Ritter.)

- loc. 2:** Argentina: Jujuy; "Iturbe (Jujuy)". – / 1. / 1953.

ZSS SR13672 – sem

Ritter 51: *Gymnocalycium saglionis* (Cels) Britton & Rose var. *tilcareense* Backeberg (*nom. inval.* Art. 36.1) – in Backeberg & Knuth, Kaktus-ABC, 295, 1936. (Dated 1935, publ. Febr. 1936. Validly published 1942 as *Brachycalycium tilcareense* Backeberg.)

- Argentina: sine loco. – No information on this collection in Ritter's publications.

ZSS S10104 – sem (Leg. F. Ritter (ex Fa. Winter) 1955. Annotated as "var. *albispinus* et var. *roseispinus*" as demanded by Ritter in litt.)

Ritter 52: *Lobivia longispina* Britton & Rose var. *nigra* (Backeberg) F. Ritter (*nom. inval.* Art. 33.2, 36.1) – Kakt. Südamer. 2: 459, 1980. (The name given as basionym was itself a combination and is here corrected.)

- loc. 1:** Argentina: Jujuy; Maimará. – / – / 1955. – Also found (and collected under the same number) in Villazón in Bolivia, close to the Argentinian frontier. It is impossible to determine where the individual specimens have been collected (cf. letter from Ritter to ZSS, 12. 2. 1955, p. 2).

B GH19318 – ic (corp, fl) (Cult. ex BG Berlin, 3. 7. 1985 (cult. ex sem.

Cat. H. Winter 1961). Collection number inferred.)

ZSS AX3555 – corp, ar, sp (Leg. F. Ritter (coll. ex nat., 4000 m.); ex cult. ZSS s.n.)

- loc. 2:** Bolivia: Potosí; Sud-Chichas; "Villazón". – Locality data according to index card associated with the seed sample at ZSS.

ZSS S10368 – sem (Leg. F. Ritter 1955.)

- loc. 3:** Argentina: Jujuy; "Abra Pampa".
SGO 124387 – (corp), ar, sp
- loc. 4:** Argentina: Jujuy; "Purmamarca Nr. 7".
SGO 124388 – (corp), ar, sp
- loc. 5:** Bolivia: Potosí: Sud-Chichas; "Villazón". – "*Lob. ähnl. ferox*. Wohl Hybrid *ferox x longisp.*" = *Lobivia* similar to *ferox*. Probably hybrid *Lobivia ferox* × *L. longispina*. The label is numbered as "52 x 80", FR 80 is *Lobivia longispina* according to the field number list in KS 4.
SGO 124392 – (corp), ar, sp

Ritter 53: *Lobivia haageana* Backeberg var. *chrysantha* Backeberg – Cactus (Paris) No. 41: 84, 1954. (Repeated in Descr. Cact. Nov. [1:] 29, 1957 (dated 1956) (cf. RPS 7).)

- loc. 1:** Argentina: Jujuy; "Iturbe". – Locality data according to specimen at SGO and to Ritter letter dated 12. 2. 1955 (ZSS archives).
SGO 124390 – (rad, corp, ar, sp) (Seedling material only.)
ZSS S10005 – sem (Leg. F. Ritter 1955.)
ZSS T4443 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Jujuy; "19 km südl. Tres Cruces, Nr. 8" = 19 km S of Tres Cruces.
SGO 124389 – rad, corp, ar, sp

Ritter 54: *Lobivia jajoiana* Backeberg var. *nigristoma* (Kreuzinger & Buining) Backeberg – Die Cact. 3: 1464, 1959.

- loc. 1:** Argentina: Jujuy; near Maimará. – / – / 1954.
ZSS S10006 – sem (Leg. F. Ritter 1955.)
ZSS T4444 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4445 – ar, sp (Leg. F. Ritter)
ZSS T5064 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Argentina: Jujuy; "unterhalb Huacalera" = below Huacalera. – "od. gemischt mit Humahuaca ?" = or mixed with Humahuaca. The label also has the number given as "FR 54 (+ 979?)", 979 is identified as *Lobivia* sp. 20 km unterhalb Humahuaca in the field number list in KS 4.
SGO 124391 – rad, corp, ar, sp

Ritter 55: *Lobivia buiningiana* F. Ritter – Kakt. Südamer. 2: 461-462, figs. 306-307, 1980.

Typus (T): Ritter 55 (U 160353B, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- Argentina: Jujuy; "von Volcán" = from Volcán. – / 1. / 1953. – Collection date according to the protologue, the holotype specimen at U is dated "1963".
U 160353B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter and dated "1963". Collection number inferred.)
ZSS A10489 **Type number** – ar, sp, fl (Ex cult. ZSS s.n., 12. 7. 1976. No locality data associated with this specimen.)
ZSS S10105 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

Ritter 56: *Hymenorebutia kreuzingeri* Fric ex Buining – Succulenta 1939:

104-106, 1939. (First used by Fric, *Rebutioideae*, [unpaged], 1936.)

- Argentina: Jujuy; "oberhalb und unterhalb Maimará" = above and below Maimará. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S10007 – sem (Leg. F. Ritter 1955.)

Ritter 57: *Rebutia haagei* Fric & Schelle – *Kaktusar* 1: 88-89, ill., 1930.

- loc. 1:** Argentina: Jujuy; Iturbe. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S10008 – sem (Leg. F. Ritter 1955.)
ZSS S10445 – sem (Leg. Fa. Köhres (ex cult.) 1976.)
ZSS T4446 – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Jujuy; "Iturbe" / "Gebirge 7 km südl. Iturbe" = mountain 7 km S of Iturbe. – / 4. / 1962.
SGO 124555 – rad, corp, ar, sp

Ritter 57a: *Rebutia pygmaea* (R. E. Fries) Britton & Rose – *The Cact.* 3: 47, 1922.

- loc. 1:** Bolivia: Potosí: Sud-Chichas; Villazón.
ZSS T4447 – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: La Paz: Avilez; "Copacabana" / "Abstieg von Copacabana km 11, Nr. 10" = descent from Copacabana km 11.
SGO 124556 – rad, corp, ar, sp
- loc. 3:** Argentina: Jujuy; "La Quiaca". – / 4. / 1962.
SGO 124557 – rad, corp, ar, sp
- loc. 4:** Bolivia: Potosí: Sud-Chichas; "Villazon Nr. 16".
SGO 124558 – rad, corp, ar, sp

Ritter 58: *Rebutia calliantha* Bowerunge – *Sukkulantenkunde* 2: 25, ill., 1948. (Based on cultivated material without origin.)

- loc. 1:** Argentina: Jujuy; "Volcán in tieferen und mittleren Lagen" = Volcán, in lower and intermediate altitudes. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS A10463 – fl (Ex cult. ZSS s.n. 1959. No locality data associated with this specimen.)
ZSS A10475 – fl (Ex cult. ZSS s.n., 16. 5. 1974. No locality data associated with this specimen.)
ZSS S10009 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Argentina: Jujuy; "Volcan unten" = Volcán, below.
SGO 124559 – rad, corp, ar, sp

Ritter 59: *Cleistocactus jujuyensis* Backeberg – *Beitr. Sukk.-kunde & -pflege* 1942(3): 49-50, ill., 1942. (Based on *Cleistocactus strausii* var. *jujuyensis* Backeberg 1936 (*nom. inval.*, Art. 36.1).)

loc. 1: Argentina: Jujuy; "10 km südl. Volcán" = 10 km S of Volcán / "Volcan".
SGO 124761 – corp, ar, sp

loc. 2: Argentina: Jujuy; "Volcán (Jujuy)". – / 1. / 1953.
ZSS SR13673 – sem

Ritter 59a: *Cleistocactus jujuyensis* Backeberg – Beitr. Sukk.-kunde & -pflege 1942(3): 49-50, ill., 1942. (Based on *Cleistocactus strausii* var. *jujuyensis* Backeberg 1936 (*nom. inval.*, Art. 36.1).)

– Argentina: Salta; "Chorillos".
SGO 124762 – corp, ar, sp

Ritter 59b: *Cleistocactus jujuyensis* Backeberg var. *fulvus* F. Ritter – Kakt. Südamer. 2: 480, 1980.

Typus (T): Ritter 59b (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

– Argentina: Jujuy; "Purmamarca" above Volcán. – / 1. / 1959. – Identified as *Cleistocactus jujuyensis* var. *rufus* in KS 4: 1620. Locality data supplemented from the protologue. Collection date according to original Ritter seed sample at ZSS.
SGO 124763 ISO – corp, ar, sp
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
ZSS SR13674 ISO – sem

Ritter 60: *Austrocylindropuntia weingartiana* (Backeberg) Backeberg – Cact. Succ. J. (US) 23(1): 14, 1951.

loc. 1: Argentina / Bolivia?: sine loco.
ZSS T4448 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Bolivia: Potosí: Sud-Chichas; "Tupiza". – / 1. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121910 – corp, ar, sp
ZSS SR14172 – sem

loc. 3: Bolivia: Cochabamba?: "Macha" [= Machaca?]. – The locality originally read "Machac" and was amended later on the original label.
SGO 121912 – corp, ar, sp

loc. 4: Bolivia: Potosí: Nor-Chichas; "Cotagaita, Höhen" = Cotagaita, altitudes.
SGO 121913 – corp, ar, sp

loc. 5: Bolivia: Tarija: Mendez; "Cieneguillas".
SGO 121914 – corp, ar, sp

loc. 6: Argentina: Jujuy; Iturbe. – Locality data according to Ritter letters dated 12. 2. 1955 and 4. 1955 (ZSS archives).
ZSS S9988 – sem (Leg. F. Ritter 1955.)

Ritter 61: *Austrocylindropuntia vestita* Backeberg var. *shaferei* (Britton & Rose) F. Ritter – Kakt. Südamer. 2: 380-382, 1980.

- loc. 1:** Argentina / Bolivia: sine loco.
ZSS S9989 – sem (Leg. F. Ritter 1955.)
ZSS T4450 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Argentina: Jujuy; "Volcán". – / 4. / 1962. – Collection date according to original Ritter seed sample at ZSS.
SGO 121915 – corp, ar, sp
ZSS SR13675 – sem
- loc. 3:** Bolivia: Tarija; "Berge nördl. Tarija" = mountains N of Tarija.
SGO 121916 – corp, ar, sp
- loc. 4:** Bolivia: Tarija; "nördl. San Lorenzo, Ebene" = N of San Lorenzo, plain".
SGO 121917 – corp, ar, sp ("Haarlose" = hair-less one.)
- loc. 5:** Bolivia: Tarija; "Berge nordöstl. Tarija" = mountains NE of Tarija.
ZSS SR14173 – sem

Ritter 62: *Opuntia soehrensii* Britton & Rose – The Cact. 1: 134, 1919.
Typus (T): Rose 18967 (US).

- Argentina: Jujuy; "Iturbe Nr. 1 (Jujuy)". – / 1. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter. The collection number "= 554b" was added later to the original envelope and is set equal to FR 62 in the field-number list in KS 4.
ZSS SR13676 – sem

Ritter 63: *Opuntia tilcarensis* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 411, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Argentina: Jujuy; "unterh. Humahuaca". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and identified as *P. soehrensii* var. *tilcarensis*.
SGO 125318 – corp, ar, sp
- loc. 2:** Argentina: Jujuy; "westl. Purmamarca". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and identified as *P. soehrensii* var. *tilcarensis*.
SGO 125319 – (corp), ar, sp
- loc. 3:** Argentina: Jujuy; "Maimará Nr. 2 (Jujuy)". – / 1. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and identified as "*P. soehrensii* gelbstachel." = yellow-spined on the original envelope.
ZSS SR13677 – sem

Ritter 65: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter var. *dactylifera* (Vaupel) F. Ritter – Kakt. Südamer. 2: 490-491, 1980.

- loc. 1:** Bolivia: La Paz: Avilez; "Abstieg von Copacabana, km 11" = descent from Copacabana, km 11.
SGO 121856 – corp, ar, sp ("Exemplar der Blütenbeschreibg." = specimen of the flower description.)
- loc. 2:** Bolivia: La Paz; "15 km westl. Calacoto" = 15 km W of Calacoto.
SGO 121857 – corp, ar, sp
- loc. 3:** Argentina: Salta; "39 km vor Cachi, Nr. 5" = 39 km before Cachi / "östl. Cachi" = E of Cachi.
SGO 121858 – corp, ar, sp

- loc. 4:** Argentina: Salta; "östl. Cachi" = E of Cachi / "24 km vor Cachi bei 3000 m" = 24 km before Cachi. 3000 m.
SGO 121859 – corp, ar, sp
- loc. 5:** Bolivia: Oruro / Cochabamba; "Strasse Caracollo - Cochab.ba, Aufstieg unten" = road Caracollo - Cochabamba, ascent, below / "Caracollo". – The original label has the number as "FR 65 (+ FR 394 ?)", FR 394 is identified as *Cumulopuntia pentlandii* var. *pentlandii* in the field number list in KS 4.
SGO 121860 – corp, ar, sp
- loc. 6:** Bolivia: Chuquisaca: Sud-Cinti; "Cueva, Nr. 4" = La Cueva.
SGO 121868 – corp, ar, sp
- loc. 7:** Argentina: Jujuy; "Iturbe Nr. 3 (Jujuy)". – / 1. / 1953.
ZSS SR13678 – sem
- loc. 8:** Bolivia: Oruro; "Oruro".
ZSS SR14174 – sem

Ritter 65a: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter var. *dactylifera* (Vaupel) F. Ritter – Kakt. Südamer. 2: 490-491, 1980.

- loc. 1:** Argentina / Bolivia?: sine loco. 4500 m. – First identified as *Tephrocactus boliviensis* var. *aureispinus* or as *T. pentlandii* var. *aureispinus* / var. *rufispinus* (in herb. ZSS).
ZSS B4451 – ar, sp (Leg. F. Ritter.)
ZSS S9893 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Argentina: Jujuy; "34 km über Purmamarca, nach West" = 34 km above Purmamarca, towards the West / "westl. Purmamarca" = W of Purmamarca. – Locality data on original label first given as "nach Ost", then crossed out and replaced with "nach West".
SGO 121876 – corp, ar, sp
- loc. 3:** Chile: "nördl. Ollagüe" = N of Ollagüe. – Material from this locality is also available at SGO under the Ritter-number 65c.
ZSS SR13191 – sem
- loc. 4:** Bolivia: Potosí; "Chiguana". – / 3. / 1953. – "gelbe var." = yellow variety.
ZSS SR14175 – sem

Ritter 65b: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter var. *colchana* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 491-492, 1980.

- loc. 1:** Bolivia: Potosí: Nor-Lípez; "zwischen San Juan und Colchac" = between San Juan and Colchac / "S. Colchac" = S of Colchac. – The original label also has the number FR 252, but crossed out. This number refers to a *Pyrrhocactus* according to KS 4.
SGO 121862 – rad, corp, ar, sp
- loc. 2:** Bolivia: Potosí; "Chiguana (Pot.)". – / 3. / 1953. – "weisst. Var." = white-spined variety.
ZSS SR14176 – sem

Ritter 65c: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter var. *dactylifera* (Vaupel) F. Ritter – Kakt. Südamer. 2: 490-491, 1980.

- Chile: "Ollagüé".
SGO 125092 – corp, ar, sp

Ritter 65d: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter var. *dactylifera* (Vaupel) F. Ritter – Kakt. Südamer. 2: 490-491, 1980.

- Bolivia: Potosí; "unterh. Pulacayo" = below Pulacayo.
SGO 121863 – (corp), ar, sp

Ritter 65e: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter – Kakt. Südamer. 2: 488-490, 1980.

- Bolivia: La Paz; "Vanburuta" / "Höhen über Vanburuta bei 4300 m" = altitudes above Vanburuta. 4300 m. – "Zwischenform *dactylifera* u. *ignescens*" = intermediate form between *dactylifera* and *ignescens*, identified as "*Cumulopuntia pentlandii* (Salm-Dyck) Ritter var." in the field-number list in KS 4.
SGO 121864 – corp, ar, sp

Ritter 66: *Maihueiniopsis hypogaea* (Werdermann) F. Ritter – Kakt. Südamer. 2: 386-388, 1980.

- loc. 1:** Bolivia: Potosí: Sud-Chichas; Villazón. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S9990 – sem (Leg. F. Ritter 1955 (sub *Tephrocactus molfinoi*.)
- loc. 2:** Argentina: Jujuy; "Abra Pampa". – / 4. / 1962. – Collection date according to original Ritter seed sample at ZSS.
SGO 125211 – corp, ar, sp
ZSS SR13679 – sem
- loc. 3:** Argentina: Jujuy; "19 km südl. Tres Cruces, Nr. 14, 3700 m." = 19 km S of Tres Cruces / "südl. Tres Cruces" = S of Tres Cruces. 3700 m.
SGO 125212 – corp, ar, sp
- loc. 4:** Argentina: Jujuy; "Iturbe".
SGO 125213 – corp, ar, sp

Ritter 67: *Cleistocactus tupizensis* (Vaupel) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 190, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Bolivia: sine loco.
ZSS A4274 – fl (Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Potosí: Sud-Chichas; "Tupiza". – / 1. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 124764 – (corp), ar, sp
ZSS SR14178 – sem
- loc. 3:** Bolivia: Tarija: Mendez; "Cieneguillas". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124765 – corp, ar, sp
ZSS SR14179 – sem

loc. 4: Bolivia: Chuquisaca: Sud-Cinti; "Camblay Chico, Nr. 8". – The original label also has the number "FR 859" in brackets; 859 is said to equal FR 67 in KS 4: 1637.

SGO 124820 – corp, ar, sp

loc. 5: Bolivia: Tarija / Potosí; "Carrizal (Tarija) u. Montes (Potosí)".

ZSS SR14177 – sem

Ritter 67a: *Cleistocactus tupizensis* (Vaupel) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 190, 1936. (Dated 1935, publ. Febr. 1936.)

– Bolivia: Potosí; "Yocalla".

SGO 124766 – corp, ar, sp

Ritter 68: *Cleistocactus strausii* (Heese) Backeberg – Kakteenfreund (Mannheim) 3(11): 125, in adnot. ad fig., 1934. (Sphalm. 'straussii').

loc. 1: Bolivia: Tarija: Arce; "Padcaya".

SGO 124971 – corp, ar, sp

loc. 2: Bolivia: Tarija: Arce; "Padcaya, höchste Lagen" = Padcaya, uppermost altitudes. – / 3. / 1958.

ZSS SR14180 – sem

loc. 3: Bolivia: Tarija; "Tarija (Tar.)". – / 2. / 1953.

ZSS SR14181 – sem

Ritter 69: *Cleistocactus tarijensis* Cárdenas – Cact. Succ. J. (US) 28(2): 54-55, 1956.

loc. 1: Bolivia: Tarija; "Tarija". – / 12. / 1962. – Collection date according to original Ritter seed sample at ZSS.

SGO 124767 – corp, ar, sp, al ("26 Rippen" = 26 ribs.)

ZSS SR14182 – sem

loc. 2: Bolivia: Tarija; Tarija. – Locality according to Ritter letter dated 12. 2. 1955 (ZSS archives).

B GH19244 – ic (corp, fl) (Ex cult. BG Berlin, July 1985 (cult. ex sem.

Cat. H. Winter 1957). Collection number inferred.)

B GH19244a – corp, ar, sp (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem.

Cat. H. Winter 1957). Collection number inferred.)

ZSS S9991 – sem (Leg. F. Ritter 1955.)

Ritter 70: *Trichocereus werdermannianus* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 206, 412, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Bolivia: Potosí: Sud-Chichas; "Tupiza".

SGO 121223 – (corp), ar, sp

loc. 2: Bolivia: Tarija: Mendez; "Cieneguillas". – / 4. / 1958.

ZSS SR14183 – sem

Ritter 71: *Trichocereus tarijensis* (Vaupel) Werdermann var. *poco* (Backeberg) F. Ritter – Kakt. Südamer. 2: 560, 1980.

- loc. 1:** Bolivia: Potosí; "9 km nördl. Potosí" = 9 km N of Potosí.
SGO 121224 – (corp), ar, sp
- loc. 2:** Bolivia: Potosí; "El Monte". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 121225 – (corp), ar, sp ("Jugend- und Altersform" = young and old form.)
ZSS SR14185 – sem (The collection number on the original label was first given as "FR 71d".)
- loc. 3:** Bolivia: Potosí; Nor-Chichas; "33 km von Cotagaita nach Tupiza" = 33 km from Cotagaita to Tupiza.
SGO 121226 – (corp), ar, sp ("2 Stücke der gleichen Pflanze Jugend und mittl. Alter am Scheitel" = two pieces of the same plant, young and intermediate age from the apex.)
- loc. 4:** Bolivia: Potosí; Sud-Chichas; "Villazón". – / 2. / 1953. – Collection date according to original Ritter seed sample at ZSS.
SGO 121228 – (corp), ar, sp
ZSS SR14186 – sem
ZSS S9992 – sem (Leg. F. Ritter 1955.)
- loc. 5:** Bolivia: Potosí; "10 km unterhalb Potosi an Strasse" = 10 km below Potosí along road. – / 3. / 1963.
ZSS SR14184 – sem
- loc. 6:** Bolivia: Potosí; "Pulacayo". – / 1. / 1957. – The collection number on the original label was first given as "Nr. 71d" and the collection is probably identical with a specimen filed at SGO under FR 71d.
ZSS SR14187 – sem
- loc. 7:** Bolivia: Oruro; "Sevaruyo".
ZSS SR14188 – sem

Ritter 71c: *Trichocereus totorensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 562, 1980.

- Bolivia: Potosí; Sud-Chichas; Villazón. – Locality from correspondence with Ritter at ZSS (letter 12. 2. 1955, p. 31).
ZSS B4452 – ar, sp (Leg. F. Ritter.)

Ritter 71d: *Trichocereus tarijensis* (Vaupel) Werdermann var. *poco* (Backeberg) F. Ritter – Kakt. Südamer. 2: 560, 1980.

- loc. 1:** Bolivia: Potosí; "Tulacayo" [= Pulacayo ?].
SGO 121227 – (corp), ar, sp

Ritter 72: *Trichocereus tacaquirensis* (Vaupel) Cárdenas – Revista Agric. (Cochabamba) 8: 17, 1953.

- loc. 1:** Bolivia: sine loco.
ZSS S10106 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS T4453 – (corp), ar, sp (Leg. F. Ritter (stem apices).)
ZSS T4454 – ar, sp (Leg. F. Ritter (mature rib segment with areoles).)

- loc. 2:** Bolivia: Potosí: Sud-Chichas; "Tupiza, östl. des Flusses" = Tupiza, E of the river.
SGO 121229 – (corp), ar, sp
- loc. 3:** Bolivia: Potosí: Sud-Chichas; "Tupiza".
SGO 121230 – (corp), ar, sp ("8 - 14 Rippen" = 8 - 14 ribs.)
- loc. 4:** Bolivia: Tarija / Potosí; "Curque 1953 + Tupiza 1962 + Cieneguillas 1962".
ZSS SR14189 – sem

Ritter 73: *Trichocereus caulescens* F. Ritter – Cactus (Paris) No. 87: 11, 1966.
(Erroneously treated as invalid in RPS 17.)
Typus (T): Ritter 73 (U 160748B, SGO, Z [seeds only]).

- loc. 1:** Bolivia: Tarija; "Tarija Nr. 9". – / – / 1958. – The species was first collected in 1931 according to the protologue.
SGO 121160 **ISO** – (corp), ar, sp
- loc. 2:** Bolivia: Tarija; "von Tarija" = from Tarija. – / – / 1963. – Collection date according to specimen at U, and probably erroneous (= date, when received). The species was first collected in 1931 according to the protologue.
U 160748 **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
ZSS S9993 **Type number** – sem (Leg. F. Ritter 1955 (sub *Trichocereus lamprochlorus*)).
- loc. 3:** Bolivia: Tarija; "Tarija". – / 2. / 1953.
ZSS SR14190 **Type number** – sem

Ritter 74: *Trichocereus hybr.*

- loc. 1:** Bolivia: sine loco. – Identified as the natural hybrid *Trichocereus tacaquirensis* (FR 72) × *T. caulescens* (FR 73) in the field-number list in KS 4.
ZSS T4455 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: Tarija; "Tarija Nr. 19". – / 2. / 1953. – Identified as the natural hybrid *Trichocereus tacaquirensis* (FR 72) × *T. caulescens* (FR 73) in the field-number list in KS 4.
ZSS SR14191 – sem

Ritter 75: *Trichocereus camarguensis* Cárdenas – Revista Agric. (Cochabamba) 11(8): 17, 1953.

- loc. 1:** Bolivia: Chuquisaca: Nor-Cinti; N of Camargo, frontier region of Prov. Mendez and Dept. Tarija. – / – / 1955.
B GH16684 – fl, ic (corp) (Ex cult. BG Berlin, 10. 8. 1984 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS AX3689 – ar, fl (Ex cult. ZSS 81 4171, 23. 6. 1983)
ZSS S10107 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
- loc. 2:** Bolivia: Potosí: Sud-Chichas; "Impora". 12. / 3. / 1958.
SGO 121156 – (corp), ar, sp
- loc. 3:** Bolivia: Tarija: Mendez; "Carrizal No. 7 (Tarija)". – / 2. / 1953.
ZSS SR14192 – sem

Ritter 76: *Cereus forbesii* Otto var. *bolivianus* (F. Ritter) hort. (*nom. inval.* Art. 29.1)

- loc. 1:** Bolivia: Tarija; "Tarija". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121767 – (rad, corp, ar, sp) (Seedling only.)
ZSS SR14193 – sem
- loc. 2:** Bolivia: Tarija; "Fluss unterhalb Río Negro" = river below Río Negro / "Río Soledad". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121855 – (corp), ar, sp
- loc. 3:** Bolivia: Santa Cruz: Florida; "Mairana". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
U 160852B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number by inference.)
- loc. 4:** Bolivia: sine loco. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
B GH20416 – fl, ic (corp) (Ex cult. BG Berlin, 1. 7. 1986 (cult. ex sem.
Cat. H. Winter 1960). Collection number inferred.)
ZSS S10108 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub
Piptanthocereus chalybaeus.)

Ritter 76a: *Cereus forbesii* Otto var. *bolivianus* (F. Ritter) hort. (*nom. inval.* Art. 29.1)

- loc. 1:** Bolivia: Santa Cruz: Florida; "Mairana, Nr. 6". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121768 – (corp), ar, sp
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palos Blancos". – / 4. / 1958. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to original Ritter seed sample at ZSS.
SGO 121769 – (corp), ar, sp (Includes a seedling.)
ZSS SR14196 – sem
- loc. 3:** Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza, Nr. 9, untere Lagen" = ascent from Marqueza, lower altitudes. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121770 – corp, ar, sp
- loc. 4:** Bolivia: Santa Cruz; "Saipina, Nr. 24". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121771 – corp, ar, sp
- loc. 5:** Bolivia: Chuquisaca; "Pte. Acero, Nr. 8 + 3" = Puente Acero. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121777 – corp, ar, sp
- loc. 6:** Bolivia: sine loco.
B GH14547 – fr, sem, ic (corp, fl) (Ex cult. BG Berlin, April 1983 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
B GH22143 – fl (Ex cult. BG Berlin, 3. 7. 1987 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
ZSS S12573 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Piptanthocereus forbesii* var. *mairanensis*.)

Ritter 77: *Corryocactus tarijensis* Cárdenas – Rev. Agric. Cochabamba 7(7): 23-25, ills., 1952.

Typus (T): Cardenas 4823 (BOLV ?).

loc. 1: Bolivia: Tarija: Mendez; between Cieneguillas and Curque.
ZSS S10109 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Erdisia tarijensis*)).

ZSS T4456 – (corp), ar, sp, (al) (Leg. F. Ritter.)

ZSS T5142 – (corp, ar, sp) (Leg. F. Ritter 1956. Ex cult. ZSS s.n.)

loc. 2: Bolivia: Tarija: Mendez; "Cieneguillas".

SGO 125163 – corp, ar, sp

loc. 3: Bolivia: Tarija: Mendez; "Curque (Tarija) + Cieneguillas". – / 2. / 1953. – The locality "+ Cieneguillas" was obviously added later in a different pen.

ZSS SR14197 – sem

Ritter 78: *Oreocereus celsianus* (Lemaire ex Salm-Dyck) Riccobono – Boll. Reale Ort. Bot. Palermo 8: 259, 1909.

loc. 1: Bolivia: Potosí: Sud-Chichas; "Villazón". – / 3. / 1953. – Identified as *Oreocereus celsianus* fa. *villosissimus* in KS 4 (*nom. nud.*).

SGO 125304 – (corp), ar, sp

ZSS SR14198 – sem

loc. 2: Argentina: Jujuy; "Abra Pampa". – / 4. / 1962. – Identified as *Oreocereus celsianus* fa. *villosissimus* in KS 4 (*nom. nud.*).

ZSS SR13680 – sem

Ritter 78b: *Oreocereus celsianus* (Lemaire ex Salm-Dyck) Riccobono – Boll. Reale Ort. Bot. Palermo 8: 259, 1909.

– Bolivia: Potosí: Sud-Chichas; "Tupiza". – / 1. / 1957. – Collection date according to original Ritter seed sample at ZSS. Identified as *Oreocereus celsianus* fa. *maximus* (Backeberg) F. Ritter (*nom. inval.*) in KS 4: 1620.

SGO 125305 (in 2 parts) – (corp), ar, sp

ZSS SR14199 – sem

ZSS S9895 – sem (Leg. F. Ritter 1955. No original label with locality information present.)

ZSS T5144 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. No original label with locality information present.)

Ritter 78c: *Oreocereus celsianus* (Lemaire ex Salm-Dyck) Riccobono – Boll. Reale Ort. Bot. Palermo 8: 259, 1909.

loc. 1: Bolivia: Potosí; Pulacayo. – Distributed as *Oreocereus celsianus* var./fa. *maximus* and said to be a specially large and very white-woolly form in KS 2: 697. Identified as *Oreocereus celsianus* fa. *maximus-villosior* (*nom. inval.*) in KS 4: 1620.

ZSS S9896 – sem (Leg. F. Ritter 1955.)

loc. 2: Bolivia: Potosí; "unterh. Pulacayo" = below Pulacayo. – Identified as *Oreocereus celsianus* fa. *maximus-villosior* (*nom. nud.*) in KS 4.

SGO 125306 – (corp), ar, sp

Ritter 78d: *Oreocereus celsianus* (Lemaire ex Salm-Dyck) Riccobono – Boll. Reale Ort. Bot. Palermo 8: 259, 1909.

- Bolivia: Tarija: Mendez; "Cieneguillas".
SGO 125307 – (corp), ar, sp

Ritter 78f: *Oreocereus celsianus* (Lemaire ex Salm-Dyck) Riccobono – Boll. Reale Ort. Bot. Palermo 8: 259, 1909.

- Bolivia: Tarija: Mendez; "Cieneguillas". – / 2. / 1963. – "extra stark u. rotstachl., ausgesucht von Cieneguillas" extra strong and red-spined, selected from Cieneguillas.
ZSS SR14200 – sem

Ritter 79: *Echinopsis mamillosa* Gürke var. ***ritteri*** (Bödeker) F. Ritter – Succulenta 1965: 24, 1965.

- Bolivia: Tarija; "Tarija". – Locality information according to letter dated 12. 2. 1955, p. 28 (in ZSS archives) and from specimens at SGO, U and ZSS.
SGO 121444 **ISONEO** – rad, corp, ar, sp
U 160868B **NEO** – corp, ar, sp (Labelled as "Neotypus" by Ritter. The collection number is not given on the original label but is inferred. The specimen is dated "1963" but this might be the date of accession.)
ZSS B16428 **Type collection** – ar, sp, fl, fr, sem (Ex cult. ZSS 89 2166, 1. 6. 1995) (Leg. Ritter.)
ZSS SR14202 **ISONEO** – sem (The original label was first dated "II. 1953", now crossed out and replaced with "II. 1963".)
ZSS S9894 **ISONEO** – sem (Leg. F. Ritter 1955.)
ZSS T4457 **ISONEO** – corp, ar, sp (Leg. F. Ritter.)

Ritter 79a: *Echinopsis mamillosa* Gürke – Monatschr. Kakt.-Kunde, 1907.
Typus (N): Ritter 79a (U [neo]) (Neotype designated by F. Ritter, Succulenta 44: 25, 1963.).

- Bolivia: Tarija; "Berge südöstl. Tarija" = mountains SE of Tarija. – / – / 1963. – Collection date according to specimen at U. Identified as *Echinopsis mamillosa* var. *mamillosa* in KS 4: 1620.
U **NEO** – (corp), ar, sp (Labelled as "Neotypus" by Ritter. Collection number inferred.)

Ritter 80: *Lobivia longispina* Britton & Rose – The Cact. 3: 51, ill., 1922.
Typus (T): Shafer 83 (? , G, K).

- loc. 1:** Bolivia: Potosí: Sud-Chichas; "Villazón". – Locality data according to specimen at SGO and to index card associated with the seed sample at ZSS.
SGO 124393 – (corp), ar, sp
ZSS S10367 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Argentina: Jujuy; "La Quiaca". – "(hellstachlig)" = pale-spined. Ritter was obviously uncertain about the 'nationality' of this location and stored the material together with Bolivian collections.
ZSS SR14203 – sem

Ritter 80a: *Lobivia tenuispina* F. Ritter – Succulenta 45(6): 85, 1966.

Typus (T): Ritter 80a (U 160297B, SGO [status ?], ZSS [status ?]).

loc. 1: Bolivia: Tarija: Mendez; "von San Antonio" = from San Antonio. – / – / 1963. – Collection date according to specimen at U.
U 160297B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

loc. 2: Bolivia: Tarija: Mendez; San Antonio. – Locality data according to KS 2: 574.

ZSS S10110 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955
(sub *Lobivia longispina* var.))

loc. 3: Bolivia: Tarija: Mendez; "San Antonio Nr. 5". – "Stück mit den vielen Mittelstacheln, wird *L. hystrix* sein" = specimen with the many central spines; is probably *L. hystrix*.

SGO 124394 **Type number** – rad, corp, ar, sp

loc. 4: Bolivia: Tarija: Mendez; "San Antonio in Richtg. Escayachi" = San Antonio towards Escayachi.

SGO 124395 **Type number** – (corp), ar, sp, (al)

loc. 5: Bolivia: Tarija: Mendez; "San Antonio, Bergkamm nach West, bei ca. 3600 m." = San Antonio, mountain ridge towards the W near 3600 m". – "Exemplar mit vielen St." = specimen with many spines.

SGO 124396 **Type number** – (corp), ar, sp

loc. 6: Bolivia: Tarija: Mendez; "Escayachi". – / 2. / 1953. – Collection date according to original Ritter seed sample at ZSS (locality given as "Iscayachi").

SGO 124397 – (corp), ar, sp

ZSS SR14204 – sem

Ritter 81: *Lobivia pugionacantha* (Rose & Bödeker) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 235, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Bolivia: Potosí: Sud-Chichas; "Villazón". – Locality data according to specimen at SGO and to Ritter letters dated. 12. 2. 1955 and 4. 1955 (ZSS archives).

SGO 124629 – (corp), ar, sp (Includes a seedling plant.)

ZSS S9994 – sem (Leg. F. Ritter 1955.)

loc. 2: Argentina: Jujuy; "La Quiaca (Arg.)". – Ritter was obviously uncertain about the 'nationality' of this location and stored the sample together with material from Bolivia.

ZSS SR14205 – sem

Ritter 82: *Hymenorebutia cintiensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 583-586, 1980.

loc. 1: Bolivia: Tarija: Mendez; few km S of El Puente.

U 117899B – (corp), ar, sp, al (Labelled as "Holotypus" (for *Lobivia imporana* [nom. nud.] by Ritter.)

ZSS T4458 – ar, sp (Leg. F. Ritter.)

- loc. 2:** Bolivia: Chuquisaca; "de Chuquisaca". – Locality data according to index card associated with the seed sample at ZSS.
ZSS S10362 – sem (Leg. F. Ritter 1955 (sub *Lobivia imporana* var. *elongata*)).
- loc. 3:** Bolivia: Tarija: Mendez; "einige km südl. El Puente" = few km S of El Puente.
SGO 124398 – (corp), ar, sp
- loc. 4:** Bolivia: Potosí; "Oroya" / "Oroya (Nordseite)" = Oroya, N side.
SGO 124399 – rad, corp, ar, sp
- loc. 5:** Bolivia: Tarija: Mendez; "El Puente (Tarija)". – / 12. / 1958.
ZSS SR14206 – sem

Ritter 82a: *Hymenorebutia cintiensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 583-586, 1980.

- loc. 1:** Bolivia: Tarija: Mendez; Carrizal.
B GH16175 – fl (Ex cult. BG Berlin, 22. 6. 1984 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH20117 – fl, ic (corp, fl) (Ex cult. BG Berlin, 12. 6. 1986 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
ZSS S10364 – sem (Leg. F. Ritter 1955. Locality simply given as "de Chuquisaca".)
ZSS T5063 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Tarija: Mendez; "Carrizal". – / 2. / 1953.
ZSS SR14207 – sem

Ritter 82b: *Hymenorebutia cintiensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 583-586, 1980.

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; La Torre. – Locality information according to correspondence with Ritter at ZSS (letter 12. 2. 1955, p. 4).
ZSS B4459 – ar, sp (Leg. F. Ritter.)
ZSS S9995 – sem (Leg. F. Ritter 1955 (sub *Lobivia imporana*)).
- loc. 2:** Bolivia: Potosí: Nor-Chichas; "Cotagaita".
SGO 124400 – rad, corp, ar, sp
- loc. 3:** Bolivia: Potosí: Sud-Chichas; "Impora".
SGO 124401 – (corp), ar, sp
- loc. 4:** Bolivia: Chuquisaca: Sud-Cinti; "Kieshügel zw. Las Carreras u. Puente" = gravelly hill between Las Carreras and Puente". – "schlank" = slender.
SGO 124402 – (corp), ar, sp
- loc. 5:** Bolivia: Potosí: Sud-Chichas; "Torata, unten bei ca. 3000 m." = Torata, below at c. 3000 m. 3000 m.
SGO 124403 – (corp), ar, sp, (fl)
- loc. 6:** Bolivia: Tarija: Mendez; "Caña Cruz". – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS.
SGO 124404 – rad, corp, ar, sp
ZSS SR14208 – sem

- loc. 7:** Bolivia: Chuquisaca: Sud-Cinti; "Villa Abecia".
SGO 124405 – (corp), ar, sp
- loc. 8:** Bolivia: Chuquisaca: Sud-Cinti; "La Torre". – / 12. / 1954. – The original label is annotated as "*Lobivia imporana* typ."
ZSS SR14209 – sem
- Ritter 82c: *Hymenorebutia cintiensis*** (Cárdenas) F. Ritter – Kakt. Südamer. 2: 583-586, 1980.
- Bolivia: Chuquisaca: Sud-Cinti; "Puente San Pedro". – / 12. / 1958.
ZSS SR14210 – sem
- Ritter 82d: *Hymenorebutia cintiensis*** (Cárdenas) F. Ritter – Kakt. Südamer. 2: 583-586, 1980.
- Bolivia: Chuquisaca: Sud-Cinti; "10 km südl. Villa Abecia" = 10 km S of Villa Abecia. – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS.
SGO 124406 – (corp), ar, sp
ZSS SR14211 – sem
- Ritter 83: *Rebutia fiebrigii*** (Gürke) Britton & Rose – in Bailey, Standard Cycl. Hort. 5: 2915, 1916.
- loc. 1:** Bolivia: Chuquisaca: Sucre; Hacienda Ressini. – Identified as "*Rebutia fiebrigii* var." in KS 4: 1621.
ZSS T4460 – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: Chuquisaca: Azurduy; "Tarvita". – Identified as '*Rebutia fiebrigii* var.' in KS 4: 1621. This identification appears doubtful (ue.).
SGO 124560 – rad, corp, ar, sp
- Ritter 84: *Rebutia fiebrigii*** (Gürke) Britton & Rose – in Bailey, Standard Cycl. Hort. 5: 2915, 1916.
- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina Nr. 6". – Identified as *Rebutia fiebrigii* var. *fiebrigii* in KS 4: 1621.
SGO 124561 – rad, corp, ar, sp
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Ingahuasi Nr. 4". – Identified as *Rebutia fiebrigii* var. *fiebrigii* in KS 4: 1621.
SGO 124562 – rad, corp, ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "Ingahuasi Nr. 2". – Identified as *Rebutia fiebrigii* var. *fiebrigii* in KS 4: 1621. One of the two labels has the information "Kümmerform" = depauperate form. The jar contains two specimens each of two probably different taxa.
SGO 124563 – rad, corp, ar, sp
- loc. 4:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina Nr. 5". – / 5. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as *Rebutia fiebrigii* var. *fiebrigii* in KS 4: 1621.
SGO 124564 – rad, corp, ar, sp
ZSS SR14212 – sem (The original label has the number as "FR 84 mit Einschlag 83" = FR 84 with introgression from 83; FR 83 is

identified as "*Rebutia fiebrigii* var." in the field-number list in KS 4.)

- loc. 5:** Bolivia: sine loco.
B GH12101 – fl (Ex cult. BG Berlin, 22. 6. 1982 (cult. ex sem. ex Fa. Köhres 1978).)
- loc. 6:** Bolivia: Tarija: Mendez; "westl. San Antonio" = W of San Antonio. – Identified as *Rebutia fiebrigii* var. *fiebrigii* in KS 4: 1621.
ZSS SR14213 – sem

Ritter 84a: *Rebutia fiebrigii* (Gürke) Britton & Rose – in Bailey, Standard Cycl. Hort. 5: 2915, 1916.

- loc. 1:** Bolivia: Tarija: Mendez; "Cajas Nr. 4". – Identified as '*Rebutia fiebrigii* var. *fiebrigii* forma' in KS 4: 1621.
SGO 124565 – rad, corp, ar, sp
- loc. 2:** Bolivia: Tarija: Mendez; "Pass östl. Junacas" = pass E of Junacas. – / 12. / 1962. – Identified as '*Rebutia fiebrigii* var. *fiebrigii* forma' in KS 4: 1621.
SGO 124566 – rad, corp, ar, sp
- loc. 3:** Bolivia: Tarija: Arce; "La Merced". – / 3. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as '*Rebutia fiebrigii* var. *fiebrigii* forma' in KS 4: 1621.
SGO 124567 – rad, corp, ar, sp
ZSS SR14214 – sem

Ritter 85: *Parodia ritteri* Buining – Succulenta 1959(2): 17-20, ill., 1959.
Typus (T): Ritter 85 (U [not found], SGO, ZSS).

- loc. 1:** Bolivia: Tarija: Mendez; El Puente. 2500 m. – / – / 1953.
ZSS S9996 ISO – sem (Leg. F. Ritter 1955.)
ZSS T4461 ISO – corp, ar, sp (Leg. F. Ritter)
ZSS T4466 ISO – ar, sp (Leg. F. Ritter.)
ZSS T4467 ISO – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: Tarija: Mendez; "einige km südl. Puente" = some km S of Puente.
SGO 124502 ISO – (corp), ar, sp
- loc. 3:** Bolivia: Tarija: Mendez; "El Puente". – / 2. / 1953.
ZSS SR14215 ISO – sem

Ritter 85a: *Parodia cintiensis* F. Ritter – Succulenta 1962(9): 122-123, ill., 1962.

Typus (T): Ritter 85a (U 117635B, SGO, ZSS [seeds only]).

- Bolivia: Potosí: Sud-Chichas; "Impora". – / 3. / 1958. – Collection date according to specimen at U.
SGO 124503 ISO – (corp), ar, sp, (al)
U 117635B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS SR14216 ISO – sem (Original label dated "IV. 58.")

Ritter 85b: *Parodia cintiensis* F. Ritter – Succulenta 1962(9): 122-123, ill., 1962.

Typus (T): Ritter 85a (U 117635B, SGO, ZSS [seeds only]).

- Bolivia: Tarija: Mendez; "Carrizal". - / 4. / 1958. - Collection date according to original Ritter seed sample at ZSS. Labelled originally as "*Parodia cintiensis* var. *hamata*" (unpublished nude name). KS 4: 1621 identifies this number as hybrid between FR 85 and FR 727 (= *Parodia fulvispina*).
SGO 124507 (in 2 parts) - rad, corp, ar, sp
ZSS SR14217 - sem

Ritter 86: *Parodia camargensis* Buining & F. Ritter - Succulenta 41(2): 18-21, ill., 1962.

Typus (T): Ritter 86 (U 117739B, SGO, ZSS).

- loc. 1:** Bolivia: Chuquisaca: Nor-Cinti; Camargo. - / 2. / 1953. - The protologue gives the province as 'Sud-Cinti', but Camargo is in Nor-Cinti according to the maps consulted.

U 117739B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10111 **ISO** - sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS S9997 **ISO** - sem (Leg. F. Ritter 1955.)
ZSS T4468 **ISO** - (corp, ar, sp) (Leg. F. Ritter.)

- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Saladillo".

SGO 124504 - (corp), ar, sp, (fl)

- loc. 3:** Bolivia: Chuquisaca: Nor-Cinti; "Camargo". - The protologue gives the province as 'Sud-Cinti', but Camargo is in Nor-Cinti according to the maps consulted.

SGO 124506 **ISO** - rad, corp, ar, sp
ZSS SR14218 **Type number** - sem (The original label was first dated "XII. 54.", now crossed out and replaced with "III. 63".)

- loc. 4:** Bolivia: Chuquisaca: Sud-Cinti; "Saladillo (unterh. Puente S.n Pedro)" = Saladillo (below Puente San Pedro). - / 5. / 1958.

ZSS SR14219 - sem

Ritter 86a: *Parodia rubida* F. Ritter - Succulenta 43(3): 43-44, 1964.

Typus (T): Ritter 725 (U 160788B, SGO, ZSS [status ?]).

- Bolivia: Chuquisaca: Sud-Cinti; La Torre. - Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S9998 - sem (Leg. F. Ritter 1955 (sub '*Parodia camargensis* var.')).)

Ritter 87: *Parodia maxima* F. Ritter - Succulenta 43(2): 23, 1964.

Typus (T): Ritter 87 (U 160716B, SGO, ZSS).

- loc. 1:** Bolivia: Tarija: Mendez; Cieneguillas. - / - / 1963. - Date according to specimen at U.

U 160716B (in 2 parts) **HOLO** - corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U. There is no original label conserved for this collection which contains a seedling plant and a fragment of an older plant.)
ZSS S10413 **ISO** - sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.)
ZSS T4469 **ISO** - (corp), ar, sp (Leg. F. Ritter (apparently a seedling plant).)
ZSS T4470 **ISO** - ar, sp (Leg. F. Ritter (mature areoles).)

ZSS T5071 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS, 2. 4. 1960 (leg. H. Hinder).)

loc. 2: Bolivia: Tarija: Mendez; "Cieneguillas, Nr. 13".
SGO 124505 (in 2 parts) **ISO** – rad, corp, ar, sp

loc. 3: Bolivia: Tarija: Mendez; "Cieneguillas Nord" = Cieneguillas North. – / 2. / 1953.
ZSS SR14220 **ISO** – sem

Ritter 88: *Gymnocalycium cardenasianum* F. Ritter – Taxon 13(4): 144, 1964. (First mentioned as nude name in Backeberg, Die Cact. 3: 1747, 1959 (cf. RPS 10).)

Typus (T): Ritter 88 (U 117818B, SGO, ZSS) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: Tarija: Mendez; Carrizal. – / – / 1953.
B GH19350 – ic (corp) (Ex cult. BG Berlin, 8. 1. 1986 (cult. ex sem. Cat. H. Winter 1956). Collection number inferred.)
U 117818B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
ZSS A4257 **ISO** – rad, corp, ar, sp (Leg. F. Ritter 1955. Ex cult. ZSS s.n., 2. 9. 1982.)
ZSS S10112 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

loc. 2: Bolivia: Tarija: Mendez; "Carrizal".
SGO 124651 **ISO** – (corp), ar, sp
ZSS SR15007 – sem (The original label was first dated "II. 53"; later, the additional date "IV. 62" was added in a different pen.)

Ritter 89: *Blossfeldia liliputana* Werdermann – Repert. Spec. Nov. Regni Veg. Kakteenkunde 1937: 162, 1937.

Typus (T): Blossfeld & Marsoner s.n. (B) (Ex cult. Hort. Berolinensis 1937.).

loc. 1: Argentina: sine loco.
ZSS S10447 – sem (Leg. Fa. Köhres (ex cult.) 1977 (sub *Blossfeldia flocculosa*).)

loc. 2: Argentina: Jujuy; "unterh. Humahuaca" = below Humahuaca.
SGO 124997 – rad, corp, ar, sp

loc. 3: Argentina: Jujuy; "Maimara" = Maimará. – / 1. / 1955. – Identified as "*Blossfeldia liliputana* typ." on the original label.
ZSS SR13681 – sem

Ritter 89a: *Blossfeldia liliputana* Werdermann – Repert. Spec. Nov. Regni Veg. Kakteenkunde 1937: 162, 1937.

Typus (T): Blossfeld & Marsoner s.n. (B) (Ex cult. Hort. Berolinensis 1937.).

loc. 1: Bolivia: sine loco. – Locality data according to KS 2: 550. Originally distributed as *Blossfeldia cyathiformis* Ritter (*nom. nud.*).
ZSS S9897 – sem (Leg. F. Ritter 1955.)

- loc. 2:** Bolivia: Tarija; "Angosto. 1. Durchbruch Tarija-Fluss" = Angosto. First break-through of Tarija river / "Angosto de Tarija".
SGO 124998 – rad, corp, ar, sp
ZSS SR14224 – sem (Locality simply given as "Angosto von Tarija" on the original label.)
- loc. 3:** Bolivia: Potosí; "Oroya". – / 4. / 1958.
SGO 124999 – rad, corp, ar, sp
- loc. 4:** Bolivia: Potosí; Nor-Chichas; "Cotagaita".
SGO 125000 – rad, corp, ar, sp
ZSS SR14221 – sem
- loc. 5:** Bolivia: Tarija: Arce; "La Merced". – "Hatte gestielte Blüte" = had a stalked flower.
SGO 125001 – rad, corp, ar, sp
- loc. 6:** Bolivia: Potosí / Tarija; "Aufstieg Tojo nach Villazon bei 3200 m." = ascent Tojo to Villazón / "Tojo". 3200 m.
SGO 125002 – rad, corp, ar, sp
- loc. 7:** Bolivia: Potosí; "11 km unterh. Atocha" = 11 km below Atocha / "Atocha".
SGO 125003 – rad, corp, ar, sp
- loc. 8:** Bolivia: Tarija: Mendez; "südl. El Puente" = S of El Puente / "Fundplatz der *Par. ritteri*" = locality of *Parodia ritteri*.
SGO 125004 – rad, corp, ar, sp
- loc. 9:** Bolivia: Chuquisaca: Nor-Cinti; "Camargo".
SGO 125005 – rad, corp, ar, sp
- loc.10:** Bolivia: Potosí; Sud-Chichas; "Villazón". – / 1. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125006 – rad, corp, ar, sp
ZSS SR14222 – sem
- loc.11:** Bolivia: Potosí; "westl. Tojo" = W of Tojo / "Tojo".
SGO 125007 – rad, corp, ar, sp
- loc.12:** Bolivia: Potosí / Tarija; "Oroya (Potosí) + Weg Puente - Sama (Tarija) = Oroya + path Puente - Sama. – / 2. / 1953. – "Becherkaktus" = cup-like cactus.
ZSS SR14223 – sem

Ritter 89b: *Blossfeldia liliputana* Werdermann var. *formosa* F. Ritter – Kakt. Südamer. 2: 435, fig. 293, 1980.
Typus (T): Ritter 89b (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Salta; "Alemania". 1200 m. – / – / 1959. – Altitude according to the protologue.
U HOLO – rad, corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Argentina: Salta; "15 km über Alemania" = 15 km above Alemania. – / 1. / 1959.
ZSS SR13682 ISO – sem

Ritter 90: *Opuntia nigripina* K. Schumann – Gesamtb. Kakt., 695, 1898.

Typus (N): Pastor Arenas & A. Dell'Arciprete s.n. (BACP 1738) (Neotype designated by Kiesling in Darwiniana 25(1-4): 209, 1984.).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 7". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122004 – corp, ar, sp

loc. 2: Argentina: Jujuy; "Abra Pampa". – / 4. / 1962. – Collection date according to original Ritter seed sample at ZSS. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125320 – corp, ar, sp

ZSS SR13683 – sem

Ritter 91: *Cumulopuntia subterranea* (R. Fries) F. Ritter – Kakt. Südamer. 2: 401-402, 1980.

loc. 2: Bolivia: Potosí: Sud-Chichas; "Villazon" [Villazón]. – / 8. / 1957. – The collection date (according to specimen at SGO) is probably erroneous as all other dated collections from July 1957 are from Peru, those from August 1957 from Chile.

SGO 121865 – rad, corp, ar, sp

Ritter 92: *Opuntia cordobensis* Spegazzini – Anal. Mus. Nac. Buenos Aires 4: 513, 1905.

loc. 1: Argentina: Jujuy; "43 km südl. Jujuy" = 43 km S of Jujuy / "südl. Jujuy" = S of Jujuy. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125321 – (corp), ar, sp

loc. 2: Argentina: Jujuy; "10 km südl. Volcán" = 10 km S of Volcán. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125322 – (corp), ar, sp

Ritter 94: *Opuntia spinibarbis* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1(a) – Kakt. Südamer. 2: 499-500, in *synon.*, 1980.

loc. 1: Bolivia: Tarija: Mendez; "Carrizal". – / 4. / 1962. – Collection date according to original Ritter seed sample at ZSS, given as 1931 in KS 2: 500. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122005 ISO – (corp), ar, sp

ZSS B4471 ISO – ar, sp (Leg. F. Ritter.)

ZSS SR14225 ISO – sem

loc. 2: Bolivia: Tarija: Mendez; "vor Carrizal" = before Carrizal. – / – / 1963. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

U 160908B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter.

Collection number inferred.)

loc. 3: Bolivia: Tarija; "de Tarija". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS S9999 – sem (Leg. F. Ritter 1955.)

Ritter 94a: *Opuntia spinibarbis* (F. Ritter) F. Ritter var. *grandiflora* (F. Ritter) hort. (*nom. inval.* Art. 29.1, 43.1)

loc. 2: Argentina: Salta; "22 km von Cachi" = 22 km from Cachi / "östl. Cachi" = E of Cachi. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125323 ISO – (corp), ar, sp

Ritter 95: *Tephrocactus atroglobosus* Backeberg (*nom. inval.* Art. 9.5) – Cactus (Paris) No. 73/74: 5, 1962. (Erroneously included as valid in RPS 13. Concurrently described in Die Cact. 6: 3905, 1962.)

– Bolivia: Potosí; "Chiguana (Pot.)". – / 3. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by F. Ritter.
ZSS SR14226 – sem

Ritter 97: *Austrocylindropuntia teres* (Cels ex F. A. C. Weber) Backeberg – Cactaceae (Jahrb. Deutsche Kakt. Ges.) 1944: 39, 1944.

– Bolivia: La Paz; "Calacoto".
SGO 121918 – corp, ar, sp
SGO 121919 – corp, ar, sp

Ritter 98: *Lobivia ferox* Britton & Rose – The Cact. 3: 51, 1922.

loc. 1: Bolivia: Oruro; near Oruro. – / 10. / 1954. – Also near Chijumuni, Prov. Aroma of Dept. La Paz (cf. letter in ZSS archives, 31. 1. 1955, p. 133).
ZSS S10000 – sem (Leg. F. Ritter 1955.)
ZSS T4472 – ar, sp (Leg. F. Ritter.)

loc. 2: Bolivia: Cochabamba ?; "Machac, Nr. 4" [= Machaca ?].
SGO 124407 – (corp), ar, sp

loc. 3: Bolivia: Potosí; "Weg nach El Monte, Nr. 17" = path to El Monte.
SGO 124408 – (corp), ar, sp

loc. 4: Bolivia: Potosí; "Don Diego". – / 12. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124409 – (corp), ar, sp
ZSS SR14228 – sem (The original label was first numbered "FR 976"; FR 976 is set equal with FR 98 in the field-number list in KS 4.)

loc. 5: Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 9".
SGO 124410 – (corp), ar, sp

loc. 6: Bolivia: Chuquisaca: Sud-Cinti; "12 km südl. Villa Abecia" = 12 km S of Villa Abecia.
SGO 124411 – (corp), ar, sp

loc. 7: Bolivia: Oruro; "Oruro". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 124412 – (corp), ar, sp
ZSS SR14227 – sem

loc. 8: Bolivia: Potosí; "24 km N. Potosí" = 24 km N of Potosí / "ca. 24 km unterh. Potosi, Richt. Oruro" = c. 24 km below Potosí, towards Oruro.
SGO 124413 (in 2 parts) – (corp), ar, sp

loc. 9: Bolivia: Potosí; "2 km nördl. Potosí" = 2 km N of Potosí. – The original label also has the number "FR 976" which is said to equal FR 98 in the field number list in KS 4.

SGO 124414 – (corp), ar, sp

loc.10: Bolivia: Potosí; "Pulacayo u. oberh., höchste Lagen, Nr. 8" = Pulacayo and above, uppermost altitudes. – The second label included with this material also has the number "FR 98a" crossed out and replaced with 98; the locality is identical with a specimen held at ZSS under the number FR 98a.

SGO 124415 (in 2 parts) – (corp), ar, sp

loc.11: Bolivia: Potosí; Sud-Chichas; "westl. Tupiza, Nr. 6" = W of Tupiza / "Tupiza, oberste grosse Schlucht nach West (selten)" = Tupiza, uppermost large gorge towards the W (rare). – "15-25 Rippen. Sehr gross." = 15-25 ribs. Very large. One of the two labels also has the number "FR 793", which is said to be equal with 98 in the field number list in KS 4.

SGO 124416 (in 2 parts) – (corp), ar, sp

loc.12: Bolivia: Chuquisaca: Sud-Cinti; "La Torre". – / 12. / 1954. – The original label was first numbered "FR 382"; FR 382 is set equal to FR 98 in the field-number list in KS 4.

ZSS SR14229 – sem

loc.13: Bolivia: Potosí; "Pulacayo Nr. 8". – / 1. / 1957.

ZSS SR14230 – sem

loc.14: Bolivia: Oruro; "Sevaruyo".

ZSS SR14231 – sem ("1 Frucht") = 1 fruit.)

loc.15: Bolivia: Chuquisaca: Sud-Cinti; "oberhalb La Cueva" = above La Cueva.

ZSS SR14232 – sem ("1 Frucht") = 1 fruit.)

Ritter 98a: *Lobivia ferox* Britton & Rose – The Cact. 3: 51, 1922.

– Bolivia: Potosí; Pulacayo.

ZSS S9906 – sem (Leg. F. Ritter 1955.)

Ritter 99: *Lobivia caespitosa* (Purpus) Britton & Rose var. *rinconadensis* F.

Ritter – Kakt. Südamer. 2: 569, fig. 464, 1980.

Typus (T): Ritter 99 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: La Paz: Murillo; railway station of "Rinconada". 4000 m. – / – / 1958. – Locality data supplemented from the protologue; collection date according to specimen at U.

U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present. Collection number inferred.)

loc. 2: Bolivia: La Paz: Murillo; railway station of Rinconada. – Locality data according to the protologue.

ZSS S10113 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

loc. 3: Bolivia: La Paz: Murillo; "Rinconada (Weg nach Yungas)" = Rinconada (way to Yungas).

SGO 124417 **Type number** – (corp), ar, sp

loc. 4: Bolivia: Cochabamba: Ayopaya; "Passhöhe Tiquiriripaya - Independencia, Nr. 6" = culmination of pass Tiquiriripaya [Tiquiripaya] - Independencia.

SGO 124418 – (corp), ar, sp

loc. 5: Bolivia: La Paz; "Pongo (La Paz)". - / 3. / 1953.
ZSS SR14234 - sem

loc. 6: Bolivia: La Paz; Murillo; "Rinconada". - / 11. / 1962.
ZSS SR14235 ISO - sem

Ritter 99a: *Lobivia caespitosa* (Purpus) Britton & Rose var. *altiplani* F. Ritter - Kakt. Südamer. 2: 569-570, 1980.

Typus (T): Ritter 99a (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: La Paz; Aroma; Chiguni. 4000 m. - / - / 1953.
ZSS T4473 ISO - corp. ar, sp (Leg. F. Ritter.)

Ritter 100: *Oreocereus fossulatus* (Labouret) Backeberg - Kakteenfreund (Mannheim) 1934: 122, 1934.

loc. 1: Bolivia: La Paz; along the valley of the Río La Paz, S of the city of La Paz. - / - / 1954. - Identified as '*Oreocereus fossulatus* var. *fossulatus* forma' by Ritter. This number was selected as type for *Cleistocactus fossulatus* by Mottram. Alternatively identifiable as *Oreocereus pseudofossulatus* D. Hunt.

ZSS AX4236 - corp, ar, sp (Leg. F. Ritter 1958. Ex cult. ZSS s.n., 14. 3. 1985.)

ZSS S9960 - sem (Leg. F. Ritter 1955.)

loc. 2: Bolivia: La Paz; "Calacoto". - Collection identified as '*Oreocereus fossulatus* var. *fossulatus* forma' by Ritter. This number was selected as type for *Cleistocactus fossulatus* by Mottram. Alternatively identifiable as *Oreocereus pseudofossulatus* D. R. Hunt.

SGO 125308 - (corp), ar, sp

loc. 3: Bolivia: La Paz; "Abrajes bei La Paz" = Abrajes near La Paz. - / 3. / 1953. - Identified as '*Oreocereus fossulatus* var. *fossulatus* forma' by Ritter. This number was selected as type for *Cleistocactus fossulatus* by Mottram. Alternatively identifiable as *Oreocereus pseudofossulatus* D. Hunt.

ZSS SR14236 - sem

Ritter 100a: *Oreocereus fossulatus* (Labouret) Backeberg var. *rubrispinus* F. Ritter - Kakt. Südamer. 2: 697-699, 1980.

Typus (T): Ritter 100a (U, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: La Paz; Murillo; "Valencia". - / 10. / 1954. - Collection date according to the protologue.

U HOLO - (corp), ar, sp (Assumed to be the holotype as this is the only specimen present. Collection number inferred.)

loc. 2: Bolivia: La Paz; "Mecapaca".

SGO 125309 - corp, ar, sp (Stem tip only.)

ZSS T4474 - (corp), ar, sp (Leg. F. Ritter (stem tip only).)

loc. 3: Bolivia: La Paz; Murillo; Valencia.

ZSS S9961 Type number - sem (Leg. F. Ritter 1955.)

Ritter 101: *Trichocereus bridgesii* (Salm-Dyck) Britton & Rose – The Cact. 2: 134, 1920.

loc. 1: Bolivia: La Paz; "Mecapaca".

SGO 121161 – (corp), ar, sp

loc. 2: Bolivia: La Paz; "Abrajes bei La Paz" = Abrajes near La Paz. – / 3. / 1953.

ZSS SR14238 – sem

Ritter 102: *Echinopsis bridgesii* Salm-Dyck – Cact. Hort. Dyck. 1849, 181, 1850.

loc. 1: Bolivia: La Paz; "Hügel zw. La Paz u. Miraflores" = hill between La Paz and Miraflores.

SGO 121430 – ar, sp

loc. 2: Bolivia: La Paz; "unterhalb Miraflores" = below Miraflores.

SGO 121431 – (corp), ar, sp

loc. 3: Bolivia: Cochabamba: Ayopaya; "Puente Pilatos".

SGO 121432 – (corp), ar, sp (The original label contains the following information: "*Echinopsis bridgesii* + 102a var. *tenuispina* + Mischung mit FR 785 *Echinopsis ayopayana*", probably indicating a mix-up (the jar contains 3 fragments).)

loc. 4: Bolivia: La Paz; "Mecapaca".

SGO 121433 – (corp), ar, sp

loc. 5: Bolivia: La Paz; La Paz region. – Locality information according to letters from F. Ritter dated 17. 1. 1955 and 31. 1. 1955 (ZSS archives).

ZSS S9962 – sem (Leg. F. Ritter 1955.)

loc. 6: Bolivia: La Paz; "Abrajes (La Paz)". – / 3. / 1953.

ZSS SR14239 – sem

Ritter 102a: *Echinopsis bridgesii* Salm-Dyck var. *tenuispina* F. Ritter *in sched.* (*nom. inval.* Art. 29.1)

loc. 1: Bolivia: Santa Cruz ?; "Rio Sta. Rita, nahe der Mündung" = Río Santa Rita, close to the mouth. – Identified as '*Echinopsis bridgesii* var.' by Ritter in KS 4: 1621, where the locality is given as "Quime - Inquisivi".

SGO 121434 – (corp), ar, sp

loc. 2: Bolivia: "Tuini". – Identified as '*Echinopsis bridgesii* var.' by Ritter in KS 4: 1621, where the locality is given as "Quime - Inquisivi".

SGO 121435 – (corp), ar, sp

loc. 3: Bolivia: Cochabamba: Ayopaya; "unterhalb Sta. Rosa" = below Santa Rosa. – Identified as '*Echinopsis bridgesii* var.' by Ritter in KS 4: 1621, where the locality is given as "Quime - Inquisivi".

SGO 121436 – (corp), ar, sp

loc. 4: Bolivia: Cochabamba: Ayopaya; "unterhalb Tiquirpaya nach 30 Übergängen über Fluss" = below Tiquirpaya after crossing the river 30 times. – Identified as '*Echinopsis bridgesii* var.' by Ritter in KS 4: 1621, where the locality is given as "Quime - Inquisivi".

SGO 121437 – rad, corp, ar, sp

- loc. 5:** Bolivia: Cochabamba: Ayopaya; "Aufstieg von Mündung Río Sta. Rosa - Sacambayo, ca. 300 m über d. Fluss" = ascent from mouth of Río Santa Rosa - Sacambayo, c. 300 m above the river. – Identified as '*Echinopsis bridgesii* var.' by Ritter in KS 4: 1621, where the locality is given as "Quime - Inquisivi".
SGO 121438 – (corp), ar, sp, al ("Muster der Samenprobe, halbkugelig, 10 Rippen" = specimen of the seed sample, half-globular, 10 ribs.)
- loc. 6:** Bolivia: La Paz: Murillo; "ca. 25 km am Berg unter Tirata" = c. 25 km at the mountain below Tirata / "Mündung Río Caracato" = mouth of Río Caracato. – Identified as '*Echinopsis bridgesii* var.' by Ritter in KS 4: 1621, where the locality is given as "Quime - Inquisivi".
SGO 121439 – (corp), ar, sp
- loc. 7:** Bolivia: La Paz: Inquisivi; Quime - Inquisivi, "Inquisivi". – / 10. / 1954. – Locality data according to original Ritter seed sample at ZSS and to Ritter letters dated 17. 1. and 31. 1. 1955 (ZSS archives), supplemented from KS 4, where the collection is identified as '*Echinopsis bridgesii* var.'. Collection date according to original Ritter seed sample.
ZSS SR14240 – sem
ZSS S9963 – sem (Leg. F. Ritter 1955 (sub *Echinopsis bridgesii* var. *quimensis* (nom. nud.)).)
- loc. 8:** Bolivia: Cochabamba: Ayopaya; "ca. 300 m über d. Mündung des Río Sta. Rosa, Weg nach Independencia" = c. 300 above the mouth of the Río Santa Rosa, path towards Independencia. – / 5. / 1958. – "Same taub" = seeds sterile.
ZSS SR14241 – sem

Ritter 103: *Corryocactus melanotrichus* (K. Schumann) Britton & Rose – The Cact. 2: 68, 1920.

- loc. 1:** Bolivia: Cochabamba; "50 km östl. Cochabamba" = 50 km E of Cochabamba / "östl. Cochabamba" = E of Cochabamba.
SGO 125039 – (corp), ar, sp
- loc. 2:** Bolivia: La Paz: "Mecapaca".
SGO 125040 – (corp), ar, sp
- loc. 3:** Bolivia: La Paz; "Abrajes (La Paz)". – / 3. / 1953.
ZSS SR14242 – sem

Ritter 103b: *Corryocactus melanotrichus* (K. Schumann) Britton & Rose – The Cact. 2: 68, 1920.

- Bolivia: La Paz?: Murillo?; "Caracato". – Identified as "*Corryocactus melanotrichus* var." or separate species in KS 4.
SGO 125041 – (corp), ar, sp

Ritter 103c: *Corryocactus melanotrichus* (K. Schumann) Britton & Rose – The Cact. 2: 68, 1920.

- Bolivia: Chuquisaca; "Weg nach Sotomayor" = path to Sotomayor / "unterh. Yamparuez" = below Yamparuez. – Identified as "*Corryocactus melanotrichus* var." or separate species in KS 4.
SGO 125042 – corp, ar, sp

Ritter 105: *Cereus huilunchu* Cárdenas – Succulenta 1951(4): 49-52, 1951.

- loc. 1:** Bolivia: sine loco. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS S10114 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub
Trichocereus caesius.)
ZSS T4475 – (corp), ar, sp (Leg. F. Ritter.)
ZSS T4476 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: La Paz: Sud-Yungas; "Plazuela". – Treated as *Piptanthocereus*
(*nom. illeg.*) by Ritter.
SGO 121772 – corp, ar, sp ("dünner" = slender one.)
- loc. 3:** Bolivia: La Paz: Inquisivi; "Inquisivi". – Treated as *Piptanthocereus* (*nom.*
illeg.) by Ritter.
SGO 121773 – (corp), ar, sp
- loc. 4:** Bolivia: La Paz; "Busquiro (La Paz)". – / 4. / 1953. – Treated as
Piptanthocereus (*nom. illeg.*) by Ritter.
ZSS SR14243 – sem

**Ritter 106: *Cleistocactus granjaensis* F. Ritter – Kakt. Südamer. 2: 687, 1980.
Typus (*T*): Ritter 106 (U [not found], ZSS [status ?]) (Type cited for U l.c.
1: iii, 1979.).**

- loc. 1:** Bolivia: La Paz: Murillo; Granja. 3000 m. – / – / 1953.
ZSS A10480 **Type number** – fl (Ex cult. ZSS s.n., 2. 4. 1975.)
- loc. 2:** Bolivia: "Aramani". – / 10. / 1954. – Locality data from letter dated 31. 1.
1955, p. 78 (ZSS archives).
ZSS S9964 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T4477 **Type number** – corp, ar, sp (Leg. F. Ritter.)
- loc. 3:** Bolivia: La Paz; "Busquiro (La Paz)" =? Busquiro. – / 4. / 1953.
ZSS SR14244 **Type number** – sem

**Ritter 107: *Lobivia pentlandii* (Hooker) Britton & Rose – The Cact. 3: 54,
1922.**

- loc. 1:** Bolivia: Oruro; "Oruro". – Locality according to original and non-original
seed samples at ZSS.
ZSS B4478 – corp, ar, sp (Leg. F. Ritter.)
ZSS S10001 – sem (Leg. F. Ritter 1955. The date Oct. 1954 is associated
with this specimen.)
ZSS SR14247 – sem (The original label is dated "XII. 54".)
- loc. 2:** Bolivia: Oruro; "Challapata".
SGO 124428 – (corp), ar, sp
- loc. 3:** Bolivia: "südl. Puno" = S of Puno. – / 7. / 1957. – The original label also
has the number "FR 333" (said to equal FR 107 in KS 4) now crossed out.
SGO 124429 – rad, corp, ar, sp
- loc. 4:** Bolivia: Cochabamba ?; "Machac, Nr. 5" [= Machaca ?]. – One of the
original labels also has the number "FR 348a" (said to equal FR 107 in KS 4)
now crossed out.
SGO 124430 – (corp), ar, sp

- loc. 5:** Bolivia: Oruro / Cochabamba; "Caracollo" / "Strasse Caracollo - Cochab.ba, Aufstieg" = road Caracollo - Cochabamba, ascent.
SGO 124431 – (corp), ar, sp
- loc. 6:** Bolivia: La Paz: Aroma; "Eucaliptus". – Both original labels also have the number "FR 333" (said to equal FR 107 in KS 4) now crossed out.
Department / province according to KS 2: 602.
SGO 124432 – (corp), ar, sp
- loc. 7:** Bolivia: La Paz ?; "Desaguadero". – / 11. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124433 – (corp), ar, sp
ZSS SR14246 – sem
- loc. 8:** Bolivia: La Paz; "oberh. La Paz" = above La Paz. 1. / 3. / 1958. – Collection date according to original label at SGO.
SGO 124434 – (corp), ar, sp (Both original labels also have the number "FR 333" (said to equal FR 107 in KS 4) now crossed out.)
ZSS SR14245 – sem (Collection date simply given as "III. 58" on the original label.)
- loc. 9:** Bolivia: La Paz: Pacajes; "Corocoro".
SGO 124435 – (corp), ar, sp
- loc.10:** Peru: Cuzco; "Cuzco, ca. 3650 m.". 3650 m. – / 7. / 1957. – One of the two original labels is numbered "FR 667", a number crossed out and replaced on the other. FR 667 is identified as *Lobivia cruciaureispina* in KS 4: 1634. The specimen jar contains rather different fragments.
SGO 124436 – rad, corp, ar, sp
- loc.11:** Peru ?; "Viacha". – The original label also has the number "FR 333" (said to equal FR 107 in KS 4) now crossed out.
SGO 124437 – (corp), ar, sp
- loc.12:** Bolivia: La Paz; "Vanburuta (westl. Calacoto)" = Vanburuta (W of Calacoto).
SGO 124438 – (corp), ar, sp
- loc.13:** Bolivia: Cochabamba ? / Oruro ?; "Ventillas, Nr. 3". – Both original labels also have the number "FR 797" (said to equal FR 107 in KS 4) now crossed out.
SGO 124439 – (corp), ar, sp
- loc.14:** Bolivia: Oruro; "Oruro". – "Mit kurzen roten Blüten" = with short red flowers.
SGO 124440 – (corp), ar, sp
- loc.15:** Peru: Cuzco; "Lauramarca". – / 7. / 1957. – All original labels first had the number "FR 667" (identified as *Lobivia cruciaureispina* in KS 4) and the specimen at SGO was originally named *Lobivia westii*. Collection date according to the original Ritter seed sample at ZSS.
SGO 124456 – corp, ar, sp
ZSS SR13789 – sem
- loc.16:** Peru: Cuzco; "Cuzco". – / – / 1969.
ZSS SR13788 – sem

- loc.17:** Bolivia: Oruro; "Oruro + Machacam..." = Oruro + Machacamarca [?]. – / 12. / 1954. – The original label was first numbered "Nr. 333 × 107"; FR 333 is set equal to FR 107 in the field-number list in KS 4.
ZSS SR14248 – sem
- loc.18:** Bolivia: Oruro; "Huanuni + Machacamarca". – The original label was first numbered "Nr. 333a"; FR 333a is set equal to FR 107 in the field-number list in KS 4.
ZSS SR14249 – sem
- loc.19:** Bolivia: Oruro; "Challapata (unten)" = Challapata (below). – / 11. / 1962. – The original label is numbered "FR 107 cf.".
ZSS SR14250 – sem

Ritter 108: *Cleistocactus varispinus* F. Ritter – Taxon 13(3): 114, 1964.

(Sphalm. 'varispinus'.)

Typus (T): Ritter 108 (U 117850B, SGO, ZSS) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Bolivia: La Paz: Larecaja; Mina Cascabel. 2000 m. – / – / 1953.
U 117850B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS T4480 **ISO** – corp, ar, sp (Leg. F. Ritter)
ZSS T4481 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4483 **ISO** – ar, sp (Leg. F. Ritter.)
- loc. 2:** Bolivia: La Paz ?; Río Consata. – / 10. / 1954.
B GH31608 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 21. 7. 1993
(cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
ZSS S10366 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T4479 **Type number** – corp, ar, sp (Leg. F. Ritter.)
- loc. 3:** Bolivia: La Paz: Larecaja; "Cascabel".
SGO 124769 **ISO** – corp, ar, sp
- loc. 4:** Bolivia: La Paz; "unterhalb Sorata" = below Sorata. – / 4. / 1953.
ZSS SR14252 **Type number** – sem

Ritter 109: *Trichocereus* sp.

- loc. 1:** Bolivia: La Paz; "Quiabaya".
SGO 121231 (in 2 parts) – (corp), ar, sp
- loc. 2:** Bolivia: La Paz; "Sorata Nr. 3". – / 4. / 1953.
ZSS SR14253 – sem

Ritter 111: *Parodia comosa* F. Ritter – Cactus (Paris) 17(75): 21–22, 1962.

Typus (T): Ritter 111 (U 117883B, SGO [status ?], ZSS).

- loc. 1:** Bolivia: La Paz; between Prov. Loayza and Yungas Sud, gorge of Río La Paz. – / – / 1953.
B GH25119 – ic (corp, al) (Ex cult. BG Berlin, 28. 6. 1989 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
U 117883B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS A10461 **Type number** – fl (Ex cult. ZSS s.n., undated, probably 1959.)

ZSS S10115 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
 ZSS T4485 **ISO** – (corp), ar, sp (Leg. F. Ritter.)
 ZSS T4486 **ISO** – corp, ar, sp (Leg. F. Ritter.)
 ZSS T4487 **ISO** – (corp, ar, sp) (Leg. F. Ritter (small seedlings).)

loc. 2: Bolivia: La Paz: Sud-Yungas; Plazuela, Tijrana. – / 10. / 1954.
 ZSS AX4235 **Type number** – rad, corp, ar, sp (Leg. F. Ritter 1954. Ex
 cult. ZSS s.n., 4. 2. 1981.)
 ZSS T4484 **Type number** – corp, ar, sp (Leg. F. Ritter.)

loc. 3: Bolivia: La Paz: Sud-Yungas; "Plazuela".
 SGO 124495 **Type number** – rad, corp, ar, sp

loc. 4: Bolivia: La Paz: Sud-Yungas; "Rio Boopi Nr. 8 (La Paz, Boliv.). Plazuela". –
 The original label was first dated "V. 53."; later and in a different pen, the
 date "V. 58" has been added together with the additional locality "Plazuela".
 ZSS SR14254 **Type number** – sem

Ritter 112: *Cleistocactus glaucus* F. Ritter – Taxon 13(3): 114, 1964.

Typus (T): Ritter 112 (U 117611B, SGO, ZSS) (Holotype cited for U l.c.
 12(1): 28.).

loc. 1: Bolivia: La Paz: Murillo; "Tirata". – / 5. / 1953. – Collection date according
 to original Ritter seed sample at ZSS.

SGO 124770 **ISO** – corp, ar, sp
 ZSS SR14255 **ISO** – sem
 ZSS S9965 **Type number** – sem (Leg. F. Ritter 1955. Locality according
 to Ritter letters dated 17. & 31. 1. 1955 (ZSS archives).)

loc. 2: Bolivia: La Paz: Murillo; sine loco. – / – / 1953. – Collection date
 according to the protologue.

B GH31612 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 21. 7. 1993
 (cult. ex sem. Cat. H. Winter 1958). Collection number inferred.)
 U 117611B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS A9830 **Type number** – fl (Ex cult. ZSS s.n., 12. 5. 1987 (leg. F.
 Ritter 1953).)
 ZSS S9877 **Type number** – sem (Leg. Jardin Exotique de Monaco, ex
 cult. 1981.)
 ZSS T4491 **ISO** – corp, ar, sp (Leg. F. Ritter.)
 ZSS T4492 **ISO** – corp, ar, sp (Leg. F. Ritter.)

**Ritter 112a: *Cleistocactus glaucus* F. Ritter var. *plurispinus* F. Ritter – Taxon
 13(3): 114, 1964.**

Typus (T): Ritter 112a (U 117754B, SGO [status ?]) (Holotype cited for U
 l.c. 12(1): 28.).

loc. 1: Bolivia: La Paz; frontier of Prov. Murillo and Loayza.
 U 117754B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Bolivia: La Paz ?; Murillo ?; "Rio Abajo unterhalb Rio Caracato" = Río
 Abajo below Río Caracato.
 SGO 124771 **Type number** – corp, ar, sp

**Ritter 113: *Cleistocactus reae* Cárdenas – Cactus (Paris) No. 57: 251-252,
 1957.**

loc. 1: Bolivia: La Paz: Inquisivi; "Quime". – / 10. / 1954. – Locality data according to letter in ZSS archives (31. 3. 1955, p. 79, 90) and to original Ritter seed sample at ZSS. Collection date according to letter.

ZSS SR14256 – sem

ZSS S9966 – sem (Leg. F. Ritter 1955.)

ZSS T4494 – (corp), ar, sp (Leg. F. Ritter.)

ZSS T4495 – corp, ar, sp, (al) (Leg. F. Ritter.)

ZSS T4496 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Bolivia: La Paz: Inquisivi; "oberhalb Inquisivi" = above Inquisivi.

SGO 124772 – (corp), ar, sp

loc. 3: Bolivia: La Paz: Inquisivi; sine loco.

B GH16792 – fl, ic (corp, al) (Ex cult. BG Berlin, 17. 8. 1984 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

B GH16792a – corp, ar, sp, ic (corp, fl) (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

Ritter 114: *Austrocylindropuntia vestita* (Salm-Dyck) Backeberg – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

loc. 1: Bolivia: La Paz; near La Paz.

ZSS SX9967 – sem (Leg. F. Ritter 1955 (sub "*Cylindropuntia* de La Paz").)

ZSS T4497 – (corp, ar, sp) (Leg. F. Ritter.)

loc. 2: Bolivia: Tarija: Arce; "Padcaya, hohe Lagen" = Padcaya, high altitudes.

SGO 121920 – corp, ar, sp

loc. 3: Bolivia: Cochabamba; "Quillacollo".

SGO 121921 – corp, ar, sp

loc. 4: Bolivia: Chuquisaca: Azurduy; "Abstieg zum Río Pilcomayo von Scheide Río Acero" = descent to the Río Pilcomayo from the water divide to the Río Acero / "oberh. Capaytala" = above Capaytala.

SGO 121922 – corp, ar, sp

loc. 5: Bolivia: La Paz: Inquisivi; "Quime Nr. 28".

ZSS SR14257 – sem

Ritter 115: *Rhipsalis tucumanensis* F. A. C. Weber – Rev. Hort. 64: 426-427, 1892.

loc. 1: Bolivia: La Paz; Coroico. – Locality data according to KS 4: 1619 (sub no. 40). The locality is given as "Inquisivi" in the Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S9968 – sem (Leg. F. Ritter 1955.)

loc. 2: Bolivia: La Paz; "Fluss Coroico Nr. 3" = Coroico River. – / 6. / 1953.

ZSS SR14258 – sem

loc. 3: Bolivia: Tarija: Gran Chaco; "Höhen westlich Palos Blancos" = altitudes W of Palos Blancos.

ZSS SR14259 – sem

- loc. 4:** Bolivia: Tarija: O'Connor, "Narvaez".
ZSS SR14260 – sem
- loc. 5:** Bolivia: Chuquisaca; "Pte. Acero" = Puente Acero". – / 8. / 1958. – The original label had the collection number first as "FR 40a" which is said to come from "Dept. Santa Cruz" in the field-number list in KS 4 and is set equal to FR 40 and FR 115.
ZSS SR14261 – sem

Ritter 115a: *Rhipsalis* sp.

- Bolivia: Campanani. – Originally distributed as *Rhipsalis boliviana*.
ZSS B4498 – (corp) (Leg. F. Ritter.)

Ritter 116: *Rhipsalis hylaea* F. Ritter – Kakt. Südamer. 4: 1261-1262, fig. 1117, 1981.

Typus (T): Ritter 116 (U, SGO [status ?], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Amazonas; "Sta. Rosa am Marañon" = Santa Rosa at the Marañon. – / – / 1954. – Collection date according to specimen at U.
U **HOLO** – corp, ar (Collection number inferred.)
ZSS B4499 **ISO** – (corp) (Leg. F. Ritter.)
- loc. 2:** Peru: Cajamarca: Jaén; "Jaén". – / 7. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 125568 **Type number** – rad, corp, ar, sp
ZSS SR13790 **Type number** – sem
- loc. 3:** Peru: Amazonas ?; "unterhalb Maravilla am Marañon" = below Maravilla at the Marañon / "Maravilla".
SGO 125569 **Type number** – rad, corp, ar, sp
- loc. 4:** Peru: Amazonas ?; "Marañon am Wegebau [?]. Aramango" = Marañon, at path construction site [?]. Aramango / "Aramango".
SGO 124768 **Type number** – corp, ar, sp

Ritter 117: *Opuntia brachyacantha* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1(a)) – Kakt. Südamer. 2: 501, in synon., 1980.

- loc. 1:** Bolivia: Cochabamba: Ayopaya; "Independencia, Nr. 9". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122006 **ISO** – (corp), ar, sp
- loc. 2:** Bolivia: La Paz: Larecaja; "Cascabel, Nr. 11". – "(wie dichtareolige von Millocatu)" = as the one with dense areoles from Millocatu. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122007 – (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba; "von Independencia" = from Independencia. – / – / 1955. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U **HOLO** – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

Ritter 118: *Opuntia alko-tuna* Cárdenas – Lilloa 23: 23-25, ills., t. 4 (above), 1950.

Typus (T): Cardenas 4394 (BOLV).

loc. 1: Bolivia: La Paz; "La Paz, Tahnopalca". – / 10. / 1954. – Locality data from specimen at ZSS. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS B4500 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4501 – fr (Leg. F. Ritter.)

loc. 2: Bolivia: La Paz: Larecaja; "Cascabel, Nr. 2". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122008 – (corp), ar, sp

loc. 3: Bolivia: La Paz ?; "Flussgebiete des Río Consata und Río de la Paz bis ca. 3000 m Höhe" = region of the Río Consata and Río de la Paz up to 3000 m altitude. 3000 m. – Originally distributed as *Opuntia monacantha*. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS S9969 – sem (Leg. F. Ritter 1955.)

loc. 4: Bolivia: La Paz: Murillo; "Tirata - Lurata". – / 7. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS SR14262 – sem

Ritter 119: *Corryocactus charazanensis* Cárdenas – Cactus (Paris) No. 57: 247-249, 1957.

loc. 1: Bolivia: La Paz ?; Río Consata. – / 10. / 1954. – Locality information according to specimens at ZSS.

B GH17837 – fl, ic (corp, fl) (Ex cult. BG Berlin, 7. 6. 1985 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

B GH17837a – corp, ar, sp (Ex cult. BG Berlin, 2. 8. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

ZSS S10116 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

ZSS T4502 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4503 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Bolivia: La Paz: Larecaja; "Cascabel, tief" = Cascabel, low altitude / "Cascabel". – "Besonders schwach" = specially weak.

SGO 125043 – corp, ar, sp

loc. 3: Bolivia: La Paz: Larecaja / Muñecas; "Ayata + Cascabel".

ZSS SR14263 – sem

Ritter 120: *Parodia borealis* F. Ritter – Taxon 13(3): 116-117, 1964.

Typus (T): Ritter 120 (U 117747B, SGO [status ?], ZSS) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: La Paz; frontier between Prov. Larecaja and Muñecas, gorge of Río Consata. – / – / 1954.

U 117747B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S10117 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955

(sub *Parodia gigantea* var.). The seed sample has been annotated by Ritter in his own handwriting: "ist nicht die von mir beobach. Art" = is not the species observed by me.)

ZSS T4504 **ISO** – corp, ar, sp (Leg. F. Ritter.)

ZSS T4505 **ISO** – corp, ar, sp (Leg. F. Ritter.)

ZSS T4506 **ISO** – corp, ar, sp (Leg. F. Ritter.)

ZSS T4508 **ISO** – (corp, ar, sp) (Leg. F. Ritter (juvenile offset).)

- loc. 2:** Bolivia: La Paz: Larecaja; "Cascabel". - / 7. / 1953. - Collection date according to original Ritter seed sample.
SGO 124508 (in 2 parts) **Type number** - rad, corp, ar, sp
ZSS SR14264 **Type number** - sem

Ritter 121: *Cumulopuntia berterii* (Colla) F. Ritter - Kakt. Südamer. 3: 885, 1980.

- loc. 1:** Peru: Tacna; Tarata.
ZSS T4509 - corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Tacna; "Abstieg von Bolivien - Chile nach Tacna, 2550 m" = descent from Bolivia - Chile to Tacna / "oberh. Tacna, Höhen" = above Tacna, altitudes. 2550 m.
SGO 121866 - corp, ar, sp
- loc. 3:** Chile: "Berge über Camiña bei 3100 m. - ca. 200 m." = mountains above Camiña / "Camiña". 3100 m.
SGO 125093 - corp, ar, sp, (fr)
- loc. 4:** Chile: "Weg Camiña nach Boliv. bei 3200 - 200 m. Höhe" = path Camiña to Bolivia / "Camiña". 3200 m.
SGO 125094 - corp, ar, sp
- loc. 5:** Peru: Tacna; "Tacna". - / 4. / 1957.
SGO 125363 - corp, ar, sp
- loc. 6:** Peru: Tacna; "Tarata (Tacna) Nr. 4". - / 7. / 1953.
ZSS SR13791 - sem

Ritter 121a: *Cumulopuntia kuehnrhichiana* (Werdermann & Backeberg) F. Ritter (*nom. inval.* Art. 33.2) - Kakt. Südamer. 4: 1253-1254, 1981.

- loc. 1:** Peru: Lima; Chosica. - This is the type number of *Tephrocactus sphaericus* var. *glaucus* Backeberg.
ZSS SX9970 - sem (Leg. F. Ritter 1955.)
- loc. 2:** Peru: Lima; "16 km östl. Sayan bei ca. 1000 m." = 16 km E of Sayán. 1000 m. - This is the type number of *Tephrocactus sphaericus* var. *glaucus* Backeberg.
SGO 125095 - corp, ar, sp, fr, sem
ZSS SR13792 - sem (This label has no altitude information.)
- loc. 3:** Peru: Lima; "Chosica". - / 9. / 1954. - Collection date according to original Ritter seed sample at ZSS. This is the type number of *Tephrocactus sphaericus* var. *glaucus* Backeberg.
SGO 125096 - corp, ar, sp
ZSS SR13794 - sem
- loc. 4:** Peru: Ica; "Sol de Oro". - This is the type number of *Tephrocactus sphaericus* var. *glaucus* Backeberg.
SGO 125430 - corp, ar, sp, fr, sem
ZSS SR13793 - sem

Ritter 121c: *Cumulopuntia berterii* (Colla) F. Ritter - Kakt. Südamer. 3: 885, 1980.

loc. 1: Chile: "Salamanca + Illapel". – / 5. / 1954. – This label was originally labelled as "242". FR 121c and FR 242 are said to be equal in the field-number list in KS 4.

ZSS SR13192 – sem

loc. 2: Chile: "Los Andes". – / 5. / 1954. – This label was originally labelled as "242". FR 121c and FR 242 are said to be equal in the field-number list in KS 4.

ZSS SR13193 – sem

loc. 3: Chile: "Tres Cruces". – / 5. / 1954. – This label was originally labelled as "242". FR 121c and FR 242 are said to be equal in the field-number list in KS 4.

ZSS SR13194 – sem

Ritter 121d: *Cumulopuntia berterii* (Colla) F. Ritter – Kakt. Südamer. 3: 885, 1980.

– Peru / Chile?: "Chapiquiña, Höhenform bei 3500 m." = Chapiquiña, high altitude form at 3500 m. 3500 m.

SGO 125097 – corp, ar, sp

Ritter 122: *Corryocactus brevistylus* (K. Schumann) Britton & Rose – The Cact. 2: 66, 1920.

loc. 1: Peru: sine loco. – / 7. / 1953.

ZSS B4510 – ar, sp (Leg. F. Ritter.)

ZSS S10118 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Corryocactus brachypetalus*.)

loc. 2: Bolivia: La Paz: Pacajes; "Coracora 2500 m." [= Corocoro?]. 2500 m.

SGO 125044 – (corp), ar, sp

loc. 3: Peru: Tacna; "Tarata (Tacna) Nr. 2". – / 7. / 1953.

ZSS SR13795 – sem

Ritter 122a: *Corryocactus brevistylus* (K. Schumann) Britton & Rose – The Cact. 2: 66, 1920.

loc. 1: Peru: Ayacucho; Puquio. – / 12. / 1953. – Locality given as 'Puquias' and said to be in Chile on the non-original label at ZSS.

ZSS B4511 – ar, sp (Leg. F. Ritter.)

loc. 2: Chile: "Camiña". – / 9. / 1960. – Collection date according to original Ritter seed-sample at ZSS.

SGO 125045 – (corp), ar, sp

ZSS SR13195 – sem

Ritter 123: *Oreocereus leucotrichus* (Philippi) Wagenknecht – Anales Acad. Chil. Ci. Nat. 20: 102, 1956. (The bibliographical citation may be erroneous and has not been checked, and the name could be invalid (Art. 33.2).)

loc. 1: Peru: Tacna; Tacna. 4000 m.

ZSS S10119 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Oreocereus hendriksenianus*.)

ZSS T4512 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4513 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4514 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4515 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Tacna; "Estique". – Locality according to index card associated with the seed sample at ZSS.

ZSS S10215 – sem (Leg. F. Ritter 1955 (sub *Oreocereus hendriksonianus*.)

loc. 3: Peru / Chile?: "unterhalb Alcerreca" = below Alcerreca.

SGO 125310 – (corp), ar, sp

loc. 4: Chile: "unterhalb Portezuelo Chapiquiña" = below Portezuelo Chapiquiña. – / 11. / 1960. – "unvermischt" = not mixed.

ZSS SR13196 – sem

loc. 5: Peru: Tacna / Moquegua; "Tarata Nr. 6 (Tacna, Peru) + Cuajones (Moquegua, Peru)". – / 7. / 1953. – "+ Cuajones" etc. was obviously added later to the original envelope.

ZSS SR13796 – sem

Ritter 123a: *Oreocereus leucotrichus* (Philippi) Wagenknecht – Anales Acad. Chil. Ci. Nat. 20: 102, 1956. (The bibliographical citation may be erroneous and has not been checked, and the name could be invalid (Art. 33.2).)

– Peru: Tacna; Tacna. 4000 m. – / 12. / 1953. – A black-hairy form (labelled as var. *niger*). Identified as "*Oreocereus leucotrichus* fa." in KS 4: 1622.

ZSS T4517 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4518 – corp, ar, sp (Leg. F. Ritter.)

Ritter 123b: *Oreocereus varicolor* Backeberg – Cact. Succ. J. (US) 23(1): 20, 1951. (Sphalm. 'variicolor').

loc. 1: Peru: Chuchuo. 9. / 9. / 1954.

ZSS T4519 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4520 – ar, sp (Leg. F. Ritter.)

loc. 2: Chile: Arica.

ZSS S10120 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Oreocereus horridispinus*.)

loc. 3: Chile?: "Wasserscheide Río Lluta u. Azapa, südwestl. der Strasse" = water divide between Río Lluta and Azapa, SW of the road. – / 11. / 1960. – The original label is numbered "FR 123b = FR 478"; the two numbers are set equal in the field-number list in KS 4.

ZSS SR13197 – sem

loc. 4: Chile: "Strasse nach Río Lauca, bei km 80" = road to Río Lauca, at km 80.

29. / 9. / 1957. – "z.T. wenig hybridis. mit *Or. leucotrichus*" = in part slightly hybridized with *Oreocereus leucotrichus*. The original label also has the number "FR 478" crossed out; this is said to equal FR 123b in the field-number list in KS 4.

ZSS SR13198 – sem

- loc. 5:** Chile: "Puquios (Chile)". – / 12. / 1953. – First identified as *Oreocereus hendriksenianus* var. *horridispinus* (*nom. nud.*) and with the comment: "etwas hybridisiert mit Typ" = somewhat hybridized with the type. The original envelope also has the number "FR 478" added and crossed out again; this is set equal to FR 123b in the field-number list in KS 4.
ZSS SR13199 – sem

Ritter 123c: *Oreocereus leucotrichus* (Philippi) Wagenknecht – Anales Acad. Chil. Ci. Nat. 20: 102, 1956. (The bibliographical citation may be erroneous and has not been checked, and the name could be invalid (Art. 33.2).)

- loc. 1:** Chile: "Baños Puritama". – Identified as "*Oreocereus leucotrichus* fa." in KS 4.
SGO 125311 – (corp), ar, sp
- loc. 2:** Chile: "Vilama". – Identified as "*Oreocereus leucotrichus* fa." in KS 4.
ZSS SR13200 – sem
- loc. 3:** Chile: "Toconce-Tal" = Toconce valley. – / 1. / 1958. – Identified as "*Oreocereus leucotrichus* fa." in KS 4.
ZSS SR13201 – sem

Ritter 123d: *Oreocereus leucotrichus* (Philippi) Wagenknecht – Anales Acad. Chil. Ci. Nat. 20: 102, 1956. (The bibliographical citation may be erroneous and has not been checked, and the name could be invalid (Art. 33.2).)

- loc. 1:** Peru / Chile ?: sine loco. – Identified as '*Oreocereus leucotrichus* forma' in KS 4.
ZSS S12572 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Oreocereus hendriksenianus* var.))
- loc. 2:** Chile: "Chusmisa". – / 4. / 1956. – "Übergang nach *varicolor*" = intermediate towards *Oreocereus varicolor*. The original label was first numbered as "FR 478a", now crossed out. FR 123d is identified as '*Oreocereus leucotrichus* forma' in KS 4, FR 478a is not recorded.
ZSS SR13202 – sem

Ritter 124: *Oreocereus tacnaensis* F. Ritter – Kakt. Südamer. 4: 1363-1365, fig. 1239, 1981.

Typus (T): Ritter 124 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Tacna: Tarata; "Estique". 3000 m. – / 7. / 1953. – Locality data and collection date according to original Ritter seed sample at ZSS, locality supported on index card associated with the seed sample at ZSS; altitude according to the protologue.
ZSS AX4234 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 9. 9. 1983.)
ZSS S10216 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS SR13797 **ISO** – sem (Locality given as "Estique Nr. 1 (Tacna)" on the original envelope.)
ZSS T4523 **ISO** – corp, ar, sp (Leg. F. Ritter.)

ZSS T4524 **ISO** – ar, sp (Leg. F. Ritter.)

ZSS T5357 **Type number** – corp, ar, sp (Ex cult. ZSS s.n., 25. 4. 1991 (ex coll. Locuty).)

Ritter 124a: *Oreocereus tacnaensis* F. Ritter – Kakt. Südamer. 4: 1363-1365, fig. 1239, 1981.

Typus (T): Ritter 124 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Tacna: Tarata; Estique. 3500 m. - 4000 m. – / 6. / 1954. – Identified as '*Oreocereus tacnaensis* fa.' in KS 4: 1622.

ZSS T4525 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4526 – corp, ar, sp (Leg. F. Ritter.)

Ritter 125: *Haageocereus fascicularis* (Meyen) F. Ritter – Kakt. Südamer. 3: 1125-1126, 1980.

loc. 1: Chile: "unterhalb Chapiquiña, Nordchile" = below Chapiquiña, N Chile. – / – / 1957. – This collection number is said to equal *Ritter 601* in KS 4. Collection date according to specimen at U.

U – (corp), ar, sp (Collection number inferred. Originally labelled *Haageocereus chilensis* (*nom. nud.*)).

ZSS T4527 – ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Tacna; "Tacna". – Locality data according to index card associated with the seed sample at ZSS, and from Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S10217 – sem (Leg. F. Ritter 1955 (sub *Haageocereus australis* var. *albiflora*)).

loc. 3: Peru: Tacna; "Ovilla [Orilla ?] (Tacna) Nr. 1". – / 7. / 1953.

ZSS SR13798 – sem

Ritter 126: *Haageocereus australis* Backeberg – Jahrb. Deutsche Kakt.-Ges. 1: 104, 1936.

loc. 1: Peru: Arequipa; above Mollendos [Mollendo]. – Locality information from specimen list at ZSS. Specimens under this number seem to be mixed up with *Haageocereus decumbens sensu* Ritter, and this was in fact also the name first used for No. 126.

ZSS S9898 – sem (Leg. F. Ritter 1955 (sub *Haageocereus decumbens*; cf. KS 4: 1392).)

ZSS T4528 – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Tacna; "Tacna". – / 4. / 1957. – Specimens under this number seem to be mixed up with *Haageocereus decumbens sensu* Ritter, and this was in fact also the name first used for No. 126.

SGO 124683 – corp, ar, sp

loc. 3: Chile: Tarapacá; "Junin (Chile)" = Junín. – / 1. / 1958. – Interestingly, this sample was filed amongst Peruvian collection in the collection of original Ritter seed samples; while there is a locality and department of this name in Peru, the taxon is not reported from the area, and accordingly, the locality seems to be genuinely Chilean.

ZSS SR13799 – sem

loc. 4: Peru: Tacna; "Tacna Nr. 1". – / 7. / 1953.
ZSS SR13800 – sem

Ritter 126a: *Haageocereus australis* Backeberg fa. *subtilispinus* F. Ritter – Kakt. Südamer. 3: 1127, fig. 29, 1980.

Typus (T): Ritter 126a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Tarapacá; "Junin" = Junín. – / – / 1954. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Interpreted as holotype, as this is the only specimen present.)

ZSS T5119 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960.)

loc. 2: Chile: Tarapacá; "Junin, südl. Pisagua" = Junín, S of Pisagua. – "südl. Pisagua" added later.

SGO 124689 **ISO** – corp, ar, sp

loc. 3: Chile: Tarapacá; "Junin, Chile" = Junín. – / 1. / 1958.

ZSS SR13801 **ISO** – sem

loc. 4: Peru: Tacna; "Tacna". – / 12. / 1953.

ZSS SR13802 – sem

Ritter 126b: *Haageocereus australis* Backeberg – Jahrb. Deutsche Kakt.-Ges. 1: 104, 1936.

loc. 1: Chile: Arica. – / 6. / 1954. – Locality information from specimen list at ZSS.

ZSS T4529 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Chile: "Camarapa bei Arica" = Camarapa near Arica. – The original label contains a long comment explaining the variability, especially of spination and number of ribs found in the habitat. The jar contains 5 stem fragments including 1 cristate shoot.

SGO 124684 – corp, ar, sp

Ritter 126c: *Haageocereus australis* Backeberg fa. *nanus* F. Ritter – Kakt. Südamer. 3: 1127, 1980.

Typus (T): Ritter 126c (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Moquegua; Ilo. – / 6. / 1954.

ZSS T4530 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)

Ritter 126d: *Haageocereus australis* Backeberg – Jahrb. Deutsche Kakt.-Ges. 1: 104, 1936.

loc. 1: Peru: Arequipa; Chala. – / 7. / 1954. – Identified as '*Haageocereus australis* fa.' in KS 4: 1622.

ZSS T4531 – rad, corp, ar, sp (Leg. F. Ritter (seedling plant).)

- loc. 2:** Peru: Arequipa; "Atico". – / 11. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as '*Haageocereus australis* fa.' in KS 4: 1622.
SGO 124685 – (corp), ar, sp
ZSS SR13803 – sem
- loc. 3:** Peru: Arequipa; "Lomas". – Identified as '*Haageocereus australis* fa.' in KS 4: 1622.
SGO 124686 – corp, ar, sp
- loc. 4:** Peru: Arequipa; "nördlich Chala Vieja" = N of Chala Vieja. – / 2. / 1969. – Identified as '*Haageocereus australis* fa.' in KS 4: 1622.
ZSS SR13804 – sem

Ritter 126e: *Haageocereus tenuis* F. Ritter – Kakt. Südamer. 4: 1421-1422, fig. 1283, 1981.

Typus (T): Ritter 126e (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Lima; halbwegs "zwischen Chancay und Huacho" an der Panamericana Strasse = halfway between Chancay and Huacho at the Panamericana. – / 7. / 1956. – Collection date according to specimen at U. Locality data supplemented from the protologue.
U HOLO – corp, ar, sp (Collection number inferred. Interpreted as the holotype as this is the only specimen present.)
- loc. 2:** Peru: Lima; "80 km nördl. Lima, nördl. Chancay" = 80 km N of Lima, N of Chancay / "km 80". – The first label is a piece of newspaper dated 17. 4. 1960.
SGO 124687 ISO – corp, ar, sp

Ritter 127: *Arequipa rettigii* (Quehl) Oehme – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1940(Mai): Blatt 7, 1940.

- loc. 1:** Peru: sine loco. 4000 m. – / 12. / 1953. – Information according to specimen list at ZSS.
ZSS T4532 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4533 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Chile / Peru?: Ohudruca. – / 6. / 1954. – Information according to specimen list at ZSS. Received originally as *Arequipa nigricans* ('nigrigens' in the ZSS list).
ZSS T4534 – corp, ar, sp (Leg. F. Ritter.)
- loc. 3:** Peru: Arequipa; "Arequipa". – / 7. / 1954. – Locality data according to specimen at SGO, original Ritter seed sample at ZSS and the index card associated with the other seed sample at ZSS. Collection date according to original Ritter seed sample.
SGO 124972 – (corp), ar, sp ("Same grubig glänzend" = seed pitted, shiny.)
SGO 124973 – (corp), ar, sp
ZSS S10219 – sem (Leg. F. Ritter 1955 (sub *Arequipa leucotricha*)).
ZSS SR13805 – sem ("In 2 Samentypen" = in 2 seed types.)

Ritter 127a: *Arequipa hempeliana* (Gürke) Oehme – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1940(2): 8, 1940.

- loc. 1:** Peru: Tacna: Tarata; "Estique". – / 6. / 1954. – Locality data according to index card associated with the seed sample at ZSS; collection date according to specimen list at ZSS.
ZSS S10218 – sem (Leg. F. Ritter 1955.)
ZSS T5122 – corp, ar, sp (Leg. F. Ritter 1954. Ex cult. ZSS s.n.)
- loc. 2:** Chile ?: "unterh. Socorana bei 2600 m." = below Socorana [= Socoroma (Tarapacá) ?]. 2600 m.
SGO 124974 – (corp), ar, sp
- loc. 3:** Chile: "Chusmiga, Nr. 10". – Locality appears to be identical with 'Chusmisa', Chile (Tarapacá).
SGO 124977 – (corp), ar, sp
- loc. 4:** Peru / Chile ?: sine loco.
B GH20732 – fl (Ex cult. BG Berlin, 5. 8. 1986 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
B GH22564 – fl, fr, sem, ic (corp) (Ex cult. BG Berlin, 22. 8. 1987 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
B GH30116 – fl (Ex cult. BG Berlin, 7. 8. 1992 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
- loc. 5:** Chile: "Ticnamar".
ZSS SR13203 – sem
- loc. 6:** Chile: "Chusmisa (hohe Lagen)" = Chusmisa, upper altitudes. – / 4. / 1956. – The original label was first numbered "598", which is said to be equal to FR 127a in the field-number list in KS 4.
ZSS SR13204 – sem
- loc. 7:** Chile: "Chusmisa (tiefe Lagen)" = Chusmisa, lower altitudes. – / 4. / 1956. – "von 1 Pflanze" = from one specimen, but there is a single seed preserved only anyway. The original label was first numbered "598", which is said to equal FR 127a in the field-number list in KS 4.
ZSS SR13205 – sem
- loc. 8:** Chile: "Mamiña". – / 1. / 1957. – The original label was first numbered "598", which is said to equal FR 127a in the field-number list in KS 4.
ZSS SR13206 – sem
- loc. 9:** Peru: Tacna; "Strasse Tacna - Charaña bei 3900 m., Per" = road Tacna [Peru] - Charaña [Bolivia] ?. 3900 m. – / 5. / 1959. – The original label was first numbered "FR 598", now crossed out. FR 598 is set equal to FR 127a in the field-number list in KS 4.
ZSS SR13807 – sem
- loc.10:** Peru: Tacna; "Tarata (Tacna) Nr. 8". – / 7. / 1953. – The original label was first numbered "Nr. 127", now amended to read "Nr. 127a".
ZSS SR13806 – sem

Ritter 127b: *Arequipa retigii* var. *borealis* F. Ritter – Kakt. Südamer. 4: 1369, fig. 1249, 1981.

Typus (T): Ritter 127b (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Peru: Arequipa: Caraveli; "über Convento" = above Convento. – / 6. / 1956.
ZSS SR13808 **ISO** – sem

Ritter 128: *Islaya copiapoides* Rauh & Backeberg var. *chalaensis* F. Ritter –
Kakt. Südamer. 4: 1295-1297, fig. 1161, 1981.

Typus (T): Ritter 128 (U, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa; near Chala. – / 7. / 1954.

ZSS S12588 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Islaya paucispina*).

ZSS T4535 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)

ZSS T4536 **ISO** – rad, (corp), ar, sp (Leg. F. Ritter.)

ZSS T4537 **ISO** – corp, ar, sp (Leg. F. Ritter.)

ZSS T4538 **ISO** – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Arequipa; "Chala". – / 8. / 1953. – Collection date according to original Ritter seed sample at ZSS ("VIII. 53.") and to specimen at U ("1953").

SGO 122087 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype, as this is the only specimen present.)

ZSS S10121 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Islaya chalaensis*).

ZSS SR13810 **ISO** – sem (Locality given as "Chala (Peru) Nr. 1" on the original envelope.)

loc. 3: Peru: Arequipa; "Atico". – / 11. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 122088 – (corp), ar, sp

ZSS SR13809 – sem

Ritter 128a: *Islaya copiapoides* Rauh & Backeberg var. *pseudomollendensis* F. Ritter – Kakt. Südamer. 4: 1297, fig. 1162, 1981.

Typus (T): Ritter 128a (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa; "Calaveritas" zwischen Atico und Ocoña, auf Küstenbergen = Calaveritas between Atica and Ocoña, on coastal mountains. – / – / 1957.
– Locality information supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

ZSS SR13811 **ISO** – sem (The original label is dated "XI 1958".)

loc. 2: Peru: Arequipa; "nördl. Ocoña, Nr. 1" = N of Ocoña.

SGO 122089 **Type number** – (corp), ar, sp

loc. 3: Peru: Arequipa; "Pass nördl. Ocoña" = pass N of Ocoña. – / 11. / 1958.

ZSS SR13812 **Type number** – sem

Ritter 129: *Weberbauerocereus weberbaueri* (K. Schumann ex Vaupel)
Backeberg – Descr. Cact. Nov. [1]: 27, 1956.

- Peru: Arequipa; "Arequipa". – / 8. / 1953. – Collection date according to original Ritter seed sample at ZSS, where the locality is given as "Arequipa Nr. 3".
SGO 121136 (in 2 parts) – corp, ar, sp
ZSS SR13813 – sem

Ritter 129a: *Weberbauerocereus weberbaueri* (K. Schumann *ex* Vaupel)

Backeberg var. *horridispinus* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1356, 1981.

- loc. 1:** Peru: Arequipa / Ayacucho; along road from Chala to Coracora, E of desert belt in a very dry region. – / – / 1958. – Locality information according to KS 4: 1356, and according to specimen list at ZSS.
ZSS T4539 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Ayacucho; "Strasse nach Coracora" = road to Coracora. 2500 m.
SGO 121128 – (corp), ar, sp
- loc. 3:** Peru: Arequipa; "Quicacha". – / 2. / 1969.
ZSS SR13814 – sem

Ritter 129b: *Weberbauerocereus weberbaueri* (K. Schumann *ex* Vaupel)

Backeberg var. *horridispinus* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1356, 1981.

- Peru: Arequipa ?; "Cerro Negro". – / 7. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121135 (in 2 parts) – corp, ar, sp
ZSS SR13815 – sem

Ritter 130: *Neoraimondia peruviana* (Linné) F. Ritter fa. *roseiflora* (Backeberg) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 4: 1622, 1981.

- loc. 1:** Peru: Lima; Pacarán. – / 7. / 1954. – Locality data from specimen list at ZSS. Also distributed as *Neoraimondia macrostibas* or *N. peruviana* var. *roseiflora* (*nom. nud.*).
ZSS S10220 – sem (Leg. F. Ritter 1955 (sub *Neoraimondia macrostibas* var. *roseiflora*)).
ZSS T4540 – corp, ar, sp, ceph (Leg. F. Ritter.)
ZSS T4541 – rad, (corp, ar, sp) (Leg. F. Ritter (apparently a seedling plant, or a mix-up with something else).)
- loc. 2:** Peru: Ica; "Sol de Oro".
SGO 125252 – (corp), ar, sp
- loc. 3:** Peru: Ica; "Ica (Peru) Nr. 2". – / 8. / 1953. – The original envelope was first numbered "Nr. 130" which was later amended to "Nr. 130a" and then crossed out again to read "Nr. 130".
ZSS SR13816 – sem
- loc. 4:** Peru: Huancavelica; "unterhalb Ticrapo" = below Ticrapo. – / 5. / 1957.
ZSS SR13817 – sem

Ritter 130a: *Neoraimondia peruviana* (Linné) F. Ritter fa. *sayanensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1622, 1981.

Based on Ritter 130a.

loc. 1: Peru: Lima; "Rio Huaura" / "Valle Huaura".
SGO 125253 – (corp), ar, sp

loc. 2: Peru: Lima; "Valle Huaura". – / 6. / 1957.
ZSS SR13818 – sem

Ritter 131: *Armatocereus procerus* Rauh & Backeberg var. *armatus* F. Ritter –
Kakt. Südamer. 4: 1277, 1981.

Typus (T): Ritter 131 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ancash; "Yautan" = Yaután. – / 8. / 1953. – The locality is given as
being in Dept. Ica in the specimen list at ZSS but this is certainly erroneous.
Collection date according to specimens at ZSS.

SGO 124936 **ISO** – ar, sp

SGO 124937 **ISO** – (corp), ar, sp ("Gewöhnliche Areolen" = ordinary
areoles [in respect to the other specimen which consists of 2 areoles
from the trunk].)

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only
specimen present. Collection number inferred.)

ZSS SR13819 **Type collection** – sem (The original label is dated "VIII.
56".)

ZSS T4542 **ISO** – corp, ar, sp (Leg. F. Ritter.)

ZSS T4543 **ISO** – (corp), ar, sp (Leg. F. Ritter.)

ZSS T4544 **ISO** – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ancash; sine loco.

ZSS S10122 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955
(sub *Armatocereus armatus*).)

ZSS S12550 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 3: Peru: Lima ?; "Valle Canta". – "10 - 11 Rippen" = 10 - 11 ribs.

SGO 124938 – (corp), ar, sp

loc. 4: Peru: Ancash; "Rio Huanta".

SGO 124939 – (corp), ar, sp

Ritter 132: *Melocactus peruvianus* Vaupel – Bot. Jahrb. Syst. 50: Beibl. 111:
28, 1913.

Typus (T): Weberbauer 2629 (B).

loc. 1: Peru: Arequipa; Quicacha. – / 7. / 1954. – Locality information from
specimen list at ZSS.

ZSS T4545 – rad, corp, ar, sp (Leg. F. Ritter (juvenile seedling plant).)

ZSS T4546 – (corp), ar, sp, ceph (Leg. F. Ritter.)

ZSS T4552 – rad, corp, ar, sp (Leg. F. Ritter (juvenile plant).)

ZSS T4553 – ar, sp (Leg. F. Ritter (fragment of mature plant).)

loc. 2: Peru: Lima; "Pacaran" = Pacarán. 9. / 9. / 1954. – Locality information from
specimen list at ZSS.

ZSS S10221 – sem (Leg. F. Ritter 1955.)

ZSS T4554 – corp, ar, sp (Leg. F. Ritter (juvenile plant).)

- loc. 3:** Peru: Arequipa; "Quicacha".
SGO 122106 – (corp), ar, sp, (ceph)
- loc. 4:** Peru: Lima; "von Sta. Eulalia bis Huancapo" = from Santa Eulalia to Huancapo / "Sta. Eulalia" = Santa Eulalia.
SGO 122107 – (corp), ar, sp, (ceph)
- loc. 5:** Peru: Huancavelica / Ica; "zw. Huancapo u. Ticrapo" = between Huancapo [sphalm., Huancano ?] and Ticrapo / "Ticrapo".
SGO 122108 – (corp), ar, sp, (ceph)
- loc. 6:** Peru: Ica; "Sol de Oro".
SGO 122110 – (corp), ar, sp, (ceph)
ZSS SR13821 – sem
- loc. 7:** Peru: Ancash; "Tablones".
SGO 122111 – (corp), ar, sp
ZSS SR13820 – sem
- loc. 8:** Peru: Ica; "Dept. Ica, Peru", sine loco. – / 8. / 1953.
ZSS SR13822 – sem
- loc. 9:** Peru: Lima; "San Bartolomé (Lima) Peru". – / 8. / 1953.
ZSS SR13823 – sem

Ritter 132a: *Melocactus peruvianus* Vaupel – Bot. Jahrb. Syst. 50: Beibl. 111: 28, 1913.

Typus (T): Weberbauer 2629 (B).

- loc. 1:** Peru: Lambayeque; Olmos. – / 7. / 1954. – Locality information from specimen list at ZSS. Originally distributed as *Melocactus peruvianus* var. *jansensianus*.
ZSS T4555 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: La Libertad; Laredo. – / 7. / 1954. – Locality information from specimen list at ZSS. Originally distributed as *Melocactus peruvianus* var. *jansensianus*.
ZSS T4556 – (corp), ar, sp (Leg. F. Ritter.)
ZSS T4557 – rad, corp, ar, sp (Leg. F. Ritter (juvenile plant).)
ZSS T4559 – corp, ar, sp (Leg. F. Ritter (juvenile plant).)
- loc. 3:** Peru: Tumbes ?; Tumbas [= Tumbes ?]. – Locality information from specimen list at ZSS. Originally distributed as *Melocactus peruvianus* var. *jansensianus*.
ZSS T4558 – corp, ar, sp (Leg. F. Ritter (juvenile plant).)
- loc. 4:** Peru: Arequipa / La Libertad ?; "Chiral". – Locality information from specimen list at ZSS. Originally distributed as *Melocactus peruvianus* var. *jansensianus*.
ZSS S10222 – sem (Leg. F. Ritter 1955 (sub *Melocactus peruvianus* var. *jansensianus*)).
ZSS SR13824 – sem

Ritter 132b: *Melocactus peruvianus* Vaupel fa. *huallancensis* (Rauh & Backeberg) F. Ritter *in sched.* (*nom. inval.* Art. 29.1)

- Peru: Ancash; "Huallanca". - / 8. / 1964. - Collection date according to original Ritter seed sample at ZSS.
SGO 122109 - (corp), ar, sp, ceph
ZSS SR13825 - sem

Ritter 133: *Haageocereus multangularis* (Haworth) F. Ritter var. *pseudomelanoste* (Backeberg) F. Ritter - Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

- loc. 1: Peru: sine loco.
ZSS T4560 - corp, ar, sp (Leg. F. Ritter.)
ZSS T4561 - corp, ar, sp (Leg. F. Ritter.)
- loc. 2: Peru: Ancash; "St. Clara" = Santa Clara.
SGO 124691 - (corp), ar, sp
ZSS S9971 - sem (Leg. F. Ritter 1955.)
ZSS T4563 - corp, ar, sp (Leg. F. Ritter.)
- loc. 3: Peru: Ancash; "Chimbote". - / 8. / 1956. - Collection date according to original Ritter seed sample at ZSS.
SGO 124688 - (corp), ar, sp
ZSS SR13826 - sem
- loc. 4: Peru: Lima; "Pachacamac".
SGO 124699 - (corp), ar, sp
- loc. 5: Peru: Lima; "nördl. Barranca" = N of Barranca. - "Von 2 Pflzn" = From two plants.
SGO 124690 - (corp), ar, sp
- loc. 6: Peru: Lima; "Lima Nr. 2". - / 8. / 1953.
ZSS SR13827 - sem

Ritter 133a: *Haageocereus multangularis* (Haworth) F. Ritter var. *pseudomelanoste* (Backeberg) F. Ritter - Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

- loc. 1: Peru: sine loco. - No locality information in KS. Identified as *Haageocereus multangularis* var. *pseudomelanoste* fa. *chrysacantha* in KS 4: 1622 (*nom. inval.*).
ZSS S9902 - sem (Leg. F. Ritter 1955.)
ZSS T5124 - corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2: Peru: Lima / Ancash; "30 km N. Pativilca, Peru" = 30 km N of Pativilca. - / 6. / 1957. - Identified as *Haageocereus multangularis* var. *pseudomelanoste* fa. *chrysacantha* in KS 4: 1622 (*nom. inval.*).
ZSS SR13828 - sem

Ritter 134: *Haageocereus limensis* (Salm-Dyck) F. Ritter - Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

- loc. 1: Peru: Ancash; Santa Clara. - / 7. / 1954. - Locality information and date from specimen list at ZSS.
ZSS T4564 - rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4565 - corp, ar, sp (Leg. Ritter. The specimen is very reminiscent of FR 133 and may be mislabelled.)

- ZSS T4567 – rad, corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Peru: sine loco. – / 9. / 1953. – Date from specimen at ZSS.
 B GH31905 – corp, ar, sp (Ex cult. BG Berlin, 11. 10. 1993 (cult. ex sem. Cat. H. winter 1959). Collection number inferred.)
 B GH31906 – corp, ar, sp (Ex cult. BG Berlin, 11. 10. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
 ZSS S10123 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Haageocereus olowinskianus*.)
 ZSS T4566 – corp, ar, sp (Leg. F. Ritter (sub *Borzicactus olowinskianus*.)
- loc. 3:** Peru: Lima; "30 km N. Mala".
 SGO 124693 – (corp), ar, sp
- loc. 4:** Peru: Lima; "von Atocongo" = from Atocongo. – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
 SGO 124694 – (corp), ar, sp
 ZSS SR13829 – sem ("(Normalform von Atoconga [sic!])" = normal form from Atocongo.)
- loc. 5:** Peru: Lima; "Pachacamac".
 SGO 124695 – (corp), ar, sp
- loc. 6:** Peru: Lima; "östl. Cañete Nr. 2" = E of Cañete. – The original label first identified this collection as *Bingh[hamia] acrantha* typ, then as [*B.*] *limensis*, and finally as [*B.*] *olowinsk[iana]*.
 SGO 124696 – (corp), ar, sp
- loc. 7:** Peru: Ancash; "St. Clara" = Santa Clara. – Labelled as *B.[orzicactus] Binghamia olowinskia[nus/a]*.
 SGO 124692 – (corp), ar, sp (Labelled as *B. olowinskia[nus]*.)
 ZSS SR13830 – sem

Ritter 135: *Loxanthocereus neglectus* F. Ritter – Taxon 13(3): 116, 1964.

Typus (T): Ritter 135 (U 117855B, SGO, ZSS) (Holotype cited for U l.c. 12(1): 28; later cited for ZSS in KS 4: 1466.).

- loc. 1:** Peru: Lima ?; Santa Clara E of Lima, W of desert belt. – / 11. / 1953.
 U 117855B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.
 Holotype sent to ZSS according to KS 4, to U according to the protologue.)
 ZSS T4568 **ISO** – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Ancash; "Santa Clara". – / 7. / 1954. – Collection date according to original label in the living collection at ZSS.
 SGO 121944 **ISO** – corp, ar, sp
 ZSS S10223 **Type number** – sem (Leg. F. Ritter 1955 (sub *Loxanthocereus aurivillus*.)
- loc. 3:** Peru: Lima; "Pachacamac".
 SGO 121945 – corp, ar, sp
- loc. 4:** Peru: Lima; "Südstrasse nach Sayán" = S road to Sayán.
 SGO 121946 – corp, ar, sp

loc. 5: Peru: Lima; "Lima Nr. 3". - / 8. / 1953.

ZSS SR13831 - sem

Ritter 135a: *Loxanthocereus neglectus* F. Ritter var. *chimbotensis* F. Ritter -
Taxon 13(3): 116, 1964.

Typus (T): Ritter 277a (U 117882B, SGO, ZSS [seeds only]) (Holotype
cited for U l.c. 12(1): 28; later cited for ZSS in KS 4: 1466.).

- Peru: Ancash; coastal hills of Chimbote. - This collection was Later
renumbered Ritter 277a by Ritter himself; FR 277a is the type of
Loxanthocereus neglectus var. *chimbotensis*.

ZSS S10365 **Type** ? - sem (Leg. F. Ritter 1955 (sub *Haageocereus*
neglectus)).

ZSS T4570 **Type** ? - rad, corp, ar, sp (Leg. F. Ritter.)

Ritter 136: *Austrocylindropuntia floccosa* (Salm-Dyck) F. Ritter - Kakt.
Südam. 4: 1244-1246, 1981.

loc. 1: Peru: La Libertad; "Höhen über Aricapampa bei 3900 m." = altitudes above
Aricapampa. 3900 m.

SGO 121923 - corp, ar, sp

loc. 2: Peru: Cajamarca; "Weg Cajamarca - Celedin, km 47" = path Cajamarca -
Celedin, km 47.

SGO 121924 - rad, corp, ar, sp

loc. 3: Peru: Cajamarca; "Höhen zw. Cajamarca u. Celendin bei 3400 m." =
altitudes between Cajamarca and Celendin. 3400 m. - / 7. / 1964.

ZSS SR13833 - sem

loc. 4: Peru: Junín / Puno ?; "Oroya, Peru". - / 7. / 1953. - "langhaarig" = long-
hairy.

ZSS SR13832 - sem

Ritter 136a: *Austrocylindropuntia lagopus* (K. Schumann) F. Ritter fa. *rauhii*
(Backeberg) F. Ritter - Kakt. Südamer. 4: 1243-1244, 1981.

loc. 2: Peru: Cuzco; "Lauramarca". - / 7. / 1957. - Collection date according to
original Ritter seed sample at ZSS.

SGO 121925 - rad, corp, ar, sp

ZSS SR13834 - sem

Ritter 137: *Austrocylindropuntia exaltata* (A. Berger) Backeberg - Blätt.
Kakt.-forsch. 1938(6): [unpaged], 1938.

loc. 1: Peru: Tacna; "Weg Charaña - Tacna, km 79, n. 3300 m." = path Charaña -
Tacna, km 79, near 3300 m / "östl. Tacna" = E of Tacna. 3300 m.

SGO 121926 - rad, corp, ar, sp

loc. 2: Peru: Lima; "Matucana, Peru". - / 8. / 1953.

ZSS SR13835 - sem

Ritter 138: *Opuntia* sp.

- Peru: Lima; "San Bartolomé (Lima)". - / 8. / 1953. - Treated as *Platyopuntia* (*nom. illeg.*) in KS 4.
ZSS SR13836 - sem

Ritter 139: *Armatocereus ghiesbreghtii* (K. Schumann) F. Ritter – Backeberg's Descr. & Erört. taxon. nomenkl. Fragen, [unpaged], 1961.

- loc. 1:** Peru: sine loco. - / 7. / 1954.
ZSS S10124 - sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Armatocereus matucanensis*.)
ZSS T4571 - (corp), ar, sp (Leg. F. Ritter (juvenile form).)
- loc. 2:** Peru: Lima; "Churin" = Churín. - "5 - 6 Rippen" = 5 - 6 ribs.
SGO 124940 - (corp), ar, sp
- loc. 3:** Peru: Arequipa; "62 km N. Ocoña" = 62 km N of Ocoña / "S. Atico" = S of Atico.
SGO 124941 - (corp), ar, sp
- loc. 4:** Peru: La Libertad; "Abstieg nach Chepén bei 1000 - x m." = descent to Chepén. 1000 m.
SGO 124942 - corp, ar, sp
- loc. 5:** Peru: Huancavelica / Ica; "zw. Huancano u. Ticrapo" = between Huancano and Ticrapo / "zw. Huanuco u. Ticrapo" = between Huanuco [sphalm., Huancano ?] and Ticrapo. - The locality given on the second original label seems to be a slip of the pen for "Huancano".
SGO 124943 - (corp), ar, sp
- loc. 6:** Peru: Ancash; "Caras" [= Caraz].
SGO 124944 - (corp), ar, sp
- loc. 7:** Peru: La Libertad; "Curunday" / "Samne".
SGO 124945 - (corp), ar, sp
- loc. 8:** Peru: Cajamarca; "Zangal" / "unterh. San Pablo" = below San Pablo.
SGO 124946 - (corp), ar, sp
- loc. 9:** Peru: Ancash; "Huallanca". - / 10. / 1953. - Collection date according to original Ritter seed sample at ZSS.
SGO 124947 - (corp), ar, sp
ZSS SR13837 - sem (The original envelope was first numbered "Nr. 139a" now amended to read "Nr. 139".)
- loc.10:** Peru: Arequipa ?; "Cerro Negro".
SGO 124948 - (corp), ar, sp
- loc.11:** Peru: Ancash ?; "Chusquitambo (Fortaleza-Tal)" = Chusquitambo (Fortaleza valley). - / 8. / 1964. - "1 Baum" = one tree.
ZSS SR13838 - sem
- loc.12:** Peru: Ica ?; "Hualluas (östl. von Nazca)" = Hualluas (E of Nazca). - / 11. / 1958.
ZSS SR13839 - sem
- loc.13:** Peru: Lima; "Matucana Nr. 4". - / 8. / 1953.
ZSS SR13840 - sem

Ritter 139a: *Armatocereus ghiesbreghtii* (K. Schumann) F. Ritter –

Backeberg's Descr. & Erört. taxon. nomenkl. Fragen, [unpaged], 1961.

- Peru: sine loco.
ZSS T5113 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 140: *Melocactus peruvianus* Vaupel – Bot. Jahrb. Syst. 50: Beibl. 111: 28, 1913.

Typus (T): Weberbauer 2629 (B).

- Peru: Lima; near Lima. – Locality data from specimen list at ZSS, probably erroneous.
ZSS T4572 – rad, corp, ar, sp (Leg. F. Ritter (juvenile plant).)

Ritter 141: *Mila nealeana* Backeberg – Blätt. Kakt.-Forsch. 1934(11): [unpaged], 1934.

- loc. 1: Peru: Lima; sine loco.
ZSS A4278 – corp, ar, sp (Leg. F. Ritter 1955. Ex cult. ZSS s.n.)
ZSS T4573 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4574 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T5126 – rad, corp, ar, sp (Leg. F. Ritter 1964. Ex cult. ZSS s.n.)
- loc. 2: Peru: Lima; "Pacaran" = Pacarán. – / 7. / 1954. – Locality data from specimen list at ZSS.
ZSS T4575 – corp, ar, sp (Leg. F. Ritter.)
- loc. 3: Peru: Lima; "Churín, (oben)" = Churín, above.
SGO 121722 – rad, corp, ar, sp
- loc. 4: Peru: Lima; "Churín, (unten)" = Churín, below / "östl. Sayán" = E of Sayán.
SGO 121723 – rad, corp, ar, sp (Contains several fragments which fall into two groups.)
- loc. 5: Peru: Ancash; "Huallanca, nordwestl. bei 2300 m" = Huallanca, northwest. 2300 m.
SGO 121724 – rad, corp, ar, sp (Contains several fragments which fall into two groups.)
- loc. 6: Peru: Ancash; "unterhalb Caraz" = below Caraz. – "Selten zs. mit *Mila pugionac.* ?" = rarely together with *M. pugionacantha* ?.
SGO 121725 – corp, ar, sp
- loc. 7: Peru: Lima; "San Bartolomé Nr. 2". – / 8. / 1953.
ZSS SR13841 – sem
- loc. 8: Peru: Lima; "Rio Huaura" = Río Huaura. – / 6. / 1957.
ZSS SR13842 – sem

Ritter 141a: *Mila nealeana* Backeberg fa. *grandiflora* F. Ritter (*nom. inval.* Art. 29.1, 34.1) – Kakt. Südamer. 4: 1340, 1981. (Mentioned in the synonymy as nude name only. Probably previously used in Winter-catalogues.)

- loc. 1: Peru: Ancash ?; "Valle Fortaleza" / "12 km östl. Chusquitambo bei 1330 m" = 12 km E of Chusquitambo. 1330 m. – / 6. / 1957. – "Ist von Sämling, genaue Stelle nicht bekannt" = from seedling, exact locality unknown.
SGO 121726 – rad, corp, ar, sp, (fl)
ZSS S12601 – sem (Leg. H. Winter (Cat. 1961/62). No locality data

directly associated with this specimen.)

loc. 2: Peru: Ancash ?; "Valle Fortaleza". – / 3. / 1960.
ZSS SR13843 – sem

Ritter 142: *Matucana haynei* (Salm-Dyck) Britton & Rose – The Cact. 3: 102, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 39, 1935.)

loc. 1: Peru: sine loco.
ZSS S10125 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS T4588 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Lima; "Canta". – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 122174 – (corp), ar, sp
ZSS SR13845 – sem

loc. 3: Peru: Lima; "Matucana". – / 8. / 1953. – Collection date according to original Ritter seed sample at ZSS.
SGO 122175 – rad, corp, ar, sp (Includes seedling material.)
ZSS SR13844 – sem (Locality given as "Matucana (Lima)" on the original envelope.)

Ritter 142a: *Matucana crinifera* F. Ritter – Taxon 12(3): 125, 1963.

Typus (T): Ritter 595 (U 117555B, SGO, ZSS [status ?]) (Holotype cited for U l.c. (1): 28, 1963.).

– Peru: Ancash: Huari; Machac. – Said to equal F. Ritter 595 in KS; locality data given here is for 595. Ritter 595 is the type collection of *Matucana crinifera*, and material under FR 142b could likewise be interpreted as having type status.

ZSS S10126 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Matucana haynei* var.))
ZSS T4589 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4590 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4591 – rad, corp, ar, sp (Leg. F. Ritter.)

Ritter 142b: *Matucana multicolor* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 19, 1957. (Dated 1956, published 1957.)

Typus (T): Rauh K115 (ZSS).

loc. 1: Peru: Ayacucho; Galeras, W of Nazca. 3500 m. - 4000 m.
ZSS S10377 – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Matucana haynei* var. *multicolor* / *gigantea*)).
ZSS T4592 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4593 – ar, sp (Leg. F. Ritter (areoles from several plants).)

loc. 2: Peru: Ayacucho; "Galeras (oben)" = Galeras (above).
SGO 122176 – rad, corp, ar, sp (Includes a large seedling.)

loc. 3: Peru: Ayacucho; "Lucanas (oben)" = Lucanas (above) / "Abstieg nach Lucanas, höchste" = Descent to Lucanas, highest

SGO 122215 – (corp), ar, sp
ZSS S9972 – sem (Leg. F. Ritter 1955 (sub *Matucana haynei* var.

gigantea) (locality simply given as "Lucanas" in Ritter letter dated 31. 3. 1955 in ZSS archives.)

- loc. 4:** Peru: Ayacucho; "von Lucanas (Ayac.)" = from Lucanas. - / 11. / 1953. - The original envelope also had another locality, but now crossed out and completely illegible except "(Arequ.)".
ZSS SR13846 - sem

Ritter 142c: *Matucana haynei* (Salm-Dyck) Britton & Rose var. *elongata* (Backeberg) F. Ritter - Backeberg's Descr. & Erört. taxon. nomenkl. Fragen, 37, 1958. (Combination repeated in F. Ritter, Kakt. Südamer. 4: 1497, 1981.)

- loc. 1:** Peru: Ancash ?; "Rio Fortaleza" / "Valle Fortaleza bei 3400 m.". 3400 m.
SGO 122177 - rad, corp, ar, sp (Includes a large seedling.)
- loc. 2:** Peru: Ancash ?; "Valle Fortaleza bei 3600 - x m.". 3600 m. - / 8. / 1964.
ZSS SR13847 - sem

Ritter 143: *Oroya peruviana* (K. Schumann) Britton & Rose - The Cact. 3: 102, 1922.

- loc. 1:** Peru: Puno; Oroya. - There is no original label associated with this collection.
B GH13843 - fl, ic (corp, fl) (Ex cult. BG Berlin, 11. 5. 1983 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
SGO 125263 - (corp), ar, sp
- loc. 2:** Peru: Puno; "Oroya". - / 8. / 1953.
ZSS SR13848 - sem
- loc. 3:** Peru: Puno; "nahe unterhalb Oroya" = nearby below Oroya. - / 7. / 1957.
ZSS SR13849 - sem

Ritter 143a: *Oroya gibbosa* F. Ritter - Kakt. Südamer. 4: 1512-1513, figs. 1412-1414, 1981. (First mentioned (as *nomen nudum*) in Backeberg, Die Cact. 3: 1695, 1959 (cf. RPS 10).)
Typus (T): Ritter 143a (U 160692B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Apurimac; "Andahuaylas". - / 7. / 1957. - Collection date according to original Ritter seed sample at ZSS ("VII. 57.") and to specimen at U ("1957").
SGO 125264 ISO - (corp), ar, sp
U ISO - (corp), ar, sp (Collection number inferred.)
ZSS SR13850 ISO - sem
- loc. 2:** Peru: Apurimac; "von Andahuaylas" = from Andahuaylas. - / - / 1963. - Collection date according to specimen at U, and probably erroneous and representing the accession date.
U 160692B HOLO - (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
- loc. 3:** Peru: Apurimac; sine loco.
ZSS S10386 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

ZSS S12594 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 143b: *Oroya peruviana* Britton & Rose var. *pluricentralis* (Backeberg) F. Ritter (*nom. inval.* Art. 9.5, 33.2) – Kakt. Südamer. 4: 1511, 1981.

loc. 1: Peru: Huancavelica; "d. Bergen von Pampa" = from the mountains of Pampa. – Locality given as "Pampas" in KS 4: 1511.
SGO 125266 – (corp), ar, sp

loc. 2: Peru: Huancavelica; "Pampas". – / 7. / 1957.
ZSS SR13851 – sem

Ritter 144: *Espostoa haagei* (Rümppler) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

loc. 1: Peru: Ancash; "oberhalb Pariacoto" = above Pariacoto.
SGO 122146 – corp, ar, sp, ceph

loc. 2: Peru: Lima; "Chosica".
SGO 122147 – corp, ar, sp, ceph

loc. 3: Peru: Lima; "San Bartolomé (Lima, Peru)". – / 8. / 1953.
ZSS SR13852 – sem

loc. 4: Peru: Lima; "Sta. Eulalia" = Santa Eulalia. – / 6. / 1965.
ZSS SR13853 – sem

Ritter 144a: *Espostoa haagei* (Rümppler) F. Ritter var. *samnensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1435, 1981. (Described as provisional name.)

Based on Ritter 144a (ZSS).

loc. 1: Peru: La Libertad; Samne.
ZSS S10127 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Espostoa melanosteles* var. *rubripina*).)
ZSS T4594 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Cajamarca ? / Lambayeque ?; "Valle Saña, tiefe Lagen, Gebiet von Haag. *elegans*" = Valle Saña, lower altitudes, region of Haag. *elegans*.
SGO 122148 – corp, ar, sp, ceph

loc. 3: Peru: Lambayeque; "Valle Saña". – / 5. / 1957. – "anscheinend Hybridstufe mit *Esp. lanata*, die in höherer Lage wächst." = apparently a hybrid level with *Espostoa lanata* which grows at higher altitudes.
ZSS SR13854 – sem (The original label was first numbered "FR 144b", now amended to read "FR 144a".)

loc. 4: Peru: La Libertad; "Samne (Libertad, Peru)". – / 10. / 1953.
ZSS SR13855 – sem

loc. 5: Peru: Lambayeque; "Saña-Schlucht, tiefe Lagen" = Saña gorge, low altitudes. – / 8. / 1964.
ZSS SR13856 – sem

loc. 6: Peru: "Ventura". – "Same von unnormaler Beschaffenheit. Gemischt war er nicht. Normalsamen von Ventura. In den von mir gewaschenen Samen gab es ebenfalls solche Körner (aus der Frucht von Ventura ? (welche grösser und

weiss statt rot war, sonst normal) Hybrid ? Jedenfalls keine *Espostoa haagei*" [the unbalanced brackets are reproduced as in the original] Seed of abnormal nature. It was not mixed. Normal seed from Ventura. In the seeds washed by me were also such seed (from the fruit from Ventura ? (which were larger and white instead of red, but otherwise normal). Hybrid ? In any case not *Espostoa haagei*.

ZSS SR13858 – sem

Ritter 144b: *Espostoa haagei* (Rümppler) F. Ritter var. *borealis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1435, 1981. (Published as provisional name.)

Based on Ritter 144b.

– Peru: Lambayeque; "Salas". – / 4. / 1960. – Locality and collection date according to original Ritter seed sample at ZSS.

ZSS S12559 – sem (Leg. H. Winter (Cat. 1961/62). No locality directly associated with this specimen.)

ZSS SR13857 – sem

Ritter 145: *Haageocereus limensis* (Salm-Dyck) F. Ritter var. *andicola* F. Ritter – Kakt. Südamer. 4: 1397-1399, 1981.

Typus (T): Ritter 145 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Lima; "Chosica". – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 124697 **ISO** – (corp), ar, sp (The original label was first numbered "FR 134a", a number not recorded in the field-number list in KS 4.)
ZSS SR13863 **ISO** – sem

loc. 2: Peru: Lima; "Valle Lurin oberhalb Sisicaya" = Lurin valley above Sisicaya.
SGO 124698 – (corp), ar, sp

loc. 3: Peru: Lima; "oberh. Chosica Höhen" = above Chosica, altitudes / "Chosica". – "stark stachl. von 12-rippiger Pfl., schwach stachl. von 15-rippig Triebe" = strongly spined from 12-ribbed plant, weakly spined from 15-ribbed stems.
SGO 124700 **Type number** – (corp), ar, sp

loc. 4: Peru: Lima; "Chosica". – / – / 1953. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present. Labelled as "nom. nov." by Ritter. Collection number inferred.)

ZSS T5143 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1982.)

Ritter 145a: *Haageocereus limensis* (Salm-Dyck) F. Ritter var. *zonatus* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

loc. 1: Peru: Lima; "oberhalb Churin" = above Churin.

B GH31908 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 11. 10. 1993 (cult. ex sem. Cat. H. Winter 1960, without locality data). Collection number inferred.)

SGO 124702 – corp, ar, sp

loc. 2: Peru: Lima; "Valle Churín" = Valle Churín. – / 6. / 1957.
ZSS SR13864 – sem

Ritter 145b: *Haageocereus limensis* (Salm-Dyck) F. Ritter var. *deflexispinus* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1399-1400, 1981.

– Peru: Lima; "Valle Churín" / "Churín" / "Churín km 90" / "33 km östl. Sayán" = 33 km E of Sayán. – Second label with the comment "12-14-Rippen. unterste Pflanzen" = 12-14 ribs, lowermost plants. Third label with the comment "13 Rippen" = 13 ribs.
SGO 124703 – (corp), ar, sp

Ritter 145c: *Haageocereus limensis* (Salm-Dyck) F. Ritter var. *brevispinus* F. Ritter – Kakt. Südamer. 4: 1399, 1981.

Typus (T): Ritter 145c (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Lima; "Huínco". 2000 m. – / – / 1956. – Collection date according to specimen at U. Locality data supplemented from the protologue.

SGO 124701 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 2: Peru: Lima; "San Bartolomé Nr. 1 (Lima)". – / 8. / 1953. – The original envelope first had the collection number simply as "Nr. 145".

ZSS SR13865 – sem

Ritter 146: *Haageocereus icensis* Backeberg ex F. Ritter – Kakt. Südamer. 4: 1394, 1981.

Typus (T): Ritter 146 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ica; Ica, near Mina Canza. – / 9. / 1953.

ZSS S10128 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Haageocereus acranthus* var. *metachrous*). Locality given as "de Ica".)

ZSS S10224 **Type number** – sem (Leg. F. Ritter 1955 (sub *Haageocereus acranthus* var. *metachrous*). Locality given as "de Ica".)

ZSS T4597 **ISO** – ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Lima; Pacarán. – / 7. / 1954. – Locality data from specimen list at ZSS.

ZSS T4595 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4596 – corp, ar, sp (Leg. F. Ritter.)

loc. 3: Peru: Ica; "Ica Nr. 4". – / 8. / 1953.

ZSS SR13866 **ISO** – sem

Ritter 146a: *Haageocereus limensis* (Salm-Dyck) F. Ritter var. *metachrous* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

- Peru: Huancavelica / Ica; "zw. Huanuco u. Ticrapo" = between Huanuco [sphalm., Huancano ?] and Ticrapo.
SGO 124704 – (corp), ar, sp

Ritter 147: *Haageocereus multangularis* (Haworth) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958. (Probably invalid; validity not assessed (may affect subordinate taxa).)

- loc. 1:** Peru: Lima; sine loco. – / 7. / 1954. – First distributed as *Haageocereus chosicensis*.
B GH31868 – corp, ar, sp (Ex cult. BG Berlin, 4. 10. 1993 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS S10129 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Haageocereus chosicensis*)).
ZSS T4598 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4600 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4602 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Lima; "Chosica höhere Lagen" = Chosica, upper altitudes / "Chosica grössere Höhen" = Chosica greater altitudes.
SGO 124705 – (corp), ar, sp
- loc. 3:** Peru: Ancash; "Yautan" = Yaután. – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 124706 – (corp), ar, sp
ZSS SR13868 – sem
- loc. 4:** Peru: Lima; "Chosica". – / 7. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124707 – (corp), ar, sp (Originally numbered "133a", which is *Haageocereus multangularis* var. *pseudomelanosteles* fa. *chrysacantha* (sic !) according to the field-number list in KS 4.)
ZSS SR13867 – sem
- loc. 5:** Peru: Ancash; "Pariacoto". – Originally numbered 133a (= *Haageocereus multangularis* var. *pseudomelanosteles* fa. *chrysacantha*).
SGO 124708 – (corp), ar, sp
- loc. 6:** Peru: Lima; "Sayán, Valle Churin" / "22 km östl. Sayán" = 22 km E of Sayán / "Sayán, Huauratal" = Sayán, Huaura valley. – The second label is written on a piece of newspaper dated 16. 2. 1960.
SGO 124709 – (corp), ar, sp
- loc. 7:** Peru: Lima; "Valle Churin km 88" / "Churin km 88" = Churín. – "15-21 Rippen" = 15-21 ribs.
SGO 124710 – (corp), ar, sp
- loc. 8:** Peru: Lima; "Sisicaya (Lurin)" / "Valle Lurin, oberhalb Sisicaya" = Lurin valley, above Sisicaya.
SGO 124711 – (corp), ar, sp
- loc. 9:** Peru: Ancash ?; "Chusquitambo (Fortaleza-Tal)" = Chusquitambo (valley of Fortaleza). – / 8. / 1964.
ZSS SR13869 – sem

Ritter 147a: *Haageocereus chryseus* F. Ritter (*nom. inval.* Art. 37) – Kakt.

Südamer. 4: 1390-1391, figs. 38, 42, 1981. (Based on two syntypes, *Ritter 585* and *Ritter 147a*.)

- Peru: Ancash; "Huallanca". – / – / 1953. – Said to equal *F. Ritter 585* in KS 4. *Ritter* (in litt. 31. 1. 1955, pp. 93, 90, ZSS archives) gives the locality for this collection as "Canon del Pato, Trujillo, Dept. Ancash".
 U **SYN** – corp, ar, sp (Collection number inferred.)
 ZSS S10130 **SYN** – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Haageocereus chosicensis* var. *chrysacanthus*). No locality directly associated with this specimen.)
 ZSS T4601 **SYN** – corp, ar, sp (Leg. F. Ritter (ex locus classicus).)

Ritter 147b: × *Haagespostoa* sp.

- loc. 1:** Peru: Lima; Chosica. – / – / 1953. – First distributed as *Haageocereus chosicensis* var. *albispinus*, later recognized as natural hybrid between *Haageocereus chryseus* and *Epostoa nana*.
 ZSS S9973 – sem (Leg. F. Ritter 1955.)
 ZSS T4603 – corp, ar, sp (Leg. F. Ritter.)
 ZSS T4604 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Lima; "Chosica". – / 9. / 1954. – The collection number is placed in brackets and the collection is interpreted as the hybrid "144 × 147"; FR 144 is *Epostoa haagei*, FR 147 *Haageocereus multangularis* according to the field-number list in KS 4.
 ZSS SR13861 – sem
- loc. 3:** Peru: Lima; "Sta. Eulalia" = Santa Eulalia. – / 6. / 1957. – The collection number is placed in brackets and the collection is interpreted as the hybrid "144 × 147"; FR 144 is *Epostoa haagei*, FR 147 *Haageocereus multangularis* according to the field-number list in KS 4.
 ZSS SR13862 – sem

Ritter 147c: *Haageocereus multangularis* (Haworth) F. Ritter var. *turbidus* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

- Peru: Ica; "Sol de Oro (Nazca) Nr. 4". – / 11. / 1953. – The original envelope was first numbered "Nr. 182"; FR 147c is set equal to FR 182 in the field-number list in KS 4.
 ZSS SR13870 – sem

Ritter 147d: *Haageocereus multangularis* (Haworth) F. Ritter var. *aureus* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1405, 1981. (Published as provisional name.)
 Based on Ritter 147d.

- loc. 1:** Peru: Ancash; near frontier to Dept. La Libertad, Tablones in the lower Santa valley. – / – / 1959.
 B GH31869 – corp, ar, sp (Ex cult. BG Berlin, 4. 10. 1993 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
 ZSS T5061 – corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Peru: Ancash; "Tablones". – / 7. / 1956. – Collection date according to original Ritter seed sample at ZSS.
 SGO 124712 – (corp), ar, sp
 SGO 125680 – (fl)
 ZSS SR13871 – sem

Ritter 147e: *Haageocereus multangularis* (Haworth) F. Ritter var. *dichromus* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

- loc. 1:** Peru: Lima; Huaura valley, upper reaches up to 1800 m.
 ZSS A4279 – corp, ar, sp (Leg. F. Ritter 1958. Ex cult. ZSS s.n.)
 ZSS S9900 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Peru: Lima; "Churin Nr. 19" = Churín.
 SGO 124713 – (corp), ar, sp
- loc. 3:** Peru: Lima; "Churin Nr. 19a" = Churín.
 SGO 124714 – (corp), ar, sp
- loc. 4:** Peru: Lima; "Valle Churin" = Valle Churín. – / 6. / 1957.
 ZSS SR13872 – sem

Ritter 147f: *Loxanthocereus erectispinus* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 15, 1957. (Dated 1956, publ. 1957.)

- loc. 1:** Peru: Lima; "Ausnahme-Exemplar Nr. 20 vom Valle Churin" = exceptional specimen Nr. 20 from Valle Churín.
 SGO 125681 – (fl)
- loc. 2:** Peru: Lima; "Exemplar Nr. 20 von Valle Huaura" = specimen nr. 20 from Valle Huaura. – / 6. / 1957.
 ZSS SR13873 – sem ("201 Korn" = 201 seeds [not verified by counting].)

Ritter 148: *Loxanthocereus variabilis* F. Ritter – Kakt. Südamer. 4: 1473-1475, fig. 1324, 1981.

Typus (T): Ritter 148 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Ica; frontier to Dept. Ayacucho, Sol de Oro near Nazca, E of desert belt. 1000 m. – / 11. / 1953.
 ZSS S10131 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Haageocereus variabilis*.)
 ZSS T4605 **ISO** – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Ica; "Sol de Oro, Nr. 7" / "oberhalb Sol de Oro" = above Sol de Oro.
 SGO 121948 **ISO** – ar, sp
- loc. 3:** Peru: Ica; "Sol de Oro, Grenze Departemente Nazca und Ayacucho" = Sol de Oro, frontier of Dept. Nazca and Ayacucho". – / – / 1956. – Collection date according to specimen at U.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype, as this is the only specimen present at U.)

loc. 4: Peru: Ica; "Sol de Oro". – / 8. / 1956.
ZSS SR13874 ISO – sem

Ritter 148a: *Loxanthocereus variabilis* F. Ritter – Kakt. Südamer. 4: 1473-1475, fig. 1324, 1981.

Typus (T): Ritter 148 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: sine loco. – The number on the original label originally was "148a", later changed to "148". The locality is in KS 4: 1475 given as "Mine Canza nahe Ica, im unteren Pisco-Tal" = Canza mine near Ica, in the lower Pisco valley, where the collection is identified as '*Loxanthocereus variabilis* var.'. SGO 121949 – corp, ar, sp

loc. 2: Peru: Ica; "Ica Nr. 6". – / 8. / 1953. – The original envelope was first numbered "160", now put in brackets. FR 160 and FR 148a are set equal in the field-number list in KS 4.
ZSS SR13875 – sem

loc. 3: Peru: Ica; "Ica Nr. 3". – / 8. / 1953. – "(z.T. hybridisiert mit Ica Nr. 6)" = partly hybridized with Ica Nr. 6. The original envelope first had the collection number as "148", now amended to read "Nr. 148a?".
ZSS SR13876 – sem

Ritter 148b: *Loxanthocereus variabilis* F. Ritter – Kakt. Südamer. 4: 1473-1475, fig. 1324, 1981.

Typus (T): Ritter 148 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Lima; sine loco.
ZSS T4606 – (corp), ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ica; sine loco.
ZSS T4607 – rad, (corp), ar, sp (Leg. F. Ritter.)

Ritter 149: *Browningia hertlingiana* (Backeberg) Buxbaum – in Krainz, Die Kakt. C IV/1, 1965.

loc. 1: Peru: Huancavelica; sine loco. – / 9. / 1953. – Data from specimen list at ZSS.

ZSS S10132 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Azureocereus hertlingianus*)).

ZSS SR13877 – sem

ZSS T4608 – ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Huancavelica; "Mantaro-Tal" = Mantaro valley.
SGO 124975 – (corp), ar, sp

loc. 3: Peru: Huancavelica; "Villa Azul".
SGO 124976 (in 2 parts) – (corp), ar, sp

loc. 4: Peru: "Marcas (Peru) Nr. 8". – / 9. / 1953.
ZSS SR13878 – sem

Ritter 150: *Morawetzia doelziana* Backeberg fa. *calva* (Backeberg) F. Ritter –

Backeberg's Descr. & Erört. taxon. nomenkl. Fragen, 52, 1958.
(Combination repeated in F. Ritter, Kakt. Südamer. 4: 1366-1367, 1981
(and reported as invalid in RPS 32).)

loc. 1: Peru: Huancavelica; Río Mantaro.

ZSS S10133 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

ZSS T4609 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Huancavelica; "Auco (Huantavlica [sic !], Peru)". – /9. / 1953.

ZSS SR13879 – sem

Ritter 150a: *Morawetzia doelziana* Backeberg – Jahrb. Deutsche Kakt.-Ges. 1: 73, 1936.

loc. 1: Peru: Ayacucho; "Mejorada". – /7. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 121731 – corp, ar, sp, (fl)

ZSS SR13880 – sem

loc. 2: Peru: sine loco.

ZSS S10134 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

Ritter 151: *Opuntia inaequilateralis* A. Berger – Bot. Jahrb. Syst. 36: 453, 1905.

loc. 1: Peru: Huancavelica; "Mantarotal" = valley of [Río] Mantaro. – /9. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and erroneously identified with the non-existent name *Platyopuntia aequilateralis* in the field-number list in KS 4.

ZSS SR13881 – sem

loc. 2: Peru: Huancavelica; "Villa Azul, Nr. 2". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and erroneously identified with the non-existent name *Platyopuntia aequilateralis* in the field-number list in KS 4.

ZSS SR13882 – sem

Ritter 152: *Austrocyllindropuntia lagopus* (K. Schumann) F. Ritter – Kakt. Südamer. 4: 1242-1243, 1981.

loc. 1: Peru: Ayacucho; "oberhalb Ayacucho" = above Ayacucho. – /7. / 1957.

SGO 121927 – (corp), ar, sp

loc. 2: Peru: Huancavelica; "Sta. Inés" = Santa Inés. – /9. / 1953. – "goldgelb" = golden-yellow.

ZSS SR13883 – sem

Ritter 153: *Opuntia ficus-indica* (Linné) Miller – Gard. Dict., ed. 8, [unpaged, no. 2], 1768. (Treated as combination by Leuenberger (Taxon 40: 625, 1991); sometimes also treated as new taxon independent from the Linnean name.)

loc. 1: Bolivia: Santa Cruz: Cordillera; "10 km westl. Boyuibe" = 10 km W of Boyuibe. – "best." = "bestachelte Wildform" = spiny wildform (cf. KS 4: 1623). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122009 – (corp), ar, sp

- loc. 2:** Peru: Ancash: Huari; "oberh. Rahuapampa" = above Rahuapampa / "Rahuapampa". – "Wie Mantarotal" = same as [specimen from the] Mantaro valley. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125324 – (corp), ar, sp
- loc. 3:** Peru: Ancash: Huari; "Rahuapampa". – "bestachelt" = spiny. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR13884 – sem ("ca. 180 Korn" = c. 180 seeds.)
- loc. 4:** Peru: "Marcas Nr. 3". – / 9. / 1953. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR13885 – sem

Ritter 153a: *Opuntia cordobensis* Spegazzini – Anal. Mus. Nac. Buenos Aires 4: 513, 1905.

- loc. 1:** Argentina: sine loco. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS S10361 – sem (Leg. F. Ritter 1957.)
- loc. 2:** Argentina: Catamarca; "Catamarca". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125325 – (corp), ar, sp

Ritter 154: *Weberbauerocereus rauhii* Backeberg – Descr. Cact. Nov. [1:] 27, 1957. (Dated 1956, published 1957.)
Typus (T): Rauh K107 (ZSS).

- loc. 1:** Peru: Huancavelica; Ticrapo, Pisco valley. – / 11. / 1953.
B GH31912 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 11. 10. 1993
(cult. ex sem. Cat. H. Winter 1957) sub *Weberbauerocereus marnierianus* (*nom. nud.*). Collection number inferred.)
ZSS S10135 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS T4610 – rad, corp, ar, sp (Leg. F. Ritter (seedling plant).)
ZSS T4611 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4612 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4613 – ar, sp (Leg. F. Ritter (from two different plants).)
- loc. 2:** Peru: Huancavelica / Ica; "zw. Huancano u. Ticrapo" = between Huancano and Ticrapo.
SGO 121129 – (corp), ar, sp
- loc. 3:** Peru: Ica; "Sol de Oro".
SGO 121127 (in 2 parts) – corp, ar, sp
- loc. 4:** Peru: Huancavelica; "Ticrapo (Peru) Nr. 4". – / 9. / 1953.
ZSS SR13886 – sem

Ritter 154a: *Weberbauerocereus rauhii* Backeberg var. *laticornuus* Rauh – Beitr. Kennt. Peruan. Kakt.-veg., 460, 1958. (Sphalm. 'laticornua'.)

- Peru: Ica; "Sol de Oro". – / 5. / 1957.
ZSS SR13887 – sem

Ritter 155: *Trichocereus pachanoi* Britton & Rose fa. *peruvianus* (Britton & Rose) F. Ritter – Kakt. Südamer. 4: 1324, 1981.

- loc. 1:** Peru: Lima; "Matucana".
SGO 121138 – (corp), ar, sp (Part of this specimen is numbered as F.
Ritter 567 (= *Trichocereus pachanoi* according to KS 4).)
- loc. 2:** Peru: Ancash; "nordöstl. Yautan" = NE of Yaután.
SGO 121158 – (corp), ar, sp
- loc. 3:** Peru: Huancavelica; "von Ticrapo, Peru" = from Ticrapo. – / 9. / 1953.
ZSS SR13888 – sem

Ritter 155a: *Trichocereus tacnaensis* F. Ritter – Kakt. Südamer. 4: 1326, 1981.
Typus (T): Ritter 994 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Peru: Tacna; "Estique". – / 6. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS; locality also according to index card associated with the other seed sample at ZSS; and from various Ritter letters (ZSS archives). Identified as "*Trichocereus tacnaensis* var." in KS 4: 1623.
ZSS S10225 – sem (Leg. F. Ritter 1955 (sub *Trichocereus peruvianus* var.))
ZSS SR13889 – sem

Ritter 157: *Corryocactus ayacuchoensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 12, 1957. (Dated 1956, publ. 1957.)

- loc. 1:** Peru: Huancavelica; "de Huancavelica" = from Huancavelica. – Locality data according to data associated with the specimen; KS 4: 1281 gives the locality for this number as "Ayacucho".
ZSS S10136 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
- loc. 2:** Peru: Ayacucho; "Ayacucho". – / 7. / 1957.
SGO 125046 – (corp), ar, sp
- loc. 3:** Peru: "Marcas, Peru". – / 9. / 1953.
ZSS SR13890 – sem

Ritter 158: *Mila kubeana* Backeberg & Werdermann – Neue Kakt. 1931: 83, 1931.

- loc. 1:** Peru: Lima; Matucana. – / 11. / 1953.
ZSS T4614 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4615 – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Lima; "Matucana". – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121727 – rad, corp, ar, sp
ZSS SR13891 – sem

Ritter 159: *Cleistocactus morawetzianus* Backeberg – Jahrb. Deutsche Kakt.-Ges. 1(19): 77, 1936.

Typus (T): Backeberg s.n. (? , ZSS) (ZSS has a probably authentic seed sample.).

- loc. 1:** Peru: sine loco. – / 9. / 1953.
ZSS SR13892 – sem ("(weiss- bis rotblüh.)" = white- to red-flowered.)
ZSS SR13893 – sem ("(weiss- bis rotblüh.)" = white- to red-flowered.)

ZSS T4616 – ar, sp (Leg. F. Ritter.)

- loc. 2: Peru: "Mantacra".
SGO 124773 – (corp), ar, sp
- loc. 3: Peru: Ayacucho; "Ayacucho".
SGO 124774 – corp, ar, sp

Ritter 161: *Loxanthocereus faustianus* (Backeberg) Backeberg – Repert. Spec. Nov. Regni Veget. 51: 65, 1942.

- loc. 1: Peru: Lima; Chosica. – / 7. / 1954.
ZSS S9974 – sem (Leg. F. Ritter 1955.)
ZSS T4618 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2: Peru: Lima; "Höhen über Chosica" = altitudes above Chosica.
SGO 121950 – corp, ar, sp
- loc. 3: Peru: Lima; "Huinco". – / 2. / 1960. – Collection date according to original Ritter seed sample at ZSS.
SGO 121951 – corp, ar, sp
ZSS SR13894 – sem
- loc. 4: Peru: Lima; "oberh. Sta. Eulalia" = above Santa Eulalia.
SGO 121952 – (corp), ar, sp ("Schwarzstachlige zweifelhaft" = black-spined one doubtful.)
- loc. 5: Peru: Lima ?; "Sta. Eulalita".
SGO 124716 – corp, ar, sp
- loc. 6: Peru: Lima; "Chosica". – / 6. / 1957.
ZSS SR13895 – sem
- loc. 7: Peru: Lima; "San Bartolomé (Lima, Peru) Nr. 6". – / 8. / 1953.
ZSS SR13896 – sem

Ritter 162: *Mila caespitosa* Britton & Rose – The Cact., 3: 211, 1922.

- loc. 1: Peru: Ancash; "Santa Clara". – / 9. / 1953. – Locality data and collection date according to original Ritter seed sample at ZSS, repeated on the index card associated with the other seed sample at ZSS.
ZSS S10226 – sem (Leg. F. Ritter 1955.)
ZSS SR13897 – sem (Locality given as "Sta. Clara (Rimac-Tal)" = Santa Clara (Rimac valley) on the original envelope.)
ZSS T4619 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2: Peru: Ancash; "Sta. Clara" = Santa Clara.
SGO 121728 – corp, ar, sp
- loc. 3: Peru: Lima / Ancash; "34 km n. Pativilca" = 34 km N of Pativilca.
SGO 121729 – corp, ar, sp

**Ritter 162a: *Mila caespitosa* Britton & Rose var. *grandiflora* F. Ritter (nom. inval. Art. 36.1) – Kakt. Südamer. 4: 1340, 1981.
Based on Ritter 162a.**

loc. 1: Peru: Lima; frontier region of Dept. Lima and Dept. Ancash, coastal region, sine loco. – Locality data according to KS 4: 1340.
ZSS S10347 – sem (Leg. F. Ritter 1957.)

loc. 2: Peru: Lima ?; "Barrancas" [= Barranca ?]. – / 8. / 1956.
ZSS SR13898 – sem

Ritter 163: *Oroya borchersii* (Bödeker) Backeberg – in Rauh, Beitr. Kenntn. peruan. Kakt.-veg., 487, 1958.

loc. 1: Peru: Ancash; Huaraz. 3500 m. – 4000 m. – Locus classicus.
ZSS S10137 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS T4620 – rad, corp, ar, sp (Leg. F. Ritter.)
ZSS T4621 – rad, corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ancash; "Huaraz". – / 10. / 1953. – Collection date according to original Ritter seed sample at ZSS.
SGO 125265 – (corp), ar, sp
ZSS SR13899 – sem

Ritter 164: *Matucana currundayensis* F. Ritter – Succulenta 37(12): 139-140, ill., 1958. (Included as *nomen nudum* in Backeberg, Die Cact. 2: 1085, 1959 (cf. RPS 11).)

Typus (T): Ritter 164 (ZSS T4622, SGO).

loc. 1: Peru: La Libertad: Otusco; "am Gipfel des Mt. Currunday, 3000 m." = summit of Mt. Currunday. 3000 m. – / – / 1953.
ZSS S10227 **ISO** – sem (Leg. F. Ritter 1955 (sub *Arequipa aurantiaca*.)
ZSS T4622 **HOLO** – ar, sp (Leg. F. Ritter.)

loc. 2: Peru: La Libertad: Otusco; "Currunday".
SGO 122178 **ISO** – (corp), ar, sp

loc. 3: Peru: La Libertad; "Samna [sic !] (Libertad, Peru) Nr. 12" = Samne. – / 10. / 1953.
ZSS SR13901 – sem

Ritter 165: *Weberbauerocereus winterianus* F. Ritter – Kakt. and. Sukk. 13(4): 54, 1962.

Typus (T): Ritter 165 (U 117763B, SGO, ZSS).

loc. 1: Peru: La Libertad: Otusco; "Cerro Currunday, bei Samne" = Cerro Currunday, near Samne. – / – / 1953. – Collection date according to material at ZSS.
SGO 121130 **ISO** – corp, ar, sp
U 117763B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
The original label does not contain locality data.)
ZSS T4623 **ISO** – corp, ar, sp (Leg. F. Ritter.)
ZSS T4624 **ISO** – (corp, ar, sp) (Leg. F. Ritter.)
ZSS T4626 **ISO** – corp, ar, sp (Leg. F. Ritter.)
ZSS T4627 **ISO** – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: La Libertad; "de Libertad". – Distributed as '*Selenicereus* de Libertad'.
ZSS S10138 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

loc. 3: Peru: La Libertad; "Samna [sic !] (La Libertad) Nr. 11" = Samne. – / 10. / 1953.

ZSS SR13902 **Type number** – sem

Ritter 165a: *Weberbauerocereus winterianus* F. Ritter – Kakt. and. Sukk.

13(4): 54, 1962.

Typus (T): Ritter 165 (U 117763B, SGO, ZSS).

loc. 1: Peru: La Libertad; "Strasse Samne - Otuzco" = road Samne - Otuzco. – Originally distributed as *Weberbauerocereus winterianus* var. *fa. flavus* (*nom. nud.*) and identified as "*fa. flavus* in the field-number list in KS 4. SGO 121121 – corp, ar, sp

loc. 2: Peru: La Libertad; "zw. Samne u. Otuzco" = between Samne and Otuzco. – / 5. / 1957. – Identified as "*Weberbauerocereus winterianus* *fa. flavus* (*nom. nud.*) in the field-number list in KS 4.

ZSS SR13903 – sem

Ritter 166: *Espostoa nana* F. Ritter – Taxon 13(4): 143, 1964.

Typus (T): Ritter 166 (U 117012B, SGO, ZSS) (Holotypus cited for U l.c. 12(1): 28.).

loc. 1: Peru: Ancash; Huallanca in the "Cañon del Pato". – / – / 1953. – Locality data according to specimens at ZSS (index card associated with the seed sample), supplemented from KS 4: 1447.

U 117012B **HOLO** – corp, ar, sp, cephal (Labelled as "Holotypus" by Ritter, but without locality on the original label.)

ZSS S10139 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Espostoa lanata* var. *gracilis*.)

ZSS S10399 **Type number** – sem (Leg. F. Ritter (Ex Fa. Winter) 1965. No locality data associated with this specimen.)

ZSS T4629 **ISO** – (corp), ar, sp, cephal (Leg. F. Ritter.)

loc. 2: Peru: Ancash; "Huallanca". – / 10. / 1953. – Collection date according to original Ritter seed sample at ZSS.

SGO 122150 **ISO** – corp, ar, sp, cephal

ZSS SR13904 **ISO** – sem

loc. 3: Peru: Ancash; sine loco.

ZSS S12556 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 167: *Loxanthocereus granditessellatus* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 15, 1957. (Dated 1956, published 1957.)

loc. 1: Peru: Ancash; Caraz, upper Santa valley. – / – / 1953. – Locality given as "Cañon del Pato, Dept. Ancash" in litt. 31. 3. 1955 (archives, ZSS).

B GH27275 – fl, ic (corp) (Ex cult. BG Berlin, 1. 8. 1990 (cult. ex sem. Cat. H. Winter 1956). Collection number inferred.)

B GH28767 – fl (Ex cult. BG Berlin, 4. 11. 1991 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

B GH28767a – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1957) (sub *L. tessellatus* var. *spinasi*)). Collection number inferred.)

ZSS AX4244 – corp, ar, sp (Ex cult. ZSS s.n.)

ZSS S10286 – sem (Leg. F. Ritter 1957 (sub *Loxanthocereus tessellatus* var. *spinosior*)).

ZSS T4630 – (corp, ar, sp) (Leg. F. Ritter.)

ZSS T5066 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

loc. 2: Peru: Ancash; "Caraz". – / – / 1956.

SGO 121953 – (corp), ar, sp

ZSS SR13906 – sem (Collection date given as "X. 53" on the original label.)

loc. 3: Peru: Ancash; "nordwestl. Huallanca, bei 2300 m." = NW of Huallanca. 2300 m.

SGO 121954 – (corp), ar, sp

loc. 4: Peru: La Libertad; "Otuzco". – Locality data according to Ritter letters dated 31. 1. and 12. 2. 1955 (ZSS archives).

ZSS S10228 – sem (Leg. F. Ritter 1955 (sub *Borzicactus tessellatus* / *Loxanthocereus tessellatus* var. *spinosior*)).

Ritter 168: *Neoraimondia peruviana* (Linné) F. Ritter fa. *gigantea* (Backeberg) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 4: 1623, 1981.

loc. 1: Peru: Arequipa / La Libertad ?; "Chiral". – Locality data according to specimen at SGO and the index card associated with seed sample at ZSS.

SGO 125256 – (corp), ar, sp

ZSS S10229 – sem (Leg. F. Ritter 1955 (sub *Neoraimondia gigantea*)).

loc. 2: Peru: Ancash; "Tablones".

SGO 125254 – (corp), ar, sp

loc. 3: Peru: Ancash; "Huallanca". – / 10. / 1953. – Collection date according to original Ritter seed sample at ZSS.

SGO 125255 – (corp), ar, sp

ZSS SR13907 – sem

Ritter 169: *Haageocereus icosagonoides* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 23, 1957. (Dated 1956, published 1957.)

loc. 1: Peru: La Libertad; "Samne". – / 7. / 1954. – Locality data according to index card associated with the seed sample at ZSS, and from Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S10230 – sem (Leg. F. Ritter 1955 (sub *Haageocereus versicolor* var. *elegans*)).

ZSS T4631 – corp, ar, sp (Leg. F. Ritter (sub *Haageocereus elegans*)).

ZSS T4632 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4633 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Lambayeque; "Valle Saña" / "Valle Saña bei ca. 400-x m." = Saña valley. 400 m. – Both original labels have the number as "FR 169 + 169a"; 169a is *H. icosagonoides* fa. *heteracanthus* according to KS 4. The second label identifies the collection as *Haageocereus elegans* cf.

SGO 124717 – (corp), ar, sp

loc. 3: Peru: Arequipa; "Chiral, Nr. 4".

SGO 124718 – (corp), ar, sp

- loc. 4:** Peru: Cajamarca; "San Pablo, Zangal".
SGO 124719 – (corp), ar, sp
- loc. 5:** Peru: La Libertad; "Samne, hohe Lagen" = Samne, high altitudes. – The original label has the number as "FR 169 + 169a" (169a is *H. icosagonoides* fa. *heteracanthus* according to KS 4), and identifies the collection as *Binghamia elegans*.
SGO 124720 – (corp), ar, sp
- loc. 6:** Peru: La Libertad; sine loco.
B GH31866 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 4. 10. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH31907 – corp, ar, sp (Ex cult. BG Berlin, 11. 10. 1993 (cult. ex sem. Cat. H. Winter 1957, sub *Haageocereus elegans* [nom. nud.]). Collection number inferred.)
ZSS S12568 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Haageocereus elegans*)).
- loc. 7:** Peru: Cajamarca; "Zangal". – / 4. / 1960.
ZSS SR13908 – sem (Labelled *Haageocereus elegans* on the original label.)
- loc. 8:** Peru: La Libertad; "Samna [sic !] (Ancash) Nr. 4" = Samne. – / 10. / 1953.
ZSS SR13909 – sem

Ritter 169a: *Haageocereus icosagonoides* Rauh & Backeberg fa. *heteracanthus* F. Ritter – Kakt. Südamer. 4: 1395, 1981.
Typus (T): Ritter 169a (U) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Lambayeque; "Rio Saña, 500 m, Nordperu". 500 m.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2:** Peru: La Libertad; "Samne". – / 6. / 1957. – Labelled as "*Binghamia elegans* langzentralstachl. Varietät grosser Höhe" = Variety of *Binghamia elegans* with long central spines from great altitudes or variety of tall plants of *B. elegans* with long central spines.
ZSS SR13910 – sem

Ritter 170: *Borzicactus fieldianus* Britton & Rose – The Cact. 4: 278, 1923.

- loc. 1:** Peru: Ancash / La Libertad; sine loco.
ZSS A4277 – ar, sp, fl (Ex cult. ZSS s.n.)
ZSS S10140 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS S12552 – sem (Leg. H. Winter (Cat. 1961/62).)
ZSS T4634 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru ?; "Cachicatan".
SGO 125026 – corp, ar, sp
- loc. 3:** Peru: Ancash; "Caraz". – / 3. / 1960. – Collection date according to original Ritter seed sample at ZSS.
SGO 125028 – corp, ar, sp
ZSS SR13911 – sem

loc. 4: Peru: Ancash; "Yungay (Ancash) Nr. 3". – / 10. / 1953.
ZSS SR13912 – sem

Ritter 171: *Austrocyliindropuntia floccosa* (Salm-Dyck) F. Ritter – Kakt.
Südam. 4: 1244-1246, 1981.

loc. 1: Peru: Ancash; Huaraz. 4000 m. – Distributed as *Tephrocactus floccosus* fa. *udonis*; identified as *Austrocyliindropuntia floccosa* fa. *udonis* (*nom. nud.*) in KS 4.
ZSS T4635 – corp, ar, sp, [fr] (Leg. F. Ritter.)

loc. 2: Peru: Ancash; "Huaraz (Ancash, Peru)". – / 10. / 1953. – "kraushaarig" = with curly hair.
ZSS SR13913 – sem

loc. 3: Peru: La Libertad; "Santiago de Chuco". – / 6. / 1957.
ZSS SR13914 – sem

Ritter 172: *Austrocyliindropuntia pachypus* (K. Schumann) Backeberg –
Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

loc. 1: Peru: Ancash; "westlichste Berge nördl. der Quebrada Huecocho" = W-most mountains N of the Quebrada Huecocho / "östl. Casma" = E of Casma / "ca. 30 km östl. Casma" = c. 30 km E of Casma.
SGO 121928 – rad, corp, ar, sp

loc. 2: Peru: Lima; "oberh. Chosica" = above Chosica.
SGO 121929 – corp, ar, sp, (fr)

loc. 3: Peru: sine loco.
ZSS SX10231 – sem (Leg. F. Ritter 1955.)

loc. 4: Peru: Lima; "Chosica". – / 11. / 1953.
ZSS SR13915 – sem

Ritter 173: *Loxanthocereus bicolor* F. Ritter – Kakt. Südamer. 4: 1455-1456,
fig. 1327, 1981.

Typus (T): Ritter 173 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Lima; Auco, Cañete valley. 2000 m. – / – / 1953. – Locality according to index list at ZSS.
ZSS A4263 **Type number** – ar, sp, fl (Ex cult. ZSS s.n., 16. 7. 1985 (leg. Ritter / Winter 1959).)

loc. 2: Peru: Lima; Chosica. – / 7. / 1954. – Locality according to index list at ZSS.
ZSS T4636 **ISO** – (corp), ar, sp (Leg. F. Ritter.)

loc. 3: Peru: sine loco.
B GH18017 – fl (Ex cult. BG Berlin, 20. 5. 1985 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH22398 – fl (Ex cult. BG Berlin, 2. 8. 1987 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH28474 – fl, ic (corp) (Ex cult. BG Berlin, 14. 8. 1991 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH29778 – fl, ic (corp, fl) (Ex cult. BG Berlin, 26. 6. 1992 (cult. ex

- sem. Cat. H. Winter 1957). Collection number inferred.)
 B GH29803 – fl, ic (corp) (Ex cult. BG Berlin, 7. 7. 1992 (cult. ex sem.
 Cat. H. Winter 1957). Collection number inferred.)
 B GH29803a – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 4. 10. 1993
 (cult. ex sem. Cat. H. winter 1957). Collection number inferred.)

loc. 4: Peru: Lima; "unterhalb Yauyos Nr. 10" = below Yauyos.
 ZSS SR13916 – sem

Ritter 174: *Loxanthocereus eremiticus* F. Ritter – Kakt. Südamer. 4: 1459, 1981.

Typus (T): Ritter 174 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Lima; high mountains N of Pacarán, Cañete-valley. – / 11. / 1953.
 ZSS T4637 ISO – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Lima; "Höhen über Pacarán, nach Nord, Nr. 4" = altitudes above
 Pacarán, towards the North.
 ZSS SR13917 ISO – sem

Ritter 175: *Lobivia tegeleriana* Backeberg var. ***puquiensis*** F. Ritter – Kakt. Südamer. 4: 1329-1330, figs. 1198-1199, 1981.

Typus (T): Ritter 175 (U, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ayacucho; "Puquio". 3500 m. - 4000 m. – / 11. / 1953. – Collection
 date according to the protologue; year confirmed by specimen at U.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
 the holotype as this is the only specimen present.)
 ZSS T4638 ISO – ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ayacucho; "Lucanas, km 103" / "Lucanas, West".
 SGO 124419 – rad, corp, ar, sp

loc. 3: Peru: Ayacucho; "Puquio + Abstieg von Lucanas" = Puquio and descent from
 Lucanas. – / 11. / 1953. – The locality "+ Abstieg von Lucanas" was
 obviously added later with a different pen.
 ZSS SR13918 **Type number** – sem

Ritter 176: *Corryocactus brevistylus* (K. Schumann) Britton & Rose var.
puquiensis (Backeberg) F. Ritter – Kakt. Südamer. 4: 1279, 1981.

loc. 1: Peru: Ayacucho; Puquio. – / 11. / 1953.
 ZSS T4639 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ayacucho; "oberhalb Huayllas" = above Huayllas / "Huayllas" [=
 Hualluas ?]. – The first original label has the number FR 176 in brackets and
 set equal to 122b.
 SGO 125047 – (corp), ar, sp

loc. 3: Peru: Arequipa ?; "Villa de Tambo u. Quicacha" = Villa de Tambo and
 Quicacha. – / 12. / 1953.
 ZSS SR13919 – sem

loc. 4: Peru: Ayacucho; "Huaylluas" [= Hualluas ?]. - / 11. / 1958. - "(1 Frucht)" = 1 fruit.
ZSS SR13920 - sem

Ritter 177: *Oreocereus ritteri* Cullmann - Kakt. and. Sukk. 9(7): 101-103, ills., 1958. (First mentioned l.c. (5): 71.)
Typus (T): Ritter 177a (ZSS [3 isotypes]).

- Peru: Ayacucho; "Galeras" / "Lucanas, km 102".
SGO 125312 (in 2 parts) - corp, ar, sp

Ritter 177a: *Oreocereus ritteri* Cullmann - Kakt. and. Sukk. 9(7): 101-103, ills., 1958. (First mentioned l.c. (5): 71.)
Typus (T): Ritter 177a (ZSS [3 isotypes]).

loc. 1: Peru: Arequipa / Ayacucho; coastal cordillera, NW of line Lomas - Lucanas. - / - / 1953. - Goes to an altitude of 4000 m. White form.
ZSS T4640 **ISO** - corp, ar, sp (Leg. F. Ritter.)
ZSS T4641 **ISO** - corp, ar, sp (Leg. F. Ritter.)
ZSS T4643 **ISO** - corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ayacucho; "Lucanas". - Locality data according to index card associated with the seed sample.
ZSS S10141 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

loc. 3: Peru: Ica / Ayacucho; "halbwegs Nazca - Puquio Nr. 4" = halfway Nazca - Puquio. - / 11. / 1953. - Labelled as "*Oreocereus sp.* weisshaar. var." = *Oreocereus sp.* white-hairy var.
ZSS SR13921 - sem

Ritter 177b: *Oreocereus ritteri* Cullmann - Kakt. and. Sukk. 9(7): 101-103, ills., 1958. (First mentioned l.c. (5): 71.)
Typus (T): Ritter 177a (ZSS [3 isotypes]).

loc. 1: Peru: Arequipa / Ayacucho; coastal cordillera, NW of line Lomas - Lucanas. - / 11. / 1953. - Yellowish to red form.
ZSS T4644 - corp, ar, sp (Leg. F. Ritter.)
ZSS T4645 - ar, sp (Leg. F. Ritter.)
ZSS T4646 - corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ayacucho; "Lucanas". - Locality data according to index card associated with seed sample.
ZSS S10142 - sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

Ritter 178: *Matucana rarissima* F. Ritter (*nom. inval.* Art. 34.1, 36.1) - Kakt. Südamer. 4: 1500, 1981. (First used in catalogues of Fa. H. Winter. Published as nude name.)
Based on Ritter 178.

loc. 1: Peru: Arequipa / Ayacucho; coastal cordillera, NW of line Lomas - Lucanas. - / 11. / 1953. - Said to be a natural hybrid between F. Ritter 177 (*Oreocereus ritteri*) and F. Ritter 142b (*Matucana multicolor*); locality information by inference as for Ritter 177.
B GH30956 - fl, ic (corp) (Ex cult. BG Berlin, 19. 4. 1993 (cult. ex sem).

Cat. H. Winter 1959). Collection number inferred.)

ZSS T4647 – corp, ar, sp (Leg. F. Ritter.)

ZSS T4648 – corp, ar, sp (Leg. F. Ritter.)

ZSS T5140 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1982.)

loc. 2: Peru: Ayacucho; "Lucana" [Lucanas ?]. – Said to be a natural hybrid between F. Ritter 177 (*Oreocereus ritteri*) and F. Ritter 142b (*Matucana multicolor*) (cf. field number list in KS 4).

SGO 122179 (in 2 parts) – corp, ar, sp

ZSS S9975 – sem (Leg. F. Ritter 1955.)

loc. 3: Peru: Ayacucho; "oberhalb Lucanas" = above Lucanas / "Lucanas (Höhen)" = Lucanas (altitudes).

SGO 125682 – (fl)

loc. 4: Peru: Ayacucho; "Höhe üb. Lucanas Nr. 2" = altitudes above Lucanas.

ZSS SR13922 – sem

Ritter 179: *Corryocactus quadrangularis* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

loc. 1: Peru: Ayacucho; Lucanas. – Locality data from specimen list at ZSS.

ZSS T4649 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ayacucho; "Puquio".

SGO 125164 – (corp), ar, sp

loc. 3: Peru: Ayacucho; "Puquio - Lucanas Nr. 2 (Ayacucho)". – / 11. / 1953.

ZSS SR13923 – sem

Ritter 179a: *Corryocactus quadrangularis* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

– Peru: Ayacucho; sine loco. – / 11. / 1953. – "Wie Nr. 179, aber Samen grösser und schwarz. Varietät ?" = The same as no. 179, but seeds larger and black. A variety ? – The original envelope also has the date "IX 1964" added in a different pen.

ZSS SR13924 – sem

Ritter 180: *Corryocactus prostratus* F. Ritter – Kakt. Südamer. 4: 1283-1284, fig. 1148, 1981.

Typus (T): Ritter 180 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa; Quicacha. 1500 m. - 1800 m. – / – / 1953. – Probably recollected in July 1954 (date associated with material at ZSS).

ZSS T4650 ISO – corp, ar, sp (Leg. F. Ritter.)

ZSS T4651 ISO – corp, ar, sp (Leg. F. Ritter (juvenile material).)

loc. 2: Peru: Arequipa; "Quicacha". – / – / 1964. – Date according to specimen at U.

SGO 125048 ISO – (corp), ar, sp

U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present.)

loc. 3: Peru: Ayacucho; "Puquio Quebrada Nr. 9". – / 11. / 1953.
ZSS SR13925 – sem

Ritter 181: *Loxanthocereus puquiensis* F. Ritter – Kakt. Südamer. 4: 1470-1471, fig. 1328, 1981.
Typus (T): Ritter 181 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ayacucho; gorge below Puquio. 2500 m. – / 11. / 1953. – Altitude associated with specimen at ZSS is 3000 m, while the protologue gives 2500 m.
ZSS T4652 ISO – ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ayacucho; "Puquio Quebrada Nr. 11". – / 11. / 1953.
ZSS SR13926 ISO – sem

Ritter 182: *Haageocereus multangularis* (Haworth) F. Ritter var. *turbidus* (Rauh & Backeberg) F. Ritter – Backeberg's Descr. & Erört. taxon. Fragen, [unpaged], 1958.

loc. 1: Peru: Ica / Ayacucho; Sol de Oro, near Nazca (E of Nazca). – Originally distributed as *Haageocereus marksianus* Ritter (*nom. nud.*) or *H. chosicensis* var. *marksianus* Ritter (*nom. nud.*).
ZSS AX3651 – corp, ar, sp (Leg. Ritter. Ex cult. ZSS s.n.)
ZSS AX4239 – corp, ar, sp (Leg. F. Ritter 1956. Ex cult. ZSS s.n.)
ZSS S9899 – sem (Leg. F. Ritter 1955.)
ZSS T4653 – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ica / Ayacucho; "Sol de Oro", near Nazca (E of Nazca). – Locality data amended according to protologue.
SGO 124721 – (corp), ar, sp

Ritter 183: *Weberbauerocereus weberbaueri* (K. Schumann ex Vaupel) Backeberg var. *horridispinus* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1356, 1981.

loc. 1: Peru: Arequipa; Quicacha. – / 6. / 1954.
ZSS S10232 – sem (Leg. F. Ritter 1955 (sub *Weberbauerocereus fascicularis* var.))
ZSS T4654 – corp, ar, sp (Leg. F. Ritter (6/1954).)
ZSS T4655 – (corp, ar, sp) (Leg. F. Ritter (12/1953, juvenile material.))
ZSS T4656 – corp, ar, sp (Leg. F. Ritter (12/1953).)

loc. 2: Peru: Arequipa; "Quicacha (Arequ.) Nr. 2". – / 12. / 1953.
ZSS SR13927 – sem

Ritter 184: *Cumulopuntia alboareolata* (F. Ritter ex Backeberg) F. Ritter – Kakt. Südamer. 4: 1249-1250, 1981.

loc. 1: Peru: Arequipa; mountain E of Quicacha. 3000 m. – Locality information according to KS 4: 1249-1250, 1981.
ZSS S9901 **Type ?** – sem (Leg. F. Ritter 1955.)
ZSS T5072 **Type ?** – rad, corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1957.)

loc. 2: Peru: Arequipa; "Quicacha (Arequ.) Nr. 13". – / 12. / 1953.
ZSS SR13928 **Type ?** – sem

loc. 3: Peru: Arequipa / Ayacucho; "51 km von Convento nach Coracora" = 51 km
from Convento towards Coracora. – / 6. / 1956.
ZSS SR13929 **Type ?** – sem

Ritter 185: *Loxanthocereus deserticola* F. Ritter – Kakt. Südamer. 4: 1458-
1459, 1981.

Typus (T): Ritter 185 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ica; frontier to Dept. Ayacucho, Sol de Oro near Nazca. – / 12. /
1953.

ZSS T4658 **ISO** – ar, sp (Leg. F. Ritter.)

ZSS T4659 **ISO** – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Ica; frontier to Dept. Ayacucho, Sol de Oro near Nazca. – / 6. / 1954.
ZSS S12567 – sem (Leg. H. Winter (Cat. 1961/62). No date originally
associated with this collection.)

ZSS T4657 **Type number** – corp, ar, sp (Leg. F. Ritter.)

loc. 3: Peru: Ica; "Sol de Oro, Nr. 2".

SGO 121955 **Type number** – (corp), ar, sp

loc. 4: Peru: Ica; "Sol de Oro". – / – / 1953. – Collection date according to
specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
the holotype as this is the only specimen present.)

ZSS SR13930 **ISO** – sem

ZSS SR13931 **ISO** – sem

Ritter 186: *Islaya flavida* F. Ritter – Kakt. Südamer. 4: 1298-1299, fig. 1157,
1981.

Typus (T): Ritter 186 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa: Caraveli; "Convento", Chappara gorge E of desert belt. – / –
/ 1953. – Locality information supplemented from the protologue;
collection date according to specimen at U. Ritter gives the locality as being
in "Prov. Caraveli" but this province name is not reported in the gazetteers
available.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
the holotype as this is the only specimen present.)

ZSS S10233 **ISO** – sem (Leg. F. Ritter 1955.)

ZSS T4660 **ISO** – corp, ar, sp, (fl) (Leg. F. Ritter (7/1954).)

ZSS T4661 **ISO** – (corp), ar, sp (Leg. F. Ritter (7/1954).)

loc. 2: Peru: Arequipa: Caraveli; "Convento".

SGO 122094 **ISO** – rad, corp, ar, sp

SGO 125694 **ISO** – (fl)

loc. 3: Peru: Arequipa; "Quicacha, Ar." = Quicacha, Arequipa. – / 12. / 1953.

ZSS SR13932 – sem

Ritter 187: *Haageocereus chalaensis* F. Ritter – Kakt. Südamer. 4: 1389-1390,
fig. 1275, 1981.

Typus (T): Ritter 187 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa; "Chala", common near coast. – / – / 1953. – Collection date according to specimen at U; additional information from the protologue.

SGO 124722 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

ZSS S10234 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T4662 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Arequipa; sine loco.

B GH20586 – fl (Ex cult. BG Berlin, 23. 7. 1986 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

B GH22865 – fl (Ex cult. BG Berlin, 2. 11. 1987 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

B GH22865a – corp, ar, sp (Ex cult. BG Berlin, 4. 10. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

ZSS A9825 **Type number** – fr, sem (Ex cult. ZSS 82 3665 (ex coll. Cullmann).)

ZSS S9880 **Type number** – sem (Leg. W. Cullmann ex cult. 1982. Cult. sub ZSS 82 3665.)

ZSS T15383 – corp, ar, sp (Ex cult. ZSS 81 4207, 12. 7. 1993) (Ex cult. ZSS.)

loc. 3: Peru: Arequipa; "Chala Nr. 2". – / 12. / 1953.

ZSS SR13933 **ISO** – sem

Ritter 187a: *Haageocereus decumbens* (Vaupel) Backeberg var. *spinosior*

Backeberg – Cact. Succ. J. (US) 23(2): 47, 1951. (First mentioned (*nom. inval.*, Art. 36.1) by Backeberg in Backeberg & Knuth, Kaktus ABC, 208, 1935.)

– Peru: Arequipa; "Höhen südl. Tambo-Schlucht" = altitudes S of the Tambo gorge / "Höhen südl. Quebrada Tambo" = altitudes S of Quebrada Tambo. – "Angeblich *Loxanthoc[ereus] sextonianus*. Gehört aber nach genauem Vergleiche zu *Haag[erocereus] decumbens* v. *spinosior*" = Suposedly *Loxanthocereus sextonianus*. But belongs to *Haageocereus decumbens* var. *spinosior* after careful comparison.

SGO 124724 – (corp), ar, sp

Ritter 187b: *Haageocereus decumbens* (Vaupel) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 207, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Peru: Arequipa; "Mollendo, tiefe Lagen" = Mollendo, lower altitudes / "Mollendo". – "Der dickere Trieb wohl Hybrid mit *australis*" = The thicker shoot apparently a hybrid with [*Haageocereus*] *australis*. Collection number first given as FR 126 (= *H. australis*) on the second original label. - Identified as *Haageocereus decumbens* var. *decumbens* in KS 4: 1623.

SGO 124726 – corp, ar, sp

loc. 2: Peru: Arequipa; "Abstieg nach Camaná" = descent to Camaná. – Identified as *Haageocereus decumbens* var. *decumbens* in KS 4: 1623.

SGO 124727 – (corp), ar, sp

- loc. 3:** Peru: Arequipa; "Aufstieg von Camaná" = ascent from Camaná. – / 11. / 1958. – The original label first had a different collection number which is now illegible.
ZSS SR13934 – sem

Ritter 188: *Weberbauerocereus cephalomacrostibas* (Werdermann & Backeberg) F. Ritter – Kakt. Südamer. 4: 1353-1354, 1981.

- loc. 1:** Peru: Arequipa; Atico, between Chala and Atico. – / 7. / 1954.
ZSS T4663 – ar, sp (Leg. F. Ritter.)
ZSS T4664 – corp, ar, sp (Leg. F. Ritter.)
ZSS T4665 – ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Arequipa; "oberh. Mollendo" = above Mollendo.
SGO 121133 – (corp), ar, sp
- loc. 3:** Peru: Arequipa; "Atico Nr. 4".
SGO 121124 – (corp), ar, sp
- loc. 4:** Peru: Arequipa; between Chala and Atico / Atico. – / – / 1955. – Locality information from correspondence with Ritter dated 31. 1. 1955, p. 98 (ZSS archives), while the letter dated 10. 9. 1954 gives the locality as "Atico". This collection, identified as *Haageocereus platinospinus* at ZSS and in Winter Kat. 1955, was later (Winter Kat. 1957) named *Haageocereus ferox* Ritter (*nom. nud.*), a name which is in KS 4: 1353 cited in the synonymy of *Weberbauerocereus cephalomacrostibas*.
ZSS S10235 – sem (Leg. F. Ritter 1955.)
ZSS S12577 – sem (Leg. H. Winter (Cat. 1961/62).)
ZSS T5117 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 5:** Peru: Arequipa; "Chala - Atico Nr. 4". – / 12. / 1953.
ZSS SR13935 – sem

Ritter 189: *Loxanthocereus jajoianus* (Backeberg) Backeberg – Repert. Spec. Nov. Regni Veget. 51: 64, 1942. (Repeated in Cact. Succ. J. (US) 23(1): 19, 1951, and reported as place of publication in RPS 3.)

- Peru: Arequipa; "Chiral (Arequipa) Nr. 6". – / 12. / 1953.
ZSS SR13936 – sem

Ritter 190: *Lobivia pampana* Britton & Rose – The Cact. 3: 56, 1922.

- loc. 1:** Peru: Arequipa; higher mountains E of town of Arequipa, rocky places, rare. 3500 m. - 4000 m. – / 12. / 1953.
ZSS B4666 – ar, sp (Leg. F. Ritter.)
ZSS T4667 – corp, ar, sp (Leg. F. Ritter (juvenile material).)
- loc. 2:** Peru: Arequipa; "Yura (Arequipa)". – / 12. / 1953.
ZSS SR13937 – sem

Ritter 191: *Neowerdermannia peruviana* F. Ritter – Kakt. Südamer. 4: 1338-1339, fig. 1213, 1981.

- Typus (T)*: Ritter 191 (U, ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Moquegua; Cuajones. 4000 m. - / - / 1953.
ZSS S10143 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS T4668 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Moquegua; "Mina Cuajones". - / - / 1969. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 3:** Peru: Moquegua; "Cuajones (Moqueg.)". - / 12. / 1953.
ZSS SR13938 **ISO** – sem

Ritter 192: *Browningia candellaris* (Meyen) Britton & Rose – The Cact. 2: 63, 1920.

- loc. 1:** Peru: Arequipa; "Arequipa". - / 9. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 125122 – (corp), ar, sp
ZSS SR13939 – sem
- loc. 2:** Peru: Arequipa; "Quicacha (Arequ.)". - / 12. / 1953.
ZSS SR13940 – sem

Ritter 192a: *Browningia candellaris* (Meyen) Britton & Rose – The Cact. 2: 63, 1920.

- loc. 1:** Peru: Arequipa; sine loco. - / - / 1955.
ZSS T4669 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS.)
- loc. 2:** Chile: "Camiña". – "Ast, Jungpfl. in 1.60 mt. Höhe u. 1 m. Höhe" = branch, young plant at 1.6 and 1 m.
SGO 125123 – (corp), ar, sp
- loc. 3:** Chile: "Angostura (Chile), bei Puquios" = Angostura (Chile), near Puquios. - / 12. / 1953. – "bei Puquios" on the original envelope was added later, but is also in F. Ritter's handwriting.
ZSS SR13207 – sem

Ritter 193: *Browningia icaensis* F. Ritter – Kakt. Südamer. 4: 1320-1322, fig. 1181, 1981.

Typus (T): Ritter 193 (U [not found], SGO [status ?], ZSS [seeds only])
(Type cited for U l.c. 1: iii, 1979.)

- loc. 1:** Peru: Ica; "Canza (Ica)". - / 12. / 1953. – The collection date is difficult to read and could also be "XI. 53".
ZSS SR13941 **ISO** – sem
- loc. 2:** Peru: Arequipa; "oberh. Quicacha, ca. 1900 m." = above Quicacha. 1900 m. – "32 Ri." = 32 ribs.
SGO 125124 **Type number** – (corp), ar, sp

Ritter 193a: *Browningia* sp.

- Peru: Ancash ?; "Huayhuas, 1800 - 3000 m." [= Huaylas ?]. 1800 m. - 3000 m. – "Triebende 26 Ri." = stem tip 26 ribs.
SGO 125125 – corp, ar, sp

Ritter 194: *Weberbauerocereus torataensis* F. Ritter – Kakt. Südamer. 4: 1357, 1981.

Typus (T): Ritter 194 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Moquegua; "Torata", E of Moquegua. 1900 m. - 2000 m. - / 12. / 1953. – Locality data and collection date added from specimen at ZSS and data in KS. The altitude is given as 1900 m. in the SGO specimen, as 2000 m. in the ZSS specimen.
SGO 121125 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (The original label is dated "1969". Assumed to be the holotype as this is the only specimen present.)
ZSS SR13942 **ISO** – sem (The original label is dated "II. 1969".)
ZSS T4670 **ISO** – corp, ar, sp (Leg. F. Ritter.)
ZSS T4671 **ISO** – corp, ar, sp (Leg. F. Ritter.)

Ritter 195: *Loxanthocereus* sp.

- Peru: Arequipa; "Yura (Arequipa) Nr. 11". - / 12. / 1953. – The locality is given as "Uyupampa" in the field-number list in KS 4.
ZSS SR13943 – sem

Ritter 196: *Arequipa spinosissima* F. Ritter – Taxon 13(3): 115, 1964. (First mentioned (with Krainz & F. Ritter as authors) in Backeberg, Die Cact. 2: 1053, 1959 (cf. RPS 10).)

Typus (T): Ritter 196 (ZSS AX10497, SGO).

loc. 1: Peru: Arequipa; "Quicacha". – Locality according to specimen at SGO and the index card associated with the seed sample at ZSS (with the spelling 'Quicachan').

- SGO 124978 **ISO** – rad, corp, ar, sp ("Pflanzungsexemplar" = specimen for (or from ?) cultivation.)
- SGO 125678 **ISO** – fr
- ZSS S10236 **Type number** – sem (Leg. F. Ritter 1955. Locality according to index card associated with this specimen (with the spelling "Quicachan").)

loc. 2: Peru: Arequipa; sine loco.

- B GH14195 – fl, ic (corp) (Ex cult. BG Berlin, 7. 6. 1983 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
- ZSS AX10497 **HOLO** – corp, ar, sp (Leg. F. Ritter 9. 9. 1954; preserved ex cult. ZSS 26. 7. 1979.)
- ZSS SR13944 – sem (The original label has the collection numbers FR 127, 127b and 196, of which 196 is underlined. The comment reads: "Durcheinander gekommene Samen von *Arequipa rettigii*, *Ar. rettigii* v. *borealis* und *Ar. spinosissima*" = mixed-up seeds of *Arequipa rettigii*, *A. rettigii* var. *borealis* and *A. spinosissima*.)

Ritter 197: *Eulychnia aricensis* F. Ritter – Taxon 13(3): 115, 1964.

Typus (T): Ritter 197 (ZSS [3 specimens], SGO [status ?]).

loc. 1: Chile: steep coast S of Arica, Camarca. 21. / 6. / 1954.

- ZSS T4672 **Type number** – corp, ar, sp (Leg. F. Ritter.)

- loc. 2:** Chile: steep coast S of Arica, Camarca. – / 12. / 1953.
 ZSS T4673 **Type number** – corp, ar, sp, (ceph) (Leg. F. Ritter.)
 ZSS T4674 **Type number** – corp, ar, sp (Leg. F. Ritter.)
- loc. 3:** Chile: "Arica". 5. / 3. / 1957. – Locality data according to specimen at SGO and to Ritter letter dated 26. 12. 1955 (ZSS archives).
 SGO 125177 (in 2 parts) **Type number** – corp, ar, sp (Additional material collected "6. 11. 1960" according to the original label.)
- loc. 4:** Chile: "Arica". – / 12. / 1953. – Collection date according to original Ritter seed sample at ZSS.
 ZSS S10054 **Type number** – sem (Leg. F. Ritter 1955.)
 ZSS SR13208 **Type number** – sem

Ritter 198: *Cumulopuntia echinacea* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 884, 1980.

- loc. 1:** Chile: road from Arica to Portezuelo, Chapiquiña on water divide between Lluta- and Azapa-gorge. 2900 m. – / 12. / 1953. – Collection date and locality according to protologue and KS.
 U **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS SX10055 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 2:** Chile: "Str. von Azapa nach Boliv. bei km 74 u. ca. 2600 m." = road from Azapa to Bolivia at km 74" / "Pass (Lluta + Azapa-Schlucht) nach Portezuela Chapiquiña, 2900 m." = pass (Lluta + Azapa gorge) to Portezuela Chapiquiña. 2600 m. - 2900 m. – / 9. / 1957.
 SGO 121867 **Type number** – corp, ar, sp (The jar contains 3 fragments which readily fall into 2 groups.)
- loc. 3:** Chile: Puquitos [Puquios ?]. – Locality according to specimen list at ZSS.
 ZSS B4675 – sp (Leg. F. Ritter.)
- loc. 4:** Peru / Bolivia ? : "Weg Charaña - Tacna bei km 79 u. ca. 3300 m." = path Charaña - Tacna at km 79. 3300 m. – "Variationsbreite" = spectrum of variation.
 SGO 125098 – corp, ar, sp
- loc. 5:** Chile: Tarapacá; "Strasse nach Ticnamar bei 3200 m." = road to Ticnamar. 3200 m. – "typ."; interpreted as meaning "typical" in respect to loc. 4.
 SGO 125099 – corp, ar, sp
- loc. 6:** Chile: Tarapacá; "Camiña-Schlucht bei ca. 3400 m. Höhe" = Camiña gorge at c. 3400 m altitude. 3400 m. – "2 Köpfe des gleichen Exemplars je Besonnung" = 2 heads of the same plant depending on insolation.
 SGO 125100 – corp, ar, sp
- loc. 7:** Chile: "Puquios, Nr. 5".
 SGO 125364 – ar, sp
- loc. 8:** Chile: "Wasserscheide Lluta - Azapa-Schluchten an Strasse (Holotyp-Ort)" = water divide Lluta - Azapa gorges at road (holotype locality). – / 11. / 1960.
 ZSS SR13209 **Type number** – sem
- loc. 9:** Chile: "Puquios (Chile) Nr. 1". – / 12. / 1953.
 ZSS SR13210 – sem

Ritter 198a: *Cumulopuntia echinacea* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 884, 1980.

- Peru: Tacna; "Estique". – / 6. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS; locality repeated on the index card associated with the other seed sample at ZSS; identified as "*Cumulopuntia echinacea* var." by Ritter in KS 4.
ZSS SR13945 – sem
ZSS SX10237 – sem (Leg. F. Ritter 1955.)

Ritter 198b: *Cumulopuntia echinacea* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 884, 1980.

- loc. 1: Chile: "unterh. Chapiquiña bei ca. 3500 m." = below Chapiquiña. 3500 m. – The original label was first numbered "FR 1085" now crossed out, but this number relates to a *Pyrrhocactus* and must be erroneous. Identification according to original label of loc. 2.
SGO 125108 – corp, ar, sp, fr
- loc. 2: Chile: "unterh. Portezuelo Chapiquiña bei ca. 3500 m." = below Portezuelo Chapiquiña. 3500 m. – / 11. / 1960. – The original label was first numbered "FR 1085" now crossed out, but this number relates to a *Pyrrhocactus* and must be erroneous. The original label identifies the collection as "*Cumulopuntia echinacea* forma".
ZSS SR13211 – sem

Ritter 199: *Neowerdermannia chilensis* Backeberg – Cact. & Succ. J. (US) 8: 73, 1936.

- loc. 1: Chile: N Chilean andes, "Puquito". 4000 m. – / 12. / 1953. – Locality and date according to specimen at ZSS (T4693)
ZSS S10144 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
ZSS T4693 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (Dec. 1953).)
ZSS T4694 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (Dec. 1953).)
ZSS T4695 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4696 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4700 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2: Chile: "Puquios". – / 12. / 1953. – Collection date according to original Ritter seed sample at ZSS.
SGO 125247 (in 2 parts) – rad, corp, ar, sp
ZSS SR13212 – sem
- loc. 3: Chile: Tarapacá; "Ticnamar bei 3500 m.". 3500 m. – / 11. / 1960. – Collection date according to original Ritter seed sample at ZSS.
SGO 125248 – (corp), ar, sp
ZSS SR13213 – sem (The locality is simply given as "Ticnamar" on this label.)
- loc. 4: Chile: "Chapiquiña".
SGO 125249 – (corp), ar, sp

Ritter 200: *Islaya krainziana* F. Ritter – Sukkulantenkunde 7/8: 31-33, ill., 1963.

Typus (T): Ritter 200 (ZSS T4703, SGO [status ?]).

- loc. 1:** Chile: S of frontier to Peru, Poconchile, Arica. – / 1. / 1954.
 ZSS T4702 **Type number** – rad, corp, ar, sp (Leg. F. Ritter.)
 ZSS T4703 **HOLO** – rad, corp, ar, sp (Leg. F. Ritter. Type status according to herbarium index list at ZSS.)
 ZSS T4704 **Type number** – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Chile: S of frontier to Peru, Poconchile, Arica. – / 10. / 1957.
 ZSS T4701 **Type number** – corp, ar, sp (Leg. F. Ritter, Oct. 1957. Ex cult. ZSS s.n., 1958.)
- loc. 3:** Chile: "Poconchile".
 SGO 122090 **Type number** – (corp), ar, sp
 SGO 125695 **Type number** – (fl)
 ZSS S10145 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)
- loc. 4:** Chile: "Poconchile über Arica (Chile)" = Poconchila above Arica. – / 1. / 1954.
 ZSS SR13214 **Type number** – sem

Ritter 201: *Pyrrhocactus floribundus* (Backeberg) F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 3: 940-942, 1980.

- loc. 1:** Chile: near Iquique, above town. – / – / 1954. – This is the type number of *Pyrrhocactus iquiquensis* Ritter, which later was treated as a synonym of *P. floribundus* by Ritter himself.
 ZSS S10056 **Type number** – sem (Leg. F. Ritter 1955.)
 ZSS T4708 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)
 ZSS T4709 **HOLO** – rad, corp, ar, sp (Leg. F. Ritter.)
 ZSS T4710 **ISO** – rad, corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Chile: "Iquique". – This is the type number of *Pyrrhocactus iquiquensis* Ritter, which later was treated as a synonym of *P. floribundus* by Ritter himself.
 SGO 121454 **ISO** – rad, corp, ar, sp
 ZSS SR13215 **Type number** – sem (The original label has two dates in the form "I. 54. + I. 60.")
- loc. 3:** Chile: "Pisagua". – / 1. / 1958. – This is the type number of *Pyrrhocactus iquiquensis* Ritter, which later was treated as a synonym of *P. floribundus* by Ritter himself.
 ZSS SR13216 – sem

Ritter 202: *Eulychnia iquiquensis* (K. Schumann) Britton & Rose – The Cact. 2: 83, 1920.

- Chile: "Iquique". – / 1. / 1954. – Locality data according to specimen at SGO, to original Ritter seed sample at ZSS, and to Ritter letter dated 1955 (ZSS archives). Collection date according to original Ritter seed sample.
 SGO 125178 – (corp), ar, sp
 ZSS S10057 – sem (Leg. F. Ritter 1955.)
 ZSS SR13217 – sem

Ritter 202a: *Eulychnia morromorenoensis* F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 3: 901-902, figs. 759-760, 1980. (Based on two syntypes, *F. Ritter 202a* and *F. Ritter 479*. Erroneously included as valid in RPS 31.)

- loc. 1:** Chile: Antofagasta; Morro Moreno near Antofagasta. – / – / 1954.
 ZSS S10090 **SYN** – sem (Leg. F. Ritter 1955 (sub *Eulychnia floresii*)).
 ZSS T4711 **SYN** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4712 **SYN** – rad, corp, ar, sp (Leg. F. Ritter ex nat. (seedling plant)).
 ZSS T4713 **SYN** – (ceph: corp, ar, sp) (Leg. F. Ritter ex nat.)
 ZSS T4715 **SYN** – (ceph: corp, ar, sp) (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: Chañaral.
 ZSS T4714 **SYN** – corp, ar, sp (Leg. F. Ritter.)

Ritter 203: *Pyrrhocactus residuus* F. Ritter – Taxon 12: 33, 1963.

Typus (T): Ritter 203 (U, SGO [status ?], ZSS [seeds only]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: "Bergvorsprung 18 km südl. Tocopilla" = mountain spur 18 km S of Tocopilla.
 SGO 121455 – (corp), ar, sp
- loc. 2:** Chile: "südl. Cobija" = S of Cobija. – / 10. / 1962.
 SGO 121456 – rad, corp, ar, sp
- loc. 3:** Chile: "Cerro Moreno". – / 1. / 1954. – Collection date according to original Ritter seed sample at ZSS, where "Antofagasta" is also added to the locality in brackets.
 SGO 121457 **Type number** – rad, corp, ar, sp
 ZSS S10068 **Type number** – sem (Leg. F. Ritter 1955.)
 ZSS SR13218 **Type number** – sem
- loc. 4:** Chile: Antofagasta; "nördl. Antofagasta" = N of Antofagasta.
 SGO 121465 – rad, corp, ar, sp ("Wohl Mischform zum 204" = probably intermediate to 204 (FR 204 is *Pyrrhocactus reconditus* Ritter).)
 SGO 125696 – fr
- loc. 6:** Chile: "Morro Moreno westl. von Antofagasta" = Morro Moreno W of Antofagasta. – / – / 1954. – Collection date according to specimen at U.
 U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 7:** Chile: "Cobija südlich Tocopilla" = Cobija S of Tocopilla. – / 1. / 1960.
 ZSS SR13219 – sem

Ritter 204: *Pyrrhocactus reconditus* F. Ritter – Succulenta 41(3): 27-29, 1962.

Typus (T): Ritter 204 (ZSS [none of several specimens annotated as holotype], SGO [status ?], U).

- loc. 1:** Chile: Antofagasta; "Antofagasta". – / 1. / 1960. – Collection date according to specimen at U.
 U 145215B **ISO** – rad, corp, ar, sp (Deposited as *Chileorebutia recondita*.)
 ZSS S10067 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 2:** Chile: Antofagasta; mountains N of Antofagasta.
 ZSS S10427 **Type number** – sem (Leg. De Herdt 1972 (ex cult.))
 ZSS T4716 **Type number** – rad, corp, ar, sp (Leg. F. Ritter ex nat.
 Previously labelled as holotype, but this appears to represent a later

recollection under the same collection number. Dated "15. 3. 1960" in the herbarium list, but this appears erroneous as all other dated collections from March 1960 are from Peru.)

loc. 3: Chile: Antofagasta; "Chumba de Antofagasta". – / 10. / 1957.
SGO 121458 **Type number** – rad, corp, ar, sp

loc. 4: Chile: "Antofagasta Chimba". – The date on the original label is given as "I. 54 + I. 60."
ZSS SR13220 **Type number** – sem

Ritter 205: *Copiapoa boliviana* (Pfeiffer) F. Ritter – Kakt. Südamer. 3: 1089-1090, 1980.

loc. 1: Chile: Antofagasta.
ZSS S10066 – sem (Leg. F. Ritter 1955 (sub *Copiapoa echinoidea*, later corrected to *C. marginata*.)
ZSS S10372 – sem (Leg. F. Ritter (via Fa. H. Winter) 1964 (sub *Copiapoa marginata*.)
ZSS S10455 – sem (Leg. Fa. Köhres (ex cult. ?) 1977 (sub *Copiapoa marginata*.)
ZSS T4717 – corp, ar, sp (Leg. F. Ritter ex nat. Originally dated "10. 4. 1959" in the herbarium list, later amended to "10 4. 1954", and probably relating to the date of accession.)
ZSS T4718 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Cerro Moreno".
SGO 124837 – rad, corp, ar, sp

loc. 3: Chile: "Antofagasta". – / 1. / 1954. – The original label identifies this collection as *Copiapoa marginata*.
ZSS SR13221 – sem

loc. 4: Chile: "El Cobre Nr. 3".
ZSS SR13222 – sem

Ritter 206: *Trichocereus deserticola* (Werdermann) Looser – Revista Chilena Hist. Nat. 33: 614, 1936. (Repeated by Backeberg in Backeberg & Knuth, Kaktus-ABC, 202, 1936 (dated 1935).)

loc. 1: Chile: Antofagasta; Cerro Moreno, Antofagasta. – Locality data according to index card associated with ZSS specimen.
ZSS S10065 – sem (Leg. F. Ritter 1955 (sub *Trichocereus nigripilis*.)

loc. 2: Chile: "Antofagasta, Chile, ob. Taltal ?" = Antofagasta, above Taltal ?. – / 1. / 1954. – Identified as *Trichocereus nigripilis* cf. on the original label.
ZSS SR13223 – sem

Ritter 207: *Copiapoa cinerea* (Philippi) Britton & Rose – The Cact. 3: 86, 1922.

loc. 1: Chile: Taltal. 21. / 6. / 1954.
ZSS S10064 – sem (Leg. F. Ritter 1955.)
ZSS T4719 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)

- loc. 2:** Chile: "nahe östl. Taltal" = closely E of Taltal.
SGO 124838 – (corp), ar, sp
- loc. 3:** Chile: "von südl. Cruce nach Cifuncho" = from S of Cruce towards Cifuncho / "von Cruce 5 km nach Cifuncho" = from Cruce 5 km towards Cifuncho. – / – / 1956. – One of the two original labels also has the number "FR 207b" (which is identified as strongly-spined forms of *C. cinerea* in KS 4: 1624).
SGO 124839 – rad, corp, ar, sp
- loc. 4:** Chile: "Taltal". – / 1. / 1954.
ZSS SR13224 – sem

Ritter 207a: *Copiapoa cinerea* (Philippi) Britton & Rose var. *albispina* F. Ritter – Taxon 12(1): 30, 1963.

Typus (T): Ritter 207a (U 145279B, SGO) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: "Typuslokalität Küste nördlich Taltal" = type locality at coast N of Taltal.
U 145279B **HOLO** – (corp), ar, sp
- loc. 2:** Chile: "15 km nördl. Taltal" = 15 km N of Taltal.
SGO 124841 **ISO** – (corp), ar, sp
- loc. 3:** Chile: "nördl. Taltal" = N of Taltal. – / 3. / 1963.
ZSS SR13225 **ISO** – sem

Ritter 207b: *Copiapoa cinerea* (Philippi) Britton & Rose – The Cact. 3: 86, 1922.

- Chile: "von der Lokalität Taltal, ca. 15 km südöstl." = from the locality Taltal, c. 15 km SE. – / 2. / 1956. – Identified as strongly-spined forms of *C. cinerea* in KS 4: 1624.
SGO 124840 – (corp), ar, sp

Ritter 208: *Copiapoa gigantea* Backeberg var. *haseltoniana* (Backeberg) F. Ritter – Kakt. Südamer. 3: 1101-1102, 1980.

- loc. 1:** Chile: Taltal. 21. / 6. / 1954.
ZSS S10063 – sem (Leg. F. Ritter 1955 (sub *Copiapoa haseltoniana*).
Specimen not dated.)
ZSS T4720 – corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)
ZSS T4721 – corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)
- loc. 2:** Chile: Cumbras above Paposó.
ZSS T4722 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 3:** Chile: "Taltal, ca. 15 km nordost Inland" = Taltal, c. 15 km NE, inland.
SGO 124842 (in 2 parts) – rad, corp, ar, sp
- loc. 4:** Chile: sine loco.
B GH22827 – ic (corp) (Ex cult. BG Berlin, 19. 10. 1987 (cult. ex sem.
Cat. H. Winter 1957). Collection number inferred.)
B GH24756 – ic (corp) (Ex cult. BG Berlin, 5. 5. 1989 (cult. ex sem. Cat.
H. Winter 1961). Collection number inferred.)

loc. 5: Chile: "Taltal". – / 1. / 1954.
ZSS SR13226 – sem

loc. 6: Chile: "Paposo, Küste" = Paposo, coast.
ZSS SR13227 – sem

Ritter 208b: *Copiapoa gigantea* Backeberg – Jahrb. Deutsche Kakt.-Ges. 1: 104, 1936.

– Chile: "östl. Paposo" = E of Paposo. – Identified as '*Copiapoa gigantea* var. *gigantea*' in KS 4: 1624.
SGO 124843 – (corp), ar, sp

Ritter 209: *Copiapoa krainziana* F. Ritter var. *scopulina* F. Ritter – Taxon 12(1): 30-31, 1963.

Typus (T): Ritter 209 (U 117819B, SGO [status ?], U, ZSS) (Holotype cited for U l.c., 28.).

loc. 1: Chile: Antofagasta; "Küstenberge des Dept. Taltal" = coastal mountains of the Dept. Taltal. – / 6. / 1954. – Collection date according to the protologue; locality data according to the isotype at U. Identified as the natural hybrid *Copiapoa krainziana* × *C. cinerea* in KS 4: 1624.
U 117819B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
U 145263B **ISO** – (corp), ar, sp
ZSS S10062 **Type number** – sem (Leg. F. Ritter 1955 (sub *Copiapoa gigantea*). Locality simply given as "Taltal".)
ZSS T4723 **ISO** – rad, corp, ar, sp (Leg. F. Ritter ex nat. Previously labelled as holotype, but the holotype is cited for (and present at U.)

loc. 2: Chile: Antofagasta; "Taltal Nord, Nr. 12" / "Ostfundstelle der *Cop. krainz.na*" = E locality of *Copiapoa krainziana*. – Identified as the natural hybrid *Copiapoa krainziana* × *C. cinerea* in KS 4: 1624.
SGO 124845 **Type number** – (corp), ar, sp

loc. 3: Chile: "Taltal Nr. 10". – / 1. / 1954.
ZSS SR13228 **Type number** – sem

Ritter 210: *Copiapoa krainziana* F. Ritter – Taxon 12(1): 30-31, 1963. (First mentioned in Backeberg, Die Cact. 6: 3834, 1962 (as *nom. nud.*))
Typus (T): Ritter 210 (ZSS T4724, SGO, ZSS).

loc. 1: Chile: Antofagasta; Taltal, mountains near coast. 21. / 6. / 1954. – Collection date according to material at ZSS.
B GH30589 – ic (corp) (Ex cult. BG Berlin, 30. 11. 1992 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
SGO 124844 **ISO** – rad, corp, ar, sp (Juvenile material only.)
ZSS S10061 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T4724 **HOLO** – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4725 **ISO** – corp, ar, sp (Leg. F. Ritter (juvenile plant).)

loc. 2: Chile: "Taltal Nr. 9". – / 1. / 1954.
ZSS SR13229 **ISO** – sem

Ritter 211: *Copiapoa rubriflora* F. Ritter – Taxon 12(1): 31, 1963.

Typus (T): Ritter 211 (ZSS [none of 2 specimens annotated as holotype], SGO).

loc. 1: Chile: S of Taltal, along coast. – / 1. / 1954.
 ZSS S10060 **Type number** – sem (Leg. F. Ritter 1955 (sub *Copiapoa echinoidea* var. *salm-dyckiana*).)
 ZSS T4726 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4727 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Taltal" / "sw. Taltal, Nr. 1" = SW of Taltal.
 SGO 124846 **ISO** – rad, corp, ar, sp

loc. 3: Chile: "Taltal Nr. 11". – / 1. / 1954.
 ZSS SR13230 **ISO** – sem

Ritter 211a: *Copiapoa montana* F. Ritter – Cactus (Paris) 15(66): 21-22, 1960. (Appears to be based on 2 syntypes, *Ritter 211a* and *Ritter 522*, but '522' is a re-numbering for '211a' (cf. Kakt. Südamer. 3: 1088).)

Typus (T): Ritter 211a (ZSS T4728, SGO [sub Ritter 522]).

– Chile: N of Taltal, in the mountains. – / 1. / 1954. – This collection was later re-numbered Ritter 522.

ZSS S9921 **Type number** – sem (Leg. F. Ritter 1955 (sub '*Copiapoa rubriflora* var.').)
 ZSS T4728 **HOLO** – ar, sp (Leg. F. Ritter ex nat.)

Ritter 212: *Pyrrhocactus neohankeanus* F. Ritter – Kakt. Südamer. 3: 959, fig. 845, 1980. (Incorrectly treated as *nom. illeg.* (Art. 67) in RPS 31.)

Typus (T): Ritter 212 (U [not found], SGO [status ?], ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Cachita near Taltal. 21. / 6. / 1954.
 ZSS T4729 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4730 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T5067 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1956.)
 ZSS T5094 **Type number** – rad, corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960.)

loc. 2: Chile: "SW Taltal".
 SGO 121459 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Taltal, Nr. 3". – / 6. / 1955.
 SGO 121460 **Type number** – rad, corp, ar, sp
 ZSS S10058 **Type number** – sem (Leg. F. Ritter 1955. Locality given as "de Taltal".)

loc. 4: Chile: "Taltal Ost, Nr. 3" = Taltal, East.
 SGO 125614 **Type number** – (fl), fr

loc. 5: Chile: "Taltal".
 ZSS SR13235 **Type number** – sem

Ritter 212a: *Pyrrhocactus neohankeanus* F. Ritter var. *flaviflorus* F. Ritter – Kakt. Südamer. 3: 960, fig. 851, 1980. (Validity depends on assessment of

questionable validity of *P. neohankeanus*.)

Typus (T): Ritter 212a (U) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "nördl. Taltal, Westwand" = N of Taltal, W-exposed rock wall.
SGO 121461 – rad, corp, ar, sp

loc. 2: Chile: "15 km nördl. Taltal" = 15 km N of Taltal.
SGO 121462 – rad, corp, ar, sp

loc. 3: Chile: "hohe Wasserstelle" = water hole at high altitude.
SGO 121463 – rad, corp, ar, sp (Originally labelled *Pyrrhocactus cachitaensis* var. *flaviflorus* (nom. nud.).)

loc. 4: Chile: "15 km östlich von Taltal" = 15 km E of Taltal. – / – / 1966. –
Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present. Deposited as *Pyrrhocactus cachitaensis* var. *flaviflorus* Ritter (nom. nud.).)

loc. 5: Chile: "Berge 10 - 15 km nördl. Taltal" = mountains 10 - 15 km N of Taltal.
– / 1. / 1958. – The original label first had the locality as "... nördl. Paposo", but Paposo is now crossed out and replaced with "Taltal".
ZSS SR13236 – sem

Ritter 212b: *Pyrrhocactus neohankeanus* F. Ritter var. *densispinus* F. Ritter – Kakt. Südamer. 3: 960, fig. 846, 1980. (Validity depends on assessment of questionable validity of *P. neohankeanus*.)

Typus (T): Ritter 212b (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Antofagasta: "östl. Paposo" = E of Paposo. – / – / 1957. – Collection date according to specimen at U.
SGO 121464 **ISO** – rad, corp, ar, sp
U **HOLO** – (corp), ar, sp, (al) (Collection number inferred. Assumed to be the holotype as this is the only specimen present. Deposited as *Pyrrhocactus cachitaensis* var. *densispinus* Ritter (nom. nud.).)

loc. 2: Chile: "Quebrada de Paposo, östl. der Quelle" = Quebrada de Paposo, E of the source. – / 1. / 1958.
ZSS SR13231 **ISO** – sem

Ritter 212c: *Pyrrhocactus pulchellus* F. Ritter – Kakt. Südamer. 3: 965-966, fig. 856, 1980.

Typus (T): Ritter 520 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "südl. Chañaral" = S of Chañaral.
SGO 121466 – rad, corp, ar, sp

loc. 2: Chile: "Cifuncho, Nr. 3".
SGO 121467 – rad, corp, ar, sp

Ritter 212d: *Pyrrhocactus neohankeanus* F. Ritter var. *elongatus* F. Ritter – Kakt. Südamer. 3: 960, figs. 849-850, 1980. (Validity depends on assessment of questionable validity of *P. neohankeanus*.)

Typus (T): Ritter 212d (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "östl. Paposo, westl. Wasserstelle" = E of Paposo, W of water hole.
SGO 121468 **ISO** – (rad), corp, ar, sp

loc. 2: Chile: "östlich von Paposo" = E of Paposo. – / – / 1957. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp, (al) (Collection number inferred. Assumed to be the holotype as this is the only specimen present. Deposited as *Pyrrhocactus cachitaensis* var. *elongatus* Ritter (*nom. nud.*.)

loc. 3: Chile: "Quebrada de Paposo, westl. der Quelle" = Quebrada de Paposo, W of the source. – / 1. / 1958.
ZSS SR13232 **ISO** – sem

Ritter 213: *Pyrrhocactus taltalensis* (Hutchison) F. Ritter – Succulenta 1959(10): 131, 1959.

loc. 1: Chile: Taltal. – Locality data according to KS 3: 975. This is the type number of *Pyrrhocactus rupicolus*, placed in the synonymy of *P. taltalensis* by Ritter himself.

ZSS B10319 **Type number** – sem (Leg. F. Ritter 1957.)

ZSS S10320 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus rupicolus*)).

loc. 2: Chile: "Berg 21 km n. Chañaral" = mountain 21 km N of Chañaral. – This is the type number for *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

SGO 121469 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Esmeralda". – This is the type number for *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

SGO 121470 **Type number** – rad, corp, ar, sp

SGO 121474 **Type number** – (rad), corp, ar, sp

loc. 4: Chile: "östl. Taltal" = E of Taltal. – / – / 1955. – This is the type number for *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself. Collection date according to specimen at U.

SGO 121471 **Type number** – (corp), ar, sp

U **Type number** – rad, corp, ar, sp (Collection number inferred. Deposited as *Pyrrhocactus cachitaensis* Ritter (*nom. nud.*)).

loc. 5: Chile: "sw Chañaral" = SW of Chañaral. – This is the type number for *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

SGO 121472 **Type number** – (rad), corp, ar, sp

loc. 6: Chile: "Esmeralda, Fahrstrasse zum Strande" = Esmeralda, road to the beach / "Esmeralda Nord" = Esmeralda, North. – This is the type number for *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

SGO 121473 **Type number** – corp, ar, sp

loc. 7: Chile: mountains and rocks between Alorro (SW Caldera) and N of Paposo. – This is the type number of *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

ZSS S10059 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 8: Chile: "29 km N. Chañaral" = 29 km N of Chañaral. – / 2. / 1956. – This is the type number for *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

SGO 125616 **Type number** – (fl, fr)

loc. 9: Chile: "Taltal". – / 1. / 1954. – This is the type number of *Pyrrhocactus rupicolus* Ritter, later placed in the synonymy of *P. taltalensis* by Ritter himself.

ZSS SR13233 **Type number** – sem

Ritter 213a: *Pyrrhocactus taltalensis* (Hutchison) F. Ritter – Succulenta
1959(10): 131, 1959.

– Chile: "15 km östl. Chañ., Nr. 2" = 15 km E of Chañaral. – / 2. / 1956. –
Collection date according to original Ritter seed sample at ZSS.

SGO 121475 – (corp), ar, sp

ZSS SR13234 – sem (Locality simply given as "15 km östl. Chañaral" =
15 km E of Chañaral.)

Ritter 213b: *Pyrrhocactus* sp.

loc. 1: Chile: "südwestl. Caldera" = SW of Caldera. – / 1. / 1956. – Collection date
according to original Ritter seed sample at ZSS.

SGO 121476 – corp, ar, sp

ZSS SR13237 – sem

loc. 2: Chile: "sw. Caldera, Nr. 7" = SW of Caldera. – / 1. / 1956.

SGO 125615 – (fr)

Ritter 213c: *Pyrrhocactus intermedius* F. Ritter – Taxon 12(1): 32, 1963.
Typus (T): Ritter 213c (U 098088B, SGO) (Holotype cited for U l.c., 28.).

loc. 1: Chile: "nördl. Flugplatz Chañal, Höhen" = N of airstrip of Chañaral, upper
altitudes. – / 1. / 1968. – Collection date according to original Ritter seed
sample at ZSS.

SGO 121478 **Type number** – rad, corp, ar, sp

ZSS SR13240 – sem (The collection number is given as "213c cf." on the
original label.)

loc. 2: Chile: "nördl. Flugplatz Chañaral" = N of airstrip of Chañaral.

SGO 121479 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Chañaral".

SGO 121616 **Type number** – rad, corp, ar, sp

loc. 4: Chile: "nördl. Chañaral" = N of Chañaral. – / 1. / 1956. – Collection date
according to specimens at U and the original Ritter seed sample at ZSS.

U **Type number** – sem (Collection number inferred.)

U 098088B **HOLO** – rad, corp, ar, sp, (fl) (Collection number inferred.)

Assumed to be the holotype as this is the only specimen present.)

ZSS SR13238 **ISO** – sem

loc. 5: Chile: slopes of mountains N of airstrip of Chañaral.

ZSS S10321 **Type number** – sem (Leg. F. Ritter 1957 (sub

Horridocactus rupicolus var. *intermedius*.)

loc. 6: Chile: "24 km N. Chañaral, Nr. 11" = 24 km N of Chañaral. – / 2. / 1956.
SGO 125617 **Type number** – fr

loc. 7: Chile: "nördl. Flugplatz Chañaral, Nr. 2" = N of airstrip of Chañaral. – / 1. / 1956.
SGO 125618 **Type number** – fr

loc. 8: Chile: "Höchster Bergkamm südl. Chañaral" = upper-most mountain ridge S of Chañaral. – / 2. / 1962. – "1 Trockenfrucht" = 1 dry fruit.
ZSS SR13239 **Type number** – sem

Ritter 214: *Eulychnia breviflora* Philippi var. *taltalensis* F. Ritter – Kakt. Südamer. 3: 898-899, fig. 741, 1980.

Typus (T): Ritter 214 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Antofagasta; "Taltal". – / – / 1956. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
ZSS S10069 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 2: Chile: "SW Taltal" / "SW Taltal, Nr. 1" = SW of Taltal.
SGO 125179 **Type number** – corp, ar, sp

loc. 3: Chile: "Taltal Nr. 1". – / 1. / 1954.
ZSS SR13241 **Type number** – sem

Ritter 214a: *Eulychnia breviflora* Philippi – Fl. Atacam., 24, no. 149, t. 2A, 1860.

loc. 1: Chile: "unterhalb Totoral" = below Totoral. – Identified as *Eulychnia breviflora* var. *breviflora* in KS 4.
SGO 125180 – (corp), ar, sp

loc. 2: Chile: "Coquimbo, Küste" = Coquimbo, coast. – Identified as *Eulychnia breviflora* var. *breviflora* in KS 4.
SGO 125181 – (corp), ar, sp

loc. 3: Chile: "Serena" =? La Serena. – / 12. / 1955. – Identified as "*Eulychnia spinibarbis* var." on the original label.
ZSS SR13242 – sem

Ritter 215: *Eulychnia barquiténsis* F. Ritter – Kakt. Südamer. 3: 899, figs. 751-752, 1980.

Typus (T): Ritter 215 (U, SGO [status ?], ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; "Barquito". – / – / 1954. – Collection date according to the protologue, the specimen at U is dated 1956.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype (despite the difference in the date) as this is the only specimen present.)

- loc. 2:** Chile: Chañaral. – Locality data according to specimens at ZSS.
ZSS S10070 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T5091 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 3:** Chile: "Chañaral, sw." = SW of Chañaral.
SGO 125182 **Type number** – corp, ar, sp
- loc. 4:** Chile: "Chañaral Nr. 2". – / 1. / 1954.
ZSS SR13243 **Type number** – sem

Ritter 215a: *Eulychnia breviflora* Philippi var. *tenuis* F. Ritter – Kakt. Südamer. 3: 898, 1980.

Typus (*T*): Ritter 215a (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Coquimbo; coast near "Caldera". – / 1. / 1956. – Locality data supplemented from the protologue; collection date according to specimen at U (dated "1956") and the original Ritter seed sample at ZSS.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS S10281 **Type number** – sem (Leg. F. Ritter 1957 (sub *Eulychnia spinibarbis* var. *tenuis*.)
ZSS SR13244 **ISO** – sem
- loc. 2:** Chile: "Piedras Colgadas".
SGO 125183 – corp, ar, sp

Ritter 216: *Copiapoa cinerascens* (Salm-Dyck) Britton & Rose var. *intermedia* F. Ritter – Kakt. Südamer. 3: 1084, 1980. (Published as a new name for *Copiapoa applanata* Backeberg.)

Typus (*T*): Ritter 216 (U, SGO [status ?], ZSS).

- loc. 1:** Chile: "Barquito bei Chañaral" = Barquito near Chañaral. – / – / 1954. – Date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
ZSS T4731 **ISO** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: Chañaral. – Locality data according to specimen at ZSS.
ZSS S10071 **Type number** – sem (Leg. F. Ritter 1955 (sub *Copiapoa malletiana*.)
- loc. 3:** Chile: "Barquitos".
SGO 124847 **Type number** – rad, corp, ar, sp (A small plant only.)
- loc. 4:** Chile: "Barquitos" / "sw. Chañar, Nr. 2".
SGO 124848 (in 2 parts) **Type number** – rad, corp, ar, sp
- loc. 5:** Chile: "11 km nördl. Chañaral" = 11 km N of Chañaral. – / 1. / 1956. – The original label has the number as "FR 216 (= 524)"; these numbers refer to each other in the field-number list in KS 4.
ZSS SR13245 **Type number** – sem
- loc. 6:** Chile: "Chañaral. Barquito". – / 1. / 1954. – The locality "Barquito" was added later to the original label by Ritter.
ZSS SR13246 **Type number** – sem

Ritter 217: *Pyrrhocactus pilispinus* F. Ritter – Succulenta 41(4): 42-44, ill., 1962.

Typus (T): Ritter 217 (ZSS T4732, SGO).

loc. 1: Chile: Atacama; "Barquitos" = Barquitos. 21. / 6. / 1954. – Locality given as "Barquitos bei Chañaral" = Barquitos near Chañaral in KS 3: 965.

Collection date supplied from holotype at ZSS.

SGO 121480 **ISO** – rad, corp, ar, sp

ZSS T4732 **HOLO** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: Atacama; "südl. Barquito" = S of Barquito.

SGO 121481 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Chañaral".

ZSS S10072 **Type number** – sem (Leg. F. Ritter 1955. Locality according to index card associated with this seed sample.)

ZSS SR13247 **Type number** – sem (The date on the original label is given as "1954, 1956, 1957 + 1959".)

loc. 4: Chile: "sw. Chañaral, Nr. 3" = SW of Chañaral. – / 1. / 1956.

SGO 125619 **Type number** – fr

Ritter 218: *Neoporteria nigrihorrida* Backeberg – Kakteenkunde 1939: 81, 1939. (Based on *Chilenia nigrihorrida* Backeberg 1936 (*nom. inval.* Art. 43.1).)

loc. 1: Chile: Coquimbo and neighbourhood. – / 1. / 1954.

ZSS S10073 – sem (Leg. F. Ritter 1955 (sub *Neoporteria castaneoides*)).

ZSS T4733 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4734 – corp, ar, sp (Leg. F. Ritter (2 juvenile plants).)

loc. 2: Chile: "Coquimbo". – / 1. / 1954. – Collection date according to original Ritter seed sample at ZSS.

SGO 121482 – corp, ar, sp

ZSS SR13248 – sem

Ritter 219: *Neoporteria litoralis* F. Ritter – Succulenta 38(3): 28-29, ill. (p. 43), 1959.

Typus (T): Ritter 219 (ZSS [none of several specimens annotated as holotype], SGO, U).

loc. 1: Chile: coastal rocks of Coquimbo. – / 1. / 1954.

B GH30546 – fl, ic (corp) (Ex cult. BG Berlin, 12. 11. 1992 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

ZSS B4738 **Type collection** – corp, ar, sp (Leg. F. Ritter (juvenile plants).)

ZSS S10074 **Type collection** – sem (Leg. F. Ritter 1955.)

ZSS T16279 **Type collection** – rad, corp, ar, sp (Ex cult. ZSS 93 1803, 9. 6. 1994) (Leg. Diers (seedling plant ex cult.))

ZSS T4735 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4737 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Coquimbo". – / 1. / 1954. – Collection date according to original Ritter seed sample at ZSS.

SGO 121483 **ISO** – corp, ar, sp

ZSS SR13249 ISO – sem

- loc. 3:** Chile: "Punta de Teatinos".
SGO 121484 **Type number** – (corp), ar, sp
- loc. 4:** Chile: "Quebr. Juan Soldado, Küstenfelsen" = Quebrada Juan Soldado, costal rocks.
SGO 121485 **Type number** – (corp), ar, sp
- loc. 5:** Chile: "von der Typuslokalität Coquimbo" = from the type locality Coquimbo. – / 12. / 1956. – Collection date according to specimen at U. U 016201 **ISO** – (corp), ar, sp (Collection number inferred.)
- loc. 6:** Chile: "Coquimbo, Nr. 5". – / 12. / 1955. – "Feine" = fine one.
SGO 125707 **ISO** – fr

Ritter 220: *Pyrrhocactus kunzei* (Förster) Borg – Cacti, 262, 1937. (Sphalm. 'kuwzei'. Repeated by Y. Ito, Explan. Diagr. Austroechinocactinae, 228, 1957 (cf. RPS 8), and by F. Ritter in Succulenta 1959(10): 130, 1959 (cf. RPS 10).)

- loc. 1:** Chile: "Sierra Hornillos" / "50 km südl. Copiapó" = 50 km S of Copiapó.
SGO 121486 – corp, ar, sp
- loc. 2:** Chile: "Paipote".
SGO 121487 – (corp), ar, sp
ZSS S10075 – sem (Leg. F. Ritter 1955.)
- loc. 3:** Chile: W, E and S of Copiapó.
ZSS S10322 – sem (Leg. F. Ritter 1957 (sub *Horridocactus copiapensis*).)
- loc. 4:** Chile: "Toledo, Nr. 1". – / 6. / 1955. – Collection date according to specimen at SGO.
SGO 125620 – fr
ZSS SR13250 – sem
- loc. 5:** Chile: "46 km südl. Copiapó" = 46 km S of Copiapó. – / 1. / 1956.
SGO 125621 – fr
- loc. 6:** Chile: "Paipote bei Copiapó" = Paipote near Copiapó. – / 1. / 1954.
ZSS SR13251 – sem

Ritter 221: *Neoporteria nidus* (Söhrens ex K. Schumann) Britton & Rose – The Cact. 3: 94, 1922. (As to type only; Britton & Rose's concept of *N. nidus* incorporates additional elements (F. Kattermann, Succ. Pl. Res. 1: 148, 1994).)

- loc. 1:** Chile: sine loco. – / 1. / 1954. – Identified as *Neoporteria nidus* var. *nidus* in KS 4.
ZSS T4739 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)
- loc. 2:** Chile: Ovale. – Locality data according to Ritter letters dated 31. 1. and 12. 2. 1955 (ZSS archives). Identified as *Neoporteria nidus* var. *nidus* in KS 4.
ZSS S10076 – sem (Leg. F. Ritter 1955.)
ZSS T4741 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4742 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (seedling plant).)

Ritter 222: *Pyrrhocactus limariensis* F. Ritter – Kakt. Südamer. 3: 956-957, figs. 841-842, 1980. (Erroneously said to have been published in Succulenta 1960(12): 133 by various sources.)

Typus (T): Ritter 222b (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "Ovalle". – / 1. / 1954. – Collection date according to a specimen at ZSS. Identified as "*Pyrrhocactus limariensis* fa." in KS 4: 1624.

SGO 121489 – (corp), ar, sp

ZSS S10077 – sem (Leg. F. Ritter 1955.)

ZSS SR13252 – sem

ZSS T4743 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4744 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4746 – rad, corp, ar, sp (Ex cult. ZSS s.n.)

loc. 3: Chile: Ovalle. – Locality data according to KS 4: 1624, where the collection is identified as "*Pyrrhocactus limariensis* forma".

ZSS S10323 – sem (Leg. F. Ritter 1957 (sub *Horridocactus nigricans*)).

ZSS S10444 – sem (Leg. Fa. Köhres (ex cult.) 1976 (sub *Neoporteria nigricans*)).

Ritter 222a: *Pyrrhocactus pamaensis* F. Ritter – Kakt. Südamer. 3: 962-963, fig. 865, 1980.

Typus (T): Ritter 222a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Coquimbo; "unterhalb Combarbalá" = below Combarbalá in the gorge of the Río Pama. – / - / 1955. – Additional locality information supplemented from the protologue. Collection date according to specimen at U.

SGO 121488 ISO – rad, corp, ar, sp

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: below Combarbalá in the gorge of the Río Pama, and E and NE of Ovalle in upper altitudes. – Locality data according to the protologue.

ZSS S10324 **Type number** – sem (Leg. F. Ritter 1957 (sub

Horridocactus kesselringianus)).

ZSS S12574 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Pyrrhocactus kesselringianus*; cf. KS 3: 992).)

Ritter 222b: *Pyrrhocactus limariensis* F. Ritter – Kakt. Südamer. 3: 956-957, figs. 841-842, 1980. (Erroneously said to have been published in Succulenta 1960(12): 133 by various sources.)

Typus (T): Ritter 222b (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "östl. Fray Jorge" = E of Fray Jorge / "Weg nach Fray Jorge" = path towards Fray Jorge.

SGO 121490 ISO – (rad), corp, ar, sp

SGO 121491 ISO – (corp), ar, sp, (al)

- loc. 2:** Chile: "östlich von Fray Jorge" = E of Fray Jorge. – / – / 1955. – Collection date according to the specimen at U.
 U **HOLO** – (corp), ar, sp, (al) (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 3:** Chile: "Abzweigung nach Fray Jorge" = turnoff to Fray Jorge. – Identified as "*Horridocactus nigricans* var." on the original label.
 ZSS SR13253 **Type number** – sem

Ritter 222c: *Pyrrhocactus limariensis* F. Ritter – Kakt. Südamer. 3: 956-957, figs. 841-842, 1980. (Erroneously said to have been published in Succulenta 1960(12): 133 by various sources.)
Typus (T): Ritter 222b (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Chile: "Incienso". – Identified as "*Pyrrhocactus limariensis* fa." in the field number list in KS 4: 1624.
 ZSS SR13254 – sem ("(Same in Cajón Grande geerntet)" = seed harvested at Cajón Grande.)

Ritter 223: *Pyrrhocactus horridus* (Gay) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 264, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Chile: Valparaiso. – / 1. / 1954.
 ZSS S10078 – sem (Leg. F. Ritter 1955.)
 ZSS T4747 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4748 – ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Valparaiso, Küste" = Valparaiso, coast. – / 4. / 1955.
 SGO 121492 – (corp), ar, sp
- loc. 3:** Chile: "El Salto (bei Valparaiso)" = El Salto (near Valparaiso). – / 6. / 1955.
 SGO 121493 – (corp), ar, sp
- loc. 4:** Chile: "Pichidangui, Küstennähe" = Pichidangui, near coast. – "Die beiden feinerstacheligen von Strandnähe" = The two more finely spined ones from near the coast.
 SGO 121494 – (corp), ar, sp, al
- loc. 5:** Chile: "Pichidangui, Berge" = Pichidangui, mountains.
 SGO 121495 – (corp), ar, sp
- loc. 6:** Chile: "Palos Quemados". – / 6. / 1955.
 SGO 121496 – (corp), ar, sp
- loc. 7:** Chile: "Valparaiso".
 SGO 125622 – fr (Dated "IV. 55" on the original label.)
 ZSS SR13255 – sem (Dated "II. 54." on the original label and identified as *Horridocactus tubersulcatus*.)

Ritter 223a: *Pyrrhocactus horridus* (Gay) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 264, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Chile: "nördl. Pichidangui" = N of Pichidangui. – Treated as "*Pyrrhocactus horridus* fa." in the field number list in KS 4.
 SGO 121497 – (corp), ar, sp

loc. 2: Chile: "Pichidangui, Nr. 3". – / 5. / 1955. – Treated as "*Pyrrhocactus horridus* fa." in the field number list in KS 4. The original label has the comment "(od. Hybride 223a x 470)" = or hybrid 223a x 470; FR 470 is identified as *Pyrrhocactus odoriflorus* in the field number list in KS 4.
SGO 121498 – (corp), ar, sp
SGO 125623 – (fl), fr
ZSS SR13256 – sem (Dated "VI. 55." on the original label.)

loc. 3: Chile: sine loco. – Treated as "*Pyrrhocactus horridus* fa." in the field number list in KS 4.
ZSS S12593 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Pyrrhocactus horridus* var. *minor*)).

Ritter 223b: *Pyrrhocactus horridus* (Gay) Backeberg var. *mutabilis* F. Ritter – Kakt. Südamer. 3: 946-947, fig. 828, 1980.

Typus (T): Ritter 223b (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "Küstenvorsprung nördl. Los Vilos" = coastal spur N of Los Vilos.
SGO 121499 **Type number** – corp, ar, sp

loc. 2: Chile: "Los Vilos". – / 12. / 1955. – Collection date according to specimens at U ("1955") and the original Ritter seed sample at ZSS.

SGO 121500 **Type number** – corp, ar, sp (The various fragments in this jar seem to belong to more than one taxon (BEL & UE).)

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

ZSS SR13257 **ISO** – sem

Ritter 224: *Neoporteria subgibbosa* (Haworth) Britton & Rose – The Cact. 3: 97, 1922.

loc. 1: Chile: sine loco. – / 1. / 1954. – Material first labelled as *Neoporteria acutissima*.

B GH31615 – fr, ic (corp, fr) (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1955). Collection number inferred.)

ZSS T4740 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: Valparaiso. – / 5. / 1954. – Originally labelled as *Neoporteria acutissima*.

ZSS B4749 – ar, sp, [fl] (Leg. F. Ritter ex nat.)

ZSS S10079 – sem (Leg. F. Ritter 1955 (sub *Neoporteria acutissima*)).

loc. 3: Chile: "Steilküste bei Valparaiso" = steep coast near Valparaiso. – / 5. / 1955.

SGO 121501 – (corp), ar, sp

loc. 4: Chile: "Pichidangui, südl. balneario" = Pichidangui, S of balneario / "etwas südl. von Pichidangui" = somewhat S of Pichidangui. – / 6. / 1955. – "Mit Übergängen" = with intermediates. The original labels both give the collection number as "224 + 224a". FR 224a is *Neoporteria litoralis* var. *intermedia* according to the field number list in KS 4.

SGO 121502 – (corp), ar, sp

- loc. 5:** Chile: "Tanumé". – / 4. / 1955.
SGO 125708 – fr
- loc. 6:** Chile: "Valparaiso Nr. 3". – / 2. / 1954.
ZSS SR13258 – sem

Ritter 224a: *Neoporteria litoralis* F. Ritter var. *intermedia* F. Ritter –
Succulenta 45(9): 130-131, 1966.
Typus (T): Ritter 224a (U 160708B).

- loc. 1:** Chile: "von Strandfelsen gegenüber Bahnstation Pichidangui, Mittelchile" =
from coastal rocks opposite the railway station Piquidangui, central Chile. –
/ – / 1963.
U 160708B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
- loc. 2:** Chile: "Los Vilos".
SGO 121503 – (corp), ar, sp
ZSS S10147 – sem (Leg. F. Ritter (ex Fa. Winter) 1955 (sub *Neoporteria*
acutissima var.))
ZSS SR13259 – sem (Dated "X. 1964 + (V. 1954)" on the original label;
the 1964-date was obviously added later.)
ZSS T4750 – ar, sp (Leg. F. Ritter ex nat.)
ZSS T4751 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4754 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 3:** Chile: "c. 15 km südl. Coquimbo, nördlichste Fundstelle" = c. 15 km S of
Coquimbo, N-most population found.
SGO 121504 – (corp), ar, sp
- loc. 4:** Chile: "Pichidangui nach Nordwest, Küstenvorsprung" = Pichidangui,
towards the Northeast, costal spur. – "Kleinblütige Form" = small flowered
form.
SGO 121505 – (corp), ar, sp

Ritter 224b: *Neoporteria hybr.*

- loc. 1:** Chile: Illapel. – / 5. / 1954. – *Neoporteria litoralis* var. *intermedia* ×
Neoporteria nigrihorrida according to KS 4.
ZSS T4752 – ar, sp (Leg. F. Ritter ex nat.)
ZSS T4753 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Pte. Teniente" = Puente Teniente. – The original label identifies this
collection as *Neoporteria subgibbosa* var. *conjungens* (nom. nud.); the field
number list in KS 4 gives it as the hybrid *Neoporteria litoralis* var.
intermedia × *Neoporteria nigrihorrida*.
SGO 121506 – (corp), ar, sp
- loc. 3:** Chile: "Choapa, Nr. 7". – / 5. / 1955. – The field number list in KS 4
identifies this collection as the hybrid *Neoporteria litoralis* var. *intermedia* ×
N. nigrihorrida.
SGO 125709 – (fl)
- loc. 4:** Chile: "Panamericana südl. Coquimbo km 147" = Panamericana S of
Coquimbo, km 147. – / 11. / 1957. – First identified on the original label as
Neoporteria subgibbosa var. *intermedia*, then replaced with 'var.

conjungens'. The field-number list in KS 4 identifies this number as the hybrid *Neoporteria litoralis* var. *intermedia* × *N. nigrihorrida*.
ZSS SR13260 – sem

Ritter 224c: *Neoporteria subgibbosa* (Haworth) Britton & Rose var. *orientalis*

F. Ritter – Succulenta 1966: 129, 131, ill., 1966.

Typus (T): Ritter 224c (U 160876B, SGO, ZSS [seeds only]).

loc. 1: Chile: "Pichidangui, grosse Höhen" = Pichidangui, great altitudes. – / 6. / 1955. – Altitude given as 600 m. in KS 3: 1042.

SGO 121507 ISO – ar, sp

loc. 2: Chile: "Cabildo". – / 6. / 1955.

SGO 121508 – (corp), ar, sp

loc. 3: Chile: "östlich Pichidangui bei 600 m Höhe" = E of Pichidangui. 600 m. – / – / 1963. – Collection date according to holotype specimen at U.

U 160876B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

loc. 4: Chile: "Pichidangui".

ZSS SR13261 **Type number** – sem

Ritter 225: *Pyrrhocactus curvispinus* (Bertero ex Colla) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 262, 1936. (Dated 1935, publ. Febr. 1936. First invalidly published by A. Berger, Kakteen, 216, 1929.)

loc. 1: Chile: "El Volcán", SE of Santiago. – / 5. / 1954. – Locality information and date according to Ritter letter dated 31. I. 1955, p. 155 (ZSS archives); and to the original Ritter seed sample at ZSS ("El Volcán").

ZSS S10080 – sem (Leg. F. Ritter 1955.)

ZSS SR13262 – sem (Dated "II. 54." on the original label.)

ZSS T4755 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: Tranquilla. – / 5. / 1954. – First labelled as *Pyrrhocactus tranquillensis* (*nom. nud.*).

ZSS T4756 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 3: Chile: "Coya". – / 5. / 1955.

SGO 121509 – ar, sp

loc. 4: Chile: "La Coya, Nr. 2". – / 5. / 1955.

SGO 125624 – (fl)

Ritter 225a: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *santiagensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 932, 1980. (Published as provisional name.)

Based on Ritter 225a.

loc. 1: Chile: Central Andes E, SE and NE of Santiago, upper Aconcagua valley and side valleys. – / – / 1954. – Locality information as given in the original publication.

ZSS S10315 – sem (Leg. F. Ritter 1957.)

ZSS T4758 – ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Chile: "Rio Blanco". - / 4. / 1955.
SGO 121510 - (corp), ar, sp
SGO 125625 - fr
- loc. 3:** Chile: "Putando". - / 4. / 1955.
SGO 121511 - (corp), ar, sp
- loc. 4:** Chile: "unterhalb Perez Caldera" = below Perez Caldera. - Locality information according to index card associated with the seed sample.
ZSS S10081 - sem (Leg. F. Ritter 1955 (sub *Horridocactus montanus*).)
ZSS T4757 - rad, corp, ar, sp (Leg. F. Ritter ex nat. Locality given as "Perez (Caldera)", but not on an original label.)
- loc. 5:** Chile: "Putando, Nr. 2". - / 4. / 1955.
SGO 125626 - fr
- loc. 6:** Chile: "Perez Caldera". - / 2. / 1954.
ZSS SR13263 - sem

Ritter 225b: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *felpensis* F. Ritter (*nom. inval.* Art. 36.1) - Kakt. Südamer. 3: 932, 1980. (Published as provisional name.)

Based on Ritter 225b.

- loc. 1:** Chile: "Manquehue". - / 5. / 1954.
ZSS S10148 - sem (Leg. F. Ritter 1955.)
ZSS SR13264 - sem
ZSS T4759 - ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Las Coimas". - / 4. / 1955.
SGO 121512 - rad, corp, ar, sp
- loc. 3:** Chile: "C.o Minas" = Cerro Minas.
SGO 121513 - ar, sp
SGO 121514 - (corp), ar, sp
SGO 121515 - ar, sp ("Same gerippt" = seed ribbed.)
- loc. 4:** Chile: "Alicahue". - "u. Mischform nach *andicolus descendens*" = and intermediates to *andicolus descendens*. One of the two original labels at SGO has the number as "225b + 468b", FR 486b is identified as *Pyrrhocactus andicola* Ritter var. *descendens* in the field number list in KS 4.
SGO 121516 - (corp), ar, sp
- loc. 5:** Chile: "Las Coimas". - / 5. / 1955.
SGO 125627 - fr
- loc. 6:** Chile: "San Felipe". - / 6. / 1955. - "Unbeborstete Ausnahmeblüte" = exceptional flower without bristles.
SGO 125628 - fr
- loc. 7:** Chile: "C.o de Minas (westl. Santiago)" = Cerro de Minas, W of Santiago. - / 5. / 1955. - Locality first given as "Cuesta de lo Prado" on the original label which also comments "gerippt. Same" = ribbed seed.
ZSS SR13265 - sem
- loc. 8:** Chile: "Las Coimas". - / 6. / 1955. - "Same gerippt u. ungerippt" = Seed ribbed and unribbed.
ZSS SR13266 - sem

- loc. 9:** Chile: "Cumbre de Chacabuco". – / 6. / 1955. – "Same gerippt + ungerippt."
= seed ribbed and unribbed.
ZSS SR13267 – sem

Ritter 225c: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *combarbalensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 932, 1980. (Published as provisional name.)
Based on Ritter 225c.

- loc. 1:** Chile: "Tranquilla". – / 5. / 1954.
ZSS S10149 – sem (Leg. F. Ritter 1955.)
ZSS SR13268 – sem
ZSS T4760 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4761 – ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Combarbalá, Nr. 2". – / 5. / 1955.
SGO 121517 – (corp), ar, sp
SGO 125629 – (fl), fr
ZSS SR13269 – sem
- loc. 3:** Chile: "Salamanca". – / 5. / 1955.
SGO 121518 – (corp), ar, sp
- loc. 4:** Chile: "Matancillo" [Maitencillo ?].
SGO 121519 – (corp), ar, sp
- loc. 5:** Chile: "Auco", "Hang mit *N. senilis*" = slope with *N. senilis*. – The original label has the number as "FR 225c + 709 cf."; FR 709 is *Pyrrhocactus curvispinus* var. *fusciflorus* Ritter (*nom. nud.*) according to the field-number list in KS 4.
SGO 121520 – (corp), ar, sp

Ritter 225d: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *mostazalensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 932, 1980. (Published as nude name.)
Based on Ritter 225d.

- loc. 1:** Chile: "Sn. Franc.sco de M." = San Francisco de Mostazal. – / 5. / 1955.
SGO 121521 – (corp), ar, sp
- loc. 2:** Chile: "San Francisco de Mostazal, Nr. 2". – / 5. / 1955. – Collection date according to original Ritter seed sample at ZSS.
SGO 125630 – fr
ZSS SR13270 – sem

Ritter 225e: *Pyrrhocactus hybr.*

- loc. 1:** Chile: "Petorca". – / 5. / 1955. – *Pyrrhocactus curvispinus* × *P. horridus* according to field number list in KS 4. Also identified as *P. curvispinus* var. *petorcensis* Ritter (*nom. nud.*) in l.c. 3: 932.
SGO 121522 – (corp), ar, sp
ZSS S10316 – sem (Leg. F. Ritter 1957. No locality data associated with this specimen.)
ZSS SR13271 – sem

loc. 2: Chile: "Petorca, Nr. 3". – / 5. / 1955. – *Pyrrhocactus curvispinus* × *P. horridus* according to field number list in KS 4. Also identified as *P. curvispinus* var. *petorcensis* Ritter (*nom. nud.*) in l.c. 3: 932.
SGO 125631 – fr

loc. 3: Chile: "Salamanca". – / 11. / 1957. – "(Grüner Körper)" = green body. The original label was most probably first numbered "225c", now overwritten by "225e". Identified as *Pyrrhocactus curvispinus* × *P. horridus* according to field-number list in KS 4. Also identified as *P. curvispinus* var. *petorcensis* Ritter (*nom. nud.*) in l.c. 3: 932.
ZSS SR13272 – sem

Ritter 225f: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *nidularis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 932, 1980. (Published as nude name.)
Based on Ritter 225f.

loc. 1: Chile: "Putando". – / 5. / 1955.
SGO 121523 – (corp), ar, sp

loc. 2: Chile: "Combarbalá, Nr. 2a". – / 5. / 1955.
SGO 121524 – (corp), ar, sp
SGO 125632 – (fl)
ZSS SR13273 – sem

loc. 3: Chile: "C.o Chivato" = Cerro Chivato. – / 5. / 1955.
SGO 121525 – (corp), ar, sp

loc. 4: Chile: "Putando, Nr. 2a". – / 4. / 1955.
SGO 125633 – fr

Ritter 225g: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *tilamensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 932, 1980. (Published as nude name.)
Based on Ritter 225g.

- Chile: "Berge über Tilama, ca. 1300 m." = mountains above Tilama. 1300 m. – / 12. / 1957. ⇨ Collection date according to original Ritter seed sample at ZSS.
ZSS SR13274 – sem
ZSS S9949 – sem (Leg. F. Ritter 1955. No locality associated with this specimen.)

Ritter 225h: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var. *campanensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 932, 1980. (Sphalm. 'campanaensis'. Published as nude name.)
Based on Ritter 225h.

- Chile: "Cerro de la Campana, Basis Felswand gegen Westen" = Cerro de la Campana, base of rock wall towards the W. – / 1. / 1962.
ZSS SR13275 – sem

Ritter 226: *Austrocactus hibernus* F. Ritter – Sukkulenteenkunde 7/8: 34-36, ill., 1963.

Typus (T): Ritter 226 (U 116932B, SGO, ZSS).

loc. 1: Chile: mountains above Mina Dolomita, Maule gorge. 2000 m. – / 2. / 1954.

U 116932B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.
"Mit geilem Kulturaustrieb" = with etiolated stem produced in
cultivation.)

ZSS T4762 **ISO** – (corp), ar, sp (Leg. F. Ritter ex nat.)

ZSS T4763 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)

loc. 2: Chile: "Gebirge am Río del Maule" = mountains at the Río del Maule. –
Locality data according to Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S10087 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 3: Chile: "oberhalb Mine La Dolomita" = above La Dolomita mine.

SGO 124987 **ISO** – rad, corp, ar, sp

loc. 4: Chile: "Höhen des Maule" = altitudes of the [Río] Maule. – / 2. / 1954.

ZSS SR13276 **Type number** – sem

Ritter 227: *Trichocereus chiloensis* (Colla) Britton & Rose var. *panhoplites* (K. Schumann) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 3: 1109, 1980.

loc. 1: Chile: Coquimbo; near Ovalle. – / 5. / 1954.

ZSS S10082 – sem (Leg. F. Ritter 1955. Locality simply given as
"Ovalle" in correspondence dated 11. 4. 1954 (ZSS archives).)

ZSS T4764 – ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Combarbalá". – / 5. / 1955.

SGO 121232 – (corp), ar, sp

loc. 3: Chile: "Ovalle Nr. 2". – / 1. / 1954.

ZSS SR13277 – sem

Ritter 227a: *Trichocereus chiloensis* (Colla) Britton & Rose – The Cact. 2: 137, 1920. (The spelling of the specific epithet is frequently changed to 'chilensis', but the taxon was named erroneously after the island of Chiloe, and such a 'correction' is not permissible.)

– Chile: "Salamanca". – / 5. / 1954. – Locality data and date according to original Ritter seed sample at ZSS, repeated on the index card associated with the other seed sample at ZSS. Identified as *Trichocereus chilensis* var. *chilensis* in KS 4: 1625.

ZSS S10150 – sem (Leg. F. Ritter 1955.)

ZSS SR13278 – sem

ZSS T4765 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (seedling plant).)

Ritter 228: *Trichocereus chiloensis* (Colla) Britton & Rose – The Cact. 2: 137, 1920. (The spelling of the specific epithet is frequently changed to 'chilensis', but the taxon was named erroneously after the island of Chiloe, and such a 'correction' is not permissible.)

loc. 1: Chile: Valparaíso; region of Valparaíso. – / – / 1955. – Identified as *Trichocereus chilensis* var. *chilensis* in KS 4: 1625.

ZSS AX3536 – corp, ar, sp (Ex cult. (cult. ex sem.) ZSS s.n.)

ZSS S10083 – sem (Leg. F. Ritter 1955.)

loc. 2: Chile: "Berge südöstl. Tranca (südl. Limache) bei 800 m." = mountains SE of Tranca (S of Limache). 800 m. – Identified as *Trichocereus chilensis* var. *chilensis* in KS 4: 1625.

SGO 121168 – (corp), ar, sp

loc. 3: Chile: "Chagres" [= Chacras ?]. – / 1. / 1962. – Collection date according to original Ritter seed sample at ZSS. Identified as *Trichocereus chilensis* var. *chilensis* in KS 4: 1625.

SGO 121165 (in 2 parts) – (corp), ar, sp

ZSS SR13280 – sem

loc. 4: Chile: "Petorca". – / 5. / 1955. – Identified as *Trichocereus chilensis* var. *chilensis* in KS 4: 1625.

ZSS SR13279 – sem

Ritter 228a: *Trichocereus chiloensis* (Colla) Britton & Rose var. *australis* F. Ritter – Kakt. Südamer. 3: 1108, fig. 1066, 1980.

Typus (T): Ritter 228a (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Chile: Talca: Lontué; "Villa Prat". – / 4. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS and repeated on the index card associated with the other seed sample at ZSS.

ZSS S10151 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS SR13281 **Type number** – sem

Ritter 228b: *Trichocereus chiloensis* (Colla) Britton & Rose var. *eburneus* (K. Schumann) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 3: 1109, 1980.

– Chile: "östl. Los Patos, bei 1500 m., Talsohle" = E of Los Patos, bottom of valley. 1500 m.

SGO 121164 (in 2 parts) – (corp), ar, sp ("Junger und alter Kopf" = young and old head.)

Ritter 228c: *Trichocereus chiloensis* (Colla) Britton & Rose var. *conjungens* F. Ritter – Kakt. Südamer. 3: 1109, figs. 1060-1062, 1064, 1980.

Typus (T): Ritter 228c (U 160273B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "Pichidangui". – "Hohe Form" = tall form. "Scheint *chilensis* evt. näher zu stehen als *litoralis*" = probably closer to *chilensis* than to *litoralis*.

SGO 121169 – (corp), ar, sp

loc. 2: Chile: "Choapa". – "Näher nach *chilensis* als nach *litoralis*" = closer to *chilensis* than to *litoralis*.

SGO 121166 – (corp), ar, sp

loc. 3: Chile: "Valparaiso, Steilküste" = Valparaiso, steep coast. – "Steht dem *chilensis* wohl etwas näher als dem *litoralis*" = probably closer to *chilensis* than to *litoralis*.

SGO 121167 ISO – (corp), ar, sp

- loc. 4:** Chile: "Crucero, Granizo". – "Steht dem *chilensis* näher als dem *litoralis*" = is closer to *chilensis* than to *litoralis*. The two localities given on the label have been added at different times, both in Ritter's handwriting.
SGO 121233 – (corp), ar, sp
- loc. 5:** Chile: "von Valparaiso" = from Valparaiso. – / 1. / 1962. – Collection date according to original Ritter seed sample at ZSS.
U 160273B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred. Dated "1963".)
ZSS SR13282 **ISO** – sem (Locality simply given as "Valparaiso".)
- loc. 6:** Chile: sine loco.
ZSS S10288 – sem (Leg. F. Ritter 1957.)
- loc. 7:** Chile: "Valparaiso Nr. 1".
ZSS SR13283 **ISO** – sem
- loc. 8:** Chile: "Cajón Grande". – / – / 1961.
ZSS SR13284 – sem

Ritter 228d: *Trichocereus chiloensis* (Colla) Britton & Rose var. *borealis* F. Ritter – Kakt. Südamer. 3: 1109, 1980.

Typus (*T*): Ritter 228d (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Coquimbo; "Huanta" in the Elqui valley. – Locality data supplemented from the protologue.
SGO 125524 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

Ritter 229: *Trichocereus skottsbergii* Backeberg – Acta Horti Gothob. 18: 146, t. 10, 1950. (Publication year also frequently cited as 1951.)

Typus (*T*): Skottsberg 834 (not traced).

- loc. 1:** Chile: "150 km südl. Coquimbo, Nr. 1" = 150 km S of Coquimbo. – Locality information according to original Ritter seed sample at ZSS, repeated on the index card associated with the other specimen at ZSS.
ZSS S10084 – sem (Leg. F. Ritter 1955.)
ZSS SR13285 – sem
- loc. 2:** Chile: "Fray Jorge". – "Muster der gleichen Pf." = specimens of the same plant, indicating that all parts of the specimen are from the same plant.
SGO 125525 – corp, ar, sp

Ritter 230: *Copiapoa pseudocoquimbana* F. Ritter var. *vulgata* F. Ritter – Taxon 12(1): 30, 1963.

Typus (*T*): Ritter 230 (U 145255B, SGO, ZSS) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: "Typuslokalität Coquimbo" = type locality Coquimbo. – / 10. / 1962. – Collection data according to holotype at U.
U 145255B **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
ZSS A4256 **ISO** – corp, ar, sp (Ex cult. ZSS s.n., 2. 9. 1982.)
ZSS S10085 **Type number** – sem (Leg. F. Ritter 1955. Locality simply

given as "Coquimbo".)

- loc. 2:** Chile: "14 km östl. La Serena" = 14 km E of La Serena.
SGO 124849 – (corp), ar, sp
- loc. 3:** Chile: "Coquimbo".
SGO 124850 ISO – (corp), ar, sp
- loc. 4:** Chile: "Carrizalillo".
SGO 124851 – (corp), ar, sp
- loc. 5:** Chile: "Coquimbo Nr. 4". – / 1. / 1954.
ZSS SR13286 ISO – sem (The original label has the additional comment
"+ 1 Fr. X. 1961" = added 1 fruit Oct. 1961.)

Ritter 230a: *Copiapoa pseudocoquimbana* F. Ritter var. *chaniarensis* F. Ritter – Kakt. Südamer. 3: 1077, fig. 1006, 1980.

Typus (T): Ritter 230a (U) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; "Carrizalillo". – / – / 1961. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Chile: "29 km westl. Domeyko" = 29 km W of Domeyko.
SGO 124852 – (corp), ar, sp

Ritter 231: *Copiapoa megarhiza* Britton & Rose – The Cact. 3: 89, 1922.

- loc. 1:** Chile: "Paipote bei Copiapó" = Paipote near Copiapó. – / 1. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS, partly repeated on the index card associated with the other seed sample at ZSS.
ZSS S10086 – sem (Leg. F. Ritter 1955.)
ZSS SR13287 – sem
- loc. 2:** Chile: "Copiapó".
SGO 124853 – (rad), corp, ar, sp
- loc. 3:** Chile: sine loco.
SGO 124854 (in 2 parts) – (rad), corp, ar, sp
- loc. 4:** Chile: "Toledo Nr. 5 u. 6". – One of the original labels has the number as "FR 231 + 506a"; FR 506a is *Copiapoa echinata* var. *borealis* according to KS 4.
SGO 124856 – (corp), ar, sp

Ritter 231a: *Copiapoa megarhiza* Britton & Rose var. *microrhiza* F. Ritter – Kakt. Südamer. 3: 1081, 1980.

Typus (T): Ritter 231a (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; "Gebirge östlich Paipote" = mountains E of Paipote. – / 1. / 1954. – Data and date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: Atacama; "Toledo Nr. 2" / "Paipote". – / 6. / 1955.
SGO 124855 **Type number** – (corp), ar, sp

Ritter 232: *Eulychnia acida* Philippi – Linnaea 33: 80, 1864.

Typus (T): Landbeck s.n. (SGO 52680 [status not evaluated]).

loc. 1: Chile: "Ovalle". – / 1. / 1954. – Collection date according to the original Ritter seed sample at ZSS.

ZSS S10089 – sem (Leg. F. Ritter 1955.)

ZSS SR13288 – sem

loc. 2: Chile: "37 km östl. La Serena" = 37 km E of La Serena / "Tambo".

SGO 125184 – (corp), ar, sp

loc. 3: Chile: "unterh. Domeyco [sic!]" = below Domeyko.

SGO 125185 – (corp), ar, sp

Ritter 233: *Maihuenia poeppigii* (Pfeiffer) K. Schumann – Gesamtbeschr. Kakt., 755, 1898.

loc. 1: Chile: "Lago Laja". – / 4. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS, locality repeated in Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S10152 – sem (Leg. F. Ritter 1955.)

ZSS SR13289 – sem

loc. 2: Chile: "Cabrero". – / 12. / 1957.

ZSS SR13290 – sem

Ritter 234: *Pyrhocactus marksianus* F. Ritter – Succulenta 39(1): 2-3, 1960.

Typus (T): Ritter 234 (ZSS [none of several specimens annotated as holotype], SGO).

loc. 1: Chile: Villa Prat SW of Curico. – / 4. / 1954. – Locality information originally given differently, but this is as given in Kakt. Südamer. 3: 958, and in accordance with specimens at ZSS. None of the specimens present at ZSS has been selected as holotype.

ZSS T4775 **Type collection** – ar, sp (Leg. F. Ritter ex nat.)

ZSS T4776 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T5062 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1959.)

loc. 2: Chile: Talca; "Villa Prat". – / 4. / 1955. – Collection date according to SGO 121526.

SGO 121526 **ISO** – rad, corp, ar, sp

SGO 125634 **ISO** – fr

ZSS S10153 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 3: Chile: Talca; "Villa Prat, Nr. 3".

ZSS SR13291 **ISO** – sem

Ritter 234a: *Pyrhocactus marksianus* F. Ritter var. *tunensis* F. Ritter – Succulenta 1960(1): 2, 1960.

Typus (T): Ritter 234a (U 098112B, SGO [status ?], ZSS [seeds only]) (Type cited for ZSS but specimen actually deposited at U.).

- loc. 1:** Chile: "Tuna, Mittelchile" = Tuna, middle Chile.
U 098112B **HOLO** – 2 ar, sp (Labelled as "V.-Typus" and "Muster Fr. Ritter" by Ritter. Collection number inferred.)
- loc. 2:** Chile: "östl. San Fernando, Nr. 2" = E of San Fernando. – / 11. / 1955.
SGO 121527 – rad, corp, ar, sp
- loc. 3:** Chile: "von der Typus-Lokalität" = from the type locality.
U **Type collection** – sem (Collection number inferred.)
- loc. 4:** Chile: "Tuna". – / 5. / 1955.
SGO 125635 **Type number** – fr
ZSS SR13292 **Type number** – sem (Locality given as "La Tuna".)

Ritter 235: *Pyrhocoactus engleri* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959.

- loc. 1:** Chile: coastal andes between Santiago and Valparaiso, Polpaico. 1900 m. – / 5. / 1954. – Locality information 'Polpaico' and collection month added according to specimens at ZSS.
SGO 121528 **ISO** – (corp), ar, sp
ZSS S10154 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS S8478 **Type number** – sem (Leg. Köhres.)
ZSS T4777 **Type collection** – rad, corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)
ZSS T4778 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4779 **Type collection** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4780 **Type collection** – (corp), ar, sp (Leg. F. Ritter ex nat.)
ZSS T4781 **Type collection** – (corp), ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Las Yaretas über Polpaico" = Las Yaretas above Polpaico.
ZSS SR13293 **ISO** – sem

Ritter 236: *Neoporteria castanea* F. Ritter – Taxon 12(1): 34, 1963.

Typus (T): Ritter 236 (U 117863B, SGO, ZSS) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Talca; Villa Prat. – / 4. / 1954. – Locality and date according to protologue; the holotype specimen at U has no locality data and is undated.
U 117863B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter and erroneously labelled as "Ritter 136".)
ZSS T4782 **ISO** – (corp), ar, sp (Leg. F. Ritter ex nat.)
ZSS T5149 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 19. 10. 1983.)
- loc. 2:** Chile: "Pichidangui Nr. 2".
SGO 121529 – rad, corp, ar, sp
- loc. 3:** Chile: Talca; "Villa Prat". – / 4. / 1955.
SGO 121530 **ISO** – corp, ar, sp
SGO 125710 **ISO** – fr
ZSS S10155 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 4:** Chile: "Villa Prat Nr. 2".
ZSS SR13294 **ISO** – sem

Ritter 236a: *Neoporteria castanea* F. Ritter var. *tunensis* F. Ritter – Taxon 12(1): 34, 1963.

Typus (T): Ritter 236a (U 117831B, SGO) (Holotype cited for U l.c., 28.).

loc. 1: Chile: "Tuna", near San Fernando. – / 5. / 1955. – Locality data according to specimen at SGO and completed from the protologue; the holotype specimen at U is without locality and undated.

SGO 121531 **ISO** – ar, sp

U 117831B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter and erroneously numbered "Ritter 136a". The locality is not given on the original label and is inferred.)

loc. 2: Chile: "Naltagua".

SGO 121532 – ar, sp

loc. 3: Chile: sine loco, probably near Tuna.

ZSS S9903 – sem (Leg. F. Ritter 1955.)

loc. 4: Chile: "Naltágua (westl. Santiago)" = Naltagua (W of Santiago). – / 11. / 1955.

SGO 125711 – fr

ZSS SR13295 – sem

Ritter 237: *Pyrrhocactus aspillagae* (Söhrens) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'aspillagai').

– Chile: "Constitución Nr. 2". – / 4. / 1954. – Collection date according to original Ritter seed sample at ZSS; locality repeated on the index card associated with the other seed sample at ZSS, date repeated on the plant specimens.

ZSS A10483 – fl (Ex cult. ZSS s.n., 7. 5. 1975.)

ZSS S10156 – sem (Leg. F. Ritter 1955.)

ZSS S10426 – sem (Leg. Köhres (ex cult.))

ZSS SR13296 – sem

ZSS T4783 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T5118 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 237a: *Pyrrhocactus aspillagae* (Söhrens) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'aspillagai').

loc. 1: Chile: "Cardonal". – / 6. / 1955.

SGO 121533 – rad, corp, ar, sp

loc. 2: Chile: "Cardonal bei Tanumé". – / 5. / 1955.

SGO 125636 – (fl)

Ritter 238: *Pyrrhocactus choapensis* F. Ritter – Succulenta 30(12): 133-134, 1960.

Typus (T): Ritter 238 (ZSS [none of several specimens annotated as holotype], SGO).

loc. 1: Chile: near Illapel, from the railway station Choapa throughout to N of Illapel. – / 5. / 1954. – None of the several specimens at ZSS has been selected as holotype.

ZSS A10492 **Type number** – fl (Ex cult. ZSS s.n., 4. 7. 1977.)

ZSS T4784 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4785 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T5073 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1959.)

- loc. 2:** Chile: "Illapel".
 SGO 121534 **ISO** – (corp), ar, sp
 ZSS S10157 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 3:** Chile: "Choapa, Nr. 5". – / 5. / 1955.
 SGO 121535 – rad, corp, ar, sp
 SGO 125637 – (fl), fr
- loc. 4:** Chile: "Illapel, Nr. 4". – / 5. / 1954.
 ZSS SR13297 **ISO** – sem

Ritter 238a: *Pyrrhocactus choapensis* F. Ritter – Succulenta 30(12): 133-134, 1960.

Typus (T): Ritter 238 (ZSS [none of several specimens annotated as holotype), SGO).

- loc. 1:** Chile: Salamanca. – / 5. / 1954.
 ZSS S10158 – sem (Leg. F. Ritter 1955.)
 ZSS T4786 – (corp), ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4787 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Salamanca, Nr. 2". – / 5. / 1954.
 ZSS SR13298 – sem

Ritter 239: *Pyrrhocactus horridus* (Gay) Backeberg fa. *vegasanus* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 947-948, 1980.

- loc. 2:** Chile: "Las Vegas". – / 5. / 1955.
 SGO 121536 **Type number** – (corp), ar, sp
 SGO 125638 **Type number** – (fl), fr
- loc. 3:** Chile: "Cabildo". – / 6. / 1955. – "In Übergängen zu *froehlichianus* und *horridus*" = in intermediates to *froehlichianus* and *horridus*. The original label also contains the numbers 239d and 573 replaced with "*robustus*" written over.
 SGO 121537 **Type number** – (corp), ar, sp
- loc. 4:** Chile: "südl. Tilama, ca. 700 m" = S of Tilama. 700 m. – The original label contains the numbers 239d and 573 replaced with "*robustus*" written over.
 SGO 121538 **Type number** – (corp), ar, sp
- loc. 5:** Chile: sine loco. – / – / 1959.
 ZSS S10159 **Type number** – sem (Leg. F. Ritter 1955 (sub *Pyrrhocactus robustus*)).
 ZSS T4790 **Type number** – corp, ar, sp (Leg. F. Ritter.)
- loc. 6:** Chile: "Las Vegas". – / 5. / 1954. – Locality and collection date according to original Ritter seed sample at ZSS, repeated in herbarium list associated with the other material at ZSS.
 ZSS SR13300 **Type number** – sem
 ZSS T4788 **Type number** – (corp), ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4789 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 7:** Chile: "Cabildo Nr. 2". – / 6. / 1955. – The original label also has the number "573" crossed out, and "239" was first given as "239d".
ZSS SR13299 **Type number** – sem

Ritter 239a: *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter)
F. Ritter – Kakt. Südamer. 3: 947-948, 1980.

- loc. 1:** Chile: Los Andes. – / 5. / 1954. – This is the type number of *Pyrrhocactus robustus* F. Ritter.
ZSS T4791 **Type number** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4792 **Type number** – (corp), ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Rabuco, Nr. 3". – / 6. / 1955. – This is the type number of *Pyrrhocactus robustus* F. Ritter. Collection date according to specimen at SGO.
SGO 121539 **Type number** – (corp), ar, sp
ZSS SR13301 **Type number** – sem
- loc. 3:** Chile: "von der Typuslokalität oberhalb Hacienda Rabuco, Mittelchile" = from the type locality above Hacienda Rabuco, middle Chile. – / 12. / 1957.
– Collection date according to specimen at U. This is the type number of *Pyrrhocactus robustus* F. Ritter.
U 097912B **Type collection** – (corp), ar, sp (Labelled as "Muster Ritter" and "Belegprobe von der Typuslokalität" = specimen from the type locality, by Ritter.)
- loc. 4:** Chile: high mountains near Ocoa. – This is the type number of *Pyrrhocactus robustus* F. Ritter.
U **Type collection** – sem (No locality or collection number given on the original label which just says "von der Typus-Lokalität" = from the type locality.)
ZSS S10317 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus froelichianus*.)
- loc. 5:** Chile: sine loco. – This is the type number of *Pyrrhocactus robustus* F. Ritter.
B GH20390 – fl, ic (corp) (Ex cult. BG Berlin, 1. 7. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
- Ritter 240: *Eriosyce sandillon* (Gay) Philippi** – Anales Univ. Chile 41: 721, 1872. (= Descr. Pl. Nuev., 63, 1872.)
- loc. 1:** Chile: "Tranquilla". – / 5. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS and repeated in Ritter letter dated 31. I. 1955 (ZSS archives).
ZSS S10160 – sem (Leg. F. Ritter 1955 (sub *Eriosyce ceratistes* var. *tranquillaensis*.)
ZSS SR13304 – sem
ZSS T4793 – (corp), ar, sp, al, (fl) (Leg. F. Ritter ex nat.)
ZSS T4794 – rad, corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)
- loc. 2:** Chile: "Combarbalá (tieferer Lagen)" = Combarbalá (lower altitudes). – / 5. / 1955.
SGO 121668 – (corp), ar, sp, al
ZSS SR13307 – sem (The locality is given as "(niedere Lagen)" which

has the same meaning.)

- loc. 3:** Chile: "wenige km unterhalb Huanta" = few km below Huanta.
SGO 121669 – (corp), ar, sp
- loc. 4:** Chile: "östl. Huanta" = E of Huanta / "über Huanta" = above Huanta / "Los Hoyos". – There are two labels in this jar, the second containing the second and third locality as given above; this label was originally numbered as 255 which was later crossed out and replaced with 240.
SGO 121670 – (corp), ar, sp
- loc. 5:** Chile: "Los Llanos de Huanta". – / 11. / 1957. – Collection date according to original Ritter seed sample at ZSS (where the locality is simply given as "Llanos de Huanta").
SGO 121671 – rad, corp, ar, sp (A large seedling plant.)
ZSS SR13305 – sem
- loc. 6:** Chile: "westl. von Putaendo" = W of Putaendo. – / 5. / 1955.
SGO 121672 – (corp), ar, sp, (al)
ZSS SR13303 – sem (Dated "IV. 55." on the original label.)
- loc. 7:** Chile: "Pass 31 km S. Cruze von Vicuña" = pass 31 km S of Cruze from Vicuña. 2000[†] m. – / 11. / 1957. – Collection date and altitude according to original Ritter seed sample at ZSS.
SGO 121673 – rad, corp, ar, sp (2 large seedling plants.)
ZSS SR13308 – sem
- loc. 8:** Chile: "Balala oberhalb Huanta" = Balala above Huanta. – / 9. / 1955.
ZSS SR13309 – sem

Ritter 240a: *Eriogyne sandillon* (Gay) Philippi – Anales Univ. Chile 41: 721, 1872. (= Descr. Pl. Nuev., 63, 1872.)

- Chile: "Rio Blanco". – / 4. / 1955.
SGO 121674 – (corp), ar, sp
ZSS SR13310 – sem

Ritter 241: *Eulychnia castanea* Philippi – Linnaea 33: 80-81, 1864.

Typus (T): Philippi s.n. (SGO 52701 [status not evaluated]).

- loc. 1:** Chile: "Los Vilos". – / 5. / 1954. – Locality data and collection date according to specimens at SGO and ZSS and Ritter letter dated 31. I. 1955 (ZSS archives).
SGO 125187 – (rad, corp, ar, sp) (Juvenile rooted plant only.)
ZSS S10161 – sem (Leg. F. Ritter 1955.)
ZSS SR13311 – sem
ZSS T4795 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Pichidanguí".
SGO 125186 – (corp), ar, sp

Ritter 242: *Cumulopuntia berterii* (Colla) F. Ritter – Kakt. Südamer. 3: 885, 1980.

- loc. 1:** Chile: "Salamanca und Tres Cruces" = Salamanca and Tres Cruces. – Locality data according to Ritter letter dated 31. I. 1955 (ZSS archives). Identified as "*Cumulopuntia berterii* fa." in KS 4: 1625.

ZSS S10162 – sem (Leg. F. Ritter 1955 (sub *Tephrocactus campestris*.)

loc. 2: Chile: Illapel. – / 5. / 1954. – Identified as "*Cumulopuntia berterii* fa." in KS 4: 1625.

ZSS T4796 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 242a: *Cumulopuntia berterii* (Colla) F. Ritter – Kakt. Südamer. 3: 885, 1980.

– Chile: "Los Andes". – / – / 1954. – Locality data according to Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S10163 – sem (Leg. F. Ritter 1955 (sub *Tephrocactus campestris* var.))

ZSS T1485 – rad, corp, ar, sp (Ex cult. ZSS s.n.)

Ritter 242b: *Cumulopuntia berterii* (Colla) F. Ritter – Kakt. Südamer. 3: 885, 1980.

– Chile: Taltal. – / 6. / 1954.

ZSS T4797 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 243: *Neoporteria multicolor* F. Ritter – Taxon 12(1): 33-34, 1963.

Typus (T): Ritter 243 (U [not found], ZSS T4804 [holo], SGO [status ?]) (Holotype cited for U l.c., 28; later in KS 3: 1039-1041 cited for ZSS.).

loc. 1: Chile: E of Salamanca. – / 5. / 1954. – Locality according to KS 3: 1039-1041, and from specimen at ZSS. Collection date according to specimen list at ZSS.

ZSS S10350 **Type number** – sem (Leg. F. Ritter 1957.)

ZSS T4804 **HOLO** – corp, ar, sp (Leg. F. Ritter ex nat. Labelled as holotype according to the herbarium index list.)

ZSS T5068 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1956.)

loc. 2: Chile: "Huintil, 1300 m". 1300 m.

SGO 121541 – corp, ar, sp

loc. 3: Chile: "Strasse Illapel a Huintin bei ca. 15 km oberhalb Canal" = road from Illapel to Huintin at ca. 15 km above Canal.

SGO 121542 – rad, corp, ar, sp, (fr)

loc. 4: Chile: "Salamanca, Nr. 4" / "Salamanca Ost" = Salamanca east. – / 5. / 1955.

SGO 121543 **Type number** – corp, ar, sp

loc. 5: Chile: "Salamanca, Nr. 4". – / 12. / 1955.

SGO 125712 **Type number** – fr

loc. 6: Chile: "Salamanca, Nr. 4". – / 5. / 1955.

SGO 125713 **Type number** – fr

ZSS SR13312 – sem

loc. 7: Chile: "28 km unterhalb Salamanca" = 28 km below Salamanca. – / 11. / 1957.

ZSS SR13313 – sem

loc. 8: Chile: "Huintil, grosse Höhen" = Huintil, great altitudes. – / 10. / 1961.
ZSS SR13314 – sem

Ritter 244: *Pyrhocactus intermedius* F. Ritter – Taxon 12(1): 32, 1963.
Typus (T): Ritter 213c (U 098088B, SGO) (Holotype cited for U l.c., 28.).

loc. 1: Chile: Chañaral. – / 6. / 1954.
ZSS S10164 – sem (Leg. F. Ritter 1955.)
ZSS T4805 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Chañaral Nr. 8".
ZSS SR13315 – sem

Ritter 245: *Copiapoa bridgesii* (Pfeiffer) Backeberg – Die Cact. 3: 1909, 1959.

loc. 1: Chile: mountains N of air strip of Chañaral. – / 6. / 1954.
B GH11982 – fl, ic (corp) (Ex cult. BG Berlin, 9. 6. 1982 (cult. ex sem.
Cat. H. Winter 1957). Collection number inferred.)
ZSS S10165 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T4806 **NEO** – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4807 **ISONEO** – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4808 **ISONEO** – ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "24 km nördl. Chañaral, Nr. 5" = 24 km N of Chañaral.
SGO 124857 **ISONEO** – (corp), ar, sp

loc. 3: Chile: "nördl. + südlich Chañaral Nr. 7" = N and S of Chañaral. – / 6. /
1954. – The locality obviously first read "Chañaral Nr. 7"; later "Nr. 7" was
crossed out and now the locality reads "nördl. + südl. Chañaral".
ZSS SR13316 – sem

Ritter 245a: *Copiapoa marginata* (Salm-Dyck) Britton & Rose – The Cact. 3:
86, 1922.

loc. 1: Chile: "Flamenco Nr. 4". – "ähnl. *Cop. cuprea/bridgesii* var. mit Einschlag
von 722" = similar to *Copiapoa cuprea* / *bridgesii* var. with introgression
from 722; FR 722 is *Copiapoa calderana* var. *spiniosior* according to KS 4.
Originally, the label only gave the Name as *Copiapoa bridgesii*, *C. cuprea*
was added later.
SGO 124858 – (corp), ar, sp

loc. 2: Chile: "Quebrada Guamanga".
SGO 124859 – (corp), ar, sp

loc. 3: Chile: "Flamenco". – The original label first identified this material as "*C.*
streptocaulon ?", then as "*bridgesii* var.", and finally as "*C. marginata*".
SGO 124860 – (corp), ar, sp

Ritter 246: *Copiapoa serpentisulcata* F. Ritter – Cactus (Paris) 15(66): 22-23,
1960.

Typus (T): Ritter 246 (ZSS T4811, SGO, ZSS) (Type cited for Z, later
corrected to ZSS.).

loc. 1: Chile: mountain tops N of Chañaral. – / 6. / 1954.
B GH21139 – ic (corp) (Ex cult. BG Berlin, 30. 7. 1986 (cult. ex sem.
Cat. H. Winter 1958). Collection number inferred.)

ZSS S10166 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T4810 **ISO** – (corp), ar, sp (Leg. F. Ritter ex nat.)

ZSS T4811 **HOLO** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "nördl. Chañal" = N of Chañaral / "Chañar, 12 km Nord, Nr. 2 (Berge)" = Chañar[al], 12 km N of (mountains).

SGO 124861 **ISO** – rad, corp, ar, sp

loc. 3: Chile: "Chañaral Nr. 11". – / 6. / 1954.

ZSS SR13317 **ISO** – sem

Ritter 246?: *Copiapoa serpentisulcata* F. Ritter – Cactus (Paris) 15(66): 22-23, 1960.

Typus (T): Ritter 246 (ZSS T4811, SGO, ZSS) (Type cited for Z, later corrected to ZSS.).

– Chile: "Chañar., nördl." = N of Chañaral. – One of the two original labels first had the number as "FR 517" now crossed out and was labelled "*malleolata*". 517 is identified as *Thelocephala malleolata* in KS 4.

SGO 124931 – rad, corp, ar, sp

Ritter 247: *Copiapoa pseudocoquimbana* F. Ritter – Taxon 12(1): 30, 1963.

Typus (T): Ritter 1086 (U 145207B) (Holotype cited for U l.c., 28.).

– Chile: Tres Cruces. – / 6. / 1954. – Identified as *Copiapoa pseudocoquimbana* var. *pseudocoquimbana* in KS 4.

ZSS S10167 – sem (Leg. F. Ritter 1955 (sub *Copiapoa trescruzensis*)).

ZSS T4812 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 248: *Trichocereus litoralis* (Johow) Looser – Revista Chilena Hist. Nat. 33: 598, 1929.

loc. 1: Chile: sine loco.

ZSS S10168 – sem (Leg. F. Ritter 1955.)

ZSS T5112 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

loc. 2: Chile: "Los Vilos, Küste" = Los Vilos, coast.

SGO 121149 – (corp), ar, sp

loc. 3: Chile: "Zapallar". – / – / 1955.

SGO 121153 – (corp), ar, sp

loc. 4: Chile: "Los Vilos". – / 5. / 1954.

ZSS SR13318 – sem

Ritter 249: *Thelocephala napina* (Philippi) Y. Ito – Explan. Diagn. Austroechinocactinae, 149, 1957.

loc. 1: Chile: region of Huasco.

ZSS A10470 – fl (Ex cult. ZSS s.n., 2. 7. 1974.)

ZSS S8545 – sem (Leg. Köhres ex cult.)

loc. 2: Chile: "Huasco". – / 5. / 1954. – Locality according to specimen at SGO and to index card associated with the seed sample at ZSS; collection date according to original Ritter seed sample at ZSS.

SGO 125129 – (rad), corp, ar, sp

SGO 125697 – fr
 ZSS S10169 – sem (Leg. F. Ritter 1955.)
 ZSS SR13319 – sem

Ritter 250: *Neoporteria villosa* (Monville) A. Berger ex A. W. Hill – Index
 Kew. Suppl. 8: 158, 1933. (First used invalidly by A. Berger, Kakteen, 201, 1929.)

- loc. 1:** Chile: Atacama; "Huasco". – / 5. / 1954.
 ZSS S10170 – sem (Leg. F. Ritter 1955.)
 ZSS T4813 – corp, ar, sp, (fl) (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: Atacama; "Huasco, Küste" = Huasco, coast.
 SGO 121544 – (corp), ar, sp
- loc. 3:** Chile: "Huasco". – / 1. / 1956.
 SGO 125715 – (fr)
- loc. 4:** Chile: "Huasco, Nr. 8". – / 5. / 1954.
 ZSS SR13320 – sem

Ritter 251: *Copiapoa fiedleriana* (K. Schumann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 280, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Chile: "Huasco". – / 6. / 1954. – Collection date according to material at ZSS.
 SGO 124862 (in 2 parts) – rad, corp, ar, sp
 ZSS S10171 – sem (Leg. F. Ritter 1955. No locality directly associated with this specimen.)
 ZSS T4814 – rad, corp, ar, sp (Leg. F. Ritter ex nat. No locality directly associated with this specimen.)
 ZSS T4815 – rad, corp, ar, sp (Leg. F. Ritter ex nat. No locality directly associated with this specimen.)
- loc. 2:** Chile: "Huasco Nr. 1". – / 5. / 1954.
 ZSS SR13321 – sem

Ritter 252: *Pyrrhocactus* sp.

- loc. 1:** Chile: Tres Cruces. – / 5. / 1954. – Given as "var. *trescruceensis*" (*nom. nud.*) for *Pyrrhocactus jussieui* or *P. trapichensis* in Ritter's field number list in KS 4.
 ZSS S10172 – sem (Leg. F. Ritter 1955.)
 ZSS T4816 – (corp), ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4817 – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4818 – (rad, corp, ar, sp) (Leg. F. Ritter ex nat. (seedling plant).)
 ZSS T4819 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2:** Chile: "Tres Cruces".
 ZSS SR13322 – sem

Ritter 252a: *Pyrrhocactus jussieui* (Monville ex Salm-Dyck) F. Ritter – Kakt. Südamer. 3: 951-952, 1980.

- loc. 1:** Chile: W of Vicuña. – Identified as *Pyrrhocactus jussieui* var. *jussieui* in KS 4: 1625.
ZSS T5360 – rad, corp, ar, sp (Ex cult. ZSS s.n. (Leg F. Ritter, sub *Neopterita hankeana*.)
- loc. 2:** Chile: "20 km W Vicuña" = 20 km W of Vicuña. – Identified as *Pyrrhocactus jussieui* var. *jussieui* in KS 4: 1625.
SGO 121545 – (corp), ar, sp (Includes a small rooted seedling.)
- loc. 3:** Chile: "westl. Vicuña (nicht sehr weit westlich)" = W of Vicuña (not very far to the W). – / 11. / 1957.
ZSS SR13323 – sem
- loc. 4:** Chile: "westl. Vicuña (Garten)" = W of Vicuña (garden). – / 4. / 1956.
ZSS SR13324 – sem

Ritter 252b: *Pyrrhocactus jussieui* (Monville) F. Ritter var. *spiniosior* F. Ritter – Kakt. Südamer. 3: 952, figs. 837-838, 1980.
Typus (T): Ritter 252b (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "12 km östl. Vicuña" = 12 km E of Vicuña.
SGO 121546 **Type number** – (corp), ar, sp
- loc. 2:** Chile: "östlich von Vicuña" = E of Vicuña. – / 12. / 1955. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS S10325 **Type number** – sem (Leg. F. Ritter 1957. No locality data directly associated with this specimen.)
- loc. 3:** Chile: "östl. Vicuña" = E of Vicuña. – / 12. / 1955.
SGO 125639 **Type number** – fr
ZSS SR13325 **Type number** – sem

Ritter 252c: *Pyrrhocactus trapichensis* F. Ritter – Kakt. Südamer. 3: 979-980, fig. 884, 1980. (The protologue does not contain a collection number for the type collection which is said to have been found by R. Wagenknecht in 1955. The collection number here given as type is so designated by inference from the collection locality.)
Typus (T): Ritter 252c (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "Trapiche", at the Río Choros. – / – / 1955. – Locality data supplemented from the protologue. Collection date according to specimen at U. Material probably collected by R. Wagenknecht, but numbered in Ritter's series.
SGO 121547 **ISO** – rad, corp, ar, sp
U **HOLO** – (corp), ar, sp (Collection number and type status inferred.)
- loc. 2:** Chile: "Trapiche, Schluchtgrund" = Trapiche, bottom of gorge. – / 12. / 1955.
SGO 125640 **ISO** – fr

loc. 3: Chile: "Trapiche (Schluchtgrund)" = Trapiche (bottom of gorge). – / 1. / 1956.

ZSS SR13326 ISO – sem

Ritter 252d: *Pyrrhocactus jussieui* (Monville) F. Ritter var. *australis* F. Ritter – Kakt. Südamer. 3: 952-953, fig. 836, 1980.

Typus (T): Ritter 252d (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Chile: "Las Perdices". – / 3. / 1963. – According to the protologue, this taxon was first encountered in 1961, and a single specimen was found only. The collection date here given is according to the original Ritter seed sample at ZSS.

ZSS SR13327 ISO – sem

Ritter 253: *Eriosyce ihotzkyana* F. Ritter – Kakt. Südamer. 3: 912-913, fig. 770, 1980. (Sphalm. 'ihotzkyanae'.)

Typus (T): Ritter 253 (ZSS [none of the several specimens annotated as holotype], SGO).

loc. 1: Chile: El Dorado near Ovalle. – / – / 1954.

ZSS S10173 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T4820 **Type collection** – ar, sp, (al) (Leg. F. Ritter ex nat.)

ZSS T4821 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)

loc. 2: Chile: "El Dorado". – The type locality is given as "El Dorado bei Ovalle" = El Dorado near Ovalle, in KS 3: 913.

SGO 121675 ISO – (corp), ar, sp, al

loc. 3: Chile: "Transito, unten" = Transito, below.

SGO 121676 (in 3 parts) – rad, corp, ar, sp (Includes 2 juvenile plants.)

loc. 4: Chile: "Marqueza, Schlucht, 900 m." = Marqueza, gorge. 900 m.

SGO 121677 – (corp), ar, sp, (al)

loc. 5: Chile: "Combarbalá, Tiefenform" = Combarbalá, lowland form / "Combarbalá, Weg nach Ovalle" = Combarbalá, path to Ovalle.

SGO 121678 – (corp), ar, sp

loc. 6: Chile: "50 km S. Coquimbo" = 50 km S of Coquimbo.

SGO 121679 – (corp), ar, sp, al

loc. 7: Chile: "Mina El Dorado".

SGO 125720 – fr

loc. 8: Chile: "2 km unterhalb Combarbalá" = 2 km below Combarbalá.

SGO 125721 – fr

loc. 9: Chile: "Viñita in Marqueza-Schlucht, 900 m." = Viñita in the Marqueza gorge. 900 m.

SGO 125722 – fr

loc.10: Chile: "16 km W. Vicuña" = 16 km W of Vicuña. – / 1. / 1969.

ZSS SR13328 – sem

loc.11: Chile: "Ovalle". – / 5. / 1954.
ZSS SR13329 – sem

loc.12: Chile: "Marqueza-Schlucht bei Viñita" = Marqueza gorge near Viñita. – / 10. / 1961. – "Same von 1 Fr." = seed from one fruit. The original label has the collection number as "FR 253 cf."
ZSS SR13330 – sem

Ritter 253?: *Eriogyne ihotzkyana* F. Ritter – Kakt. Südamer. 3: 912-913, fig. 770, 1980. (Sphalm. 'ihotzkyanae'.)

Typus (T): Ritter 253 (ZSS [none of the several specimens annotated as holotype], SGO).

– Chile: "4 1/2 km südl. Cruce Vicuña" = 4.5 km S of Cruce Vicuña.
SGO 121680 – (corp), ar, sp, al

Ritter 254: *Eriogyne ihotzkyana* F. Ritter var. *aussealiana* (F. Ritter) F. Ritter (*nom. inval.* Art. 33.2, 36.1) – Kakt. Südamer. 4: 1625, 1981.

loc. 1: Chile: "Tres Cruces". – / 5. / 1954.

ZSS SR13331 – sem

ZSS T4822 – ar, sp (Leg. F. Ritter ex nat. Locality according to herbarium list.)

ZSS T4823 – corp, ar, sp (Leg. F. Ritter (juvenile plant). Locality according to herbarium list.)

loc. 2: Chile: "Cumbre Pajonal".

SGO 121681 – (corp), ar, sp

loc. 3: Chile: sine loco.

ZSS S10146 – sem (Leg. F. Ritter (ex Fa. Winter) 1955.)

ZSS S10174 – sem (Leg. F. Ritter 1955.)

Ritter 255: *Eriogyne lapampaensis* F. Ritter – Kakt. Südamer. 3: 914-915, 1980.

Typus (T): Ritter 255 (ZSS [none of the several specimens annotated as holotype], SGO [status ?]).

loc. 1: Chile: Atacama; La Pampa, Río Conay, SE of Transito. 1850 m. – / 6. / 1954.

ZSS S10175 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T4824 **Type collection** – corp, ar, sp (Leg. F. Ritter (juvenile plant).)

ZSS T4825 **Type collection** – ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Transito, bei 2000 m. Höhe". 2000 m.

SGO 121682 **Type number** – (corp), ar, sp

loc. 3: Chile: "Transito, bei 2400 m." / "Transito, oben" = Transito, above. 2400 m.

SGO 121683 **Type number** – (corp), ar, sp

loc. 4: Chile: "Transito".

SGO 121684 **Type number** – (rad), corp, ar, sp (Juvenile plant.)

loc. 5: Chile: "Tránsito". – / 1. / 1956.

SGO 125723 **Type number** – fr

loc. 6: Chile: "oberhalb Balala (Huanta)" = above Balala (Huanta). – / 12. / 1955.
SGO 125724 – fr

loc. 7: Chile: "La Palma + Transito". – "+ Transito" was obviously added later to the original label, but is also in Ritter's handwriting.
ZSS SR13332 **Type number** – sem

Ritter 256: *Maihue niopsis archiconoidea* F. Ritter – Kakt. Südamer. 3: 877, figs. 729-731, 1980.

Typus (T): Ritter 256 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; "Transito östlich Vallenar" = Transito E of Vallenar, rare. 1200 m. - 2800 m. – / – / 1954. – Altitude and date according to protologue; the specimen at U is dated "1960".

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: Atacama; Transito E of Vallenar. 1200 m. - 2800 m. – Locality data according to the protologue.

ZSS S10176 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 3: Chile: Atacama; "Transito".

SGO 125214 **ISO** – (rad), corp, ar, sp

loc. 4: Chile: "La Pampa".

ZSS SR13333 – sem

Ritter 257: *Miqueliopuntia miquelii* (Monville) F. Ritter – Kakt. Südamer. 3: 869-871, 1980.

loc. 1: Chile: sine loco.

ZSS SX10177 – sem (Leg. F. Ritter 1955.)

loc. 2: Chile: "Maitencillo".

SGO 125235 – (corp), ar, sp

loc. 3: Chile: "Marqueza-Schlucht (südl. des Elqui-Tales)" = gorge of Marqueza S of the Elqui valley. – / 10. / 1961.

SGO 125236 (in 2 parts) – corp, ar, sp

loc. 4: Chile: "Tres Cruces".

ZSS SR13334 – sem

ZSS T5099 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. Locality according to herbarium list.)

Ritter 258: *Neoporteria nigrihorrida* Backeberg – Kakteenkunde 1939: 81, 1939. (Based on *Chilenia nigrihorrida* Backeberg 1936 (*nom. inval.* Art. 43.1).)

loc. 1: Chile: Ovalle. – / 6. / 1954. – Collection date according to specimens at ZSS.

ZSS S10352 – sem (Leg. F. Ritter 1957.)

ZSS T4827 – (corp), ar, sp (Leg. F. Ritter ex nat.)

ZSS T4828 – corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Chile: "El Dorado". – "Übergang zu *senilis* var. *nidus*" = intermediate to *senilis* var. *nidus*. The label gives the number as "FR 258 + 258 x 474a"; FR 474a is *Neoporteria nidus* var. *nidus* according to the field number list in KS 4.
SGO 121548 – (corp), ar, sp
- loc. 3:** Chile: "Mina Dorado". – / 12. / 1955.
ZSS SR13335 – sem

Ritter 259: *Neoporteria villosa* (Monville) A. Berger ex A. W. Hill – Index Kew. Suppl. 8: 158, 1933. (First used invalidly by A. Berger, Kakteen, 201, 1929.)

- Chile: Huasco. – / 5. / 1954. – Identified as "*Neoporteria villosa* fa." in KS 4: 1625.
ZSS T15234 – rad, corp, ar, sp (Ex cult. ZSS 93 1802, 6. 5. 1994) (Leg. Diers.)
ZSS T4831 – rad, corp, ar, sp (Leg. F. Ritter.)

Ritter 259?: *Neoporteria villosa* (Monville) A. Berger ex A. W. Hill – Index Kew. Suppl. 8: 158, 1933. (First used invalidly by A. Berger, Kakteen, 201, 1929.)

- Chile: Atacama; "Huasco". – "Zettelverwechslung ?" = mixup of labels ?. The original label identifies this collection as *Neoporteria atrispinosa*.
SGO 121550 – (corp), ar, sp

Ritter 260: *Pyrhocactus huascensis* F. Ritter – Succulenta 1961(6): 57-58, ill., 1961.

Typus (T): Ritter 260 (U [seeds only], SGO, ZSS [not present, seeds only]) (Type cited for U in the protologue, for ZSS in KS 3: 950.)

- loc. 1:** Chile: Atacama; "Huasco". – / 1. / 1957. – Collection date according to specimen at U.
SGO 121551 **ISO** – (corp), ar, sp
U **Type collection** – sem (Dated "Jan. 1957" and labelled as "Samenprobe von der Typus-Lokalität Huasco. Musterpflanze wurde im Juni 1954 an die Städt. Sukkulentensammlg. Zürich gesandt" = seed sample from the type locality. Representative specimen sent to ZSS in June 1954. No material is, however, present at ZSS.)
- loc. 2:** Chile: Atacama; "Huasco, nördlich" " Huasco, N-wards. – "Exemplar der Früchte u. kleines Exemplar von daneben" = specimen of the fruits and small specimen from its side.
SGO 121552 **Type number** – (corp), ar, sp
- loc. 3:** Chile: Atacama; "13 km O. Huasco" = 13 km E of Huasco.
SGO 121553 **Type number** – corp, ar, sp
- loc. 4:** Chile: "Huasco". – / 1. / 1956.
SGO 125641 **Type number** – (fl)
- loc. 5:** Chile: "nördlich Huasco" = N of Huasco. – / 9. / 1959.
ZSS SR13336 **Type number** – sem

loc. 6: Chile: "Hiasco (Same von Saucache)" = Hiasco (seed from Saucache). - / 2. / 1957.

ZSS SR13337 **Type number** – sem

Ritter 261: *Copiapoa hypogaea* F. Ritter – Cactus (Paris) 15(66): 19-20, ill., 1960.

Typus (T): Ritter 261 (ZSS [none of several specimens annotated as holotype], U [seeds only]) (Type cited for Z, later corrected to ZSS.).

loc. 1: Chile: Antofagasta; coastal region. - / - / 1954.

U **Type collection** – sem (Collection number inferred from the identification on the original label which also says "von der Typuslokalität" = from the type locality; the label is dated "Febr. 1956".)

ZSS S10302 **Type number** – sem (Leg. F. Ritter 1957.)

ZSS S10453 **Type number** – sem (Leg. Fa. Köhres (ex cult.). 1977.)

ZSS T4832 **Type collection** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4833 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4836 **Type collection** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Chile: "Chañaral, 5 km N, Nr. 7" = 5 km N of Chañaral. - / 1. / 1956. – The direction "N" on the original label was added later, and the locality probably first read "S of Chañaral".

ZSS SR13339 **Type number** – sem

Ritter 262: *Pyrhocactus intermedius* F. Ritter – Taxon 12(1): 32, 1963.

Typus (T): Ritter 213c (U 098088B, SGO) (Holotype cited for U l.c., 28.).

– Chile: Chañaral. - / 6. / 1954.

ZSS T4838 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 263: *Trichocereus fulvilanus* F. Ritter – Kakt. and. Sukk. 13(10): 165-167, ill., 1962.

Typus (T): Ritter 263 (U 117827B, SGO [status ?], ZSS [status ?]).

loc. 1: Chile: Taltal. - / 6. / 1954. – Locality and collection date according to the protologue.

U 117827B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS AX4233 **Type number** – ar, sp, fl (Ex cult. ZSS s.n., 15. 5. 1981.)

ZSS S10289 **Type number** – sem (Leg. F. Ritter 1957.)

ZSS T5095 **Type number** – (corp), ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960.)

ZSS T5108 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960.)

loc. 2: Chile: "Chañaral".

SGO 121234 – corp, ar, sp

ZSS T4839 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4840 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4841 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 3: Chile: "15 km N. Taltal" = 15 km N of Taltal.

SGO 121235 **Type number** – (corp), ar, sp

- loc. 4:** Chile: "nahe östl. Taltal, Fuss der Vorberge" = E close to Taltal, base of foothills / "Taltal".
SGO 125526 **Type number** – (corp), ar, sp
- loc. 5:** Chile: "Esmeralda".
SGO 125527 (in 2 parts) – corp, ar, sp
- loc. 6:** Chile: "Taltal". – / 2. / 1956.
ZSS SR13340 **Type number** – sem

Ritter 264: *Eriosyce rodentiophila* F. Ritter – Kakt. Südamer. 3: 916-917, figs. 773, 775, 1980.

Typus (T): Ritter 264 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; "westlich Salado" = W of Salado. – / – / 1956. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS T4842 **ISO** – ar, sp (Leg. F. Ritter ex nat. (from mature plant).)
ZSS T4843 **ISO** – rad, corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)
- loc. 2:** Chile: Atacama; "El Salado".
SGO 121685 (in 2 parts) **ISO** – corp, ar, sp (Includes a juvenile plant.)
- loc. 3:** Chile: Atacama; "Pass Chañal nach Flamenco" = pass Chañaral to Flamenco.
SGO 121686 – rad, corp, ar, sp (Includes a juvenile plant.)
- loc. 4:** Chile: "Flamenco".
SGO 121687 – (corp), ar, sp
- loc. 5:** Chile: "einige km öst. Cifuncho" = some km E of Cifuncho.
SGO 121688 – (corp), ar, sp
- loc. 6:** Chile: Atacama; "Strasse Abzweig von Chañaral nach Pan de Azucar, km 9" = side road from Chañaral to Pan de Azucar, km 9.
SGO 121689 – (corp), ar, sp
- loc. 7:** Chile: Atacama; "Abzweig von Chañaral nach Pan de Azucar, km 20" = tumoff from Chañaral to Pan de Azucar, km 20.
SGO 121695 – (corp), ar, sp ("19 - 27 Rippen" = 19 - 27 ribs. Includes a rooted seedling.)
- loc. 8:** Chile: sine loco.
ZSS S10357 – sem (Leg. F. Ritter 1957 (sub *Rodentiophila atacamensis*)).
- loc. 9:** Chile: "Esmeralda - Breas". – / 2. / 1956.
ZSS SR13341 – sem

Ritter 265: *Trichocereus deserticola* (Werdermann) Looser – Revista Chilena Hist. Nat. 33: 614, 1936. (Repeated by Backeberg in Backeberg & Knuth, Kaktus-ABC, 202, 1936 (dated 1935).)

- loc. 1:** Chile: "Taltal". – / 6. / 1954. – Locality and collection date according to original Ritter seed sample at ZSS and also repeated on the index card and the specimen lists associated with the other ZSS specimens.
ZSS A4276 – ar, sp, fl (Ex cult. ZSS s.n.)
ZSS S10178 – sem (Leg. F. Ritter 1955 (sub *Trichocereus nigripilis*)).

ZSS SR13343 – sem
 ZSS T4844 – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4846 – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4847 – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T5087 – (corp), ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

- loc. 2:** Chile: "oberhalb Paposo" = above Paposo.
 SGO 125528 – corp, ar, sp
- loc. 3:** Chile: "Schlucht 22 km nördl. Paposo" = gorge 22 km N of Paposo / "nördl. Paposo" = N of Paposo.
 SGO 125530 – (corp), ar, sp
- loc. 4:** Chile: "Morro Moreno".
 SGO 125531 – (corp), ar, sp
- loc. 5:** Chile: "Tocopilla".
 SGO 125532 – corp, ar, sp
- loc. 6:** Chile: sine loco.
 B GH25035 – fl, ic (corp) (Ex cult. BG Berlin, 20. 6. 1989 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
 B GH25035a – corp, ar, sp (Ex cult. BG Berlin, 2. 8. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
- loc. 7:** Chile: "22 km nördl. Paposo" = 22 km N of Paposo. – / 2. / 1956.
 ZSS SR13342 – sem

Ritter 266: *Copiopoa cinerea* (Philippi) Britton & Rose var. *albispina* F. Ritter – Taxon 12(1): 30, 1963.

Typus (T): Ritter 207a (U 145279B, SGO) (Holotype cited for U l.c., 28.).

- Chile: Taltal. – / 6. / 1954. – This collection may or may not be the type, it is said to be concurrent with Ritter 207a which was given as type in the original description; KS 3: 1098 says that the material has been deposited at ZSS under Ritter 266.
 ZSS T4848 – ar, sp (Leg. F. Ritter ex nat.)

Ritter 267: *Pyrrhocactus occultus* F. Ritter (*nom. inval.* Art. 36.1, 37.1) – Succulenta 1959(10): 131, 1959. (Based on *Echinocactus occultus sensu* K. Schumann 1903 *non* Philippi.)

- loc. 1:** Chile: "Taltal". – / – / 1954. – Locality information according to index card and specimen lists associated with ZSS specimens.
 ZSS S10179 – sem (Leg. F. Ritter 1955.)
 ZSS T4849 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4850 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4851 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: "Cachita östl. Taltal" = Cachita E of Taltal.
 SGO 125455 – corp, ar, sp
- loc. 3:** Chile: "einige km östl. Taltal" = some km E of Taltal. – / 1. / 1958.
 ZSS SR13344 – sem

Ritter 267b: *Pyrrhocactus occultus* F. Ritter var. *spinosior* F. Ritter (*nom. inval.*)

Art. 36.1, 43.1) – Kakt. Südamer. 4: 1626, 1981.

Based on Ritter 267b.

- Chile: "Taltal Nr. 13, Höhen im Süden" = Taltal, altitudes to the S. – / 6. / 1954.
ZSS SR13345 – sem

Ritter 268: *Pyrrhocactus aricensis* F. Ritter – Taxon 12(1): 32, 1963.

Typus (T): Ritter 268 (ZSS T4853, SGO).

- loc. 1:** Chile: Camaraca, steep coast near Arica. – / – / 1953. – Collection date according to KS 3: 921; the specimens at ZSS, labelled as type, seem to have been collected only in May and/or June 1954.

ZSS S10238 **Type number** – sem (Leg. F. Ritter 1955. Locality given simply as "Arica" on the index card associated with the specimen.)

ZSS T4852 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4853 **HOLO** – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Chile: "Arica" / "Camaraca". – / 3. / 1957.

SGO 121554 **ISO** – rad, corp, ar, sp (Apart from 2 different labels, the jar contains 2 plants and 3 fragments.)

- loc. 3:** Chile: "Arica". – / 5. / 1956.

SGO 125642 **Type number** – (fl)

- loc. 4:** Chile: "Arica Nr. 3". – / 6. / 1954. – The locality as given above is that written directly on the envelope of the original Ritter seed sample at ZSS; the inside label contains the data "Camarapa. 3 Früchtchen [3 fruits] VI. 54, X. 56, III. 57 + 2 Korn [2 seeds] 1960".

ZSS SR13346 **Type number** – sem

Ritter 269: *Corryocactus aureus* (Meyen) Hutchison – Sukkulantenkunde 7/8: 9, 1963.

- loc. 1:** Peru: Tacna; "Estique". – / 6. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS; locality repeated on the index card associated with the other seed sample at ZSS; and in Ritter letter dated. 31. 1. 1955 (ZSS archives).

ZSS S10239 – sem (Leg. F. Ritter 1955 (sub *Erdisia meyenii* cf.)).

ZSS SR13947 – sem

- loc. 2:** Peru: Arequipa; "Arequipa". – / 7. / 1957.

SGO 125165 – corp, ar, sp

ZSS SR13946 – sem

Ritter 270: *Trichocereus glaucus* F. Ritter – Kakt. and. Sukk. 13(11): 180-181, ill., 1962.

Typus (T): Ritter 270 (U 117004B, SGO [status ?], ZSS [status ?]).

- loc. 1:** Peru: Arequipa; mountains along lower reaches of Río Tambo, and region of Ilo. – / 6. / 1953.

U 117004B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS AX3513 **Type number** – corp, ar, sp (Ex cult. ZSS s.n., 14. 3. 1985.)

- loc. 2:** Peru: Arequipa / Moquegua; coast near Ilo, halfway to the N towards Mollendo. – / 7. / 1954.
 ZSS S9904 **Type number** – sem (Leg. F. Ritter 1955 ?)
 ZSS T4854 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4855 **Type number** – corp, ar, sp (Leg. F. Ritter.)
- loc. 3:** Peru: Arequipa; "oberhalb Tambo-Schlucht Süd" = above Tambo gorge South.
 SGO 121236 **Type number** – corp, ar, sp
- loc. 4:** Peru: "Horca". – / 9. / 1956.
 ZSS SR13948 – sem

Ritter 270a: *Trichocereus glaucus* F. Ritter fa. *pendens* F. Ritter – Kakt. and. Sukk. 13: 181, 1962. (The protologue does not give a number for the type collection; the number given here is in accordance with KS 3: 1117, 1980.) *Typus (T)*: Ritter 270a (SGO [status ?]) (No herbarium indicated for the type.).

- loc. 2:** Chile: "Camaraca". – Specimen at SGO is labelled as Ritter 270 and carries the locality information "Camaraca" which is given for Ritter 270a in KS 4: 1328.
 SGO 121162 **Type ?** – (corp), ar, sp
- loc. 3:** Chile: "Camaraca". – The original label associated with one of the two specimen jars of this specimen has the information "unterstes Exemplar" = lowest specimen, without locality data. The specimen at SGO is labelled as Ritter 270, but the locality 'Camaraca' is the locality given for 270a in KS 4: 1328, and it is therefore here treated as representing this latter number.
 SGO 125533 (in 2 parts) **Type ?** – corp, ar, sp

Ritter 271: *Corryocactus brachypetalus* (Vaupel) Britton & Rose – The Cact. 2: 67, 1920.

- loc. 1:** Peru: Arequipa; "Atico", near coast. – / 7. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS; locality repeated and supplemented with additional data in Ritter letter dated 31. 3. 1955, p. 82 (ZSS archives).
 ZSS AX4230 – corp, ar, sp (Leg. F. Ritter 1955; ex cult. ZSS s.n.)
 ZSS S10240 – sem (Leg. F. Ritter 1955 (sub *Corryocactus brevistylus*).)
 ZSS SR13949 – sem
 ZSS T4856 – (corp), ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Peru: Arequipa; "Mollendo".
 SGO 125049 – (corp), ar, sp
- loc. 3:** Peru: Tacna; "Weg Yarada - Sama" = path Yarada - Sama.
 SGO 125050 – (corp), ar, sp
- loc. 4:** Peru: Arequipa; sine loco.
 ZSS A427 – fl (Ex cult. ZSS s.n. (ex coll. W. Reppenhagen).)

Ritter 272: *Neoraimondia peruviana* (Linné) F. Ritter fa. *arequipensis* (Meyen) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 4: 1626, 1981.

- loc. 1:** Peru: Arequipa; Atico. – / 7. / 1954.
 ZSS S10241 – sem (Leg. F. Ritter 1955 (sub *Neoraimondia gigantea*)).
 ZSS T4857 – ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4858 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Peru: Arequipa ?; "Cerro Negro".
 SGO 125257 – (corp), ar, sp
- loc. 3:** Peru: Arequipa; "Atico". – / 7. / 1954. – Collection date according to original Ritter seed sample at ZSS.
 SGO 125258 – (corp), ar, sp ("Rippen 7 - 9" = ribs 7 - 9.)
 ZSS SR13950 – sem
- loc. 4:** Peru: Arequipa; "Tambo Schlucht" = Tambo gorge.
 SGO 125259 – (corp), ar, sp
- loc. 5:** Peru: Tacna; "Abstieg Peru nach Tacna, 2550 m." = descent Peru to Tacna / "Tacna". 2550 m.
 SGO 125260 – (corp), ar, sp
- loc. 6:** Peru: Arequipa ?; "Cerro Negro (Ma...)" [illegible]. – / 7. / 1957.
 ZSS SR13951 – sem
- loc. 7:** Peru: Arequipa; "südl. Tambo-Schlucht" = S Tambo gorge. – / 4. / 1957.
 ZSS SR13952 – sem
- loc. 8:** Peru: Tacna; "oberh. Tacna" = above Tacna. – / 5. / 1959.
 ZSS SR13953 – sem

Ritter 273: *Armatocereus rauhi* Backeberg – Descr. Cact. Nov. [1:] 13, 1957.
 (Dated 1956, published 1957.)
Typus (T): Rauh K127 (ZSS).

- loc. 1:** Peru: Amazonas ?; "Marañon".
 ZSS S10242 – sem (Leg. F. Ritter 1955 (sub *Armatocereus maranonensis*). Locality according to the index card associated with this sample.)
 ZSS SR13954 – sem
- loc. 2:** Peru: Amazonas ?; "unterhalb Maravilla; Marañon" = below Maravilla; Marañon / "Aramango".
 SGO 124949 – (corp), ar, sp
- loc. 3:** Peru: Amazonas; "Hacienda Valor". – / 7. / 1956. – First identified as *Armatocereus maranensis* Ritter (*nom. nud.*) and said to be "von der Typuslokalität" = from the type locality, of this taxon on the original label.
 SGO 124950 – (corp), ar, sp
- loc. 4:** Peru: Cajamarca; Jaén; "unterhalb Pucará" = below Pucará / "Bucara". – / 4. / 1960. – "Trieb des Blütenphoto" = branch of the flower photograph.
 SGO 124951 – (corp), ar, sp

Ritter 273a: *Armatocereus balsasensis* F. Ritter – Kakt. Südamer. 4: 1271-1272, figs. 1127, 1132, 1310, 1981.
Typus (T): Ritter 273a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979).

- loc. 1:** Peru: Amazonas / Cajamarca; frontier region of Dept. Cajamarca and Amazonas, "Balsas am Marañon" = Balsas at the Marañon. 800 m. - / - / 1957. – Locality data supplemented from KS 4.
 U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
 ZSS S9950 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)
- loc. 2:** Peru: Amazonas; "Balsas". - / 5. / 1957.
 SGO 124969 **ISO** – (corp), ar, sp (Collection date simply given as "1957".)
 ZSS SR13955 **ISO** – sem

Ritter 274: *Espostoa ritteri* Buining – Succulenta 39(3): 25-27, ill., 1960.
Typus (T): Ritter 274 (ZSS [none of several specimens labelled as holotype], SGO [status ?]).

- loc. 1:** Peru: Cajamarca; Bellavista, Río Marañon valley. - / - / 1953.
 ZSS AX3656 **Type number** – corp, ar, sp (Ex cult. ZSS s.n., 10. 12. 1984.)
 ZSS S10243 **Type number** – sem (Leg. F. Ritter 1955. Locality simply given as "Marañon" on the index card associated with the specimen.)
 ZSS T4859 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4860 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4861 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T5131 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 18. 12. 1980.)
- loc. 2:** Peru: Amazonas; "Hda. Valor" = Hacienda Valor.
 SGO 122160 **Type number** – (corp), ar, sp, ceph (Includes a seedling.)
- loc. 3:** Peru: Amazonas ?; "Marañon".
 ZSS SR13956 **Type number** – sem

Ritter 275: *Cumulopuntia multiareolata* (F. Ritter) F. Ritter – Kakt. Südamer. 4: 1252-1253, 1981.

- loc. 2:** Peru: Arequipa; "Quicacha". – Locality data according to original Ritter seed sample at ZSS and to index card associated with the other seed sample at ZSS (with the spelling 'Quicachan').
 ZSS SR13957 **Type number** – sem
 ZSS SX10244 **Type number** – sem (Leg. F. Ritter 1955 (sub *Tephrocactus multiareolatus*)).

Ritter 276: *Eulychnia ritteri* Cullmann – Kakt. and. Sukk. 9(8): 121-122, 1958.
Typus (T): Ritter 276 (ZSS [none of the 2 specimens labelled as holotype], SGO).

- loc. 1:** Peru: Arequipa; N part of Dept. Arequipa, coastal region of Chala, 400 km N of Chilean border. - / 7. / 1954.
 ZSS S10245 **Type number** – sem (Leg. F. Ritter 1955. Locality simply given as "Chala" on the associated index card.)
 ZSS T4862 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4863 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Arequipa; "Chala".

SGO 125188 (in 2 parts) **ISO** – (corp), ar, sp (Includes a rooted seedling.)

ZSS SR13958 **ISO** – sem

Ritter 277: *Loxanthocereus pacaranensis* F. Ritter – Kakt. Südamer. 4: 1468-1469, fig. 1320, 1981.

Typus (T): Ritter 277 (ZSS [fragment only], SGO).

loc. 1: Peru: Lima; some km E of Imperial, lower Cañete valley, W of desert belt. – / – / 1953.

ZSS B4864 **Type collection** – (ar) (Leg. F. Ritter ex nat. It is questionable whether this fragment was intended as holotype of the name.)

ZSS S10246 **Type number** – sem (Leg. F. Ritter 1955. Locality simply given as "Cañete" on the associated index card.)

ZSS S10433 **Type number** – sem (Leg. W. Cullmann (ex cult.) 1975.)

loc. 2: Peru: Lima; "Imperial".

SGO 121956 **ISO** – corp, ar, sp

loc. 3: Peru: Lima; "Cañete Nr. 3".

ZSS SR13959 **Type number** – sem

Ritter 277a: *Loxanthocereus neglectus* F. Ritter var. *chimboteensis* F. Ritter – Taxon 13(3): 116, 1964.

Typus (T): Ritter 277a (U 117882B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28; later cited for ZSS in KS 4: 1466.).

loc. 1: Peru: Ancash; coastal mountains near Chimbote. – / – / 1956.

U 117882B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Peru: Ancash; "Chimbote". – / 8. / 1956. – Collection date according to original Ritter seed sample at ZSS.

SGO 121957 **ISO** – corp, ar, sp

ZSS SR13960 **ISO** – sem

Ritter 278: *Borzicactus hybr.*

loc. 1: Peru: sine loco. – Identified as the hybrid *Borzicactella serpens* × *Borzicactus aureivillus* in KS 4: 1626.

ZSS S10247 – sem (Leg. F. Ritter 1955 (sub *Leocereus serpens*)).

loc. 2: Peru: Piura; "Huancabamba Nr. 13". – Identified as the hybrid *Borzicactella serpens* × *Borzicactus aureivillus* in KS 4: 1626.

ZSS SR13961 – sem

Ritter 279: *Monvillea diffusa* Britton & Rose – The Cact. 2: 24, 1920.

loc. 1: Peru: Piura; Canchaque. – Identified as "*Monvillea* sp. zwischen *maritima* und *diffusa* stehend" in KS 4: 1626.

ZSS AX4241 – fl (Ex cult. ZSS s.n.)

ZSS S10248 – sem (Leg. F. Ritter 1955.)

- loc. 2:** Peru: Piura; "Canchaque". – Identified as "*Monvillea* sp. zwischen *maritima* und *diffusa* stehend" in KS 4: 1626.
ZSS SR13962 – sem

Ritter 280: *Pilosocereus tweedyanus* (Britton & Rose) Byles & G. D. Rowley – Cact. Succ. J. Gr. Brit. 19: 69, 1957.

- loc. 1:** Peru?: sine loco.
ZSS S10249 – sem (Leg. F. Ritter 1955.)

- loc. 2:** Peru: Piura; "Canchaque".
SGO 125466 – (corp), ar, sp
ZSS SR13963 – sem

Ritter 281: *Espostoa lanata* (Kunth) Britton & Rose – The Cact. 2: 61, 1920.

- loc. 1:** Peru: Cajamarca: Jaén; "Pucará".
SGO 122153 – (corp), ar, sp, ceph

- loc. 2:** Peru: Amazonas; "oberhalb Balsas" = above Balsas.
SGO 122154 – corp, ar, sp, ceph

- loc. 3:** Peru: Cajamarca / Piura?; "Abstieg nach Pucará = descent to Pucará / "östl. Porculla" = E of Porculla.
SGO 122155 – (corp), ar, sp

- loc. 4:** Peru: Piura; "Huancabamba". – / 7. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 122156 – (corp), ar, sp, ceph, (fl)
ZSS S10250 – sem (Leg. F. Ritter 1955. Locality according to herbarium list.)
ZSS SR13964 – sem

Ritter 281a: × *Borzipostoa* sp.

- loc. 1:** Peru: Piura; "Huancabamba". – / 8. / 1954. – Identified as the natural hybrid between FR 281 × 292 or FR 281 × 295 in the field-number list in KS 4. Locality according to the index card associated with the seed sample at ZSS.
ZSS S10251 – sem (Leg. F. Ritter 1955 (sub *Espostoa lanata* var.))
ZSS T4865 – corp, ar, sp, ceph (Leg. F. Ritter ex nat.)

- loc. 2:** Peru: Piura; "Huancab. Nr. 16" = Huancabamba. – Identified as the natural hybrid between FR 281 × 292 or FR 281 × 295 in the field-number list in KS 4.
ZSS SR13965 – sem ("(23-rippig)" = with 23 ribs.)

Ritter 281b: × *Borzipostoa* sp.

- loc. 1:** Peru: Piura; "Huancabamba". – / 8. / 1954. – Identified as the natural hybrid between FR 281 × 292 or FR 281 × 295 in the field-number list in KS 4. Locality according to the index card associated with the seed sample at ZSS.
ZSS S10252 – sem (Leg. F. Ritter 1955 (sub *Espostoa lanata* var.))
ZSS T4866 – corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Peru: Piura; "Huancabamba Nr. 16". – Identified as the natural hybrid between FR 281 × 292 or FR 281 × 295 in the field-number list in KS 4.
ZSS SR13966 – sem ("(18-rippig)" = with 18 ribs.)

Ritter 281c: *Espositoa lanata* (Kunth) Britton & Rose – The Cact. 2: 61, 1920.

- Peru: Lambayeque; Olmos. – / 8. / 1954. – Originally distributed as *Espositoa* var. *rot* or as *Espositoa mocupensis* (*nom. nud.*).
ZSS T4867 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 281e: *Espositoa lanata* (Kunth) Britton & Rose var. *procera* (Rauh & Backeberg) F. Ritter (*nom. inval.* Art. 34.1(a)) – Kakt. Südamer. 4: 1437, in synon., 1981.

- loc. 1:** Peru: Lambayeque; "20 km östl. Olmos" = 20 km E of Olmos. – Various identified as var. or fa. *procera* (both *nom. nud.*).
SGO 122157 – (corp), ar, sp, ceph
ZSS S12558 – sem (Leg. H. Winter (Cat. 1961/62). No locality associated directly with this specimen.)
- loc. 2:** Peru: Lambayeque; "Olmos". – / 5. / 1960. – Various identified as var. or fa. *procera* (both *nom. nud.*).
ZSS SR13967 – sem

Ritter 281f: *Espositoa lanata* (Kunth) Britton & Rose var. *floridaensis* F. Ritter – Kakt. Südamer. 4: 1442-143, fig. 1322, 1981.

Typus (T): Ritter 281f (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Cajamarca: Hualgaioc; below the Hacienda La Florida.
U **HOLO** – corp, ar, sp, (ceph) (No original label present. Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
- loc. 2:** Peru: Lambayeque; "Valle Saña, 700 - x m". 700 m.
SGO 122152 **Type number** – (corp), ar, sp, ceph
- loc. 3:** Peru: Lambayeque; "Valle Saña bei 900 - x m.". 900 m. – / 8. / 1964.
ZSS SR13968 **Type number** – sem

Ritter 282: *Borzicactella tenuiserpens* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1387, 1981.

- loc. 1:** Peru: Piura / Cajamarca; Jaén, Huancabamba, together with Ritter 278 and 288. – / 8. / 1954.
ZSS B4868 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS S10253 – sem (Leg. F. Ritter 1955 (sub *Leocereus* sp.))
- loc. 2:** Peru: Cajamarca; "55 km unterhalb Pucará" = 55 km below Pucará.
SGO 121958 – rad, corp, ar, sp
- loc. 3:** Peru: Piura / Lambayeque ?; "Quebrada Honda Nr. 10 + Magdalena". – The locality "Magdalena" (Lambayeque ?) was obviously added later with a different pen.
ZSS SR13969 – sem

Ritter 283: *Pereskia vargasii* H. Johnson – Cact. Succ. J. (US) 24(4): 115-116, 1952.

Typus (T): Vargas & Johnson s.n. (not located).

- loc. 1: Peru: Cajamarca: Jaén; Jaén. – / 8. / 1954.
ZSS B4869 – corp, ar, sp (Leg. F. Ritter.)
- loc. 2: Peru: Amazonas; "H.da Valor" = Hacienda Valor.
SGO 125348 – corp, ar, sp
- loc. 3: Peru: Cajamarca: Jaén; "Jaén Nr. 8" = Jaén. – / 8. / 1954.
ZSS SR13970 – sem

Ritter 283+284: *Pereskia humboldtii* Britton & Rose – The Cact. 4: 251, 1923.

- Peru: Amazonas / Piura; "auf durren Ebenen am Marañon" = on dry plains at the Marañon (FR 283) / "am Río Utcubamba und auch bei Jaén, Marañon-Gebiet" = at the Río Utcubamba and also near Jaén, region of the Marañon (FR 284). – This specimen is given as mixture of FR 283 (identified as *Pereskia vargasii*) and FR 283 (*P. horrida*, by Ritter in KS 4); the name *P. horrida* is the one associated with the material at ZSS. The locality information is according to the Ritter letter dated. 10. 9. 1954, pp. 20-21 (ZSS archives).
ZSS S10254 – sem (Leg. F. Ritter 1955.)

Ritter 284: *Pereskia horrida* (Kunth) De Candolle – Prodr. 3: 475, 1828.

- loc. 1: Peru: Amazonas / Cajamarca; sine loco.
ZSS B1463 – corp, ar, sp, fol, fl (Ex cult. Jardin Botanique "Les Cèdres", ex sem. (ex Fa. H. Winter).)
- loc. 2: Peru: Piura; "Quebrada Honda". – / 8. / 1954.
ZSS B4870 – corp, ar, sp (Leg. F. Ritter.)
ZSS SR13971 – sem
- loc. 3: Peru: Amazonas; "östl. Balsas" = "o. Balsas" = E of Balsas.
SGO 125349 – corp, ar, sp, (al, fl)
- loc. 4: Peru: Amazonas; "östl. + westl. der H.da Valor" = E and W of Hacienda Valor / "Marañon". – "dünnblättrige" = thin-leaved one.
SGO 125350 (in 2 parts) – corp, ar, sp, fol, (al, fl)
- loc. 5: Peru: Amazonas; "östl. Balsas, 1600 m." = E of Balsas. 1600 m. – The original label has the number as "FR 284 cf."
ZSS SR13972 – sem

Ritter 285: *Armatocereus laetus* (Kunth) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 176, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1: Peru: Piura; frontier region to Dept. Cajamarca, Sondorilla near Huancabamba, and near Huancabamba as well as E of Abra Porculla pass. – / – / 1954.
ZSS AX4249 – corp, ar, sp (Leg. F. Ritter Aug. 1954. Ex cult. ZSS s.n.)
ZSS S10255 – sem (Leg. F. Ritter 1955 (sub *Armatocereus jungo*).)
ZSS T5098 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2: Peru: Piura; "Huancabamba".
SGO 124952 – (corp), ar, sp
ZSS SR13973 – sem

- loc. 3:** Peru: Lambayeque / Cajamarca; "unterhalb zw. Pas[s] Porcaya zw. Olmos u. Pucará" = below Pass Porcaya between Olmos and Pucará. – "7 - 8 Rippen" = 7 - 8 ribs.
SGO 124953 – (corp), ar, sp

Ritter 286: *Loxanthocereus pacaranensis* F. Ritter – Kakt. Südamer. 4: 1468-1469, fig. 1320, 1981.
Typus (T): Ritter 277 (ZSS [fragment only], SGO).

- loc. 1:** Peru: Lima; "Pacaran" = Pacarán. – Locality data according to the index card associated with the seed sample at ZSS. Identified as '*Loxanthocereus pacaranensis* var.' by Ritter in KS 4: 1626.
ZSS S10256 – sem (Leg. F. Ritter 1955 (sub *Haageocereus* sp.))

- loc. 2:** Peru: Lima; "nordöstl. Pacaran, Nr. 4" = NE of Pacarán. – / 7. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 125679 – (fl)
ZSS SR13974 – sem

Ritter 287: *Rauhocereus riosaniensis* Backeberg var. *jaenensis* Rauh ex Backeberg – Die Cact. 2: 1159, 1959. (First published as a *nomen nudum* by Rauh in Beitr. Kenntn. peruan. Kakt.veg., 367, 1958 (reported as valid in RPS 10).)
Typus (T): Rauh K75 (ZSS) (The same collection is also cited as type of *Rauhocereus riosaniensis* var. *riosaniensis* by Backeberg in Descr. Cact. Nov., 20, 1956 !).

- loc. 1:** Peru: Cajamarca: Jaén; valley of the Río Marañón, near Jaén. – / – / 1955.
B GH13026 – fl, ic (corp, fl) (Ex cult. BG Berlin, 20. 11. 1982 (cult. ex sem., most probably received from H. Winter). Collection number inferred.)
ZSS A495 – fr, sem (Ex cult. ZSS s.n.)
ZSS A496 – fl (Ex cult. ZSS s.n.)
ZSS AX3660 – corp, ar, sp (Ex cult. ZSS s.n.)
ZSS S10257 – sem (Leg. F. Ritter 1955 (sub *Trichocereus tropicus*).
Locality simply given as "de Jaén".)

- loc. 2:** Peru: Cajamarca; "55 km unterhalb Pucara" = 55 km below Pucará.
SGO 121237 – (corp), ar, sp

- loc. 3:** Peru: Cajamarca: Jaén; "Jaén" = Jaén. – / 8. / 1954.
ZSS SR13975 – sem

Ritter 287a: *Rauhocereus riosaniensis* Backeberg – Descr. Cact. Nov. [1:] 5, 20, 1957. (Dated 1956, published 1957.)

- Peru: Lambayeque; "Valle Saña 700 - x m.". 700 m. – Identified as *Rauhocereus riosaniensis* var. *riosaniensis* in KS 4: 1626.
SGO 121238 – (corp), ar, sp

Ritter 288: *Borzicactella serpens* (Kunth) F. Ritter – Kakt. Südamer. 4: 1387, 1981.

- loc. 1:** Peru: Lambayeque / Piura; W Cordilleras, Olmos and Huancabamba. – / 8. / 1954. – Locality data according to letter dated 31. 1. 1955 at ZSS.
 B GH26970 – corp, ar, sp, fl, ic (corp) (Ex cult. BG Berlin, 19. 6. 1990 (cult. ex sem. of unknown origin). Collection number inferred.)
 ZSS A4272 – fr, sem (Ex cult. ZSS s.n.)
 ZSS S10258 – sem (Leg. F. Ritter 1955.)
 ZSS T4871 – corp, ar, sp (Leg. F. Ritter. This specimen is erroneously labelled "Ritter 287" on the original label.)
 ZSS T4872 – (corp), ar, sp (Leg. F. Ritter.)
- loc. 2:** Peru: Cajamarca: Jaén; "Abstieg nach Pucará" = descent to Pucará.
 SGO 121959 – corp, ar, sp
- loc. 3:** Peru: Amazonas: "Balsas".
 SGO 121960 – corp, ar, sp
- loc. 4:** Peru: Piura; "Huancabamba".
 ZSS SR13976 – sem

Ritter 289: *Melocactus bellavistensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 36, 1957. (Dated 1956, published 1957.)
Typus (L): Rauh K137 (ZSS [lecto]) (Lectotype designated (from amongst 2 syntypes) by N. P. Taylor, Bradleya 9: 66, 1991.)

- loc. 1:** Peru: Amazonas / Cajamarca ?; Marañón. – / 8. / 1954.
 ZSS S10259 – sem (Leg. F. Ritter 1955 (sub *Melocactus stenogonus* Ritter *nom. nud.*))
 ZSS T4873 – ceph (Leg. F. Ritter.)
 ZSS T4874 – corp, ar, sp (Leg. F. Ritter (juvenile plant).)
 ZSS T4875 – (corp), ar, sp (Leg. F. Ritter (seedling plant).)
- loc. 2:** Peru: Amazonas; "Hda. Valor (Marañón)" = Hacienda Valor (Marañón).
 SGO 122112 – (corp), ar, sp, ceph
- loc. 3:** Peru: Amazonas / Cajamarca ?; "Marañón" = Marañón. – / 8. / 1954.
 ZSS SR13977 – sem

Ritter 290: *Gymnanthocereus chlorocarpus* (Kunth) Backeberg – Blätt. Kakt.-Forsch. 1937(7): [unpaged], 1937.

- loc. 1:** Peru: Lambayeque / Piura; E of Olmos, Huancabamba and Abra Porculla, atlantic side. – / 8. / 1954.
 ZSS A3568 – fl (Ex cult. ZSS 90 4048, 12. 9. 1990) (Leg. Ritter.
 Prepared from an aged flower already closed again.)
 ZSS A6043 – fl (Ex cult. ZSS 90 4048, 27. 8. 1991) (Leg. Ritter.)
 ZSS S10260 – sem (Leg. F. Ritter 1955.)
 ZSS T4881 – (corp), ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4882 – (corp), ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Peru: Lambayeque / Piura; "Paso Porculla".
 SGO 121962 – corp, ar, sp
- loc. 3:** Peru: Piura; "Huancabamba".
 SGO 121963 – corp, ar, sp
 ZSS SR13978 – sem

Ritter 291: *Gymnanthocereus altissimus* F. Ritter – Cactus (Paris) 14(62): 119, 1959.

Typus (T): Ritter 291 (ZSS T4883, SGO [status ?]).

loc. 1: Peru: Amazonas; Bellavista, valley of the Río Marañón. – / 8. / 1956. – Collection data according to holotype specimen at ZSS.

ZSS A1444 **Type collection** – fl, fr, sem (Ex cult. Jardin Botanique "Les Cèdres".)

ZSS A4262 **Type collection** – fl (Ex cult. Jardin Botanique "Les Cèdres".)

ZSS T4883 **HOLO** – (corp), ar, sp (Leg. F. Ritter ex nat.)

ZSS T5086 **Type collection** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960. Labelled as "holotype", but the status of this specimen is debatable, as it is clearly a plant cultivated for some time.)

loc. 2: Peru: Cajamarca: Jaén; "unterhalb Bucara" = below Pucará. – The spelling on the original label is erroneous and is here corrected.

SGO 121964 **Type number** – (corp), ar, sp

loc. 3: Peru: Amazonas / Cajamarca ?; "Marañón, Typuslokalität" = Marañón, type locality. – Locality according to index card associated with the seed sample at ZSS.

ZSS S10261 **Type collection** – sem (Leg. F. Ritter 1955 (sub *Gymnanthocereus validus*)).

loc. 4: Peru: Amazonas / Cajamarca ?; "Marañón" = Marañón.

ZSS SR13979 **Type number** – sem

Ritter 292: *Borzicactus humboldtii* (Kunth) Britton & Rose – The Cact. 3: 163, 1920.

loc. 1: Peru: "Passhöhe" = culmination of pass.

SGO 121283 – (corp), ar, sp

loc. 2: Peru: Piura; "Huancabamba".

SGO 121282 – corp, ar, sp

ZSS S10262 – sem (Leg. F. Ritter (sub *Seticereus humboldtii*)).

ZSS SR13980 – sem

Ritter 293: *Monvillea jaenensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 33, 1957. (Dated 1956, published 1957. Repeated by Rauh in Sitz.-Ber. Heidelberg. Akad. Wiss. Math.-Nat. Kl. 1: 506, 1958.)

loc. 1: Peru: Amazonas / Cajamarca ?; "Marañón" = Marañón, in forests. – / 8. / 1954. – Locality data and collection data according to original Ritter seed sample at ZSS, repeated on the index card associated with the other seed sample at ZSS. Additional locality data according to KS.

ZSS AX4246 – ar, sp, fl (Ex cult. ZSS s.n.)

ZSS S10263 – sem (Leg. F. Ritter 1955. Locality simply given as "de Marañón".)

ZSS SR13981 – sem

ZSS T4884 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Cajamarca: Jaén; "Bucará" = Pucará. – The locality as given on the original label must be a spelling error which is corrected above. The various fragments in the jar appear rather heterogeneous.

SGO 121817 – corp, ar, sp

Ritter 294: *Haageocereus pacalaensis* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 298, 412, 1936. (Dated 1935, publ. Febr. 1936. Said to be a corrected description for *Cereus tapalcalaensis* Backeberg 1933, cf. Die Cact. 2: 1202, 1959, which can hardly be accepted.)

loc. 1: Peru: La Libertad; "Laredo". – Locality data according to original Ritter seed sample at ZSS, repeated on the index card associated with the other seed sample at ZSS, and from Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS S10264 – sem (Leg. F. Ritter 1955 (sub *Haageocereus laredensis*.)
ZSS SR13983 – sem

loc. 2: Peru: "5 km östl. Daijan" = 5 km E of Daijan. – "Von 2 Pflanz." = from 2 plants.

SGO 124728 – (corp), ar, sp

loc. 3: Peru: La Libertad; "Ascope bei Pfacalá (sic !) (bei Casa Grande)" = Ascope near Pfacalá (near Casa Grande).

SGO 124729 – (corp), ar, sp

loc. 4: Peru: La Libertad; "östl. Laredo bis 30 km von Trujillo" = E of Laredo to 30 km from Trujillo.

SGO 124730 – (corp), ar, sp

loc. 5: Peru: Cajamarca; "Strasse nach Tembladera, km 35" = road to Tembladera, km 35.

SGO 124731 – (corp), ar, sp

loc. 6: Peru: La Libertad; "17 km nördl. Pacasmayo" = 17 km N of Pacasmayo.

SGO 125683 – (fl)

loc. 7: Peru: La Libertad; "Ascope bei Pacalá" = Ascope near Pacalá. – / 7. / 1964.

ZSS SR13982 – sem

Ritter 294a: *Haageocereus pacalaensis* Backeberg var. *montanus* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1417, 1981. (Published as provisional name.)

Based on Ritter 294a.

loc. 1: Peru: La Libertad; Chiral, between Trujillo and Samne. – / 7. / 1954.

ZSS S10265 – sem (Leg. F. Ritter 1955 (sub *Haageocereus laredensis* var. *collareformans* (sic !)).)

ZSS T4885 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Arequipa / La Libertad ?; "Chiral". – / 8. / 1954.

ZSS SR13984 – sem

Ritter 294b: *Haageocereus pacalaensis* Backeberg var. *pseudoversicolor* (Rauh & Backeberg) F. Ritter ex Krainz – Kat. ZSS ed. 2, 64, 1967.

loc. 1: Peru: Lambayeque ?; "westl. Nueva Arica" = W of Nueva Arica.

SGO 124732 – corp, ar, sp

loc. 2: Peru: Lambayeque; "südl. Mocupa km 712" = S of Mocupa km 712.

SGO 124733 – (corp), ar, sp

loc. 3: Peru: Lambayeque / La Libertad ?; "westl. Nueva Arica, Saña-Fluss" = W of Nueva Arica, Saña river / "Viña, Río Saña". – Comment on the second label: "21 Rippen" = 21 ribs.

SGO 124734 – (corp), ar, sp

loc. 4: Peru: Lambayeque; "Saña-Schlucht" = Saña gorge. – / 5. / 1957. – The original label was first numbered "FR 675"; FR 675 and FR 294b are set equal in the field-number list in KS 4.

ZSS SR13985 – sem

Ritter 295: *Borzicactus aurivillus* (K. Schumann) Britton & Rose – The Cact. 3: 226, 1922.

loc. 1: Peru: Piura; Huancabamba. – / 7. / 1954. – Locality information according to herbarium specimen at ZSS.

ZSS T4886 – corp, ar, sp (Leg. F. Ritter (sub *Seticereus aurivillus*)).

loc. 2: Peru: Piura; "Huancabamba".

SGO 121284 – (corp), ar, sp

ZSS S10266 – sem (Leg. F. Ritter 1955 (sub *Seticereus icosagonus*)).

ZSS SR13986 – sem

loc. 3: Peru: "Passhöhe" = culmination of pass.

SGO 121286 – (corp), ar, sp

Ritter 296: *Armatocereus ghiesbreghtii* Backeberg var. *oligogonus* (Rauh & Backeberg) F. Ritter – Kakt. Südamer. 4: 1275, 1981.

loc. 1: Peru: Lambayeque; "Olmos". – / 8. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS; locality repeated on the index card associated with the other seed sample at ZSS, and in Ritter letter dated. 31. 1. 1955 (ZSS archives).

ZSS S10267 – sem (Leg. F. Ritter 1955 (sub *Armatocereus sp. de Olmos*)).

ZSS SR13987 – sem

loc. 2: Peru: Lambayeque; "Valle Saña, 700 - x m." / "Saña". 700 m.

SGO 124954 – (corp), ar, sp

loc. 3: Peru: Lambayeque; "20 km östl. Olmos" / "Olmos".

SGO 124955 – (corp), ar, sp

loc. 4: Peru: La Libertad; "östl. Chepén bei ca. 1000 - x m." = E of Chepén. 1000 m. – / 7. / 1964. – The original label was first numbered "FR 139" and has the comment "Same vermischt mit Olmos" = seeds mixed with [those from] Olmos. FR 139 is identified as *Armatocereus ghiesbreghtii* in the field-number list in KS 4.

ZSS SR13988 – sem

Ritter 297: *Armatocereus cartwrightianus* (Britton & Rose) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 176, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Peru: Lambayeque; "von Chiclayo bis Tumbes, Nordperu im Despoblado, Küstenebenen und -hügel" = from Chiclayo to Tumbes, N Peru in the Despoblado, coastal plains and hills. – Locality data according to Ritter

letter dated 10. 9. 1954, p. 27 (ZSS archives).

ZSS S10268 – sem (Leg. F. Ritter 1955.)

loc. 2: Peru: Lambayeque; "zw. Motupe u. Chiclayo" = between Motupe and Chiclayo.

SGO 124956 – (corp), ar, sp

loc. 3: Peru: Piura; "Canchaque". – / 8. / 1954.

ZSS SR13989 – sem

Ritter 298: *Opuntia quitensis* F. A. C. Weber – in Bois, Dict. Hortic., 894, 1898.

loc. 1: Peru: Ancash: Huari; "Rahuapampa". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122010 – corp, ar, sp, fr, sem

loc. 2: Peru: Apurimac; "oberh. Chalhuanca" = above Chalhuanca. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122011 – (corp), ar, sp

loc. 3: Peru: sine loco. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

B GH31864 – corp, ar, sp (Ex cult. BG Berlin, 4. 10. 1993 (cult. ex sem.

Cat. H. Winter 1959). Collection number inferred.)

ZSS S10269 – sem (Leg. F. Ritter 1955.)

loc. 4: Peru: Piura; "Canchaque". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS SR13990 – sem

loc. 5: Peru: Piura; "Huancabamba". – / – / 1954. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS SR13991 – sem

Ritter 299: *Matucana ritteri* Buining – Succulenta 38(1): 2-4, 1959. (A taxon with the same name is mentioned in Backeberg, Die Cact. 2: 1084, 1959, with the authors "Krainz & Rupf", but without Latin diagnosis (cf. RPS 10).)

Typus (T): Ritter 299 (ZSS).

– Peru: La Libertad; "Otuzco". 2500 m. – / – / 1953.

SGO 122180 **ISO** – (corp), ar, sp

ZSS S10270 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS SR13992 **ISO** – sem (The original label is dated as "VIII. 54".)

ZSS T4887 **HOLO** – corp, ar, sp (Leg. F. Ritter.)

Ritter 300: *Monvillea* sp.

loc. 1: Peru: Lambayeque; "25 km östl. Olmos" = 25 km E of Olmos.

SGO 121818 – corp, ar, sp

loc. 2: Peru: Lambayeque; "15 km östl. Olmos" = 15 km E of Olmos.

SGO 121819 – (corp), ar, sp

loc. 3: Peru: Lambayeque; "Salas".

SGO 121820 – (corp), ar, sp

ZSS SR13993 – sem ("(1 Frucht)" = 1 fruit. The collection number is given as "FR 300 cf." on the original label.)

Ritter 301: *Borzicactus neoroezlii* F. Ritter – Kakt. and Sukk. 12: 54, 1961.

Typus (T): Ritter 301 (U 117871B, SGO [status ?], ZSS).

loc. 1: Peru: Lambayeque / Piura; E of Olmos, Abra Porculla on continental water divide.

U 117871B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Peru: Piura; "Huancabamba". – / 7. / 1954. – Locality data according to specimens at SGO and ZSS, collection date according to original Ritter seed sample at ZSS.

SGO 125030 **Type number** – (corp), ar, sp

ZSS S10271 **Type number** – sem (Leg. F. Ritter 1955. The index card gives the collection date as "10. 1954".)

ZSS SR13995 **Type number** – sem

ZSS T5075 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1959.)

loc. 3: Peru: Lambayeque / Piura; "Paso Porculla". – / 4. / 1960. – Collection date according to original Ritter seed sample at ZSS.

SGO 125029 **Type number** – (corp), ar, sp ("Triebenden von Blühtrieben" = apices from flowering stems.)

ZSS SR13994 **Type number** – sem

Ritter 302: *Haageocereus versicolor* (Werdermann & Backeberg) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 209, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Peru: Piura; region of Morropon, southwards to Salas (Dept. Lambayeque).

ZSS A4267 – corp, ar, sp (Ex cult. ZSS s.n.)

ZSS AX4245 – ar, sp, fl (Ex cult. ZSS s.n.)

loc. 2: Peru: Piura; "Canchaque". – / 8. / 1954. – Locality data and collection date according to original Ritter seed sample at ZSS, locality repeated on the index card associated with the other seed sample at ZSS.

ZSS S10272 – sem (Leg. F. Ritter 1955.)

ZSS SR13996 – sem

loc. 3: Peru: Lambayeque; "östl. Olmos" = E of Olmos. – / 7. / 1956. – Collection date according to original Ritter seed sample at ZSS.

SGO 124735 – (corp), ar, sp

ZSS SR13997 – sem

Ritter 303: *Haageocereus versicolor* (Werdermann & Backeberg) Backeberg var. *fuscus* Backeberg – Repert. Spec. Nov. Regni Veget. 51: 62, 1942.

– Peru: Piura; coast near "Paíta", in very dry area. – / 8. / 1954. – Material originally distributed as *Haageocereus talarensis* (*nom. nud.*) or *Haageocereus versicolor* var. *paitanus* (*nom. nud.*). Locality data and collection date according to original Ritter seed sample at ZSS, locality repeated in Ritter letter dated 31. 1. 1955, p. 99 (ZSS archives). Identified as *Haageocereus versicolor* var. *paitanus* in KS 4: 1626. The identification here given follows KS 4: 1422.

B GH31911 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 11. 10. 1993 (cult. ex sem. Cat. H. Winter 1960, sub *Haageocereus versicolor* var. *paitanus* [*nom. nud.*], no locality data). Collection number

inferred.)

SGO 124736 – (corp), ar, sp
 ZSS S10273 – sem (Leg. F. Ritter 1955.)
 ZSS SR13998 – sem
 ZSS T4888 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 304: *Borzicactus sammensis* F. Ritter – Taxon 13(3): 118, 1964.

Typus (*T*): Ritter 304 (ZSS T4889, SGO [status ?]).

loc. 1: Peru: Cajamarca; Zangal, N of Chilete, esp. frequently at Samne. – / – / 1953.

ZSS A3338 **Type number** – fl (Ex cult. ZSS 90 3463, 21. 6. 1990)
 (Original material leg. Ritter (sub sem. ?).)

ZSS A9824 **Type number** – fr, sem (Ex cult. ZSS 82 3663, 18. 10. 1982
 (ex coll. Cullmann).)

ZSS S9878 **Type number** – sem (Leg. W. Cullmann ex cult., 1982. Cult.
 sub ZSS 82 3663.)

ZSS T4889 **HOLO** – (corp), ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: La Libertad; "Samne Nr. 3". – / 8. / 1954. – Collection date according to original Ritter seed sample at ZSS; locality simply given as "Samne" on the index card associated with the other seed sample at ZSS.

ZSS S10274 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS SR13999 **Type number** – sem

loc. 3: Peru: Cajamarca; "Zangal".

SGO 125031 **Type number** – (corp), ar, sp

loc. 4: Peru: Cajamarca; "Zangal (bei San Pablo)" = Zangal (near San Pablo). – / 5. / 1957.

ZSS SR14000 **Type number** – sem

Ritter 305: *Austrocylindropuntia intermedia* Rauh & Backeberg – Descr. Cact. Nov. 1: 6, 1957. (Dated 1956, publ. 1957.)

– Peru: Piura; "Huancabamba". – / 7. / 1954. – Locality and collection date according to original Ritter seed sample at ZSS; locality repeated on index card associated with the other seed sample at ZSS.

ZSS SR14001 – sem

ZSS SX10275 – sem (Leg. F. Ritter 1955 (sub *Cylindropuntia cylindrica*).)

Ritter 306: *Thrixanthocereus blossfeldiorum* (Werdermann) Backeberg – Blätt. Kakt.-forsch. 1937(7): [unpaged], 1937.

loc. 1: Peru: Piura; "Huancabamba".

SGO 121293 – corp, ar, sp, ceph (One of the two labels present in this jar was originally numbered "309", and was later corrected to "306".)

ZSS SR14002 – sem

loc. 2: Peru: Amazonas; "Balsas". – / 7. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 121294 – (corp), ar, sp, (ceph) (Includes a small seedling with roots. One of the three labels present in this jar was originally numbered "309", and was later corrected to "306".)

ZSS SR14003 – sem

- loc. 3:** Peru: Cajamarca: Jaén: "Strasse nach Pucara 8 km unterhalb ... Brücke über einen Bach" = road to Pucará 8 km below bridge over a small river.
SGO 121295 – corp, ar, sp, ceph
- loc. 4:** Peru: sine loco.
B GH20996 – fl, ic (corp) (Ex cult. BG Berlin, 9. 10. 1986 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
ZSS A15150 – fl (Leg. A. Hofer ex cult. (from plant raised from seed obtained from H. Winter).)

Ritter 307: *Islaya islayensis* (Förster) Backeberg var. *minor* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1300, 1981.

- loc. 1:** Peru: Moquegua; Ilo. – / 7. / 1954.
ZSS T4890 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Peru: Arequipa; "oberh. Mollendo" = above Mollendo. – / 7. / 1957.
SGO 122091 – (corp), ar, sp

Ritter 307a: *Islaya islayensis* (Förster) Backeberg var. *minor* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1300, 1981.

- loc. 1:** Peru: "über Horca-Schlucht" = above gorge of Horca.
SGO 122092 – rad, corp, ar, sp
- loc. 2:** Peru: Horca. – Locality data according to KS 4: 1626.
ZSS S10339 – sem (Leg. F. Ritter 1957 (sub *Islaya minor* var. *paucicostata*)).
- loc. 3:** Peru: "Horca". – / 9. / 1956.
SGO 125698 – (fl)
ZSS SR14004 – sem (Date simply given as "1957" on the original label.)

Ritter 308: *Opuntia quitensis* F. A. C. Weber – in Bois, Dict. Hortic., 894, 1898.

- loc. 1:** Peru: Piura; Huancabamba. – / 7. / 1954. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS B4892 – (corp, ar, sp) (Leg. F. Ritter ex nat.)

Ritter 309: *Opuntia infesta* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) – Kakt. Südamer. 4: 1258, in synon., 1981.

- loc. 1:** Peru: Ancash; "von unterhalb Chavin" = from below Chavin. – / – / 1960. – Collection date according to specimen at U; the protologue gives the date as "1953". Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U HOLO – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)
- loc. 2:** Peru: Ancash; "Chavin". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14005 ISO – sem
- loc. 3:** Peru: Ancash ?; "(= Huancabamba Nr. 8) Caraz". – / 8. / 1956. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter. The locality data is interpreted to mean that the taxon is identical to the one collected as "Huancabamba Nr. 8".

ZSS SR14006 – sem

Ritter 310: *Rhipsalis micrantha* (Kunth) De Candolle – Prodr. Syst. 3: 476, 1828. (Combination repeated by G. Don, Gen. Syst. Gard. & Bot. 3: 177, 1834.)

loc. 1: Peru: Piura; Canchaque. – / 7. / 1954.

ZSS B4893 – corp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Lambayeque; "Valle Saña, 700 - x m." / "Saña". 700 m.

SGO 125570 – corp, ar, sp

loc. 3: Peru: Lambayeque; "Saña-Schlucht" = Saña gorge.

ZSS SR14007 – sem

Ritter 311: *Epiphyllum phyllanthus* (Linné) Haworth – Syn. Pl. Succ., 197, 1812.

loc. 1: Paraguay: "nordwestl. Ypytá" = NW of Ypytá.

SGO 125080 – (corp, ar)

loc. 2: Paraguay: Guairá; "Cerro Pelado östl. Villarica" = Cerro Pelado E of Villarica.

SGO 125081 – corp, ar

loc. 3: Paraguay: Amambay; "Río Aceite bei Cerro Corá" = Río Aceite near Cerro Corá.

SGO 125082 – corp, ar

loc. 4: Brazil: Minas Gerais; "Montes Claros".

SGO 125083 – corp, ar

ZSS SR14620 – sem

loc. 5: Paraguay: Paraguari ?; "Chiriguelo westl. P. J. Caballero" = Chiriguelo W of P. J. Caballero / "Chiriguelo (Paraguay)".

SGO 125084 – corp, ar

loc. 6: Paraguay ?; "San Bernardino".

SGO 125085 – corp, ar

loc. 7: Paraguay: Amambay; "zwischen Capitan Bado u. Cerro Nbcobi" = between Capitan Bado and Cerro Nbcobi.

SGO 125086 – corp, ar

loc. 8: Peru: Cajamarca: Jaén; "unterhalb Jaén, Linderos" = below Jaén, Linderos.

SGO 125087 – corp, ar

loc. 9: Peru: Amazonas; "Magdalena (Marañon)".

SGO 125088 – corp, ar

Ritter 311b: *Epiphyllum phyllanthus* (Linné) Haworth – Syn. Pl. Succ., 197, 1812.

loc. 1: Bolivia: La Paz: Sud-Yungas; Plazuela. – / 10. / 1954.

ZSS B4894 – corp (Leg. F. Ritter ex nat.)

loc. 2: Bolivia: Santa Cruz: Florida; Bermejo. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).

ZSS S10010 – sem (Leg. F. Ritter 1955.)

Ritter 312: *Wilmattea minutiflora* (Britton & Rose) Britton & Rose – The Cact. 2: 195, 1920.

– Peru: Cajamarca: Jaén; Jaén. – / 8. / 1954.
ZSS B4895 – (corp, ar, sp) (Leg. F. Ritter ex nat. (fragment only).)

Ritter 313: *Hylocereus peruvianus* Backeberg – Repert. Spec. Nov. Regni Veget. 51: 61-62, 1942.

Typus (T): Backeberg s.n. (?) (Probably not preserved.)

loc. 1: Peru: Piura; Canchaque. – / 8. / 1954.
ZSS T4896 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Lambayeque; "Valle Saña, 700 - x m.". 700 m.
SGO 121763 – corp, ar, sp

Ritter 314: *Hylocereus* sp.

loc. 1: Peru: Amazonas / Piura; Río Marañón, Quebrada Honda, Río Utcubamba. – / 8. / 1954. – Locality information amended according to specimens at ZSS herbarium.

ZSS AX3706 – fl (Ex cult. ZSS s.n.)
ZSS B4897 – (corp, ar, sp) (Leg. F. Ritter ex nat. (juvenile material).)

loc. 2: Peru: Amazonas; "Magdalena, oberhalb Arbeitsstelle Marañón" = Magdalena, above working site at Marañón.
SGO 121761 – corp, ar, sp

loc. 3: Peru: Amazonas; "Sta. Rosa" = Santa Rosa. – / 4. / 1960.
ZSS SR14008 – sem

Ritter 315: *Calymmanthium substerile* F. Ritter – Kakt. and. Sukk. 13: 25, 1962. (First mentioned as nude name in Backeberg, Die Cact. 2: 887, 1959 (cf. RPS 10).)

Typus (T): Ritter 315 (U 097800B, SGO, ZSS).

loc. 1: Peru: Cajamarca: Jaén; lower part of Huancabamba gorge, Bucara [Pucará]. – / 8. / 1954. – Locality information amended according to specimen at ZSS herbarium.

B GH20873 – ic (corp) (Ex cult. BG Berlin, 26. 6. 1986 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

B GH20873a – corp, ar, sp (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

U 097800B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10280 **Type number** – sem (Leg. F. Ritter 1957 (sub *Diploperianthium substerile*)).

ZSS T4898 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Cajamarca: Jaén; "Pucará".
SGO 125020 **ISO** – (corp), ar, sp
SGO 125684 **ISO** – (fl)
ZSS SR14009 **ISO** – sem

Ritter 316: *Loxanthocereus trujilloensis* F. Ritter – Kakt. Südamer. 4: 1472-1473, fig. 1332, 1981.

Typus (T): Ritter 1469 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

– Peru: La Libertad; Trujillo. – / 9. / 1954.

ZSS T4899 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T5125 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 317: *Loxanthocereus gracilis* (Akers & Buining) F. Ritter – Backeberg's Descr. & Erört. taxon. nomenkl. Fragen, [unpaged], 1958. (Concurrently published by Rauh & Backeberg in Rauh, Beitr. Kenntn. peruan. Kakt.-veg., 300, 1958 (cf. RPS 10).)

loc. 1: Peru: Arequipa; between Chaviña and southwards towards Atico, close to the coast.

ZSS A4275 – ar, sp, fl (Ex cult. ZSS 76 2193, 4. 7. 1987) (Leg. Lüthi ex cult.)

loc. 2: Peru: Arequipa; "nördl. Atico" = N of Atico.

SGO 121965 – corp, ar, sp

loc. 3: Peru: Arequipa; "Atico". – / 6. / 1956.

ZSS SR14010 – sem

Ritter 318: *Haageocereus platinospinus* (Werdermann & Backeberg) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 209, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Peru: Arequipa; Arequipa. – / 7. / 1954.

ZSS T4900 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4901 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Moquegua; "östl. Moquegua, 2000 m." = E of Moquegua. 2000 m.

SGO 124737 – corp, ar, sp

loc. 3: Peru: Arequipa; "von Arequipa" = from Arequipa.

SGO 124738 – corp, ar, sp

loc. 4: Peru: Ayacucho; "Strasse nach Coracora, 2500 m." = road to Coracora. 2500 m.

SGO 124739 – (corp), ar, sp

loc. 5: Peru: Tacna; "Abstieg Peru nach Tacna" = descent Peru to Tacna.

SGO 124740 – (corp), ar, sp

loc. 6: Peru: Arequipa; Caraveli; "Convento Nr. 6 (S. 1394)". – / 6. / 1956. – The page reference given in the locality data probably relates to the Ritter field-books. The original label was first numbered "FR 185", which is identified as *Loxanthocereus deserticola* in the field-number list in KS 4.

ZSS SR14011 – sem

Ritter 318a: *Haageocereus platinospinus* (Werdermann & Backeberg) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 209, 1936. (Dated 1935, publ. Febr. 1936.)

- Peru: Tacna; "Weg Tacna nach Charaña" = path Tacna [Peru] towards Charaña [Bolivia ?]. – / 5. / 1959. – Identified as "*Haageocereus platinospinus* fa." in the field-number list in KS 4.
ZSS SR14012 – sem

Ritter 319: *Loxanthocereus variabilis* F. Ritter – Kakt. Südamer. 4: 1473-1475, fig. 1324, 1981.

Typus (T): Ritter 148 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Arequipa; Atico. 7. / 7. / 1954. – Material at ZSS has been received as *Haageocereus platinospinus*. Identified as "*Loxanthocereus variabilis* var. oder eigene Art" in KS 4: 1627.
ZSS T4902 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 320: *Loxanthocereus* sp.

- Peru: Lima; Pacarán. – / 7. / 1954.
ZSS T4903 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4904 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 321: *Loxanthocereus xylorhizus* F. Ritter – Kakt. Südamer. 4: 1475-1476, fig. 1341, 1981.

Typus (T): Ritter 321 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Lima; high mountains N of Chosica. – / – / 1953.
ZSS T4905 ISO – (corp), ar, sp (Leg. F. Ritter ex nat.)
ZSS T4906 ISO – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: Lima; "Chosica, Nr. 7".
SGO 121966 ISO – (corp), ar, sp

loc. 3: Peru: Lima; "nördlich Chosica" = N of Chosica. – / – / 1954. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 4: Peru: Lima; "Chosica". – / 2. / 1960.
ZSS SR14013 ISO – sem

Ritter 322: *Pygmaeocereus familiaris* F. Ritter – Kakt. Südamer. 4: 1428-1429, figs. 1282, 1287-1288, 1205, 1981.

Typus (T): Ritter 322 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa; "Chala", below main garua zone. – / – / 1954. – Locality data supplemented from the protologue; collection date according to specimen at U.

U HOLO – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS SR14014 ISO – sem (The original label is dated "XI. 58.")
ZSS T4909 ISO – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Peru: Arequipa; "Chala". – "Typus".
SGO 121967 ISO – rad, corp, ar, sp

loc. 3: Peru: sine loco.

ZSS A12784 – corp, ar, sp, al, fl (Ex cult. ZSS 89 2876, 27. 7. 1993)

ZSS B12783 – corp, ar, sp, fl (Ex cult. ZSS 89 2876, 27. 7. 1993)

Ritter 323: *Cleistocactus viridiflorus* Backeberg – Descr. Cact. Nov. 3: 5, 1963.

(Based on a living plant (cult. St. Pie) of Ritter 323; believed to be validly published as F. Ritter had previously deposited herbarium material.)

Typus (T): Ritter 323 (ZSS [type number]).

– Bolivia: La Paz: Muñecas; "Ayata". 3300 m. – / 10. / 1954.

ZSS B4910 **Type number** – (corp), ar, sp (Leg. F. Ritter ex nat. No locality associated with this specimen.)

ZSS SR14265 **ISO** – sem

ZSS S9976 **Type number** – sem (Leg. F. Ritter 1955 (sub '*Cleistocactus* de Ayata').)

ZSS T5120 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1978. No locality associated with this specimen.)

Ritter 324: *Cephalocleistocactus pallidus* Backeberg – Kakt.-Lex. 79, 1966.

(See Eggl in Bradleya 3: 102, 1985, on the typification of this taxon.)

Cleistocactus palhuayensis F. Ritter and *C. palhuayensis* var. *camachoensis* are based on the same collection number.)

Typus (T): Ritter 324 (? , ZSS) (ZSS has authentic material from the type collection.).

loc. 1: Bolivia: La Paz: Muñecas; "Rio Palhuaya". – / 10. / 1954. – Collection date according to original Ritter seed sample at ZSS.

ZSS SR14266 **Type number** – sem

ZSS S9977 **Type number** – sem (Leg. F. Ritter 1955 (sub '*Cleistocactus* de Palhuaya').)

Ritter 324: *Cleistocactus palhuayensis* F. Ritter & Shatori – in Ritter, Kakt.

Südamer. 2: 688–689, figs. 669–673, 1980. (*Cephalocleistocactus pallidus* Backeberg is based on another individual of the type collection.)

Typus (T): Ritter 324 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Bolivia: La Paz: Muñecas; lower Río Palhuaya, Consata depression. – / 10. / 1954. – Flowers yellow.

B GH20171 – fl, ic (corp) (Ex cult. BG Berlin, 19. 6. 1986.)

B GH20171a – corp, ar, sp (Ex cult. BG Berlin, 21. 7. 1993.)

ZSS A10499 **Type number** – fl, fr (Ex cult. ZSS 82 1856, 24. 5. 1982.)

ZSS S10370 **Type number** – sem (Ex cult. ZSS s.n., 1963.)

ZSS T4911 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4912 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T5070 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1956.)

Ritter 325: *Cleistocactus ritleri* Backeberg – Kakt. and Sukk. 10(11): 163,

1959. (The type was cited to be a living plant in the collection of Karius, Muggensturm; but preserved material of the type collection was at the time already deposited at ZSS.)

Typus (T): Ritter 325 (? , ZSS).

loc. 1: Bolivia: La Paz: Sud-Yungas; frontier towards Prov. Loyaza, Plazuela, at Rio La Paz. 1100 m. – / 10. / 1954. – Locality information according to specimens at ZSS and correspondence in ZSS archives (letter 31. 1. 1955, p. 79).

ZSS S9978 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T4913 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4914 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4915 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Bolivia: La Paz: Sud-Yungas; "Plazuela".

SGO 124775 **Type number** – corp, ar, sp

Ritter 326: *Cephalocleistocactus chrysocephalus* F. Ritter – Succulenta 1959(8): 107-111, ills., 1959.

Typus (T): Ritter 326 (ZSS [none of the several specimens annotated as holotype], SGO).

loc. 1: Bolivia: La Paz: Inquisivi; gorge below Inquisivi. 2000 m. – / 10. / 1954.

ZSS S9979 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T4916 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T4917 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Bolivia: La Paz: Inquisivi; "Inquisivi". 2000 m. – / 10. / 1954. – Collection date and altitude according to material at ZSS.

SGO 121736 **ISO** – corp, ar, sp, ceph

ZSS SR14267 **ISO** – sem (The original label was first dated "X. 54.", now crossed out and replaced with "I. 57.". It has the further comment: "Ceree (mit Cephal.) = Cereus (with cephalium).")

Ritter 327: *Trichocereus clavatus* F. Ritter – Kakt. Südamer. 2: 564, 1980.

Typus (T): Ritter 327 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: La Paz: Larecaja; "Cascabel".

SGO 121239 **ISO** – (corp), ar, sp

loc. 2: Bolivia: La Paz: Larecaja; "Mine Cascabel". – / – / 1958. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 3: Bolivia: La Paz ?; "Rio Consata". – / 10. / 1954. – Locality and collection date according to original Ritter seed sample at ZSS, locality also given in Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS SR14194 **Type number** – sem

ZSS S9980 **Type number** – sem (Leg. F. Ritter 1955.)

Ritter 328: *Pereskia weberiana* K. Schumann – Gesamtbeschr. Kakt., 762, 1898.

Typus (T): Kuntze s.n. (NY [lecto]) (Original holotype at B destroyed, cf. Leuenberger in Mem. New York Bot Gard. 41: 73, 1986.).

- Bolivia: La Paz: Sud-Yungas; "Plazuela" = La Plazuela. - / 10. / 1954. -
Collection date according to original Ritter seed sample at ZSS.
SGO 125351 - corp, ar, sp
ZSS B4918 - corp, ar, sp (Leg. F. Ritter ex nat. No locality associated
with this specimen.)
ZSS SR14195 - sem
ZSS S9981 - sem (Leg. F. Ritter 1955(sub *Pereskia diaz-romeroana*).
No locality associated with this specimen.)

Ritter 329: *Lobivia maximiliana* (Heyder) Rausch – *Lobivia* 1: 36, 1975.

(Attributed to Backeberg who used the name in the synonymy of *L. pentlandii* in *Die Cact.* 3: 1379, 1959. Name first used by Backeberg in his catalogue '10 Jahre Kakteen-Forschung', p. 28, 1937, but this can hardly be treated as combination.)

- loc. 1:** Bolivia: La Paz: Muñecas; upper main slopes of E cordillera, "Bacomba" [= Bacobamba ?]. - / 10. / 1954. - Locality information according to specimen at ZSS and letter in ZSS archives (31. 1. 1955, p. 136). This differs from KS 4: 1627, where the locality is given as "W of La Cumbre".
ZSS S9983 - sem (Leg. F. Ritter 1955 (sub *Lobivia corbula*)).
ZSS T4919 - rad, corp, ar, sp (Leg. F. Ritter ex nat. (seedling plant).)
- loc. 2:** Bolivia: La Paz: "Passhöhe Sorata - Quiabaya, Ost" = culmination of pass Sorata - Quiabaya, East / "oberh. Quiabaya" = above Quiabaya.
SGO 124420 - rad, corp, ar, sp
- loc. 3:** Bolivia: La Paz: "Passhöhe Sorata - Quiabaya, westliche Fundstelle" = culmination of pass Sorata - Quiabaya, western locality.
SGO 124421 - (corp), ar, sp
- loc. 4:** Bolivia: La Paz: "westl. La Cumbre (nach Yungas)" = W of La Cumbre (towards Yungas).
SGO 124422 - (corp), ar, sp, (al)
- loc. 5:** Bolivia: sine loco.
B GH15778 - fl, (ic) (Ex cult. BG Berlin, 8. 5. 1984 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
- loc. 6:** Bolivia: La Paz: Muñecas; "Bacobamba (Muñecas)".
ZSS SR14268 - sem
- loc. 7:** Bolivia: La Paz: Murillo; "westl. Pass Cumbre (Murillo)" = W of pass [La] Cumbre. - / 11. / 1962.
ZSS SR14269 - sem

Ritter 329a: *Lobivia maximiliana* (Heyder) Rausch – *Lobivia* 1: 36, 1975.

(Attributed to Backeberg who used the name in the synonymy of *L. pentlandii* in *Die Cact.* 3: 1379, 1959. Name first used by Backeberg in his catalogue '10 Jahre Kakteen-Forschung', p. 28, 1937, but this can hardly be treated as combination.)

- loc. 1:** Bolivia: La Paz: Omasuyo; "Achacachi (Omasuyo)". - / 10. / 1954. -
Locality according to original Ritter seed sample at ZSS, collection date according to data associated with the other ZSS herbarium material.
ZSS SR14270 - sem

ZSS S9984 – sem (Leg. F. Ritter 1955.)

ZSS T4920 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

loc. 2: Bolivia: "nördl. Puno" = N of Puno. – Both original labels originally read as "südl. Puno" = S of Puno and were corrected by Ritter.

SGO 124423 – corp, ar, sp

Ritter 329b: *Lobivia maximiliana* (Heyder) Rausch – Lobivia 1: 36, 1975.

(Attributed to Backeberg who used the name in the synonymy of *L.*

pentlandii in Die Cact. 3: 1379, 1959. Name first used by Backeberg in his catalogue '10 Jahre Kakteen-Forschung', p. 28, 1937, but this can hardly be treated as combination.)

– Peru: Cuzco; "Vilcanota, km 178" / "Vilcanota-Tal, km 178" = Vilcanota valley, km 178. – All 3 original labels have the locality "Marangani" added later.

SGO 124424 – rad, corp, ar, sp

Ritter 330: *Lobivia miniatiflora* F. Ritter – Taxon 12(3): 124, 1963.

Typus (T): Ritter 330 (U [not found], ZSS [status ?]) (Holotype cited for U l.c. (1): 28, 1963.).

loc. 1: Bolivia: La Paz: Inquisivi; above Inquisivi. 3300 m. – / – / 1954.

ZSS A10473 **Type number** – corp, ar, sp, fl (Ex cult. ZSS s.n., 28. 5. 1974.)

ZSS A4252 **Type number** – rad, corp, ar, sp (Ex cult. ZSS s.n., 28. 11. 1980.)

ZSS A4264 **Type number** – corp, ar, sp, al, fl (Ex cult. ZSS s.n., 19. 4. 1982 (same clone as vegetative material sub herb. ZSS 4252).)

loc. 2: Bolivia: La Paz: Inquisivi; "Quime". – / 10. / 1954. – Locality and collection date according to original Ritter seed sample at ZSS, repeated in Ritter letter dated 31. 1. 1955 (ZSS archives).

ZSS SR14271 **Type number** – sem

ZSS S9985 **Type number** – sem (Leg. F. Ritter c. 1955.)

Ritter 331: *Echinopsis yungasensis* F. Ritter – Kakt. Südamer. 2: 631, 1980.

Typus (T): Ritter 331 (U, SGO, ZSS [status ?]).

loc. 1: Bolivia: La Paz: Sud-Yungas; "Plazuela". – / – / 1953.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

ZSS AX10487 **Type number** – fl (Ex cult. ZSS s.n., 27. 6. 1975. No locality data or collection date associated with this specimen.)

ZSS S9811 **Type number** – sem (Leg. Köhres. Actual locality not given.)

ZSS S9881 **Type number** – sem (Leg. Köhres (ex cult.). No locality data or collection date associated with this specimen.)

loc. 2: Bolivia: La Paz: Sud-Yungas; "Plazuela".

SGO 121407 **ISO** – corp, ar, sp ("2 Varianten" = 2 variants.)

ZSS S9986 **Type number** – sem (Leg. F. Ritter 1955.)

Ritter 332: *Yungasocereus inquisivensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 669, 1980.

- loc. 1:** Bolivia: La Paz: Sud-Yungas; Plazuela. – / 10. / 1954. – Locality information according to specimens at ZSS.
 B GH31353 – fl, ic (corp) (Ex cult. BG Berlin, 18. 6. 1993 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
 ZSS B4922 – corp, ar, sp (Leg. F. Ritter ex nat. (seedling plant).)
 ZSS T4921 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: La Paz: Inquisivi; "Inquisivi".
 SGO 121140 – (corp), ar, sp

Ritter 333: *Lobivia pentlandii* (Hooker) Britton & Rose – The Cact. 3: 54, 1922.

- loc. 1:** Bolivia: Oruro; Oruro. – / 10. / 1954.
 ZSS B4923 – ar, sp (Leg. F. Ritter ex nat.)
 ZSS S9987 – sem (Leg. F. Ritter 1955 (sub *Lobivia boliviensis*).)
- loc. 2:** Bolivia: La Paz: Aroma; Chijmuni [Chigmuni]. – / 10. / 1954.
 ZSS T4924 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 3:** Bolivia: La Paz: Omasuyo; Achacachi. – / 10. / 1954.
 ZSS T4925 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 333a: *Lobivia pentlandii* (Hooker) Britton & Rose – The Cact. 3: 54, 1922.

- Bolivia: Oruro; Huanuni. 4000 m. – Locality data according to Ritter letter dated 12. 2. 1955, p. 15 (ZSS archives). KS 4 (sub no. 107) gives the locality as Machacamarca.
 ZSS S10011 – sem (Leg. F. Ritter 1955 (sub *Lobivia boliviensis*).)

Ritter 334: *Lobivia schieliana* Backeberg – Descr. Cact. Nov. [1:] 30, 1957. (Dated 1956, published early in 1957 according to correspondence at Kew. Often mis-spelled 'schieleana'.)

- loc. 1:** Bolivia: La Paz: Muñecas; below Mollopampa, W of Ayata. – / 10. / 1954. – Locality information according to letter in ZSS archives (31. 1. 1955, p. 138).
 ZSS A10460 – fl (Ex cult. ZSS s.n., undated, probably 1959.)
 ZSS A10495 – fl (Ex cult. ZSS s.n., 4. 8. 1977.)
 ZSS T4926 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T5141 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: La Paz: Muñecas; "Mollopampa". – / 8. / 1959. – Collection date according to original Ritter seed sample at ZSS.
 SGO 124425 – rad, corp, ar, sp
 ZSS SR14272 – sem ("(1 Frucht)") = 1 fruit.)

Ritter 334a: *Lobivia schieliana* Backeberg – Descr. Cact. Nov. [1:] 30, 1957. (Dated 1956, published early in 1957 according to correspondence at Kew. Often mis-spelled 'schieleana'.)

- Bolivia: La Paz: Larecaja; "Cascabel". – Locality given as "südl. Cascabel" = S of Cascabel, in KS 4: 1627.
 SGO 124426 – rad, corp, ar, sp

Ritter 336: *Cleistocactus* sp.

- Bolivia: La Paz; above Irupana. – / 10. / 1954.
ZSS T4927 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 337: *Opuntia* sp.

- Bolivia: La Paz: Inquisivi; Inquisivi. – / 10. / 1954. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS B4928 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 338: *Opuntia orurensis* Cárdenas – Cact. Succ. J. (US) 28: 112-113, 1956.

- loc. 1:** Bolivia: Oruro; near Oruro. – / 10. / 1954. – Collection date according to specimen at ZSS. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS T4929 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: Cochabamba ?; "Machac, Nr. 7" / "Machac" [= Machaca ?]. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122012 – corp, ar, sp

Ritter 339: *Rebutia orurensis* (Backeberg) F. Ritter – Kakt. Südamer. 2: 594-595, 1980.

- loc. 1:** Bolivia: Oruro; near Oruro. – / 10. / 1954.
ZSS S10442 – sem (Leg. Fa. Köhres (ex cult.) 1975.)
ZSS T4930 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: Oruro; "Oruro Nord" = Oruro north / "Oruro". – / 10. / 1954.
SGO 124568 – rad, corp, ar, sp
- loc. 3:** Bolivia: Oruro; "Oruro".
ZSS SR14273 – sem

Ritter 340: *Rebutia eucaliptana* (Backeberg) F. Ritter – Kakt. Südamer. 2: 602, 1980.

- Bolivia: La Paz: Aroma; Chijmuni [Chigmuni]. – / 10. / 1954.
ZSS A9826 – ar, fl (Ex cult. ZSS s.n. (ex coll. BG Linz 1974).)
ZSS T4932 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 341: *Rebutia steinmannii* (Solms-Laubach) Britton & Rose – The Cact. 3: 47, 1922.

- loc. 1:** Bolivia: La Paz; Yaco. – / 10. / 1954.
ZSS A9826 – ar, fl (Ex cult. ZSS s.n. (ex coll. BG Linz 1974).)
ZSS T4933 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: Potosí; "Llallagua". – "St. 2 - 3 1/2 mm lang" = spines 2 - 3.5 mm long.
SGO 124569 – rad, corp, ar, sp
- loc. 3:** Bolivia: Potosí; "10 km westl. Cuchoingenio" = 10 km W of Cuchoingenio.
ZSS SR14274 – sem ("1 Frucht" = 1 fruit.)

loc. 4: Bolivia: Oruro; "Huanuni". - / 1. / 1955.
ZSS SR14275 - sem

**Ritter 341a: *Rebutia mamillosa* Rausch var. *australis* F. Ritter - Kakt. and. Sukk. 28(4): 77, 1977.
Typus (T): Ritter 341a (U, SGO, ZSS [seeds only]).**

loc. 1: Bolivia: Tarija: Mendez; "San Antonio". - / - / 1962. - Collection date according to specimen at U.
U HOLO - rad, corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS S9882 **Type number** - sem (Leg. Köhres ex cult. No locality data associated with this specimen.)

loc. 2: Bolivia: Tarija: Mendez; "San Antonio Nr. 9". - / 4. / 1962.
SGO 124570 **ISO** - rad, corp, ar, sp

loc. 3: Bolivia: Tarija: Mendez; "westl. San Antonio" = W of San Antonio. - "(ohne N.-K.)" = without nectary chamber.
ZSS SR14276 **Type number** - sem

**Ritter 341b: *Rebutia graciliflora* F. Ritter var. *occidentalis* F. Ritter (*nom. inval.* Art. 36.1, 37.1) - Kakt. Südamer. 2: 610, in synon., 1980. (Earlier used as provisional catalogue name.)
Based on Ritter 341b.**

loc. 1: Bolivia: Potosí: Sud-Chichas; E slopes of high Andes, far W of Impora. 3600 m. - Identified as *Rebutia mamillosa* var. *mamillosa* in KS 4: 1627, assuming that the second entry of FR 341a is a misprint for this collection.
ZSS S8465 - sem (Leg. De Herdt.)

loc. 2: Bolivia: Potosí: Sud-Chichas; "östl. Mal Paso, Abstieg" = E of Mal Paso, descent. - "(ohne N.-K.)" = without nectary chamber.
ZSS SR14277 - sem

**Ritter 341c: *Rebutia camargoensis* Rausch - Succulenta 55(3): 42, ill. (p. 41), 1976.
Typus (T): Rausch 311 (ZSS) (Type cited for W but placed in ZSS).**

loc. 1: Bolivia: Chuquisaca: Nor-Cinti; "nördl. Camargo" = N of Camargo / "37 km nördl. Camargo = 37 km N of Camargo. - / - / 1963.
SGO 124571 - (corp), ar, sp

loc. 2: Bolivia: Chuquisaca: Nor-Cinti; "37 km nördl. Camargo" = 37 km N of Camargo.
ZSS SR14278 - sem

Ritter 342: *Neowerdermannia vorwerkii* Fric - Kaktusár 1(11): 85-87, 1930.

loc. 1: Bolivia: sine loco. - / 10. / 1954.
ZSS SR14279 - sem ("Ort nicht mehr zu ermitteln" = locality impossible to establish anymore.)
ZSS T4937 - rad, corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Bolivia: Oruro / Cochabamba; "Strasse Caracollo - Cochab.a, Aufstieg" = road Caracollo - Cochabamba, ascent / "östl. Caracollo" = E of Caracollo.
SGO 125250 – (corp), ar, sp
- loc. 3:** Bolivia: La Paz: Pacajes; "Corocoro".
SGO 125251 – rad, corp, ar, sp
- loc. 4:** Bolivia: Potosí: Sud-Chichas; "Mal Paso". – / 3. / 1962.
ZSS SR14280 – sem

Ritter 343: *Acanthorhopsalis paranganiensis* Cárdenas – Cactus (Paris) 6(34): 126-127, ill., 1952.

- loc. 1:** Bolivia: La Paz: Inquisivi; Inquisivi. – / 10. / 1954.
ZSS B4938 – corp, ar, sp, fl (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: "oberh. Tuini" = above Tuini / "Tuini". – / 6. / 1958.
SGO 125571 – corp, ar, sp

**Ritter 344: *Opuntia cochabambensis* Cárdenas – Rev. Agric. Cochabamba 9: 20-22, 2 pl., 1953.
Typus (T): Cardenas 5042 (BOLV, US).**

- loc. 1:** Bolivia: Cochabamba; "Cochabamba, Hügel" = Cochabamba, hill. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122013 – corp, ar, sp
- loc. 2:** Bolivia: Cochabamba / Santa Cruz; "Palmar zw. Valle Grande u. Río Mizque" = Palmar between Valle Grande and Río Mizque. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122014 – corp, ar, sp

Ritter 345: *Cleistocactus parviflorus* (K. Schumann) Roland-Gosselin – Bull. Mens. Soc. Nice 44: 32, 1904.

- loc. 1:** Bolivia: Tarija; near Tarija. – Locality information according to Ritter letter dated 12. 2. 1955, p. 34 (ZSS archives), where Ritter says that this plant will be described by Cardenas as *Cleistocactus tarijensis*.
ZSS T5069 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Santa Cruz; "Buen Retiro".
ZSS S10012 – sem (Leg. F. Ritter 1955 (sub *Cleistocactus herzogianus*).
Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).)
ZSS SR14281 – sem
- loc. 3:** Bolivia: Cochabamba; "Cochabamba". – / 6. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124776 – corp, ar, sp
ZSS SR14282 – sem

**Ritter 346: *Cumulopuntia frigida* F. Ritter – Kakt. Südamer. 2: 493-494, 1980.
Typus (T): Ritter 346 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).**

loc. 1: Bolivia: Potosí / Oruro; "Pass Llallagua" / "Pass Llallagua - Huanuni" = pass Llallagua - Huanuni.

SGO 121869 ISO – corp, ar, sp ("Jugend- u. Alterform" = juvenile and mature form.)

loc. 2: Bolivia: Potosí / Oruro; "Pass zwischen Huanuni und Llallagua, Depart.-Grenze Oruro und Potosí" = pass between Huanuni and Llallagua, frontier of Dept. Oruro and Potosí. – / – / 1953.

U HOLO – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

Ritter 347: *Lobivia caineana* Cárdenas – Cact. Succ. J. (US) 24(6): 184-185, 1952.

– Bolivia: Santa Cruz; "Buen Retiro". – / 11. / 1954. – Locality information and collection date according to original Ritter seed sample at ZSS, locality repeated on specimen label at SGO and in Ritter letter dated 12. 2. 1955 (ZSS archives).

SGO 124427 – (rad), corp, ar, sp

ZSS S10013 – sem (Leg. F. Ritter 1955.)

ZSS SR14283 – sem

Ritter 348: *Lobivia rossii* (Bödeker) Backeberg var. *bustilloensis* F. Ritter – Kakt. Südamer. 2: 579-580, figs. 18, 482, 1980.

Typus (T): Ritter 348 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

– Bolivia: Potosí: Bustillo ?; "Lallagua, Nr. 4" / "Llallagua". – / – / 1954. – Collection date according to specimen at U.

SGO 124443 ISO – (corp), ar, sp

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

ZSS T4939 ISO – ar, sp (Leg. F. Ritter ex nat.)

Ritter 348a: *Lobivia pentlandii* (Hooker) Britton & Rose – The Cact. 3: 54, 1922.

– Bolivia: Potosí; "Betanzos, Nr. 3". – One of the original labels has the number 348a crossed out and replaced with FR 107; the two numbers are said to be equal in KS 4.

SGO 124448 – (corp), ar, sp

Ritter 348b: *Lobivia rossii* (Bödeker) Backeberg – Die Cact. 3: 1404, 1959.

(Cryptic combination, attributed to Bödeker. Name first used by Marshall & Bock, Cactaceae, 130, 1941, but this can hardly serve as new combination.)

loc. 1: Bolivia: Potosí: Frias; "Leñas". – / – / 1963. – Distributed as *Lobivia andina* Ritter (*nom. nud.*). Collection date according to specimens at U. Identified as *Lobivia rossii* var. *rossii* in KS 4: 1627.

U – (corp), ar, sp (Labelled as "Neotyp" by Ritter, but this 'neotypification' was never formally published as far as known. Collection number inferred.)

U 160804B – (corp), ar, sp (Labelled as "Holotypus" of *Lobivia andina* Ritter (*nom. nud.*). Collection number inferred.)

- loc. 2:** Bolivia: Potosí; "9 km nördl. Potosí" = 9 km N of Potosí / "nördl. Potosí" = N of Potosí. – The first original label also has the number "FR 797" crossed out, the second has FR 797 replaced with "FR 348b" and is named as *Lobivia andina*. FR 797 is *Lobivia culpinensis* according to KS 4.
SGO 124441 – (corp), ar, sp
- loc. 3:** Bolivia: Potosí; "10 km w. Cuchoingenio" = 10 km W of Cucho Ingenio / "W. Cuchoingenio" = W of Cucho Ingenio. – Both labels also have the number FR 797 (identified as *Lobivia culpinensis* in KS 4) crossed out, replaced with "348" (and identified as *Lobivia cf. andina*) on the first label, with "348b" on the second label.
SGO 124442 – (corp), ar, sp
- loc. 4:** Bolivia: Potosí; "Yocalla" / "24 km westl. Yocalla, ca. 4000 m." = 24 km W of Yocalla. 4000 m. – The second label has the number as "FR 348", the first originally also had "FR 348" and was later changed to FR 348b.
SGO 124444 – (corp), ar, sp
- loc. 5:** Bolivia: Potosí; "36 km nw. Potosí, Nr. 8" = 36 km NW of Potosí. – One of the two labels has the number as "FR 348", the other originally also had "FR 348" and was later changed to FR 348b.
SGO 124445 – (corp), ar, sp
- loc. 6:** Bolivia: Oruro; "Sevaruyo" / "nordöstl. Sevaruyo, Nr. 6" = NE of Sevaruyo. – The second label also contains the information "einziges Exemplar" = only specimen. Both labels also have the number "FR 797" (identified as *Lobivia culpinensis* in KS 4) now crossed out and amended to "FR 348b" on the first and to "FR 348" on the second label.
SGO 124446 – (corp), ar, sp
- loc. 7:** Bolivia: Potosí; "24 km westl. Yocalla" = 24 km W of Yocalla. – / 3. / 1963.
ZSS SR14284 – sem

Ritter 348c: *Lobivia rossii* (Bödeker) Backeberg var. *sayariensis* F. Ritter – Kakt. Südamer. 2: 580, fig. 483, 1980.

Typus (T): Ritter 348c (U, SGO [status ?], ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Cochabamba; Tapacari; "oberhalb Sayari" = above Sayari. – / – / 1958. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Cochabamba; "über Parotani" = above Parotani / "Abstieg nach Parotani, Nr. 1" = descent to Parotani. – The second labels has the locality "Sayari" added later. The first label first had the number as "FR 348a", the second had the original number "FR 348" changed to "FR 348c".
SGO 124447 Type ? – (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba; "Abstieg nach Barotani" = descent to Parotani. – / 12. / 1958.
ZSS SR14285 Type ? – sem

Ritter 349: *Lobivia sp.*

- Bolivia: Potosí; "Llallagua Nr. 10". - / 12. / 1954.
ZSS S10014 - sem (Leg. F. Ritter 1955. No locality associated with this specimen.)
ZSS SR14286 - sem

Ritter 350: *Echinopsis obrepanda* (Salm-Dyck) K. Schumann - in Engler & Prantl, Nat. Pfl.-fam. 3(6a): 184, 1894.

- loc. 2:** Bolivia: Cochabamba; Campero; "Quiroga, Bergrücken gegen Westen" = Quiroga, mountain ridge towards the West. - "Das vielstachelige Stück wohl Mischform nach *Echps. rubens* R. FR 986" = the many-spined specimen apparently intermediate with *Echinopsis rubens* Ritter 986.
SGO 121408 - (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba; "Quillacollo, höchste Lagen Gebirge" = Quillacollo, uppermost altitudes of the mountains. - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121409 - (corp), ar, sp
- loc. 4:** Bolivia: Cochabamba; "Quillacollo, unten" = Quillacollo, below. - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121410 - (corp), ar, sp
- loc. 5:** Bolivia: Cochabamba; "Hügel bei Cochabamba" = hills near Cochabamba. - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121411 - (corp), ar, sp
- loc. 6:** Bolivia: "Otyuo, Echps. Nr. 6". - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121412 - (corp), ar, sp
- loc. 7:** Bolivia: Cochabamba; Tapacari; "unterh. Sayari, bei 3000 m." = below Sayari. 3000 m. - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121413 - (corp), ar, sp
- loc. 8:** Bolivia: Cochabamba; "Aiquile, Nr. 9". - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121414 - (corp), ar, sp

Ritter 350a: *Echinopsis obrepanda* (Salm-Dyck) K. Schumann - in Engler & Prantl, Nat. Pfl.-fam. 3(6a): 184, 1894.

- loc. 1:** Bolivia: sine loco.
ZSS T5107 - corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Tarija; "Tarija, südl. des Flusses" = Tarija, S of the river. - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121415 - (corp), ar, sp, fl ("Mit 13 - 17 cm langen Blütenresten" = with remains of flowers 13 - 17 cm long.)
- loc. 3:** Bolivia: Tarija; Arce; "Padcaya". - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121416 - (corp), ar, sp
- loc. 4:** Bolivia: Tarija; Mendez; "Junacas". - Identified as *Echinopsis fiebrigii* on the original label.
SGO 121417 - rad, corp, ar, sp

loc. 5: Bolivia: Tarija; "Tarija". – Identified as *Echinopsis febrigii* on the original label.

SGO 121418 – rad, corp, ar, sp, al
ZSS SR14287 – sem ("2 Pflanzen") = 2 plants.)

Ritter 350b: *Echinopsis calliantholilacina* Cárdenas – Cactus (Paris) 20(85): 110-111, 1965.

– Bolivia: Cochabamba; "ca. 50 km östl. Cochab.ba" = c. 50 km E of Cochabamba. – / 12. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as *Echinopsis febrigii* on the original label.
SGO 121419 – (corp), ar, sp, al
ZSS SR14288 – sem ("Same von 1 Frucht") = seeds from 1 fruit.)

Ritter 351: *Rebutia steinmannii* (Solms-Laubach) Britton & Rose var. *cinninata* (Rausch) F. Ritter – Kakt. Südamer. 2: 602, 1980.

loc. 1: Bolivia: Copachuncho. – / – / 1954.
ZSS T4940 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Bolivia: Oruro; Huanuni. – / – / 1954. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S10015 – sem (Leg. F. Ritter 1955.)
ZSS T4941 – rad, corp, ar, sp (Leg. F. Ritter.)

Ritter 352: *Rebutia violascens* F. Ritter – Kakt. and. Sukk. 28(4): 76, 1977.
Typus (T): Ritter 352 (U, ZSS [seeds only]).

loc. 1: Bolivia: Chuquisaca: Nor-Cinti; "nördlich Camargo" = N of Camargo. – / – / 1958. – Collection date according to specimen at U.
U HOLO – rad, corp, ar, sp (Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Bolivia: Chuquisaca: Nor-Cinti; sine loco.
ZSS S10016 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 3: Bolivia: Potosí; "Llallagua Nr. 5". – First labelled "Llallagua Nr. 4".
SGO 124572 – rad, corp, ar, sp

loc. 4: Bolivia: Chuquisaca ?; "s. Lecori" = S of Lecori / "41 km über Lecori = 41 km above Lecori.
SGO 124573 – rad, corp, ar, sp

loc. 5: Bolivia: Cochabamba ?; "Macha".
SGO 124574 – rad, corp, ar, sp

loc. 6: Bolivia: Potosí; "Llallagua Nr. 1".
ZSS SR14289 – sem

Ritter 353: *Cleistocactus buchtienii* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 189, 411, 1936. (Dated 1935, publ. Febr. 1936.)
Typus (T): Anonymus s.n. (? , ZSS) (ZSS has an authentic seed sample.)

loc. 1: Bolivia: Chuquisaca: Sucre; "Hda. Ressini" = Hacienda Ressini.
SGO 124777 – corp, ar, sp

- loc. 2:** Bolivia: Cochabamba; "Cochabamba".
SGO 124778 – corp, ar, sp ("Beide langblütig" = both long-flowered.)
ZSS SR14290 – sem
- loc. 3:** Bolivia: Potosí; "Yocalla". – / 12. / 1962. – "(gelbst.)" = yellow-spined. The original label has the collection number as "FR 353 (= FR 67a)"; the two numbers are set equal in the field-number list in KS 4.
ZSS SR14291 – sem

Ritter 353a: *Cleistocactus buchtienii* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 189, 411, 1936. (Dated 1935, publ. Febr. 1936.)
Typus (T): Anonymus s.n. (? , ZSS) (ZSS has an authentic seed sample.).

- loc. 1:** Bolivia: sine loco. – A red-spined form, identified as "*Cleistocactus buchtienii* fa." in KS 4: 1627.
ZSS A10 – fl (Ex cult. ZSS 89 1916, 20. 4. 1989) (Ex cult. ZSS.)
- loc. 2:** Bolivia: Cochabamba; "50 km östl. Cochab.ba" = 50 km E of Cochabamba / "östl. Cochab.ba" = E of Cochabamba. – "schwarz- bis rotbraunstachl." = black to reddish-brown spined. Identified as "*Cleistocactus buchtienii* fa." in KS 4: 1627.
SGO 124779 – corp, ar, sp
- loc. 3:** Bolivia: "Beginn Rio Chuta" = start of Río Chuta / "Rio Chuta". – Identified as "*Cleistocactus buchtienii* fa." in KS 4: 1627.
SGO 124780 – corp, ar, sp
- loc. 4:** Bolivia: Cochabamba; "50 km östl. Cochabamba" = 50 km E of Cochabamba. – / 12. / 1958. – Identified as "*Cleistocactus buchtienii* fa." in KS 4: 1627.
ZSS SR14292 – sem

Ritter 353c: *Cleistocactus buchtienii* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 189, 411, 1936. (Dated 1935, publ. Febr. 1936.)
Typus (T): Anonymus s.n. (? , ZSS) (ZSS has an authentic seed sample.).

- Bolivia: Chuquisaca; "Weg von Yamparaez nach Sotomayor" = path from Yamparaez to Sotomayor / "unterh. Yamparaez" = below Yamparaez.. – The second original label has the locality "Sotomayor" crossed out and replaced with "Yamparaez". Identified as "*Cleistocactus buchtienii* fa." in KS 4: 1627.
SGO 124781 – corp, ar, sp

Ritter 354: *Parodia schwebsiana* (Werdermann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 271, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Argentina: La Rioja; "Famatina". – Locality data according to index card associated with the seed sample at ZSS, and probably completely erroneous.
ZSS S10369 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Cochabamba; "Cochabamba". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 124509 – rad, corp, ar, sp
ZSS SR14293 – sem

- loc. 3:** Bolivia: Cochabamba; "ca. 50 km östl. Cochabamba" = c. 50 km E of Cochabamba. – / 12. / 1958.
SGO 124510 – (corp), ar, sp
- loc. 4:** Bolivia: Cochabamba; sine loco.
B GH20409 – fl, ic (corp, fl) (Ex cult. BG Berlin, 1. 7. 1986 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
- Ritter 355: *Bolivicereus samaipatanus*** Cárdenas – Cact. Succ. J. (US) 23(3): 91-93, 1951.
- loc. 1:** Bolivia: Santa Cruz: Florida; near Samaipata, below the village. 1500 m.
B GH16277 – fl, ic (corp) (Ex cult. BG Berlin, 4. 7. 1984 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH16277a – corp, ar, sp (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
ZSS AX1457 – corp, ar, sp, fl (Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Santa Cruz: Florida; "Samaipata". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 121968 – corp, ar, sp ("14 - 16 R." = 14 - 16 ribs / "13 Rippen (dies Exemplar wohl 11 oder 12 od. 13)" = 13 ribs (this specimen probably 11 or 12 or 13).)
ZSS SR14294 – sem
- Ritter 355a: *Bolivicereus samaipatanus*** Cárdenas var. *multiflorus* Cárdenas – Cact. Succ. J. (US) 23(3): 93-94, 1951.
- Bolivia: Santa Cruz: Florida; "Bermejo". – / 12. / 1954.
ZSS SR14295 – sem
- Ritter 356: *Cleistocactus chacoanus*** F. Ritter var. *santacruzensis* F. Ritter – Kakt. Südamer. 2: 672, fig. 687, 1980. (Based on the same type collection as *Cleistocactus santacruzensis* Backeberg, and therefore incorrectly designated as illegitimate by Mottram in Cact. Succ. J. (US) 61: 156, 1989.)
Typus (T): Ritter 356 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).
- loc. 1:** Bolivia: Santa Cruz; tile roofs of department capital "Santa Cruz", frequent. – / – / 1954. – Locality data supplemented from the protologue; collection date according to specimen at U.
B GH10078 – fl (Ex cult. BG Berlin, 5. 6. 1981 (cult. ex sem.)). No locality data directly associated with this specimen.)
SGO 124782 ISO – corp, ar, sp
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
ZSS A4268 **Type number** – fl (Ex cult. ZSS 77 2285 (additional flower and description added 22. 3. 1988).)
ZSS A483 **Type number** – fr, sem (Ex cult. ZSS 77 2285, 4. 9. 1987)
ZSS A9829 **Type number** – fl (Ex cult. ZSS 77 2285, 21. 5. 1986) (Ex cult. ZSS (ex coll. Hänslı 1977).)
ZSS S10017 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 2: Bolivia: Santa Cruz; "Sta. Cruz (Cercado, Sta. Cruz)" = Santa Cruz. – The original label also had the collection number "841", now crossed out. FR 841 is identified as *Cleistocactus chacoanus* in the field-number list in KS 4.
ZSS SR14296 **Type number** – sem

Ritter 357: *Cleistocactus candelilla* Cárdenas – Cact. Succ. J. (US) 24(5): 146-147, 1952.

loc. 1: Bolivia: Santa Cruz: Florida; "Samaipata". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS, locality also repeated in Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS A10472 – fl (Ex cult. ZSS s.n., 8. 5. 1974. No locality directly associated with this specimen.)
ZSS B5100 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. No original label present.)
ZSS S10018 – sem (Leg. F. Ritter 1955. No original label present.)
ZSS SR14297 – sem

loc. 2: Bolivia: Santa Cruz: Florida; "Mairana, Nr. 9".
SGO 124783 – corp, ar, sp

loc. 3: Bolivia: Santa Cruz; sine loco.
B GH13869 – fl, ic (corp, fl) (Ex cult. BG Berlin, 16. 5. 1983 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)
B GH13869a – corp, ar, sp (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

Ritter 358: *Cleistocactus parviflorus* (K. Schumann) Roland-Gosselin var. *comarapanus* F. Ritter – Kakt. Südamer. 2: 683-684, 1980.

Typus (T): Ritter 358 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Santa Cruz: Valle Grande; E of "Comarapa". – / – / 1954. – Locality data supplemented from the protologue.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Bolivia: Santa Cruz: Florida; "Mataral". – / 12. / 1954. – Collection date and locality according to original Ritter seed sample at ZSS, locality data repeated in Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S10019 – sem (Leg. F. Ritter 1955.)
ZSS SR14298 – sem

loc. 3: Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 15". – "(Hat grössere Samen als Mataral, etc.)" = has larger seeds than [material from] Mataral, etc.
SGO 124784 **ISO** – corp, ar, sp

loc. 4: Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza, tiefere Lagen" = ascent from Marqueza, lower altitudes.
SGO 124785 – corp, ar, sp

loc. 5: Bolivia: Santa Cruz: Valle Grande; "Comarapa Nr. 15". – / 7. / 1958.
ZSS SR14299 **ISO** – sem ("z.T. taub") = partly sterile.)

Ritter 358a: *Cleistocactus* sp.

- Bolivia: Cochabamba / Santa Cruz; "Abstieg zum Rio Mizque, Nr. 4" = descent to the Rio Mizque.
SGO 124786 – (corp), ar, sp

Ritter 359: *Cleistocactus parviflorus* (K. Schumann) Roland-Gosselin var. ***aiquilensis*** F. Ritter – Kakt. and. Sukk. 14(6): 102-104, ill., 1963. (Type erroneously cited as *Ritter 539* (instead of *Ritter 359*.)
Type (T): Ritter 359 (U 117874B, SGO, ZSS).

- Bolivia: Cochabamba: Campero; "Aiquile". – / – / 1954. – Collection date according to KS 2.
SGO 124787 **ISO** – corp, ar, sp
U 117874B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10020 **Type number** – sem (Leg. F. Ritter 1955. No locality directly associated with this specimen.)
ZSS SR14300 **ISO** – sem
ZSS T4942 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat. No locality directly associated with this specimen.)

Ritter 360: *Echinopsis arachnacantha* (Buining & F. Ritter) H. Friedrich – Kakt. and. Sukk. 25: 82, 1974.

- loc. 1:** Bolivia: Santa Cruz: Florida; near Samaipata. 2000 m.
ZSS A10485 **Type number** – fl (Ex cult. ZSS s.n., 13. 5. 1975.)
ZSS A10494 **Type number** – fl (Ex cult. ZSS s.n., 20. 7. 1977.)
ZSS S10021 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T4943 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Bolivia: Santa Cruz: Florida; "Samaipata (Florida)".
ZSS SR14301 **ISO** – sem

Ritter 360a: *Echinopsis arachnacantha* (Buining & F. Ritter) H. Friedrich – Kakt. and. Sukk. 25: 82, 1974.

- Bolivia: Santa Cruz: Florida; "Mairana, Nr. 20". – / 7. / 1958. – Identified as *Echinopsis arachnacantha* var. *minor* Ritter (*nom. nud.*) on the original label. Locality given as "westl. der Ortschaft Mairana" in KS 2: 632.
SGO 121420 – rad, corp, ar, sp

Ritter 360b: *Echinopsis arachnacantha* (Buining & F. Ritter) H. Friedrich var. ***densisetata*** (Rausch) H. Friedrich – Kakt. and. Sukk. 25: 82, 1974.

- Bolivia: Santa Cruz: Valle Grande; "Valle Grande". – Identified as *Echinopsis arachnacantha* var. *spiniosior* Ritter (*nom. nud.*) on the original label. Locality given as "westl. von Valle Grande, oberhalb der Stadt" in KS 2: 632. Here, Ritter also comments that he has no material of this collection; despite this, SGO has a specimen consisting of two small plants.
SGO 121421 – rad, corp, ar, sp

Ritter 361: *Acanthorhipsis samaipata* (Cárdenas) F. Ritter – Kakt. Südamer. 4: 1628, 1981. (The name given as basionym was itself a combination, but with the correct literature reference for the assumed basionym (name here corrected).)

- Bolivia: Santa Cruz: Florida; "Samaipata". – Locality data according to specimen at SGO and to Ritter letter dated 12. 2. 1955, p. 21 (ZSS archives).
SGO 124932 – corp, ar, sp
ZSS A10469 – fl (Ex cult. ZSS s.n., May 1974.)
ZSS S10022 – sem (Leg. F. Ritter 1955.)

Ritter 362: *Rhipsalis lorentziana* Grisebach – Abh. Ges. Wiss. Göttingen 24: 139, 1879.

- loc. 1:** Bolivia: Santa Cruz: Florida; "Samaipata". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 125572 – corp, ar, sp
ZSS SR14302 – sem
- loc. 2:** Argentina: Tucumán; "25 km von Monteros nach Tafi" = 25 km from Monteros towards Tafi del Valle / "Tafi d. V." = Tafi del Valle.
SGO 125573 – corp, ar, sp
- loc. 3:** Bolivia: Santa Cruz: Florida; Samaipata. – Locality data according to Ritter letter dated 12. 2. 1955, p. 21 (ZSS archives).
ZSS B4944 – corp (Leg. F. Ritter ex nat. Conf. D. C. Zappi.)
ZSS S10023 – sem (Leg. F. Ritter 1955.)
- loc. 4:** Argentina: Tucumán; "östl. Tafi d. V." = E of Tafi del Valle. – / 2. / 1959.
ZSS SR13684 – sem
- loc. 5:** Bolivia: Tarija: O'Connor; "Narvaez". – / 1. / 1963.
ZSS SR14303 – sem

Ritter 363: *Pfeiffera mataralensis* F. Ritter – Taxon 13(3): 115-116, 1964.

Typus (T): Ritter 363 (U 117903B, SGO, ZSS) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Bolivia: Santa Cruz: Florida; "Mataral". – / – / 1954. – Collection date according to specimen at ZSS.
SGO 125369 **ISO** – (corp), ar, sp
U 117903B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS B4945 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat. (juvenile material).)
ZSS S10024 **ISO** – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 9".
SGO 125370 – corp, ar, sp
- loc. 3:** Bolivia: Santa Cruz; "ca. 16 km südl. Camiri" = c. 16 km S of Camiri / "s. Camiri" = S of Camiri.
SGO 125371 – corp, ar, sp
- loc. 4:** Bolivia: Santa Cruz: Florida; sine loco.
B GH31652 – corp, ar, sp, fr, sem, ic (Ex cult. BG Berlin, 3. 8. 1993 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
- loc. 5:** Bolivia: Tarija: O'Connor; "Villa Montes". – The collection number on the original label is given as "FR 363 (?)".
ZSS SR14304 – sem

loc. 6: Bolivia: Santa Cruz: Florida; "Mataral + Sama + Aiquile". – / 12. / 1954.
ZSS SR14305 **Type number** – sem

loc. 7: Bolivia: Santa Cruz; "Petroleumberg Camiri" = petrol mountain Camiri. –
The collection number on the original label is given as "FR 363 (cf.)".
ZSS SR14306 – sem

Ritter 364: *Rhipsalis shaferei* Britton & Rose – The Cact. 4: 229, 1923.

loc. 1: Bolivia: Santa Cruz; "Santa Cruz". – Locality data according to Ritter letter
dated 12. 2. 1955 (ZSS archives).

ZSS S10025 – sem (Leg. F. Ritter 1955 (sub *Ophiorhopsis*
bermejensis)).

loc. 2: Paraguay: Alto Paraguay / Concepción; "Puerto Riso" / "Tres Cerros".
SGO 125574 – rad, corp, ar, sp

loc. 3: Paraguay: Guairá; "Cerro Pelado, Nr. a".
SGO 125575 – rad, corp, ar, sp

loc. 4: Bolivia: Tarija; O'Connor; "14 km nördl. Villa Montes" = 14 km N of Villa
Montes / "n. Villa M." = N of Villa Montes.
SGO 125576 – rad, corp, ar, sp

loc. 5: Bolivia: Santa Cruz; "Sta. Cruz" = Santa Cruz.
SGO 125577 – corp, ar, sp

loc. 6: Bolivia: Tarija; "Yacuiba, Nr. 1". – Both original labels first had the
collection number as "FR 884", now crossed out. FR 884 is said to equal FR
364 in the field number list in KS 4.
SGO 125578 – corp, ar, sp

loc. 7: Bolivia: La Paz: Sud-Yungas; "Plazuela". – Both original labels first had the
collection number as "FR 884", now crossed out. FR 884 is said to equal FR
364 in the field number list in KS 4.
SGO 125579 – corp, ar, sp

loc. 8: Bolivia / Paraguay?: sine loco.
ZSS S12599 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Rhipsalis*
lumbricoides)).

Ritter 365: *Rhipsalis lumbricoides* (Lemaire) Lemaire var. *leucorhaphis* (K.
Schumann) F. Ritter – Kakt. Südamer. 1: 247, 1979.

loc. 1: Bolivia: Santa Cruz: Florida; San Isidro and Samaipata. – Locality data
according to Ritter letter dated 12. 2. 1955 (ZSS archives). KS 4: 1628 (sub
no. 365) gives the locality as Mataral.
ZSS S10026 – sem (Leg. F. Ritter 1955 (sub *Ophiorhopsis*
densispina)).

loc. 2: Bolivia: Santa Cruz: Florida; "Mairana, Nr. 4, Berge im Osten" = Mairana,
mountains in the East / "Mairana". – "(Pfl. der Blütenbeschreibg.)" = plant of
the flower description.
SGO 125580 – rad, corp, ar, sp

loc. 3: Bolivia: Tarija; "Entre Rios, Nr. 8".
SGO 125581 – rad, corp, ar, sp

- loc. 4:** Bolivia: Tarija; O'Connor; "Tacuarandi".
SGO 125582 – rad, corp, ar, sp
- loc. 5:** Bolivia: Santa Cruz: Florida; "Mataral".
SGO 125583 – rad, corp, ar, sp
- loc. 6:** Brazil: Rio Grande do Sul; "Jansen". – / 3. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125584 – corp, ar, sp
ZSS SR14621 – sem
- loc. 7:** Argentina: Catamarca; "30 km über Catamarca Richtg. La Puerta" = 30 km above Catamarca towards La Puerta / "Catamarca".
SGO 124836 – rad, corp, ar, sp
- loc. 8:** Argentina: Tucumán; "23 km nördl. Tucuman" = 23 km N of Tucumán.
SGO 131240 – rad, corp, ar, sp
- loc. 9:** Argentina: Tucumán; "31 km nördl. Tucuman" = 31 km N of Tucumán.
SGO 125613 – rad, corp, ar, sp
- loc.10:** Argentina: Salta; "Betania (Salta)". – / 1. / 1953. – The original envelope was first numbered "Nr. 30"; FR 30 is set equal to FR 365 in the field-number list in KS 4.
ZSS SR13685 – sem
- loc.11:** Argentina: Jujuy; "Jujuy (Jujuy)". – / 1. / 1953. – The original envelope was first numbered "Nr. 39", which was then replaced with "Nr. 30". FR 30 is set equal to FR 365 in the field-number list in KS 4, while FR 39 is identified as *Rhipsalis lumbricoides*.
ZSS SR13686 – sem
- loc.12:** Bolivia: Tarija; O'Connor; "14 km nördl. Villa Montes" = 14 km N of Villa Montes. – / 1. / 1963. – The collection number on the original label was first given as "FR 364", and there is a collection at SGO under FR 364 loc. 4 with near-identical locality data. FR 364 is *Rhipsalis shaferi* according to the field-number list in KS 4.
ZSS SR14307 – sem
- loc.13:** Bolivia: La Paz; "Fluss Coroico Nr. 9" = river Coroico. – The collection number on the original label was first given as "FR 364". FR 364 is *Rhipsalis shaferi* according to the field-number list in KS 4.
ZSS SR14308 – sem
- loc.14:** Bolivia: Santa Cruz; "Sta. Cruz" = Santa Cruz. – / 12. / 1954. – The collection number on the original label was first given as "FR 364", and there is a collection at SGO under FR 364 loc. 5 with identical locality data. FR 364 is *Rhipsalis shaferi* according to the field-number list in KS 4.
ZSS SR14309 – sem

Ritter 366: *Rhipsalis tucumanensis* F. A. C. Weber – Rev. Hort. 64: 426-427, 1892.

- Bolivia: Santa Cruz: Florida; Bermejo. – Locality data according to KS 4: 1619, sub no. 40.
ZSS S10027 – sem (Leg. F. Ritter 1955.)

Ritter 367: *Brasiliopuntia* sp.

- loc. 1:** Bolivia: Santa Cruz: Florida; Bermejo.
ZSS B4946 – corp, ar (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: Chuquisaca; "Puente Acero".
SGO 121900 – (corp), ar, sp
- loc. 3:** Paraguay: Guairá; "Cerro Acati".
SGO 121901 – (corp), ar, sp
- loc. 4:** Paraguay: Paraguari; "Paraguay" = Paraguari. – The collection number is given as "FR 367 cf." on the original label.
ZSS SR13586 – sem

Ritter 368: *Mediocactus coccineus* (De Candolle) Britton & Rose – The Cact. 2: 211, 1920.

- loc. 2:** Bolivia: Santa Cruz: Florida; "Mairana, Nr. 21".
SGO 125237 – (corp), ar, sp
- loc. 3:** Brazil: Mato Grosso do Sul; "Corumbá".
SGO 125238 – corp, ar, sp

Ritter 369: *Sulcorebutia lepida* F. Ritter – Nation. Cact. Succ. J. 17(1): 13, 1962.

Typus (T): Ritter 369 (U 117762B, SGO [status ?], ZSS [status ?]) (No herbarium cited for type.)

- loc. 1:** Bolivia: Cochabamba: Carrasco; highlands E of Totora. – / 12. / 1954.
U 117762B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS A10464 **Type number** – fl (Ex cult. ZSS s.n., 7. 7. 1962 (ex coll. Volkart).)
ZSS A10477 **Type number** – fl (Ex cult. ZSS s.n., 16. 5. 1974.)
ZSS A10506 **Type number** – corp, ar, sp (Ex cult. ZSS s.n., 26. 6. 1983.)
ZSS A5998 **Type number** – fl (Leg. ex cult. W. Rausch 1973; ex cult. ZSS s.n., 20. 7. 1977.)
ZSS S10429 **Type number** – sem (Leg. Köhres 1974 (ex cult.))
ZSS T9822 **Type number** – corp, ar, sp, (fl) (Ex cult. ZSS 76 2315, 15. 11. 1978 (ex coll. Lüthi).)
- loc. 2:** Bolivia: Cochabamba; "Copachuncho, Nr. 2".
SGO 122072 **Type number** – rad, corp, ar, sp
ZSS S10028 **Type number** – sem (Leg. F. Ritter 1955. Locality given as "Copachuncho" in Ritter letter dated 12. 2. 1955 (ZSS archives).)
- loc. 3:** Bolivia: Cochabamba; "Copachuncho, Nr. 6". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 125686 **Type number** – fl ("(Die kleine (separat) nicht aufgenommen)" = the small one (separately) not recorded.)
ZSS SR14310 **Type number** – sem

Ritter 370: *Weingartia pulquinensis* Cárdenas – Revista Agric. (Cochabamba) 7(6): 26-29, ills., 1951.

Typus (T): Cardenas 4571 (BOLV, US?).

- loc. 1:** Bolivia: Santa Cruz: Valle Grande; near San Isidro. – Locality information according to letter dated 12. 2. 1955, p. 35 (ZSS archives).
 ZSS A10468 – ar, sp, fl (Ex cult. ZSS s.n., 6. 5. 1969.)
 ZSS S10029 – sem (Leg. F. Ritter 1955.)
 ZSS S9912 – sem (Leg. F. Ritter (*sub Weingartia cuningii*).)
 ZSS T5089 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "San Isidro". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
 SGO 121298 – (corp), ar, sp
 ZSS SR14311 – sem
- Ritter 371: *Weingartia lanata*** F. Ritter – Nation. Cact. Succ. J. 16(1): 7-8, ill., 1961.
Typus (T): Ritter 814 (U 097808B, SGO, ZSS [status ?]).
- Bolivia: Chuquisaca: Oropeza; Chuquichuqui. – / – / 1954. – Later renumbered F. Ritter 814.
 ZSS A10462 – fl (Ex cult. ZSS s.n., undated, probably 1959.)
- Ritter 372: *Weingartia multispina*** F. Ritter – Nation. Cact. Succ. J. 16(1): 7, ill., 1961.
Typus (T): Ritter 372 (U 097856B, SGO, ZSS [status ?]).
- Bolivia: Cochabamba: Campero; "Aiquile". – / 12. / 1954. – Collection date according to specimen at SGO.
 SGO 121300 **ISO** – rad, corp, ar, sp
 U 097856B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
 The collection number was later added in a different hand-writing.)
 ZSS A10466 **Type number** – ar, sp, fl (Ex cult. ZSS s.n., undated, probably 1959. No locality associated with this specimen.)
 ZSS S10030 **Type number** – sem (Leg. F. Ritter 1955. Locality from index card associated with this sample.)
 ZSS SR14312 **ISO** – sem (Locality given as "Aiquile (Campero, Cochab.)" on the original label.)
- Ritter 373: *Weingartia cintiensis*** Cárdenas – Revista Agric. (Cochabamba) 10: 9-10, pl., 1958.
- loc. 1:** Bolivia: sine loco.
 ZSS T5088 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Tarija: Mendez; "einige km südl. El Puente" = some km S of El Puente, "Stelle mit *Blossfeldia*" = place with *Blossfeldia*. – "16 - 18 Rippen" = 16 - 18 ribs.
 SGO 121299 – (corp), ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "Villa Abecia" / "Weg Amblay Chico nach Villa Abecia" = path Amblay Chico to Villa Abecia".
 SGO 121301 – (corp), ar, sp
- loc. 4:** Bolivia: Chuquisaca: Nor-Cinti; "Camargo".
 SGO 121302 – (corp), ar, sp

- loc. 5:** Bolivia: Chuquisaca: Sud-Cinti; "Las Carreras".
SGO 121303 – (corp), ar, sp
- loc. 6:** Bolivia: Chuquisaca: Sud-Cinti; La Torre. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S10031 – sem (Leg. F. Ritter 1955.)
- loc. 7:** Bolivia: Chuquisaca: Sud-Cinti / Nor-Cinti; "La Torre + Camargo". – / 12. / 1954. – The locality "+ Camargo" was added later in a different pen.
ZSS SR14313 – sem

Ritter 373a: *Weingartia cintiensis* Cárdenas – Revista Agric. (Cochabamba) 10: 9-10, pl., 1958.

- Bolivia: Chuquisaca: Sud-Cinti; "Pte. San Pedro Ost" = Puente San Pedro, East / "Puente San Pedro, nach Ost, unten" = Puente San Pedro, towards the East, below. – Identified as "*Weingartia cintiensis* Cardenas var. / fa." in the field-number list in KS 4.
SGO 121304 – (corp), ar, sp

Ritter 374: *Sulcorebutia tiraquensis* (Cárdenas) F. Ritter – Nation. Cact. Succ. J. 16: 81, 1961. (Republished by Backeberg in Die Cact. 6: 3702, 1962)

- loc. 1:** Bolivia: Cochabamba; Copachuncho. – Locality information according to list of field numbers in KS 4. Identified as "*Sulcorebutia tiraquensis* var. oder fa." in KS 4: 1628.
ZSS S10032 – sem (Leg. F. Ritter 1955.)
ZSS T4947 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Bolivia: Cochabamba; "Copachuncho, Nr. 1". – Identified as "*Sulcorebutia tiraquensis* var. oder fa." in KS 4: 1628.
SGO 122073 – (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba; "Copachuncho Nr. 9". – Identified as "*Sulcorebutia tiraquensis* var. oder fa." in KS 4: 1628.
ZSS SR14314 – sem

Ritter 374a: *Sulcorebutia tiraquensis* (Cárdenas) F. Ritter – Nation. Cact. Succ. J. 16: 81, 1961. (Republished by Backeberg in Die Cact. 6: 3702, 1962)

- Bolivia: Cochabamba ?; "Strasse Cochab. - Sta. Cruz, km 105" = road Cochabamba - Santa Cruz, km 105. – Identified as *Sulcorebutia tiraquensis* var. *tiraquensis* in KS 4: 1628.
SGO 122074 – rad, corp, ar, sp
ZSS S10435 – sem (Leg. Fa. Köhres (ex cult.) 1975. No locality data associated with this specimen.)

Ritter 376: *Echinopsis huottii* (Cels) Labouret – Monogr. Cact., 301, 1853.

- loc. 1:** Bolivia: Cochabamba; "Cochabamba".
SGO 121422 – (corp), ar, sp
- loc. 2:** Bolivia: Cochabamba; Tapacari; "unterhalb Sayari" = below Sayari.
SGO 121423 – (corp), ar, sp

loc. 3: Bolivia: Santa Cruz; "Buen Retiro". – / 12. / 1958.
ZSS SR14315 – sem

Ritter 376b: *Echinopsis comarapana* Cárdenas – Nation. Cact. Succ. J. 12: 61, 1957.

– Bolivia: Santa Cruz: Valle Grande; San Isidro. – Locality information according to letter dated 12. 2. 1955, p. 29 (ZSS archives).
ZSS S10033 – sem (Leg. F. Ritter 1955 (sub *Echinopsis huottii*).)
ZSS T5096 – rad, corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 377: *Echinopsis huottii* (Cels) Labouret var. *longispina* F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 2: 633, 1980.
Based on Ritter 377.

loc. 1: Bolivia: Chuquisaca; Río Chico. – Locality information according to field-number list in KS 4.
ZSS T5090 – rad, corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

loc. 2: Bolivia: Chuquisaca: Oropeza; "Río Chico, unten" = Río Chico, below. – / 12. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 121424 – (corp), ar, sp
ZSS SR14317 – sem

loc. 3: Bolivia: Potosí: Saavedra; "Otuyo".
SGO 121425 – (corp), ar, sp, al

loc. 4: Bolivia: Cochabamba: Campero; "Quiroga, Nr. 10".
SGO 121426 – (corp), ar, sp ("Exemplar der Samenprobe" = specimen of the seed sample.)

loc. 5: Bolivia: Chuquisaca / Potosí; "Pulque (zwischen Millares und Sucre)" = Pulque (between Millares and Sucre) / "Millares". – Original label first numbered as FR 790, this crossed out and replaced with 377. The two numbers are said to be equal in KS 4.
SGO 121427 – (corp), ar, sp

loc. 6: Bolivia: Cochabamba: Campero; "Quiroga, Nr. 14".
ZSS SR14320 – sem

loc. 7: Bolivia: Chuquisaca: Oropeza ?; "Río Paccha (Río Chico)". – / 12. / 1958.
ZSS SR14319 – sem

loc. 8: Bolivia: Potosí; "Millares". – / 12. / 1959.
ZSS SR14318 – sem

Ritter 378: *Echinopsis rojasii* Cárdenas – Rev. Agric. (Cochabamba) 7(6): 31-33, ill., 1951.

Typus (*T*): Cardenas 4573 (BOLV, US).

loc. 1: Bolivia: Santa Cruz: Valle Grande; near San Isidro, and also near Samaipata (Prov. Florida). – / – / 1955. – Locality information from correspondence at ZSS (letter dated 12. 2. 1955, p. 29-30).
B GH20761 – fl (Ex cult. BG Berlin, 6. 8. 1986 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

ZSS AX4248 – rad, corp, ar, sp (Ex cult. ZSS s.n.)

- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Sn. Isidro, Nr. 10" = San Isidro.
SGO 121428 – (corp), ar, sp
ZSS S10034 – sem (Leg. F. Ritter 1955. Locality given as "San Isidro" in the Ritter letter dated 12. 2. 1955 (ZSS archives).)
- loc. 3:** Bolivia: Santa Cruz: Florida; "Mairana, Berge nach Ost" = Mairana, mountains to the East. – "FR 378 + Einschlag von FR 379 (vieltstchl.)" = FR 378 + introgression from FR 379 (many-spined).
SGO 121429 – (corp), ar, sp
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; "San Isidro". – / 4. / 1958.
ZSS SR14322 – sem
- loc. 5:** Bolivia: Santa Cruz: Valle Grande; "San Isidro + Samaipata".
ZSS SR14321 – sem

Ritter 379: *Echinopsis* sp.

- loc. 1:** Bolivia: Santa Cruz: Florida; Samaipata. – / – / 1959. – Locality information according to list of field numbers in KS 4.
ZSS AX10458 – fl (Ex cult. ZSS s.n., undated but probably prior to 1960 (sub *Echinopsis orozasana*)).
ZSS S10035 – sem (Leg. F. Ritter 1955 (sub *Echinopsis orozasana*)).
ZSS T4948 – (corp), ar, sp (Leg. F. Ritter ex nat.)
ZSS T4949 – (corp), ar, sp (Leg. F. Ritter ex nat. An abnormally-spined plant fragment.)
- loc. 2:** Bolivia: Santa Cruz: Florida; "Samaipata Nr. 11".
ZSS SR14323 – sem

Ritter 380: *Echinopsis ibicuatensis* Cárdenas – Cact. Succ. J. (US) 28(3): 74-75, 1956.

- loc. 1:** Bolivia: Santa Cruz: Florida; Samaipata. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).
ZSS S10036 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Santa Cruz: Florida; "Samaipata Nr. 12".
ZSS SR14324 – sem

Ritter 382: *Lobivia ferox* Britton & Rose – The Cact. 3: 51, 1922.

- Bolivia: Chuquisaca: Sud-Cinti; La Torre. 2000 m.
ZSS S10037 – sem (Leg. F. Ritter 1955.)
ZSS T4950 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 383: *Hymenorebutia torreana* F. Ritter – Kakt. Südamer. 2: 589-590, fig. 480, 1980.

Typus (T): Ritter 383 (U [not found], SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; mountains above La Torre. – / – / 1954.
ZSS A10478 **Type number** – corp, ar, sp (Ex cult. ZSS s.n., 4. 4. 1975.)
ZSS S10038 **Type number** – sem (Leg. F. Ritter 1955.)

- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "La Torre". – / – / 1962. – Collection date according to specimen at SGO.
SGO 122057 **ISO** – (corp), ar, sp
ZSS SR14325 **ISO** – sem
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "über La Torre" = above La Torre / "La Torre".
SGO 124450 **ISO** – (rad), corp, ar, sp

Ritter 384: *Hymenorebutia tiegeliana* (Wessner) F. Ritter – Kakt. Südamer. 2: 586-587, 1980.

- loc. 1:** Bolivia: Tarija; "bei Tarija auf den Bergen nördlich der Stadt" = near Tarija in the mountains N of the town. – Locality data according to Ritter letter dated 12. 2. 1955, p. 27 (ZSS archives).
ZSS S10039 – sem (Leg. F. Ritter 1955.)
ZSS T4951 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. It is debatable whether this material is part of the type(s) of *Lobivia peclardiana* Krainz.)
- loc. 2:** Bolivia: Tarija; "Berge nördl. San Lorenzo" = mountains N of San Lorenzo / "N. San Lorenzo".
SGO 124449 – rad, corp, ar, sp
- loc. 3:** Bolivia: Tarija; "Tarija Nr. 10". – / 12. / 1954.
ZSS SR14326 – sem
- loc. 4:** Bolivia: Tarija; "südl. Tarija" = S of Tarija. – / 12. / 1962.
ZSS SR14327 – sem

Ritter 385: *Parodia compressa* F. Ritter – Cactus (Paris) 17(73/74): 9-10, ill., 1962.

Typus (T): Ritter 385 (U 117667B, ZSS [seeds only, status ?]).

- loc. 1:** Bolivia: Chuquisaca: Oropeza; middle part of Río Chico. – / 12. / 1954.
U 117667B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter and with the collection number "385a" on the original label; here corrected according to the explanation in KS.)

Ritter 385: *Parodia ocampoi* Cárdenas – Kakt. and. Sukk. 6(1): 101-103, 1955.

- loc. 2:** Bolivia: Chuquisaca: Oropeza; "Chuquichuqui". – Locality data according to specimen at SGO and to Ritter letter dated 12. 2. 1955 (ZSS archives). This collection number is identified as *P. compressa* in KS 4, but there was a temporary mix-up between it and the field number 738 which is *P. ocampoi*.
SGO 124511 – rad, corp, ar, sp
ZSS S10040 – sem (Leg. F. Ritter 1955.)
ZSS SR14328 **Type** ? – sem (Identification as *P. compressa* according to original label.)

Ritter 385a: *Parodia compressa* F. Ritter – Cactus (Paris) 17(73/74): 9-10, ill., 1962.

Typus (T): Ritter 385 (U 117667B, ZSS [seeds only, status ?]).

- Bolivia: Chuquisaca: Oropeza; middle part of Río Chico. – Collection number said to be equal with Ritter 385, whose locality data is repeated here. B GH20591 – fl (Ex cult. BG Berlin, 25. 7. 1986 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)

Ritter 386: *Parodia columnaris* Cárdenas – Cact. Succ. J. (US) 23(3): 95-95, 1951.

- loc. 1:** Bolivia: Santa Cruz: Valle Grande; "Sn. Isidro" = San Isidro. – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS. Locality given as "San Isidoro" in Ritter letter dated 12. 2. 1955 (ZSS archives).
SGO 124513 – (corp), ar, sp, (al)
ZSS S10041 – sem (Leg. F. Ritter 1955.)
ZSS SR14329 – sem
- loc. 2:** Bolivia: Santa Cruz; "Perez".
SGO 124512 – (corp), ar, sp
- loc. 3:** Bolivia: Santa Cruz; "Saipina".
SGO 124630 – corp, ar, sp

Ritter 386a: *Parodia columnaris* Cárdenas var. *ochraceiflora* F. Ritter – Kakt. Südamer. 2: 539-540, fig. 405, 1980. (Type erroneously cited as 'Ritter 368a' in the protologue which becomes evident from the field number list in l.c. 4.)

Typus (T): Ritter 386a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Santa Cruz: Valle Grande; "Marqueza", at the lower Río Mizque, near frontier between the provinces Camperos and Valle Grande. – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS ("VII 1958") and to specimen at U ("1958"); locality data supplemented from the protologue.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS SR14330 ISO – sem
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Marqueza, unten" = Marqueza, below.
SGO 124514 ISO – (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba / Santa Cruz; "Abstieg zum Río Mizque, Nr. 21" = descent to the Río Mizque.
SGO 124515 Type number – rad, corp, ar, sp

Ritter 387: *Cereus colosseus* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1(a)) – Kakt. Südamer. 2: 553-554, in synonym., 1980.

- loc. 1:** Bolivia: Santa Cruz: Florida; "Mairana, Nr. 7". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121774 ISO – (corp), ar, sp ("ganz jung (marmoriert) u. etwas älter" = very young (marbled) and somewhat older.)
- loc. 2:** Bolivia: Chuquisaca; "Pte. Acero, Nr. 4" = Puente Acero. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121775 – (corp), ar, sp ("langst. von 3-rippig jung, kurzst. von 4-

- rippig etw. älterer Pflanze" = the long-spined one from a young 3-ribbed plant, the short-spined 4-ribbed one from an older plant.)
- loc. 3:** Bolivia: Santa Cruz: Florida; "Mairana". – / – / 1963. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to specimen at U.
 U 160700B (in 2 parts) **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred. "Jugendform (stark bestachelt) - 1 besonders kleiner Trieb der Altersform (mit winzigen Stachelchen)" = 1 juvenile form (strongly spined) - 1 extraordinarily small branch of the mature form (with minute spines).)
- loc. 4:** Bolivia: Santa Cruz: Florida; near Pampa Grande, Samaipata and Bermejo and further down in the plains of Santa Cruz. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives). Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
 ZSS S10042 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 5:** Bolivia: Santa Cruz: Florida?; "irgendwo zw. Samaipata und Agua Clara" = somewhere between Samaipata and Agua Clara. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
 ZSS SR14331 – sem
- loc. 6:** Bolivia: Santa Cruz; "15 km südl. Camiri" = 15 km S of Camiri. – / 1. / 1963. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
 ZSS SR14332 – sem
- loc. 7:** Bolivia: Santa Cruz; "Sta. Cruz" = Santa Cruz. – / 12. / 1954. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
 ZSS SR14333 – sem

Ritter 388: *Opuntia retrorsa* Spegazzini – Anal. Mus. Nac. Buenos Aires 4: 517, 1905.

- loc. 1:** Paraguay: "Cerro Aca-hay, oben" = Cerro Aca-hay, above. – "wohl eigene Art" = apparently a species of its own. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 SGO 122015 – corp, ar, sp
- loc. 2:** Paraguay: Concepción; "Concepción". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 SGO 122016 – corp, ar, sp ("Fotopfl." = plant of the photograph.)
- loc. 3:** Bolivia: Tarija: O'Connor; "Villamontes" [Villa Montes]. – "Liegend" = prostrate. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 SGO 122017 – corp, ar, sp, (fr)
 SGO 122018 – corp, ar, sp
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; San Isidro. – Locality data according to KS 4 and Ritter letter dated 12. 2. 1955 (ZSS archives). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 ZSS S10043 – sem (Leg. F. Ritter 1955.)
- loc. 5:** Paraguay: Alto Paraguay; "Puerto Casado". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 ZSS SR13587 – sem

loc. 6: Bolivia: Tarija: Gran Chaco; "Taringuiti". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14334 – sem

Ritter 389: *Opuntia vüelliniflora* (F. Ritter) P. J. Braun & E. Esteves Pereira – Succulenta 74(3): 133, 1995. (Sphalm. 'vitenilli flora'. First used by F. Ritter, Kakt. Südamer. 2: 498, 1980, as synonym.)

loc. 2: Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 13". – /7./ 1958. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122020 – (corp), ar, sp

loc. 3: Bolivia: Santa Cruz: Florida; Samaipata. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS S10044 **Type number** – sem (Leg. F. Ritter (sub *Platyopuntia discolor*)).

Ritter 390: *Rebutia fiebrigii* Britton & Rose var. *densiseta* (Cullmann) Oeser – Kakt. and. Sukk. 27: 28-30, 1976.

– Bolivia: Chuquisaca: Sud-Cinti; "La Torre". – /1./ 1955. – Collection date according to original Ritter seed sample at ZSS.
ZSS S10045 – sem (Leg. F. Ritter 1955. Locality according to Ritter letter dated 12. 2. 1955 (ZSS archives).)
ZSS SR14335 – sem

Ritter 391: *Monvillea leucantha* F. Ritter – Kakt. Südamer. 2: 511, 1980.
Typus (*T*): Ritter 391 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

– Bolivia: Santa Cruz: Florida; Bermejo. – /–/ 1954.
ZSS B4952 ISO – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 392: *Samaipaticereus corroanus* Cárdenas – Cact. Succ. J. (US) 24(5): 141-143, 1952.

loc. 1: Bolivia: Santa Cruz: Florida; "Mairana".
SGO 121735 – corp, ar, sp

loc. 2: Bolivia: sine loco.
ZSS T4953 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 3: Bolivia: Santa Cruz: Valle Grande; "Strasse Mataral - San Isidro" = road Mataral - San Isidro. – /7./ 1958.
ZSS SR14336 – sem ("Same hohl" = seed hollow.)

Ritter 393: *Eriocereus tephacanthus* (Labouret) Riccobono – Boll. Reale Orto Bot. Palermo 8: 244, 1909.

loc. 1: Bolivia: Chuquisaca; "Yamparuez" / "Strasse nach Sotomayor" = road to Sotomayor.
SGO 121710 – (corp), ar, sp

- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Comarapa". – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 121711 – (corp), ar, sp
ZSS SR14337 – sem
- loc. 3:** Bolivia: Cochabamba: Ayopaya; "Ayopaya" / "Mündung Río Sta. Rosa mit Sacambaya" = junction of Río Santa Rosa with Sacambaya.
SGO 121712 – (corp), ar, sp (Seedling plant.)
- loc. 4:** Bolivia: sine loco.
ZSS S9953 – sem (Leg. F. Ritter c. 1957 (sub *Eriocereus tephracanthus* var. *bolivianus*).)
- loc. 5:** Bolivia: Potosí; "Millares". – / 5. / 1959.
ZSS SR14338 – sem
- loc. 6:** Bolivia: Cochabamba: Ayopaya; "Puente Pilatos". – / 6. / 1958.
ZSS SR14339 – sem

Ritter 394: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter – Kakt. Südamer. 2: 488-490, 1980.

- loc. 1:** Argentina: Jujuy; "La Quiaca". – / 4. / 1962. – Identified as *Cumulopuntia pentlandii* var. *pentlandii* in KS 4.
SGO 121870 – corp, ar, sp
- loc. 2:** Bolivia: La Paz; "oberh. La Paz" = above La Paz. – "Ausnahme-Exemplare mit allen Übergängen in normale." = exceptional specimens with all intermediates to normal ones. – Identified as *Cumulopuntia pentlandii* var. *pentlandii* in KS 4.
SGO 121871 – corp, ar, sp
- loc. 3:** Bolivia: "19 km südl. Tres Cruces, Nr. 11" = 19 km S of Tres Cruces. – Identified as *Cumulopuntia pentlandii* var. *pentlandii* in KS 4.
SGO 121872 – corp, ar, sp
- loc. 4:** Bolivia ?; "Viacha, Hügel" = Viacha, hill. – Identified as *Cumulopuntia pentlandii* var. *pentlandii* in KS 4.
SGO 121873 – corp, ar, sp
- loc. 5:** Argentina: Jujuy; "Iturbe". – / 4. / 1962. – Identified as *Cumulopuntia pentlandii* var. *pentlandii* in KS 4.
ZSS SR13687 – sem
- loc. 6:** Bolivia: Potosí: Sud-Chichas; "Villazón". – / 12. / 1954. – Identified as *Cumulopuntia pentlandii* var. *pentlandii* in KS 4.
ZSS SR14340 – sem

Ritter 395: *Cumulopuntia boliviana* (Salm-Dyck) F. Ritter – Kakt. Südamer. 2: 492-493, 1980.

- loc. 1:** Argentina: Jujuy; "10 km über Purmamarca, nach Ost" = 10 km above Purmamarca, towards the East / "westl. Purmamarca" = W of Purmamarca. – The jar contains 2 labels and 3 fragments which could be from two populations.
SGO 121874 – corp, ar, sp

- loc. 2:** Argentina: Tucumán; "27 km über Tafi" = 27 km above Tafi / "westl. Tafi" = W of Tafi.
SGO 121875 – corp, ar, sp
- loc. 3:** Bolivia: Potosí: Sud-Chichas; "Villazón". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
ZSS S10046 – sem (Leg. F. Ritter 1955 (sub *Tephrocactus chichensis*).
Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives).)
ZSS SR14341 – sem
- loc. 4:** Argentina: Jujuy; "Abra Pampa". – / 4. / 1962.
ZSS SR13688 – sem
ZSS SR14342 – sem

Ritter 395a: *Cumulopuntia pampana* F. Ritter – Kakt. Südamer. 2: 402-403, figs. 248, 261, 1980.

Typus (T): Ritter 395a (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Argentina: Jujuy; "Abra Pampa Nr. 10". 3300 m. – / – / 1962. – Collection date and altitude supplemented from the protologue.
ZSS AX15300 **Type number** – corp, ar, sp, fl (Ex cult. ZSS 81 2525, 17. 5. 1994) (From a plant received from the collection of H. Ruoff and reputedly descending from original Ritter-material.)
ZSS SR13689 **ISO** – sem

Ritter 396: *Lobivia* sp.

- Bolivia: Potosí: Sud-Chichas; "Villazón". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS and repeated on the other specimens at ZSS; the field number list in KS gives "La Quiaca".
ZSS S10047 – sem (Leg. F. Ritter 1955.)
ZSS SR14343 – sem
ZSS S9910 – sem (Leg. F. Ritter 1955.)
ZSS T4954 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 397: *Gymnocalycium pflanzii* (Vaupel) Werdermann var. *albipulpa* F. Ritter – Kakt. Südamer. 2: 660-661, fig. 642, 1980.

Typus (T): Ritter 397 (U [not found], SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: sine loco. – Originally distributed as *Gymnocalycium bolivianum* Cardenas ex Ritter (*nom. nud.*).
B GH16276 – fl, ic (corp) (Ex cult. BG Berlin, 4. 7. 1984 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS S12590 – sem (Leg. H. Winter (Cat. 1961/62).)
ZSS S9911 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Tarija: O'Connor; "Villamontes". – One of the two original labels has the number "FR 397" crossed out and replaced with FR 29 (which is *Gymnocalycium pflanzii* according to KS 4).
SGO 124652 **Type number** – (corp), ar, sp

- loc. 3:** Bolivia: Santa Cruz; "Perez".
SGO 124653 **Type number** – (corp), ar, sp
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; "Comarapa".
SGO 124654 **Type number** – (corp), ar, sp
- loc. 5:** Bolivia: Cochabamba; "Pte. Arce" = Puente Arce.
SGO 124655 **Type number** – (corp), ar, sp
- loc. 6:** Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Markeza" = ascent from Markeza / "Markeza".
SGO 124656 **Type number** – (corp), ar, sp
- loc. 7:** Bolivia: Santa Cruz: Florida; "Mataral". – / 12. / 1954. – Collection date according to original Ritter seed sample at ZSS.
SGO 124657 **Type number** – (corp), ar, sp
ZSS SR15008 **Type number** – sem
- loc. 8:** Bolivia: Tarija: Gran Chaco; "Palmar Grande". – One of the two original labels has the number "FR 397" crossed out and replaced with "FR 29" (which is *Gymnocalycium pflanzii* according to KS 4).
SGO 124658 **Type number** – (corp), ar, sp
- loc. 9:** Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Markeza nach Ost" = ascent from Markeza towards the East. – / 7. / 1958. – "Same taub" = seed sterile.
ZSS SR15009 **Type number** – sem (It appears that this specimen has been transferred to a non-original seed envelope recently.)
- loc.10:** Bolivia: Santa Cruz: Florida; "Mairana West" . – / 7. / 1958. – "Same hohl" = seed hollow.
ZSS SR15010 **Type number** – sem

Ritter 398: *Neoraimondia herzogiana* (Backeberg) Buxbaum – in Krainz, Kat. ZSS ed. 2, 89, 1967.

- loc. 1:** Bolivia: Chuquisaca / Santa Cruz; lower altitudes of the region of Río Grande and Río Pilcomayo, but not in the plains of the Gran Chaco.
ZSS S9908 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palos Blancos". – / 4. / 1958.
SGO 125261 – (corp), ar, sp ("Jungpflanze ca. bei 1 m. Höhe" = young plant at c. 1 m.)
ZSS SR14345 – sem
- loc. 3:** Bolivia: Santa Cruz: Valle Grande; "Comarapa". – "Jugendexemplar" = young specimen.
SGO 125262 – (corp), ar, sp
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; "San Isidro". – / 12. / 1954.
ZSS SR14344 – sem

Ritter 399: *Trichocereus tarijensis* (Vaupel) Werdermann var. *densispinus* F. Ritter – Kakt. Südamer. 2: 449, 1980.
Typus (T): Ritter 399 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: Jujuy; "Abra Pampa". – / – / 1958. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Argentina: Jujuy; "Abra Pampa".

SGO 121210 **ISO** – (corp), ar, sp

loc. 3: Argentina: Jujuy; Iturbe. – Locality according to Cat. Winter 1956 (sphalm. 'Itrube') and Ritter letter dated 12. 2. 1955 (ZSS archives).

ZSS S9907 – sem (Leg. F. Ritter 1955.)

Ritter 400: *Trichocereus volcanensis* F. Ritter – Kakt. Südamer. 2: 448-449, 1980.

Typus (T): Ritter 400 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: Jujuy; "Volcán". 2300 m. – / – / 1955. – Collection date and altitude added from specimen at ZSS.

SGO 121211 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.

Deposited as *Trichocereus smrzianus* var. *volcanensis* (nom. nud.).)

ZSS S10048 **ISO** – sem (Leg. F. Ritter 1955.)

ZSS S9905 **ISO** – sem (Leg. F. Ritter 1955.)

ZSS T4955 **ISO** – (corp), ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Argentina: Jujuy; Volcán.

B GH31648 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 2. 8. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

Ritter 400a: *Trichocereus volcanensis* F. Ritter – Kakt. Südamer. 2: 448-449, 1980.

Typus (T): Ritter 400 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: La Rioja; Famatina. – / 2. / 1955. – Identified as *Trichocereus* sp. (probably close to *T. volcanensis*) in the field-number list in KS 4.

ZSS T4956 – (corp), ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Argentina: La Rioja; "Famatina, nach Osten" = Famatina, towards the East.

– / 5. / 1962. – Given as "Hybrid FR 17 *terscheckioides* × FR 13 *strigosus* ?" on the original label; identified as *Trichocereus* sp. (probably close to *T. volcanensis*) in the field-number list in KS 4.

SGO 121241 – (corp), ar, sp

Ritter 401: *Lobivia* sp.

– Argentina: Jujuy; S of Maimará, uppermost altitudes. – Locality data according to KS 4: 1629.

ZSS S10049 – sem (Leg. F. Ritter 1955.)

Ritter 402: *Rebutia ritteri* (Wessner) Buining & Donald – Sukkulantenkunde 7/8: 103, 1963.

loc. 1: Argentina: Jujuy; near Volcán. 2500 m. – Locality data according to Ritter letter dated 12. 2. 1955 (ZSS archives). Identified (with question mark) as *Rebutia ritteri* var. *pilifera* (*nom. nud.*) in KS 4.

ZSS S10050 – sem (Leg. F. Ritter 1955.)

ZSS T4957 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Argentina: Jujuy; "Volcán". – Identified (with question mark) as *Rebutia ritteri* var. *pilifera* (*nom. nud.*) in KS 4.

SGO 124575 – rad, corp, ar, sp ("Die beiden Fruchtpfl. ..." = The two fruiting plants ...)

SGO 124576 – rad, corp, ar, sp

Ritter 403: *Hymenorebutia chlorogona* (Wessner) F. Ritter – Kakt. Südamer. 2: 472, 1980.

loc. 1: Argentina: Jujuy; Volcán. – Locality information from Ritter correspondence in ZSS archives (letter dated 12. 2. 1955, p. 9).

ZSS S10051 – sem (Leg. F. Ritter 1955.)

ZSS T4958 – rad, corp, ar, sp (Leg. F. Ritter ex nat. Dated "15. 3. 1960" in the herbarium list, but this appears erroneous, as all other dated collections from March 1960 are from Peru.)

ZSS T5123 – rad, corp, ar, sp, al (Leg. F. Ritter (ex sem H. Winter 7. 4. 1960, cat. no. 429). Ex cult. ZSS s.n.)

loc. 2: Argentina: Jujuy; "Volcán" / "Volcán unten + oben" = Volcán below and above.

SGO 124451 – rad, corp, ar, sp, (fl)

Ritter 404: *Rebutia spegazziniana* Backeberg var. *atroviridis* (Backeberg) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 4: 1629 (sub no. 404), 1981.

loc. 1: Argentina: Jujuy; near Volcán. – Locality information according to Ritter letter dated 12. 2. 1955 (ZSS archives).

ZSS S10052 – sem (Leg. F. Ritter 1955.)

ZSS T4959 – rad, corp, ar, sp (Leg. F. Ritter ex nat. There is a suspected mix-up with this specimen, as the dried corpse resembles a *Sulcorebutia* sp. much more (cf. material of FR 405 at ZSS).)

loc. 2: Argentina: Jujuy; "Volcán Nr. 5". – / 4. / 1962.

SGO 124577 – rad, corp, ar, sp

Ritter 405: *Hymenorebutia* sp.

– Argentina: Jujuy; higher slopes above Volcán.

ZSS T4960 – rad, corp, ar, sp (Leg. F. Ritter ex nat. There is a mix-up with this specimen, as the material is of the *Rebutia steinmannii* relationship and was identified as "*Rebutia sarothroides*" in the original herbarium list (cf. material of FR 404, loc. 1, at ZSS).)

Ritter 407: *Rebutia* sp.

– Argentina: Jujuy; N of Volcán, high altitudes. – Locality data according to KS 4: 1629.

ZSS A10457 – (fl) (Ex cult. ZSS s.n., undated but probably prior to 1960.)

ZSS S10053 – sem (Leg. F. Ritter 1955.)

Ritter 408: *Echinopsis ancistrophora* Spegazzini – Anales Mus. Nac. Hist. Nat. Buenos Aires 3(4): 492, 1905.

- Bolivia: La Paz; sine loco. – / 4. / 1953.
 ZSS T4965 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4966 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 409: *Oreocereus* sp.

- loc. 1:** Bolivia / Argentina?: sine loco.
 ZSS T4967 – (corp), ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4968 – corp, ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Argentina: Jujuy; "Abra Pampa, Nr. 11".
 SGO 125313 – corp, ar, sp

Ritter 410: *Austrocylirodopuntia verschaffeltii* (Cels ex F. A. C. Weber) Backeberg – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

- Argentina: Jujuy; "Volcan, unten" = Volcán, below.
 SGO 121930 – corp, ar, sp

Ritter 410a: *Austrocylirodopuntia verschaffeltii* (Cels ex F. A. C. Weber) Backeberg – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

- loc. 1:** Bolivia: Tarija: Mendez; "San Antonio".
 SGO 121931 – corp, ar, sp ("Fotoexemplar" = specimen of the photograph.)
- loc. 2:** Bolivia: Tarija: Mendez; "San Antonio, Nr. 2". – The original label was first numbered as "889".
 SGO 121932 – rad, corp, ar, sp

Ritter 410b: *Austrocylirodopuntia verschaffeltii* (Cels ex F. A. C. Weber) Backeberg – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

- Argentina: Tucumán; "14 km über Tafi = 14 km above Tafi".
 SGO 121935 – corp, ar, sp

Ritter 412: *Opuntia corrugata* Salm-Dyck – Hort. Dyck 1834: 360, 1834.

- loc. 1:** Argentina: Jujuy; Volcán. – / 2. / 1955. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 ZSS B9404 – corp, ar, sp, fl (Ex cult. ZSS 90 4053, 9. 7. 1992) (Leg. Ritter.)
 ZSS T4969 – (corp, ar, sp) (Leg. F. Ritter ex nat.)
- loc. 2:** Argentina: La Rioja; "Famatina". – Locality data according to Ritter letter dated 22. 4. 1955 (ZSS archives). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 ZSS S10185 – sem (Leg. F. Ritter 1955.)

loc. 3: Argentina: Tucumán; "Tafí del Valle". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125326 – corp, ar, sp

loc. 4: Argentina: Jujuy; "roter Berg südl. Volcán" = red mountain S of Volcán / "Volcán". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125328 – rad, corp, ar, sp

Ritter 413: *Eriocereus polyacanthus* F. Ritter – Kakt. Südamer. 2: 436, 1980.
Typus (*T*): Ritter 413 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: Catamarca; "Catamarca".
ZSS A4265 **Type number** – fr, sem (Ex cult. ZSS s.n., 17. 10. 1986.)
ZSS AX3658 **Type number** – ar, sp, fl (Leg. Ritter 1956. Ex cult. ZSS s.n., 20. 8. 1981.)

loc. 2: Argentina: Catamarca; "Catamarca". – "St. 12 - 16 (Mst. 4 - 6)" = spines 12 - 16 (central spines 4 - 6).
SGO 121713 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 3: Argentina: Catamarca / La Rioja; "La Rioja und Catamarca" = La Rioja and Catamarca. – Locality data according to Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10186 **Type number** – sem (Leg. F. Ritter 1955 (sub *Eriocereus tortuosus*)).

Ritter 413: *Cleistocactus* sp.

p.p.(2): unde ? : sine loco.
ZSS B4970 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4971 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4972 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 414: *Maihuenia albolanata* F. Ritter – Kakt. Südamer. 2: 377-378, 1980.
Typus (*T*): Ritter 414 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

– Argentina: Neuquén; "Zapala", c. 39° S. – / 3. / 1955. – Locality data supplemented from the protologue; collection data according to the original Ritter seed sample at ZSS.
ZSS S10187 **ISO** – sem (Leg. F. Ritter 1955. Locality according to ZSS herbarium list.)
ZSS SR13690 **ISO** – sem ("rotbraunstach." = red-brown spined.)
ZSS T4973 **ISO** – corp, ar, sp (Leg. F. Ritter ex nat. Locality according to ZSS herbarium list.)

Ritter 414a: *Maihuenia albolanata* F. Ritter fa. *viridulispina* F. Ritter – Kakt. Südamer. 2: 378, 1980.
Typus (*T*): Ritter 414a (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- Argentina: Neuquén; "Zapala" c. 39° S. – / 3. / 1955. – Locality data supplemented from the protologue; collection date according to the original Ritter seed sample at ZSS.
 ZSS S10188 ISO – sem (Leg. F. Ritter 1955. Locality according to ZSS herbarium list.)
 ZSS SR13691 ISO – sem
 ZSS T4974 ISO – corp, ar, sp (Leg. F. Ritter ex nat. Locality according to ZSS herbarium list.)

Ritter 415: *Maihuenia cumulata* F. Ritter – Kakt. Südamer. 2: 378-379, 1980.

Typus (T): Ritter 415 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Argentina: Neuquén; NW of Las Lajas. – / 3. / 1955.
 ZSS S10189 ISO – sem (Leg. F. Ritter 1955.)
 ZSS T4975 ISO – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2: Argentina: Neuquén; "Las Lajas Nr. 1". – / 3. / 1955.
 ZSS SR13692 ISO – sem

Ritter 416: *Maihuenia latispina* F. Ritter – Kakt. Südamer. 2: 378, 1980.

Typus (T): Ritter 416 (U [not found], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Argentina: Mendoza; near Malargüe. – / 3. / 1955.
 ZSS S10190 ISO – sem (Leg. F. Ritter 1955.)
 ZSS T4976 ISO – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS T4977 ISO – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2: Argentina: Mendoza; "Malargüe". – / 3. / 1955.
 ZSS SR13693 ISO – sem

Ritter 417: *Maihueniopsis ovata* (Pfeiffer) F. Ritter – Kakt. Südamer. 2: 389, 1980.

- loc. 1: Argentina: Mendoza; Villavicencio. – / 3. / 1955.
 ZSS B4978 – corp, ar, sp (Leg. F. Ritter ex nat.)
 ZSS S10191 – sem (Leg. F. Ritter 1955.)
- loc. 2: Argentina: Mendoza; "Challao, ca. 1600 m.". 1600 m. – / 5. / 1962. – Collection date and altitude according to the original Ritter seed sample at ZSS.
 SGO 125215 – corp, ar, sp
 ZSS SR13695 – sem
- loc. 3: Argentina: Mendoza; "Potrerillos". – / 4. / 1962.
 ZSS SR13694 – sem

Ritter 417: *Acanthorhopsis* sp.

- p.p.(2): Bolivia: sine loco. – / 5. / 1953.
 ZSS B4979 – corp, ar, sp (Leg. F. Ritter ex nat. Det. U. Eggl.)

Ritter 418: *Maihueniopsis albomarginata* F. Ritter – Kakt. Südamer. 2: 389, 1980.

Typus (T): Ritter 418 (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Argentina: Mendoza; Malargüe. - / - / 1955.
ZSS S10192 ISO – sem (Leg. F. Ritter 1955.)

Ritter 419: *Tephrocactus alexanderi* (Britton & Rose) Backeberg – Cactus (Paris) 8(38): 250, 1953.

- Argentina: La Rioja; "Famatina". - / 2. / 1955. – Locality data according to specimens at SGO and ZSS and to index card associated with seed sample at ZSS. Collection date according to original Ritter seed sample at ZSS.
SGO 125431 – corp, ar, sp
ZSS S10193 – sem (Leg. F. Ritter 1955 (sub *Tephrocactus aoracanthus*)).
ZSS SR13696 – sem (Locality given as "Famatina Nr. 3").
ZSS T4980 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 420: *Tephrocactus articulatus* (Pfeiffer) Backeberg – Cactus (Paris) 8(38): 249, 1953. (The author abbreviation is normally given as "(Otto) Backeberg", on the assumption that *Opuntia articulata* Otto is the basionym, but Otto's name is a nude name.)

- loc. 1:** Argentina: La Rioja; "Famatina". - / 6. / 1955. – Collection date according to original Ritter seed sample at ZSS, but this appears erroneous because all other dated collections from May / June 1955 are from Chile. Identified as "*Tephrocactus articulatus* fa. *articulatus* und fa. *syringacanthus*" by Ritter in KS 4: 1629.
ZSS S10194 – sem (Leg. F. Ritter 1955. Locality according to index card associated with this sample.)
ZSS SR13697 – sem
- loc. 2:** Argentina: Catamarca; "54 km über Belén" = 54 km above Belén / "westl. Belén" = W of Belén. – Identified as '*Tephrocactus articulatus* fa. *articulatus* und fa. *syringacanthus*' by Ritter in KS 4: 1629. The original label identifies the collection as "*Tephrocactus syringacanthus*".
SGO 125432 – corp, ar, sp
- loc. 3:** Argentina: Mendoza; "Challao". – Identified as '*Tephrocactus articulatus* fa. *articulatus* und fa. *syringacanthus*' by Ritter in KS 4: 1629. The original label identifies the collection as "*Tephrocactus articulatus*".
SGO 125433 – corp, ar, sp
- loc. 4:** Argentina: Mendoza; "Potrerillos". - / 1. / 1957. – "Saml. Wigbert" = collection Wigbert. Identified as '*Tephrocactus articulatus* fa. *articulatus* und fa. *syringacanthus*' by Ritter in KS 4: 1629. The original label identifies the collection as "*Tephrocactus articulatus*".
SGO 125434 – corp, ar, sp
- loc. 5:** Argentina: La Rioja; "Patquia" = Patquía. - / 5. / 1962. – Identified as "*Tephrocactus articulatus* fa. *articulatus* und fa. *syringacanthus*" by Ritter in KS 4: 1629.
ZSS SR13698 – sem

loc. 6: Argentina: Catamarca; "54 km westl. Belen" = 54 km W of Belén. – / 2. / 1959. – Identified as "*Tephrocactus articulatus* fa. *articulatus* und fa. *syringacanthus*" by Ritter in KS 4: 1629.
ZSS SR13699 – sem ("1 Frucht" = 1 fruit.)

Ritter 421: *Tephrocactus strobiliformis* (A. Berger) Fric – Cat. "Akklimatisations- und Versuchsgarten", [unpaged], 1933. (Repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 41, 1935, and by Backeberg in Backeberg & Knuth, Kaktus-ABC, 106, 1936 (dated 1935).)

– Argentina: Córdoba; "Serrezuela". – Locality data according to index card associated with seed sample at ZSS, and from Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS B4981 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS S10195 – sem (Leg. F. Ritter 1955.)

Ritter 421a: *Tephrocactus articulatus* (Pfeiffer) Backeberg – Cactus (Paris) 8(38): 249, 1953. (The author abbreviation is normally given as "(Otto) Backeberg", on the assumption that *Opuntia articulata* Otto is the basionym, but Otto's name is a nude name.)

– Argentina: San Luis; "Luján". – Identified as '*Tephrocactus articulatus* var.' in KS 4.
SGO 125435 – rad, corp, ar, sp

Ritter 422: *Opuntia salagria* A. Castellanos – Lilloa 27: 85-89, 1953. (Dated 1953, published 1955 according to RPS 6.)

– Argentina: San Luis; "Juan Llerena". – / 2. / 1955. – Collection date according to original Ritter seed sample at ZSS; locality data from the same source, supported from the index card associated with seed sample at ZSS, and from Ritter letter dated 22. 4. 1955 (ZSS archives). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS S10196 – sem (Leg. F. Ritter 1955 (sub *Platyopuntia cordobensis*)).
ZSS SR13700 – sem

Ritter 423: *Opuntia microdisca* F. A. C. Weber – in D. Bois, Dict. hort., 896, 1898.

– Argentina: La Rioja; "Famatina". – Locality data according to index card associated with seed sample at ZSS, and from Ritter letter dated 22. 4. 1955 (ZSS archives). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS S10197 – sem (Leg. F. Ritter 1955 (sub *Platyopuntia macrodisca*)).
ZSS T4982 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 424: *Cereus aethiops* Haworth – Philos. Mag. 7: 109, 1830.

loc. 1: unde?: sine loco. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS AX4247 – corp, ar, sp (Leg. F. Ritter 1959. Ex cult. ZSS s.n.)

loc. 2: Argentina: San Luis; "Luján (San Luis)". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter and labelled as *P. coeruleus* on the original label.
SGO 121776 – (corp), ar, sp

loc. 3: Argentina: Córdoba; "V. Dolores" = Villa Dolores. – / 2. / 1955. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter and labelled as *P. coeruleus* on the original label.

ZSS SR13701 – sem

Ritter 424: *Erdisia* sp.

p.p.(2): Peru: sine loco.

ZSS B4983 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 425: *Notocactus submammulosus* (Lemaire) Backeberg – Backeberg & Knuth, Kaktus-ABC, 255, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina: Córdoba; "Capilla del Monte". – / 3. / 1955. – Collection date according to original Ritter seed sample at ZSS; locality data according to the same source and to index card associated with seed sample at ZSS, and from Ritter letter dated 22. 4. 1955 (ZSS archives). Identified as "*Notocactus submammulosus* var." in KS 4: 1629.

ZSS S10198 – sem (Leg. F. Ritter 1955.)

ZSS SR13702 – sem

ZSS T4984 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Argentina: San Luis; "südl. Quines bei 1000 m." = S of Quines. 1000 m. – Identified as "*Notocactus submammulosus* var." in KS 4: 1629.

SGO 125267 – (corp), ar, sp

loc. 3: Argentina: San Luis; "Sierra südlich Quines" = Sierra S of Quines. – / 3. / 1962. – Identified as "*Notocactus submammulosus* var." in KS 4: 1629.

ZSS SR13703 – sem ("1 Frucht") = 1 fruit.)

Ritter 426: *Trichocereus vatteri* Kiesling – Hickenia 1(6): 31-32, 1976.

(Probably invalid (Art. 37.1) since two elements are given in the type citation.)

Typus (*T*): Cabrera & al. 24568a&b (LP).

– Argentina: La Rioja; "Famatina", towards the W. – / 2. / 1955. – Collection data and date according to specimen at ZSS.

ZSS S10199 – sem (Leg. F. Ritter 1955.)

ZSS T4987 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 426: *Browningia candelaris* (Meyen) Britton & Rose – The Cact. 2: 63, 1920.

p.p.(2): Peru: sine loco. – / 7. / 1953. – The locality information for this number (doubly assigned also to a *Trichocereus* from Argentina) is conflicting: The labels of 2 specimens at ZSS give Peru as locality, while a letter in the ZSS archives (p. 71, 31. 1. 1955) gives Chile.

ZSS T4985 – (corp, ar, sp) (Leg. F. Ritter ex nat.)

ZSS T4986 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 426a: *Trichocereus* hybr.

- loc. 1:** Argentina: La Rioja; "Famatina West" = Famatina West. – / 4. / 1962. – Given as "Hybrid *candicans* × FR 426 ?"; FR 426 is *Trichocereus vatterii*. SGO 121242 – (corp), ar, sp
- loc. 2:** Argentina: La Rioja; "Famatina". – Given as the hybrid *Trichocereus vatterii* × *T. candicans* in KS 4. Locality data according to Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10200 – sem (Leg. F. Ritter 1955.)

Ritter 427: *Trichocereus lobivioides* Gräser & F. Ritter ex F. Ritter – Kakt. Südamer. 2: 444-445, 705, 1980. (*Nom. nov. pro Lobivia grandiflora sensu* Werdermann 1936. Nomenclatural status not assessed.)

- Argentina: Catamarca; near Catamarca city. – Locality information according to letter dated 22. 4. 1955 (p. 50, 70, 90, 100) in ZSS archives.
ZSS A10493 – ar, sp, fl (Ex cult. ZSS s.n., 4. 7. 1977.)
ZSS S10201 – sem (Leg. F. Ritter 1955 (sub *Trichocereus grandiflorus*)).
ZSS T4990 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1. 5. 1955.)

Ritter 427: *Borzicactus* sp.

- p.p.(2):** Peru: Arequipa; Chala and Atico. – / 8. / 1953. – Locality information from letter dated 31. 1. 1955, p. 100, 70, 90, in ZSS archives.
ZSS T4988 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 428: *Trichocereus auricolor* Backeberg – in Backeberg & Knuth, Kaktus ABC, 220, 412, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Argentina: Catamarca; "Catamarca bei 1300 m.". 1300 m. – Identified as *Trichocereus andalgalensis* on the original collector's label.
SGO 121183 – (corp), ar, sp

Ritter 428: *Loxanthocereus acanthurus* (Vaupel) Backeberg – Repert. Spec. Nov. Regni Veget. 51: 65, 1942.

- p.p.(2):** Peru: Lima; sine loco. – Locality information according to specimens at ZSS.
ZSS T4991 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 429: *Trichocereus purpureopilosus* Weingart – Monatsschr. Deutsche Kakt.-Ges. 2: 96, 1930.

- Argentina: Córdoba; Sierra Chica, near Capilla del Monte. – / - / 1955. – Locality data from correspondence with F. Ritter (ZSS archives, letter 22. 4. 1955, p. 51).
ZSS AX4237 – corp, ar, sp (Leg. F. Ritter 1956. Ex cult. ZSS s.n.)
ZSS B271 – corp, ar, sp, fl (Ex cult. ZSS s.n. Duplo in herb. Z.)
ZSS S10202 – sem (Leg. F. Ritter 1955.)
ZSS T4994 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 429: *Mila caespitosa* Britton & Rose – The Cact., 3: 211, 1922.

- p.p.(2):** Peru: Lima; Matucana. – Locality information from Ritter letter dated 31. 1. 1955, p. 142 (in ZSS archives). – Ritter's comment in litt. (l.c.; translated): Plants 8 - 11 ribs, with 8 - 11 white radial spines and 1 to several pale darker tipped centrals of 0.5 - 1 cm length; stems 5 - 10 cm long, 2 - 2.5 cm in diam. No flowers seen.
ZSS B4993 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 430: *Gymnocalycium schuetzianum* Till & Schatzl – Kakt. and. Sukk. 32(10): 234-236, 1981.

- loc. 1:** Argentina: Córdoba; near Cruz del Eje. – Identified as *Gymnocalycium* sp. in KS 4: 1629.
ZSS S10203 – sem (Leg. F. Ritter 1955.)
ZSS T5115 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Argentina: Córdoba; "Cruz d. Eje No. 10" = Cruz del Eje. – / 3. / 1955. – Identified as *Gymnocalycium* sp. in KS 4: 1629.
ZSS SR13704 – sem

Ritter 430: *Erdisia* sp.

- p.p.(2):** Peru: sine loco.
ZSS B4995 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 431: *Trichocereus ingens* (Britton & Rose ex Backeberg) F. Ritter – Kakt. Südamer. 2: 451, 1980.

- Argentina: La Rioja; "Famatina". – Locality according to index card associated with the seed sample at ZSS. Identified as '*Trichocereus ingens* var.' in KS 4 and originally distributed as *Soehrensia* sp.
ZSS S12547 – sem (Leg. F. Ritter 1955.)

Ritter 431a: *Trichocereus ingens* (Britton & Rose ex Backeberg) F. Ritter – Kakt. Südamer. 2: 451, 1980.

- loc. 1:** Argentina: Tucumán; "4 km über Passhöhe westl. Tafí" = 4 km above culmination of pass W of Tafí. – / 7. / 1959. – Identified as *Trichocereus ingens* var. *ingens* in KS 4: 1629. Collection date according to specimen at SGO.
SGO 121847 – (corp), ar, sp
- loc. 2:** Argentina: Catamarca; "94 km südl. Sta. Maria" = 94 km S of Santa Maria. – / 2. / 1959. – Identified as *Trichocereus ingens* var. *ingens* in KS 4: 1629.
SGO 121848 – (corp), ar, sp

Ritter 432: *Gymnocalycium mazanense* Backeberg – Kakteenfreund (Mannheim) 1932: 133, 1932. (See also Blätt Kakt.forsch. 1935(2): [unpaged].)

- loc. 1:** Argentina: La Rioja; near Famatina. – / 2. / 1955. – Locality information according to letter dated 22. 4. 1955, p. 45 (archives ZSS).
ZSS S10204 – sem (Leg. F. Ritter 1955 (sub *Gymnocalycium hossei*)).
ZSS T4996 – ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Argentina: La Rioja; "Famatina West, 2100 m." / "Famatina West, Höhen" = Famatina, west, altitudes.
SGO 124659 – (corp), ar, sp
- loc. 3:** Argentina: La Rioja; "Famatina nach Ost" = Famatina, towards the E / "Famatina Ost" = Famatina, East.
SGO 124660 – (corp), ar, sp
- loc. 4:** Argentina: Catamarca; "91 km östl. Mazan" = 91 km E of Mazan / "östl. Mazan" = E of Mazan.
SGO 124661 – (corp), ar, sp
- loc. 5:** Argentina: La Rioja; "Alpasinche, Nr. 7".
SGO 124662 – (corp), ar, sp
- loc. 6:** Argentina: La Rioja; "Gobernador Gordillo, Nr. 12; Chamental" / "Chamental".
SGO 124663 – (corp), ar, sp
- loc. 7:** Argentina: La Rioja; "Famatina Nr. 9". – / 2. / 1955.
ZSS SR13705 – sem
- loc. 8:** Argentina: La Rioja; "Chamental". – / 5. / 1962.
ZSS SR13706 – sem

Ritter 432: *Mila caespitosa* Britton & Rose – The Cact., 3: 211, 1922.

- p.p.(2):** Peru: Ancash; sine loco.
ZSS T4997 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 433: *Gymnocalycium bicolor* Schütz – Friciana 1(7): 2-3, ill. (p. 8), 1962. (The type is said to be in the "Succulent Collection" and may have been a living plant, which would invalidate the name.)
Typus (T): Ritter 433 (Brno, ZSS).

- loc. 1:** Argentina: Córdoba; Capilla del Monte. – / 2. / 1955. – Identified as "*Gymnocalycium valnicekianum* cf." in KS 4: 1629.
ZSS T4998 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T4999 **Type number** – ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Argentina: Córdoba; "Capilla d. Monte Nr. 6" = Capilla del Monte. – / 3. / 1955. – Identified as "*Gymnocalycium valnicekianum* cf." in KS 4: 1629.
ZSS SR13707 **Type number** – sem

Ritter 434: *Gymnocalycium capillense* (Schick) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 287, 1936. (Sphalm. 'capillaense', frequently misspelled 'capill(a)ensis'. Dated 1935, publ. Febr. 1936. There is no agreement whether the original spelling is correctable or not.)

- loc. 1:** Argentina: Córdoba; Capilla del Monte. – / 2. / 1955.
ZSS A10459 – fl (Ex cult. ZSS s.n., undated but probably prior to 1960 (sub *Gymnocalycium baldianum*)).
ZSS S10205 – sem (Leg. F. Ritter 1955 (sub *Gymnocalycium sutterianum*)).
ZSS T5000 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

- loc. 2:** Argentina: Córdoba; "Capilla d. Monte Nr. 7" = Capilla del Monte. – / 3. / 1955.
ZSS SR13708 – sem

Ritter 435: *Gymnocalycium stellatum* (Spegazzini) Spegazzini – Nuevas Not. Cact., 62, 1925.

- loc. 1:** Argentina: La Rioja; Gobernador Gordillo. – / 2. / 1955.
ZSS S10206 – sem (Leg. F. Ritter 1955.)
ZSS T5003 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Argentina: La Rioja; "Gobernador Gordillo, Nr. 17" / "Chemical".
SGO 124665 – rad, corp, ar, sp
- loc. 3:** Argentina: La Rioja; "Gobernador Gordillo Nr. 8" = Gobernador Gordillo. – / 2. / 1955.
ZSS SR13709 – sem

Ritter 435: *Haageocereus* sp.

- p.p.(2):** Peru: Lima; Rimac-valley, Chosica. – / 11. / 1953.
ZSS T5001 – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T5002 – (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 436: *Gymnocalycium ritterianum* Rausch – Kakt. and. Sukk. 23(7): 180-181, ill., 1972.

- Typus* (*T*): Rausch 126 (ZSS) (Type cited for *W* but placed in ZSS.).
- Argentina: La Rioja; "Famatina". – Locality data according to index card associated with the seed sample, and from Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS A10496 – fl (Ex cult. ZSS s.n., 19. 7. 1977. No locality associated with this specimen.)
ZSS S10207 – sem (Leg. F. Ritter 1955 (sub *Gymnocalycium jossensianum*)).

Ritter 437: *Gymnocalycium oenanthemum* Backeberg – Blätt. Kakt.-forsch. 1934(9): [unpaged], 1934.

- loc. 1:** Argentina: Catamarca; "Catamarca". – Locality data according to index card associated with the seed sample, and from Ritter letter dated 22. 4. 1955 (ZSS archives).
ZSS S10208 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Argentina: Catamarca; "Catamarca bei 1300 m." / "Catamarca". 1300 m.
SGO 124523 – (corp), ar, sp
- loc. 3:** Argentina: Catamarca; "Quebrada Catamarca, Höhen" = Quebrada Catamarca, altitudes. – / 3. / 1962.
ZSS SR13710 – sem

Ritter 438: *Gymnocalycium mostii* (Gürke) Britton & Rose – Addisonia 3: 5, 1918.

loc. 1: Argentina: Córdoba; "Las Rabonas aus der Sierra Grande SW von Cordoba" = Las Rabonas in the Sierra Grande SW of Córdoba. – Locality data according to Ritter letter dated 22. 4. 1955, p. 47 (ZSS archives). Kakt. Südamer. 4: 1516 has the locality as "Capilla del Monte, in hohen bis höchsten Berglagen" = Capilla del Monte, in upper and uppermost mountain regions.

ZSS S10209 – sem (Leg. F. Ritter 1955 (sub *Gymnocalycium brachyanthum*)).

loc. 2: Argentina: Córdoba; "Las Rabonas Nr. 9". – / 2. / 1955.

ZSS SR13711 – sem

Ritter 439: *Gymnocalycium* sp.

– Argentina: Córdoba; Las Rabonas. – / 2. / 1955. – The collection number of this specimen may be wrong; it was once "corrected" to 436; information from Ritter letters (dated 22. 4. 1955, p. 47, in ZSS archives) indicates that the correct number for plants from this locality could be 438.

ZSS T5004 – ar, sp (Leg. F. Ritter ex nat.)

Ritter 439: *Opuntia* sp.

p.p.(2): Peru: sine loco. – / 11. / 1953.

ZSS T5005 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 440: *Gymnocalycium proliferum* (Backeberg) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 295, 1936. (Dated 1935, publ. Febr. 1936.)

– Argentina: Córdoba; Las Rabonas. – / 2. / 1955. – Locality according to specimen at ZSS. Identified as "*Gymnocalycium proliferum* cf." in KS 4: 1629.

ZSS B5006 – ar, sp (Leg. F. Ritter ex nat.)

Ritter 441: *Neoraimondia* sp.

p.p.(2): Peru: sine loco. – / 12. / 1953.

ZSS T5007 – corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)

Ritter 442: *Gymnocalycium quehlianum* (F. A. Haage jr.) Hosseus var. ***rolfianum*** Schick – Sukkulantenkunde 2: 26, 1948.

– Argentina: sine loco. – / 3. / 1955.

ZSS T5010 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 442: *Corryocactus* sp.

p.p.(2): Peru: sine loco. – / 12. / 1953.

ZSS T5008 – corp, ar, sp (Leg. F. Ritter ex nat.)

ZSS T5009 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 443: *Neoporteria* sp.

- Chile: Arica. - / 12. / 1953.
ZSS T5011 - (corp), ar, sp (Leg. F. Ritter ex nat.)

Ritter 444: *Gymnocalycium schickendantzii* (F. A. C. Weber) Britton & Rose – The Cact. 3: 164, 1922.

- loc. 1:** Argentina: Córdoba; Cruz del Eje. - / 3. / 1955.
ZSS S10210 - sem (Leg. F. Ritter 1955 (sub *Gymnocalycium delatitii*)).
ZSS T5013 - ar, sp (Leg. F. Ritter ex nat.)
ZSS T5028 - corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Argentina: Catamarca; "Catamarca".
SGO 124666 - (corp), ar, sp
- loc. 3:** Argentina: Catamarca / Córdoba; "Serrezuela Nr. 7 + Catamarca Nr. 5". - / 2. / 1955.
ZSS SR13712 - sem

Ritter 444: *Copiapoa* sp.

- p.p.(2):** Chile: Chañaral. - / 1. / 1954.
ZSS T5012 - ar, sp (Leg. F. Ritter ex nat.)
ZSS T5014 - corp, ar, sp (Leg. F. Ritter ex nat. (juvenile plant).)

Ritter 444b: *Gymnocalycium schickendantzii* (F. A. C. Weber) Britton & Rose – The Cact. 3: 164, 1922.

- loc. 1:** Argentina: San Luis; "Luján (San Luis), Fuss der Berge, Hang" = Luján, bottom of mountains, slope. - Identified as "*Gymnocalycium schickendantzii* var." in KS 4: 1629.
SGO 124668 - (corp), ar, sp
- loc. 2:** Argentina: San Luis; "Quines, unten" = Quines, below. - Identified as "*Gymnocalycium schickendantzii* var." in KS 4: 1629.
SGO 124667 - (corp), ar, sp
- loc. 3:** Argentina: San Luis; "Quines". - / 3. / 1962. - Identified as "*Gymnocalycium schickendantzii* var." in KS 4: 1629.
ZSS SR13713 - sem

Ritter 445: *Hymenorebutia aurea* (Britton & Rose) F. Ritter var. *cylindrica* (Backeberg) F. Ritter – Kakt. Südamer. 2: 467, 1980.

- Argentina: Córdoba; "Capilla del Monte". - Locality data according to index card associated with seed specimen at ZSS.
ZSS A10486 - fl (Ex cult. ZSS s.n., 22. 5. 1975. No locality data associated with this specimen.)
ZSS S10211 - sem (Leg. F. Ritter 1955 (sub *Pseudoechinopsis aurea*)).

Ritter 445: *Erdisia* sp.

- p.p.(2):** unde ?: sine loco.
ZSS T5015 - corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 446: *Setiechinopsis mirabilis* (Spegazzini) De Haas – Succulenta 22: 9, 1940.

- Argentina: La Rioja; Famatina. – / 2. / 1955. – Identified as *Setiechinopsis* sp. in KS 4: 1629.
ZSS S10212 – sem (Leg. F. Ritter 1955.)
ZSS T5029 – corp, ar, sp, (fr) (Leg. F. Ritter ex nat.)

Ritter 446: *Opuntia* sp.

- p.p.(2):** Chile: Perez Caldera. – / 6. / 1954.
ZSS B5134 – (corp, ar, sp) (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 447: *Pyrrhocactus strausianus* (K. Schumann) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 263, 1936. (Dated 1935, publ. Febr. 1936. First invalidly (Art. 34.1a) published by A. Berger, Kakteen, 215, 345, 1929.)

- Argentina: Mendoza; "Malargüe Nr. 3". – / 3. / 1955. – Locality data and collection date according to original Ritter seed sample at ZSS, supported also on the index card associated with the other seed specimen at ZSS (locality simply given as "Malargüe"), and in Ritter letter dated 22. 4. 1955 (ZSS archives). Identified as "*Pyrrhocactus strausianus* var." in KS 4: 1629.
ZSS S10213 – sem (Leg. F. Ritter 1955.)
ZSS SR13714 – sem
ZSS T5030 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 448: *Pyrrhocactus platyacanthus* F. Ritter – Kakt. Südamer. 2: 420, 1980.

Typus (T): Ritter 448 (ZSS [none of the 2 specimens labelled as holotype]).

- loc. 1:** Argentina: Mendoza; "Malargüe". – / 3. / 1955. – Locality data according to index card associated with seed specimen at ZSS, and to Ritter letter dated 22. 4. 1955 (ZSS archives).

ZSS S10214 **Type number** – sem (Leg. F. Ritter 1955.)
ZSS T5031 **Type collection** – corp, ar, sp (Leg. F. Ritter ex nat.)
ZSS T5032 **Type collection** – (corp), ar, sp (Leg. F. Ritter ex nat.)

- loc. 2:** Argentina: Mendoza; "Malargüe Nr. 7". – / 3. / 1955.
ZSS SR13718 **ISO** – sem

Ritter 449: *Pyrrhocactus armatus* F. Ritter – Succulenta 39(5): 49-51, ill., 1960.

Typus (T): Ritter 449 (U 097952B, SGO, ZSS [seeds only]) (Type cited for ZSS but eventually found at U.).

- loc. 1:** Chile: "Typus-Lokalität Berghöhen südlich von El Paico, südwestl. von Santiago" = type locality, altitudes of mountains S of El Paico, SW of Santiago. – / 5. / 1955. – Collection date according to specimen at U.
U 097952B **HOLO** – (corp), ar, sp (Labelled as "Typus-Exemplar" by Ritter. Collection number inferred.)

- loc. 2:** Chile: "El Paico". – / 5. / 1955. – The original label has both numbers 449 and 239b, which are said to be equal in field number list in KS 4.
SGO 121540 **ISO** – (corp), ar, sp
ZSS SR13302 **ISO** – sem (Date given as "IV. 55." on the original label.)

loc. 3: Chile: "Berghöhen südl. El Paico" = heights of mountains S of El Paico. – / 5. / 1955.

U ISO – sem (Collection number by inference from locality data; labelled as "von der Typus-Lokalität" = from the type locality.)

loc. 4: Chile: "Cuesta Lo Prado". – "Photopflanze" = specimen of photograph. SGO 125453 – (corp), ar, sp

loc. 5: Chile: "Cuesta de lo Prado". – / 5. / 1955. – The original label first had the collection number as "FR 239b", now crossed out. FR 239b is said to equal 449 in KS 4.

SGO 125643 – fr

Ritter 449?: *Pyrrhocactus armatus* F. Ritter – Succulenta 39(5): 49-51, ill., 1960.

Typus (T): Ritter 449 (U 097952B, SGO, ZSS [seeds only]) (Type cited for ZSS but eventually found at U.).

– Chile: "Sn. Francisco de M." = San Francisco de Mostazal. – The original label also has the number "FR 239" with a question mark and in brackets. FR 239 is identified as *Pyrrhocactus horridus* var. *robustus* fa. *vegasanus* in the field number list in KS 4.

SGO 125644 – fr

Ritter 450: *Pterocactus* sp.

– Argentina: Mendoza; Malargüe. – / 3. / 1955.

ZSS T5033 – corp, ar, sp (Leg. F. Ritter ex nat. The material is more reminiscent of an *Opuntia* (U. Eggl).)

Ritter 451: *Tephrocactus weberi* (Spegazzini) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 106, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Argentina: La Rioja; Famatina. – / 5. / 1955. – Collection date according to herbarium list at ZSS, probably representing the date of accession.

ZSS T5034 – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 2: Argentina: Salta; "60 über Cafayate" = 60 [km] above Cafayate / "südl. Cafayate" = S of Cafayate.

SGO 125436 – (corp), ar, sp

loc. 3: Argentina: Catamarca; "33 km über Sta. Maria" = 33 km above Santa Maria / "südl. Sta. Maria" = S of Santa Maria.

SGO 125437 – rad, corp, ar, sp

loc. 4: Argentina: La Rioja; "Famatina". – / 4. / 1962.

ZSS SR13719 – sem

Ritter 452: *Opuntia salmiana* Parmentier ex Pfeiffer – Enum. Cact., 172, 1837.

– Argentina: La Rioja; Gobernador Gordillo. – / 2. / 1955. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS B5035 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 453: *Opuntia* sp.

- Argentina: Córdoba; Las Rabonas. – / 2. / 1955. – Collection date according to label associated with living accession at ZSS. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS A9785 – corp, ar, sp, fl (Ex cult. ZSS 92 2487, 31. 8. 1992) (Leg. Ritter.)

Ritter 455: *Opuntia* sp.

- Argentina: La Rioja; Famatina mountains. – / 2. / 1955. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS B5036 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 457: *Opuntia* sp.

- Argentina: Catamarca; mountains W of Catamarca city, small plants in rock crevices. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS A10488 – corp, ar, sp, fl (Ex cult. ZSS s.n., 24. 6. 1976.)
ZSS A15936 – corp, ar, sp, al, fl, fr (Ex cult. ZSS 90 4077, 22. 7. 1994)
(Leg. Ritter. Det. U. Eggli (the form which is horticulturally treated as *fa. inermis*). Probably not representing the Ritter collection, which was treated as *Platyopuntia* by F. Ritter.)
ZSS B5554 – corp, ar, sp, al, fl (Ex cult. ZSS 90 4051, 12. 6. 1991) (Leg. Ritter. The plant is reminiscent of *Opuntia picardoi* (as cultivated at ZSS) [U. Eggli].)

Ritter 458: *Acanthocalycium klimpelianum* (Weidlich & Werdermann)

Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 225, 1936. (Dated 1935, publ. Febr. 1936.)

- Argentina: Córdoba; near Las Rabonas, NE of Villa Dolores, less than 1000 m altitude. – Locality according to KS 2: 466.
B GH18750 – fl, ic (corp) (Ex cult. BG Berlin, 31. 7. 1985 (cult. ex sem. ex H. Winter 1959, not recorded in the catalogue). Collection number inferred.)

Ritter 459: *Lobivia famatimensis* (Spegazzini) Britton & Rose – The Cact. 4: 286, 1923. (Orthography of the specific epithet probably correctable to 'famatinensis'.)

- Argentina: La Rioja; Famatina mountains. – / 2. / 1955.
ZSS A10479 – corp, ar, sp, fl (Ex cult. ZSS s.n. (plants received from Ritter 1955), 26. 4. 1978.)
ZSS T5037 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 460: *Rhipsalis lumbricoides* (Lemaire) Lemaire – Ill. Hort. 6(Misc.): 88, 1859. (Sometimes erroneously attributed to K. Schumann 1898.)

- Argentina: sine loco. – / 2. / 1955.
ZSS B5038 – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 462: *Austrocactus spiniflorus* (Philippi) F. Ritter – Sukkulentenkunde 7/8: 35, 1963.

- Chile: "Refugio Lagunillas". – / 11. / 1955.
ZSS SR13347 – sem

Ritter 464: *Copiopoa humilis* (Philippi) Hutchison – Cact. Succ. J. (US) 25: 34, 1953.

- loc. 1:** Chile: region of Paposo. – Locality data according to KS 3: 1066.
B GH30590 – ic (corp) (Ex cult. BG Berlin, 30. 11. 1992 (cult. ex sem.
Cat. H. Winter 1957). Collection number inferred.)
ZSS S10294 – sem (Leg. F. Ritter 1957.)
ZSS S10452 – sem (Leg. Fa. Köhres (ex cult.) 1977.)

- loc. 2:** Chile: "östl. Paposo".
SGO 124863 – corp, ar, sp

- loc. 3:** Chile: "22 km N. Paposo" = 22 km N of Paposo. – The original label also
first had the additional data "(unten)" = below, now crossed out.
SGO 124864 – rad, corp, ar, sp

- loc. 4:** Chile: "Blanco Encalada".
SGO 124865 – corp, ar, sp

- loc. 5:** Chile: "Paposo Nr. 5". – / 6. / 1955.
ZSS SR13348 – sem

Ritter 465: *Pyrrhocactus kunzei* (Förster) Borg – Cacti, 262, 1937. (Sphalm.
'kuzzei'. Repeated by Y. Ito, Explan. Diagn. Austroechinocactinae, 228,
1957 (cf. RPS 8), and by F. Ritter in Succulenta 1959(10): 130, 1959 (cf.
RPS 10).)

- Chile: "Toledo, Nr. 1". – / 6. / 1955. – The original label gives the number
as "Nr. 465 = 220".
SGO 121555 – corp, ar, sp

Ritter 466: *Pyrrhocactus lissocarpus* F. Ritter – Succulenta 1960(2): 17-18, ill., 1960.

Typus (T): Ritter 466 (U 097936B, SGO, ZSS [seeds only]) (Type cited for ZSS in the protologue but material found at U. F. Kattermann (Succ. Pl. Res. 1: 152, 1994) unnecessarily designates the ill. l.c. p. 18, as lectotype.).

- loc. 1:** Chile: "Cauquenes", c. 34° 15' S latitude. – / 5. / 1955. – Collection date according to specimens at SGO and the original Ritter seed sample at ZSS ("5. 1955") and at U ("1955"); locality data supplemented from the protologue.

SGO 125645 ISO – fr

U **Type collection** – sem (Collection number inferred from the locality data; labelled as "von der Typus-Lokalität" = from the type locality.)

U **Type collection** – fr, sem (Collection number inferred from the locality data; labelled as "von der Typuslokalität" = from the type locality.)

U 097936B **HOLO** – (corp), ar, sp (Labelled as "Musterprobe des Typus" by Ritter. Collection number inferred.)

ZSS SR13349 ISO – sem

loc. 2: Chile: "Coya". – / 5. / 1955.
SGO 125448 **Type number** – (corp), ar, sp

Ritter 466a: *Pyrrhocactus lissocarpus* F. Ritter var. *gracilis* F. Ritter – Succulenta 1960(2): 17-19, 1960.

Typus (T): Ritter 466a (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for ZSS in the protologue but material found at U.).

loc. 1: Chile: W of "San Francisco Mostazal", at larger altitudes, c. 34 ° latitude, on rock walls. – / – / 1955. – Collection date according to specimen at U. Locality data supplemented from the protologue.

SGO 125646 **Type collection** – (fl)

U **HOLO** – sem (Collection number inferred; labelled as "von der Typus-Lokalität" = from the type locality, and therefore assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: Valparaíso; "Coliguay". – / 11. / 1967.
SGO 121557 **Type number** – (corp), ar, sp

loc. 3: Chile: "Sn Francisco de Mostazal" = San Francisco de Mostazal. – / 5. / 1955.

ZSS SR13350 **Type collection** – sem

Ritter 467: *Pyrrhocactus garaventae* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'garaventai'.)

loc. 1: Chile: "Cerro de la Campana". – / 6. / 1955. – Originally described as *Horridocactus garaventae*. Collection date according to specimen at U; originally collected by A. Garaventa but numbered by Ritter.

U **Type collection** – fr, sem (Collection number inferred from the locality; labelled as "von der Typus-Lokalität" = from the type locality.)

ZSS S10318 **Type number** – sem (Leg. F. Ritter 1957. No locality data associated with this specimen.)

loc. 2: Chile: "C.o Campana, Nr. 7" = Cerro Campana / "Campana". – / 6. / 1955. – Originally described as *Horridocactus garaventae*.

SGO 125449 **ISO** – (corp), ar, sp

SGO 125649 **ISO** – (fr)

ZSS SR13351 **ISO** – sem

Ritter 468: *Pyrrhocactus andicola* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'andicolus'.)

loc. 1: Chile: "Cerro Chivato (zwischen Santiago und Los Andes)" = Cerro Chivato, between Santiago and Los Andes). – / 5. / 1955. – Originally described as *Horridocactus andicola*.

U **Type collection** – sem (Collection number inferred from the locality data and date; labelled "von der Typus-Lokalität" = from the type locality.)

U **Type collection** – fr, sem (Collection number inferred from the locality data; labelled as "von der Typus-Lokalität" = from the type locality; dated "Juni 1955".)

loc. 2: Chile: Aconcagua; "von der Typuslokalität Cerro Chivato (nördl. Santiago)" = from the type locality Cerro Chivato (N of Santiago). – / 5. / 1955. – Collection date according to specimen at U. Originally described as *Horridocactus andicola*.

U **HOLO** – (corp), ar, sp (Labelled as "Typ." by Ritter. Collection number inferred.)

loc. 3: Chile: Aconcagua; "Cerro Chivato" / "Cerro Chivato bei Los Andes" = Cerro Chivato near Los Andes. – / 11. / 1955. – Originally described as *Horridocactus andicola*.

SGO 125450 **Type number** – (corp), ar, sp

loc. 4: Chile: Aconcagua; "C.o Chivato Nr. 7" = Cerro Chivato. – / 6. / 1955. – Originally described as *Horridocactus andicola*.

SGO 125451 **Type number** – rad, corp, ar, sp

SGO 125648 **Type number** – fr (No collection date given for this specimen.)

ZSS SR13352 **Type number** – sem

loc. 5: Chile: Aconcagua; "Putando Nr. 4". – / 4. / 1955. – Originally described as *Horridocactus andicola*.

SGO 125452 – (corp), ar, sp

SGO 125647 – (fl)

loc. 6: Chile: Aconcagua; sine loco. – Originally described as *Horridocactus andicola*.

B GH22399 – fl, ic (corp, fl) (Ex cult. BG Berlin, 2. 8. 1987 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

B GH31084 – fl (Ex cult. BG Berlin, 27. 5. 1993 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

Ritter 468a: *Pyrrhocactus grandiflorus* F. Ritter – Succulenta 1960: 41-42, ill., 1960.

Typus (T): Ritter 469 (U 088226A) (Type cited for ZSS in the protologue, but material found at U. F. Kattermann (Succ. Pl. Res. 1: 144, 1994) unnecessarily designated the ill. l.c. p. 42 as lectotype.).

– Chile: "C.o de la Provincia" = Cerro de la Provincia. – / 5. / 1955. – The second label in the jar has the number 469 which is identical with 468a according to the field number list in KS 4. The jar contains several different-looking fragments, probably representing 2 collections.

SGO 121558 – (corp), ar, sp

Ritter 468b: *Pyrrhocactus andicola* (F. Ritter) F. Ritter var. *descendens* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'andicolus').

loc. 1: Chile: "Los Andes". 1000 m. – / 5. / 1955. – Collection date according to specimen at U; altitude according to the protologue.

SGO 125456 **Type collection** – corp, ar, sp

U **Type collection** – sem (Collection number inferred.)

U 098120B **Type collection** – (corp), ar, sp (Collection number inferred.)

loc. 2: Chile: "Las Condes". 30. / 10. / 1955.

SGO 125457 – (corp), ar, sp

- loc. 3:** Chile: "La Cumbre Nr. 4". – / 6. / 1955. – One of the original labels has the collection numbers as "FR 469 = 468b"; 469 is *Pyrrhocactus grandiflorus* according to the field number list in KS 4.
SGO 125458 – (corp), ar, sp
- loc. 4:** Chile: "Los Andes Nr. 5". – / 6. / 1955. – The original label also has the collection number "FR 469" (in brackets at SGO, written over on the original Ritter seed sample at ZSS); 469 is *Pyrrhocactus grandiflorus* according to the field number list in KS 4.
SGO 125459 **Type number** – (corp), ar, sp (Includes a seedling plant.)
ZSS SR13353 **Type number** – sem ("(Same von 1 Frucht nahe Los Andes)" = seed from one fruit from near Los Andes.)

Ritter 468d: *Pyrrhocactus andicola* (F. Ritter) F. Ritter var. ***robustus*** (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'andicolus'.)

- loc. 1:** Chile: above Tilama, and elsewhere. – Locality data according to KS 3: 919.
ZSS S10326 **Type number** – sem (Leg. F. Ritter 1957.)
- loc. 2:** Chile: "Pass nach Combarbalá (von Illapel) = pass to Combarbalá (from Illapel). – / 8. / 1957.
SGO 121559 **Type number** – (rad), corp, ar, sp
- loc. 3:** Chile: "nördl. Illapel" = N of Illapel. – / 5. / 1955.
U **Type number** – sem (Collection number inferred from the locality and the identification.)
- loc. 4:** Chile: "zwischen Illapel u. Combarbalá" = between Illapel and Combarbalá. – / 5. / 1955. – Collection date according to specimen at U.
U 098056B **HOLO** – (corp), ar, sp (Labelled as "Belegprobe" by Ritter; and assumed to represent the holotype as this is the only specimen present. Collection number inferred.)
- loc. 5:** Chile: "Combarbalá Nr. 2b". – / 5. / 1955.
SGO 125460 **Type number** – (corp), ar, sp
- loc. 6:** Chile: "hohe Berge über Tilama" = high mountains above Tilama.
SGO 125461 **Type number** – (corp), ar, sp
- loc. 7:** Chile: "Höhe oberhalb Tilama" = altitude above Tilama. – / 12. / 1957.
ZSS SR13354 **Type number** – sem
- loc. 8:** Chile: "Passhöhe Illapel - Combarbalá" = culmination of pass Illapel - Combarbalá. – / 12. / 1955.
ZSS SR13355 **Type number** – sem

Ritter 468e: *Pyrrhocactus andicola* (F. Ritter) F. Ritter var. ***mollensis*** (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959. (Sphalm. 'andicolus'.)

- loc. 1:** Chile: "Los Molles". – / 5. / 1955. – Collection date according to specimen at U.
U **ISO** – sem (Collection number inferred.)
U 097896B **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS S10327 **ISO** – sem (Leg. F. Ritter 1957. Locality inferred from the varietal epithet 'mollensis'.)

loc. 2: Chile: "Planta Molles".

SGO 125462 **Type number** – (corp), ar, sp

loc. 3: Chile: "oberhalb Planta Molles" = above Planta Molles. – / 12. / 1955.

ZSS SR13356 **Type number** – sem

Ritter 469: *Pyrrhocactus grandiflorus* F. Ritter – Succulenta 1960: 41-42, ill., 1960.

Typus (T): Ritter 469 (U 088226A) (Type cited for ZSS in the protologue, but material found at U. F. Kattermann (Succ. Pl. Res. 1: 144, 1994) unnecessarily designated the ill. l.c. p. 42 as lectotype.).

loc. 1: Chile: "Cerro Ramón bei Santiago", at more than 2000 m. – / 5. / 1955. – Collection date according to specimen at U; locality data supplemented from the protologue.

U **ISO** – sem (Collection number inferred from locality data; labelled as "von der Typuslokalität" = from the type locality.)

U 088226A **HOLO** – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

loc. 2: Chile: "Refugio Lagunillas, Nr. 2". – The original label first had the number 468a, overwritten with 469.

SGO 121560 – (corp), ar, sp

loc. 3: Chile: "C.o de la Provincia" = Cerro de la Provincia. – / 5. / 1955. – The original label first had the number 468a, overwritten with 469. A collection with identical data is filed at SGO under FR 468a.

ZSS SR13357 – sem

Ritter 470: *Pyrrhocactus odoriflorus* F. Ritter – Succulenta 1960: 116-117, ill., 1960.

Typus (T): Ritter 470 (U 097920B, SGO, ZSS [seeds only]) (Type cited for ZSS in the protologue, but material found at U. F. Kattermann (Succ. Pl. Res. 1: 146, 1994) unnecessarily designated the ill. l.c. as lectotype.).

loc. 1: Chile: "Pichidangui, Nr. 5". – / 6. / 1955.

SGO 121561 **ISO** – rad, corp, ar, sp

SGO 125650 **ISO** – (fl, fr) (The envelope contains very variable material. Original label dated "5. 1955".)

U **ISO** – sem (Collection number inferred from locality data and date, labelled as "von der Typus-Lokalität" = from the type locality.)

ZSS SR13358 **ISO** – sem

loc. 2: Chile: "von der Typus-Lokalität Höhen über Pichidangui" = from the type locality, altitudes above Pichidangui. – / 6. / 1955. – Collection date according to specimen at U.

U 097920B **HOLO** – rad, corp, ar, sp (Labelled as "Typus-Exemplar" by Ritter. Collection number inferred.)

Ritter 471: *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 947-948, 1980.

- loc. 1:** Chile: "C.o Campana" = Cerro Campana.
SGO 121574 – rad, corp, ar, sp
- loc. 2:** Chile: "C.o Campana" = Cerro Campana. – / 6. / 1955. – The original label is numbered "471 x 239a (?)", the two numbers are said to be equal in the field number list in KS 4.
SGO 121575 – ar, sp
- loc. 3:** Chile: "C.o Campana, Nr. 2" = Cerro Campana. – / 6. / 1955.
SGO 125651 – fr
- loc. 4:** Chile: "C.o Campana Nr. 2 + Nr. 2a" = Cerro Campana. – / 6. / 1955.
ZSS SR13359 – sem
- Ritter 471a:** *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 947-948, 1980.
– Chile: "Limache (C.o La Cruz)" = Limache (Cerro La Cruz). – / 12. / 1955.
ZSS SR13360 – sem
- Ritter 471a+b:** *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 947-948, 1980.
– Chile: sine loco.
ZSS S9914 – sem (Leg. F. Ritter 1955.)
- Ritter 471b:** *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 947-948, 1980.
– Chile: "Calera". – / 5. / 1955. – The first original label also has the collection number "FR 472" in brackets, the second only has the number "FR 471"; both these numbers and also FR 471b are said to equal FR 239a in the field number list in KS 4.
SGO 125463 – (corp), ar, sp
- Ritter 472:** *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 947-948, 1980.
loc. 1: Chile: sine loco.
ZSS T5146 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
loc. 2: Chile: "Calera". – / 5. / 1955.
SGO 125652 – fr
ZSS SR13361 – sem (The original label also has the number "FR 471b" added at a later date.)
- Ritter 473:** *Neoporteria coimasensis* F. Ritter – Taxon 12(1): 34, 1963.
Typus (T): Ritter 473 (U 117867B, SGO, ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).
loc. 1: Chile: "Las Chilcas".
SGO 121564 – (corp), ar, sp
loc. 2: Chile: "Salamanca, Nr. 5". – / 5. / 1955.
SGO 121565 – (corp), ar, sp

- loc. 3:** Chile: "Strasse Illapel - Los Vilos, Brücke über den Salamanca-Fluss" = road Illapel - Los Vilos, bridge crossing the Salamanca river.
SGO 121566 – (corp), ar, sp
- loc. 4:** Chile: "Choapa, Nr. 3a". – / 5. / 1955.
SGO 121567 – (corp), ar, sp ("Ausnahmee exemplar" = exceptional specimen.)
- loc. 5:** Chile: "7 km N. Illapel" = 7 km N of Illapel.
SGO 121568 – (corp), ar, sp
- loc. 6:** Chile: "westl. Salamanca" = W of Salamanca / "28 km unterhalb Salamanca" = 28 km below Salamanca.
SGO 121569 – rad, corp, ar, sp
- loc. 7:** Chile: "Palomar". – / 6. / 1955. – "Kümmerform von 473 ?" = depauperate form of 473 ?.
SGO 121570 – (corp, ar, sp)
- loc. 8:** Chile: Aconcagua; "Las Coimas, Nr. 4". – / 4. / 1955.
SGO 121571 **ISO** – (corp), ar, sp (Annotated by Ritter as "Muster Ritter".)
SGO 125718 **ISO** – fr
U **ISO** – sem (Collection number inferred from the locality data; labelled as "von der Typuslokalität" = from the type locality. Specimen dated as "Juni 1955".)
U **ISO** – sem (Collection number inferred from locality data and date; specimen labelled "von der Typuslokalität" = from the type locality.)
U 117867B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. The locality is not given on the original label and is inferred.)
- loc. 9:** Chile: sine loco.
ZSS S10351 **Type number** – sem (Leg. F. Ritter 1957.)
ZSS TX16237 – (rad), corp, ar, sp (Ex cult. ZSS 80 2528, 25. 5. 1994) (Leg. Locuty.)
- loc.10:** Chile: "bei km 7 Weg nach Combarbalá von Illapel" = at km 7 of path to Combarbalá from Illapel. – / 11. / 1957.
ZSS SR13362 – sem
- loc.11:** Chile: "Las Coimas - Palomar - Chagres". – The date on the original label is given as "VI. 55. - I. 62".
ZSS SR13363 **Type number** – sem

Ritter 473a: *Neoporteria coimasensis* F. Ritter fa. *tenuispina* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1630, 1981. (Mentioned in field-number list only.)

Based on Ritter 473a.

- loc. 1:** Chile: "Las Coimas, Nr. 6". – / 6. / 1955. – The jar at SGO contains 2 labels, one of the two with a multitude of numbers and names crossed out and overwritten several times. The SGO material (2 plants, several fragments) seems to fall in at least 3 groups and may prove to be heterogeneous (U. Eggl & B. Leuenberger).
SGO 121572 – rad, corp, ar, sp

U – sem (Collection number by inference from the date and locality data which is just given as "Las Coimas".)

ZSS SR13364 – sem

loc. 2: Chile: Aconcagua; "Las Coimas, Nr. 6". – / 4. / 1955.

SGO 125719 – fr

Ritter 473b: *Neoporteria coimasensis* F. Ritter fa. *crassispina* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1630, 1981. (Mentioned in field-number list only.)

Based on Ritter 473b.

– Chile: "von Las Coimas" = from Las Coimas. – / 6. / 1955.

U 097968B – (corp), ar, sp

Ritter 473c: *Neoporteria coimasensis* F. Ritter var. *robusta* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1041-1042, 1980.

– Chile: Santiago; E of "Montenegro". – Originally published as *Neoporteria robusta* Ritter. Locality data amended according to the protologue. The material was probably collected by A. Fankhauser.

SGO 121573 ISO – (corp), ar, sp

U 116956B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter.

No locality given on original label.)

ZSS S12582 **Type number** – sem (Leg. H. Winter (Cat. 1961/62) (sub *Neoporteria robusta*). No locality data directly associated with this specimen.)

ZSS SR13365 **Type number** – sem (The original envelope does not have locality data.)

Ritter 474: *Neoporteria nidus* (Söhrens) Britton & Rose var. *gerocephala* (Y. Ito) F. Ritter – Kakt. Südamer. 3: 1039, 1980.

loc. 1: Chile: "unterhb. Vicuña" = below Vicuña. – / 11. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 121576 – (corp), ar, sp

ZSS SR13367 – sem

loc. 2: Chile: "Combarbalá". – / 5. / 1955.

SGO 121577 – rad, corp, ar, sp

loc. 3: Chile: "Auco".

SGO 121578 – corp, ar, sp

loc. 4: Chile: sine loco.

B GH20735 – fl, ic (corp) (Ex cult. BG Berlin, 5. 8. 1986 (cult. ex sem. Cat. H. Winter 1957). Collection number inferred.)

ZSS S10349 – sem (Leg. F. Ritter (sub "*Neoporteria nidus* Typus").)

loc. 5: Chile: "Vicuña". – / 12. / 1955.

SGO 125717 – (fl)

loc. 6: Chile: "zw. Illap. u. Combarbalá" = between Illapel and Combarbalá. – / 12. / 1955.

ZSS SR13366 – sem

Ritter 474a: *Neoporteria nidus* (Söhrens ex K. Schumann) Britton & Rose – The Cact. 3: 94, 1922. (As to type only; Britton & Rose's concept of *N. nidus* incorporates additional elements (F. Kattermann, Succ. Pl. Res. 1: 148, 1994).)

loc. 1: Chile: "19 km W. Vicuña" = 19 km W of Vicuña. – "Hybrid ?". Identified as *Neoporteria nidus* var. *nidus* in KS 4.

SGO 121579 – corp, ar, sp

loc. 2: Chile: "Ovalle". – The original label also contains the information "474a u. fast 474 (?)" = 474a and almost 474 (?). Identified as *Neoporteria nidus* var. *nidus* in KS 4.

SGO 121580 – corp, ar, sp

loc. 3: Chile: "Ovalle". – / 12. / 1955. – Identified as *Neoporteria nidus* var. *nidus* in KS 4.

SGO 125716 – (fr)

loc. 4: Chile: "Ovalle". – / 1. / 1954. – Identified as *Neoporteria nidus* var. *nidus* in KS 4. The original label was first numbered "221"; this number is set equal to FR 474a in the field-number list in KS 4.

ZSS SR13368 – sem

Ritter 474b: *Neoporteria nidus* (Söhrens) Britton & Rose var. *matancillana* F. Ritter – Kakt. Südamer. 3: 1039, 1980.

Typus (T): Ritter 474b (U, SGO, ZSS [seeds only]) (Type cited for U 1: iii, 1979.).

loc. 1: Chile: "Matancillo" [Maitencillo ?], NE of Illapel. 800 m. – / – / 1959. – Locality data supplemented from the protologue; collection date according to specimen at U.

SGO 121581 ISO – (corp), ar, sp

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: "Mantancilla".

ZSS SR13369 ISO – sem ("Same taub (3 Früchte) (2 Pflanzen)" = seed sterile (3 fruits) (2 plants).)

Ritter 475: *Pyrrhocactus atroviridis* F. Ritter – Succulenta 1960(8): 89-90, ill., 1960.

Typus (T): Ritter 475 (U 098008B, SGO, ZSS [seeds only, status ?]) (Type cited for ZSS in the protologue, but material found at U. F. Kattermann (Succ. Pl. Res. 1: 150, 1994) unnecessarily designated the fig. 1.c. as lectotype.).

loc. 1: Chile: "Vallenar". – / 1. / 1956. – Collection date according to specimens at SGO and U.

SGO 125653 ISO – (fl), fr

U ISO – sem (Collection number inferred from the locality data; labelled as "von der Typuslokalität" = from the type locality.)

U 098008B HOLO – rad, corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only complete specimen present.)

- loc. 2:** Chile: "Vallenar, Nord, nahe der Stadt" = Vallenar, North, near the town.
SGO 125464 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: "6 km nördl. Nicolasa" = 6 km N of Nicolasa.
SGO 125465 – (corp), ar, sp
- loc. 4:** Chile: "Vallenar Nr. 5". – / 1. / 1956.
ZSS SR13370 **Type number** – sem
- loc. 5:** Chile: "8 km nördl. Nicolasa" = 8 km N of Nicolasa. – / 1. / 1956.
ZSS SR13371 – sem

Ritter 476: *Copiapoa eremophila* F. Ritter – Kakt. Südamer. 3: 1104-1105, figs. 1046-1047, 1980. (First mentioned in Backeberg, Die Cact. 6: 3828, 1962 (as *nom. inval.*))

Typus (T): Ritter 476 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.)

- loc. 1:** Chile: Antofagasta; "östlich Paposo, Grenze gegen die Wüste" = E of Paposo, frontier towards the desert. – / – / 1956.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS S9913 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this collection.)
- loc. 2:** Chile: Antofagasta; "Paposo, Nr. 7". – The original label also has the locality "Taltal" now crossed out.
SGO 124866 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: "östl. Paposo" = E of Paposo. – / 2. / 1956. – The original label also has the number "(= 208a)"; FR 208a and FR 476 are said to be equal in the field-number list in KS 4.
ZSS SR13372 **Type number** – sem

Ritter 478: *Oreocereus varicolor* Backeberg – Cact. Succ. J. (US) 23(1): 20, 1951. (Sphalm. 'variicolor'.)

- loc. 1:** Peru: Ayacucho; "westl. Puquios" = W of Puquio.
SGO 125314 (in 2 parts) – (corp), ar, sp
- loc. 2:** Chile: "Strasse nach Portezuela Chapiquiña bei ca. 3000 - 200 m. bei km 80" = road to Portezuela Chapiquiña at km 80. 3000 m. - 3200 m.
SGO 125315 (in 3 parts) – (corp), ar, sp

Ritter 478a: *Oreocereus varicolor* Backeberg – Cact. Succ. J. (US) 23(1): 20, 1951. (Sphalm. 'variicolor'.)

- Chile: "Chusmiga".
SGO 125316 (in 2 parts) – (corp), ar, sp

Ritter 479: *Eulychnia morromorenoensis* F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 3: 901-902, figs. 759-760, 1980. (Based on two syntypes, *F. Ritter 202a* and *F. Ritter 479*. Erroneously included as valid in RPS 31.)

loc. 1: Chile: sine loco.

SGO 125189 **SYN** – corp, ar, sp

ZSS S12562 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 2: Chile: "von Cerro Moreno (Antofag.)" = from Cerro Moreno (Antofagasta).
– / 1. / 1954. – The original label was first numbered "FR 202a", now crossed
out. FR 202a and FR 479 are set equal in the field-number list in KS 4.

ZSS SR13373 **SYN** – sem

Ritter 479a: *Eulychnia saint-pieana* F. Ritter – Taxon 13(3): 115, 1964.

Typus (T): Ritter 479a (U [not found], SGO [status ?], ZSS [seeds only])
(Holotype cited for U l.c. 12(1): 28.).

loc. 1: Chile: Atacama; sine loco.

ZSS S10282 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 2: Chile: "Esmeralda".

SGO 125190 **Type number** – (rad, corp, ar, sp) (A rooted seedling only.)

loc. 3: Chile: "nördl. Chañaral" = N of Chañaral / "Chañaral". – / 12. / 1957.

SGO 125191 (in 3 parts) **Type number** – corp, ar, sp (Includes a rooted
seedling.)

loc. 4: Chile: "Chañaral S." ?= S of Chañaral. – / 1. / 1956.

ZSS SR13374 **Type number** – sem

Ritter 479b: *Eulychnia iquiquensis* (K. Schumann) Britton & Rose var.

pullilana F. Ritter – Kakt. Südamer. 3: 901, 1980.

Typus (T): Ritter 479b (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:
iii, 1979.).

loc. 1: Chile: Antofagasta; "El Cobre". – / 3. / 1963. – Collection date according to
the original Ritter seed sample at ZSS; the specimen at U is dated "1963";
the specimen at SGO is undated, while the protologue gives the original
collection date as 1956.

SGO 125192 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to
represent the holotype as this is the only specimen present.)

ZSS SR13375 **ISO** – sem

loc. 2: Chile: Antofagasta; "Cerro Coloso".

SGO 125234 **Type number** – corp, ar, sp

Ritter 480: *Pyrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var.

australis F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 3: 932-933,
1980. (Published as provisional name.)

Based on Ritter 480.

loc. 1: Chile: "Sidetal (Maule-Schlucht)" = Sidetal (Maule gorge).

SGO 121582 – (corp), ar, sp

loc. 2: Chile: "Rio Mocho".

SGO 121583 – rad, corp, ar, sp

Ritter 481: *Neoporteria nigrihorrida* (Backeberg) Backeberg fa. *crassispina* F.

Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1630, 1981.

Based on Ritter 481.

loc. 1: Chile: "58 km S Coquimbo". – / 11. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 121584 – (corp), ar, sp

ZSS SR13377 – sem

loc. 2: Chile: "Choapa, Nr. 3 + Nr. 7". – / 5. / 1955. – "Mit z.T. Einschlag von FR 473 *Neoporteria coimasensis*" = partly with introgression from FR 473 *N. coimasensis*.

SGO 121585 – (corp), ar, sp

loc. 3: Chile: "Weg nach Fray Jorge" = path to Fray Jorge / "östl. Fray Jorge" = E of Fray Jorge.

SGO 121586 – (corp), ar, sp

loc. 4: Chile: sine loco.

ZSS S10353 – sem (Leg. F. Ritter 1957 (sub *Neoporteria crassispina*)).

ZSS S12581 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 5: Chile: "10 km östl. Fray Jorge" = 10 km E of Fray Jorge. – / 12. / 1955.

SGO 125714 – fr

ZSS SR13376 – sem

Ritter 482: *Neoporteria clavata* (Söhrens ex K. Schumann) Werdermann – Kakteenkunde 1939: 79, 1939.

loc. 1: Chile: sine loco.

ZSS S10354 – sem (Leg. F. Ritter 1957.)

ZSS T5145 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS 78 1818 (ex coll. Locuty).)

loc. 2: Chile: "37 km östl. La Serena, 30 km W. Vicuña" = 37 km E of La Serena, 30 km W of Vicuña.

SGO 121587 – (corp), ar, sp

loc. 3: Chile: "20 km W. Vicuña" = 20 km W of Vicuña. – / 11. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 121588 – rad, corp, ar, sp

ZSS SR13378 – sem

Ritter 482a: *Neoporteria clavata* (Söhrens ex K. Schumann) Werdermann fa. *grandiflora* F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 3: 1037, 1980. (Published as provisional name.)

Based on Ritter 482a.

loc. 1: Chile: "25 km W. Vicuña" = 25 km W of Vicuña.

SGO 121589 – (corp), ar, sp, (fl)

loc. 2: Chile: sine loco.

ZSS S9920 – sem (Leg. F. Ritter 1955 (sub *Neoporteria clavata* var. *grandiflora*)).

loc. 3: Chile: "42 km östl. La Serena = 25 km westl. Vicuña" = 42 km E of La Serena = 25 km W of Vicuña. – / 11. / 1957. – "Wahrscheinlich gemischt mit var. *parviflora*; letztere mit grösseren Körner [sic !]" = Probably mixed

with var. *parviflora* which has larger seeds.
ZSS SR13379 – sem

Ritter 482b: *Neoporteria clavata* (Söhrens ex K. Schumann) Werdermann var. *parviflora* F. Ritter – Succulenta 1966: 131, 1966.

Typus (T): Ritter 482b (U 160682B, SGO, ZSS [seeds only]).

- Chile: Coquimbo; "Cuesta San Antonio" near San Antonio. – / 10. / 1961. – Collection data completed according to the protologue; collection date according to the original Ritter seed sample at ZSS, the specimen at U is dated "1963".
SGO 121590 **ISO** – (corp), ar, sp
U 160682B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS SR13380 **ISO** – sem

Ritter 483: *Neoporteria laniceps* F. Ritter – Taxon 12(1): 34, 1963. (Sphalm. 'planiceps', cf. Succulenta 1966(3): 36.)

Typus (T): Ritter 483 (U 117847B) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Totoral Bajo.
U 117847B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. Locality not given on original label but inferred.)
- loc. 2:** Chile: Atacama; "nördl. Carrizal Bajo" = N of Carrizal Bajo.
SGO 121591 – rad, corp, ar, sp
- loc. 3:** Chile: "18 km nördl. Carrizal Bajo" = 18 km N of Carrizal Bajo. – / 11. / 1957.
ZSS SR13381 – sem
- loc. 4:** Chile: "16 km nördl. Carrizal Bajo" = 16 km N of Carrizal Bajo. – / 10. / 1961.
ZSS SR13382 – sem ("1 Frucht" = 1 fruit.)

Ritter 484: *Pyrhocactus eriosyzoides* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959.

- loc. 1:** Chile: "6 km unterh. Huanta, Berghang" = 6 km below Huanta, mountain slope / "westl. Huanta" = W of Huanta. – Originally described as *Horridocactus eriosyzoides* Ritter.
SGO 121592 **Type number** – (corp), ar, sp
- loc. 2:** Chile: "6 km unterh. Huanta, Schluchtausgang" = 6 km below Huanta, exit of gorge / "westl. Huanta" = W of Huanta. – Originally described as *Horridocactus eriosyzoides* Ritter.
SGO 121593 **Type number** – (corp), ar, sp
- loc. 3:** Chile: "Huanta". – Originally described as *Horridocactus eriosyzoides* Ritter.
SGO 121594 **Type number** – (corp), ar, sp
SGO 121596 **Type ?** – rad, corp, ar, sp (= Lembcke s.n. in Ritter 484 (loc. 3).)
- loc. 4:** Chile: "Cumbre Pajonales (zw. Río Choro [Choros] u. Vallenar)" = Cumbre Pajonales (between Río Choros and Vallenar). – Originally described as *Horridocactus eriosyzoides* Ritter.

SGO 121595 – rad, corp, ar, sp

loc. 5: Chile: "von der Typus-Lokalität" = from the type locality. – Originally described as *Horridocactus eriosyzoides* Ritter. The type locality is given as near Huanta.

U ISO – sem (Collection number inferred from the identification on the original label, which says "von der Typus-Lokalität" = from the type locality.)

loc. 6: Chile: "von der Typuslokalität Huanta" = from the type locality Huanta. – / – / 1955. – Originally described as *Horridocactus eriosyzoides* Ritter. Collection date according to specimen at U.

U 098072B HOLO – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only complete specimen present.)

loc. 7: Chile: sine loco. – Originally described as *Horridocactus eriosyzoides* Ritter.

ZSS S10328 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus kunzei*).

ZSS S12591 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 8: Chile: "Huanta". – / 12. / 1955. – Originally described as *Horridocactus eriosyzoides*.

SGO 125654 **Type number** – fr

ZSS SR13383 **Type number** – sem

loc. 9: Chile: "Cuesta Pajonal (zw. Rio Choros u. Vallenar)" = Cuesta Pajonal (between Rio Choros and Vallenar). – Originally described as *Horridocactus eriosyzoides*.

SGO 125655 – fr

Ritter 484a: *Pyrrhocactus eriosyzoides* (F. Ritter) F. Ritter var. *domeykoensis*

F. Ritter – Kakt. Südamer. 3: 938, fig. 815, 1980.

Typus (T): Ritter 484a (U, SGO) (Type cited for U l.c. 1: iii, 1979).

loc. 1: Chile: Atacama; "2 1/2 km westl. Domeyko" = 2.5 km W of Domeyko.

SGO 121597 ISO – (corp), ar, sp

loc. 2: Chile: Atacama; "weit nördl. Domeyko, ca. 800 m. Höhe" = far N of Domeyko. 800 m. 17. / 1. / 1967.

SGO 121598 – corp, ar, sp

loc. 3: Chile: Atacama; W of Domeyko. – / – / 1961. – Collection date according to specimen at U.

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 4: Chile: "Cumbre Pajonales" / "Pajonales". – / 12. / 1955.

ZSS SR13384 – sem

Ritter 485: *Pyrrhocactus transitensis* F. Ritter – Taxon 12: 33, 1963.

Typus (T): Ritter 485 (U 145319B, SGO, ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

loc. 1: Chile: "Transito". – / 10. / 1962. – Collection date according to specimen at U.

SGO 121599 **ISO** – rad, corp, ar, sp
U 145319B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: Transito E of Vallenar. – Locality data according to KS 3: 979.

ZSS S10329 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus transitensis*)).

loc. 3: Chile: "Transito".

SGO 125656 **Type number** – fr (Original label dated "XII. 55.")
ZSS SR13385 **Type number** – sem (Original label dated "I. 56.")

Ritter 486: *Pyrrhocactus vallenarensis* F. Ritter – Succulenta 1959(11): 157-158, ill., 1959.

Typus (T): Ritter 486 (U 028796, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for ZSS in the protologue, but material found at U. F.

Kattermann (Succ. Pl. Res. 1: 148, 1994) unnecessarily designated the ill. l.c. as lectotype.)

loc. 1: Chile: "Viñita in Marqueza-Schlucht" = Viñita in the Marqueza gorge. – / 10. / 1961.

SGO 121600 **Type number** – (corp), ar, sp

loc. 2: Chile: "27 km südl. Cruce von Vicuña" = 27 km S of Cruce from Vicuña.

SGO 121601 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "5 km südl. Rivadavia" = 5 km S of Rivadavia.

SGO 121602 **Type number** – (corp), ar, sp

loc. 4: Chile: "oberhalb Vallenar" = above Vallenar. – / 12. / 1955. – Collection date according to original Ritter seed sample at ZSS.

SGO 121603 **Type number** – corp, ar, sp
ZSS SR13386 **Type number** – sem

loc. 5: Chile: "Pass nach Andacollo" = pass to Andacollo. – / 10. / 1961. – Collection date according to original Ritter seed sample at ZSS.

SGO 121659 **Type number** – (corp), ar, sp
ZSS SR13387 **Type number** – sem

loc. 6: Chile: "von Typuslokalität 25 südl. (sic !) Vicuña" = from type locality 25 [km] S of Vicuña. – The original label does not give a distance measurement; it is dated "1937" for the specimen at U.

U 028796 **HOLO** – rad, corp, ar, sp (Labelled as "Typus" by Ritter and assumed to represent the holotype.)

loc. 7: Chile: sine loco.

ZSS S10330 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus vallenarensis*)).

loc. 8: Chile: "16 km oberhalb Vallenar" = 16 km above Vallenar. – / 12. / 1955.

SGO 125657 **Type number** – fr

loc. 9: Chile: "27 km südl. von Vicuña" = 27 km S of Vicuña. – / 11. / 1957.

ZSS SR13388 **Type number** – sem

Ritter 487: *Pyrrhocactus wagenknechtii* F. Ritter – Succulenta 1960: 82-83,

ill., 1960.

Typus (T): Ritter 487 (ZSS [not found; seeds only], SGO [status ?]) (F. Kattermann (Succ. Pl. Res. 1: 154, 1994) designates the fig. l.c. p. 83 as lectotype.).

– Chile: near the town of "La Serena". – / 12. / 1955. – Locality data completed according to the protologue; collection date according to original Ritter seed sample at ZSS.

SGO 121604 **Type number** – (corp), ar, sp

ZSS S10331 **Type number** – sem (Leg. F. Ritter 1957 (sub

Horridocactus wagenknechtii). No locality data directly associated with this specimen.)

ZSS SR13389 **Type number** – sem

Ritter 488: *Pyrhocactus simulans* F. Ritter – Succulenta 1961: 35-36, ill., 1961.

Typus (T): Ritter 488 (U 098016B, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Chile: "von der Typus-Lokalität Choros-Tal" = from the type locality Choros valley. – / 1. / 1956. – Collection date according to specimen at U.

U 098016B **HOLO** – rad, corp, ar, sp (Collection number inferred.

Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: "Choros Bajos".

SGO 121605 **Type number** – (corp), ar, sp

ZSS S10332 **Type number** – sem (Leg. F. Ritter 1957 (sub

Horridocactus simulans). No locality data associated with this specimen.)

loc. 3: Chile: "Choros Bajos, Nr. 5". – / 12. / 1955.

SGO 125658 **Type number** – (fr)

loc. 4: Chile: "Trapiche, Nr. 5". – / 12. / 1955.

SGO 125659 – (fl), fr

ZSS SR13390 – sem

Ritter 489: *Pyrhocactus chorosensis* F. Ritter – Succulenta 1960: 121-122, ill., 1960.

Typus (T): Ritter 489 (ZSS [not found], SGO [status ?], U [seeds only]) (F. Kattermann (Succ. Pl. Res. 1: 154, 1994) designates the fig. l.c. p. 122, as lectotype.).

loc. 1: Chile: in the lower "Choros-Tal" = Choros valley, rare. – / 1. / 1956.

U **ISO** – sem (Collection number inferred from the locality data; labelled as "von der Typus-Lokalität" = from the type locality.)

loc. 2: Chile: "nordöstl. El Tofo, Ebene" = NE of El Tofo, plain.

SGO 121606 – rad, corp, ar, sp

loc. 3: Chile: "Ebene NE El Tofo" = plain NE of El Tofo. – / 12. / 1955.

SGO 125660 – (fl)

- loc. 4:** Chile: "El Tofo"; "Saucache". - / 12. / 1955. - The comment on the original label reads: "Die 4 kleinen Korn von El Tofo XII. 55 - die 8 grossen Korn in Saucache geemtet." = The 4 small seeds from El Tofo 12/1955 - the 8 large seeds harvested in Saucache.
ZSS SR13391 - sem

Ritter 490: *Pyrrhocactus chaniarensis* F. Ritter - Kakt. Südamer. 3: 926-927, figs. 790-791, 1980.

Typus (T): Ritter 490 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "Schlucht-Ausgang von Chañaral de Aceitunas." = Exit of gorge of Chañaral de Aceitunas. - / - / 1959. - Collection date according to specimen at U (which has the locality as "Ausgang Schlucht von ...".
SGO 121607 ISO - (corp), ar, sp
U HOLO - (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Chile: "12 km südöstl. Carrizalillo" = 12 km SE of Carrizalillo.
SGO 121608 - corp, ar, sp
ZSS SR13392 - sem
- loc. 3:** Chile: "Rio Choros, Nr. 6".
SGO 121609 - rad, corp, ar, sp (The specimen seems to have been in cultivation for some time prior to preservation.)
- loc. 4:** Chile: "Choros Bajos"; "Saucache". - / 2. / 1957. - The original label reads: "Choros Bajos. (Same Saucache II.57 I Exemplar)" = Choros Bajos. (Seeds Saucache 2/1957 1 specimen).
ZSS SR13393 - sem

Ritter 490a: *Pyrrhocactus chaniarensis* F. Ritter - Kakt. Südamer. 3: 926-927, figs. 790-791, 1980.

Typus (T): Ritter 490 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "Rio Choros, Nr. 6a". - / 12. / 1955. - Collection date according to fruit specimen at SGO.
SGO 121610 - rad, corp, ar, sp
SGO 125661 - fr
- loc. 2:** Chile: "Am Wege von Choros Bajos nach Trapiche (Choros Bajos Nr. 6a)" = along path from Choros Bajos towards Trapiche (Choros Bajos).
ZSS SR13394 - sem
- loc. 3:** Chile: "Choros Bajos"; "Saucache". - / 2. / 1957. - The original label reads: "Choros Bajos. (Same von Saucache vom II. 57.) 1 Exemplar." = Choros Bajos. (seed from Saucache from 2/1957). 1 specimen.
ZSS SR13395 - sem

Ritter 491: *Pyrrhocactus crispus* F. Ritter - Succulenta 1959(11): 137-138, ill., 1959.

Typus (T): Ritter 491 (ZSS [not found], SGO [status ?], U [seeds only]) (F. Kattermann designated the illustration l.c. p. 138 as lectotype (Succ. Pl. Res. 1: 150, 1994).).

- loc. 1:** Chile: "Freirina". – / 1. / 1956.
U ISO – sem (Collection number inferred from the locality data; labelled as "von der Typuslokalität" = from the type locality.)
- loc. 2:** Chile: "25 km westl. Vallenar" = 25 km W of Vallenar / "Maitencillo".
SGO 121611 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: "20 km westl. Vallenar" = 20 km W of Vallenar. – / 2. / 1958. – "1 Frucht. Das kleine Korn 25 km westl. Vallenar und vom 1. 1956." = 1 fruit.
The small seed 25 km W of Vallenar and from 1/1956.
ZSS SR13396 **Type number** – sem

Ritter 492: *Pyrrhocactus totoralensis* F. Ritter – Succulenta 1961(12): 131-132, ill., 1961. (The protologue erroneously gives the field number as '495' (concurrently also given for *P. gracilis* l.c. 131), instead of '492' (cf. l.c. 1962: 5).)

Typus (T): Ritter 492 (U 117659B, SGO [status ?], ZSS [seeds only, status ?]).

- loc. 1:** Chile: Atacama; "30 km N Carriz. Bajo" = 30 km N of Carrizal Bajo / "zw. Carrizal (Bajo) und Totalar Bajo" = between Carrizal Bajo and Totalar Bajo.
SGO 121612 **Type number** – corp, ar, sp
- loc. 2:** Chile: Atacama; "östl. Totalar Bajo" = E of Totalar Bajo. – On the original label "Totalar" is crossed out and replaced with "Carrizal (?)".
SGO 121613 **Type number** – (corp), ar, sp
- loc. 3:** Chile: Atacama; "Carriz. Bajo, Küste Süd" = Carrizal Bajo, coast south.
SGO 121614 **Type number** – (corp), ar, sp ("Hohes Exemplar" = tall specimen.)
- loc. 4:** Chile: Atacama; "Carrizal Bajo, Küste nach Süd" = Carrizal Bajo, coast towards the south. – One of the original labels contained "Totalar Bajo".
SGO 121615 **Type number** – corp, ar, sp
- loc. 5:** Chile: Atacama; Totalar Bajo.
U 117659B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 6:** Chile: "Carrizal Bajo, Küste" = Carrizal Bajo, coast. – / 1. / 1956.
SGO 125662 **Type number** – (fr)
ZSS SR13397 **Type number** – sem
- loc. 7:** Chile: "östl. Totalar Bajo" = E of Totalar Bajo. – / 1. / 1956.
SGO 125663 **Type number** – (fl)
- loc. 8:** Chile: "20 km nördl. Carrizal Bajo (Same Saucache)" = 20 km N of Carrizal Bajo (seed Saucache). – / 2. / 1957. – The collection date is given in the bracket with "Saucache" on the original label.
ZSS SR13398 **Type number** – sem

Ritter 493: *Pyrrhocactus carrizalensis* F. Ritter – Taxon 12(1): 33, 1963.

Typus (T): Ritter 493 (U 117802B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Atacama; W of Carrizal Alto. – / – / 1956. – Locality and collection date according to the protologue.
U 117802B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10333 **Type number** – sem (Leg. F. Ritter 1957 (sub
Horridocactus carrizalensis.)
- loc. 2:** Chile: Atacama; "ca. 8 km östl. Carrizal Bajo" = ca. 8 km E of Carrizal Bajo.
SGO 121617 **Type number** – (corp), ar, sp
- loc. 3:** Chile: "5 km östl. Carrizal Bajo" = 5 km E of Carrizal Bajo. – / 1. / 1956.
SGO 125664 **Type number** – (fl)
ZSS SR13399 **Type number** – sem ("Die grösseren Körner (die meisten)
von Saucache II. 57" = The larger seeds (the majority) from
Saucache 2/1957.)
- loc. 4:** Chile: "Carrizal Alto (Berg mit Chileoreb.)" = Carrizal Alto (mountain with
Chileorebutia). – / 1. / 1958.
ZSS SR13400 **Type number** – sem
- loc. 5:** Chile: "westl. Totoral, Berge" = W of Totoral, mountains.
ZSS SR13401 **Type number** – sem

Ritter 494: *Pyrrhocactus confinis* F. Ritter – Succulenta 1961(1): 4-5, ill., 1961.

Typus (T): Ritter 494 (U 098080B, SGO, ZSS [seeds only, status ?]).

- loc. 1:** Chile: "Monte Amargo" near Copiapó. – Locality supplemented with data from the protologue.
SGO 121618 **ISO** – (corp), ar, sp
U **ISO** – sem (Collection number inferred from the locality data; labelled as "von der Typuslokalität" = from the type locality. Specimen dated "Jan. 1956".)
ZSS S10334 **Type number** – sem (Leg. F. Ritter 1957 (sub
Horridocactus confinis). No locality data associated with this specimen.)
- loc. 2:** Chile: sine loco.
B GH13977 – fl (Ex cult. BG Berlin, 18. 5. 1983 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
SGO 121619 **Type number** – (corp), ar, sp ("Exemplar an Felswand mit Samen" = specimen at the rock wall with seeds.)
ZSS S12592 – sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 3:** Chile: "von der Typuslokalität südl. Monte Amargo" = from the type locality S of Monte Amargo. – / 1. / 1956. – Collection date according to specimen at U.
U 098080B **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 4:** Chile: "30 km westl. Toledo" = 30 km W of Toledo. – / 1. / 1956.
SGO 125665 – (fr)
- loc. 5:** Chile: "westl. Monte Amargo" = W of Monte Amargo. – / 1. / 1956.
ZSS SR13402 **Type number** – sem

Ritter 495: *Pyrrhocactus gracilis* F. Ritter – Succulenta 1961: 129-131, ill.,

1961.

Typus (T): Ritter 495 (U 117866B, SGO, ZSS [seeds only, status ?]).

loc. 1: Chile: Atacama; "Morro Copiapó" near Caldera. – Locality data added from the protologue.

SGO 121620 **ISO** – rad, corp, ar, sp, al

U 117866B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. The original label has no locality data.)

loc. 2: Chile: "südwestl. Caldera, Höhe Küstenberge" = SW of Caldera, altitudes of coastal mountains. – / 1. / 1956.

SGO 125666 **Type number** – (fr)

loc. 3: Chile: "sw Caldera Nr. 6" = SW of Caldera. – / 1. / 1956.

ZSS SR13403 **Type number** – sem

Ritter 496: *Pyrhocactus calderanus* F. Ritter – Succulenta 1961(2): 13-14, ill., 1961.

Typus (T): Ritter 496 (U 098136B, SGO, ZSS [seeds only]).

loc. 1: Chile: Atacama; "nördl. Caldera" = N of Caldera. – / 2. / 1956. – Collection date according to specimen at SGO.

SGO 121621 **ISO** – ar, sp

SGO 125667 **ISO** – fr

U **ISO** – sem (Collection number inferred from the identification of the original label which also says "von der Typus-Lokalität" = from the type locality.)

ZSS SR12879 **ISO** – sem (Dated Jan. 1956.)

loc. 2: Chile: Atacama; "von der Typuslokalität Caldera" = from the type locality Caldera. – / – / 1956. – Collection date according to specimen at U.

U 098136B **HOLO** – ar, sp (Labelled as "Typ-Muster" by Ritter and therefore assumed to represent the holotype. Collection number inferred.)

Ritter 497: *Maihue niopsis leoncito* (Werdermann) F. Ritter – Kakt. Südamer. 3: 875-876, 1980.

– Chile: "Baños Toro". – / 12. / 1955.

ZSS SR13404 – sem

Ritter 498: *Thelocephala aerocarpa* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1010-1011, 1980. (Incorrectly given as invalid in the IOS Index Names Cact.)

loc. 1: Chile: Atacama; "Arica". – / 9. / 1959. – The protologue does not give any locality data except "Dept. Freirina". The locality here given and the collection date are according to the specimen at U.

U 097904B **HOLO** – rad, corp, ar, sp (Labelled as "Typusexemplar" by Ritter.)

loc. 2: Chile: Atacama; on a mountain near Carrizal Alto. – / 12. / 1957. – Locality data according to KS 3: 1011. Collection date according to specimen at SGO.

SGO 125210 **Type number** – rad, corp, ar, sp

ZSS S10292 **Type number** – sem (Leg. F. Ritter 1957 (sub *Chileorebutia*

aerocarpa.)

ZSS S9873 **Type number** – sem (Leg. Köhres (ex cult.), 1981.)

loc. 3: Chile: Atacama; "Carrizal Alto". – / 1. / 1956.

SGO 125699 **Type number** – fr

ZSS SR13405 **Type number** – sem

Ritter 499: *Thelocephala odieri* (Lemaire ex Salm-Dyck) F. Ritter – Kakt. Südamer. 3: 1012-1016, 1980.

loc. 1: Chile: between Copiapó and Caldera. – / – / 1955. – Collection date according to KS 3.

U 098160B – corp, ar, sp (Labelled as "Typus-Exemplar nach Ritter von der Typus-Lokalität" = type specimen according to Ritter from the type locality. Collection number inferred.)

ZSS S12580 – sem (Leg. H. Winter (Cat. 1961/62).)

ZSS S9874 – sem (Leg. Köhres (ex cult.).)

loc. 2: Chile: "sw. Caldera" = SW of Caldera.

SGO 125130 – rad, corp, ar, sp

ZSS SR13406 – sem (Originally dated "I. 1958", additional material was added "XII. 59" according to the original label. There is a second label with the following comment: "Die gröberen braunen Samen, die einem Exemplar von F. Krauss in Toledo entnommen wurden, sind offenbar etwas anderes weder *odieri* noch Hybrid mit *confinis* denn letztere Samen sind ebenfalls anders. Beide Samensorten im II. 1966 noch lebend." = The coarser brown seeds, which have been taken from a specimen from F. Krauss in Toledo, are apparently something else, neither [*Thelocephala*] *odieri* nor the hybrid with [*Pyrrhocactus*] *confinis* as these seeds are also different. Both seed-sorts still living in 2/1966. The last sentence commenting that the 'seed sorts' are still living has obviously been added later.)

loc. 3: Chile: "Monte Amargo".

SGO 125131 – rad, corp, ar, sp

loc. 4: Chile: "von Pfl. geerntet halbwegs zw. Caldera und Morro de Copiapó" = harvested from plants half-way between Caldera and Morro Copiapó. – / 12. / 1965. – "(Same anders als der von mir 1958 geerntete mit sehr kleinen schwarz. Körnern)" = Seed different from the one I harvested in 1958 with the very small black seeds.

ZSS SR13407 – sem

Ritter 500: *Thelocephala fulva* F. Ritter – Kakt. Südamer. 3: 1011-1012, 1980. (Given as comb. nov., but in fact a sp. nov.)

Typus (T): Ritter 500 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; Totoral. – / – / 1956. – Collection date according to specimen at U.

B GH15812 – fl (Ex cult. BG Berlin, 8. 5. 1984 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present. The original label has no locality data.)

ZSS S8547 **Type number** – sem (Leg. Köhres ex cult., 1977.)

loc. 2: Chile: Atacama; "Totoral Alto". – / 12. / 1957.

SGO 125132 **Type number** – rad, corp, ar, sp

loc. 3: Chile: Atacama; "Totoral Alto, Berghänge" = Totoral Alto, mountain sides.

SGO 125133 **Type number** – rad, corp, ar, sp, (fr), sem

loc. 4: Chile: "östl. Totoral Alto am Wege" = E of Totoral Alto along path. – / 12. / 1957.

ZSS SR13408 **Type number** – sem

Ritter 501: *Thelocephala lembckei* (Backeberg) F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 3: 1005-1009, 1980.

loc. 1: Chile: between Vallenar and Huasco. – / 1. / 1956. – Mostly encountered in cultivation as *Neoporteria reichii*, but Ritter disputes this identification (KS 3: 1005). Collection date according to original Ritter seed sample at ZSS.

ZSS A10471 – fl (Ex cult. ZSS s.n., 2. 7. 1974.)

ZSS S10291 – sem (Leg. F. Ritter 1957.)

ZSS SR13412 – sem (Identified by Ritter as *Neochilenia reichii*.)

ZSS S8565 – sem (Leg. Köhres ex cult.)

ZSS T5497 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

loc. 2: Chile: "w. Vallenar" = W of Vallenar / "Maitencillo". – / 12. / 1957.

SGO 125135 – rad, corp, ar, sp

loc. 3: Chile: "Schlucht der *Maihueiopsis* westl. Vallenar" = gorge of the *Maihueiopsis* W of Vallenar.

SGO 125136 – rad, corp, ar, sp

loc. 4: Chile: "20 km westl. Vallenar" = 20 km W of Vallenar. – / 1. / 1956.

SGO 125701 – (fl)

Ritter 502: *Thelocephala krausii* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1017-1019, 1980.

loc. 1: Chile: Atacama: Copiapó; sine loco. – / – / 1956.

ZSS SR13413 **Type number** – sem ("Same saftig" = seed juicy [sic !], but probably referring to the fruit.)

loc. 2: Chile: Tarapacá; "Arica". – / 9. / 1959. – Collection date according to specimen at U.

U 097928B **HOLO** – rad, corp, ar, sp (Labelled as "Typus-Hinterlegung" by Ritter. Collection number inferred.)

loc. 3: Chile: "Caldera". – The piece of paper with the original label glued on also gives the locality as "nördl. Caldera", but not in Ritters handwriting, having probably been copied from the reverse of the original label.

SGO 125137 – rad, corp, ar, sp

loc. 4: Chile: "nördl. Caldera" = N of Caldera. – / 1. / 1956.

SGO 125700 – (fr)

Ritter 503: *Thelocephala hybr.*

- loc. 1:** Chile: Atacama: "Monte Amargo". – Identified as the hybrid "FR 499 x 494"; FR 499 is *Thelocephala odieri*, FR 494 *Pyrrhocactus confinis* according to KS 4.
SGO 125134 – rad, corp, ar, sp
- loc. 2:** Chile: "30 km westl. Toledo" = 30 km W of Toledo. – / 2. / 1956. – Identified as the hybrid "FR 499 x 494"; FR 499 is *Thelocephala odieri*, FR 494 *Pyrrhocactus confinis* according to KS 4.
SGO 125702 – fr
- loc. 3:** Chile: sine loco. – / 1. / 1958. – Identified as the hybrid FR 494 x 499; FR 494 is *Pyrrhocactus confinis* according to the field-number list in KS 4, FR 499 *Thelocephala odieri*.
ZSS SR13410 – sem ("Same noch lebend II. 1966" = seeds still living in 2/1966. The collection number is not actually given on the original label but inferred from the field-number list in KS 4.)
ZSS SR13411 – sem ("Exemplar der Beschreibg. S. 2855/56, 16. XII 59. 201 Korn" = Specimen of the description p. 2855/56. 201 seeds. The page reference refers to Ritter's field books.)
- loc. 4:** Chile: "westl. Monte Amargo" = W of Monte Amargo. – / 1. / 1956. – Identified as the hybrid FR 499 x 494; FR 494 is *Pyrrhocactus confinis* according to the field-number list in KS 4, FR 499 *Thelocephala odieri*. The collection number FR 503 is not given on the label but is inferred in accordance with the field-number list.
ZSS SR13409 – sem

Ritter 504: *Copiapoa pendulina* F. Ritter – Cactus (Paris) 14(63): 134-135, ill., 1959.

Typus (T): Ritter 504 (ZSS [not found, seeds only], SGO [status ?], U [seeds only]) (Type cited for ZSS in the protologue but not found.)

- loc. 1:** Chile: "Fray Jorge". – / 12. / 1955. – Collection date according to specimen at U and to original Ritter seed sample at ZSS.
U ISO – sem (Collection number inferred from the locality; labelled as "von der Typuslokalität" = from the type locality.)
ZSS SR13414 ISO – sem
- loc. 2:** Chile: Frai Jorge, and to 40 km further S, coastal rocks. – Locality data according to KS 3: 1073.
ZSS S10295 **Type number** – sem (Leg. F. Ritter 1957.)
- loc. 3:** Chile: "Pte. Teniente" = Puente Teniente.
SGO 124867 **Type number** – (corp), ar, sp

Ritter 505: *Copiapoa longispina* F. Ritter – Taxon 12(1): 31, 1963.

Typus (T): Ritter 505 (U 117755B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Sierra Homillos, S of Copiapó.
U 117755B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Chile: "nördl. Copiapó" = N of Copiapó / "Sierra Homillos".
SGO 124868 **Type number** – (corp), ar, sp

loc. 3: Chile: "Sierra Hornillos". – / 9. / 1959.
ZSS SR13415 **Type number** – sem

Ritter 506: *Copiapoa echinata* F. Ritter – Cactus (Paris) 14(63): 133-134, 1959.

Typus (T): Ritter 506 (U 097992B, SGO, ZSS [seeds only, status ?]) (Type cited for ZSS in the protologue, but material found at U.).

loc. 1: Chile: "Von der Typuslokalität Carrizal Bajo" = from the type locality Carrizal Bajo. – / – / 1956. – Collection date according to specimen at U.
U 097992B **HOLO** – rad, corp, ar, sp (Collection number inferred.
Assumed to represent the holotype.)

loc. 2: Chile: Carrizal Bajo, and from the low altitudes at Carrizal Bajo to the valley of the Río Copiapó, coastal rocks. – Locality data according to KS 3: 1080.
ZSS S10296 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 3: Chile: "Carrizal B., Nr. 3" = Carrizal Bajo. – / 1. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124869 **ISO** – corp, ar, sp, (fl)
ZSS SR13416 **ISO** – sem

Ritter 506a: *Copiapoa echinata* F. Ritter var. *borealis* F. Ritter – Cactus (Paris) 14(63): 133-134, ill., 1959.

Typus (T): Ritter 506a (U 098000B, SGO [status ?], ZSS [seeds only]) (Type cited for ZSS in the protologue, material found at U.).

loc. 1: Chile: "aus den Bergen südlich von Monte Amargo" = from the mountains S of Monte Amargo. – / 1. / 1956. – Collection date according to specimens at SGO and U.
U **ISO** – sem (Collection number inferred.)
U 098000B **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype.)

loc. 2: Chile: Atacama; S of Monte Amargo, and from here to the S to almost Carrizal Bajo. – Locality data according to KS 3: 1080.
ZSS S10297 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 3: Chile: "östl. Totoral Bajo, Nr. 8" = E of Totoral Bajo. – / 1. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124870 – (corp), ar, sp ("Muster der Pfl., die zuerst *Cop. totoralensis* benannt wurde." = specimen of the plant which was first named *Copiapoa totoralensis*.)
ZSS SR13417 – sem

loc. 4: Chile: "Monte Amargo".
SGO 124871 **Type number** – rad, corp, ar, sp

loc. 5: Chile: [label unreadable due to water stain]. – Both original labels have the collection number as "FR 506a + 507", FR 507 is *Copiapoa calderana* according to KS 4. The material is more reminiscent of the other collections of 506a, however.
SGO 124875 – (corp), ar, sp

loc. 6: Chile: "westl. Monte Amargo" = W of Monte Amargo. – / 1. / 1956.
ZSS SR13418 – sem

loc. 7: Chile: "westl. Totoral" = W of Totoral.
ZSS SR13419 – sem

Ritter 506b: *Copiapoa echinata* F. Ritter fa. *pulla* F. Ritter – Kakt. Südamer. 3: 1081, 1980.

Typus (T): Ritter 506b (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Chile: "17 km östl. Carrizal Bajo" = 17 km E of Carrizal Bajo.
SGO 124876 **ISO** – (corp), ar, sp

Ritter 507: *Copiapoa calderana* F. Ritter – Cactus (Paris) No. 65: 197-198, ill., 1959.

Typus (T): Ritter 507 (U [status ?], SGO, ZSS [status ?]) (Type cited for ZSS, but none of the specimens at ZSS seems to qualify as holotype.).

loc. 1: Chile: Atacama; "von der Typuslokalität Caldera" = from the type locality Caldera. – / 1. / 1956. – Originally distributed as *Copiapoa pepiniana*.
U 098048B **ISO** – rad, corp, ar, sp (Collection number inferred.)
ZSS A10490 **Type number** – corp, ar, sp (Ex cult. ZSS s.n., 13. 6. 1977.
No locality data associated with this specimen.)
ZSS AX3632 **Type number** – rad, corp, ar, sp (Leg. F. Ritter 1958. Ex cult. ZSS s.n., 28. 11. 1980. Labelled as "holotype" in the herbarium list, but this is improbable in view of the date of conservation.)
ZSS S10298 **Type number** – sem (Leg. F. Ritter 1957. No locality directly associated with this specimen.)

loc. 2: Chile: "Caldera".
SGO 124872 **ISO** – corp, ar, sp

loc. 3: Chile: "25 km südl. Flamenco" = 25 km S of Flamenco / "S. Flamenco" = S of Flamenco.
SGO 124873 – (corp), ar, sp

loc. 4: Chile: "28 km nördl. Flamenco" = 28 km N of Flamenco.
ZSS SR13420 – sem

loc. 5: Chile: "nördl. Caldera" = N of Caldera. – / 1. / 1956.
ZSS SR13421 **Type number** – sem

Ritter 508: *Copiapoa carrizalensis* F. Ritter – Cactus (Paris) No. 63: 139-140, ill., 1959.

Typus (T): Ritter 508 (U [status ?], SGO, ZSS [seeds only]) (Type cited for ZSS.).

loc. 1: Chile: Atacama; "Carrizal Bajo". – / 1. / 1956. – The specimen at U gives the locality additionally as "von der Typuslokalität Carrizal Bajo" = from the type locality Carrizal Bajo. Collection date according to specimen at U.
SGO 124877 **ISO** – rad, corp, ar, sp
U **ISO** – sem (Collection number inferred from the locality data; labelled as "von der Typuslokalität" = from the type locality.)
U 098040B **ISO** – corp, ar, sp (Collection number inferred.)

ZSS S10299 **Type number** – sem (Leg. F. Ritter 1957. No locality directly associated with this specimen.)

loc. 2: Chile: "Carrizal B. Nr. 5" = Carrizal Bajo. – / 1. / 1956.
ZSS SR13422 **ISO** – sem

Ritter 508a: *Copiapoa carrizalensis* F. Ritter var. *gigantea* F. Ritter – Taxon 12(1): 29-30, 1963.

Typus (T): Ritter 508a (U 145287B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

loc. 1: Chile: "Typuslokalität nördlich Carrizal Bajo" = type locality N of Carrizal Bajo.
U 145287B **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Chile: "Fundplatz des *Pyrrhoc. sociabilis*" = locality of *Pyrrhocactus sociabilis*. – The locality of *Pyrrhocactus sociabilis* (FR 655) is given as "Totoral Bajo" in KS 3: 1030-1031.
SGO 124878 **Type number** – (corp), ar, sp

loc. 3: Chile: "Totoral Bajo". – / 10. / 1961.
ZSS SR13423 **Type number** – sem

Ritter 509: *Copiapoa dealbata* F. Ritter – Cactus (Paris) 14(63): 137-139, ill., 1959.

Typus (T): Ritter 509 (ZSS [status ?], SGO, U [iso or holo ?]) (No herbarium has been cited for the holotype, and it is unclear, which specimen is the actual holotype.)

loc. 1: Chile: Carrizal Bajo, coastal zone. – / – / 1956. – No locality information is published in the original description; the locality given above is taken from the specimen at U, which is said to have been collected in 1957 in Ritter's handwriting.

ZSS A4254 – rad, corp, ar, sp (Ex cult. ZSS s.n., 28. 11. 1980.)
ZSS S10300 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 2: Chile: "Carrizal Bajo". – / – / 1957.
U 098096B **ISO** – (corp), ar, sp (Collection number inferred.)

loc. 3: Chile: "5 km östl. Carrizal Bajo" = 5 km E of Carrizal Bajo.
SGO 124879 **ISO** – corp, ar, sp

loc. 4: Chile: "Carrizal B., Hinterland" = Carrizal Bajo, inland. – / 1. / 1956.
ZSS SR13424 **Type number** – sem

Ritter 510: *Copiapoa cuprea* F. Ritter – Cactus (Paris) No. 63: 136-137, ill., 1959.

Typus (T): Ritter 510 (ZSS [not found], SGO, U).

loc. 1: Chile: coastal Andes, "28° 25' geogr. Breite" = 28° 25' geographical latitude. – / 1. / 1956. – The photograph published with the protologue is labelled as coming from the "région de Nicolasa".

U **ISO** – sem (Collection number inferred from the locality data; labelled as "von der Typus-Lokalität" = from the type locality.)

U 098104B **ISO** – (corp), ar, sp (Collection number inferred.)

ZSS S10301 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 2: Chile: "24 km nördl. Nicolasa" = 24 km N of Nicolasa.

SGO 124880 (in 2 parts) **ISO** – rad, corp, ar, sp, (fl)

loc. 3: Chile: "20 km nördl. Nicolasa" = 20 km N of Nicolasa. – / 1. / 1956.

ZSS SR13425 **ISO** – sem

Ritter 511: *Copiapoa marginata* (Salm-Dyck) Britton & Rose – The Cact. 3: 86, 1922.

loc. 1: Chile: "von der Typuslokalität (nach Ritter) Morro Copiapó bei Caldera" = from the type locality (according to Ritter) Morro Copiapó near Caldera. – / 1. / 1956. – Collection data and date according to specimen at U.

U 098690B **ISONEO** – (corp), ar, sp (Collection number inferred.)

ZSS AX4231 **Type ?** – rad, corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.

This is the collection number selected as neotype for *Echinocactus marginatus* but the specimen is not labelled as type and was preserved from cultivation in 1980 only.)

loc. 2: Chile: SW of Caldera at the foot of the Morro Copiapó. – Locality data according to KS 3: 1057.

ZSS S10311 **ISONEO** – sem (Leg. F. Ritter 1957 (sub *Copiapoa echinoides*.)

loc. 3: Chile: "südwestl. Caldera, Nr. 4".

SGO 124882 **ISONEO** – (corp), ar, sp

loc. 4: Chile: "sw Caldera" = SW of Caldera.

ZSS SR13426 **ISONEO** – sem (Identified as *Copiapoa streptocaulon* on the original label.)

Ritter 512: *Copiapoa echinata* F. Ritter var. *borealis* F. Ritter – Cactus (Paris) 14(63): 133-134, ill., 1959.

Typus (T): Ritter 506a (U 098000B, SGO [status ?], ZSS [seeds only])

(Type cited for ZSS in the protologue, material found at U.).

loc. 1: Chile: "Von der Typuslokalität Totoral" = from the type locality Totoral. – / 1. / 1956. – Collection date according to specimen at U. – This is the type collection of *Copiapoa totoralensis*, placed here as synonym by Ritter himself.

U 098024B **ISO** – rad, corp, ar, sp (Collection number inferred.)

loc. 2: Chile: sine loco. – This is the type number of *Copiapoa totoralensis*, placed here as synonym by Ritter himself.

ZSS S10304 **Type number** – sem (Leg. F. Ritter 1957.)

Ritter 513: *Maihueiopsis colorea* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 875, 1980.

– Chile: "100 km östl. Copiapó" = 100 km E of Copiapó. – / 1. / 1956.

ZSS SR13427 **Type number** – sem

Ritter 514: *Eriosyce megacarpa* F. Ritter – Kakt. Südamer. 3: 917-918, figs. 777-778, 1980.

Typus (T): Ritter 514 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; near town of Chañaral. – / – / 1954.
ZSS S10358 **Type number** – sem (Leg. F. Ritter 1957 (sub *Rodentiophila megacarpa*)).
ZSS T5111 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960.)

loc. 2: Chile: Atacama; "Chañaral".
SGO 121690 (in 2 parts) **ISO** – rad, corp, ar, sp, al, (fl) (Includes 2 juvenile plants.)
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 3: Chile: "Chañaral Süd" = Chañaral South. – / 1. / 1956.
ZSS SR13428 **Type number** – sem

Ritter 515: *Eriosyce rodentiophila* F. Ritter var. *lanata* F. Ritter – Kakt. Südamer. 3: 917, 1980.

Typus (T): Ritter 515 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Antofagasta; "grosse Schlucht zw. Esmeralda und Cifuncho" = great gorge between Esmeralda and Cifuncho / "N. Esmeralda" = N of Esmeralda.
SGO 121691 **ISO** – (corp), ar, sp

loc. 2: Chile: "Schlucht nördlich von Esmeralda" = gorge N of Esmeralda. – / – / 1958. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 3: Chile: "Cifuncho". – / 3. / 1956. – Collection date according to specimen at SGO.
SGO 125725 **Type number** – fr
ZSS SR13429 **Type number** – sem (Dated "Il. 56" on the original label.)

Ritter 517: *Thelocephala malleolata* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1020, 1980.

loc. 1: Chile: N of Chañaral, N Chile. – / – / 1956.
U 117895B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S8546 – sem (Leg. Köhres ex cult.)

loc. 2: Chile: "nördl. Chañaral" = N of Chañaral. – / 12. / 1957.
SGO 125138 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Pan de Azucar".
SGO 125139 **Type number** – rad, corp, ar, sp

loc. 4: Chile: "Chañaral". – "Nach dem stärker woll. Scheitel wird es FR 517 sein." = According to more woolly apex this should be FR 517.
SGO 125140 – rad, corp, ar, sp
SGO 125687 – fl ("Angeblich. Daten nicht aufgenommen, aber von einer Blüte in Natur genommen (vergleichen !).") = Supposedly. Data not

recorded but taken from a flower in nature (compare !).)

loc. 5: Chile: sine loco. – "Gleichzeitig Bild einer gepfropften Pflanze, die ganz herrlich ist. Körper so etwas rötlich [wie] Rosenholz u. die herrlichen weissen Wolltupfen. Ich bin etwas im Zweifel ob es wirklich 517 ist + schicke gleichzeitig einen gepfropften Kopf. Es ist 517 !! Blüten duften herrlich." = Concurrently a picture of a grafted plant, which is marvellous. Body somewhat reddish [as] Rosewood and the marvellous white woolly tufts. I am in some doubt whether it is really 517 and I send concurrently a grafted head. It is 517 !! Flowers marvellously scented. It is unclear whether all of this comment is by F. Ritter or partly by his sister H. Winter. The outer cover of the specimen has the comment: "Angeblich. Daten nicht aufgenommen aber von einer Blüte in Natur genommen (vergleichen !)." = Supposedly. Data not recorded but taken from a flower in nature (compare !).
SGO 125688 – fl

loc. 6: Chile: "11 km nördl. Chañaral" = 11 km N of Chañaral. – / 1. / 1956.
SGO 125703 **Type number** – (fl)

Ritter 517a: *Thelocephala malleolata* (F. Ritter) F. Ritter var. *solitaria* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1020-1021, 1980.

loc. 1: Chile: S of Chañaral.
U 117815B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: "s. Barquitos" = S of Barquitos / "S. Chañaral" = S of Chañaral. – It is notable that two of the plants in the specimen jar are multi-headed.
SGO 125141 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Chañaral, SW., Nr. 11" = SW of Chañaral. – / 2. / 1956. –
Collection date according to specimen at SGO.
SGO 125704 **Type number** – (fl, fr)
ZSS SR13430 **Type number** – sem (Dated "I. 56." on the original label.)

loc. 4: Chile: "südlichste Fundstellen, Chañaral" = southern-most localities, Chañaral. – / 12. / 1959.
ZSS SR13431 – sem

Ritter 518: *Thelocephala esmeraldana* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1021-1023, 1980.

loc. 1: Chile: Esmeralda, very rare. – / – / 1956. – Collection date added from KS.
U 117795B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10293 **Type number** – sem (Leg. F. Ritter 1957 (sub *Chileorebutia esmeraldana*.)
ZSS S10443 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1976.)

loc. 2: Chile: "Küste" = coast. 31. / 12. / 1957.
SGO 125142 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "2 km östl. Esmeralda" = 2 km E of Esmeralda.
SGO 125143 **Type number** – corp, ar, sp

- loc. 4:** Chile: "Esmeralda, Berge" = Esmeralda, mountains.
SGO 125144 **Type number** – rad, corp, ar, sp
- loc. 5:** Chile: sine loco. – "Daten genommen" = data recorded. "Blüte ist hier halb geschlossen, ist sonst gross und breit geöffnet." = flower is halfway closed here, is otherwise large and broadly opening. There is an additional comment by H. Winter: "Herr Strnad, Kürschner in Frankf., will Dir ein Blütenphoto senden natür.... will er Pflz. dafür haben. Er liebt die grossen strubbeligen" = Mr Strnad, Frankfurt, will send you a flower photograph; naturally he wants plants for it. He likes the large untidy – This comment is by H. Winter.
SGO 125689 **Type number** – fl
SGO 125690 **Type number** – fl ("Daten genommen. Nochmals 518, schöne, grosse Blüte" = Data recorded. Again 518, large nice flower. This comment is probably in part by H. Winter.)
- loc. 6:** Chile: "Esmeralda, Nr. 9 (Berge)" = Esmeralda (mountains). – / 3. / 1956.
SGO 125705 **Type number** – (fr)
- loc. 7:** Chile: "Esmeralda, Küste" = Esmeralda, coast. – / 2. / 1956.
SGO 125706 **Type number** – fr
ZSS SR13432 **Type number** – sem

Ritter 519: *Pyrrhocactus pygmaeus* F. Ritter – Taxon 12(1): 32, 1963.

Typus (T): Ritter 519 (U 117858B, SGO [status ?], ZSS [status ?]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Antofagasta; 20 km N of Chañaral, coast. – / – / 1956.
U 117858B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS A10474 **Type number** – fl (Ex cult. ZSS s.n., 28. 5. 1974.)
ZSS A10484 **Type number** – fl (Ex cult. ZSS s.n., 7. 5. 1975.)
ZSS S10335 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus pygmaeus*)).
- loc. 2:** Chile: Antofagasta; "21 km N. Chañaral" = 21 km N of Chañaral.
SGO 121622 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: Antofagasta; "24 km N. Chañaral, Nr. 11" = 24 km N of Chañaral.
SGO 121623 **Type number** – (rad), corp, ar, sp
- loc. 4:** Chile: Antofagasta; "24 km N. Chañ., Nr. 10 + Nr. 8" = 24 km N of Chañaral.
SGO 121624 **Type number** – (rad), corp, ar, sp
- loc. 5:** Chile: "24 km nördl. Chañaral" = 24 km N of Chañaral. – / 2. / 1956. – "(Kleine, gerade-stachelige)" = Small straight-spined one.
SGO 125676 **Type number** – fr
- loc. 6:** Chile: "24 km nördl. Chañaral Nr. 9" = 24 km N of Chañaral. – / 1. / 1956.
ZSS SR13433 **Type number** – sem

Ritter 520: *Pyrrhocactus pulchellus* F. Ritter – Kakt. Südamer. 3: 965-966, fig. 856, 1980.

Typus (T): Ritter 520 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "25 km südl. Chañaral" = 25 km S of Chañaral.
SGO 121625 **ISO** – rad, corp, ar, sp
- loc. 2:** Chile: "Cifuncho". – / 2. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 121627 – rad, corp, ar, sp
SGO 121628 – rad, corp, ar, sp
ZSS SR13457 – sem
- loc. 3:** Chile: "südl. Chañaral" = S of Chañaral. – / 1. / 1956. – Collection date according to original Ritter seed sample at ZSS ("I. 56.") and specimen at U ("1956").
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS SR13458 **ISO** – sem
- loc. 4:** Chile: sine loco.
ZSS S10336 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus pulchellus*)).
- loc. 5:** Chile: "Berge südl. Chañaral, Nr. 3" = mountains S of Chañaral. – / 1. / 1956.
SGO 125668 **Type number** – fr
- loc. 6:** Chile: "ca. 25 km südl. Chañaral, Berge" = c. 25 km S of Chañaral, mountains.
ZSS SR13459 **ISO** – sem

Ritter 520?: *Pyrrhocactus pulchellus* F. Ritter – Kakt. Südamer. 3: 965-966, fig. 856, 1980.

Typus (T): Ritter 520 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: "Cifuncho". – / – / 1968.
SGO 121626 – (rad), corp, ar, sp

Ritter 521: *Pyrrhocactus paucicostatus* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959.

- loc. 1:** Chile: c. 20 km N of Paposo. – Originally published as *Horridocactus paucicostatus* Ritter.
ZSS S10337 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus paucicostatus*)).
- loc. 2:** Chile: "22 km N. Paposo" = 22 km N of Paposo. – / 2. / 1956. – Originally published as *Horridocactus paucicostatus* Ritter. Collection date according to fruit specimen at SGO and to original Ritter seed sample at ZSS.
SGO 121629 **Type number** – (corp), ar, sp
SGO 125669 **Type number** – fr
ZSS SR13460 **Type number** – sem
- loc. 3:** Chile: Antofagasta; "Cordillere Paposo". – Originally published as *Horridocactus paucicostatus* Ritter.
U 097984B **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present at U, and no material is found at ZSS where the type has

been cited for.)

loc. 4: Chile: "50 km nördl. Paposo" = 50 km N of Paposo.
ZSS SR13461 **Type number** – sem

Ritter 521a: *Pyrrhocactus paucicostatus* (F. Ritter) F. Ritter var. *viridis* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959.

loc. 1: Chile: surroundings of Paposo. – Originally published as *Horridocactus paucicostatus* Ritter var. *viridis* Ritter.
B GH23762 – fl, ic (corp) (Ex cult. BG Berlin, 13. 7. 1988 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS S10338 **Type number** – sem (Leg. F. Ritter 1957 (sub *Horridocactus paucicostatus* var. *viridis*).

loc. 2: Chile: "östl. Paposo" = E of Paposo / "Taltal". – / 9. / 1961. – Originally published as *Horridocactus paucicostatus* Ritter var. *viridis* Ritter. The original label first read "östl. Paposo", which was later crossed out and replaced with "Taltal".
SGO 121630 **Type number** – (corp), ar, sp

loc. 3: Chile: "Paposo". – / 2. / 1956. – Originally published as *Horridocactus paucicostatus* Ritter var. *viridis* Ritter. Collection date according to specimen at U and to original Ritter seed sample at ZSS.
U ISO – sem (Collection number by inference from locality data; labelled as "von der Lokalität" = from the locality, probably inferring 'type' locality.)
U 087554 HOLO – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only reasonably complete specimen present at U, and no material is found at ZSS where the type was cited for.)
ZSS SR13462 ISO – sem

loc. 4: Chile: "12 km nördl. Paposo" = 12 km N of Paposo. – / 2. / 1956.
SGO 125670 **Type number** – fr

Ritter 522: *Copiapoa montana* F. Ritter – Cactus (Paris) 15(66): 21-22, 1960. (Appears to be based on 2 syntypes, *Ritter 211a* and *Ritter 522*, but '522' is a re-numbering for '211a' (cf. Kakt. Südamer. 3: 1088).)
Typus (T): Ritter 211a (ZSS T4728, SGO [sub Ritter 522]).

loc. 1: Chile: N of Taltal. – Locality data according to KS 3: 1087-1088. This is a re-numbering of the collection *Ritter 211a* which is the type of *Copiapoa montana*, and the material is therefore of type status.
ZSS S10305 **Type number** – sem (Leg. F. Ritter 1957.)
ZSS S10449 **Type number** – sem (Leg. Fa. Köhres (ex cult. ?) 1977.)
ZSS S10454 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1977 (sub *Copiapoa mollicula*).

loc. 2: Chile: "nördl. Taltal, Nr. 9" = N of Taltal. – / 2. / 1956. – This is a re-numbering of the collection *Ritter 211a* which is the type of *Copiapoa montana*, and the material is therefore of type status.
SGO 124881 ISO – (corp), ar, sp
ZSS SR13463 ISO – sem

Ritter 523: *Copiapoa grandiflora* F. Ritter – Taxon 12(1): 30, 1963. (First mentioned in Backeberg, Die Cact. 6: 3828, 1962 (as *nom. nud.*))

Typus (T): Ritter 523 (U 145311B, SGO, ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

loc. 1: Chile: "Esmeralda".

SGO 124883 **ISO** – rad, corp, ar, sp

U 145311B **HOLO** – rad, corp, ar, sp ("Junges Exemplar, noch nicht sprossend" = young plant, not yet producing offsets. Labelled as "Holotypus" by Ritter, but without collection data.)

ZSS S10312 **Type number** – sem (Leg. F. Ritter 1957. No locality data associated with this specimen.)

loc. 2: Chile: "Esmeralda Nr. 2". – / 2. / 1956.

ZSS SR13464 **ISO** – sem

Ritter 524: *Copiapoa cinerascens* (Salm-Dyck) Britton & Rose – The Cact. 3: 88, 1922.

loc. 1: Chile: 11 - 25 km "nördl. Chañaral" = N of Chañaral. – / 2. / 1956. –

Locality data supplemented from KS.

U **ISONEO** – sem (Collection number inferred from the locality data; labelled as "von der Typus-Lokalität nach Ritter" = from the type locality according to Ritter.)

U 86749 **NEO** – (corp), ar, sp (Labelled as being "von der Typuslokalität nach Ritter" = from the type locality according to Ritter. Collection number inferred.)

loc. 2: Chile: 11 - 25 km N of Chañaral, etc.. – Locality data according to KS 3: 1084.

ZSS S10306 – sem (Leg. F. Ritter 1957.)

loc. 3: Chile: "29 km nördl. Chañar., Nr. 2" = 29 km N of Chañaral.

SGO 124884 – rad, corp, ar, sp

loc. 4: Chile: "südl. Chañ., Nr. 6" = S of Chañaral. – "(Art wie 11 km nördl. Nr. 1)" = species as 11 km North, Nr. 1.

SGO 124885 – (corp), ar, sp

loc. 5: Chile: "Pan de Azucar".

SGO 124886 – rad, corp, ar, sp

Ritter 525: *Copiapoa mollicula* F. Ritter – Taxon 12(1): 30, 1963.

Typus (T): Ritter 525 (U 117571B, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).

loc. 1: Chile: mountains N of air strip of Chañaral.

SGO 124888 **ISO** – rad, corp, ar, sp ("Belegexemplar" = voucher specimen.)

U 117571B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: "nördl. Flugpl. Chañaral" = N of airstrip of Chañaral. – The material in the specimen jar seems heterogeneous.

SGO 124887 **ISO** – rad, corp, ar, sp

- loc. 3:** Chile: "Chañar. nördl. Flugpl. Nr. 3" = Chañaral N of airstrip. – / 1. / 1956.
ZSS SR13465 **ISO** – sem
- Ritter 526: *Copiapoa taltalensis* (Werdermann) Looser** – Revista Chilena Hist. Nat. 33: 614, 1929.
- loc. 1:** Chile: valley of Cachina near Placilla Esmeralda, c. 25 ° 50'. – Locality data according to KS 3: 1066.
ZSS S10307 – sem (Leg. F. Ritter 1957.)
- loc. 2:** Chile: "O. Esmeralda" = E of Esmeralda. – / 2. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124889 – rad, corp, ar, sp
ZSS SR13466 – sem
- Ritter 527: *Copiapoa chanaralensis* F. Ritter** – Kakt. Südamer. 3: 1063-1064, fig. 979-980, 1980. (First mentioned as *C. chanaralensis* (*nom. nud.*) in Backeberg, Die Cact. 6: 3820, 1962. Probably correctable to 'chanaralensis' under Art. 73.6 (but see 73.7).)
Typus (*T*): Ritter 527 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).
- loc. 1:** Chile: "Chañaral". – / – / 1956. – The specimen at U is dated as "1 / 1927".
U **HOLO** – rad, corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
ZSS S10308 **Type number** – sem (Leg. F. Ritter 1957. No locality associated with this specimen.)
- loc. 2:** Chile: "Chañaral S. Nr. 4" = Chañaral, South. – / 1. / 1956.
ZSS SR13467 **ISO** – sem
- Ritter 528: *Copiapoa rupestris* F. Ritter** – Taxon 12(1): 31, 1963.
Typus (*T*): Ritter 528 (U 145327B, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).
- loc. 1:** Chile: "Typuslokalität Cifuncho" = type locality Cifuncho.
U 145327B **HOLO** – (corp), ar, sp (Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Chile: coast at Cifuncho, on rocks. – Locality data according to KS 3: 1061.
ZSS S10309 **Type number** – sem (Leg. F. Ritter 1957.)
- loc. 3:** Chile: "Cifuncho Nr. 7". – / 2. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124891 (in 2 parts) **ISO** – rad, corp, ar, sp
ZSS SR13468 **ISO** – sem
- Ritter 529: *Copiapoa desertorum* F. Ritter** – Kakt. Südamer. 3: 1060-1061, fig. 974, 1980. (First mentioned (as *nom. nud.*) in Backeberg, Die Cact. 6: 3826, 1962).
Typus (*T*): Ritter 529 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "östlich Cifuncho" = E of Cifuncho [at the path to Las Breas], in the desert. – / – / 1956. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: E of Cifuncho at path to Las Breas, and at the coast of Cifuncho, in a desert. – Locality data according to the protologue.

ZSS S10310 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 3: Chile: "Cifuncho Nr. 1". – / 2. / 1956.

ZSS SR13469 **Type number** – sem

Ritter 530: *Copiapoa columna-alba* F. Ritter – Cactus (Paris) No. 65: 199-200, ill., 1959.

Typus (T): Ritter 530 (ZSS [not found, seeds only], U [holo ?], SGO [status ?]) (Type erroneously cited for Z in the protologue.)

loc. 1: Chile: near coast near 26° latitude S. – / 1. / 1956. – Collection date according to specimen at U; locality data from the protologue.

U **ISO** – (corp), ar, sp (Labelled as "von der Typuslokalität = from the type locality by Ritter. Collection number inferred.)

U **ISO** – sem (Collection number inferred from the identification on the original label, which also says "von der Typuslokalität" = from the type locality.)

ZSS S10313 **Type number** – sem (Leg. F. Ritter 1957.)

loc. 2: Chile: "29 km nördl. Chañar, Nr. 1" = 29 km N of Chañar[al].

SGO 124892 **Type number** – (corp), ar, sp

loc. 3: Chile: "nördl. Flugplatz Chañaral" = N of airstrip of Chañaral / "nördl. Chañaral" = N of Chañaral.

SGO 124893 **Type number** – (corp), ar, sp

loc. 4: Chile: "östl. Esmerald[a]" = E of Esmeralda. – / 12. / 1957.

ZSS SR13470 **Type number** – sem

loc. 5: Chile: "östl. Chañaral Nr. 3" = E of Chañaral. – / 2. / 1956.

ZSS SR13471 **Type number** – sem

Ritter 530a: *Copiapoa columna-alba* F. Ritter var. *nuda* F. Ritter – Kakt. Südamer. 3: 1095, fig. 1042, 1980.

Typus (T): Ritter 530a (U [not found], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

– Chile: "Cifuncho". – / – / 1956. – Collection date according to the protologue.

ZSS SR13472 **Type collection** – sem ("1 Frucht" = 1 fruit.)

Ritter 531: *Copiapoa longistaminea* F. Ritter – Taxon 12(1): 31-32, 1963.

Typus (T): Ritter 531 (U 117779B, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).

loc. 1: Chile: near Esmeralda.

U 117779B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S10314 **Type number** – sem (Leg. F. Ritter 1957.)

- loc. 2:** Chile: "Esmeralda Nr. 1". – / 2. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124894 **ISO** – rad, corp, ar, sp
ZSS SR13473 **ISO** – sem

Ritter 532: *Copiapoa longistaminea* F. Ritter – Taxon 12(1): 31-32, 1963.

Typus (T): Ritter 531 (U 117779B, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: "Esmeralda, Nr. 6". – / 2. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 124895 – rad, corp, ar, sp
ZSS SR13474 – sem ("ist gleich FR 531" = equals FR 531; FR 531 is the type number of *Copiapoa longistaminea*. Label originally numbered FR 532a, a number not recorded in the field-number list in KS 4.)
- loc. 2:** Chile: "Esmer.a, Küste" = Esmeralda, coast. – The original label has the number as "FR 532 (x 531 ?)" and comments "*Cop. microsperma*, introggression from *C. longistaminea* (?)" = *C. microsperma*, introggression from *C. longistaminea*. *C. microsperma* is a nude name of Ritter for *C. longistaminea*.
SGO 124896 – rad, corp, ar, sp

Ritter 533: *Trichocereus coquimbanus* (Molina) Britton & Rose – The Cact. 2: 139, 1920.

- loc. 1:** Chile: "15 km östl. La Serena" = 15 km E of La Serena. – / 11. / 1957. – Collection date according to original Ritter seed sample at ZSS. This collection number was selected as neotype for *Trichocereus serenanus* Ritter (*nom. nov. illeg. pro Trichocereus coquimbanus* Britton & Rose); it remains to be confirmed whether this also serves as neotypification for *T. coquimbanus*.
SGO 121147 **ISONEO** – ar, sp (See comment for specimen at U and above for the collection.)
U 116996B **NEO** – (corp), ar, sp (Labelled as "Neotypus" (of *Trichocereus serenanus*, *nom. inval.*) by Ritter. The original label does not contain locality data.)
ZSS SR13476 **ISONEO** – sem
- loc. 2:** Chile: "50 km S Coquimbo" = 50 km S of Coquimbo. – Locality originally given as "N", corrected to "S" by Ritter. This collection number was selected as neotype for *Trichocereus serenanus* Ritter (*nom. nov. illeg. pro Trichocereus coquimbanus* Britton & Rose).
SGO 121212 **Type ?** – (corp), ar, sp
- loc. 3:** Chile: "Serena" = La Serena. – / 12. / 1955. – This collection number was selected as neotype for *Trichocereus serenanus* Ritter (*nom. nov. illeg. pro Trichocereus coquimbanus* Britton & Rose).
ZSS SR13475 **Type ?** – sem

Ritter 534: *Eriosyce spinibarbis* F. Ritter – Kakt. Südamer. 3: 915, fig. 771-772, 1980.

Typus (T): Ritter 534 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "Rio Jorquera".

SGO 121692 – (corp), ar, sp

loc. 2: Chile: "Strasse Copiapo - Inca de Oro, c. 1650 m." = road from Copiapo to Inca de Oro / "Carrera Pinto". 1650 m. – The jar contains two labels and several fragments.

SGO 121693 **Type number** – (corp), ar, sp

loc. 4: Chile: Atacama; "westlich Carrera Pinto" = W of Carrera Pinto. – /9. / 1961. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 5: Chile: "Rio Jorquera bei c. 28 °" = Río Jorquera at c. 28 ° [latitude]. – / 1. / 1956.

SGO 125726 – fr, sem

loc. 6: Chile: "Rio Jorquera (östl. Paipote)" = Río Jorquera (E of Paipote). – / 1. / 1956.

ZSS SR13477 – sem

loc. 7: Chile: "Carrera Pinto, ca. 1650 m.". 1650 m. – /9. / 1961.

ZSS SR13478 – sem (The collection number on the original label is given as "FR 534 cf.")

Ritter 535: *Neopteris microsperma* F. Ritter – Succulenta 1963(1): 6, ill., 1963.

Typus (T): Ritter 535 (U 117643B, SGO, ZSS [seeds only]) (No herbarium cited for the type.).

loc. 1: Chile: "15 km östl. La Serena" = 15 km E of La Serena.

SGO 121631 **ISO** – corp, ar, sp

loc. 2: Chile: 15 km E of La Serena. – Locality data according to KS 3: 1035.

B GH21018 – fl, ic (corp) (Ex cult. BG Berlin, 13. 10. 1986 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

U 117643B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S10355 **Type number** – sem (Leg. F. Ritter 1957.)

ZSS S8536 **Type number** – sem (Leg. Köhres ex cult., 1977.)

loc. 3: Chile: "15 km östl. Serena (feine)" = 15 km E of La Serena (fine one). – / 12. / 1955.

ZSS SR13479 **ISO** – sem

Ritter 535a: *Neopteris microsperma* F. Ritter var. ***graciana*** F. Ritter – Kakt. Südamer. 3: 1036, fig. 937, 1980.

Typus (T): Ritter 535a (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Chile: "Santa Gracia", N of La Serena. – Discovered by R. Wagenknecht. Locality data supplemented from the protologue.

ZSS SR13480 **ISO** – sem

Ritter 536: *Trichocereus spinibarbis* (Otto ex Pfeiffer) F. Ritter – Kakt. and. Sukk. 16: 212, 1965.

- loc. 1:** Chile: Quebrada Honda, 35 km N of La Serena. – Locality data according to KS 3: 1114.
 ZSS S9936 – sem (Leg. F. Ritter 1955.)
 ZSS T5039 – (corp, ar, sp) (Leg. F. Ritter ex nat.)
 ZSS T5040 – corp, ar, sp (Leg. F. Ritter ex nat.)
- loc. 2:** Chile: Atacama; "Huasco". – / 12. / 1956. – Collection date according to original Ritter seed sample at ZSS.
 SGO 121154 – (corp), ar, sp
 ZSS SR13481 – sem
- loc. 3:** Chile: Atacama; "unterhalb Totoral" = below Totoral.
 SGO 121159 – (corp), ar, sp
- loc. 4:** Chile: "35 km nörd. Serena, an Küste" = 35 km N of La Serena, at coast.
 SGO 125534 – (corp), ar, sp
- loc. 5:** Chile: "Coquimbo".
 SGO 125535 – (corp), ar, sp
- loc. 6:** Chile: "über Freirina" = above Freirina.
 SGO 125536 – (corp), ar, sp
- loc. 7:** Chile: "30 km nördl. La Serena" = 30 km N of La Serena. – / 11. / 1957.
 ZSS SR13482 – sem

Ritter 537: *Pyrrhocactus echinus* F. Ritter – Taxon 12(1): 33, 1963.

Typus (T): Ritter 537 (U 116948B, SGO, ZSS [status ?]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: near Antofagasta, Cerro Coloso. – / – / 1956.
 B GH20606 – fl, ic (corp) (Ex cult. BG Berlin, 25. 7. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
 U 116948B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS T5130 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1. 9. 1981.)
- loc. 2:** Chile: "Cerro Coloso".
 SGO 121632 **ISO** – (corp), ar, sp
 SGO 121633 **ISO** – corp, ar, sp
 ZSS SR13483 **ISO** – sem ("(verschiedene Exemplare)" = several different specimens.)
 ZSS SR13484 – sem ("(Exemplar bei K. Schaefer, welches eingegangen. Same entnommen X. 1957.) Same anders als von Cerro Coloso." = (Specimen at K. Schaefer which died. Seed taken Oct. 1957). Seed different than those from Cerro Coloso. Collection number given as "537 ?" on the original label; "537" is underlined in red.)
- loc. 3:** Chile: "El Coloso südl. v. Antofagasta" = El Coloso S of Antofagasta.
 SGO 125671 **Type number** – (fr)

Ritter 537a: *Pyrrhocactus floccosus* F. Ritter var. *minor* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 939-940, 1980.

- Chile: Antofagasta; sine loco. – No locality given, neither in the protologue nor in KS.
 U 117771B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS SR13485 **ISO** – sem ("(1 Exempl. Kakt.-Garten)" = 1 specimen cactus-garden. The original label is further dated "1968/69" with "69" crossed out again.)

Ritter 538: *Pyrrhocactus glaucescens* F. Ritter – Taxon 12(1): 33, 1963.

Typus (T): Ritter 538 (U 117859B, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).

loc. 1: Chile: coast near El Cobre.

 U 117859B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: "El Cobre". – / 3. / 1956. – Collection date according to original Ritter seed sample at ZSS.

 SGO 121634 – (rad), corp, ar, sp ("Oder 537a *echinus minor*" = Or FR 537a *echinus minor* (= *Pyrrhocactus floccosus* var. *minor*).)
 ZSS SR13486 **ISO** – sem

loc. 3: Chile: "El Cobre, Nr. 5a".

 SGO 125672 **ISO** – fr

Ritter 539: *Copiapoa tenuissima* F. Ritter (*nom. inval.* Art. 37.1) – Taxon 12(1): 31, 1963. (First mentioned in Backeberg, *Die Cact.* 6: 3840, 1962 (as *nom. nud.*). Based on 2 syntypes, *Ritter 539* and *Ritter 540* (U !). Erroneously included as valid in RPS 14.)

- Chile: mountains at the coast near Antofagasta. – One of the two syntype collection numbers of *Copiapoa tenuissima*.
 ZSS S10450 – sem (Leg. Fa. Köhres (ex cult. ?) 1977.)

Ritter 540: *Copiapoa tenuissima* F. Ritter (*nom. inval.* Art. 37.1) – Taxon 12(1): 31, 1963. (First mentioned in Backeberg, *Die Cact.* 6: 3840, 1962 (as *nom. nud.*). Based on 2 syntypes, *Ritter 539* and *Ritter 540* (U !). Erroneously included as valid in RPS 14.)

loc. 1: Chile: mountains at the coast near Antofagasta. – One of the two syntype collection numbers of *Copiapoa tenuissima*.

 SGO 125692 **SYN** – fl ("Daten notiert" = data recorded. "Die entzückende kleine dunkle (schwarze) *Copiapoa* 539+540 - Ich sehe keinen Unterschied. Es sind ausnahmsweise kleine Blüten (539 ist gleich) 540 *Cop. tenuissima* (541 ist *Pilocopiapoa*)" = The enchanting small dark (black) *Copiapoa* 539+540 - I can't see any difference. These are exceptionally small flowers (539 is identical) 540 *Cop.[iapoa] tenuissima* (541 is *Pilocopiapoa*). - It is not absolutely certain that this comment is by F. Ritter, it could also have been supplied by his sister H. Winter.)

 SGO 125693 **SYN** – fl ("Daten notiert" = data recorded. The following comment is by F. Ritter's sister, H. Winter: "Siehst Du, solche Sachen, die hier beständig blühen, müsste man in Pflanzen haben. 1)

Sehr wichtig, dass Du sie schnellstens bestimmst, denn Backeberg hat sie bestimmt schon. 2) Ausnützen, so lange sie noch neu + gesucht ist, + Pflz. (ohne Rübe) nur Köpfe ! zum Pfropfen hersenden + Samen." = You see, such things which constantly flower should be available as plants. 1) Very important that you identify them quickly, because Backeberg certainly has them already. 2) take advantage as long as they are new and in demand, and send plants (without taproot) only head ! for grafting, and seeds.)

U 117651B SYN – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: "El Cobre". – One of the two syntype collection numbers of *Copiapoa tenuissima*.

SGO 124897 SYN – rad, corp, ar, sp

ZSS SR13487 SYN – sem

Ritter 541: *Copiapoa solaris* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1047, 1980.

loc. 1: Chile: "von der Typuslokalität El Cobre" = from the type locality El Cobre. – /2. / 1956. – Collection date according to specimen at U.

U 098064B HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: "Küste bei Blanco Encalada" = coast at Blanco Encalada. – This is the type number for the taxon but the type locality is El Cobre.

SGO 125360 – (corp), ar, sp

loc. 3: Chile: "El Cobre".

SGO 125361 (in 2 parts) ISO – corp, ar, sp

ZSS SR13488 ISO – sem

loc. 4: Chile: sine loco.

B GH21140 – ic (corp) (Ex cult. BG Berlin, 30. 7. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

SGO 125362 (in 3 parts) Type number – corp, ar, sp

ZSS S10356 Type number – sem (Leg. F. Ritter 1957.)

Ritter 542: *Pyrrhocactus horridus* (Gay) Backeberg var. *aconcaguensis* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 948-949, 1980.

loc. 1: Chile: "Chacras". – Originally published as *Pyrrhocactus aconcaguensis* Ritter 1960. Locality given as 'Chacres' in the protologue.

SGO 121635 ISO – (corp), ar, sp

U ISO – sem (Collection number inferred from the locality; labelled as "von der Typus-Lokalität" = from the type locality; dated "Juni 1955".)

loc. 2: Chile: "Chagres bei Llayllay" = Chagres near Llayllay. – Originally published as *Pyrrhocactus aconcaguensis* Ritter 1960. Locality given as 'Chacres' in the protologue.

U 098032B HOLO – rad, corp, ar, sp (Collection number inferred.

Assumed to represent the holotype as this is the only specimen present.)

- loc. 3:** Chile: "Chacres Nr. 2". – / 11. / 1955. – Originally published as *Pyrrhocactus aconcaguensis* Ritter 1960. The original label was first numbered "239e", now put in brackets. FR 239e is set equal to FR 542 in the field-number list in KS 4.
ZSS SR13489 ISO – sem

Ritter 542a: *Pyrrhocactus horridus* (Gay) Backeberg var. *orientalis* (F. Ritter)
F. Ritter – Kakt. Südamer. 3: 949, 1980.

- loc. 1:** Chile: "Las Coimas". – / 6. / 1955. – Originally published as *Pyrrhocactus aconcaguensis* var. *orientalis* Ritter 1960.
SGO 121636 ISO – ar, sp
- loc. 2:** Chile: "ca. 4 km unterhalb Los Patos" = c. 4 km below Los Patos. – Originally published as *Pyrrhocactus aconcaguensis* var. *orientalis* Ritter 1960.
SGO 121637 – (corp), ar, sp
- loc. 3:** Chile: "Las Coimas bei San Felipe" = Las Coimas near San Felipe. – / 6. / 1955. – Originally published as *Pyrrhocactus aconcaguensis* var. *orientalis* Ritter 1960.
U **Type collection** – sem (Collection number inferred from the locality data.)
U 098128B **Type collection** – ar, sp ("Areolenmuster" = areole specimen. Collection number inferred. This specimen probably represents the holotype (which is cited for ZSS where no material is found).)
- loc. 4:** Chile: "Las Coimas und Panquehue" = Las Coimas and Panquehue. – / 6. / 1955. – Originally published as *Pyrrhocactus aconcaguensis* var. *orientalis*. The original label was first numbered "239c", now put in brackets. 239c is set equal to FR 542a in the field-number list in KS 4.
ZSS SR13490 – sem

Ritter 543: *Pyrrhocactus horridus* (Gay) Backeberg var. *robustus* (F. Ritter) F.
Ritter – Kakt. Südamer. 3: 947-948, 1980.

- Chile: "Cabildo, Nr. 2". – / 6. / 1955. – The original label has the collection number "FR 239d" crossed out; FR 543 and FR 239d are said to be equal in the field number list in KS 4.
SGO 125673 – fr, sem

Ritter 545: *Pyrrhocactus floccosus* F. Ritter – Taxon 12(1): 32-33, 1963.

Typus (T): Ritter 545 (U 117835B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Antofagasta; coastal mountains of Prov. Antofagasta.
U 117835B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS A12623 – (corp), ar, sp, fl, fr, sem (Ex cult. ZSS 76 1380, 12. 7. 1993) (Leg. Pitsch.)
- loc. 2:** Chile: "Blanco Encalada".
SGO 121638 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "Blanco Encalada". – / 1. / 1958.

ZSS SR13491 **Type number** – sem

loc. 4: Chile: "Blanco Encalada, Berge nach Nord" = Blanco Encalada, mountains to the N. – / – / 1969.

ZSS SR13492 – sem

Ritter 546: *Copiapoa dura* F. Ritter – Taxon 12(1): 31, 1963. (First mentioned in Backeberg, Die Cact. 6: 3827, 1962 (as *nom. nud.*))

Typus (T): Ritter 546 (U 117603B, SGO [status ?], ZSS [seeds only])

(Holotype cited for U l.c., 28.).

loc. 1: Chile: E of Totoral. – / – / 1956.

U 117603B **HOL**O – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S9939 **Type number** – sem (Leg. F. Ritter 1955.)

loc. 2: Chile: "18 km östl. Totoral Alto" = 18 km E of Totoral Alto.

SGO 124898 **Type number** – (corp), ar, sp

loc. 3: Chile: "unterhalb Totoral" = below Totoral. – "Muster alter Pfl.zn" = specimens of old plants.

SGO 124899 **Type number** – (corp), ar, sp

loc. 4: Chile: "10 km östl. Carriz. Bajo" = 10 km E of Carrizal Bajo.

SGO 124900 **Type number** – (corp), ar, sp

loc. 5: Chile: "13 km von Panamericana (sic!) Nordstrasse nach Carrizal" = 13 km from Panamericana, northern road to Carrizal. 8. / 10. / 1965.

SGO 124901 **Type number** – (corp), ar, sp

loc. 6: Chile: "Küste südl. Carriz. Bajo" = coast S of Carrizal Bajoo.

SGO 124902 **Type number** – (corp), ar, sp

loc. 7: Chile: "östl. von Carriz. Bajo" = E of Carrizal Bajo. – "Übergangsform *Cop. coquimbana* - *dura*" = intermediate form between *Copiapoa coquimbana* and *C. dura*.

SGO 124903 – (corp), ar, sp

loc. 8: Chile: "oberhalb Totoral + Küste Totoral Bajo" = above Totoral and coast of Totoral Bajo. – / 12. / 1957.

ZSS SR13493 **Type number** – sem

Ritter 547: *Maihueniopsis camacho* (Espinosa) F. Ritter – Kakt. Südamer. 3: 873, 1980.

loc. 2: Chile: "Weg nach Sn. Pedro" = path to San Pedro.

SGO 125216 – corp, ar, sp

loc. 3: Chile: "Sta. Barbara" = Santa Barbara.

SGO 125217 – corp, ar, sp

ZSS SR13494 – sem

ZSS SR13495 – sem

loc. 4: Chile: "Rio San Pedro bei ca. 3600 m.". 3600 m.

ZSS SR13496 – sem

loc. 5: Chile: "Weg Calama - Vilama" = path Calama - Vilama. - / 3. / 1956.
ZSS SR13497 - sem

Ritter 547a: *Maihue niopsis camachoi* (Espinosa) F. Ritter - Kakt. Südamer. 3: 873, 1980.

loc. 1: Chile: "O von Copiapó" = E of Copiapó. - Identified as "*Maihue niopsis camachoi* var." in KS 4.
SGO 125218 - corp, ar, sp

loc. 2: Chile: "130 km östl. Copiapó" = 130 km E of Copiapó. - / 1. / 1956. - Identified as "*Maihue niopsis camachoi* var." in KS 4.
ZSS SR13498 - sem

Ritter 548: *Maihue niopsis atacamensis* (Philippi) F. Ritter - Kakt. Südamer. 3: 872-873, 1980.

loc. 1: Chile: "Puritama" / "unterh. Puritama" = below Puritama.
SGO 125219 - corp, ar, sp

loc. 2: Chile: "Strasse Calama - S.n Pedro de A." = road Calama - San Pedro de Atacama. - / 3. / 1956.
ZSS SR13499 - sem

Ritter 548?: *Maihue niopsis atacamensis* (Philippi) F. Ritter - Kakt. Südamer. 3: 872-873, 1980.

- Chile: "Puritama" / "unterhalb Puritama" = below Puritama. - "Exemplar der Blütenbeschreibg." = specimen of the flower description.
SGO 125220 - corp, ar, sp

Ritter 549: *Maihue niopsis conoidea* (Backeberg) F. Ritter (*nom. inval.* Art. 37.1) - Kakt. Südamer. 3: 873-874, 1980. (Erroneously included as valid in RPS 31.)

- Chile: "Vilama Nr. 4". - / 4. / 1956.
ZSS SR13500 - sem

Ritter 550: *Cumulopuntia tortispina* F. Ritter - Kakt. Südamer. 3: 882-883, figs. 725-726, 1980.

Typus (T): Ritter 550 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Antofagasta; "Guatin". 3000 m. - 3600 m. - / - / 1956. - Collection date according to specimen at U.

U HOLO - corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Chile: Antofagasta; Puritama, Antofagasta. - Locality data not in Ritter's handwriting and probably copied from an original label now discarded.
SGO 125101 **Type number** - corp, ar, sp

loc. 3: Chile: "Vilama Nr. 7". - / 4. / 1956.
ZSS SR13501 **Type number** - sem

Ritter 551: *Cumulopuntia ignescens* (Vaupel) F. Ritter – Kakt. Südamer. 3: 880-882, 1980.

- loc. 1:** Chile ? : "Timalchaca bei 3900 m.". 3900 m.
SGO 125102 – corp, ar, sp
- loc. 2:** Peru: Arequipa / Puno; "Strasse von Arequipa nach Puno bei 78 km, 4150 m." = road from Arequipa to Puno at km 78 / "78 km östl. Arequipa" = 78 km E of Arequipa. 4150 m.
SGO 125103 – corp, ar, sp
- loc. 3:** Chile: "Portezuelo, Chapiquiña, 4200 m.". 4200 m. – / 11. / 1960. –
Collection date according to original Ritter seed sample at ZSS.
SGO 125104 – corp, ar, sp, fr ("Früchte von einer Pflanze" = fruits from one plant.)
ZSS SR13504 – sem ("(Samen von 1 Pflanze)" = seeds from one plant.)
- loc. 4:** Chile: "unterhalb Portezuelo, Chapiquiña, von 3500 m." = below Portezuelo, Chapiquiña / "unterhalb Portezuelo Chapiquiña, 3600 m." = below Portezuelo Chapiquiña. 3500 m. - 3600 m. – / 9. / 1957.
SGO 125438 – corp, ar, sp
- loc. 5:** Chile: "ca. 9 km östl. von Campamento Port Chapiquiña" = c. 9 km E of Campamento Port[ezuelo] Chapiquiña / "östl. Chapiquiña" = E of Chapiquiña. – The first original label has the comment "östlichste Pflanzen. Ebenso bei Portezuelo" = E-most plants. Also at Portezuelo.
SGO 125439 – corp, ar, sp
- loc. 6:** Peru / Bolivia ? : "Weg Charaña - Tacna bei 31 km, 4250 m." = path Charaña - Tacna at km 31 / "westl. Charaña" = W of Charaña. 4250 m.
SGO 125440 – corp, ar, sp
- loc. 7:** Peru / Bolivia ? : "Passhöhe Charaña - Tacna bei 60 km u. 4450 m." = culmination of pass Charaña - Tacna at 60 km. 4450 m.
SGO 125441 – corp, ar, sp
- loc. 8:** Bolivia / Chile ? : "Boliv. - Chilen. Grenzlinie bei Charaña" = frontier Bolivia - Chile near Charaña / "Grenze Charaña" = frontier [at] Charaña.
SGO 125442 – corp, ar, sp
- loc. 9:** Chile: "Vilama Nr. 5". – / 4. / 1956.
ZSS SR13502 – sem
- loc.10:** Chile: "unterhalb Polán bei 4500 m." = below Polán. 4500 m. – The original label was first numberd "FR 1162", now crossed out. FR 1162 is set equal to FR 551 in the field-number list in KS 4.
ZSS SR13505 – sem
- loc.11:** Peru / Bolivia ? : "Weg Charaña - Tacna bei ca. 60 km, ca. 4450 m hoch" = path Charaña - Tacna, c. near km 60. 4450 m. – The original label twice has the number "FR 552" added and crossed out again; FR 552 is identified as "*Cumulopuntia ignescens* var." in the field-number list in KS 4.
ZSS SR13506 – sem
- loc.12:** Bolivia: Potosí: Nor-Lipez; "15 km nördl. Colchac" = 15 km N of Colchac.
ZSS SR14346 – sem

Ritter 552: *Cumulopuntia ignescens* (Vaupel) F. Ritter – Kakt. Südamer. 3:

880-882, 1980.

- Chile: "Alcerrecá". - / 10. / 1956. - Identified as "*Cumulopuntia ignescens* var." in the field-number list in KS 4.
ZSS SR13503 - sem

Ritter 553: *Cumulopuntia tubercularis* F. Ritter - Kakt. Südamer. 3: 888, 1980.

Typus (T): Ritter 553 (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Tarapacá; "Chusmig Nr. 9" = Chuzmiza. 3000 m. - 3400 m. - / 4. / 1956. - Altitude according to the protologue; the correct spelling of the locality is "Chuzmiza" as given in the protologue.
ZSS SR13507 ISO - sem

Ritter 554: *Opuntia soehrensii* Britton & Rose - The Cact. 1: 134, 1919.

Typus (T): Rose 18967 (US).

loc. 1: Bolivia: Oruro / Cochabamba; "Strasse Caracollo - Cochab.a, Aufstieg" = road Caracollo - Cochabamba, ascent. - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

SGO 122021 - corp, ar, sp

loc. 2: Chile: "Schlucht Camiña bei 3700 - 200 m." = gorge Camiña. 3700 m. - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

SGO 125327 - corp, ar, sp

loc. 3: Peru: Tacna; "Weg Charaña - Tacna bei 67 km u. 3900 m." = path Charaña - Tacna, km 67. 3900 m. - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

SGO 125329 - corp, ar, sp

loc. 4: Chile: "unterhalb Portezuelo Chapiquiña" = below Portezuelo Chapiquiña. - / 11. / 1960. - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

ZSS SR13508 - sem

loc. 5: Chile: "Chusmiza". - / 4. / 1956. - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

ZSS SR13509 - sem

Ritter 554a: *Opuntia soehrensii* Britton & Rose - The Cact. 1: 134, 1919.

Typus (T): Rose 18967 (US).

loc. 1: Bolivia?: "Eucaliptus". - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

SGO 122022 - corp, ar, sp

loc. 2: Bolivia: La Paz?: Pacajes?: "Desaguadero". - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

SGO 122023 - corp, ar, sp

loc. 3: Bolivia: La Paz: Pacajes; "Corocoro". - Treated as *Platyopuntia (nom. illeg.)* by Ritter.

SGO 122024 - corp, ar, sp

Ritter 554b: *Opuntia soehrensii* Britton & Rose - The Cact. 1: 134, 1919.

Typus (T): Rose 18967 (US).

loc. 1: Argentina: Jujuy; "Abra Pampa". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125330 – corp, ar, sp

loc. 2: Argentina: Jujuy; "Iturbe". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS SR13720 – sem

Ritter 554c: *Opuntia soehrensii* Britton & Rose – The Cact. 1: 134, 1919.

Typus (*T*): Rose 18967 (US).

– Argentina: Jujuy; "Volcan" = Volcán. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125331 – corp, ar, sp

Ritter 554d: *Opuntia soehrensii* Britton & Rose – The Cact. 1: 134, 1919.

Typus (*T*): Rose 18967 (US).

loc. 1: Argentina: Tucumán; "27 km über Tafi" = 27 km above Tafi del Valle / "westl. Tafi" = W of Tafi del Valle. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125332 – (rad), corp, ar, sp

loc. 2: Argentina: Salta; "39 km vor Cachi, Nr. 4" = 39 km before Cachi / "östl. Cachi" = E of Cachi. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125333 – rad, corp, ar, sp

Ritter 554e: *Opuntia soehrensii* Britton & Rose – The Cact. 1: 134, 1919.

Typus (*T*): Rose 18967 (US).

– Argentina: Jujuy; "19 km südl. Tres Cruces, Nr. 2" = 19 km S of Tres Cruces / "südl. Tres Cruces, Nr. 2" = S of Tres Cruces. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125334 – rad, corp, ar, sp

Ritter 554f: *Opuntia soehrensii* Britton & Rose var. *transiens* (F. Ritter) hort. (*nom. inval.* Art. 29.1)

loc. 2: Chile: "oberh. Socorama" = above Socorama / "Socorama". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 125335 **Type number** – rad, corp, ar, sp

Ritter 554g: *Opuntia soehrensii* Britton & Rose var. *grandiflora* (F. Ritter) hort. (*nom. inval.* Art. 29.1)

– Bolivia: Chuquisaca: Sud-Cinti; "zwischen Salitre und Cueva" = between Salitre and Cueva. – / – / 1963. – Collection date according to the protologue, the specimen at U is dated "1972". Treated as *Platyopuntia* (*nom. illeg.*) and identified as *P. soehrensii* var. *grandiflora* in KS 4: 1632.

U HOLO – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

Ritter 555: *Trichocereus atacamensis* (Philippi) W. T. Marshall – in Marshall & Bock, Cactaceae, 94, 1941.

- Chile: "Guatin". – Identified as *Trichocereus atacamensis* var. *atacamensis* in KS 4.
SGO 125539 (in 2 parts) – (corp), ar, sp
ZSS SR13510 – sem

Ritter 556: *Trichocereus uebelmannianus* (Lembcke & Backeberg) F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 2: 451, 3: 1116-1117, 1980. (Erroneously included as valid in RPS 31, and by Eggl in Trop. subtrop. Pfl.welt 59: 120, 1987.)

- loc. 1:** Chile: Antofagasta: La Loa; Andes E of San Pedro de Atacama and in the Toconce valley farther to the north. – / – / 1959.
ZSS S10359 – sem (Leg. F. Ritter 1957 (sub *Weingartia schaeferi*)).
ZSS T5109 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
ZSS T5114 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Chile: "Baños Puritama".
SGO 121849 – (corp), ar, sp
- loc. 3:** Chile: "Toconce".
SGO 121850 – corp, ar, sp
- loc. 4:** Chile: "Vilama".
ZSS SR13511 – sem

Ritter 557: *Mila nealeana* Backeberg fa. *senilis* F. Ritter (*nom. inval.* Art. 37) – Kakt. Südamer. 4: 1341, 1981. (Based on two syntypes, *F. Ritter 557* and *F. Ritter 705*.)

- loc. 1:** Peru: Lima; "Churin" = Churín. – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS; the specimen at U is simply dated "1957".
U SYN – corp, ar, sp
ZSS SR14015 SYN – sem
- loc. 2:** Peru: sine loco.
ZSS S10348 – sem (Leg. F. Ritter 1957 (sub *Mila senilis*)).
- loc. 3:** Peru: Huancavelica; "Ticrapo (Peru) Nr. 5". – / 9. / 1953. – The original label was first numbered "Nr. 158". FR 158 is identified as *Mila kubeana* in the field-number list in KS 4.
ZSS SR14016 SYN – sem

Ritter 558: *Corryocactus acervatus* F. Ritter – Kakt. Südamer. 4: 1287, fig. 1138, 1981.

Typus (T): Ritter 558 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Arequipa / Ayacucho ?; "Strasse von Chala nach Coracora" = road from Chala to Coracora. 3200 m. – / – / 1956. – Collection date according to specimen at U; altitude according to the protologue.
U HOLO – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Peru: Arequipa / Ayacucho; "40 - 50 km von Convento Richtg. Coracora" = 40 - 50 km from Convento in the direction of Coracora. – / 6. / 1956.

ZSS SR14017 ISO – sem

Ritter 559: *Corryocactus megarhizus* F. Ritter – Kakt. Südamer. 4: 1286-1287, 1981.

Typus (T): Ritter 559 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Ayacucho; "Huayhuas". 2000 m. – / – / 1956. – Collection date according to specimen at U; altitude according to the protologue.
SGO 125051 ISO – corp, ar, sp
U HOLO – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

Ritter 560: *Cumulopuntia ignota* (Britton & Rose) F. Ritter – Kakt. Südamer. 4: 1250-1251, 1981.

loc. 2: Peru: Arequipa ?; "südl. des Misti ca. 3400 m." = S of the Misti / "südl. Misti" = S of Misti. 3400 m. – "Lockere kleine Gruppen" = open small groups.

SGO 125365 – (corp), ar, sp

loc. 3: Peru: Ayacucho ?; "Strasse nach Lucanas km 103" = road to Lucanas, km 103 = "Lucanas". – / 9. / 1956.

SGO 125366 – corp, ar, sp

Ritter 561: *Pygmaeocereus bylesianus* Andreae & Backeberg – Nation. Cact. Succ. J. 12(4): 86-87, 1957.

loc. 1: Peru: Arequipa; "oberhalb Tambo-Schlucht" = above Tambo gorge.

SGO 121969 – rad, corp, ar, sp

loc. 2: Peru: "Horca". – / 9. / 1956.

ZSS SR14018 – sem

loc. 3: Peru: "Horca Süd" = Horca South. – / 7. / 1957. – "Same nicht ausgereift, abgestorben" = seeds not fully ripened, died.

ZSS SR14019 – sem

Ritter 561a: *Pygmaeocereus bylesianus* Andreae & Backeberg – Nation. Cact. Succ. J. 12(4): 86-87, 1957.

loc. 1: Peru: Arequipa; "oberh. Camaná" = above Camaná. – / 11. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 121970 – rad, corp, ar, sp

ZSS SR14020 – sem

loc. 2: Peru: Arequipa; sine loco.

B GH16191 – fl (Ex cult. BG Berlin, 22. 6. 1984 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

Ritter 561b: *Pygmaeocereus bylesianus* Andreae & Backeberg – Nation. Cact. Succ. J. 12(4): 86-87, 1957.

- Peru: Arequipa; "oberh. Camaná" = above Camaná. – / 2. / 1960. – Collection date according to original Ritter seed sample at ZSS. Comment on SGO label: "Ausnahme-Exemplar, hatte als einziges 2 Früchten. Die

Wurzelrübe, die nach 5 Monaten Lagerung noch frisch war (Kopf abgestorben), wurde eingepflanzt" = Exceptional specimen, the only ... with 2 fruits. The taproot, which was still fresh after 5 months of storage (head dead) was planted again.

SGO 121971 – corp, ar, sp

ZSS SR14021 – sem (The original label simply has the comment "Ausnahme-Exemplar" = exceptional specimen.)

Ritter 562: *Platyopuntia chilensis* F. Ritter (*incorrect name* Art. 11.3) – Kakt. Südamer. 3: 889, 1980.

Based on Ritter 562 (U) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Tarapacá; "unterhalb Alcerrea" = below Alcerrea. 3500 m. – / 10. / 1956. – Collection date according to specimen at U. *Platyopuntia* is an illegitimate name, and the epithet 'chilensis' is preoccupied under *Opuntia* and therefore, this collection is here covered under its incorrect name, contrary to the policy adopted otherwise.

U **HOLO** – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

Ritter 563: *Austrocylindropuntia floccosa* (Salm-Dyck) F. Ritter – Kakt. Südam. 4: 1244-1246, 1981.

- loc. 1:** Peru: Ayacucho; "Lucanas, km 102". – Identified as "*Austrocylindropuntia floccosa* (Salm-Dyck) Ritter var./fa." in the field-number list in KS 4.

SGO 121936 – corp, ar, sp

- loc. 2:** Peru: Ayacucho; "westl. Lucanas, Höhen" = W of Lucanas, altitudes. – "Kleine fast haarlose" = small one almost without hairs. Identified as "*Austrocylindropuntia floccosa* (Salm-Dyck) Ritter var./fa." in the field-number list in KS 4.

ZSS SR14022 – sem

Ritter 564: *Opuntia pestifer* Britton & Rose – The Cact. 1: 217, 1919. (*Nom. nov. pro Cactus nanus* Kunth, *non Opuntia nana* Visiani.)

- loc. 1:** Peru: Ancash; "24 km östl. Chavin" = 24 km E of Chavin. – Treated as *Platyopuntia nana* (Kunth) Ritter in KS 2: 495; as there is no combination for this name under *Opuntia*, the synonymous *O. pestifer* is used here. One of the original labels has the number FR 564 in brackets and replaces it with FR 605, which is said to equal FR 564 in the field number list in KS 4.

SGO 122025 – rad, corp, ar, sp

- loc. 2:** Peru: Cajamarca; "Zangal, Nr. 14". – Treated as *Platyopuntia nana* (Kunth) Ritter in KS 2: 495; as there is no combination for this name under *Opuntia*, the synonymous *O. pestifer* is used here. One of the original labels has the number FR 564 in brackets and replaces it with FR 605, which is said to equal FR 564 in the field number list in KS 4.

SGO 125336 – corp, ar, sp

- loc. 3:** Peru: Cajamarca; "5 km nördl. Pte. Crisnejas" = 5 km N of Puente Crisnejas / "Pte. Crisnejas" = Puente Crisnejas. – "Fotoexemplar" = specimen of photograph. Treated as *Platyopuntia nana* (Kunth) Ritter in KS 2: 495; as there is no combination for this name under *Opuntia*, the synonymous *O.*

pestifer is used here. One of the original labels has the number FR 564 in brackets and replaces it with FR 605, which is said to equal FR 564 in the field number list in KS 4.

SGO 125337 – corp, ar, sp

Ritter 565: *Matucana multicolor* Rauh & Backeberg var. *hystrix* (Backeberg) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 4: 1499, 1981.

loc. 1: Peru: Arequipa; above Quicacha towards the S. – Locality data according to KS 4: 1499. Originally distributed as *Matucana robusta* Ritter (*nom. nud.*).

ZSS S10343 – sem (Leg. F. Ritter 1957 (sub *Matucana robusta*)).

loc. 2: Peru: Arequipa / Ayacucho; "Strasse Convento - Coracora" = road Convento - Coracora. – / 6. / 1956.

ZSS SR14023 – sem

Ritter 566: *Armatocereus procerus* Rauh & Backeberg – Cactus (Paris) No. 51: 95, 1956. (Repeated in Descr. Cact. Nov. 1: 13 (dated 1956, published 1957); emendated diagnosis see Kakt. and. Sukk. 8(6): 82-87, 1957.)

Typus (T): Rauh K32 (ZSS [iso]).

loc. 1: Peru: Ica ?; distributed from the valley of the Río Pisco to E of Nazca at the E margin of the forest of lower altitudes. – Locality according to KS 4: 1276.

ZSS S10279 – sem (Leg. F. Ritter 1957 (sub *Armatocereus confusus* Ritter *nom. nud.*)).

loc. 2: Peru: Ica; "Sol de Oro". – "Stammareolen" = areoles of the trunk.

SGO 124957 – ar, sp

loc. 3: Peru: Ica; "Nazca". – / 6. / 1956. – The seed is stored in an original envelope where the locality was first given as "Ica Nr. 1", now crossed out. Originally, the collection number "Nr. 131" was used, now replaced with "566". FR 131 is *Armatocereus procerus* var. *armatus* according to the field-number list in KS 4.

ZSS SR14024 – sem

Ritter 567: *Trichocereus pachanoi* Britton & Rose – The Cact. 2: 134, 1920.

loc. 1: Peru: La Libertad; "östl. von Samne" = E of Samne. – / 3. / 1960. – Collection date according to original Ritter seed sample at ZSS.

SGO 121137 – (corp), ar, sp

ZSS SR14025 – sem

loc. 2: Peru: Lima; "Matucana". – Part of this specimen is numbered Ritter 155.

SGO 121281 – (corp), ar, sp

loc. 3: Peru: La Libertad; "Curunday" = Currunday.

SGO 121148 – (corp), ar, sp

loc. 4: Peru: Piura; "Huancabamba".

SGO 121150 – (corp), ar, sp ("7-rippig" = with 7 ribs.)

loc. 5: Peru: sine loco.

ZSS S9934 – sem (Leg. F. Ritter 1955.)

Ritter 567a: *Trichocereus santaensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 20, 1957. (Dated 1956, publ. 1957.)

- Peru: Ancash; "zw. Huallanca u. Caras" = between Huallanca and Caraz.
SGO 121240 – (corp), ar, sp

Ritter 568: *Browningia microsperma* (Werdermann & Backeberg) W. T. Marshall – Cactus (Paris) 1(3): 8, 1946. (Repeated in Cact. Succ. J. (US) 19(5): 75, 1947.)

loc. 1: Peru: sine loco.

ZSS S9951 – sem (Leg. F. Ritter 1955 (sub *Gymnanthocereus microspermus*)).

loc. 2: Peru: Cajamarca: Jaén; "westl. Pass nach Jaén" = W of Pass to Jaén.

SGO 125126 – (corp), ar, sp

loc. 3: Peru: Lambayeque; "Olmos". – / 5. / 1957.

ZSS SR14026 – sem

Ritter 569: *Thrixanthocereus senilis* F. Ritter – Kakt. and. Sukk. 12(6): 89-91, ill., 1961. (First mentioned (without Latin diagnosis) by Backeberg in Die Cact. 4: 2477, 1960.)

Typus (T): Ritter 569 (U 097832B, SGO, ZSS).

loc. 1: Peru: Ancash: Huari; Rahuapampa. – / – / 1956. – For locality data cf. KS 4: 1482-1483.

U 097832B **HOLO** – corp, ar, sp, ceph, (fl) (Labelled as "Holotypus" by Ritter. The collection number was inserted later in a different handwriting.)

ZSS S10290 **ISO** – sem (Leg. F. Ritter 1957.)

ZSS T5097 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1960.)

loc. 2: Peru: Ancash: Huari; "Rahuapampa". – / 8. / 1956. – Collection date according to original Ritter seed sample at ZSS.

SGO 125517 **ISO** – rad, corp, ar, sp, ceph, (fl) (Includes several rooted seedlings of different age and size.)

ZSS SR14027 **ISO** – sem

Ritter 569b: *Thrixanthocereus senilis* F. Ritter – Kakt. and. Sukk. 12(6): 89-91, ill., 1961. (First mentioned (without Latin diagnosis) by Backeberg in Die Cact. 4: 2477, 1960.)

Typus (T): Ritter 569 (U 097832B, SGO, ZSS).

loc. 1: Peru: La Libertad; "Aricapampa". – Identified as "*Thrixanthocereus senilis* Ritter var." in the field-number list in KS 4.

SGO 121296 – corp, ar, sp, ceph (Includes a small fragmented seedling without roots.)

ZSS SR14028 – sem

loc. 2: Peru: La Libertad; "El Pallar". – / 4. / 1960. – Identified as

"*Thrixanthocereus senilis* Ritter var." in the field-number list in KS 4.

ZSS SR14029 – sem

Ritter 570: *Weberbauerocereus johnsonii* F. Ritter – Kakt. and. Sukk. 13(5): 72-74, ill., 1962.

Typus (T): Ritter 570 (U117563B, SGO [status ?], ZSS).

loc. 1: Peru: Cajamarca; Zangal, San Pablo. – / 7. / 1956. – Locality information according to printed sources, supplemented from specimen label at ZSS.

U 117563B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. "Jungtrieb und Altertrieb mit einseitigem Pseudocephalium" = young stem and old stem with one-sided pseudo-cephalium.)

ZSS B16679 **Type collection** – fl (Ex cult. ZSS 94 2359, 26. 7. 1995) (Leg. ZSS. Aufnahme Altbestand. Probably directly from Ritter seeds.)

ZSS S10283 **ISO** – sem (Leg. F. Ritter 1957.)

ZSS T5041 **ISO** – corp, ar, sp, ceph (Leg. F. Ritter ex nat.)

loc. 2: Peru: Cajamarca; "unterhalb San Pablo" = below San Pablo.

SGO 121118 **Type number** – corp, ar, sp

loc. 3: Peru: Cajamarca; "oberh. Cascas" = above Cascas.

SGO 121123 – corp, ar, sp

loc. 4: Peru: Cajamarca; "44 km westl. San Miguel" = 44 km W of San Miguel.

SGO 121126 **Type number** – corp, ar, sp

loc. 5: Peru: Cajamarca; "San Pablo". – / 7. / 1956.

ZSS SR14030 **Type number** – sem

loc. 6: Peru: "Contumazá". – / 6. / 1965.

ZSS SR14031 – sem

Ritter 571: *Weberbauerocereus albus* F. Ritter – Kakt. and. Sukk. 13(6): 106-108, ill., 1962.

Typus (T): Ritter 571 (U 117807B, SGO [status ?], ZSS [status ?]).

loc. 1: Peru: Ancash; San Marcos. – / – / 1956.

U 117807B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.

"Jungtrieb und Triebende eines blühbaren Kopfes

(Pseudocephalium) = young stem and stem apex of a fertile head (pseudo-cephalium).)

loc. 2: Peru: E of Cordillera Blanca. – / – / 1956. – Collection date according to the protologue (where the date is erroneously given as "1856").

B GH25091 – fl, ic (corp, al) (Ex cult. BG Berlin, 27. 6. 1989 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

B GH25091a – corp, ar, sp, al, ic (corp, fl) (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

ZSS S10284 **Type number** – sem (Leg. F. Ritter 1957. This specimen is undated.)

ZSS T5042 **Type number** – (corp, ar, sp) (Leg. F. Ritter ex nat.; dated Oct. 1957 in the herbarium list.)

ZSS T5043 **Type number** – corp, ar, sp (Leg. F. Ritter ex nat.)

loc. 3: Peru: Ancash; Huari; "oberhalb Rahuapampa" = above Rahuapampa.

SGO 121120 **Type ?** – (corp), ar, sp (This specimen appears to be heterogeneous and contains a stem fragment of probably

Haageocereus sp.)

loc. 4: Peru: Ancash: Huari; "Rahuapampa". - / 8. / 1956. - "(Same taub)" = seeds not viable.

ZSS SR14032 **Type** ? - sem

Ritter 572: *Espositoa superba* F. Ritter - Kakt. and. Sukk. 11(6): 85-86, ill., 1960.

Typus (*T*): Ritter 572 (U 117839B [holo ?], ZSS T5044 [holo ?], SGO) (Type cited for ZSS in the protologue and a specimen labelled as holotype is present; another specimen annotated as holotype by Ritter is, however, found at U.).

loc. 1: Peru: Cajamarca: Jaén; Maraón watershed, Bellavista. - / 8. / 1956. - Locality information according to original description, supplemented from specimen label at ZSS.

ZSS S10276 **ISO** - sem (Leg. F. Ritter 1957.)

ZSS SR14033 **ISO** - sem (The original label is dated "VII. 56".)

ZSS T5044 **HOLO** - corp, ar, sp, ceph (Leg. F. Ritter ex nat.)

loc. 2: Peru: Cajamarca: Jaén; Jaén in the Maraón watershed. - / - / 1954. - Collection date according to the protologue.

SGO 122162 **ISO** - (corp), ar, sp

U 117839B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter, although the type was sent to ZSS according to the protologue.)

ZSS T10813 **Type number** - corp, ar, sp (Ex cult. ZSS s.n., 1992. No locality data associated with this specimen. The original label also has the number '942' attached, but it is unclear whether this is a number supplied by Ritter or a ZSS accession number.)

Ritter 572a: *Espositoa superba* F. Ritter fa. *cristata* F. Ritter (*nom. inval.* Art. 32.1(c)) - Kakt. Südamer. 4: 1632, 1981.

Based on Ritter 572a.

- Peru: sine loco.

ZSS S10277 - sem (Leg. F. Ritter 1957.)

Ritter 573a: *Espositoa ruficeps* F. Ritter - Kakt. Südamer. 4: 1448-1450, figs. 1298-1299, 1981.

Typus (*T*): Ritter 573a (U 160820B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ancash: Huari; "Rahuapampa". - / 8. / 1956. - Collection date according to original Ritter seed sample at ZSS. - Originally numbered as Ritter 573, which was replaced after 1958 because it had been applied to 2 collections, cf. Ritter 660.

SGO 122161 **ISO** - corp, ar, sp, ceph

ZSS SR14034 **ISO** - sem (The original label was first numbered "Nr. 573".)

loc. 2: Peru: Ancash; "Prov. Huari". - / - / 1963. - Collection date according to specimen at U, and probably erroneous and representing the accession date.

U 160820B **HOLO** - corp, ar, sp, ceph (Labelled as "Holotypus" by Ritter.)

loc. 3: Peru: sine loco. – This material was distributed in 1957 under the erroneous number FR 573, cf. KS 4: 1449.

B GH31872 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 4. 10. 1993
(cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS S10278 **Type number** – sem (Leg. F. Ritter 1957.)

Ritter 574: *Cumulopuntia ticnamarensis* F. Ritter – Kakt. Südamer. 3: 885, fig. 734, 1980.

Typus (T): Ritter 574 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Chile: Tarapacá; "vom Passe westlich von Ticnamar" = from the pass W of Ticnamar. – / – / 1960. – Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Collection number by inference. Assumed to represent the holotype as this is the only specimen present.)

loc. 3: Chile: "Mamiña, grosse Höhen" = Mamiña, great altitudes.

SGO 125105 **Type number** – corp, ar, sp

loc. 4: Chile: Tarapacá; "Strasse nach Ticnamar" = road to Ticnamar.

SGO 125367 **Type number** – corp, ar, sp

Ritter 575: *Mila nealeana* Backeberg – Blätt. Kakt.-Forsch. 1934(11): [unpaged], 1934.

– Peru: Arequipa; "Quicacha". – / 6. / 1956.
ZSS SR14035 – sem

Ritter 576: *Mila maxima* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1343, 1981. (Published as provisional name.)

Based on Ritter 576.

– Peru: Ancash; mountain ridge S of "Tablones", Santa gorge, rare. – / 8. / 1956. – Locality data supplemented from the protologue.

ZSS SR14036 – sem

Ritter 577: *Borzicactus plagiostoma* (Vaupel) Britton & Rose – The Cact. 2: 163, 1920.

– Peru: Cajamarca; "Zangal". – / 5. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 125032 – corp, ar, sp
ZSS SR14037 – sem

Ritter 577a: *Borzicactus purpureus* F. Ritter – Kakt. Südamer. 4: 1383, fig. 1260, 1981.

Typus (T): Ritter 577a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Cajamarca; San Juan between Chilete and Cajamarca. – / – / 1960.

U **HOLO** – (corp), ar, sp (The collection number is not given and there is no original label present for this collection; the number is inferred from the locality data and the identification, and the specimen is assumed to be the holotype as it is the only one present at U.)

- loc. 2:** Peru: Cajamarca; "östl. Chilete" = E of Chilete / "Chilete".
SGO 125033 **ISO** – (corp), ar, sp
- loc. 3:** Peru: Cajamarca; "San Juan östl. Chilete" = San Juan E of Chilete. – / 4. / 1960.
ZSS SR14038 **ISO** – sem

Ritter 578: *Loxanthocereus parvitesselatus* F. Ritter – Kakt. Südamer. 4:

1469, fig. 1344, 1981. (Sphalm. 'parvitesselatus'.)

Typus (T): Ritter 578 (U, SGO, ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: La Libertad; "Samne". 1500 m. – / – / 1956. – Altitude supplemented from protologue; collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen.)
ZSS T5074 **ISO** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
- loc. 2:** Peru: La Libertad; "oberhalb Samne (Cerro Currunday)" = above Samne (Cerro Currunday).
SGO 121972 **ISO** – corp, ar, sp
- loc. 3:** Peru: Arequipa / La Libertad ?; "oberhalb Chiral" = above Chiral.
SGO 121973 – (corp), ar, sp
- loc. 4:** Peru: Cajamarca; "unterhalb Cascas" = below Cascas.
SGO 121974 – (corp), ar, sp
- loc. 5:** Peru: Ancash; "nordöstl. Yautan" = NE of Yautan / "Yaután".
SGO 121975 – corp, ar, sp
- loc. 6:** Peru: Ancash; "höhere Lagen Quebrada Huecocho, 2550 m." = upper altitudes of the Quebrada Huecocho. 2550 m. – "Halbaufrechter mit 10 - 11 Rippen, Trieb 4 cm. Durchmesser" = semierect one with 10 - 11 ribs, stem 4 cm in diameter.
SGO 121976 – (corp), ar, sp
- loc. 7:** Peru: sine loco.
B GH09198 – corp, ar, sp, fl (Ex cult. BG Berlin, 25. 9. 1980 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
B GH11529 – fl, ic (corp, fl) (Ex cult. BG Berlin, 27. 4. 1982 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS AX10465 **Type number** – fl (Ex cult. ZSS s.n., undated, probably 1962.)
ZSS S9947 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 8:** Peru: La Libertad; "Currunday n. oberhalb Chiral" = Currunday N above Chiral. – / 5. / 1957.
ZSS SR14039 **ISO** – sem
- loc. 9:** Peru: Ancash; "Quebrada Huecocho (Yautan)" = Quebrada Huecocho (Yaután). – / 6. / 1960.
ZSS SR14040 – sem

Ritter 579: *Loxanthocereus otuscensis* F. Ritter – Kakt. Südamer. 4: 1467, figs.

1326, 1331, 1981. (Erroneously listed as *L. obtuscensis* in RPS 32.)

Typus (T): Ritter 579 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: La Libertad; "Otuzco, Nr. 1". 2500 m. – Altitude information according to KS 4: 1467.
SGO 121977 **ISO** – (corp), ar, sp
- loc. 2:** Peru: La Libertad; "Otusco". – / – / 1954. – Collection date according to specimen at U.
U **HOLO** – ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS S10287 **Type number** – sem (Leg. F. Ritter 1957. No locality directly associated with this specimen.)
- loc. 3:** Peru: La Libertad; sine loco.
B GH23102 – fl (Ex cult. BG Berlin, 18. 4. 1988 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
B GH27497 – fl, ic (fl) (Ex cult. BG Berlin, 16. 10. 1990 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
B GH27497a – corp, ar, sp (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS SR14041 **Type number** – sem (The original label is dated "VIII. 56.")

Ritter 581: *Loxanthocereus montanus* F. Ritter – Kakt. Südamer. 4: 1463-1464, 1981.

Typus (T): Ritter 581 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Ayacucho; above "Huallas" on the road from Nazca to Puquio. 2600 m. - 3100 m. – / – / 1956. – Collection date according to specimen at U. Locality data supplemented from the protologue.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Peru: Ayacucho; "Huayhua, Nr. 8".
SGO 121978 **Type number** – (corp), ar, sp
- loc. 3:** Peru: Ayacucho; "Huallas, Nr. 8". – / 9. / 1958.
SGO 121979 **Type number** – (corp), ar, sp
- loc. 4:** Peru: sine loco.
ZSS S10285 **Type number** – sem (Leg. F. Ritter 1957.)
- loc. 5:** Peru: Ayacucho; "Huayhua". – / 9. / 1956.
ZSS SR14042 **Type number** – sem

Ritter 582: *Haageocereus subtilispinus* F. Ritter – Kakt. Südamer. 4: 1419-1420, figs. 1272, 1277, 1981.

Typus (T): Ritter 582 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Arequipa; "Atico", mountain slopes above coast. – / – / 1954. – Collection date according to specimen at U. Locality data supplemented from the protologue.
SGO 124741 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

ZSS A10498 **Type number** – ar, sp, fl (Ex cult. ZSS s.n. (cult. ex sem. ex Fa. Winter, 1961), 2. 10. 1979.)

loc. 2: Peru: Arequipa; "Chala".

SGO 124742 – corp, ar, sp

loc. 3: Peru: Arequipa; sine loco.

ZSS S12565 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 4: Peru: Arequipa; "südl. Atico Nr. 8" = S of Atico. – / 6. / 1956.

ZSS SR14043 **Type number** – sem

Ritter 583: *Haageocereus lanugispinus* F. Ritter – Kakt. Südamer. 4: 1395-1396, figs. 1276, 1279-1280, 1981.

Typus (T): Ritter 583 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Lima / Ancash; "nördlich Pativilca" = N of Pativilca. – / – / 1957. – Collection date according to specimen at U.

SGO 124743 **ISO** – rad, corp, ar, sp

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

Ritter 584: *Haageocereus fulvus* F. Ritter – Kakt. Südamer. 4: 1393, 1981.

(*Nom. nov. pro Haageocereus acanthus* var. *fortalezensis* Rauh & Backeberg 1957.)

loc. 1: Peru: Ancash; "Pariacoto, ca. 2100 m.". 2100 m.

SGO 124744 – (corp), ar, sp

loc. 2: Peru: Ancash ?; "Fortaleza" / "12 km östl. Chusquitambo bei 1330 m." = 12 km E of Chusquitambo. 1330 m.

SGO 124745 – (corp), ar, sp

loc. 3: Peru: Ancash ?; "Valle Fortaleza".

ZSS SR14044 – sem

loc. 4: Peru: Ancash; "oberhalb Pariacoto" = above Pariacoto. – / 8. / 1956.

ZSS SR14045 – sem

Ritter 585: *Haageocereus chryseus* F. Ritter (*nom. inval.* Art. 37) – Kakt.

Südamer. 4: 1390-1391, figs. 38, 42, 1981. (Based on two syntypes, *Ritter 585* and *Ritter 147a*.)

– Peru: Ancash; "Huallanca". – / 8. / 1956. – Collection date according to original Ritter seed sample at ZSS.

B GH31903 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 11. 10. 1993

(cult. ex sem. Cat. H. Winter 1957, sub *Haageocereus chosicensis* var. *chrysacanthus*, without locality). Collection number inferred.)

SGO 124746 **SYN** – corp, ar, sp

ZSS S12545 – sem (Leg. F. Ritter 1956.)

ZSS SR14046 **SYN** – sem

Ritter 586: *Espostoa hybr.*

- Peru: Ancash: Huari; "Rahuapampa". – / – / 1964. – One of the original labels seems to have been added later (1964) together with a second fragment; this label is numbered as "473a x 571" and identifies the collection as *Espositoa ruficeps* × *Weberbauerocereus albus*, "2. Exemplar" = 2. specimen.
SGO 122163 – (corp), ar, sp, (ceph)

Ritter 587: *Matucana comacephala* F. Ritter – Succulenta 37(3): 92-93, 1958.

(See also F. Ritter, Kakt. Südamer. 4: 1492, 1981.)

Typus (T): Ritter 587 (ZSS T5045, SGO, U).

- loc. 1:** Peru: Ancash: Huari; Rahuapampa, E of Cordillera Blanca. – / – / 1956. – Collection date according to the protologue.

B GH14194 – fl, ic (corp, fl) (Ex cult. BG Berlin, 7. 6. 1983 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

U 097944 **Type collection** – corp, ar, sp (Labelled as "Herbarbeleg Typuslokalität" = herbarium specimen type locality. Collection number inferred.)

U 116916B **Type collection** – (corp), ar, sp (Labelled as "vom Typusort" = from the type locality.)

ZSS S9922 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T5045 **HOLO** – (corp), ar, sp (Leg. F. Ritter ex nat. This appears to be the fragment removed from the specimen preserved at SGO (loc. 2).)

- loc. 2:** Peru: Ancash: Huari; "4 km oberhalb Rahuapampa" = 4 km above Rahuapampa.

SGO 121181 **ISO** – rad, corp, ar, sp, (fl) (The specimen is a large plant where a small fragment (c. 1/4 of upper part of head) has been cut away and might be the fragment at ZSS representing the holotype or the fragment at U (s.n.).)

- loc. 3:** Peru: Ancash: Huari; "oberhalb Rahuapampa" = above Rahuapampa. – / – / 1954. – Collection date according to specimen at U.

U **Type collection** – (corp), ar, sp (Collection number inferred. See comment above for the material at SGO.)

- loc. 4:** Peru: Ancash: Huari; "Rahuapampa". – / 8. / 1956.

ZSS SR14047 **ISO** – sem

Ritter 588: *Islaya divaricatiflora* F. Ritter – Taxon 13(4): 144, 1964.

Typus (T): Ritter 588 (U 117539B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Peru: Arequipa; "oberhalb Camana" = above Camaná.

SGO 122095 **ISO** – rad, corp, ar, sp

U 117539B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S12589 – sem (leg. H. Winter (Cat. 1961/62). No locality data directly associated with this specimen.)

ZSS S9909 **ISO** – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)

loc. 2: Peru: Arequipa; "Aufstieg von Camana Nebelzone" = ascent from Camaná, fog zone. – / 11. / 1958.
ZSS SR14048 ISO – sem ("157 K" = 157 seeds [not counted].)

Ritter 589: *Islaya bicolor* Akers & Buining – Succulenta 1951(3): 38-41, 1951.
Typus (T): Akers s.n. (DS).

loc. 1: Peru: Arequipa; "Lomas".
SGO 122096 – (corp), ar, sp

loc. 2: Peru: Arequipa; "36 km nördl. Lomas" = 36 km N of Lomas.
SGO 122097 – rad, corp, ar, sp

loc. 3: Peru: sine loco.
B GH11980 – fl (Ex cult. BG Berlin, 9. 6. 1982 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS S12586 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 4: Peru: Arequipa / Ica; "Lomas u. zw. Lomas u. Nazca" = Lomas and between Lomas and Nazca. – / 11. / 1958.
ZSS SR14049 – sem

Ritter 590: *Islaya maritima* F. Ritter – Kakt. Südamer. 4: 1301-1303, 1981.
(*Nom. nov. pro *Islaya grandiflorens** Rauh 1958 (*non* Rauh & Backeberg 1957).)
Typus (T): Rauh K130 (HEID ?).

loc. 1: Peru: Arequipa; few km S of Atico on slopes above the high tide line. – / 6. / 1956.
ZSS S12587 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 2: Peru: Arequipa; "62 km N. Ocoña" = 62 km N of Ocoña.
SGO 122098 **Type number** – (corp), ar, sp

loc. 3: Peru: Arequipa; "Hügel n. Chala" = hill N of Chala. – "13 - 24 Rippen" = 13 - 24 ribs.
SGO 122099 **Type number** – rad, corp, ar, sp

loc. 4: Peru: Arequipa; "Chala".
ZSS SR14050 **Type number** – sem

Ritter 591: *Islaya unguispina* F. Ritter – Kakt. Südamer. 4: 1304, 1981.
Typus (T): Ritter 591 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Peru: Tacna; "Yarada". – / 2. / 1969. – Collection date according to original Ritter seed sample at ZSS ("II. 1969") and to specimen at U ("1969").
SGO 122100 ISO – rad, corp, ar, sp
U **HOLO** – corp, ar, sp (Labelled as "Typus" by Ritter and assumed to represent the holotype. Collection number inferred.)
ZSS SR14051 ISO – sem

Ritter 592: *Matucana yanganucensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 18, 1957. (Dated 1956, publ. 1957.)
Typus (T): Rauh K55b (ZSS).

- loc. 1:** Peru: Ancash; "Huaraz" = Huaráz.
SGO 122182 – (corp), ar, sp
- loc. 2:** Peru: Ancash; Yanganuco in the Cordillera Blanca. – Locality data according to KS 4: 1507.
ZSS S10340 – sem (Leg. F. Ritter 1957 (sub *Matucana colorisplendida*)).
- loc. 3:** Peru: Ancash; "Huaraz (Höhen)" = Huaráz, altitudes. – / 8. / 1956. – The original label has the collection number as "Nr. 592 (= 142a)"; FR 142a is set equal to FR 595 (= *Matucana crinifera*) in the field-number list in KS 4.
ZSS SR14052 – sem

Ritter 592a: *Matucana yanganucensis* Rauh & Backeberg var. *setosa* F. Ritter – Kakt. Südamer. 4: 1507-1508, 1981.

Typus (T): Ritter 592a (U, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Ancash; Cordillera Negra, "westlich von Paso Callán" = W of Paso Callán. – / – / 1956. – Locality data supplemented from the protologue; collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS A4255 **Type number** – ar, sp, fl (Leg. F. Ritter 1957. Ex cult. ZSS s.n., 23. 4. 1982.)
ZSS S10341 **Type number** – sem (Leg. F. Ritter 1957 (sub *Matucana colorisplendida* var. *setosa*). No locality data directly associated with this specimen.)
ZSS T5129 **Type number** – corp, ar, sp (Leg. F. Ritter 1959. Ex cult. ZSS s.n., 1981.)
- loc. 2:** Peru: Ancash; "Abstieg nach Pariacoto" = descent to Pariacoto.
SGO 122184 **Type number** – (corp), ar, sp
- loc. 3:** Peru: Ancash; "Peru", sine loco. – / 8. / 1956.
ZSS SR14053 **Type number** – sem

Ritter 592b: *Matucana yanganucensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 18, 1957. (Dated 1956, publ. 1957.)

Typus (T): Rauh K55b (ZSS).

- loc. 1:** Peru: Ancash; "Recuay". – / 8. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 122183 – (corp), ar, sp
ZSS SR14054 – sem
- loc. 2:** Peru: Ancash; Cordillera Blanca, sine loco.
ZSS S10342 – sem (Leg. F. Ritter 1957 (sub *Matucana colorisplendida* var. *grandiflora*)).

Ritter 593: *Matucana megalantha* F. Ritter – Succulenta 46(1): 3, ill. (p. 1), 1967. (Latin diagnosis published without type in l.c. 45(8): 117, 1966.)
Typus (T): Ritter 593 (U, SGO, ZSS [seeds only]) (No herbarium cited for type.).

- loc. 1:** Peru: Ancash; "Caraz" / "Carás". – / 9. / 1956. – Collection date according to specimens at SGO and U.
 SGO 122185 **ISO** – (corp), ar, sp
 U **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
 ZSS SR14055 **ISO** – sem (The original label is dated "VIII. 56." and has the locality simply as "Caraz".)
- loc. 2:** Peru: Ancash; "nordwestl. Huallanca bei 2300 m." = NW of Huallanca. 2300 m.
 SGO 122186 – (corp), ar, sp
- loc. 3:** Peru: sine loco.
 ZSS S10344 **Type number** – sem (Leg. F. Ritter 1957.)
 ZSS S10376 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Matucana calvescens*).)

Ritter 594: *Matucana comacephala* F. Ritter – Succulenta 37(3): 92-93, 1958.
 (See also F. Ritter, Kakt. Südamer. 4: 1492, 1981.)
Typus (T): Ritter 587 (ZSS T5045, SGO, U).

- Peru: Ancash: Huari; "Rahuapampa".
 SGO 122187 – corp, ar, sp, (fl)

Ritter 595: *Matucana crinifera* F. Ritter – Taxon 12(3): 125, 1963.
Typus (T): Ritter 595 (U 117555B, SGO, ZSS [status ?]) (Holotype cited for U l.c. (1): 28, 1963.).

- Peru: Ancash: Huari; "Machac". – / 8. / 1956. – Collection date according to original Ritter seed sample at ZSS ("VIII. 56") and to specimen at U ("1956").
 SGO 122188 **ISO** – rad, corp, ar, sp (Includes seedling material.)
 U 117555B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS A4251 **Type number** – fl (Ex cult. ZSS s.n., 23. 4. 1982 (cult. ex sem. leg. F. Ritter 1957). No locality associated with this specimen.)
 ZSS S10345 **Type number** – sem (Leg. F. Ritter 1957. No locality data associated with this specimen.)
 ZSS SR14056 **ISO** – sem

Ritter 596: *Matucana aurantiaca* (Vaupel) Buxbaum – in H. Krainz, Die Kakt. Lief. 54: C Vb, 1973.

- loc. 1:** Peru: Cajamarca; "San Pablo". – / 7. / 1956. – Collection date according to original Ritter seed sample at ZSS.
 SGO 122190 – (corp), ar, sp
 ZSS A4273 – ar, sp, fl (Leg. Ritter 1957; ex cult. ZSS s.n.)
 ZSS SR14058 – sem
- loc. 2:** Peru: Cajamarca; "San Miguel".
 SGO 122189 – (corp), ar, sp
- loc. 3:** Peru: Cajamarca / La Libertad; "Passhöhe Cajabamba - Huamachuco" = culmination of pass Cajabamba - Huamachuco.
 SGO 122191 – (corp), ar, sp

- loc. 4:** Peru: La Libertad; "Höhen östl. El Pallar" = altitudes E of El Pallar.
SGO 122193 – (corp), ar, sp
- loc. 5:** Peru: La Libertad; "Abzweig El Pallar" = turnoff El Pallar / "Abzweigung nach Chagual" = turnoff to Chagual.
SGO 122194 – (corp), ar, sp
- loc. 6:** Peru: La Libertad; "Huamachuco".
SGO 122195 – (corp), ar, sp
- loc. 7:** Peru: Cajamarca; "Cajamarca".
SGO 122204 – rad, corp, ar, sp (Includes a rooted seedling.)
- loc. 8:** Peru: sine loco.
ZSS S10346 – sem (Leg. F. Ritter 1957.)
- loc. 9:** Peru: Cajamarca; "Contumazá". – / 7. / 1964.
ZSS SR14057 – sem

Ritter 596a: *Matucana aurantiaca* (Vaupel) Buxbaum var. *densispina* F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 4: 1490, 1981.
Based on Ritter 596a.

- loc. 1:** Peru: Cajamarca ?; "Nacora". – "(behaart)" = hairy.
SGO 122192 – (corp), ar, sp
- loc. 2:** Peru: Cajamarca; "Cajamarca". – The collection number on the original label was first given as "FR 596". The locality coincides with that given for FR 596 loc. 7.
ZSS SR14059 – sem

Ritter 597: *Matucana paucicostata* F. Ritter – Taxon 12(3): 124-125, 1963.
Typus (T): Ritter 597 (U 117723B, SGO, ZSS [seeds only, status ?])
(Holotype cited for U l.c. (1): 28, 1963.).

- loc. 1:** Peru: Ancash: Huari; "Rahuapampa".
SGO 122196 ISO – rad, corp, ar, sp
U 117723B HOLO – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.
The original label has no locality data which is inferred from the SGO specimen.)
- loc. 2:** Peru: Ancash: Huari; "unterh. Rahuapampa" = below Rahuapampa. – / 3. / 1960.
ZSS SR14060 Type number – sem

Ritter 598: *Arequipa hempeliana* (Gürke) Oehme – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1940(2): 8, 1940.

- loc. 1:** Chile: Tarapacá; "oberhalb Camiña, bei ca. 2800 m. (3000 - 200)" = above Camiña. 2800 m. - 3000 m. – One of the original labels has the number 598 crossed out and replaced with FR 127a; both numbers are said to be equal in KS 4. The numbers given in brackets with the original locality are interpreted to give the upper altitudinal limit of the distribution.
SGO 124979 – (corp), ar, sp

- loc. 2:** Chile: "Str. von Azapa nach Boliv., km 71 1/2, ca. 2500 m." = road from Azapa to Bolivia, km 71.5 / "Saucache". 2500 m. – The second original label has the number 598 crossed out and replaced with FR 127a; both numbers are said to be equal in KS 4.
SGO 124980 (in 2 parts) – rad, corp, ar, sp
- loc. 3:** Peru / Bolivia ? : "Weg Charaña - Tacna, km 67, 3900 m." = path Charaña - Tacna, km 67 / "oberh. Tacna" = above Tacna. 3900 m. – The second original label has the number 598 crossed out and replaced with FR 127a; both numbers are said to be equal in KS 4.
SGO 124981 – (corp), ar, sp
- loc. 4:** Chile: "von Mamiña" = from Mamiña. – The second original label has the number 598 crossed out and replaced with FR 127a; both numbers are said to be equal in KS 4.
SGO 124982 – (corp), ar, sp

Ritter 598a: *Arequipa hempeliana* (Gürke) Oehme var. *subtilispina* F. Ritter (nom. inval. Art. 36.1) – Kakt. Südamer. 4: 1368, 1981. (Published as provisional name and first used in H. Winter catalogues 1960 / 1962.)
Based on Ritter 598a.

- loc. 1:** Peru: Tacna; "Abstieg von Peru nach Tacna bei 2550 m." = descent from Peru to Tacna / "oberh. Tacna" = above Tacna. 2550 m.
SGO 124983 – (corp), ar, sp
- loc. 2:** Peru: Tacna; "Strasse Tacna - Charaña bei 2500 m." = road Tacna [Peru] - Charaña [Bolivia ?]. 2500 m. – / 5. / 1959.
ZSS SR14061 – sem

Ritter 599: *Pyrrhocactus chilensis* (Hildmann ex K. Schumann) F. Ritter var. *albidiflorus* F. Ritter – Kakt. Südamer. 3: 927-928, 1980.
Typus (T): Ritter 599 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "Pichidangui". – / 12. / 1956. – Collection date according to original Ritter seed sample at ZSS ("XII. 56") and the specimen at U ("1956").
SGO 121639 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
ZSS SR13512 ISO – sem
- loc. 2:** Chile: "Pichidangui". – / 6. / 1955.
SGO 125674 – (fl), fr ("Anscheinend Nr. 599. Siehe Samen." = Apparently Nr. 599. See seeds.)
ZSS SR13513 – sem ("Anscheinend *N. acutissima* = Nr. 224, aber Blütenreste u. Samen anders" = Apparently *Neoporteria acutissima* = Nr. 224, but flower remains and seeds different. FR 224 is identified as *Neoporteria subgibbosa* in the field-number list in KS 4.)

Ritter 599a: *Pyrrhocactus chilensis* (Hildmann ex K. Schumann) F. Ritter – Succulenta 1959(10): 131, 1959.

- Chile: "Molles" = Los Molles. – Identified as *Pyrrhocactus chilensis* var. *chilensis* in the field-number list in KS 4.
ZSS SR13514 – sem

Ritter 600: *Lobivia kupperiana* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 414, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1: Bolivia: Potosí: Sud-Chichas; "südl. von Tupiza" = S of Tupiza. – "schlank, 15 - 21 Rippen" = slender, 15 - 21 ribs.
SGO 124452 – (corp), ar, sp
- loc. 2: Bolivia: Potosí: Sud-Chichas; "Tupiza, roter Berg im Osten" = Tupiza, red mountain in the East.
SGO 124453 – corp, ar, sp
- loc. 3: Bolivia: Potosí: Sud-Chichas; "unterh. Tupiza" = below Tupiza.
SGO 124454 (in 2 parts) – rad, corp, ar, sp
- loc. 4: Bolivia: Potosí: Sud-Chichas; "Tupiza". – / 1. / 1957.
ZSS SR14347 – sem
- loc. 5: Bolivia: Potosí: Sud-Chichas; "südl. Tupiza (auf Kiesboden)" = S of Tupiza (on gravelly soil). – / 3. / 1958.
ZSS SR14348 – sem

Ritter 601: *Haageocereus fascicularis* (Meyen) F. Ritter – Kakt. Südamer. 3: 1125-1126, 1980.

- loc. 1: Chile: "Mamiña". – / 1. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 124747 – (corp), ar, sp
ZSS SR13515 – sem
- loc. 2: Chile: "Str. von Azapa nach Bolivien, km 71 1/2, ca. 2500 m." = road from Azapa to Bolivia, km 71.5 / "Strasse Saucache - Boliv" = road Saucache - Bolivia. 2500 m.
SGO 124748 – rad, corp, ar, sp
- loc. 3: Chile: "Chusmiza". – / 4. / 1956.
ZSS SR13516 – sem
- loc. 4: Chile: "Camiña". – / 9. / 1960.
ZSS SR13517 – sem
- loc. 5: Chile: "westl. Chapiquiña" = W of Chapiquiña. – / – / 1969.
ZSS SR13518 – sem

Ritter 602: *Trichocereus tarijensis* (Vaupel) Werdermann var. *oreurensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 560, 1980.

- loc. 1: Bolivia: Potosí; "Don Diego".
SGO 121157 – (corp), ar, sp
- loc. 2: Bolivia: Oruro; "Oruro". – / 1. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121213 – (corp), ar, sp
ZSS SR14349 – sem

loc. 3: Bolivia: Cochabamba ?; "Macha" [= Machaca ?].
SGO 121243 – (corp), ar, sp

loc. 4: Bolivia: La Paz / Oruro; near Oruro, Chigmuni, Caxata, Challapata and other places of the middle highland.
ZSS S9948 – sem (Leg. F. Ritter 1955.)

Ritter 602a: *Trichocereus tarijensis* (Vaupel) Werdermann var. *orurensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 560, 1980.

– Bolivia: Oruro; "Challapata". – Labelled as *Trichocereus tarijensis* var. *challapatensis* Ritter (*nom. nud.*).
SGO 121244 – (corp), ar, sp

Ritter 603: *Cleistocactus laniceps* (K. Schumann) Roland-Gosselin – Bull. Mens. Soc. Nice 44: 32, 1904.

loc. 1: Bolivia: sine loco. – No locality data in KS.
ZSS S9924 – sem (Leg. F. Ritter 1955.)

loc. 2: Bolivia: Cochabamba: Ayopaya; "Puente Pilatos, Nr. 4".
SGO 124788 – (corp), ar, sp

loc. 3: Bolivia: Cochabamba: Ayopaya; "Rio Sta. Rosa, nahe Einmündung, Nr. 4" = Río Santa Rosa, near mouth / "Rio St. Rosa, Unterlauf" = Río Santa Rosa, lower parts.
SGO 124789 – corp, ar, sp

loc. 4: Bolivia: Cochabamba: Ayopaya; "Puente Pilatos". – / 6. / 1958.
ZSS SR14351 – sem

loc. 5: Bolivia: Cochabamba: Ayopaya; "Rio Sta. Rosa nahe Mündung" = Río Santa Rosa near mouth. – / 6. / 1958.
ZSS SR14352 – sem

Ritter 603a: *Cleistocactus laniceps* (K. Schumann) Roland-Gosselin var. *plurispinus* F. Ritter – Kakt. Südamer. 2: 673, 1980.

Typus (T): Ritter 603a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: La Paz: Inquisivi; "Inquisivi". – / – / 1957.
U **HOLO** – (corp), ar, sp ("Tieferes und höheres Rippenstück" = lower and upper rib part. Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Bolivia: La Paz: Inquisivi; "Inquisivi, Nr. 5".
SGO 124790 **ISO** – (corp), ar, sp

loc. 3: Bolivia: La Paz: Inquisivi; "unterhalb Inquisivi" = below Inquisivi. – / 1. / 1957.
ZSS SR14353 **ISO** – sem

Ritter 604: *Opuntia albisaetacens* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 127, 411, 1936. (Dated 1935, publ. Febr. 1936.)

loc. 1: Bolivia: Potosí: Sud-Chichas; "Tupiza". – "rotblühend" = red-flowering.
Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122026 – corp, ar, sp

loc. 2: Bolivia: Potosí; "Atocha". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122027 – corp, ar, sp

loc. 3: Bolivia: Potosí; "Weg Oroya - El Monte, Nr. 18" = path Oroya - El Monte /
"Monte". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122028 – corp, ar, sp

Ritter 610: *Opuntia salmiana* Parmentier ex Pfeiffer – Enum. Cact., 172, 1837.

– Argentina: Salta; "Betania". – Treated as *Platyopuntia* (*nom. illeg.*) by
Ritter.
SGO 125338 – corp, ar, sp

Ritter 612: *Echinopsis silvestrii* Spegazzini – Anales Mus. Nac. Buenos Aires
3(4): 486, 1905.

loc. 1: Argentina: Salta; "60 km südl. Salta" = 60 km S of Salta / "Gral Moldes". –
The jar contains two different labels and several fragments.
SGO 121441 – corp, ar, sp

loc. 2: Argentina: Salta; "Juramento".
SGO 121442 – (corp), ar, sp

Ritter 613: *Trichocereus korethroides* (Werdermann) F. Ritter – Kakt.
Südamer. 2: 451, 1980.

– Argentina: Jujuy; "34 km westl. Purmamarca" = 34 km W of Purmamarca. –
/ 2. / 1959.
SGO 121851 – (corp), ar, sp

Ritter 614: *Opuntia salmiana* Parmentier ex Pfeiffer – Enum. Cact., 172, 1837.

loc. 1: Bolivia: Tarija: Gran Chaco; "Palmar Grande". – Identified as (*Salmi-*)
Opuntia ipatiana Cárdenas on the label; this name is regarded as a synonym
of (*Platy-*) *Opuntia salmiana* in KS 2: 405.
SGO 121287 – corp, ar, sp

loc. 2: Bolivia: Tarija; "Tarija Nr. 8". – Identified as (*Salmi-*) *Opuntia ipatiana*
Cárdenas on the label; this name is regarded as a synonym of (*Platy-*)
Opuntia salmiana in KS 2: 405.
SGO 121288 – corp, ar, sp

Ritter 616: *Trichocereus tenuispinus* F. Ritter – Cactus (Paris) 22(88): 27-28,
ill., 1967. (Erroneously omitted from all volumes of RPS. The collection
number of the type is taken from Kakt. Südamer. 2: 564-565, 1980.)

Typus (*T*): Ritter 616 (U 160361B, SGO [status ?], ZSS [seeds only, status
?]).

loc. 1: Bolivia: Tarija; "von nordöstl. Tarija" = from NE of Tarija. – / – / 1963. –
Collection date according to specimen at U.
U 160361B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter.

Collection number inferred.)

- loc. 2:** Bolivia: Tarija; "Berge nördl. San Lorenzo" = mountains N of San Lorenzo. – "Foto Exemplar *tenuispinus*".
SGO 121245 **Type number** – (corp), ar, sp ("Foto-Exemplar *tenuispinus*" = foto specimen of *tenuispinus*.)
- loc. 3:** Bolivia: Tarija; "Berge nordöstl. Tarija" = mountains NE of Tarija. – "Dichtstach. Muster, wohl Hybrid *caulesc.* (73) × *tenuispinus* (616) = (FR 868)" = densely spined specimen, probably hybrid *caulescens* (73) × *tenuispinus* (616).
SGO 121246 – (corp), ar, sp
- loc. 4:** Bolivia: Tarija: Mendez, Pass zw. Junacas u. Tambo' = pass between Junacas and Tambo. – / 12. / 1962.
ZSS SR14354 **Type number** – sem

Ritter 619: *Eriocereus tarijensis* F. Ritter – Kakt. Südamer. 2: 557-558, fig. 429, 431, 1980.

Typus (T): Ritter 619 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Azero / Tomina; "Puente Acero" [Puente Azero], frontier of Prov. Azero and Tomina. – / – / 1958. – Locality data supplemented from protologue, collection date according to specimen at U.
SGO 121714 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palos Blancos". – / 5. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 121715 – (corp), ar, sp
ZSS SR14356 – sem
- loc. 3:** Bolivia: Tarija: Mendez; "Cajas, unten" = Cajas, below.
ZSS SR14355 – sem

Ritter 620: *Hymenorebutia tiegeliana* (Wessner) F. Ritter var. *distefanoana* (Cullmann & F. Ritter) F. Ritter – Kakt. Südamer. 2: 587-588, 1980. (Sphalm. 'distefanoiana'.)

- Bolivia: Tarija; E of Tarija, mountains of Angosto along Río Tarija. – / – / 1958. – Also cultivated as Univ. Calif. BG 66.170 = Huntington BG 68 829; distributed also as ISI 91-13.
ZSS T5046 **HOLO** – corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 623: *Weingartia fidaiana* (Backeberg) Werdermann – Kakteenkunde 1937: 21, 1937.

- Bolivia: Potosí: Sud-Chichas; "Torata". – / 11. / 1962. – Collection date according to original Ritter seed sample at ZSS.
SGO 121305 – (corp), ar, sp
ZSS SR14357 – sem ("1 Pflanze" = 1 plant.)

Ritter 624: *Opuntia cordobensis* Spegazzini – Anal. Mus. Nac. Buenos Aires 4: 513, 1905.

- loc. 1:** Bolivia: Tarija; "Tarija, 1. Flusssdurchbruch nach Nord, Nr. 18" = Tarija, first 'break-through' of the river towards the North. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122030 – (corp), ar, sp
- loc. 2:** Bolivia: Tarija; "nordöstl. Angosto de Tarija" = NE of Angosto de Tarija. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14358 – sem

Ritter 628: *Loxanthocereus acanthurus* (Vaupel) Backeberg – Repert. Spec. Nov. Regni Veget. 51: 65, 1942.

- loc. 1:** Peru: Lima; "Matucana". – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121981 – corp, ar, sp
ZSS SR14062 – sem
ZSS S9958 – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)
- loc. 2:** Peru: Lima; "Matucana" / "unterhalb Matucana" = below Matucana. – "Exemplar scheint Übergang zu *faustianus* zu bilden. Exemplar der Frucht." = specimen seems to be intermediate to *faustianus*. Specimen of the fruit.
SGO 121982 – corp, ar, sp

Ritter 629: *Corryocactus matucanensis* F. Ritter – Kakt. Südamer. 4: 1287-1288, fig. 1139, 1981.

Typus (T): Ritter 629 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Peru: Lima; "Matucana". – / – / 1956. – Collection date according to specimen at U.
SGO 125166 ISO – corp, ar, sp, (al)
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14063 ISO – sem

Ritter 633: *Loxanthocereus sulcifer* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 14, 1957. (Dated 1956, publ. 1957.)

- loc. 1:** Peru: Ancash ?; "Fortaleza, niedere Lagen" = Fortaleza, lower altitudes / "Rio Fortaleza, tiefere Lagen" = Río Fortaleza, lower altitudes. – / – / 1957. – "9 - 12-rippig, Exemplar ohne Wollring." = with 9 - 12 ribs; specimen without wool ring. / "Die beiden schwach-stachl. Stücke von Exemplaren ohne Blütenbeobachtung." = The two poorly spined specimens without observation of flowers.
SGO 121983 – corp, ar, sp
- loc. 2:** Peru: Ancash ?; "Rio Fortaleza" = Río Fortaleza. – / – / 1957. – One of the two original labels was first numbered as 167a and then corrected to 706; the other first had the number as 706 and was corrected to 633. According to the field number list in KS 4, these numbers are all equal.
SGO 121984 – (corp), ar, sp

- loc. 3:** Peru: Ancash ?; "Fortaleza" / "Valle Fortaleza". 2100 m. - 2850 m. - / - / 1957. - "Langstl. Stück von Wollringblüte. Pfl. bei 2100 m., die beiden anderen Stücke von Pfl. ohne Wollringblüte. Das mehrstachel. Stück von 2100 m., das 3. Stück von 2850 m." = The long-spined specimen with flower with wool ring from 2100 m, the two other specimens without wool rings in the flower. The more-spined specimen from 2100 m, the third specimen from 2850 m. The date (year) is difficult to decipher and could also be 1967.
SGO 121985 - (corp), ar, sp
- loc. 4:** Peru: sine loco.
ZSS S12570 - sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 5:** Peru: Ancash ?; "Valle Fortaleza". - / 3. / 1960.
ZSS SR14064 - sem
- Ritter 634: *Corryocactus solitarius*** F. Ritter - Kakt. Südamer. 4: 1289-1290, 1981.
Typus (T): Ritter 634 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).
- loc. 2:** Peru: La Libertad; "Santiago de Chuco". - / - / 1957. - Collection date according to specimen at U.
SGO 125167 **ISO** - corp, ar, sp ("(wie Yungay)" = as [specimen from] Yungay.)
U **HOLO** - corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- Ritter 637: *Cylindropuntia tunicata*** (Lehmann) Backeberg var. *aricensis* F. Ritter - Kakt. Südamer. 3: 890-892, figs. 738-739, 1980.
Typus (T): Ritter 637 (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).
- loc. 1:** Chile: Tarapacá; "Camaraca", S of Arica. - / 12. / 1960. - Locality data supplemented from protologue.
SGO 121937 **ISO** - corp, ar, sp
- loc. 2:** Bolivia: Tarija; "Tarija".
SGO 121938 - corp, ar, sp
- Ritter 637a: *Cylindropuntia tunicata*** (Lehmann) Backeberg var. *chilensis* F. Ritter - Kakt. Südamer. 3: 889-890, figs. 737, 739, 741, 1980.
Typus (T): Ritter 637a (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).
- loc. 2:** Chile: "Choros Bajos (Kakteengarten)" = Choros Bajos (cactus garden).
ZSS SR13519 **ISO** - sem
- Ritter 638: *Corryocactus cuajonesensis*** F. Ritter - Kakt. Südamer. 4: 1287, 1981.
Typus (T): Ritter 638 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).
- loc. 2:** Peru: Moquegua; "Mine Cuajones". - / - / 1969.
SGO 125198 **ISO** - (corp), ar, sp (This specimen has the locality simply as "Cuajones".)
U **HOLO** - corp, ar, sp (Assumed to be holotype as this is the only

specimen present at U.)

Ritter 640: *Pereskia sparsiflora* F. Ritter – Kakt. Südamer. 2: 482, fig. 330, 1980. (First mentioned by Backeberg, Die Cact. 6: 3573, 1962 (*nom. nud.*).)

Typus (T): Ritter 640 (U) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija; O'Connor, "Villa Montes". – / – / 1958. – Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)

loc. 2: Bolivia: Tarija; Tarija. – / – / 1959.

B GH11539 – corp, ar, sp, fol (Ex cult. BG Berlin, 29. 4. 1982 from material originally received from ZSS. Det. as *Pereskia sacharosa* by B. E. Leuenberger.)

B GH16495 – corp, ar, sp, fol, fl (Ex cult. BG Berlin, 23. 7. 1984 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred. Identified as *Pereskia sacharosa* by B. E. Leuenberger.)

ZSS S4677 – sem (Ex cult. Jardin Exotique Monaco (sub JEM 200, "graines de F. Ritter 1959, Bolivie, Tarija", field-number by inference).)

ZSS S9955 – sem (Leg. F. Ritter 1955.)

loc. 3: Bolivia: Cochabamba; "Rio Mizque bei Juntas, Nr. 3" = Río Mizque at Juntas / "Mizque-Fl." = Mizque river.

SGO 125353 – corp, ar, sp

loc. 4: Bolivia: Tarija; O'Connor, "Entre Rios".

SGO 125354 – (corp), ar, sp

loc. 5: Paraguay: Concepción; "südl. neuen Weges von Cerro Membuy" = S of the new path from Cerro Membuy / "Cerro Membuy". – The collection number is given as "FR 640 cf." on the original label. Identified as *Pereskia nemorosa* Rojas by Leuenberger (1986) and specifically different from *P. sparsiflora* (= *P. sacharosa*).

SGO 125355 – corp, ar, sp

loc. 6: Bolivia: Cochabamba / Santa Cruz ?; "Río Mizque". – / 7. / 1958.

ZSS SR14359 – sem

loc. 7: Bolivia: Santa Cruz; "Sta. Cruz" = Santa Cruz.

ZSS SR14360 – sem

loc. 8: Bolivia: Tarija; Gran Chaco; "Palmar Grande". – / 4. / 1958. – The original label first had the collection number as "640" which was then crossed out and replaced with "608", which was again crossed out and substituted with "640". FR 608 is *Pereskia sacharosa* according to the field-number list in KS 4.

ZSS SR14361 – sem

Ritter 644: *Opuntia ianthinantha* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) – Kakt. Südamer. 2: 413, in synonym., 1980.

- loc. 1:** Argentina: Jujuy; "19 km südlich Tres Cruces" = 19 km S of Tres Cruces. 3000 m. - 3700 m. - / - / 1955. - Altitude and collection date according to the protologue. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U **HOLO** - corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)
- loc. 2:** Argentina: Jujuy; "Abra Pampa". - "(flache)" = flat one. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR13721 - sem

Ritter 650: *Eulychnia acida* Philippi var. *procumbens* F. Ritter - Kakt. Südamer. 3: 895-896, figs. 746-747, 1980.

Typus (*T*): Ritter 650 (U 160433B, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; "Freirina". - / - / 1963. - Collection date according to specimen at U.
U 160433B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
- loc. 2:** Chile: Atacama; "Freirina". - / - / 1958. - Collection date according to specimen at U.
U **Type number** - (corp), ar, sp (Collection number inferred.)
- loc. 3:** Chile: "20 km w. Vallenar" = 20 km W of Vallenar.
SGO 125193 **Type number** - (corp), ar, sp
- loc. 4:** Chile: "über Freirina, ca. 900 m." = above Freirina. 900 m.
SGO 125194 **Type number** - (corp), ar, sp
- loc. 5:** Chile: "wenige km nördl. Nicolasa" = few km N of Nicolasa. - / 12. / 1957.
ZSS SR13520 **Type number** - sem

Ritter 651: *Eulychnia acida* Philippi var. *elata* F. Ritter - Kakt. Südamer. 3: 896, fig. 748, 1980.

Typus (*T*): Ritter 651 (U 160674B, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Chile: Atacama; "Copiapó". - / - / 1963. - Collection date according to specimen at U.
U 160674B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
- loc. 3:** Chile: Atacama; "westl. Castillo" = W of Castillo. - / - / 1958. - Collection date according to specimen at U.
U - (corp), ar, sp (Collection number inferred.)
- loc. 4:** Chile: "Chorillos nach El Capote" = Chorillos towards El Capote.
SGO 125195 - (corp), ar, sp
- loc. 5:** Chile: "Berg nordöstl. Copiapó" = mountain NE of Copiapó / "nordöstl. Copiapó" = NE of Copiapó.
SGO 125196 **Type number** - (corp), ar, sp
- loc. 6:** Chile: "zw. Castillo u. Totoral" = between Castillo and Totoral.
SGO 125197 - (corp), ar, sp

loc. 7: Chile: "Carrizal". – / 12. / 1957.
ZSS SR13521 – sem

Ritter 652: *Austrocylindropuntia subulata* (Mühlenpfordt) Backeberg –
Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 12, 1942.

– Peru: Cajamarca; "Zangal". – "Blätter bis 8 cm" = leaves to 8 cm.
SGO 121939 – corp, ar, sp

Ritter 654: *Copiapoa hypogaea* F. Ritter var. *barquiténsis* F. Ritter – Kakt.
Südamer. 3: 1086, figs. 1021-1022, 1980.
Typus (T): Ritter 654 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type
cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; "Barquito". – / – / 1956.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only
specimen present at U.)
ZSS S10451 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1977. No
locality data associated with this specimen.)

loc. 2: Chile: Atacama; "Chañaral, SW, Nr. 5" = SW of Chañaral. – / 1. / 1956. –
Collection date according to original Ritter seed sample at ZSS.
SGO 124904 **Type number** – rad, corp, ar, sp
ZSS SR13522 **Type number** – sem (The original label was first
numbered "Nr. 261", now crossed out. FR 261 is identified as
Copiapoa hypogaea in the field-number list in KS 4.)

loc. 3: Chile: "südl. Barquito u. südl. Chañaral" = S of Barquito and S of Chañaral. – /
2. / 1962.
ZSS SR13523 **Type number** – sem ("2 Fr.") = 2 fruits.)

Ritter 655: *Neoporteria sociabilis* F. Ritter – Succulenta 1963(1): 3-4, ill.,
1963.
Typus (T): Ritter 655 (U 116972B).

loc. 1: Chile: near Totoral Bajo.
U 116972B **HOLO** – (corp), ar, sp, (al) (Labelled as "Holotypus" by
Ritter. No locality given on original label.)

loc. 2: Chile: Atacama; "nördl. Carrizal Bajo" = N of Carrizal Bajo.
SGO 121640 – rad, corp, ar, sp

loc. 3: Chile: "30 km nördl. Carrizal Bajo" = 30 km N of Carrizal Bajo. – / 1. /
1956. – The original label first had the collection number as "FR 213d", now
crossed out. This number is said to equal FR 655 in the field number list in
KS 4.
SGO 125675 – fr
ZSS SR13524 – sem (Dated "XI. 1957" in contrast to the specimen at
SGO from the same locality.)

Ritter 655a: *Neoporteria sociabilis* F. Ritter var. *napina* F. Ritter – Succulenta
1963(1): 3-4, 1963.
Typus (T): Ritter 655a (U 145303B, SGO, ZSS [seeds only]).

- loc. 1:** Chile: sine loco. – "Exemplar mit zieml. off. Blüte (Foto)" = specimen with fairly open flower (foto).
SGO 121641 – corp, ar, sp
- loc. 2:** Chile: "Carrizalillo". – / 10. / 1961. – Collection date according to original Ritter seed sample at ZSS.
SGO 121666 **ISO** – (corp), ar, sp
ZSS SR13525 **ISO** – sem
- loc. 3:** Chile: "Carrizalillo, Nordchile" = Carrizalillo, N Chile. – / 10. / 1962. – Collection date according to specimen at U.
U 145303B **HOLO** – (corp), ar, sp (Assumed to represent the holotype as this is the only specimen present.)

Ritter 656: *Weberbauerocereus longicomus* F. Ritter – Kakt. and. Sukk. 13(7): 117-119, ills., 1962.

Typus (T): Ritter 656 (U 117699B, SGO, ZSS [seeds only]).

- Peru: Cajamarca; "Rio Crisnejas". – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS. The locality is given as "Puente Crisnejas" in KS 4: 1350-1351.
SGO 121134 (in 2 parts) **ISO** – corp, ar, sp
U 117699B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. The original label does not contain locality data.)
ZSS SR14065 **ISO** – sem
ZSS S9918 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)

Ritter 657: *Corryocactus brachycladus* F. Ritter – Kakt. Südamer. 4: 1289, 1981.

Typus (T): Ritter 657 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Ancash; "Paso Callán" in the Cordillera Negra, W of Huaraz, on the Pacific side of the pass. 4000 m. – / – / 1957. – Locality data supplemented from the protologue; collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Peru: Ancash; in the Cordillera Negra, W of Huaraz, on the Pacific side of the pass.
ZSS S9929 **Type number** – sem (Leg. F. Ritter 1955.)
- loc. 3:** Peru: Ancash; "west. Paso Callan" = W of Paso Callán. – / 5. / 1957.
ZSS SR14066 **ISO** – sem

Ritter 658: *Matucana formosa* F. Ritter – Taxon 12(3): 125, 1963.

Typus (T): Ritter 658 (U 117787B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. (1): 28, 1963.).

- Peru: Amazonas; "Balsas". – / 5. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 122197 **ISO** – (corp), ar, sp
U 117787B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS SR14067 **ISO** – sem

Ritter 659: *Gymnanthocereus pilleifer* F. Ritter – Succulenta 46(2): 24, ill. (p. 17), 1967. (First mentioned (without type, but with Latin diagnosis) in l.c. 45: 118-119, 1966.)

Typus (T): Ritter 659 (U, SGO, ZSS [seeds only]) (No herbarium cited for type.)

loc. 1: Peru: Amazonas; "Balsas". – / 5. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 121986 **ISO** – corp, ar, sp (Includes a rooted seedling plant.)

ZSS SR14068 **ISO** – sem

ZSS S9957 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this collection.)

loc. 2: Peru: Amazonas; "Balsas am Marañon" = Balsas at the Marañon. – / 5. / 1957. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp ("Stück von einem nicht blühfähigen tieferen Trieb (bestachelt) und von einem blühbaren Gipfeltrieb (unbestachelt)" = specimen from a non-flowering lower branch (spiny) and from a flowering stem tip (spineless)". Assumed to represent the holotype.)

Ritter 660: *Espositoa lanianuligera* F. Ritter – Kakt. Südamer. 4: 1443-1444, figs. 1293, 1321, 1981.

Typus (T): Ritter 660 (U 160732B, SGO [status ?], ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.)

loc. 1: Peru: Cajamarca; "Puente Crisnejas". – / – / 1957. – Material distributed as 660 was originally collected and distributed as 573 which was, however, inadvertently used for different taxa, cf. Ritter, Kakt. Südamer. 4: 1449, 1981.

SGO 122164 **Type number** – corp, ar, sp, ceph

U **Type number** – (corp), ar, sp (No original label present, and collection number not given on the label but inferred from the locality data and the identification.)

ZSS T5128 **Type number** – corp, ar, sp (Leg. F. Ritter (cult. ex sem. H. Winter 1965). Ex cult. ZSS s.n., 15. 4. 1981.)

loc. 2: Peru: Cajamarca; "aus dem Süden der Provinz Cajamarca" = from the S of the Prov. Cajamarca. – / – / 1963. – Collection date according to specimen at U, and probably erroneous and representing the accession date.

U 160732B **HOLO** – corp, ar, sp, ceph (Labelled as "Holotypus" by Ritter. Collection number inferred.)

ZSS S10398 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

loc. 3: Peru: Cajamarca; sine loco.

ZSS S12555 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 4: Peru: Cajamarca; "Rio Crisnejas" = Río Crisnejas. – / 6. / 1957. – The locality originally read "Rio Crisnejas Nr. 5".

ZSS SR14069 **ISO** – sem

Ritter 660a: *Espositoa lanianuligera* F. Ritter – Kakt. Südamer. 4: 1443-1444, figs. 1293, 1321, 1981.

Typus (T): Ritter 660 (U 160732B, SGO [status ?], ZSS [status ?]) (Type

cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Amazonas; "oberh. Balsas nach Ost bei ca. 1700 m. = above Balsas towards the East. 1700 m. - / 7. / 1964. - Identified as "*Espostoa lanianuligera* var. nov." in the field-number list in KS 4. The original label was first numbered "FR 281", which is identified as *Espostoa lanata* in KS 4.
ZSS SR14070 - sem

loc. 2: Peru: Amazonas; "oberhalb Balsas, West" = above Balsas, west. - / 6. / 1957. - Identified as "*Espostoa lanianuligera* var. nov." in the field-number list in KS 4. The direction "West" was added later to the original label. The original label first had the number "FR 281", which is identified as *Espostoa lanata* in KS 4.
ZSS SR14071 - sem

Ritter 661: *Lasiocereus rupicola* F. Ritter - Kakt. Südamer. 4: 1478, 1981.

(First mentioned in Backeberg, Die Cact. 6: 3729; then published without type in Succulenta 45(8): 119, 1966.)

Typus (T): Ritter 661 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Cajamarca; "San Marcos". - / - / 1957.
SGO 125728 **ISO** - (fl), fr (The original label only has the information "Neue Gattung San Marcos" = new genus San Marcos; the collection number is inferred from a comparison with the numbered specimen of this collection at SGO, and from the locality data, and the information 'new genus'.)
U **HOLO** - corp, ar, sp, fl (Labelled as "Holotypus" by Ritter. "1 Rippenstück eines jüngeren Triebes, 1 Triebende eines blühbaren Triebes, 1 Blütenrest" = 1 rib piece of a younger branch, 1 top of a flowering branch, 1 flower remains.)

loc. 2: Peru: Cajamarca; "San Marcos" / "Puente Crisnejas". - This is a composite specimen, the yellow-spined top cutting is from Puente Crisnejas according to a comment ("der gelbstachl. Kopf"). The specimen also includes solitary areoles from the trunk ("Areolen vom Stamme").
SGO 121987 **ISO** - corp, ar, sp, (fl)

loc. 3: Peru: Cajamarca; sine loco.
ZSS S10408 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

loc. 4: Peru: Cajamarca; "Strasse Cajamarca - Cajabamba km 55" = road Cajamarca - Cajabamba, km 55. - / 6. / 1957.
ZSS SR14072 **Type number** - sem

Ritter 662: *Weberbauerocereus cuzcoensis* Knize - Biota (Lima) 7(57): 256, 1968. (Publication date reported as 1969 in RPS 25, but publication is dated 1968.)

loc. 1: Peru: Apurimac / Ayacucho; "Valle Rio Pampas" = valley of the Río Pampas.
SGO 121119 - (corp), ar, sp

loc. 2: Peru: Apurimac / Ayacucho; valley of the Río Pampas, border region of Dept. Ayacucho and Dept. Apurimac. 2000 m. - Originally distributed as *Trichocereus crassiarboreus* Ritter (*nom. nud.*).

B GH25234 – fl, ic (corp) (Ex cult. BG Berlin, 25. 7. 1989 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
 ZSS S9938 – sem (Leg. F. Ritter 1955 (despite the fact that the discovery of the taxon is reported only for 1957 in KS 4).)

loc. 3: Peru: Apurimac / Ayacucho; "Rio Pampa" = Río Pampas. – /7. / 1957.
 ZSS SR14073 – sem

Ritter 663: *Weberbauerocereus cuzcoensis* Knize var. *tenuiarboreus* F. Ritter – Kakt. Südamer. 4: 1358-1359, 1981.

Typus (T): Ritter 663 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Apurimac; "Valle Rio Pachachaca". 1800 m. – / – / 1964. – First distributed as *Trichocereus tenuiarboreus* Ritter (*nom. nud.*). Altitude according to the protologue; collection date according to specimen at U.
 U HOLO – corp, ar, sp (Assumed to represent the holotype as this is the only specimen present.)
 ZSS S9937 **Type number** – sem (Leg. F. Ritter 1955 (sub *Trichocereus tenuiarboreus*). No locality data associated with this specimen.)

loc. 2: Peru: Apurimac; "Rio Pachachaca" = Río Pachachaca. – /7. / 1957.
 ZSS SR14074 **ISO** – sem

Ritter 664: *Cleistocactus pungens* F. Ritter – Taxon 13(3): 115, 1964.

Typus (T): Ritter 664 (U 117875B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Peru: Apurimac / Ayacucho; frontier of Dept. Ayacucho and Apurimac, Río Pampas.
 U 117875B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Peru: Apurimac / Ayacucho; "Valle Pampas".
 SGO 124791 **Type number** – corp, ar, sp

loc. 3: Peru: Apurimac / Ayacucho; "Rio Pampa" = Río Pampas. – /7. / 1957.
 ZSS SR14075 **Type number** – sem

Ritter 665: *Espostoa huanucoensis* F. Ritter – Kakt. Südamer. 4: 1435-1436,

figs. 1301-1302, 1981. (First mentioned (as invalid name) in Backeberg, Die Cact. 4: 2540, 1960 (cf. RPS 11, where the name is reported as valid).)
Typus (T): Ritter 665 (U 160780B, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Huanuco; "Huanuco". – /6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
 SGO 122166 **Type number** – (corp), ar, sp
 U **Type number** – corp, ar, sp (No original label present; dated "1957". Collection number inferred.)
 U 160780B **HOLO** – corp, ar, sp, cephal (Labelled as "Holotypus" by Ritter and dated "1963". Collection number inferred.)
 ZSS SR14076 **ISO** – sem

- loc. 2:** Peru: Huanuco; "Huacan bei Huanuco" = Huacan near Huanuco.
SGO 122167 **Type number** – corp, ar, sp, ceph
- loc. 3:** Peru: Huanuco; "oberhalb Schlucht von Huanuco" = above gorge of Huanuco.
SGO 122168 **Type number** – (corp), ar, sp, ceph
- loc. 4:** Peru: Huanuco; sine loco.
ZSS S10397 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)
ZSS S12557 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 666: *Corryocactus erectus* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1281-1282, 1981.

- loc. 1:** Peru: Cuzco: Urubamba; slopes of the Río Urubamba from at least Chillca (below Ollantaitambo) upstream to beyond Urcos.
ZSS S9928 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Peru: Cuzco: Urubamba; "Chillca". – / 7. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 125168 – corp, ar, sp (One of the original labels has the erroneous collection number "FR 660" (which is *Espostoa lanianuligera*) according to the field-number list in KS 4.)
ZSS SR14077 – sem
- loc. 3:** Peru: Cuzco: Urubamba; "Urubamba". – / 7. / 1957.
ZSS SR14078 – sem

Ritter 667: *Lobivia cruciaureispina* Knize – Biota 7(57): 253-254, 1968. (Publication date given as 1969 in RPS 25.)

- Peru: Apurimac; "Andahuaylas".
SGO 124455 – (corp), ar, sp

Ritter 668: *Espostoa hylaea* F. Ritter – Taxon 13(4): 143, 1964.

Typus (*T*): Ritter 668 (U 117826B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Peru: Amazonas; Bagna [sic!; = Bagua ?]; Magdalena at the Marañón, frontier region towards tropical jungle. – / – / 1957.
U 117826B **HOLO** – corp, ar, sp, ceph (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Peru: Amazonas; "Sta. Rosa" = Santa Rosa" / "Sta. Rosa (unterhalb Einmündg. Rio Chuchipe), Marañón" = Santa Rosa (below mouth of Río Chuchipe), Marañón. – / 5. / 1957.
SGO 122169 **Type number** – corp, ar, sp, ceph
- loc. 3:** Peru: Amazonas ?; "Aramango (Marañón)" = Aramango (Marañón). – / 5. / 1957.
ZSS SR14079 **Type number** – sem

Ritter 669: *Browningia viridis* (Rauh & Backeberg) Buxbaum – in Krainz, Die Kakt. C IV/1, 1965.

- loc. 1:** Peru: Apurimac / Ayacucho; Río Pampas and Río Pacacocha, Dept. Ayacucho and Dept. Apurimac. 2000 m. – Originally distributed as *Azurocereus ciliisquamus* F. Ritter (*nom. nud.*).
B GH30557 – ic (corp) (Ex cult. BG Berlin, 17. 11. 1992 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS S9946 – sem (Leg. F. Ritter 1955.)
- loc. 2:** Peru: Ayacucho; "Rio Pampas". – Originally distributed as *Azurocereus ciliisquamus* F. Ritter (*nom. nud.*).
SGO 124985 – (corp), ar, sp
- loc. 3:** Peru: Apurimac / Ayacucho; "Rio Pampas + Rio Pachachaca". – / 7. / 1957.
ZSS SR14080 – sem

Ritter 670: *Espostoa mirabilis* F. Ritter – Taxon 13(4): 143, 1964. (First mentioned without Latin diagnosis in Backeberg, Die Cact. 4: 2540, 1960.)
Typus (T): Ritter 670 (U 117028B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Peru: Cajamarca; frontier towards Dept. Amazonas, middle part of Marañón gorge.
U 117028B **HOLO** – corp, ar, sp, ceph (Labelled as "Holotypus" by Ritter.)
ZSS S12405 **Type number** – sem (Ex Fa. H. Winter 1961.)
- loc. 2:** Peru: Amazonas; "Balsas". – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 122170 **Type number** – corp, ar, sp, ceph
ZSS SR14081 **Type number** – sem

Ritter 671: *Loxanthocereus convergens* F. Ritter – Kakt. Südamer. 4: 1456-1457, figs. 1333-1334, 1981.
Typus (T): Ritter 671 (ZSS T5127, SGO).

- loc. 1:** Peru: Lima; "Mala". – / 5. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121988 **ISO** – corp, ar, sp
ZSS SR14082 **ISO** – sem
ZSS T5127 **HOLO** – corp, ar, sp (Leg. F. Ritter 1958. Ex cult. ZSS s.n., 1981. Type status open to debate. The intended holotype was probably cultivated erroneously, and this specimen was only preserved in 1981 from the cultivated plant.)
- loc. 2:** Peru: Lima; sine loco.
B GH29779 – fl, ic (corp, fl) (Ex cult. BG Berlin, 26. 6. 1992 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS S9954 **Type number** – sem (Leg. F. Ritter 1955.)

Ritter 672: *Armatocereus mataranus* F. Ritter – Succulenta 46(2): 23, ill., 1967. (First invalidly published (without type) in l.c. 45: 117, 1966.)
Typus (T): Ritter 672 (U, SGO, ZSS [seeds only]).

- loc. 1:** Peru: Cajamarca; "San Marcos". – / 6. / 1957. – Collection date according to the original Ritter seed sample at ZSS.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only

specimen present at U. Collection number inferred.)
ZSS SR14083 ISO – sem

loc. 2: Peru: Cajamarca; "Rio Crisnejas" / "Pte. Crisnejas" = Puente Crisnejas.
SGO 124958 – (corp), ar, sp (Includes a rooted seedling.)

loc. 3: Peru: Cajamarca; "Strasse nach San Marcos, km 55" = road to San Marcos,
km 55 / "San Marcos".
SGO 124959 ISO – (corp), ar, sp

loc. 4: Peru: sine loco.
B GH31644 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 2. 8. 1993 (cult.
ex sem. Cat. H. Winter 1961). Collection number inferred.)
ZSS S12549 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 672a: *Armatocereus mataranus* F. Ritter var. *ancashensis* F. Ritter –
Kakt. Südamer. 4: 1276, figs. 1118, 1298, 1981.

Typus (T): Ritter 672a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:
iii, 1979.).

- Peru: Ancash: Huari; "Rahuapampa". – / 3. / 1960. – Collection date
according to original Ritter seed sample at ZSS (the protologue gives the
year as 1956).
SGO 124960 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only
specimen present at U. Collection number inferred.)
ZSS SR14084 ISO – sem (The collection number was originally given as
"FR 672" on the original label.)

Ritter 673: *Cumulopuntia crassicylindrica* (Backeberg) F. Ritter – Kakt.
Südamer. 4: 1254, 1981.

- Peru: Arequipa; "Valle Majes". – / 7. / 1957.
ZSS SR14085 – sem

Ritter 676: *Trichocereus pallarensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt.
Südamer. 4: 1325, 1981. (Published as provisional name.)
Based on Ritter 676.

- loc. 1:** Peru: Ancash: Huari; "Rahuapampa".
SGO 121184 – (corp), ar, sp
- loc. 2:** Peru: Cajamarca; "unterhalb Cajamarca" = below Cajamarca.
SGO 121187 – (corp), ar, sp
- loc. 3:** Peru: La Libertad; "El Pallar".
SGO 121196 – (corp), ar, sp
- loc. 4:** Peru: sine loco.
ZSS S12576 – sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 5:** Peru: Cajamarca; "Llacanora". – / 4. / 1960. – The original label first had the
collection number "FR 677", which is identified as *Trichocereus knuthianus*
in the field-number list in KS 4.
ZSS SR14086 – sem

- loc. 6:** Peru: Ancash; "Chavin". – / 3. / 1960. – The original label first had the collection number "FR 677", which is identified as *Trichocereus knuthianus* in the field-number list in KS 4.
ZSS SR14087 – sem

Ritter 677: *Trichocereus knuthianus* Backeberg – Succulenta 19: 42-43, 1937.

- loc. 1:** Peru: Huanuco; "Nuevas Flores".
SGO 121189 – (corp), ar, sp
- loc. 2:** Peru: Huancavelica; "Villa Azul".
SGO 121247 – (corp), ar, sp
- loc. 3:** Peru: Huanuco; "unterhalb Mayocc, ca. 2200-xm" = below Mayocc. 2200 m.
SGO 121248 – (corp), ar, sp
- loc. 4:** Peru: Huanuco; "Mejorada". – "7 - 10 Rippen" = 7 - 10 ribs.
SGO 121249 – (corp), ar, sp
- loc. 5:** Peru: sine loco.
ZSS S9933 – sem (Leg. F. Ritter 1955.)
- loc. 6:** Peru: "Marcas". – / 9. / 1953.
ZSS SR14088 – sem

Ritter 677a: *Trichocereus cuzcoensis* Britton & Rose – The Cact. 2: 136, 1920.

- loc. 1:** Peru: Ayacucho / Apurimac; "Rio Pampas".
SGO 121250 – (corp), ar, sp
- loc. 2:** Peru: Cuzco; "Cuzco". – / 7. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 121251 – (corp), ar, sp
ZSS SR14089 – sem (The collection number was first given as "FR 676" on the original label; FR 676 is identified as *Trichocereus pallarensis* (*nom. nud.*) in the field-number list in KS 4.)
- loc. 3:** Peru: Cuzco; "Bei Cuzco, 3400 m" = near Cuzco. 3400 m.
SGO 121277 – (corp), ar, sp
- loc. 4:** Peru: sine loco.
ZSS S9959 – sem (Leg. F. Ritter 1955.)
- loc. 5:** Peru: Ayacucho / Apurimac; "Valle Pampas". – / 7. / 1957.
ZSS SR14090 – sem

Ritter 678: *Haageocereus albispinus* (Akers) Backeberg – in Rauh, Beitr. Kenntn. peruan. Kakt.-veg., 414, 1958. (First published invalidly by Cullmann, Kakt. and. Sukk. 8(12): 180, 1957.)

- loc. 1:** Peru: Lima; "oberh. Sta. Eulalia" = above Santa Eulalia. – / 6. / 1957. – Collection date according to original Ritter seed sample at ZSS.
SGO 124749 – corp, ar, sp, (al) ("2 Pflzn und Muster der Pfl. mit roter Blüte" = 2 plants and specimen of the plant with the red flowers.)
ZSS SR14091 – sem

loc. 2: Peru: Lima; "Höhen über Chosica" = altitudes above Chosica / "Chosica, Höhen" = Chosica, altitudes.
SGO 124750 – corp, ar, sp

loc. 3: Peru: sine loco.
B GH31902 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 11. 10. 1993
(cult. ex sem. Cat. H. Winter 1961, sub *Haageocereus albidus* [nom. nud.]). Collection number inferred.)

Ritter 679: *Borzicactus cajamarcensis* F. Ritter – Kakt. Südamer. 4: 1375, fig. 1252, 1981.

Typus (*T*): Ritter 679 (U [not found], SGO [status ?], ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Cajamarca; Llacanora near Cajamarca. – / – / 1957.
ZSS AX4238 **Type number** – corp, ar, sp (Leg. F. Ritter; ex cult. ZSS s.n., 21. 1. 1981.)
ZSS S12551 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 2: Peru: Cajamarca; "oberh. San Marcos, nach Nord" = above San Marcos, towards the North / "San Marcos".
SGO 125034 **Type number** – (corp), ar, sp

loc. 3: Peru: Cajamarca; "unterhalb Cajamarca" = below Cajamarca.
SGO 125035 **Type number** – (corp), ar, sp

loc. 4: Peru: Cajamarca; "Llacanora". – / 4. / 1960.
ZSS SR14092 **Type number** – sem

loc. 5: Peru: Cajamarca; "Strasse Cajamarca - San Marcos, km 55" = road Cajamarca - San Marcos, km 55. – / 6. / 1957.
ZSS SR14093 **Type number** – sem

Ritter 680: *Borzicactus fieldianus* Britton & Rose var. *tessellatus* (Akers & Buining) Krainz – Kat. ZSS ed. 2, 39, 1967.

loc. 1: Peru: Lima; "Churin" / "oberh. Churin" = above Churín.
SGO 125027 – rad, corp, ar, sp
ZSS S12553 – sem (Leg. H. Winter (Cat. 1961/62). No locality associated with this specimen.)

loc. 2: Peru: Lima; "oberhalb Churin" = above Churín. – / 6. / 1957.
ZSS SR14094 – sem

Ritter 681: *Loxanthocereus peculiaris* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 16, 1957. (Dated 1956, publ. 1957.)

loc. 1: Peru: Ica; "unterhalb Huancano" = below Huancano.
SGO 121989 – corp, ar, sp

loc. 2: Peru: Huancavelica / Ica; "zw. Huancano u. Ticrapo" = between Huancano and Ticrapo.
SGO 121990 – corp, ar, sp

loc. 3: Peru: Lima ?; "Valle Canta". – "(Pfl. der Blütenbeschreibg.)" = plant of the flower description.
SGO 124751 – corp, ar, sp

loc. 4: Peru: Lima ?; "Valle Chillan, tiefe Lagen" = Valle Chillan, low altitudes.
SGO 124752 – (corp), ar, sp

loc. 5: Peru: Huancavelica / Ica; "von unterhalb Huancano / von unterhalb Ticrapo"
= from below Huancano / from below Ticrapo. – "2 Samenportionen, der
[sic !] eine von unterhalb Huancano, der andere von unterhalb Ticrapo aus
der Schlucht. Es kann nicht mehr festgestellt werden, welcher Same zu
welcher Lokalität gehört, aber beides wird die gleiche Nr., d.h. die gleiche Art
sein." = 2 seed samples, one from below Huancano, the other from below
Ticrapo from the gorge. It is not known anymore which seed belongs to
which locality, but both will be the same number, i.e. the same species.
ZSS SR14095 – sem

Ritter 682: *Islaya grandis* Rauh & Backeberg – in Backeberg, Descr. Cact.
Nov. [1:] 33, 1957. (Dated 1956, publ. 1957.)
Typus (T): Rauh K150 (ZSS).

– Peru: Arequipa ?; "unterhalb Cerro Negro" = below Cerro Negro. – / 7. /
1957.
SGO 122101 – (corp), ar, sp
ZSS SR14096 – sem (Locality given as "unterhalb Cerro Negro (Majes-
Tal)" = below Cerro Negro (Majes valley), on the original label.)

Ritter 683: *Islaya brevicylindrica* Rauh & Backeberg – in Backeberg, Descr.
Cact. Nov. [1:] 33, 1957. (Dated 1956, publ. 1957.)
Typus (T): Rauh K136 (HEID ?) (Typification according to F. Kattermann,
Succ. Pl. Res. 1: 138, 1994.).

– Peru: Arequipa; "Camana" = Camaná.
SGO 122102 – (corp), ar, sp ("Tiefenart, hoher Wuchs" = lowland
species, tall growth.)
ZSS S12585 – sem (Leg. H. Winter (Cat. 1961/62). No locality directly
associated with this specimen.)
ZSS SR14098 – sem

Ritter 684: *Islaya islayensis* (Förster) Backeberg – Blätt. Kakt.-forsch.
1934(39): [unpaged], 1934. (Repeated in Backeberg & Knuth, Kaktus-
ABC, 258, 1936 (dated 1935, publ. Febr. 1936).)

loc. 1: Peru: Arequipa; "Matarani".
SGO 122103 – (corp), ar, sp

loc. 2: Peru: Arequipa; "Mollendo".
SGO 122104 – (corp), ar, sp

Ritter 684a: *Islaya copiapoides* Rauh & Backeberg – in Backeberg, Descr.
Cact. Nov. [1:] 33, 1957. (Dated 1956, publ. 1957.)
Typus (T): Rauh K54 (HEID ?) (Typification according to F. Kattermann,
Succ. Pl. Res. 1: 138, 1994.).

loc. 1: Peru: Arequipa; "zwischen Camaná und Ocoña" = between Camaná and
Ocoña. – / 5. / 1957.
SGO 122105 – (corp), ar, sp
ZSS S9941 – sem (Leg. F. Ritter 1955. No locality information)

associated with this specimen.)

- loc. 2:** Peru: Arequipa; "Pass zw. Camaná u. Ocoña" = pass between Camaná and Ocoña. – / 11. / 1958.
ZSS SR14097 – sem

Ritter 685: *Weberbauerocereus churinensis* F. Ritter – Kakt. and. Sukk. 13(8): 133-134, ill., 1962.

Typus (T): Ritter 685 (U 117803B, SGO, ZSS [seeds only]).

- Peru: Lima; "Churin" = Churín. – / 6. / 1957. – Collection date according to the original Ritter seed sample at ZSS. The protologue gives the locality as 'below Churin'.

SGO 121122 **ISO** – corp, ar, sp ("18 - 19 Rippen. Die Borstenpinsel stammen vom im Wachstum stecken gebliebenen Jungrieben. Sie haben im Zentrum einen Wachstumskegel und entsprechend einer Anhäufung winziger junger Areolen" = 18 - 19 ribs. The bristly brushes are inhibited shoots. They have a vegetation point in the centre and are equivalent to a mass of young tiny areoles.)

U 117803B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. The original label does not contain locality data.)

ZSS SR14099 **ISO** – sem

Ritter 686: *Corryocactus sp.*

- Peru: Amazonas; "Sta. Rosa (Marañon)".
SGO 125169 – corp, ar, sp

Ritter 687: *Corryocactus melaleucus* F. Ritter – Kakt. Südamer. 4: 1289, 1981.

Typus (T): Ritter 687 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Peru: Lima; "Churin, Huaura-Tal" = Churín, valley of Huaura. – / – / 1960.
U **HOLO** – corp, ar, sp (Assumed to represent the holotype as this is the only specimen present.)

- loc. 3:** Peru: Lima; "Churin" = Churín.
SGO 125052 **ISO** – corp, ar, sp

Ritter 688: *Corryocactus quivillanus* F. Ritter – Kakt. Südamer. 4: 1290-1291, 1981.

Typus (T): Ritter 688 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Huanuco; "Nuevas Flores" near Quivilla. 2800 m. – / 7. / 1957. – Locality data supplemented from the protologue; collection date according to specimen at SGO.
SGO 125171 **ISO** – corp, ar, sp ("Ausnahme-Trieb" = exceptional shoot.)
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14100 **ISO** – sem ("vielrippige") = many-ribbed ones. The original label is dated "VI. 57.")

- loc. 2:** Peru: Huanuco; "Strasse Chavinillo a La Union" = road Chavinillo to La Unión / "unterhalb Chavinillo" = below Chavinillo. – / 6. / 1957.

SGO 125170 – corp, ar, sp

Ritter 689: *Corryocactus chavinilloensis* F. Ritter – Kakt. Südamer. 4: 1290, 1981.

Typus (T): Ritter 689 (U) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Huanuco; below "Chavinillo", Felswände. 3100 m. – / – / 1957. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

Ritter 690: *Matucana supertexta* F. Ritter – Kakt. Südamer. 4: 1504, figs. 1397-1398, 1406, 1981.

Typus (T): Ritter 690 (U) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Lima; "Churin, Huaura-Tal" = Churín, Huaura valley. 2500 m. – / – / 1957. – Altitude supplemented from protologue; collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

- loc. 2:** Peru: Lima; "Churin" = Churín.

SGO 122198 **Type number** – rad, corp, ar, sp (Includes a seedling.)

- loc. 3:** Peru: Lima; "2 km unterh. Churin" = 2 km below Churín.

SGO 122199 **Type number** – (corp), ar, sp

Ritter 691: *Matucana winteri* F. Ritter – Kakt. Südamer. 4: 1506, fig. 1400, 1981.

Typus (T): Ritter 691 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Peru: La Libertad; "Santiago de Chuco". 3500 m. – / – / 1957. – Collection date according to specimen at U and the protologue; altitude according to the protologue.

SGO 122200 **ISO** – rad, corp, ar, sp (Includes a rooted seedling.)

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

Ritter 692: *Matucana celendinensis* F. Ritter – Succulenta 46(1): 4, ill., 1967. (Latin diagnosis published without type in l.c. 45(8): 118, 1966.)

Typus (T): Ritter 692 (U, SGO [status ?], ZSS [seeds only, status ?]) (No herbarium cited for the type.).

- loc. 1:** Peru: Cajamarca / Amazonas; "zwischen Celendin und Balsas" = between Celendin and Balsas. – / 5. / 1957. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype.)

- loc. 2:** Peru: Amazonas; "oberhalb von Balsas" = above Balsas.

SGO 122201 **Type number** – (corp), ar, sp

loc. 3: Peru: Amazonas; "westlich Balsas" = W of Balsas. - / 7. / 1964.
ZSS SR14101 **Type number** - sem

Ritter 693: *Matucana intertexta* F. Ritter - Taxon 12(3): 125, 1963.

Typus (T): Ritter 693 (U 117851B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. (1): 28, 1963.).

loc. 1: Peru: Cajamarca; "Strasse Cajamarca a Cajabamba, km 50" = road Cajamarca - Cajabamba, km 50.
SGO 122202 - (corp), ar, sp

loc. 2: Peru: Cajamarca; "Rio Crisnejas". - Locality given as "Puente Crisnejas, N of Cajamarca" in the protologue.
SGO 122203 **ISO** - (corp), ar, sp

loc. 3: Peru: Cajamarca; Puente Crisnejas. - Locality data according to protologue.
U 117851B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10378 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

loc. 4: Peru: Cajamarca; "Pte. Crisnejas" = Puente Crisnejas. - / 4. / 1960.
ZSS SR14102 **ISO** - sem

Ritter 694: *Neolobivia hertrichiana* (Backeberg) F. Ritter - Kakt. Südamer. 4: 1334-1335, 1981.

loc. 1: Peru: Cuzco: Urubamba; "Chillca".
SGO 124457 - corp, ar, sp

loc. 2: Peru: Cuzco: Urubamba; "Chillca, 3300 m.". 3300 m. - / 7. / 1957. -
"Ausnahme-Exemplar" = exceptional specimen.
SGO 124458 - corp, ar, sp

Ritter 695: *Neolobivia minuta* (F. Ritter) F. Ritter - Kakt. Südamer. 4: 1336, 1981.

- Peru: Cuzco: Urubamba; "Ollantaitambo". - / 7. / 1957. - Locality and date according to specimen at SGO.
SGO 124874 **ISO** - rad, corp, ar, sp
U 11778B **HOLO** - rad, corp, ar, sp (Includes a small seedling.
Labelled as "Holotypus" by Ritter.)

Ritter 696: *Neolobivia divaricata* Ritter - Kakt. Südamer. 4: 1337-1338, fig. 1211, 1981.

Typus (T): Ritter 696 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Cuzco; "Urcos". 3200 m. - / 7. / 1957. - Altitude supplemented from the protologue. Collection date according to specimen at SGO.
SGO 124459 (in 2 parts) **ISO** - rad, corp, ar, sp
U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

Ritter 697: *Neolobivia vilcabambae* (F. Ritter) F. Ritter - Kakt. Südamer. 4: 1337, 1981.

loc. 1: Peru: Cuzco: Urubamba; Vilcabamba-mountains. 3500 m.
U 117794B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Peru: Cuzco: Urubamba; "Chillca, Nr. 6, 3500 m". 3500 m. – The original labels also have the information "Vilcabamba" but it is unclear whether this is the locality or a slip of the pen for the species name.
SGO 124460 **Type number** – rad, corp, ar, sp

Ritter 698: *Neolobivia vilcabambae* (F. Ritter) F. Ritter – Kakt. Südamer. 4: 1337, 1981.

– Peru: Cuzco: Urubamba; "Urubamba" / "Chillca, Nr. 7, Höhen" = Chillca, altitudes. – Identified as *Neolobivia urubambae* in KS 4: 1634, which seems to be a slip of the pen for '*vilcabambae*'.
SGO 124461 – rad, corp, ar, sp

Ritter 699: *Mila colorea* F. Ritter – Kakt. Südamer. 4: 1341-1342, fig. 1221, 1981.

Typus (T): Ritter 699 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ancash; "Caraz". – / 3. / 1960. – Collection date according to original Ritter seed sample at ZSS ("III. 60.") and to specimen at U ("1960") (the protologue gives 1953).

U **HOLO** – rad, corp, ar, sp (Assumed to be the holotype as this is the only specimen present.)

ZSS SR14103 **Type ?** – sem (The locality on the original label was first given as "Yungay" which was later put in square brackets by Ritter.)

loc. 2: Peru: Ancash; "Caraz".
SGO 121730 **ISO** – corp, ar, sp

loc. 3: Peru: Ancash; sine loco.
ZSS S12597 – sem (Leg. H. Winter (Cat. 1961/62) (sub *Mila pugionifera*)).

Ritter 700: *Melocactus onychacanthus* F. Ritter – Succulenta 46(3): 40, ill., 1967. (First published invalidly (Art. 37.1) l.c. 45(8): 118, 1966 (given as valid in RPS 32).)

Typus (T): Ritter 700 (U 531263B, SGO, ZSS [seeds only]) (No herbarium cited for the type.).

loc. 1: Peru: Amazonas; "Balsas".
SGO 122113 **ISO** – (corp), ar, sp
U 531263B **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present.)

loc. 2: Peru: Amazonas; "östl. Balsas" = E of Balsas. – / 6. / 1965.
ZSS SR14104 **ISO** – sem

Ritter 700a: *Melocactus onychacanthus* F. Ritter var. *conicus* F. Ritter – Kakt. Südamer. 4: 1308, fig. 1173, 1981.

Typus (T): Ritter 700a (U 531264B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Peru: La Libertad; "El Chagual". - / 4. / 1960. - Collection date according to original Ritter seed sample at ZSS.
 SGO 122114 **ISO** - (corp), ar, sp, ceph
 U 531264B **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
 ZSS S12596 - sem (Leg. H. Winter (Cat. 1961/62). No locality data directly associated with this specimen.)
 ZSS SR14105 **ISO** - sem

Ritter 700b: *Melocactus onychacanthus* F. Ritter var. *albescens* F. Ritter - Kakt. Südamer. 4: 1308, fig. 1168, 1981.

Typus (T): Ritter 700b (U 531259B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Cajamarca; "Rio Crisnejas". - / - / 1960.
 SGO 122115 **ISO** - corp, ar, sp, (ceph)
- loc. 2:** Peru: Cajamarca; "unterhalb Puente Crisnejas" = below Puente Crisnejas.
 U 231259B **HOLO** - (corp), ar, sp, (ceph) (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 3:** Peru: sine loco.
 ZSS S12595 - sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 4:** Peru: Cajamarca; "Pte. Crisnejas" = Puente Crisnejas. - / 4. / 1960.
 ZSS SR14106 **ISO** - sem

Ritter 701: *Austrocylindropuntia machacana* F. Ritter - Kakt. Südamer. 4: 1246-1247, fig. 1092, 1981.

Typus (T): Ritter 701 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Peru: Ancash: Huari; "oberh. Machac, 3700 m." = above Machac. 3700 m. - / 6. / 1957.
 SGO 121940 **ISO** - rad, corp, ar, sp
- loc. 3:** Peru: Ancash: Huari; "oberhalb Machac, östlich der Cordillera Blanca" = above Machac, E of the Cordillera Blanca". - / - / 1960.
 U **HOLO** - rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 4:** Peru: Ancash: Huari; "oberhalb Machac bei 3600 - x m." = above Machac. 3600 m.
 ZSS SR14107 **ISO** - sem

Ritter 703: *Haageocereus platinospinus* Backeberg var. *pluriflorus* (Backeberg) F. Ritter - Kakt. Südamer. 4: 1418-1419, 1981.

- Peru: Arequipa; "Hda. Ongoro, ca. 1000 m. und Cerro Negro ca. 1500 m." = Hacienda Ongoro and Cerro Negro. 1000 m. - 1500 m.
 SGO 124753 - corp, ar, sp

Ritter 704: *Opuntia* sp.

- Peru: Lima; "Canta". – / 6. / 1957. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125339 – (corp), ar, sp

Ritter 707: *Pyrrhocactus dimorphus* F. Ritter – Succulenta 1962(1: 3-5, ill., 1962.

Typus (T): Ritter 707 (U 117879B, SGO, ZSS [seeds only]).

loc. 1: Chile: "Coquimbo, Küste" = Coquimbo, coast.

SGO 121642 **ISO** – rad, corp, ar, sp

loc. 2: Chile: "15 km östl. Serena" = 15 km E of La Serena. – The label of the SGO specimen has the comment: "z.T. hybr. mit *Chileoc. wagenknechtii*" = partly hybrid with *Chileoc. [actus] wagenknechtii*. / " Nr. 707 x 487"; FR 487 is identified as *Pyrrhocactus chaniarensis* Ritter in the field number list in KS 4.

SGO 121643 – (corp), ar, sp

ZSS SR13526 – sem

loc. 3: Chile: rocky hills near Coquimbo.

U 117879B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 4: Chile: "Coquimbo". – / 12. / 1957.

ZSS SR13527 **ISO** – sem

Ritter 708: *Pyrrhocactus setosiflorus* F. Ritter – Succulenta 1962(6): 70-72, ill., 1962. (Concurrently published by Backeberg (as *nom. inval.*) in Die Cact. 6: 3745, 1962.)

Typus (T): Ritter 708 (U 117579B, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Chile: coasts of Mid-Chile, c. 31° 30' latitude.

U 117579B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: "Panameric., 189 km S. Coquimbo" = Panamericana, 189 km S of Coquimbo. – / 12. / 1957. – Collection date according to original Ritter seed sample at ZSS, where "Panameric." is not mentioned in the locality data.

SGO 121651 **Type number** – (corp), ar, sp (Includes a rooted seedling.)

ZSS SR13528 **Type number** – sem

Ritter 708a: *Pyrrhocactus setosiflorus* F. Ritter var. *intermedius* F. Ritter – Succulenta 1962(6): 70-72, ill., 1962.

Typus (T): Ritter 708a (U 117810B, SGO, ZSS [seeds only]).

loc. 1: Chile: "58 km S. Coquimbo" = 58 km S of Coquimbo. – / 12. / 1957. – Collection date according to original Ritter seed sample at ZSS.

SGO 121644 **ISO** – (corp), ar, sp

ZSS SR13529 **ISO** – sem

loc. 2: Chile: "Chancho".

SGO 121645 **Type number** – rad, corp, ar, sp

loc. 3: Chile: hill c. 60 km S of Coquimbo E of the Panamericana. – / – / 1957. –
 Locality data from KS 3: 973; no locality given in the protologue.
 U 117810B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by
 Ritter.)

Ritter 709: *Pyrrhocactus curvispinus* (Bertero) A. Berger ex Backeberg var.
fusciflorus F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 3: 933, 1980.
 (Published as provisional name.)
 Based on Ritter 709.

loc. 1: Chile: "Auco, Flugplatz (?)" = Auco, airstrip (?).
 SGO 121646 – (corp), ar, sp

loc. 2: Chile: "unterhalb Auco" = below Auco. – / 11. / 1957. – The original label
 was originally numbered "FR 709" which was later changed to "FR 709 ×
 225c ?"; FR 225c is *Pyrrhocactus curvispinus* var. *combarbalensis* according
 to the field-number list in KS 4.
 ZSS SR13530 – sem

Ritter 710: *Thelocephala glabrescens* (F. Ritter) F. Ritter – Kakt. Südamer. 3:
 1003-1004, 1980. (Incorrectly given as invalid in the IOS Index Names
 Cact.)

loc. 1: Chile: "Arica". – / 9. / 1959. – Collection date and locality according to
 specimen at U; KS gives the locality simply as 'Dept. Copiapó, near coast'.
 U 098144B **HOLO** – corp, ar, sp (Labelled as "Typusexemplar" by
 Ritter. Collection number inferred.)

loc. 2: Chile: "Totoral, Küste" = Totoral, coast.
 SGO 125145 – rad, corp, ar, sp

loc. 3: Chile: "unterhalb Totoral" = below Totoral. – One of the original labels has
 the collection number as "FR 710 ?". The identification is according to KS 4
 but seems highly doubtful (BEL & UE).
 SGO 125149 – rad, corp, ar, sp

loc. 4: Chile: "Totoral Bajo". – / 12. / 1957. – Collection date according to original
 Ritter seed sample at ZSS.
 SGO 125691 – fl ("Die Blütengrösse wechselt" = The size of the flowers
 varies.)
 ZSS SR13531 – sem

loc. 5: Chile: Atacama; sine loco.
 ZSS S8544 **Type number** – sem (Leg. Köhres ex cult., 1977.)

Ritter 711: *Copiapoa serpentisulcata* F. Ritter var. *castanea* F. Ritter – Kakt.
 Südamer. 3: 1093-1094, fig. 1015, 1980.
Typus (T): Ritter 711 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:
 iii, 1979.).

loc. 1: Chile: "Küste nördlich Chañaral" = coast N of Chañaral. – / – / 1956.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
 the holotype as this is the only specimen present.)

loc. 2: Chile: "22 nördl. Chañ., Nr. 3" = 22 [km ?] N of Chañaral / "16 km N. Chañ.1" = 16 km N of Chañaral.
SGO 124905 ISO – (corp), ar, sp (Includes a small seedling plant.)

loc. 3: Chile: "ca. 22 km nördl. Chañaral" = c. 22 km N of Chañaral. – / 12. / 1957.
ZSS SR13532 ISO – sem

Ritter 712: *Pyrhocactus saxifragus* F. Ritter – Kakt. Südamer. 3: 970-971, figs. 866-868, 1980. (Previously published as *nomen nudum* as *Chileorebutia saxifraga* F. Ritter and *Neochilenia saxifraga* Backeberg.)
Typus (T): Ritter 712 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Guanillos". – / 1. / 1958. – Collection date according to the original Ritter seed sample at ZSS ("1. 1958") and to specimen at U ("1958").
Locality given as "Guanillo" on the ZSS seed sample.
SGO 121647 ISO – rad, corp, ar, sp
U HOLO – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
ZSS SR13533 ISO – sem

Ritter 713: *Thelocephala glabrescens* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1003-1004, 1980. (Incorrectly given as invalid in the IOS Index Names Cact.)

loc. 1: Chile: "östl. Totoral Bajo" = E of Totoral Bajo. – / 1. / 1956. – Collection date according to original Ritter seed sample at ZSS.
SGO 125146 – rad, corp, ar, sp (The original label is numbered as "Fr 713 (oder FR 710 ?)".)
ZSS SR13534 – sem

loc. 2: Chile: "8 km süd. Totoral, Berge" = 8 km SW of Totoral, mountains. – "Ausnahme-Bestachl." = exceptional spination.
SGO 125147 – corp, ar, sp

loc. 3: Chile: "Form der Berge westlich Totoral" = form from the mountains W of Totoral. – / 10. / 1961. – "Ausnahme-Exemplar" = exceptional specimen. The original label also contains the information "östl. Totoral Normal- + Ausnahme-Exemplar" = E of Totoral normal and exceptional specimen, now crossed out.
SGO 125148 – rad, corp, ar, sp, (al)

loc. 4: Chile: "18 km nördl. Carrizal B." = 18 km N of Carrizal Bajo. – / – / 1956. – The first original label has the collection number as "FR 713 ?".
SGO 125150 – rad, corp, ar, sp, (al)

Ritter 714: *Neoporteria wagenknechtii* F. Ritter var. *napina* F. Ritter – Succulenta 1963: 5, 1963.

Typus (T): Ritter 714 (U 145239B) (No herbarium cited for the type.).

loc. 1: Chile: "El Tofo". – / 11. / 1957. – Collection date according to original Ritter seed sample at ZSS. Labelled as "*Neoporteria rapifera*" on the original labels; this is an unpublished provisional name for the taxon.
SGO 121648 – (corp), ar, sp

ZSS SR13535 – sem

- loc. 2:** Chile: "ca. 25 km von Carrizalillo nach Tofo" = c. 25 km from Carrizalillo towards El Tofo. – Labelled as "*Neoporteria rapifera*" on the original labels; this is an unpublished provisional name for the taxon.

SGO 121649 – (corp), ar, sp

- loc. 3:** Chile: "12 km südöstl. Carrizalillo" = 12 km SE of Carrizalillo. – / 10. / 1961. – Collection date according to original Ritter seed sample at ZSS. Labelled as "*Neoporteria rapifera*" on the original labels; this is an unpublished provisional name for the taxon.

SGO 121650 – corp, ar, sp

ZSS SR13536 – sem ("die 5 grösseren Körner andere Art ?") = The 5 larger seeds of another species ?

- loc. 4:** Chile: "Choros Bajos". – / 10. / 1962. – Collection date according to the specimen at U.

U 145239B **HOLO** – (corp), ar, sp (Deposited as *Neoporteria wagenknechtii* var. *rapifera* Ritter (*nom. nud.*). Assumed to represent the holotype.)

- loc. 5:** Chile: sine loco. – Originally distributed as *Neoporteria rapifera* Ritter (*nom. nud.*).

B GH21019 – fl, ic (corp, fl) (Ex cult. BG Berlin, 13. 10. 1986 (cult. ex sem. Cat. H. Winter 1959 sub *Neoporteria rapifera*). Collection number inferred.)

ZSS S9942 **Type number** – sem (Leg. F. Ritter 1955.)

- loc. 6:** Chile: "25 km südl. Carrizalillo" = 25 km S of Carrizalillo. – / 10. / 1961. – Labelled as "*Neoporteria rapifera*" on the original labels; this is an unpublished provisional name for the taxon.

ZSS SR13537 – sem

Ritter 715: *Neoporteria wagenknechtii* F. Ritter – Succulenta 1963(1): 5, 1963.
Typus (T): Ritter 715 (U 145231B, SGO [status ?]).

- loc. 1:** Chile: "Höhen über Quebr. J. Soldado" = altitudes above Quebrada Juan Soldado. – Identified as *Neoporteria wagenknechtii* var. *wagenknechtii* in KS 4: 1634.

SGO 121652 **Type number** – (corp), ar, sp

- loc. 2:** Chile: "Juan Soldado" / "Quebr. Juan Soldado" = Quebrada Juan Soldado / "31 km nördl. La Serena" = 31 km N of La Serena. – Identified as *Neoporteria wagenknechtii* var. *wagenknechtii* in KS 4: 1634.

SGO 121653 **Type number** – (corp), ar, sp

- loc. 3:** Chile: "Küstenfelsen bei Tofo" = coastal rocks near El Tofo. – Identified as *Neoporteria wagenknechtii* var. *wagenknechtii* in KS 4: 1634.

SGO 121654 – (corp), ar, sp (The jar contains several dissimilar fragments from different individuals.)

- loc. 4:** Chile: "Quebrada Juan Soldado". – / 10. / 1962. – Collection date according to the holotype specimen at U. Identified as *Neoporteria wagenknechtii* var. *wagenknechtii* in KS 4: 1634.

U 145231B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

- loc. 5:** Chile: canyon of Juan Soldado N of La Serena. – Identified as *Neoporteria wagenknechtii* var. *wagenknechtii* in KS 4: 1634.
 B GH21017 – fl, ic (corp, fl) (Ex cult. BG Berlin, 13. 10. 1986 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
 B GH22562 – fl, ic (corp) (Ex cult. BG Berlin, 26. 8. 1987 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
 B GH22563 – fl, ic (corp) (Ex cult. BG Berlin, 26. 8. 1987 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
 ZSS S9943 **Type number** – sem (Leg. F. Ritter 1955.)
 ZSS T16276 – rad, corp, ar, sp, (fl) (Ex cult. ZSS 93 1801, 9. 6. 1994) (Leg. Diers (seedling plant ex cult.))
- loc. 6:** Chile: "31 km nördl. La Serena" = 31 km N of La Serena. – / 12. / 1957. – Identified as *Neoporteria wagenknechtii* var. *wagenknechtii* in KS 4: 1634.
 ZSS SR13538 – sem

Ritter 716: *Neoporteria clavata* (Söhrens ex K. Schumann) Werdermann var. *procera* F. Ritter – Taxon 12(1): 34, 1963.

Typus (T): Ritter 716 (U 117627, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).

- Chile: "30 km östl. La Serena" = 30 km E of La Serena. – / 12. / 1955. – Collection date according to original Ritter seed sample at ZSS.
 SGO 121655 **ISO** – (corp), ar, sp
 SGO 121656 – (corp), ar, sp ("Exemplar mit der grossen Blüte (Hybrid ?)." = specimen with the large flower (hybrid ?).)
 U 117627B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. No locality is given on the original label.)
 ZSS SR13539 **ISO** – sem (The original label was first numbered "Nr. 482", now written over with "716". FR 482 is set equal to FR 716 in the field-number list in KS 4.)
 ZSS S9944 **Type number** – sem (Leg. F. Ritter 1955 (sub *Neoporteria procera*). No locality data associated with this specimen.)

Ritter 716a: *Neoporteria microsperma* F. Ritter var. *serenana* F. Ritter – Succulenta 1963(1): 6, 1963.

Typus (T): Ritter 716a (U 117842B, SGO, ZSS [seeds only]) (No herbarium cited for the type.).

- Chile: "15 km östl La Serena" = 15 km E of La Serena.
 SGO 121657 **ISO** – (corp), ar, sp ("Muster der Pfl. des Blütenphoto" = specimen of the plant of the flower photograph.)
 SGO 121658 **ISO** – corp, ar, sp
 U 117842B **HOLO** – (corp), ar, sp (Assumed to be the holotype.)
 ZSS SR13540 **ISO** – sem (There are two original labels; one was first dated "IX. 59." now replaced with "X. 1961.", the second has the date as "IX. 1959 + XI. 1957", "IX 1959" was clearly added later.)
 ZSS SR13541 **ISO** – sem (The original label is dated "XII. 55" and has an illegible comment.)

Ritter 717: *Copiapoa alticostata* F. Ritter – Taxon 12(1): 29, 1963.

Typus (T): Ritter 717 (U 145223B, SGO, ZSS [seeds only]) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Atacama; "Typuslokalität nördl. Nicolasa, Nordchile" = type locality N of Nicolasa, N Chile. – / 10. / 1962. – Collection date according to specimen at U.
U 145223B **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Chile: Atacama; "1. Pass nördl. Nicolasa" = first pass N of Nicolasa. – / 12. / 1957.
SGO 124906 **ISO** – (corp), ar, sp (Locality mis-spelled "Nicosasa").
ZSS SR13542 **ISO** – sem

Ritter 718: *Copiapoa coquimbana* (Rümppler) Britton & Rose var.

wagenknechtii F. Ritter – Taxon 12(1): 30, 1963.

Typus (T): Ritter 718 (U 145351B) (Holotype cited for U l.c., 28; later in KS 3: 1092, 1980, cited for ZSS.).

- loc. 1:** Chile: La Serena. – Material actually collected by R. Wagenknecht but numbered in Ritter's series. Identified as *Copiapoa coquimbana* in KS 4: 1634.
B GH20601 – fl, fr, ic (corp) (Ex cult. BG Berlin, 25. 7. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS S9952 – sem (Leg. F. Ritter 1955 (sub *Copiapoa wagenknechtii*)).
- loc. 2:** Chile: "El Tambo". – Material actually collected by R. Wagenknecht but numbered in Ritter's series. Identified as *Copiapoa coquimbana* in KS 4: 1634.
U 145351B **HOLO** – rad, corp, ar, sp ("Junges Exemplar" = young specimen. Assumed to be the holotype as this is the only specimen present.)
- loc. 3:** Chile: "13 km östl. Huasco". – Identified as *Copiapoa coquimbana* in KS 4: 1634.
SGO 124907 – (rad), corp, ar, sp
- loc. 4:** Chile: "19 km W. Vicuña" = 19 km W of Vicuña. – Identified as *Copiapoa coquimbana* in KS 4: 1634.
SGO 124908 – (rad), corp, ar, sp
- loc. 5:** Chile: "3 km unterh. Vicuña" = 3 km below Vicuña. – Identified as *Copiapoa coquimbana* in KS 4: 1634.
SGO 124909 – rad, corp, ar, sp
- loc. 6:** Chile: "westl. Vicuña" = W of Vicuña. – / 11. / 1957.
ZSS SR13543 – sem

Ritter 719: *Maihueiopsis wagenknechtii* F. Ritter – Kakt. Südamer. 3: 878, 1980.

Typus (T): Ritter 719 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Coquimbo; Cordillera de la Punilla, "50 km östlich von Tres Cruces" = 50 km E of Tres Cruces. 2000 m. – / – / 1957. – Discovered by R. Wagenknecht, but numbered by F. Ritter. Locality data supplemented from the protologue; collection date according to specimen at U.
SGO 125221 **ISO** – corp, ar, sp
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the

holotype as this is the only specimen present.)

Ritter 720: *Maihueniopsis grandiflora* F. Ritter – Kakt. Südamer. 3: 877-878, fig. 720, 1980.

Typus (T): Ritter 720 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "Llanos de Huanta", E of La Serena, very rare. 1700 m. – / – / 1957. – Locality data supplemented from the protologue; collection date according to specimen at U.

SGO 125223 **ISO** – corp, ar, sp, (fl)

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 2: Chile: "Quebrada Marquesa Zona Tocoahuico".

SGO 125222 – corp, ar, sp

Ritter 721: *Maihueniopsis crassispira* F. Ritter – Kakt. Südamer. 3: 879-880, fig. 30, 1980.

Typus (T): Ritter 721 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Chile: Atacama; "Quebrada Maitencillo westlich Vallenar" = Quebrada Maitencillo W of Vallenar. – / – / 1957. – Collection date according to specimen at U.

U **HOLO** – corp, ar, sp, fr ("Trieb und Frucht" = stem and fruit.

Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 3: Chile: Atacama; "23 km w. Vallenar" = 23 km W of Vallenar / "Vallenar".

SGO 125224 **Type number** – fr, ar, sp

loc. 4: Chile: "westl. Vallenar" = W of Vallenar. – / – / 1961.

ZSS SR13544 **Type number** – sem

Ritter 723: *Parodia camargensis* Buining & F. Ritter var. *prolifera* F. Ritter – Succulenta 1962(2): 21, 1962.

Typus (T): Ritter 723 (U 116988B, SGO, ZSS [seeds only]).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; "Las Carreras". – / 5. / 1958.

SGO 124516 (in 2 parts) **ISO** – (rad), corp, ar, sp

ZSS SR14362 **ISO** – sem (Original label dated "II. 53.".)

loc. 2: Bolivia: Chuquisaca; sine loco.

B GH11868 – fl, ic (corp) (Ex cult. BG Berlin, 3. 6. 1982 (cult. ex sem.

Cat. H. Winter 1960). Collection number inferred.)

U 116988B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S10419 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964 (sub *Parodia camargensis*).)

Ritter 724: *Parodia camargensis* Buining & F. Ritter var. *camblayana* F. Ritter – Succulenta 1962(2): 20, 1962.

Typus (T): Ritter 724 (U 116964B, SGO, ZSS [seeds only]).

- Bolivia: Chuquisaca: Sud-Cinti; Camblaya Chica near Villa Abecia. - / 5. / 1958.
U 116964B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10420 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Durchbruch Rio Camblayo" = "Break-through" of Río Camblayo.
SGO 124517 **ISO** - (corp), ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "Camblaya Chica". - / 5. / 1958.
ZSS SR14363 **ISO** - sem

Ritter 725: *Parodia rubida* F. Ritter - Succulenta 43(3): 43-44, 1964.

Typus (T): Ritter 725 (U 160788B, SGO, ZSS [status ?]).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "von La Torre" = from La Torre. - / - / 1963. - Collection date according to specimen at U.
U 160788B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
ZSS A10491 **Type number** - corp, ar, sp (Ex cult. ZSS s.n., 13. 6. 1977.
No locality data associated with this specimen.)
ZSS S10424 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1969. No
locality data associated with this specimen.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "La Torre, Nr. 2".
SGO 124518 **ISO** - rad, corp, ar, sp
ZSS SR14364 **ISO** - sem (The original label is dated "XII. 54 + V. 58";
the 1958-date was added later in a different pen.)

Ritter 726: *Parodia castanea* (F. Ritter) F. Ritter - Kakt. Südamer. 2: 519-522, 1980.

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; mountain slopes W of La Torre. - / 12. / 1954.
U 117547B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "La Torre, Nr. 1".
SGO 124519 **ISO** - corp, ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "La Torre West". - / 5. / 1958.
ZSS SR14365 **ISO** - sem

Ritter 727: *Parodia fulvispina* F. Ritter - Cactus (Paris) 17(76): 54-55, ill., 1962.

Typus (T): Ritter 727 (U 116924B, ZSS [status ?]).

- loc. 1:** Bolivia: Tarija: Mendez; Carrizal. - / - / 1953. - The collection number is cited as "727 = 46a" in the original description.
U 116924B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10422 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1969.)
- loc. 2:** Bolivia: Tarija: Mendez; Carrizal.
ZSS T5047 **Type number** - corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. ?
Dated "7. 4. 1960" in the herbarium list, but this appears erroneous
as all other dated collections from April 1960 are from Peru.)

- loc. 3:** Bolivia: Potosí; "Oroya".
SGO 124520 – (corp), ar, sp, (al)
- loc. 4:** Bolivia: Tarija: Mendez; sine loco.
B GH26020 – fl (Ex cult. BG Berlin, 5. 10. 1989 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
- loc. 5:** Bolivia: Potosí; "Oroya Süd" = Oroya South. – / 4. / 1958.
ZSS SR14366 – sem

Ritter 727a: *Parodia fulvispina* F. Ritter var. *brevihamata* F. Ritter – Cactus (Paris) 17(76): 55, ill., 1962.

Typus (T): Ritter 727a (U 116900B, SGO, ZSS [seeds only]).

- loc. 1:** Bolivia: Potosí; Tojo. – / 12. / 1958.
U 116900B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Bolivia: Potosí; "9 km westl. Tojo (Potosi)" = 9 km W of Tojo (Potosi). – / 12. / 1959. – Collection date according to original Ritter seed sample at ZSS (locality given as "9 km westl. Tojo" only). Province given as "Avilez" in KS 2: 525.
SGO 124521 **ISO** – (corp), ar, sp
ZSS SR14367 **ISO** – sem
- loc. 3:** Bolivia: La Paz / Potosí; "Abstieg von Copacabana nach 29 km" = descent from Copacabana after 29 km / "oberh. Tojo" = above Tojo.
SGO 124635 **Type number** – (corp), ar, sp

Ritter 728: *Parodia roseoalba* F. Ritter var. *australis* F. Ritter – Kakt. Südamer. 2: 523, fig. 381, 1980.

Typus (T): Ritter 728 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "Puente San Pedro". – / – / 1958. – The protologue gives the type as 'Ritter 728', but this is in conflict with the field-number list in KS 4, and '428' is also the type of *P. roseoalba* itself. Collection date according to specimen at U. The original label at SGO has the collection number "728a" amended to "728".
SGO 124524 **ISO** – corp, ar, sp
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Tarija: Mendez; "halbwegs zw. Chayasa u. Carrizal" = halfway between Chayasa and Carrizal.
SGO 124522 – (corp), ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "San Pedro Ost" = San Pedro East. – / 5. / 1958. – The original label identifies this collection as *Parodia roseoalba* var. *australis*.
ZSS SR14368 **ISO** – sem

Ritter 728a: *Parodia roseoalba* F. Ritter – Succulenta 43(2): 23-24, 1964.

(Type cited as 'FR 728', but this number was later changed to FR 728a.)

Typus (T): Ritter 728a (U 160305B, SGO, ZSS [seeds only]).

- loc. 1:** Bolivia: Potosí: Nor-Chichas; "33 km km von Cotagaita in Richtg. Tupiza" = 33 km from Cotagaita towards Tupiza. – / – / 1962.
SGO 124525 **ISO** – (corp), ar, sp
- loc. 2:** Bolivia: Chuquisaca: Nor-Cinti; "nördl. Camargo" = N of Camargo / "41 km über Lecori" = 41 km above Lecori. – The second original label first identified the collection as *Parodia roseoalba* var. *australis*, and the collection number was evidently changed from FR 728 to FR 728a.
SGO 124526 – (corp), ar, sp, (fl)
- loc. 3:** Bolivia: Potosí: Nor-Chichas; "Strasse von Cotagaita nach Tupiza" = road from Cotagaita to Tupiza. – The collection number for this specimen was originally 'FR 728' but this was obviously later changed to FR 728a, cf. field-number list in KS 4. FR 728 is the type of *P. roseoalba* var. *australis*.
U 160305B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 4:** Bolivia: Potosí: Nor-Chichas; "Weststrasse Cotagaita - Tupiza bei 33 km" = W road Cotagaita - Tupiza near km 33. – / 11. / 1962.
ZSS SR14369 **ISO** – sem
- loc. 5:** Bolivia: Chuquisaca: Nor-Cinti; "35 km N. Camargo" = 35 km N of Camargo. – / 12. / 1958. – The locality on the original label first read "35 km S. Camargo".
ZSS SR14370 – sem

Ritter 729: *Parodia commutans* F. Ritter – Succulenta 43(2): 22-23, 1964.
Typus (T): Ritter 729 (U 160249B, ZSS).

- loc. 1:** Bolivia: Potosí: Sud-Chichas; "von nahe Impora, Grenze Provinzen Sud-Cinti und Sud-Chichas" = from near Impora, frontier of Prov. Sud-Cinti and Sud-Chichas. – / – / 1963. – Collection date according to specimen at U.
U 160249B (in 2 parts) **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
ZSS A4253 **ISO** – rad, corp, ar, sp (Leg. F. Ritter 1960. Ex cult. ZSS s.n.)
ZSS S10418 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.
No locality data associated with this specimen.)
- loc. 2:** Bolivia: Potosí; "Oroya, Weg nach El Monte, erster Engpass" = Oroya, path to El Monte, first narrowing.
SGO 124527 – rad, corp, ar, sp
- loc. 3:** Bolivia: Potosí; "Oroya Nord" = Oroya North. – / 12. / 1959.
ZSS SR14371 – sem

Ritter 730: *Parodia subterranea* F. Ritter – Succulenta 43(3): 43, 1964.
Typus (T): Ritter 731 (U 098009B, SGO, ZSS [status ?]).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; Salitre. – / – / 1959.
B GH14098 – fl (Ex cult. BG Berlin, 27. 5. 1983 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS S10415 – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.)
ZSS T5110 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)
ZSS T5121 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n.)

Ritter 731: *Parodia subterranea* F. Ritter – Succulenta 43(3): 43, 1964.
Typus (T): Ritter 731 (U 098009B, SGO, ZSS [status ?]).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva". – / – / 1963. – Collection date according to specimen at U.
U 098009B HOLO – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva" / "oberhalb La Cueva" = above La Cueva. – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "oberh. La Cueva" = above La Cueva).
SGO 124528 ISO – rad, corp, ar, sp
ZSS SR14373 ISO – sem (The original label was first numbered "FR 730", which is set equal to FR 731 in the field-number list in KS 4.)
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "Berge südl. Culpina" = mountains S of Culpina / "Culpina, Südberge" = Culpina, southern mountains. – Collection number changed on both original labels from 730 to 731.
SGO 124529 – rad, corp, ar, sp
- loc. 4:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina".
SGO 124530 – rad, corp, ar, sp
- loc. 5:** Bolivia: Chuquisaca: Sud-Cinti; sine loco.
B GH21020 – fl, ic (corp, fl) (Ex cult. BG Berlin, 13. 10. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
ZSS A4261 Type collection – rad, corp, ar, sp (Ex cult. ZSS s.n.)
- loc. 6:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina Nord" = Culpina North. – / 5. / 1958.
ZSS SR14372 – sem

Ritter 731a: *Parodia robustihamata* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 532, 1980. (Published as provisional name.)
Based on Ritter 731a.

- Bolivia: Chuquisaca: Sud-Cinti; "Ingahuasi". – / 5. / 1958. – One of the original labels at SGO and the original label at ZSS first had the collection number as "FR 730", corrected to 731a. Collection date according to original Ritter seed sample at ZSS.
SGO 124531 – rad, corp, ar, sp
ZSS SR14374 – sem

Ritter 732: *Parodia tuberculata* Cárdenas – Cact. Succ. J. (US) 23(3): 97-98, 1951.

- Bolivia: Chuquisaca: Sucre; "Hda. Ressini" = Hacienda Ressini.
SGO 124532 – rad, corp, ar, sp

Ritter 733: *Parodia multicostata* F. Ritter & Jelinek ex F. Ritter – Kakt. Südamer. 2: 529-530, fig. 391, 1980.

Typus (T): Ritter 733 (U, SGO [status ?], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca; "Weg von Yamparaez nach Sotomayor" = path from Yamparaez to Sotomayor. – / – / 1958. – Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

ZSS T5048 **ISO** – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Bolivia: Chuquisaca; "Strasse nach Sotomayor" = road to Sotomayor.
SGO 124533 **Type number** – (corp), ar, sp

loc. 3: Bolivia: Chuquisaca; along path from Yamparaez to Sotomayor, closer to the latter, in a steep slope. – Locality according to the protologue.

ZSS S10414 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.)

ZSS S8481 **Type number** – sem (Leg. Köhres.)

loc. 4: Bolivia: Chuquisaca; "Weg nach Sotomayor" = path to Sotomayor. – / 8. / 1958.

ZSS SR14375 **Type number** – sem

Ritter 734: *Parodia sotomayorensis* F. Ritter – Kakt. Südamer. 2: 530, figs. 392-393, 1980.

Typus (T): Ritter 734 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Chuquisaca; "oberhalb Sotomayor" = above Sotomayor, at the Río Pilcomayo, near the river on a rocky slope. – / – / 1958. – Locality data supplemented from the protologue. Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 2: Bolivia: Chuquisaca; "Sotomayor". – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 124534 **ISO** – (corp), ar, sp

ZSS SR14376 – sem

Ritter 735: *Parodia formosa* F. Ritter – Succulenta 43(4): 57, 1964.

Typus (T): Ritter 735 (U 098001B, SGO, ZSS [seeds only]).

loc. 1: Bolivia: Tarija: O'Connor; "Margarita". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS.

U 098001B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

ZSS S10379 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965. No locality data associated with this specimen.)

ZSS SR14378 **ISO** – sem

loc. 2: Bolivia: Tarija: O'Connor; "Rio Pilcomayo, Margarita" / "Margarita".
SGO 124535 **ISO** – rad, corp, ar, sp

loc. 3: Bolivia: Tarija: Gran Chaco; "13 km - 19 km westl. Palo Blancos" = 13 - 19 km W of Palos Blancos.

SGO 124536 **Type number** – rad, corp, ar, sp

loc. 4: Bolivia: Tarija: Gran Chaco ?; "westl. Palos Blancos" = W of Palos Blancos. – "Ein paar Körner (ca. 5) von *Par. purpureoauraea* dazwischen geraten (sind unter den grösseren)" = a few seeds (c. 5) of *Parodia purpureo-auraea* mixed in (they are among the larger ones).

ZSS SR14377 **Type number** – sem

Ritter 736: *Parodia gibbulosa* F. Ritter – Kakt. Südamer. 2: 545-546, fig. 421, 1980.

Typus (T): Ritter 736 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Chuquisaca: Azurduy; "Capadala", at the Río Pilcomayo. – / 7. / 1958. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS ("VII 58.") and to specimen at U. Locality written "Capajtala" on the labels at SGO and ZSS.
SGO 124538 ISO – rad, corp, ar, sp
U HOLO – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
ZSS SR14379 ISO – sem

Ritter 737: *Parodia minuta* F. Ritter – Kakt. Südamer. 2: 546, 1980.

Typus (T): Ritter 737 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Santa Cruz: Valle Grande; "am Wege von Markeza nach Pucará" = along path from Markeza to Pucará. – / – / 1958. – Collection date according to specimen at U.
U HOLO – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Markeza, Nr. 21" = ascent from Markeza.
SGO 124539 ISO – rad, corp, ar, sp
- loc. 3:** Bolivia: Santa Cruz: Valle Grande; "östl. Markeza" = E of Markeza. – / 7. / 1958.
ZSS SR14380 ISO – sem

Ritter 738: *Parodia ocampo* Cárdenas – Kakt. and. Sukk. 6(1): 101-103, 1955.

- Bolivia: Cochabamba; "Pte. Arce" = Puente Arce. – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124537 – rad, corp, ar, sp
ZSS SR14381 – sem

Ritter 739: *Parodia tredecimcostata* F. Ritter – Kakt. Südamer. 2: 538, fig. 400, 1980.

Typus (T): Ritter 739 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Tarija: Mendez; "Colpana" at the Río Pilaya. – / – / 1958. – Locality data supplemented from the protologue; collection date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Tarija: Mendez; "Rio Pilaya, Nr. 9 / Colpana". – "Colpana" added in different writing on the original label.
SGO 124540 ISO – (corp), ar, sp, (fr)

loc. 3: Bolivia: Tarija: Mendez; "Colpana am Río Pilaya" = Colpana at the Río Pilaya. – / 4. / 1958.
ZSS SR14382 ISO – sem

Ritter 739a: *Parodia tredecimcostata* F. Ritter var. *minor* F. Ritter – Kakt. Südamer. 2: 538, fig. 401, 1980.

Typus (T): Ritter 739a (U [not found], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Bolivia: Tarija: Mendez; "Río Cajas, Unterlauf" = Río Cajas, lower reaches. – / 4. / 1958.
ZSS SR14383 Type number – sem

Ritter 739b: *Parodia tredecimcostata* F. Ritter var. *aurea* F. Ritter – Kakt. Südamer. 2: 538-539, 1980.

Typus (T): Ritter 739b (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija: O'Connor; "Margarita" at the Río Pilcomayo. – / – / 1958. – Locality data supplemented from the protologue; collection date according to specimen at U.

U HOLO – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 2: Bolivia: Tarija: O'Connor; "Río Pilcomayo" / "Margarita". – "Margarita" obviously added later on the original label.
SGO 124541 ISO – rad, corp, ar, sp

Ritter 740: *Parodia gracilis* F. Ritter – Succulenta 43(2): 23, 1964.

Typus (T): Ritter 740 (U 160860B, ZSS [seeds only]).

loc. 1: Bolivia: Tarija: Mendez; "von Alto España" = from Alto España. – / – / 1963. – Collection date according to specimen at U (the protologue gives the date as 1958).

U 160860B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

ZSS A15681 Type collection – ar, sp, fl (Ex cult. ZSS 90 4377, 24. 6. 1994) (Leg. ZSS (from an old plant without data other than the Ritter-number).)

loc. 2: Bolivia: Tarija: Mendez; "Schlucht vor Sr. Ruiz / Río Cajas Mittellauf, Nr. 18" = gorge before Señor Ruiz / middle course of Río Cajas. – Second part of locality obviously added at a later date.

SGO 124542 – rad, corp, ar, sp

loc. 3: Bolivia: Tarija: Mendez; "Río Cajas Mittellauf" = middle course of Río Cajas.

SGO 124543 – rad, corp, ar, sp

loc. 4: Bolivia: Tarija: Mendez; "Río Cajas mittlerer Teil" = Río Cajas, middle part. – / 4. / 1958.

ZSS SR14384 – sem

loc. 5: Bolivia: Tarija: Mendez; "unterhalb Alto de España" = below Alto de España. – / 4. / 1958.

ZSS SR14385 ISO – sem

Ritter 741: *Parodia subtilihamata* F. Ritter – Kakt. Südamer. 2: 537-538, figs. 234, 574, 1980.

Typus (T): Ritter 741 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; "oberhalb Challamarca" = above Challamarca, far above the valley bottom, together with *Rebutia tuberosa*. 2400 m. – / – / 1958. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "Abstieg zum Río Challamarca" = descent to the Río Challamarca / "Abstieg nach Challamarca" = descent to Challamarca / "Challamarca". – / 5. / 1958. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "Abstieg zum Río Challamarca").

SGO 124464 **ISO** – rad, corp, ar, sp

ZSS SR14386 **ISO** – sem

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; sine loco.

SGO 125612 **Type number** – (corp), ar, sp ("2. Muster ?" = second specimen ?)

ZSS S9632 **Type number** – sem (Leg. Köhres (ex cult.).)

Ritter 742: *Parodia procera* F. Ritter – Taxon 13(3): 117, 1964. (Emendation by F. H. Brandt in Kakt. and Sukk. 22: 203-206, 1971.)

Typus (T): Ritter 742 (U 117823B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; region of mouth of Río Challamarca.

B GH21021 – fl (Ex cult. BG Berlin, 13. 10. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

U 117823B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Bolivia: Tarija / Chuquisaca; "Pilaya, Nebenfluss Challamarca" = Pilaya, side river Challamarca.

SGO 124633 **ISO** – corp, ar, sp

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; "Río Challamarca". – / 5. / 1958.

ZSS SR14387 **ISO** – sem

Ritter 743: *Parodia comarapana* Cárdenas – Rev. Agric. Cochabamba 7(6): 24-26, ill., 1951.

Typus (T): Cardenas 4570 (BOLV, US).

– Bolivia: Santa Cruz: Valle Grande; "Comarapa". – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 124544 – (corp), ar, sp

ZSS SR14388 – sem

Ritter 743a: *Parodia comarapana* Cárdenas var. *paucicostata* F. Ritter – Taxon 13(3): 117, 1964.

Typus (T): Ritter 743a (U 117799B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: Santa Cruz: Florida; near Mataral, c. 40 km from the type locality of *P. comarapana* var. *comarapana*. – / – / 1958. – Collection date according to the protologue.

U 117799B **HOLO** – corp, ar, sp, (fl) (Labelled as "Holotypus" by Ritter.)

loc. 2: Bolivia: Santa Cruz: Florida; "oberhalb Mataral" = above Mataral.
SGO 124545 **ISO** – (corp), ar, sp (Includes seedling plants.)

loc. 3: Bolivia: Santa Cruz: Florida; "westl. Mataral" = W of Mataral. – / 7. / 1958.
ZSS SR14389 **ISO** – sem

Ritter 744: *Parodia mairanana* Cárdenas – Nation. Cact. Succ. J. 12(4): 84, 1957.

loc. 1: Bolivia: "Estancio Vanegas".
SGO 124546 – rad, corp, ar, sp

loc. 2: Bolivia: Santa Cruz: Florida; "Agua Clara". – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124547 – corp, ar, sp
ZSS SR14390 – sem ("Same hohl" = seed hollow.)

Ritter 746: *Parodia ayopayana* Cárdenas – Cact. Succ. J. (US) 23(3): 98, 1951.

loc. 1: Bolivia: "oberhalb Tuini" = above Tuini.
SGO 124548 – (corp), ar, sp

loc. 2: Bolivia: Cochabamba: Ayopaya; "Abstieg vom Pass Quiripaya - Independencia" = descent from the pass Quiripaya - Independencia. – "16-rippig Exemplar" = specimen with 16 ribs.
SGO 124549 – (corp), ar, sp

loc. 3: Bolivia: Cochabamba: Ayopaya; "Puente Pilatos, Nr. 8".
SGO 124551 – (corp), ar, sp

loc. 4: Bolivia: Cochabamba: Ayopaya; "Puente Pilatos". – / 6. / 1958.
ZSS SR14391 – sem

Ritter 746a: *Parodia ayopayana* Cárdenas var. *elata* F. Ritter – Kakt. Südamer. 2: 542, fig. 413, 1980.

Typus (T): Ritter 746a (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Cochabamba: Ayopaya; "Mündung des Río Sta. Rosa" = mouth of the Río Santa Rosa. – / – / 1958. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

loc. 2: Bolivia: Cochabamba: Ayopaya; "Mündung des Río Sta. Rosa in Río Sacambaya" = junction of Río Santa Rosa into Río Sacambaya.
SGO 124550 **ISO** – (corp), ar, sp

loc. 3: Bolivia: Cochabamba: Ayopaya; "Fluss unterh. Quirirpaya nach 30 Überg." = river below Quirirpaya after 30 crossings.
SGO 124552 – (corp), ar, sp

loc. 4: Bolivia: Cochabamba: Ayopaya; "Rio Sta. Rosa Unterlauf" = Río Santa Rosa, lower reaches. – / 6. / 1958.
ZSS SR14392 ISO – sem

Ritter 746b: *Parodia ayopayana* Cárdenas var. *depressa* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 542, 1980. (Published as provisional name.)
Based on Ritter 746b.

– Bolivia: Cochabamba: Ayopaya; "oberhalb Sta. Rosa" = above Santa Rosa.
SGO 124553 – (corp), ar, sp

Ritter 747: *Parodia echinus* F. Ritter – Taxon 13(3): 117, 1964.

Typus (T): Ritter 747 (U 117020B, SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: La Paz; frontier of Prov. Murillo and Loayza, gorge of La Paz of difficult access. – Collection data according to the protologue.
U 117020B HOLO – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Bolivia: "Rio Abajo".
SGO 124634 Type number – (corp), ar, sp

loc. 3: Bolivia: La Paz?: Murillo?; "Mündung Rio Caracato" = mouth of Río Caracato. – / 6. / 1958.
ZSS SR14393 Type number – sem

Ritter 748: *Blossfeldia atroviridis* F. Ritter – Succulenta 44(2): 23, 1965.

Typus (T): Ritter 748 (U 160740B, SGO [status ?], ZSS [seeds only, status ?]) (No herbarium cited for the type.).

loc. 1: Bolivia: Cochabamba: Mizque; Mizane.
ZSS S10448 Type number – sem (Leg. Fa. Köhres (ex cult.) 1977.)
ZSS S12406 Type number – sem (Leg. Fa. Winter 1961.)

loc. 2: Bolivia: Cochabamba: Mizque; "Mizque-Schlucht" = gorge of Mizque. – / – / 1963.
U 160740B HOLO – rad, corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 3: Bolivia: Santa Cruz: Valle Grande; "zw. Sta. Ana und Sta. Rosa" = between Santa Ana and Santa Rosa. – / 7. / 1958.
SGO 125008 Type number – rad, corp, ar, sp

loc. 4: Bolivia: Santa Cruz: Valle Grande; "östl. Markeza am Wege nach Pucará" = E of Markeza along path to Pucará.
SGO 125009 Type number – rad, corp, ar, sp

loc. 5: Bolivia: Cochabamba: Campero; "Chuyllas" / "Chullas". – / 7. / 1958. – The locality could be 'Chujillos', which is situated in Cochabamba.
SGO 125010 Type number – rad, corp, ar, sp
ZSS SR14395 Type number – sem (Original label dated "XII 58.", locality simply given as "Chullas".)

loc. 6: Bolivia: Santa Cruz; "Perez". – / 7. / 1958.
SGO 125011 **Type number** – rad, corp, ar, sp
ZSS SR14394 **Type number** – sem

loc. 7: Bolivia: Santa Cruz: Valle Grande ?; "Marqueza, Weg nach Pucara" =
Marqueza, path to Pucara. – / 7. / 1958.
ZSS SR14396 **Type number** – sem

Ritter 748a: *Blossfeldia atroviridis* F. Ritter var. *intermedia* F. Ritter – Kakt. Südamer. 2: 551, 1980.

Typus (T): Ritter 748a (U, SGO [status?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Chuquisaca: Oropeza; "Rio Paccha". 2000 m. – / 12. / 1958. –
Altitude according to the protologue; collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14397 **ISO** – sem (Locality simply given as "Paccha".)
ZSS SR14398 **ISO** – sem

loc. 2: Bolivia: Chuquisaca: Oropeza; "oberh. Chuquichuqui" = above
Chuquichuqui / "Paccha".
SGO 125012 **Type number** – rad, corp, ar, sp

loc. 3: Bolivia: Chuquisaca: Oropeza; Río Paccha. 2000 m. – Locality according to the protologue.
ZSS S12407 **Type number** – sem (Leg. Fa. Winter 1961.)

Ritter 749: *Blossfeldia pedicellata* F. Ritter – Succulenta 44(2): 23, 1965.

Typus (T): Ritter 749 (U 160658B, SGO, ZSS [seeds only]) (No herbarium cited for the type.).

– Bolivia: Chuquisaca: Tomina; "Tomina". – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS, the specimen at U is dated 1963.

SGO 125013 **ISO** – rad, corp, ar, sp
U 160658B **HOLO** – rad, corp, ar, sp (Assumed to be the holotype.
Collection number inferred.)
ZSS S10421 **Type number** – sem (Leg. F. Ritter s.a. No locality data associated with this specimen.)
ZSS SR14399 **ISO** – sem
ZSS S9919 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)

Ritter 750: *Blossfeldia minima* F. Ritter – Kakt. Südamer. 2: 552-553, fig. 425, 1980.

Typus (T): Ritter 750 (U, SGO [status ?]) (Holotype cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Chuquisaca: Azurduy; "Capadala", valley of Río Pilcomayo. – / – / 1958. – Locality data supplemented from the protologue; collection data according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Assumed to be the holotype as this is the

only specimen present at U.)

ZSS S10446 – sem (Leg. Fa. Köhres (ex cult.) 1977. No locality data associated with this specimen.)

loc. 2: Bolivia: Chuquisaca; "Sotomayor". – / 8. / 1958.

SGO 125014 – rad, corp, ar, sp

loc. 3: Bolivia: Potosí; "gegenüber Millares" = opposite Millares / "Millares". – / 5. / 1959.

SGO 125015 – rad, corp, ar, sp

loc. 4: Bolivia: Chuquisaca: Sud-Cinti; "Camblaya Chica". – / 5. / 1958.

SGO 125016 – rad, corp, ar, sp

loc. 5: Bolivia: Chuquisaca: Azurduy; "Angosto unterhalb Capajtala" = Angosto below Capajtala. – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS (locality given as "Angostura unterhalb Capajtala").

SGO 125017 **Type number** – rad, corp, ar, sp

ZSS SR14400 – sem ("(stark sprossende)" = the strongly offsetting one.)

loc. 6: Bolivia: Chuquisaca: Azurduy; "Capajtala (oberhalb Angosto)" = Capajtala (above Angosto).

SGO 125018 **Type number** – rad, corp, ar, sp

Ritter 751: *Sulcorebutia* sp.

– Bolivia: Cochabamba; "Quillacollo, Nr. 7, etw. tiefere Lagen" = Quillacollo, somewhat lower altitudes. – Locality given as "Gebirge nördlich Quillacollo" = mountains N of Quillacollo, in the field number list in KS 4.

SGO 122080 – rad, corp, ar, sp

Ritter 752: *Sulcorebutia verticillacantha* F. Ritter var. *verticosior* F. Ritter – Nation. Cact. Succ. J. 17(1): 13, 1962.

Typus (T): Ritter 752 (U 117578B, SGO [status ?], ZSS [seeds only, status ?]) (No herbarium cited for the type.).

loc. 1: Bolivia: Chuquisaca: Oropeza; "38 km W. Sucre" = 38 km W of Sucre.

SGO 122076 **Type number** – rad, corp, ar, sp

loc. 2: Bolivia: Cochabamba; "Quillacollo, Nr. 8, höchste Lagen" = Quillacollo, uppermost altitudes.

SGO 122093 **Type number** – rad, corp, ar, sp

ZSS SR14401 **Type number** – sem (Locality simply given as "Quillacollo Nr. 8".)

loc. 3: Bolivia: Chuquisaca / Potosí; between Sucre and Ravelo on the border between Dept. Chuquisaca and Dept. Potosí. – / 6. / 1958. – Collection date according to the protologue.

U 117578B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

Ritter 752a: *Sulcorebutia verticillacantha* F. Ritter – Nation. Cact. Succ. J. 17(1): 13, 1962. (Erroneously indicated as 'var. nova'.)

Typus (T): Ritter 752a (U 117715B, SGO [status ?], ZSS [seeds only, status ?]) (No herbarium cited for the type.).

- loc. 1:** Bolivia: Cochabamba: Arque; mountain range above Sayari. – / 12. / 1958.
– Identified as *Sulcorebutia verticillacantha* var. *verticillacantha* in KS 4:
1635. Locality data according to the protologue.
U 117715B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by
Ritter.)
- loc. 2:** Bolivia: Cochabamba; "Abstieg nach Parotani, Nr. 2, bei 3800 m." = descent
to Parotani. 3800 m. – Identified as *Sulcorebutia verticillacantha* var.
verticillacantha in KS 4: 1635.
SGO 122081 **Type number** – rad, corp, ar, sp
- loc. 3:** Bolivia: Cochabamba; "Parotani". – / 12. / 1958. – Identified as
Sulcorebutia verticillacantha var. *verticillacantha* in KS 4: 1635.
ZSS SR14402 **Type number** – sem

Ritter 753: *Rebutia muscula* F. Ritter & Thiele – Taxon 12(1): 29, 1963.

Typus (T): Ritter 753 (U 11770B, SGO, ZSS [status ?]) (Holotype cited for
U l.c., 28.).

- loc. 1:** Bolivia: Tarija: O'Connor, Narvaez. – Locality data according to the
protologue.
U 117770B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS A10476 **Type number** – fl (Ex cult. ZSS s.n., 8. 5. 1974.)
ZSS S10439 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1975.)
- loc. 2:** Bolivia: Tarija: O'Connor; "Tambo" / "El Tambo". – "Zuerst als 83a
bezeichnet. Exemplar der Bl.-Beschreibg. Seite 2306 Heft 38" = First
labelled as 83a. Specimen of the flower description, p. 2306, field book 38.
The original label also has the number FR 84a now crossed out.
SGO 124578 – rad, corp, ar, sp
- loc. 3:** Bolivia: Tarija: Arce; "Padcaya". – / – / 1958.
SGO 124579 – rad, corp, ar, sp
- loc. 4:** Bolivia: Tarija: O'Connor; "Narvaez" / "Narvais Nr. 10".
SGO 124580 **ISO** – rad, corp, ar, sp
ZSS SR14403 **ISO** – sem (Locality simply given as "Narvaez"; label
dated "I. 1963".)
ZSS SR14404 **Type number** – sem ("(Same von P. Thiele IX. 1960)" =
seeds from P. Thiele, Sept. 1960. Locality simply given as
"Narvaez".)
- loc. 5:** Bolivia: Tarija: Mendez; "Cajas".
SGO 124581 – rad, corp, ar, sp
- loc. 6:** Bolivia: Tarija: O'Connor; "Tambo-Schlucht" = Tambo gorge. – / 2. / 1963.
ZSS SR14405 – sem
- loc. 7:** Bolivia: Tarija; "nördl. Tarija" = N of Tarija. – / 12. / 1962.
ZSS SR14406 – sem

Ritter 754: *Rebutia albipilosa* F. Ritter – Taxon 12(1): 29, 1963.

Typus (T): Ritter 754 (U 117570B, SGO, ZSS [seeds only]) (Holotype cited
for U l.c., 28.).

- loc. 1:** Bolivia: Tarija: O'Connor; Narvaez. – / – / 1958.
 B GH12100 – fl, ic (corp, fl) (Ex cult. BG Berlin, 22. 6. 1982 (cult. ex sem. Fa. Köhres 1978).)
 U 117570B HOLO – (corp), ar, sp (The original label has only the name and remarks "spec. nov.".)
- loc. 2:** Bolivia: Tarija: O'Connor; "Narvaez" / "Narvais Nr. 2". 1. / 12. / 1960. –
 Collection date according to original Ritter seed sample at ZSS (date given as "1. XII 1960 + 16. XII").
 SGO 124582 ISO – rad, corp, ar, sp
 ZSS SR14407 ISO – sem ("2 Fr. der gleichen Pfl.") = 2 fruits from the same plants. "(Hybrid Nr. 2 × Nr. 3 ?".)

Ritter 755: *Rebutia fiebrigii* (Gürke) Britton & Rose – in Bailey, Standard Cycl. Hort. 5: 2915, 1916.

- Bolivia: Tarija: O'Connor; "Tambo Nr. 7". – Identified as "*Rebutia fiebrigii* var." in KS 4: 1635.
 SGO 124583 – corp, ar, sp

Ritter 756: *Rebutia flavistyla* F. Ritter – Ashingtonia 3(1): 12, ill., 1978.
Typus (T): Ritter 756 (U, SGO, ZSS [seeds only]).

- loc. 1:** Bolivia: Tarija: Mendez; "unterhalb Cajas" = below Cajas. – / – / 1958. –
 Collection date according to specimen at U.
 U HOLO – (rad), corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
 ZSS T2121 Type number – rad, corp, ar, sp (Ex cult. ZSS 80 3384, 1. 2. 1989) (Leg. Wahl. No locality directly associated with this specimen.)
- loc. 2:** Bolivia: Tarija: Mendez; "Rio Cajas Nr. 7".
 SGO 124584 ISO – rad, corp, ar, sp
- loc. 3:** Bolivia: Tarija: Mendez; "Cajas-Schlucht" = Cajas gorge. – / 3. / 1963.
 ZSS SR14408 ISO – sem

Ritter 757: *Rebutia patericalyx* F. Ritter – Kakt. and Sukk. 28(4): 78, 1977.
Typus (T): Ritter 757 (U, SGO, ZSS [seeds only]).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva". – / – / 1963. – Collection date according to specimen at U.
 U HOLO – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Cueva (oben) Nr. 2" = La Cueva, (above). – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS ("II. 63"; locality simply given as "La Cueva Nr. 2").
 SGO 124585 ISO – (corp), ar, sp (Contains a seedling plant and a very dissimilar looking fragment.)
 ZSS SR14409 ISO – sem

Ritter 757a: *Rebutia friedrichiana* Rausch – Succulenta 55(6): 103, ill. (p. 101), 1976.
Typus (T): Rausch 646 (ZSS) (Type cited for ZSS l.c. 56(2): 30, 1977.).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva". – / – / 1966. – Collection date according to specimen at U. This is the type number of *Rebutia odontopetala* F. Ritter, placed in the synonymy of *R. friedrichiana* by himself in KS.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype (of *Rebutia odontopetala*) as this is the only specimen present.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Oberh. Cueva" = above Cueva. – This is the type number of *Rebutia odontopetala* F. Ritter, placed in the synonymy of *R. friedrichiana* by himself in KS.
 SGO 124586 **Type number** – rad, corp, ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva, oberhalb" = La Cueva, above. – / 2. / 1963. – This is the type number of *Rebutia odontopetala* F. Ritter, placed in the synonymy of *R. friedrichiana* by himself in KS.
 ZSS SR14410 **Type number** – sem
- Ritter 758: *Rebutia albopectinata*** Rausch – Kakt. and. Sukk. 23(9): 236-237, 1972.
Typus (T): Rausch 312 (ZSS) (Type cited for W but placed in ZSS.).
- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina". – / – / 1962. – Collection date according to specimen at U.
 U – rad, corp, ar, sp (Collection number inferred.)
 ZSS A4270 – corp, ar, sp, fl (Ex cult. ZSS s.n.)
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina" / "Culpina Höhen" = Culpina altitudes. – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "Culpina, Höhe").
 SGO 124587 – rad, corp, ar, sp
 ZSS SR14411 – sem
- Ritter 759: *Rebutia* sp.**
- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva". – "Reb. ähnl. steinm., weiter abwärts als steinm.ii Nr. 16" = *Rebutia* similar to *R. steinmannii*, further down as *R. steinmannii* nr. 16. The jar at SGO contains three plants which form two dissimilar groups.
 SGO 124588 – rad, corp, ar, sp
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "La Cueva Nr. 8". – / 2. / 1963.
 ZSS SR14412 – sem ("1 Fr." = 1 fruit.)
- Ritter 760: *Rebutia sanguinea*** F. Ritter – Succulenta 56(3): 65, (8): 190, ill., 1977.
Typus (T): Ritter 760 (U, ZSS [seeds only]).
- loc. 1:** Bolivia: Tarija; "Angosto bei Tarija" = Angosto near Tarija. – / – / 1962. – Collection date according to specimen at U.
 U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2:** Bolivia: Tarija; "Berge südl. Angosto de Tarija Nr. 10" = mountains S of Angosto de Tarija.
 ZSS SR14413 **ISO** – sem

- loc. 3:** Bolivia: Tarija: Mendez; "Pass zwischen Junacas und Tambo Nr. 8" = pass between Junacas and Tambo.
ZSS SR14414 – sem

Ritter 760a: *Rebutia sanguinea* F. Ritter var. *minor* F. Ritter – Succulenta
56(3): 65, (8): 190, ill., 1977.
Typus (T): Ritter 760a (U).

- Bolivia: Tarija; "südl. Tarija" = S of Tarija. – / 12. / 1962. – Collection date according to original Ritter seed sample at ZSS.
ZSS SR14415 ISO – sem

Ritter 761: *Rebutia albiareolata* F. Ritter – Kakt. and. Sukk. 28(4): 78, 1977.
Typus (T): Ritter 761 (U, ZSS [status ?]).

- Bolivia: Tarija: Arce; "Padcaya". – / 1. / 1963. – Collection date according to original Ritter seed sample at ZSS; first collected in 1958 according to KS 2.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

ZSS A10502 **Type number** – ar, sp, fl (Ex cult. ZSS 80 3385, 5. 5. 1983.
No locality data associated with this specimen.)

ZSS SR14416 ISO – sem

ZSS S9884 **Type number** – sem (Leg. BG Wien-Schönbrunn ex cult.
Cult. sub ZSS 86 1080. No locality data associated with this collection.)

Ritter 762: *Rebutia kupperiana* Bödeker – Monatsschr. Deutsche Kakt. Ges. 1932: 276-277, 1932.

- loc. 1:** Bolivia: Tarija: Arce; "Padcaya Nr. 10".
SGO 124589 – rad, corp, ar, sp

- loc. 2:** Bolivia: Tarija: Arce; "Padcaya nach West" = Padcaya towards the West.
ZSS SR14417 – sem

- loc. 3:** Bolivia: Tarija: O'Connor; "Tambo". – The original label is numbered as "FR 762 (= 762a)"; FR 762 is identified as "*Rebutia kupperiana* fa." in the field-number list in KS 4.
ZSS SR14418 – sem

Ritter 762a: *Rebutia kupperiana* Bödeker – Monatsschr. Deutsche Kakt. Ges. 1932: 276-277, 1932.

- Bolivia: Tarija: O'Connor; "Tambo-Schlucht" = Tambo gorge". – / – / 1962. – Identified as "*Rebutia kupperiana* fa." in KS 4: 1635, but this does not seem to be correct (UE & BEL).
SGO 124590 – rad, corp, ar, sp

Ritter 762b: *Rebutia kupperiana* Bödeker var. *spiniflora* F. Ritter – Kakt. and. Sukk. 28(4): 78, 1977.

Typus (T): Ritter 762b (U [not found], ZSS [seeds only]).

- Bolivia: Tarija: O'Connor; "Narvaez". - / 1. / 1963. - Collection date according to original Ritter seed sample at ZSS. Identified as "*Rebutia kupperiana* fa." in KS 4: 1635.
ZSS SR14419 ISO - sem

Ritter 763: *Rebutia robustispina* F. Ritter - Succulenta 56(3): 64-65, (8): 189, ill., 1977.

Typus (T): Ritter 763 (U, ZSS [seeds only]).

- loc. 1: Bolivia: Tarija; "Berge nördlich Tarija" = mountains N of Tarija. - / - / 1966. - Collection date according to specimen at U.
U HOLO - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
ZSS SR14421 ISO - sem ("Kümmerform der niederen Lagen" = poorly developed form of the lower altitudes.)
- loc. 2: Bolivia: Tarija; "höhere Lagen nördl. Tarija" = upper altitudes N of Tarija. - "Normalform der höheren Lagen" = normal form of the upper altitudes.
ZSS SR14422 ISO - sem
- loc. 3: Bolivia: Tarija: O'Connor; "Obere Tambo-Schlucht" = upper Tambo gorge.
ZSS SR14423 - sem
- loc. 4: Bolivia: Tarija: Arce; "Padcaya Nr. 6". - / 3. / 1958.
ZSS SR14420 - sem ("1 Pflanze") = 1 plant.)

Ritter 763a: *Rebutia robustispina* F. Ritter var. *minor* F. Ritter - Succulenta 56(3): 65, (8): 189, ill., 1977.

Typus (T): Ritter 763a (U, SGO, ZSS [seeds only]).

- loc. 1: Bolivia: Tarija: Mendez; "Cajas". - / - / 1963. - Collection date according to specimen at U.
U HOLO - rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2: Bolivia: Tarija: Mendez; "Cajas Nr. 10".
SGO 124591 ISO - rad, corp, ar, sp
- loc. 3: Bolivia: Tarija: Mendez; "Fundplatz der *Reb. nitida* = locality of *Rebutia nitida* [Cajas]. - / 2. / 1963.
ZSS SR14424 ISO - sem

Ritter 764: *Rebutia archibuiningiana* F. Ritter - Ashingtonia 3(1): 14-15, ill. (pl. after p. 11), 1978.

Typus (T): Ritter 764 (U [not found], SGO, ZSS [seeds only]).

- loc. 2: Bolivia: Tarija: Arce; "Padcaya Nr. 5". - / 3. / 1958. - Collection date according to original Ritter seed sample at ZSS.
SGO 124592 ISO - rad, corp, ar, sp
ZSS SR14425 ISO - sem

Ritter 766: *Rebutia pulvinosa* F. Ritter & Buining - Taxon 12(1): 29, 1963.

Typus (T): Ritter 766 (U [not found], SGO [status ?], ZSS [seeds only, status ?]) (Holotype cited for U l.c., 28.).

loc. 1: Bolivia: Tarija; gorge of Río Pilaya, NE of Tarija.
ZSS S10425 **Type number** – sem (Leg. Succulenta 1968 (ex cult. ?).)

loc. 2: Bolivia: Tarija: Mendez; "Rio Cajas" / "Huerta Carbajal". – / 4. / 1958.
SGO 124593 – rad, corp, ar, sp
ZSS SR14426 – sem (Locality simply given as "Huerta Carbajal".)

Ritter 766a: *Rebutia albiflora* F. Ritter & Buining – Taxon 12(1): 29, 1963.
Typus (T): Ritter 766a (U [not found], SGO [status ?]) (Holotype cited for U l.c., 28.).

loc. 2: Bolivia: Tarija: Mendez; "Rio Cajas" / "Schlucht von St. Rosa Nr. 15a" (?) =
gorge of Santa Rosa (?). – Second label nearly illegible.
SGO 124594 **Type number** – rad, corp, ar, sp

Ritter 767: *Rebutia rubiginosa* F. Ritter – Taxon 12(1): 29, 1963.
Typus (T): Ritter 767 (U 117554B) (Holotype cited for U l.c., 28.).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; below Challamarca. 2800 m.
U 117554B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "La Cueva". – / 2. / 1963.
ZSS SR14427 – sem

Ritter 768: *Rebutia nogalesensis* F. Ritter – Kakt. and Sukk. 28(4): 78, 1977.
Typus (T): Ritter 768 (U, SGO, ZSS [seeds only, status ?]).

loc. 1: Bolivia: Chuquisaca: Azurduy; "Tarvita", rocky slopes. – / – / 1958. –
Locality and collection date according to specimen at U.
U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be
the holotype as this is the only specimen present.)
ZSS S9875 **Type number** – sem (Leg. Köhres (ex cult.). No locality
associated with this specimen.)

loc. 2: Bolivia: Chuquisaca: Azurduy; "Tarvita Nr. 12".
SGO 124595 **ISO** – rad, corp, ar, sp

Ritter 769: *Rebutia nitida* F. Ritter – Ashingtonia 3(1): 14, ill., 1978.
Typus (T): Ritter 769 (U [not found], SGO, ZSS [seeds only]).

loc. 1: Bolivia: Tarija: Mendez; Cajas. 2000 m. – / – / 1958.
ZSS S10437 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1975.)

loc. 2: Bolivia: Tarija: Mendez; "Cajas".
SGO 124596 **ISO** – rad, corp, ar, sp

loc. 3: Bolivia: Tarija: Mendez; "oberhalb Cajas" = above Cajas. – / 2. / 1963.
ZSS SR14428 **ISO** – sem

Ritter 770: *Rebutia tuberosa* F. Ritter – Taxon 12(1): 28-29, 1963.
Typus (T): Ritter 770 (U 117791B, SGO).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; below Challamarca. 2600 m.
U 117791B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by
Ritter.)

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "Abstieg zum Rio Challamarca Nr. 7" = descent to the Río Challamarca.

SGO 124597 **ISO** – rad, corp, ar, sp

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; "La Cueva". – / 2. / 1963.

ZSS SR14429 – sem

Ritter 772: *Rebutia leucanthera* Rausch – Kakt. and. Sukk. 26(6): 125, ill., 1975.

Typus (T): Rausch 305 (ZSS) (Type cited for W but placed in ZSS.).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; Ingahuasi and Cueva. – Identification tentative according to KS 2: 607, but this number is one of the syntypes of *Rebutia leucanthera* var. *cocciniflora* F. Ritter.

ZSS A10505 – ar, sp, fl (Ex cult. ZSS s.n., 6. 5. 1983.)

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "Ingahuasi". – / 5. / 1958. – Collection date according to original Ritter seed sample at ZSS (locality given as "Ingahuasi Nr. 3"). Identification tentative according to KS 2: 607, but this number is one of the syntypes of *Rebutia leucanthera* var. *cocciniflora* F. Ritter.

SGO 124598 – rad, corp, ar, sp

ZSS SR14430 – sem

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; "La Cueva Nr. 1". – / 2. / 1963. – Identification tentative according to KS 2: 607, but this number is one of the syntypes of *Rebutia leucanthera* var. *cocciniflora* F. Ritter.

ZSS SR14431 – sem

Ritter 773: *Rebutia tarvitaensis* F. Ritter – Kakt. and. Sukk. 28(4): 78, 1977.

Typus (T): Ritter 773 (U, SGO, ZSS [seeds only]).

loc. 1: Bolivia: Chuquisaca: Azurduy; "Tarvita". – / – / 1958. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)

ZSS S8466 **Type number** – sem (Leg. De Herdt. No locality associated with this specimen.)

loc. 2: Bolivia: Chuquisaca: Azurduy; "Tarvita Nr. 9". – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS. The SGO specimen label has the following comment: "Unterschiede gegen Ingahuasi: Höcker niedriger, flacher, dichter gedrängt, Stacheln anliegender, stets ohne mittleren, zwieblige Verdickung geringer" = Differences to [specimen from] Ingahuasi: tubercles lower, flatter, more densely spaced, spines more appressed, always without centrals, bulbous thickening less pronounced.

SGO 124599 **ISO** – rad, corp, ar, sp

ZSS SR14432 **ISO** – sem

Ritter 774: *Sulcorebutia candiae* (Cárdenas) Buining & Donald – Sukkulantenkunde 7/8: 104, 1963. (Repeated by Backeberg in Kakt.-Lex., 414, 1966.)

- loc. 1:** Bolivia: sine loco; – No data in KS.
ZSS A10481 – fl (Ex cult. ZSS s.n., 30. 4. 1975.)
ZSS T1791 – rad, corp, ar, sp (Ex cult. ZSS 75 2663, 28. 11. 1989) (Leg. SPL)
- loc. 2:** Bolivia: Cochabamba: Ayopaya; "Tiquirpaya" / "Sta. Rosa, Nr. 12" = Santa Rosa / "Weg von Tiquirpaya zum Rio Sta. Rosa" = path from Tiquirpaya to the Rio Santa Rosa. – / 6. / 1958.
SGO 122077 – rad, corp, ar, sp
- loc. 3:** Bolivia: Cochabamba: Ayopaya; "unterhalb Tiquirpaya" = below Tiquirpaya.
SGO 122078 – rad, corp, ar, sp
- loc. 4:** Bolivia: Cochabamba: Ayopaya; "Sta. Rosa, Nr. 12" = Santa Rosa.
SGO 122079 – rad, corp, ar, sp

Ritter 775: *Sulcorebutia menesesii* (Cárdenas) Buining & Donald – Sukkulenteenkunde 7/8: 104, 1963. (Repeated by Backeberg, Kakt.-Lex., 415, 1966.)

- Bolivia: Cochabamba: Ayopaya; "Rio Sta. Rosa" = Rio Santa Rosa / "Rio unterhalb Quirirpaya, Nr. 12" = river below Quirirpaya".
SGO 122085 – rad, corp, ar, sp
ZSS S10434 – sem (Leg. Fa. Köhres (ex cult.) 1975. No locality data associated with this specimen.)

Ritter 776: *Echinopsis calliantholilacina* Cárdenas – Cactus (Paris) 20(85): 110-111, 1965.

- loc. 1:** Bolivia: Tarija: Arce; "Padcaya" / "Höhen über Padcaya" = altitudes above Padcaya. – "Blüte zinnober und mit purpum" = flower vermilion with purple." One of the two labels in this jar is numbered FR 771 which relates to a *Rebutia* sp. from Rio Cajas according to the number list in KS 4. Identified as "*Echinopsis calliantholilacina* var." in the field-number list in KS 4.
SGO 121327 – (corp), ar, sp
- loc. 2:** Bolivia: Tarija: Mendez; "Cajas Nr. 7". – Identified as "*Echinopsis calliantholilacina* var." in the field-number list in KS 4.
SGO 121328 – (corp), ar, sp
- loc. 3:** Bolivia: Tarija: Mendez; "Unterhalb Alto España Nr. 4" = below Alto España. – Identified as "*Echinopsis calliantholilacina* var." in the field-number list in KS 4.
SGO 121329 – (corp), ar, sp ("Exemplar der Blütenbeschreibung" = specimen of the flower description.)
- loc. 4:** Bolivia: Tarija: Mendez; "Fundplatz der *Reb. nitida*" = locality of *Rebutia nitida* [Cajas]. – Identified as "*Echinopsis calliantholilacina* var." in the field-number list in KS 4.
ZSS SR14433 – sem ("(2 Früchte)" = 2 fruits. The comment originally read "mehrere Früchte" = several fruits.)
- loc. 5:** Bolivia: Tarija: Mendez; "Pass zw. Junacas u. Tambo" = Pass between Junacas and Tambo. – Identified as "*Echinopsis calliantholilacina* var." in the field-number list in KS 4.

ZSS SR14434 – sem ("1 Frucht" = 1 fruit.)

Ritter 777: *Echinopsis tapecuana* F. Ritter – Succulenta 44(2): 24, 1965.

Typus (T): Ritter 777 (U 160900B, ZSS [seeds only]).

loc. 1: Bolivia: Tarija: O'Connor, "von Tapecuca". – / – / 1963. – Collection date according to specimen at U.

U 160900B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

ZSS SR14435 **ISO** – sem

loc. 2: Bolivia: Tarija: O'Connor, "Narvais" = Narvaez.

SGO 121330 – (corp), ar, sp (Identified as *Echinopsis obrepanda* on the original label.)

ZSS SR14436 – sem (The locality is written as "Narvaez" on the original label.)

Ritter 777a: *Echinopsis boyuibensis* F. Ritter – Succulenta 44(2): 25-26, 1965.

Typus (T): Ritter 777a (U 160329B, SGO).

loc. 2: Bolivia: Santa Cruz: Cordillera; "10 u. 12 km westl. Boyuibe" = 10 and 12 km W of Boyuibe.

SGO 121331 **ISO** – rad, corp, ar, sp

loc. 3: Bolivia: Santa Cruz: Cordillera; "Camiri, Ölberg oben" = Camiri, 'Ölberg' above.

SGO 121332 – rad, corp, ar, sp

loc. 4: Bolivia: Santa Cruz: Cordillera; "von westlich Boyuibe" = from W of Boyuibe. – / – / 1963.

U 160329B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

loc. 5: Bolivia: Santa Cruz; "nördl. Palos Blancos" = N of Palos Blancos.

ZSS SR14437 – sem

loc. 6: Bolivia: Santa Cruz; "südlich Camiri + nördl. Buen Retiro" = S of Camiri and N of Buen Retiro.

ZSS SR14438 – sem

Ritter 778: *Echinopsis* sp.

loc. 1: Bolivia: Chuquisaca: Azurduy; "Capajtala Nr. 3".

SGO 121334 – (corp), ar, sp

loc. 2: Bolivia: Chuquisaca: Azurduy; "Capajtala Nr. 13".

SGO 121335 – (corp), ar, sp

loc. 3: Bolivia: Chuquisaca; "Weg Yamparaez - Sotomayor, grosser Aufstieg Nr. 8" = Path Yamparaez - Sotomayor, great ascent.

SGO 121336 – (corp), ar, sp

Ritter 778a: *Echinopsis* sp.

– Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 19". – The original label says "FR 778 sp. nov. + Einschlag FR 378 *rojasii*" = FR 778 + introgression from FR 378 *rojasii*.

SGO 121344 – (corp), ar, sp

Ritter 779: *Echinopsis mamillosa* Gürke var. *orozasana* F. Ritter – Succulenta 44(2): 25, 1965.

Typus (T): Ritter 779 (U 160812B, ZSS [seeds only]).

loc. 1: Bolivia: Tarija: Arce; "von Orozas" = from Orozas. – / – / 1963. –
Collection date according to specimen at U.

U 160812B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

loc. 2: Bolivia: Tarija: Arce; "Strasse Padcaya - Merced" = road Padcaya - Merced.
SGO 121337 – (corp), ar, sp, al

loc. 3: Bolivia: Tarija: Arce; "Orozas unterhalb Padcaya" = Orozas below Padcaya.
– / 3. / 1958.
ZSS SR14439 **ISO** – sem

Ritter 780: *Echinopsis mamillosa* Gürke var. *tamboensis* F. Ritter – Succulenta 44(2): 25, 1965.

Typus (T): Ritter 780 (U 160884B, SGO).

loc. 1: Bolivia: Tarija: O'Connor; "Tambo, Nr. 6".
SGO 121338 **ISO** – (corp), ar, sp

loc. 2: Bolivia: Tarija: Mendez; "Cajas oben" = Cajas, above.
SGO 121339 – (corp), ar, sp

loc. 3: Bolivia: Tarija: O'Connor; "Narvaez".
SGO 121340 – (corp), ar, sp (Includes 2 seedlings.)

loc. 4: Bolivia: Tarija: Mendez; "Cajas nach Nord" = Cajas towards the north /
"Abstieg in Cajas-Schlucht" = descent into Cajas gorge.
SGO 121341 – (corp), ar, sp ("Normal- + Ausnahme-Exemplar" =
normal + aberrant specimen.)

loc. 5: Bolivia: Tarija: O'Connor; "von Tambo-Schlucht" = from the Tambo gorge.
– / – / 1963. – Collection date according to specimen at U.
U 160884B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

loc. 6: Bolivia: Tarija: Arce; "La Merced". – / 3. / 1958.
ZSS SR14440 – sem

loc. 7: Bolivia: Tarija: Mendez; "oberh. Cajas (Fundplatz der *Reb. nitida*)" = above
Cajas (locality of *Rebutia nitida*). – The locality was first given as "oberh.
Tambo" = above Tambo, now crossed out.
ZSS SR14441 – sem

Ritter 781: *Echinopsis* sp.

– Bolivia: Chuquisaca: Azurduy; "Capajtala, Nr. 23".
SGO 121342 – (corp), ar, sp

Ritter 781a: *Echinopsis* sp.

- Bolivia: Chuquisaca: Sud-Cinti; "Incahuasi, Nr. 5".
SGO 121343 – (corp), ar, sp

Ritter 782: *Echinopsis silvatica* F. Ritter – Succulenta 44(2): 24, 1965.

Typus (T): Ritter 782 (U 160265B, SGO [status ?], ZSS [seeds only]).

- loc. 1:** Bolivia: Tarija: O'Connor; sine loco.
B GH15002 – fl, ic (corp) (Ex cult. BG Berlin, 9. 8. 1983 (cult. ex sem.
Cat. H. Winter 1959). Collection number inferred.)
- loc. 2:** Bolivia: Tarija: O'Connor; "östl. Tacuarandi" = E of Tacuarandi.
SGO 121345 **Type number** – (corp), ar, sp
- loc. 3:** Bolivia: Tarija: O'Connor; "östl. Bereti" = E of Bereti / "zw. Bereti u.
Tacuarandi" = between Bereti and Tacuarandi.
SGO 121346 **Type number** – (corp), ar, sp
- loc. 4:** Bolivia: Tarija: O'Connor; "vom Osten der Provinz O'Connor (Tacuarandi)"
= from the E of the Prov. O'Connor (Tacuarandi). – / – / 1963.
U 160265B **HOLO** – (corp), ar, sp, (al) (Labelled as "Holotypus" by
Ritter. Collection number inferred.)
- loc. 5:** Bolivia: Tarija: O'Connor; "Tacuarandi". – / 4. / 1958.
ZSS SR14442 **ISO** – sem

Ritter 783: *Echinopsis rhodotricha* K. Schumann var. *spinosior* (F. Ritter) F. Ritter – Kakt. Südamer. 1: 262, 1979.

- loc. 1:** Bolivia: Tarija: Gran Chaco; "Palmar Grande". – / 1. / 1963. – Collection
date according to original Ritter seed sample at ZSS.
SGO 121347 – (corp), ar, sp
ZSS SR14443 – sem
- loc. 3:** Paraguay: Boquerón; "Filadelfia".
SGO 125154 – (corp), ar, sp
- loc. 4:** Paraguay: Chaco; "Cerro León, am Wege unten" = Cerro León, at path below
/ "Cerro León, unten" = Cerro León, below.
SGO 125155 – (corp), ar, sp
- loc. 5:** Paraguay: "zw. Tte. Martinez u. Tte. Montania" = between Teniente
Martinez and Teniente Montania.
SGO 125156 (in 2 parts) – (corp), ar, sp, al
- loc. 6:** Bolivia / Paraguay?: sine loco.
B GH14799 – fl, ic (corp, fl) (Ex cult. BG Berlin, 4. 8. 1983 (cult. ex
sem. Cat. H. Winter 1959). Collection number inferred.)

Ritter 783a: *Echinopsis rhodotricha* K. Schumann var. *spinosior* (F. Ritter) F. Ritter – Kakt. Südamer. 1: 262, 1979.

- Bolivia: Tarija: Gran Chaco; "von Taringuiti". – / 1. / 1963. – Collection
date according to original Ritter seed sample at ZSS (where no locality is
given on the original label).
U 160724B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
ZSS SR14444 **ISO** – sem

Ritter 783b: *Echinopsis rhodotricha* K. Schumann – Monatsschr. Kakt.-kunde 10: 147, 1900.

- Paraguay: Alto Paraguay; "Puerto Casado". – Identified as *Echinopsis rhodotricha* var. *rhodotricha* in KS 4.
SGO 125157 – (corp), ar, sp, al
ZSS SR13588 – sem (Identified as *Echinopsis chacoana* on the original label.)

Ritter 784: *Echinopsis boyuibensis* F. Ritter – Succulenta 44(2): 25-26, 1965.
Typus (T): Ritter 777a (U 160329B, SGO).

- Bolivia: Tarija: Gran Chaco; "W. Palos Blancos" = W of Palos Blancos. – Number corrected to 77a on original label; but this number is not given in the field number list in KS 4. It is likely that the number should have been '777a' which is identified as *Echinopsis boyuibensis* in KS 4.
SGO 121333 – (corp), ar, sp

Ritter 785: *Echinopsis* sp.

- Bolivia: Cochabamba: Ayopaya; "Sta. Rosa, Nr. 13". – Identified as *Echinopsis ayopayana* on the original label.
SGO 121349 – corp, ar, sp

Ritter 786: *Echinopsis comarapana* Cárdenas – Nation. Cact. Succ. J. 12: 61, 1957.

- loc. 1:** Bolivia: Cochabamba; "Rio Mizque, Juntas, Nr. 11".
SGO 121348 – (corp), ar, sp
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza, Nr. 7" = ascent from Marqueza.
SGO 121350 – (corp), ar, sp
- loc. 3:** Bolivia: Santa Cruz; "Saipina, Nr. 18".
SGO 121351 – (corp), ar, sp
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; "San Isidro".
ZSS SR14445 – sem

Ritter 786a: *Echinopsis comarapana* Cárdenas – Nation. Cact. Succ. J. 12: 61, 1957.

- loc. 1:** Bolivia: Chuquisaca; "Weg Yamparaez - Sotomayor, grosser Aufstieg, Nr. 8a" = path Yamparaez - Sotomayor, great ascent. – The collection number on the original label is given with a question mark. Identified as "*Echinopsis comarapana* Cardenas var." in the field-number list in KS 4.
SGO 121352 – (corp), ar, sp
- loc. 2:** Bolivia: Chuquisaca: Azurduy; "Capajtala, Nr. 18, Hohe Lage am Wege nach ..." = Capajtala, upper altitudes along path to – Identified as "*Echinopsis comarapana* Cardenas var." in the field-number list in KS 4.
SGO 121353 – (corp), ar, sp

- loc. 3:** Bolivia: Chuquisaca; "gegenüber Sotomayor, Nr. 8" = opposite Sotomayor.
– Identified as "*Echinopsis comarapana* Cardenas var." in the field-number list in KS 4.

SGO 121354 – (corp), ar, sp

Ritter 787: *Echinopsis perezensis* Cárdenas – Cactus (Paris) No. 78: 88, 1963.

- Bolivia: Cochabamba / Santa Cruz; "Abstieg zum Río Mizque, Nr. 22" = descent to the Río Mizque. – Identified as "*Echinopsis perezensis* cf." in KS 4: 1636 (where the locality is given as "Abstieg von Palmar nach West" = descent from Palmar to the west.

SGO 121355 – (corp), ar, sp

Ritter 788: *Echinopsis* sp.

- Bolivia: Santa Cruz; "Perez, Nr. 16".

SGO 121356 – (corp), ar, sp

Ritter 788a: *Echinopsis* hybr.

- Bolivia: Santa Cruz: Valle Grande; "Comarapa Nr. 14". – One of the original labels gives this as "FR 350b x FR 378 ? oder = FR 778a ?" (which would be *Echinopsis calliantholilacina* × *E. rojasii*); the other label definitely has the collection number 778a.

SGO 121357 – corp, ar, sp (Includes a seedling with roots.)

Ritter 789: *Echinopsis* sp.

- Bolivia: Cochabamba; "Río Mizque bei Juntas, Nr. 5" = Río Mizque near Juntas. – Locality given as "Juntas des Río Mizque" in KS 4: 1636.

SGO 121358 – (corp), ar, sp

Ritter 791: *Echinopsis* sp.

- Bolivia: Chuquisaca: Tomina; "Tomina". – /7. / 1958.

SGO 121359 – (corp), ar, sp

ZSS SR14446 – sem

Ritter 792: *Echinopsis* sp.

- loc. 1:** Bolivia: Chuquisaca: Tomina; "Sopachuy".

SGO 121360 – (corp), ar, sp

- loc. 2:** Bolivia: Chuquisaca: Azurduy; "Tarvita".

SGO 121361 – (corp), ar, sp

Ritter 795: *Lobivia horrida* F. Ritter – Taxon 12(3): 124, 1963.

Typus (T): Ritter 974 (U 117691B, SGO) (Holotype cited for U l.c. (1): 28, 1963.).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti ?; "östl. Puente San Pedro bei 3000 m." = E of Puente San Pedro / "Passhöhe San Pedro - Culpina, Nr. 11" = culmination of pass San Pedro - Culpina. 3000 m. – Province / department information tentative according to KS 2 where the locality is simply written as "El Puente"; other collections from "Puente San Pedro" by Ritter are from

Chuquisaca.

SGO 121362 – (corp), ar, sp, (fl)

loc. 2: Bolivia: Potosí: Nor-Chichas; "33 km sö. Cotagaita" = 33 km SE of Cotagaita / "sö. Cotagaita" = SE of Cotagaita.

SGO 124466 – corp, ar, sp

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; "Abstieg nach Pte. S.n Pedro" = descent to Puente San Pedro. – / 2. / 1963.

ZSS SR14447 – sem

Ritter 796: *Lobivia* sp.

– Bolivia: Chuquisaca: Sud-Cinti; "Salitre, Nr. 12".

SGO 124462 – (corp), ar, sp

Ritter 797: *Lobivia culpinensis* F. Ritter – Succulenta 45(6): 83-84, ill., 1966.

Typus (T): Ritter 797 (U 160337B, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; "oberhalb La Cueva" = above La Cueva.

SGO 121363 – (corp), ar, sp

loc. 2: Bolivia: Potosí; "53 km von Uyuni nach Atocha" = 53 km from Uyuni towards Atocha / "53 km s. Uyuni" = 53 km S of Uyuni. – One of the two original labels gives the numbering as "FR 797 oder FR 348", the other only has the number "797". FR 348 is identified as *Lobivia rossii* var. *bustilloensis* in KS 4.

SGO 121364 – (corp), ar, sp

loc. 3: Bolivia: Potosí; "oberhalb Atocha" = above Atocha.

SGO 121365 – (rad), corp, ar, sp

loc. 4: Bolivia: Potosí: Sud-Chichas; "von Mal Paso" = from Mal Paso. – / – / 1963. – Collection date according to specimen at U.

U 160337B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

loc. 5: Bolivia: Chuquisaca ?; "Lecori, Nr. 12".

SGO 124472 – (corp), ar, sp

loc. 6: Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 10". – / 4. / 1958.

SGO 124473 – (corp), ar, sp

loc. 7: Bolivia: Potosí: Nor-Chichas; "Pass Cotagaita - Tupiza" / "Weg Cotagaita - Tupiza, Pass bei 3700 m, Weststrasse" = Path Cotagaita - Tupiza, pass at 3700 m, western road.

SGO 124474 – rad, corp, ar, sp

loc. 8: Bolivia: Chuquisaca ?; "29 km über Lecori" = 29 km above Lecori / "südl. Lecori" = S of Lecori.

SGO 124475 – (corp), ar, sp

loc. 9: Bolivia: Potosí: Sud-Chichas; "Mal Paso, Nr. 13". – The collection number was only added later, together with the comment "*culpinensis* typisch" = typical *culpinensis*. The original comment "Ausnahme-Exemplar mit 2 Früchten" was at the same time crossed out.

SGO 124476 **Type number** – (corp), ar, sp

- loc.10:** Bolivia: Potosí; "Atocha".
SGO 124477 – (corp), ar, sp
- loc.11:** Bolivia: Potosí: Sud-Chichas; "Abstieg von Mal Paso nach Ost bei 3900 m." = descent from Mal Paso towards the East. 3900 m. – / 11. / 1962. –
Collection number given as "FR 797 cf." on the original label.
ZSS SR14448 **Type number** – sem
- loc.12:** Bolivia: Potosí: Sud-Chichas; "Mal Paso, Höhen" = Mal Paso, altitudes. –
Collection number given as "FR 797 cf." on the original label.
ZSS SR14449 **Type number** – sem
- loc.13:** Bolivia: "Chachacui". – / 12. / 1958.
ZSS SR14450 – sem

Ritter 798: *Lobivia campicola* F. Ritter – Kakt. Südamer. 2: 576, figs. 475-476, 1980.

Typus (T): Ritter 798 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Potosí: Sud-Chichas; "Mal Paso". 3000 m. – / – / 1958. –
Collection date according to the protologue; the specimen at U is dated "1961".
U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
ZSS SR14451 **ISO** – sem
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 16".
SGO 121366 – (corp), ar, sp
- loc. 3:** Bolivia: Potosí: Sud-Chichas; "Mal Paso, Nr. 8".
SGO 124467 **ISO** – (corp), ar, sp

Ritter 799: *Lobivia* sp.

- Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 17".
SGO 121367 – (corp), ar, sp

Ritter 800: *Lobivia* sp.

- Bolivia: Chuquisaca: Sucre; "Hda. Ressini" = Hacienda Ressini. – "Mag zu *Lob. rossii* gehören" = may belong to *Lobivia rossii*.
SGO 121368 – (rad), corp, ar, sp

Ritter 801: *Lobivia* sp.

- Bolivia: Chuquisaca; "Yamparaez, Nr. 4". – "Gehört vielleicht zu *Lob. rossii*" = probably belonging to *Lobivia rossii*. The locality is "südl. Yamparaez" = S of Yamparaez according to KS 4: 1636.
SGO 121369 – (corp), ar, sp (Includes a seedling with roots.)

Ritter 802: *Lobivia* sp.

- Bolivia: Chuquisaca; "Yamparaez, Nr. 5".
SGO 124470 – rad, corp, ar, sp

Ritter 804: *Lobivia* sp.

- Bolivia: Chuquisaca: Azurduy; "Tarvita, Nr. 8".
SGO 121370 – (corp), ar, sp
ZSS T5049 – rad, corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter 805: *Lobivia* sp.

- Bolivia: Santa Cruz: Valle Grande; "Passhöhe zw. Sta. Ana und Valle Grande" = culmination of pass between Santa Ana and Valle Grande. – A second label in this jar reads "Tarvita, Nr. 8" and has the number FR 804 (= *Lobivia* sp. according to KS 4).
SGO 121371 – (corp), ar, sp

Ritter 806: *Echinopsis hystrichoides* F. Ritter – Kakt. Südamer. 2: 626, fig. 589, 1980.

Typus (T): Ritter 806 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "oberhalb [La] Cueva" = above La Cueva. 3000 m. – Altitude given as "gegen 3000 m" in KS 2: 626.
SGO 121380 ISO – (corp), ar, sp
- loc. 2:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 12".
SGO 121381 – (corp), ar, sp
- loc. 3:** Bolivia: Chuquisaca: Sud-Cinti; "Cueva" = La Cueva. – / – / 1963.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 807: *Lobivia rauschii* Zecher – Succulenta 53(3): 42-43, ill., 1974.

Typus (T): Rausch 635 (ZSS).

- Bolivia: Chuquisaca: Sud-Cinti; "Salitre, Nr. 13".
SGO 121372 – rad, corp, ar, sp (Includes a small seedling.)

Ritter 808: *Lobivia caespitosa* (Purpus) Britton & Rose – The Cact. 3: 52, 1922.

- Bolivia: Cochabamba; "oberhalb Quillacollo" = above of Quillacolla.
SGO 124471 – rad, corp, ar, sp

Ritter 809: *Echinopsis ayopayana* F. Ritter & Rausch – Succulenta 47: 85-86, ill., 1968.

Typus (T): Ritter 809 (U [not present ?], SGO, ZSS).

- Bolivia: Cochabamba: Ayopaya; "Passhöhe Quiriripaya - Independencia, über 3000 m." = culmination of pass between Quiriripaya - Independencia, above 3000 m. 3000 m. - 3500 m. – Locality corrected to "Tiquiripaya" in KS 2: 627; altitudinal range given is from original diagnosis of the taxon.
SGO 121373 ISO – (corp), ar, sp
ZSS AX3682 **Type number** – corp, ar, sp, fl (Ex cult. ZSS s.n. 1987 (from material received in 1959 from F. Ritter).)

Ritter 811: *Weingartia cumingii* (Hopffer) Werdermann ex van Oosten – Succulenta 21: 129, 1939. (Nomenclatural standing of this name not assessed (and basionym as well as bracket author probably erroneous).)

loc. 1: Bolivia: Santa Cruz: Florida; "Abstieg nach Mataral" = descent to Mataral / "oberh. Mataral" = above Mataral.

SGO 121306 – (corp), ar, sp

loc. 2: Bolivia: Santa Cruz: Valle Grande; "Comarapa".

SGO 121307 – (corp), ar, sp

Ritter 811a: *Weingartia cumingii* (Hopffer) Werdermann *ex van Oosten* – Succulenta 21: 129, 1939. (Nomenclatural standing of this name not assessed (and basionym as well as bracket author probably erroneous).)

– Bolivia: Santa Cruz; "Saipina". – Identified as "*Weingartia cumingii* (Hopffer) W. T. Marshall var." in the field-number list in KS 4.

SGO 121308 – (corp), ar, sp

Ritter 812: *Weingartia erinacea* F. Ritter – Cact. Succ. J. Gr. Brit. 23(1): 8-9, ill. (p. 11), 1961.

Typus (T): Ritter 812 (U 097864B, SGO).

– Bolivia: Cochabamba: Campero; "Quiroga".

SGO 121309 **ISO** – (corp), ar, sp

U 097864B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.

The original label does not contain locality data and the collection number was only added later in a different hand-writing.)

Ritter 812a: *Weingartia erinacea* F. Ritter var. *catariensis* F. Ritter – Cact. Succ. J. Gr. Brit. 23(1): 8-9, 1961.

Typus (T): Ritter 812a (U 097784B, ZSS [seeds only]).

– Bolivia: Cochabamba: Campero; "Catarire südlich von Quiroga" = Catarire S of Quiroga. – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS.

U 097784B **HOLO** – corp, ar, sp ("Jungexemplar" = juvenile material.

There is a note appended to this specimen explaining that only this very young specimen was available for preservation.)

ZSS SR14452 **ISO** – sem

Ritter 813: *Weingartia riograndensis* F. Ritter – Cact. Succ. J. Gr. Brit. 23(1): 9-11, ill., 1961.

Typus (T): Ritter 813 (U 097824B, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Bolivia: Cochabamba; Río Grande near Puente Arce.

U 097824B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.

The original label does not contain locality data and the collection number was added later in a different hand-writing.)

loc. 2: Bolivia: Cochabamba; "Pte. Arce Nr. 15" = Puente Arce / "Ausgang des Río Chico oberhalb Puente Arce" = exit of Río Chico above Puente Arce. – "Das Exemplar mit hellgelben Stacheln gehört anscheinend nicht hierher, die hellere Farbe der St., die zahlreicheren Randstacheln, der Mangel an dunkler Spitzung der Stacheln, die zahlreicheren und geraderen und kürzeren Mittelstacheln und die geringe Divergenz derselben weisen vielleicht auf *Weing. erinacea* v. *catariensis*." = "The specimen with the pale yellow

spines belong apparently not here; the paler colour of the spines, the more numerous radial spines, the lack of darker tips to the spines, the more numerous and straight and shorter central spines and the more limited divergence between them probably point to *Weingartia erinacea* var. *catarinensis*. The jar contains several fragments, most probably from different plants.

SGO 121310 **Type number** – (corp), ar, sp

- loc. 3:** Bolivia: Cochabamba; "Pte. Arce" = Puente Arce. – / 12. / 1958.
ZSS SR14453 **Type number** – sem

Ritter 814: *Weingartia lanata* F. Ritter – Nation. Cact. Succ. J. 16(1): 7-8, ill., 1961.

Typus (T): Ritter 814 (U 097808B, SGO, ZSS [status ?]).

- loc. 1:** Bolivia: Chuquisaca: Oropeza; Chuquichuqui. – / 12. / 1954. – The same collection has also been distributed under the number Ritter FR 371.

U 097808B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.

The original label does not contain locality data and the collection number was added later in a different hand-writing.)

ZSS A10467 **Type number** – fl (Ex cult. ZSS s.n., 1959.)

ZSS S9945 **Type number** – sem (Leg. F. Ritter 1955.)

ZSS T5065 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. 1959.)

- loc. 2:** Bolivia: Chuquisaca; "oberhalb Sotomayor" = above Sotomayor / "Strasse nach Sotomayor" = road to Sotomayor. – / 12. / 1954.

SGO 121312 – (corp), ar, sp

- loc. 3:** Bolivia: Chuquisaca: Oropeza; "Chuquichuqui". – / 12. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 121311 **ISO** – (corp), ar, sp

ZSS SR14454 **ISO** – sem

Ritter 815: *Weingartia longigibba* F. Ritter – Cact. Succ. J. Gr. Brit. 16(1): 7, ill. (p. 11), 1961.

Typus (T): Ritter 815 (U 097848B, SGO [status ?], ZSS [seeds only, status ?]).

- loc. 1:** Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Südberge" = Culpina, southern mountains.

SGO 121313 – (corp), ar, sp

- loc. 2:** Bolivia: Chuquisaca: Oropeza; "Pte. Arce Nr. 16" / "Rio Chico". – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS (locality given as "Pte. Arce Nr. 16 (Rio Chico)".

SGO 121314 **Type number** – (corp), ar, sp

ZSS SR14455 **Type number** – sem

- loc. 3:** Bolivia: Chuquisaca: Oropeza; on the sandstone rocks occurring on the Río Chico.

U 097848B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.

The original label does not contain locality data and the collection number was added later in a different hand-writing.)

Ritter 816: *Weingartia buiningiana* F. Ritter – Kakt. Südamer. 2: 659, fig. 630, 1980.

Typus (*T*): Ritter 816 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Chuquisaca: Azurduy; "Capadala" at the Río Pilcomayo. – / – / 1958. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U. Erroneously labelled as *Weingartia buiningii*.)

loc. 2: Bolivia: Chuquisaca: Azurduy; "Capajtala Nr. 16".
SGO 121315 **ISO** – (corp), ar, sp

Ritter 817: *Weingartia hediniana* Backeberg – Kakt. and. Sukk. 2: 2-3, 1950.

loc. 1: Bolivia: Chuquisaca / Potosí; "Pulqua [?], Weg von Pt. Sucre nach Sucre bei Millares" = Pulqua, path from Puente Sucre to Sucre near Millares.
SGO 121316 – (corp), ar, sp

loc. 2: Bolivia: Chuquisaca; "Puente Sucre".
SGO 121317 – (corp), ar, sp

loc. 3: Bolivia: Potosí: Saavedra; "unterh. Otuyo" = below Otuyo.
SGO 121318 – rad, corp, ar, sp

loc. 4: Bolivia: Potosí; "Millares". – / 12. / 1958.
SGO 121319 – (corp), ar, sp
ZSS SR14456 – sem

Ritter 818: *Weingartia westii* (Hutchison) Donald – Nation. Cact. Succ. J. 13(4): 67, 1958. (Repeated by Backeberg in Die Cact. 3: 1789, 1959 (and reported as correct place of citation in RPS 10).)

– Bolivia: "Chanchacui". – / 12. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 121320 – (corp), ar, sp, (fl)
ZSS SR14457 – sem

Ritter 819: *Gymnocalycium hamatum* F. Ritter – Kakt. Südamer. 2: 663-664, fig. 650, 1980.

Typus (*T*): Ritter 819 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija: Gran Chaco; "Palos Blancos". – / 4. / 1958. – Collection date according to specimen at SGO and to original Ritter seed sample at ZSS.
SGO 124669 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR15011 **ISO** – sem
ZSS S9940 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)

- loc. 2:** Bolivia: Tarija: Gran Chaco; "12 km N. P. Blancos" = 12 km N of Palos Blancos / "nördl. Palos Blancos" = N of Palos Blancos.
SGO 124670 ISO – rad, corp, ar, sp

Ritter 820: *Cleistocactus jujuyensis* Backeberg – Beitr. Sukk.-kunde & -pflege 1942(3): 49-50, ill., 1942. (Based on *Cleistocactus strausii* var. *jujuyensis* Backeberg 1936 (*nom. inval.*, Art. 36.1).)

- loc. 1:** Bolivia: Tarija: Arce; "von La Merced". – Distributed originally as *Cleistocactus albisetus* (*nom. nud.*), cf. KS 2: 480.
U 160390B – corp, ar, sp (Labelled as "Holotypus" by Ritter (proposed holotype for the nude name *Cleistocactus albisetus*). Collection number inferred.)
ZSS SR14459 – sem
- loc. 2:** Bolivia: Tarija; "Abstieg nach Cajas-Schlucht" = descent to Cajas gorge. – Distributed originally as *Cleistocactus albisetus* (*nom. nud.*), cf. KS 2: 480.
ZSS SR14458 – sem

Ritter 821: *Cleistocactus muyurinensis* F. Ritter – Taxon 13(3): 114-115, 1964. *Typus* (T): Ritter 821 (U 117562B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Bolivia: Santa Cruz: Valle Grande; Muyurina. – Locality data according to the protologue.
U 117562B HOLO – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S9925 Type number – sem (Leg. F. Ritter 1955.)
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Muyurina, Nr. 13".
SGO 124792 ISO – (corp), ar, sp
- loc. 3:** Bolivia: "Estancio Vanegas, Nr. 8". – The comment "Exemplar der Blüten-Beschreibung" = specimen of the flower description, was crossed out and reinstated again on the original label.
SGO 124793 – corp, ar, sp
- loc. 4:** Bolivia: Santa Cruz: Florida; "Agua Clara". – / 7. / 1958. – The collection number is given as "FR 821 [?]" on the original label.
ZSS SR14460 – sem

Ritter 823: *Cleistocactus fusiflorus* Cárdenas – Cactus (Paris) No. 57: 252-254, 1957.

- loc. 1:** Bolivia: Santa Cruz: Valle Grande; "Rio Mizque, Marqueza Nr. 14".
SGO 124794 – corp, ar, sp
- loc. 2:** Bolivia: Santa Cruz; "Perez, Nr. 9" / "Comarapa".
SGO 124795 – (corp), ar, sp
- loc. 3:** Bolivia: Santa Cruz; "Perez".
SGO 124796 – corp, ar, sp
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; "Comarapa Nr. 5". – / 7. / 1958.
ZSS SR14461 – sem

Ritter 824: *Cleistocactus buchtienii* Backeberg – in Backeberg & Knuth,

Kaktus-ABC, 189, 411, 1936. (Dated 1935, publ. Febr. 1936.)

Typus (T): Anonymus s.n. (? , ZSS) (ZSS has an authentic seed sample.).

loc. 1: Bolivia: Chuquisaca; Sotomayor S of the Río Pilcomayo. – Originally distributed as *Cleistocactus sotomayorensis* Ritter (*nom. nud.*), now identified as "*C. buchtienii* forma" in KS 4.

B GH20197 – fl, fr, sem, ic (corp) (Ex cult. BG Berlin, 19. 6. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

B GH20197a – corp, ar, sp (Ex cult. BG Berlin, 2. 8. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

ZSS S9926 – sem (Leg. F. Ritter 1955 (sub *Cleistocactus sotomayorensis*)).

loc. 2: Bolivia: Chuquisaca; "gegenüber Sotomayor" = opposite of Sotomayor / "Sotomayor". – Originally identified as *Cleistocactus sotomayorensis* F. Ritter (*nom. nud.*), now identified as "*C. buchtienii* forma" in KS 4.

SGO 124797 – corp, ar, sp

loc. 3: Bolivia: Chuquisaca; "Sotomayor". – / 7. / 1958.

ZSS SR14462 – sem

Ritter 825: *Cleistocactus pilcomayoensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 676-677, 1980. (Published as provisional name.)

Based on Ritter 825.

loc. 1: Bolivia: Potosí; "Pulque (zw. Millares u. Yotal)" = Pulque (between Millares and Yotal) / "Millares".

SGO 124798 – corp, ar, sp

loc. 2: Bolivia: Chuquisaca; "Puente Sucre".

SGO 124799 – (corp), ar, sp

loc. 3: Bolivia: Potosí; "Millares". – / 12. / 1958.

ZSS SR14463 – sem

Ritter 826: *Cleistocactus tominensis* (Weingart) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 190, 1935.

– Bolivia: Chuquisaca: Tomina; "Tomina".

SGO 124800 – corp, ar, sp

Ritter 827: *Cleistocactus chrysacanthus* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 677, 1980. (Published as provisional name.)

Based on Ritter 827.

– Bolivia: Chuquisaca: Tomina; "Sopachuy", steep walls. – / – / 1958. –

Locality data and collection date supplemented from KS.

SGO 124801 – (rad, corp), ar, sp

Ritter 828: *Cleistocactus capadalenensis* F. Ritter – Kakt. Südamer. 2: 677, 1980.

Typus (T): Ritter 828 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Azurduy; "Capadala", slopes to the Río Pilcomayo. – / – / 1958. – Locality data supplemented from the protologue.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Bolivia: Chuquisaca: Azurduy; "Capajtala, Nr. 8" / "Capajtala". – / – / 1958.
– The second original label also has the locality "Sopachuy" crossed out.
SGO 124802 **Type number** – corp, ar, sp

Ritter 829: *Cleistocactus crassicaulis* Cárdenas – Cact. Succ. J. (US) 33: 77, 1961.

- loc. 1:** Bolivia: Tarija: O'Connor; near Villa Montes, gorge to the W. – / 4. / 1958.
– Collection date according to specimen at SGO. Locality information according to KS 2: 674. Originally distributed as *Cleistocactus ipotanus* (*nom. nud.*).
B GH18404 – fl, ic (corp) (Ex cult. BG Berlin, 12. 7. 1985 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
B GH20100 – fl, ic (fl) (Ex cult. BG Berlin, 9. 6. 1986 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
B GH20100a – corp, ar, sp, fl (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
SGO 124803 – corp, ar, sp
ZSS A9713 – fl (Ex cult. ZSS 92 2098, 21. 8. 1992) (Leg. Ritter (sub *Cleistocactus ipotanus*.)
ZSS S9927 – sem (Leg. F. Ritter 1955 (sub *Cleistocactus ipotanus*.)
ZSS T5092 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. 1960.)
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palos Blancos". – / 4. / 1958.
ZSS SR14464 – sem

Ritter 829a: *Cleistocactus crassicaulis* Cárdenas var. *paucispinus* F. Ritter – Kakt. Südamer. 2: 674-675, 1980.

Typus (T): Ritter 829a (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Tarija: Mendez; "Schluchttiefe nördl. von Cajas" = bottom of gorge N of Cajas. – / – / 1958.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Bolivia: Tarija / Chuquisaca; "grosser Abstieg nach Pilaya, unten" = great descent to Pilaya, below / "Challamarca". – The jar contains only a single specimen despite the two conflicting original labels.
SGO 124804 **Type number** – corp, ar, sp
- loc. 3:** Bolivia: Tarija: Mendez; "grosse Schlucht unterh. Alto de España, Nr. 4" = large gorge below Alto de España / "Cajas, unten" = Cajas, below / "Cajas".
SGO 124805 **Type number** – (corp), ar, sp
- loc. 4:** Bolivia: Tarija: Mendez; "Cajas-Schlucht oben" = Cajas gorge, above. – / 2. / 1963.
ZSS SR14466 **Type number** – sem

Ritter 830: *Cleistocactus micropetalus* F. Ritter – Kakt. Südamer. 2: 675, figs.

653, 656, 1980.

Typus (T): Ritter 830 (U 160684B, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: La Paz: Avilez; Concepción. – / – / 1958.
 B GH18323 – fl, ic (corp) (Ex cult. BG Berlin, 5. 7. 1985 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
 ZSS S10391 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)
- loc. 2:** Bolivia: La Paz: Avilez; "Concepción". – / – / 1963.
 U 160684B **HOLO** – corp, ar, sp (Collection number inferred. Labelled as "Holotypus" by Ritter.)
- loc. 3:** Bolivia: La Paz: Avilez; "Valle Concepcion, Nr. 10; Angostura". – The original label has "Angostura" added in a slightly different handwriting.
 SGO 124806 **Type number** – corp, ar, sp, fr
- loc. 4:** Bolivia: La Paz: Avilez; "Angostura (Valle Concepción)". – / 3. / 1958.
 ZSS SR14467 **Type number** – sem

Ritter 831: *Cleistocactus smaragdiflorus* (F. A. C. Weber) Britton & Rose fa. *rojoi* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 678, 1980.

- loc. 1:** Bolivia: Tarija: O'Connor; "Tapecua". – / – / 1963. – Identified as *Cleistocactus smaragdiflorus* var. *rojoi* var. *viridiflora* (sic !; *nom. nud.*) on the original label.
 U – ar, sp (Collection number inferred.)
- loc. 2:** Bolivia: Tarija; "Entre Rios".
 SGO 124807 – corp, ar, sp
- loc. 3:** Bolivia: Tarija: O'Connor; "Abstieg von West nach Sereré" = descent from the West to Sereré / "Sereré".
 SGO 124808 – corp, ar, sp
- loc. 4:** Bolivia: "Pereti". – / 1. / 1963.
 ZSS SR14468 – sem

Ritter 832: *Cleistocactus luribayensis* Cárdenas – Cact. Succ. J. (US) 28(2): 59-60, 1956.

- loc. 1:** Bolivia: La Paz ?; Murillo ?; "Caracato". – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS.
 SGO 124809 – (corp), ar, sp
 ZSS SR14469 – sem
- loc. 2:** Bolivia: sine loco.
 B GH31613 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)

Ritter 834: *Cleistocactus ayopayanus* Cárdenas – Cact. Succ. J. (US) 28(2): 58-59, 1956.

- loc. 1:** Bolivia: Cochabamba: Ayopaya; "... Independencia..." / "Tiquirpaya".
 SGO 124810 – corp, ar, sp

loc. 2: Bolivia: Cochabamba: Ayopaya; "Pte. Pilatos" = Puente Pilatos. – / 6. / 1958. – Collection date according to original Ritter seed sample at ZSS.
SGO 124811 – corp, ar, sp
ZSS SR14470 – sem

loc. 3: Bolivia: sine loco.
B GH31642 – corp, ar, sp, fl, ic (corp,fl) (Ex cult. BG Berlin, 2. 8. 1993
(cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

Ritter 835: *Cleistocactus palhuayensis* F. Ritter & Shahori var. ***camachoensis***
F. Ritter & Shahori – in Ritter, Kakt. Südamer. 2: 688-689, figs. 670, 673,
1980.

Typus (T): Ritter s.n. (U [not found], SGO [status ?, sub Ritter 835]) (Type
cited for U l.c. 1: iii, 1979.).

– Bolivia: La Paz: Larecaja; "Cascabel, Nr. 10". – This is appears to be the
type collection for the taxon, but the type is reported from a different
locality. The material at SGO seems at least in part to be derived from
cultivation.
SGO 124812 – rad, corp, ar, sp

Ritter 836: *Cleistocactus azerensis* Cárdenas – Cact. & Succ. J. (US) 33: 74,
1961.

– Bolivia: Chuquisaca; "Pte. Acero" = Puente Acero.
SGO 124813 – corp, ar, sp

Ritter 837: *Cleistocactus* sp.

– Argentina / Bolivia: "Pocitos (Yacuiba)". – 'Estación Pocitos' is in
Argentina (Salta), 'Yacuiba' in Bolivia (Tarija). "Nach der Bestachel. kann es
[*Cleistocactus rojoi* sein" = according to the spination this can be
Cleistocactus rojoi.
SGO 124814 – corp, ar, sp

Ritter 838: *Vatricania guentheri* (Kupper) Backeberg – Cact. Succ. J. (US) 23:
149, 1951.

loc. 1: Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza" = ascent from
Marqueza / "Marqueza".
SGO 125515 (in 2 parts) – corp, ar, sp, ceph (Includes a rooted seedling.)

loc. 2: Bolivia: Santa Cruz: Valle Grande; "östl. Marqueza" = E of Marqueza. – / 7.
/ 1958.
ZSS SR14471 – sem ("Same taub" = seed sterile.)

Ritter 839: *Bolivicereus brevicaulis* F. Ritter – Kakt. Südamer. 2: 703, figs.
703, 705-706, 1980.

Typus (T): Ritter 839 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:
iii, 1979.).

loc. 1: Bolivia: Santa Cruz: Florida; "Mairana". – / 3. / 1959. – Collection date
according to original Ritter seed sample at ZSS; the holotype specimen at U
is dated 1958.

SGO 121991 **ISO** – (corp, ar, sp), (ft) ("(10 Ri.)" = 10 ribs.)
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
 the holotype as this is the only specimen present at U.)
 ZSS SR14472 **ISO** – sem

Ritter 840: *Bolivicereus rufus* F. Ritter – Kakt. Südamer. 2: 703-704, fig. 12, 1980.

Typus (T): Ritter 840 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Chuquisaca: Azero / Tomina; "Puente Acero" [Puente Azero], frontier of Prov. Azero and Prov. Tomina. – / 8. / 1958. – Locality data supplemented from the protologue. Collection date according to original Ritter seed sample at ZSS ("VIII 58." and to specimen at U ("1958").
 SGO 121992 **ISO** – corp, ar, sp
 U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14473 **ISO** – sem

Ritter 841: *Cleistocactus chacoanus* F. Ritter – Kakt. Südamer. 2: 671-672, fig. 685, 1980.

Typus (T): Ritter 841 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Tarija: O'Connor; "Villa Montes" / "Villamontes". – / – / 1958. – Collection date according to specimen at U.
 SGO 124815 **ISO** – corp, ar, sp
 U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palmar Grande".
 SGO 124816 – corp, ar, sp
- loc. 3:** Bolivia: Santa Cruz: Cordillera; "Boyuiibe".
 SGO 124817 – corp, ar, sp
- loc. 4:** Argentina: Salta; "Rio Juramento" / "Lumbreras". – "Ca. 13 Rippen. Blüten mennigrot, schief." = C. 13 ribs. Flowers crimson red, zygomorphic.
 SGO 124818 – corp, ar, sp
- loc. 5:** Bolivia: Santa Cruz: Cordillera ?; "Buen Retiro (west Boyuiibe)" = Buen Retiro (W of Retiro) / "Buen Retiro".
 SGO 124819 – corp, ar, sp
- loc. 6:** Bolivia: Tarija: O'Connor; Villa Montes. – Locality according to the protologue.
 ZSS S10390 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)
 ZSS T5050 **Type number** – corp, ar, sp (Leg. F. Ritter.)
- loc. 7:** Argentina: Salta; "Lumbreras". – / 2. / 1959. – The original label is numbered as "FR 841 cf."
 ZSS SR13722 – sem
- loc. 8:** Bolivia: Tarija: Gran Chaco / O'Connor ?; "Villamontes + Palmar Grande". – / 4. / 1958.
 ZSS SR14474 **Type number** – sem

Ritter 842: *Cleistocactus chacoanus* F. Ritter – Kakt. Südamer. 2: 671-672, fig. 685, 1980.

Typus (T): Ritter 841 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija: O'Connor, Margarita. – Originally distributed as *Cleistocactus margaritanus* (*nom. nud.*). Identified as "*Cleistocactus chacoanus* fa." in KS 4: 1637.

B GH12495 – fl, ic (corp) (Ex cult. BG Berlin, 29. 7. 1982 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

B GH12495a – corp, ar, sp, fl (Ex cult. BG Berlin, 2. 8. 1993 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)

loc. 2: Bolivia: Tarija: O'Connor / Gran Chaco ?; "Margarita" / "Palos Blancos". – The label with the "Palos Blancos" locality also contains "Epiphytische Form" = epiphytic form. The specimen consists of 4 similar-looking fragments. Identified as "*Cleistocactus chacoanus* fa." in the field-number list in KS 4: 1637.

SGO 121993 – corp, ar, sp

loc. 3: Bolivia: Tarija: O'Connor, "Margarita". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as "*Cleistocactus chacoanus* fa." in the field-number list in KS 4: 1637.

SGO 121995 – corp, ar, sp

ZSS SR14475 – sem

Ritter 843: *Castellanosia caineana* Cárdenas – Cact. Succ. J. (US) 23(3): 90-91, 1951.

loc. 1: Bolivia: from various warmer regions of SE Bolivia.

B GH31606 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 21. 7. 1993 (cult. ex sem Cat. H. Winter 1957). Collection number inferred.)
ZSS S9923 – sem (Leg. F. Ritter 1955.)

loc. 2: Bolivia: Cochabamba ?; "Villa Montes + Juntas am Río Mizque" = Villa Montes + Juntas at the Río Mizque / "Villamontes + Juntas".

SGO 125022 – (corp), ar, sp, al

loc. 3: Paraguay: Chaco; "Cerro León, unten" = Cerro León, below.

SGO 125023 – (corp), ar, sp

loc. 4: Bolivia: Tarija: Gran Chaco / O'Connor ?; "Palos Blancos (viel) + Villamontes (wenig)" = Palos Blancos (many) + Villamontes (few). – / 4. / 1958.

ZSS SR14476 – sem

Ritter 844: *Monvillea chacoana* F. Ritter – Kakt. Südamer. 2: 509-510, figs. 367, 582, 1980.

Typus (T): Ritter 844 (U 160241B, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija: O'Connor, "Villa Montes". – / - / 1963. – Collection date according to specimen at U.

SGO 121821 ISO – corp, ar, sp

U 160241B HOLO – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

Collection number inferred.)

loc. 2: Bolivia: Tarija: Gran Chaco / O'Connor ?; "Villamontes + Palmar Grande".
– / 4. / 1958.

ZSS SR14477 **Type number** – sem

loc. 3: Bolivia: Santa Cruz: Cordillera; "20 km südl. Boyuibe + Boyuibe" = 20 km S
of Boyuibe + Boyuibe.

ZSS SR14478 – sem

Ritter 845: *Monvillea* sp.

– Bolivia: Tarija: Gran Chaco; "Palos Blancos".

SGO 121822 – corp, ar, sp

Ritter 846: *Hildewintera aureispina* (F. Ritter) F. Ritter – Kakt. and. Sukk. 17:
11, 1966.

– Bolivia: Santa Cruz: Florida; "Agua Clara" (Yapacani-Schlucht, Strasse von
Mataral nach Mairana = Yapacani gorge, road from Mataral to Mairana). – /
7. / 1958. – Collection date according to original Ritter seed sample at ZSS.
Locality information in brackets according to KS 2: 699.

SGO 121321 **ISO** – corp, ar, sp

U 097816B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. The
collection number was obviously only added later to the original
label.)

ZSS SR14479 **ISO** – sem

Ritter 847: *Cleistocactus vulpis-cauda* F. Ritter & Cullmann – Kakt. and. Sukk.
13(3): 38-40, ills., 1962.

Typus (T): Ritter 847 (ZSS [not found], SGO [status ?]).

loc. 2: Bolivia: Chuquisaca; "Pte. Acero, Nr. 12" = Puente Acero.

SGO 124821 **Type number** – corp, ar, sp

Ritter 848: *Eriocereus bonplandii* (Parmentier ex Pfeiffer) Riccobono – Boll.
Reale Orto Bot. Palermo 8: 238, 1909.

loc. 1: Bolivia: Tarija: O'Connor; "Villa Montes". – The original label identifies
this collection as *Eriocereus crucicentrus* Ritter (*nom. nud.*).

SGO 121716 – (corp), ar, sp

ZSS S9930 – sem (Leg. F. Ritter 1955. No locality data associated with
this specimen.)

loc. 2: Bolivia: Tarija: Gran Chaco / O'Connor ?; "Villamontes + Palmar Grande".
– / 4. / 1958. – The original label first identified this collection as *Eriocereus*
crucicentrus Ritter (*nom. nud.*).

ZSS SR14480 – sem

Ritter 849: *Eriocereus* sp.

– Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza, Nr. 10" =
ascent from Marqueza.

SGO 121717 – corp, ar, sp

Ritter 850: *Trichocereus tarijensis* (Vaupel) Werdermann – Kakteenkunde 1940: 7, 1940. (Combination repeated by Cárdenas in Fuaux Herb. Bull. 5: 10, 1953.)

loc. 1: Bolivia: Tarija: Mendez; "Cieneguillas Nr. 15". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as *Trichocereus tarijensis* var. *tarijensis* in KS 4.

SGO 121253 – (corp), ar, sp
ZSS SR14481 – sem

loc. 2: Bolivia: Tarija; "Escayachi". – / 12. / 1958. – Collection date according to original Ritter seed sample at ZSS. Identified as *Trichocereus tarijensis* var. *tarijensis* in KS 4.

SGO 121252 – (corp), ar, sp
ZSS SR14482 – sem

Ritter 851: *Trichocereus tarijensis* (Vaupel) Werdermann var. *totorillanus* F. Ritter – Cactus (Paris) 22(88): 26, ill., 1967. (Erroneously omitted from all volumes of RPS.)

Typus (T): Ritter 851 (U 160369B, ZSS [seeds only, status ?]).

loc. 1: Bolivia: Tarija: Mendez; "von Totorilla" = from Totorilla. 2800 m. – / – / 1963. – Altitude according to KS. Collection date according to specimen at U.

U 160369B **HOLO** – corp, ar, sp ("Jugend- und Altersform" = juvenile and fertile form. Assumed to be the holotype as this is the only specimen present at U.)

ZSS S9935 **Type number** – sem (Leg. F. Ritter 1955 (sub *Trichocereus totorillanus*). No locality data associated with this specimen.)

loc. 2: Bolivia: Tarija: Mendez; "Cieneguillas Nr. 5". – / 4. / 1958. – Collection date according to original Ritter seed sample at ZSS.

SGO 121255 – (corp), ar, sp
ZSS SR14483 – sem

Ritter 852: *Trichocereus* sp.

– Bolivia: Chuquisaca; "Yamparaez Nr. 10".

SGO 121254 – (corp), ar, sp

Ritter 853: *Trichocereus crassicostatus* F. Ritter – Cactus (Paris) 21(87): 13-14, ill., 1966. (Erroneously treated as invalid in RPS 17.)

Typus (T): Ritter 853 (U 160756B, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Bolivia: Tarija: Mendez; "Rio Cajas". – / 4. / 1958.

SGO 121174 **Type number** – corp, ar, sp

loc. 2: Bolivia: Tarija: Arce; "zw. La Merced und Rio Negro" = between La Merced and Rio Negro.

SGO 121275 **Type number** – (corp), ar, sp

loc. 3: Bolivia: Tarija: Cercado; "von unterhalb Tarija" = from below Tarija. – / – / 1963. – Collection date according to specimen at U.

U 160756B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

Collection number inferred.)

- loc. 4:** Bolivia: Tarija; "Angosto, 1. Durchbruch Tarija-Fluss" = Angosto, first break-through of the Tarija river.
SGO 125537 **Type number** – (corp), ar, sp
- loc. 5:** Bolivia: Tarija; "Angosto de Tarija". – / 2. / 1963.
ZSS SR14484 **Type number** – sem

Ritter 854: *Trichocereus* sp.

- Bolivia: Chuquisaca: Tomina; "Sopachuy Nr. 2". – / 8. / 1958.
SGO 121256 – (corp), ar, sp

Ritter 855: *Trichocereus* sp.

- loc. 1:** Boliva: "über Marqueza" = above Marqueza / "Aufstieg von Marqueza Nr. 27" = ascent from Marqueza Nr. 27".
SGO 121176 – (corp), ar, sp
- loc. 2:** Boliva: "Abstieg nach Rio Mizque Nr. 8" = descent to Rio Mizque / "unterh. Palmar" = below Palmar. – This specimen jar contains 2 labels with the different localities given above. The 3 fragments seem to fall in 2 groups.
SGO 121175 – (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba: Campero; "Oberh. Chuyllas" = Above Chuyllas / "Abstieg von Totora nach Chuyllas 2500 m" = descent from Totora to Chuyllas. 2500 m.
SGO 121257 – (corp), ar, sp

Ritter 856: *Trichocereus riomizquensis* F. Ritter – Kakt. Südamer. 2: 563-564, fig. 444, 1980.

Typus (T): Ritter 856 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Cochabamba: Campero; "Chuyllas" at the Río Mizque, on steep walls. – / 12. / 1958. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14485 **ISO** – sem
- loc. 2:** Bolivia: Cochabamba: Campero; "Chuyllas Nr. 9".
SGO 121258 **Type number** – (corp, ar, sp)
- loc. 3:** Bolivia: Cochabamba: Campero; sine loco.
B GH21330 – ic (corp) (Ex cult. BG Berlin, 6. 6. 1986 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
ZSS S4164 **Type number** – sem (Cult. sub ZSS 88 1007 (ex cult. Parque Montjuic, Barcelona, 1988).)

Ritter 857: *Trichocereus* sp.

- loc. 1:** Bolivia: Cochabamba: Ayopaya; "Independencia Nr. 4".
SGO 121186 – (corp), ar, sp

- loc. 2:** Bolivia: Cochabamba: Ayopaya; "Puente Pilatos Nr. 1". – / 6. / 1958. –
Collection date according to original Ritter seed sample at ZSS.
SGO 121259 – (corp), ar, sp
ZSS SR14486 – sem ("Same taub" = seed sterile.)

Ritter 858: *Trichocereus* sp.

- Bolivia: La Paz: Larecaja; "Cascabel Nr. 8".
SGO 121172 – corp, ar, sp

Ritter 860: *Trichocereus vollianus* Backeberg – in Backeberg & Knuth, Kaktus ABC, 204, 412, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Bolivia: Chuquisaca: Tomina; "Tomina Nr. 4".
SGO 121178 – (corp), ar, sp
- loc. 2:** Bolivia: Chuquisaca: Sucre; "Hda. Rellini" = Hacienda Rellini.
SGO 121263 – (corp), ar, sp
- loc. 3:** Bolivia: "Beginn Rio Chula" = start of Río Chula.
SGO 121261 – (corp), ar, sp
- loc. 4:** Bolivia: Cochabamba: Tapacari; "unterhalb Sayari, 3000 m" = below Sayari.
3000 m.
SGO 121260 – corp, ar, sp, al
- loc. 5:** Bolivia: Cochabamba; "50 km östl. Cochab.ba" = 50 km E of Cochabamba.
SGO 121262 – (corp), ar, sp

Ritter 861: *Trichocereus tunariensis* Cárdenas – Cactus (Paris) 14(64): 160, 1959.

- loc. 1:** Bolivia: Cochabamba; "Quillacollo".
SGO 121171 – (corp), ar, sp
- loc. 2:** Bolivia: Cochabamba; "Abstieg nach Parotani, 3600 m" = descent to Parotani / "oberh. Sayari" = above Sayari. 3600 m. – There are 2 labels and two very slightly differing fragments in this jar, indicating two different collection localities.
SGO 121264 – (corp), ar, sp
- loc. 3:** Bolivia: Cochabamba; "Quillacollo, Höhen" = Quillacollo, altitudes. – / 6. / 1958.
ZSS SR14487 – sem

Ritter 862: *Trichocereus* sp.

- Bolivia: Santa Cruz: Valle Grande; "nördl. Sta. Ana" = N of Santa Ana / "Passhöhe zw. Sta. Ana u. Valle Grande Nr. 5" = culmination of pass between Santa Ana and Valle Grande.
SGO 121265 – (corp), ar, sp

Ritter 863: *Trichocereus* sp.

- loc. 1:** Bolivia: Chuquisaca; "Yamparaez Nr. 7". – "10 - 12 cm Durchmesser" = 10 - 12 cm in diameter.
SGO 121267 – (corp), ar, sp

- loc. 2:** Bolivia: Chuquisaca: Oropeza; "westl. Sucre" = W of Sucre / "Strasse Sucre - Ravelo, nach 26 km" = road Sucre - Ravelo, after 26 km".
SGO 121266 – (corp), ar, sp

Ritter 863a: *Trichocereus* sp.

- loc. 1:** Bolivia: Chuquisaca: Azurduy; "Tarvita, tiefere Lagen" = Tarvita, lower altitudes.
SGO 121152 – (rad, corp, ar, sp) (2 seedlings only.)
- loc. 2:** Bolivia: Chuquisaca: Azurduy; "Tarvita, hohe Lagen" = Tarvita, upper altitudes.
SGO 121268 – (corp), ar, sp

Ritter 863b: *Trichocereus chuquisacanus* F. Ritter – Cactus (Paris) 21(87): 12, ill., 1966. (Erroneously treated as invalid in RPS 17.)

Typus (T): Ritter 863b (U 160417B, SGO, ZSS [seeds only]) (No herbarium cited for the type.)

- Bolivia: Chuquisaca: Sud-Cinti; "unterhalb La Cueva" = below La Cueva. – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS ("II. 63") and to type specimen at U ("1963"). The protologue gives the collection date as 1958 and the locality as 'above La Cueva'.
SGO 121269 **ISO** – corp, ar, sp
U 160417B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
ZSS SR14488 **ISO** – sem

Ritter 864: *Trichocereus* sp.

- loc. 1:** Bolivia: Santa Cruz; "Abstieg nach Saipina Nr. 10" = descent to Saipina.
SGO 121177 – (corp), ar, sp
- loc. 2:** Bolivia: Santa Cruz: Valle Grande; "Comarapa Nr. 18".
SGO 121170 – (corp), ar, sp
- loc. 3:** Bolivia: Chuquisaca: Azurduy; "Capaytala Nr. 4". – / 8. / 1958. – Collection date according to original Ritter seed sample at ZSS (locality written as "Capajtala Nr. 4".
SGO 121173 – (corp), ar, sp
ZSS SR14489 – sem
- loc. 4:** Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza Nr. 12, untere Lagen" = ascent from Marqueza, lower altitudes.
SGO 121270 – (corp), ar, sp

Ritter 865: *Trichocereus* sp.

- Bolivia: Chuquisaca; "südl. Sotomayor Nr. 5" = S of Sotomayor / "gegenüber Sotomayor Nr. 5" = opposite Sotomayor. – The specimen jar contains 2 labels with the different information as given above, and two fragments which differ slightly.
SGO 121192 – (corp), ar, sp

Ritter 866: *Trichocereus tenuispinus* F. Ritter var. *pajonalensis* F. Ritter –

Cactus (Paris) 22(88): 27-28, ill., 1967.

Typus (T): Ritter 866 (U 160257B).

loc. 1: Bolivia: Tarija: O'Connor, "vom Pajonal-Fluss" = from the Río Pajonal. – / – / 1963. – Collection date according to specimen at U.
U 160257B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)

loc. 2: Bolivia: Tarija: O'Connor, "Narvais Nr. 1" = Narvaez.
SGO 121271 – (corp), ar, sp

loc. 3: Bolivia: Tarija: O'Connor, "Narvaez bei 2100 - x m. + bei 2000 - x m.". 2000 m. - 2100 m. – "Höhenform" = high altitude form.
SGO 121272 – corp, ar, sp

loc. 4: Bolivia: Tarija: O'Connor, "Narvaez". – / 1. / 1963.
ZSS SR14490 – sem

Ritter 867: *Trichocereus tenuispinus* F. Ritter – Cactus (Paris) 22(88): 27-28, ill., 1967. (Erroneously omitted from all volumes of RPS. The collection number of the type is taken from Kakt. Südamer. 2: 564-565, 1980.)

Typus (T): Ritter 616 (U 160361B, SGO [status ?], ZSS [seeds only, status ?]).

– Bolivia: Tarija: Mendez, "Cajas Nr. 1" / "Cajas, oben" = Cajas, above. – The second label present in the jar has the collection number 867 crossed and replaced with 616 (which is said to equal 867 in KS 4). Identified as *Trichocereus tenuispinus* var. *tenuispinus* in KS 4: 1637.
SGO 121273 – (corp), ar, sp

Ritter 868: *Trichocereus hybr.*

– Bolivia: Tarija; "Tarija Nr. 10". – / – / 1958. – Given as hybrid between *Trichocereus caulescens* FR 73 × *T. tenuispinus* var. *tenuispinus* FR 616 (= FR 876).
SGO 121182 – (corp), ar, sp

Ritter 869: *Trichocereus cajasensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 2: 566-567, 1980. (Published as provisional name.)
Based on Ritter 869.

loc. 1: Bolivia: Tarija: Mendez, "unterhalb Alto de España Nr. 9" = below Alto de España.
SGO 121180 – (corp), ar, sp

loc. 2: Bolivia: Tarija: Gran Chaco; "Palos Blancos Nr. 18".
SGO 121274 – (corp), ar, sp

loc. 3: Bolivia: Tarija: Mendez / Gran Chaco ?; from below Alto España to almost Palos Blancos. 2300 m.
ZSS S9885 – sem (Leg. BG Barcelona ex cult. Cult. sub ZSS 84 1694.)

loc. 4: Bolivia: Tarija: Mendez, "Abstieg in Cajas-Schlucht" = descent into Cajas gorge. – / 2. / 1963.
ZSS SR14491 – sem

Ritter 870: *Trichocereus* sp.

loc. 1: Bolivia: Tarija: Mendez; "Colpana Nr. 11". – / 4. / 1958.
SGO 121179 – corp, ar, sp

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "Rio Challamarca Nr. 3". – / 5. / 1958. –
Collection date according to original Ritter seed sample at ZSS.
SGO 121190 – corp, ar, sp
ZSS SR14492 – sem ("Same taub" = seed sterile.)

Ritter 872: *Stetsonia coryne* (Salm-Dyck) Britton & Rose – The Cact. 2: 64, 1920.

– Bolivia: southernmost Bolivia. – Locality according to KS 2.
ZSS S9931 – sem (Leg. F. Ritter 1955 (sub *Stetsonia boliviana*)).

Ritter 873: *Stetsonia coryne* Britton & Rose var. *procera* F. Ritter – Taxon 13(3): 116, 1964. (The number of the type collection is ambiguous in the protologue and is here assigned on account of the locality data which agrees completely with the protologue.)

Typus (T): Ritter 873 (U 116908B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

– Bolivia: Tarija: Gran Chaco / O'Connor; "Palos Blancos", frontier of Prov. Gran Chaco and Prov. O'Connor. – / 4. / 1958. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS.
SGO 121289 **ISO** – ar, sp
U 116908B **HOL**O – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS SR14493 **ISO** – sem
ZSS S9932 **Type number** – sem (Leg. F. Ritter 1955. No locality data associated with this specimen.)

**Ritter 874: *Stetsonia glauca* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1637, 1981. (Published as provisional name.)
*Based on Ritter 874.***

– Bolivia: Santa Cruz: Valle Grande; "von Marqueza (Rio Mizque), Nr. 16" = from Marqueza (Rio Mizque). – "Unterschiede dieses Musters von Muster Palos Blancos: Rippen an den Areolen weniger verbreitert, Kanten schmäler. Areolen erhabener, stärker filzig, Filz orange. Stacheln einige mehr. Rippen schmäler, so dass Areolen sich weit darüber ausbuchten. Körperfarbe anscheinend noch blauer." = Differences of this specimen vs. specimen from Palos Blancos: Ribs at the areoles less broadened, edges narrower. Areoles more raised, more strongly felted, felt orange. Spines some more. Ribs narrower so that the areoles are broadly bulging. Body colour apparently even more blue.
SGO 125538 (in 2 parts) – (corp), ar, sp

Ritter 875: *Corryocactus ayopayanus* Cárdenas – Rev. Agric. Cochabamba 7(7): 21-22, ill., 1952.

Typus (T): Cardenas 4814 (BOLV ?).

loc. 1: Bolivia: Cochabamba: Ayopaya; "Puente Pilatos". – / 6. / 1958. –
Collection date according to original Ritter seed sample at ZSS (locality
given as "Pte. Pilatos").
SGO 125053 – (corp), ar, sp
ZSS SR14494 – sem

loc. 2: Bolivia: sine loco.
B GH22090 – fl, ic (corp, fl) (Ex cult. BG Berlin, 30. 6. 1987 (cult. ex
sem. Cat. H. Winter 1960). Collection number inferred.)
B GH26922 – fl, ic (corp) (Ex cult. BG Berlin, 13. 6. 1990 (cult. ex sem.
Cat. H. Winter 1960). Collection number inferred.)
B GH26922a – corp, ar, sp (Ex cult. BG Berlin, 2. 8. 1993 (cult. ex sem.
Cat. H. Winter 1960). Collection number inferred.)

Ritter 876: *Corryocactus pulquinensis* Cárdenas – Nation. Cact. Succ. J. 12(4):
84, 1957.

– Bolivia: Santa Cruz; "Saipina (östl.)" = Saipina (E of). – / 7. / 1958.
SGO 125054 – corp, ar, sp

Ritter 877: *Cereus comarapanus* Cárdenas – Succulenta 1956(1): 3-6, 1956.

loc. 1: Bolivia: Santa Cruz: Valle Grande; "Comarapa". – Treated as
Piptanthocereus (*nom. illeg.*) by Ritter.
SGO 121778 – (corp), ar, sp

loc. 2: Bolivia: Chuquisaca: Sud-Cinti; "Challamarca". – "Gräulich-grün" =
greyish-green. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121779 – corp, ar, sp

loc. 3: Bolivia: Cochabamba; "Rio Mizque, Juntas, Nr. 18". – Treated as
Piptanthocereus (*nom. illeg.*) by Ritter.
SGO 121780 – corp, ar, sp

loc. 4: Bolivia: Santa Cruz: Florida; "westl. Mataral" = W of Mataral / "Aufstieg
von Mataral" = ascent from Mataral. – "Muss diese Art sein, denn *Cer.*
forbesii gibt es dort nicht." = must be this species as *Cereus forbesii* does not
exist there. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121781 – (rad, corp, ar, sp) (Rooted seedling only.)

loc. 5: Bolivia: sine loco.
B GH20313 – fl (Ex cult. BG Berlin, 25. 6. 1986 (cult. ex sem. Cat. H.
Winter 1960). Collection number inferred.)

loc. 6: Bolivia: Santa Cruz: Florida; "Abstieg nach Mataral" = descent to Mataral.
– / 3. / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14495 – sem

loc. 7: Bolivia: Chuquisaca: Sud-Cinti; "Abstieg zum Río Challamarca" = descent
to the Río Challamarca. – / 5. / 1958. – Treated as *Piptanthocereus* (*nom.*
illeg.) by Ritter.
ZSS SR14496 – sem

Ritter 878: *Cereus* sp.

- Bolivia: La Paz: Sud-Yungas; "Plazuela, Nr. 12". – "Grosser" = Large one.
Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121782 – (corp), ar, sp

Ritter 879: *Rhipsalis lorentziana* Grisebach – Abh. Ges. Wiss. Göttingen 24: 139, 1879.

- loc. 1:** Bolivia: Tarija; "Entre Rios". – One of the original labels has the field number crossed out and replaced with "FR 362", both numbers are said to be equal in the field number list in KS 4.
SGO 125585 – corp, ar, sp
- loc. 2:** Bolivia: Tarija; "Yacuiba, Nr. 6 + 3". – One of the original labels has the field number crossed out and replaced with "FR 362", both numbers are said to be equal in the field number list in KS 4.
SGO 125586 – corp, ar, sp
- loc. 3:** Bolivia: Tarija; O'Connor; "Narvais" / "Narvaez". – One of the original labels has the field number crossed out and replaced with "FR 362", both numbers are said to be equal in the field number list in KS 4.
SGO 125587 – rad, corp, ar, sp

Ritter 880: *Pfeiffera ianthothele* (Monville) F. A. C. Weber var. *tarijensis* F. Ritter – Kakt. Südamer. 2: 503-504, 1980.

Typus (*T*): Ritter 880 (U, SGO [status ?], ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Tarija: Arce; "südlich Padcaya" = S of Padcaya. – / – / 1958. – Collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
ZSS A10482 **Type number** – fl (Ex cult. ZSS s.n., 9. 5. 1975. No locality data associated with this specimen.)
ZSS S10410 **Type number** – sem (Leg. Stichting, 1967. No locality associated with this specimen.)
- loc. 2:** Bolivia: Tarija: Arce; "Strasse Padcaya - La Merced" = road Padcaya - La Merced / "Padcaya".
SGO 125373 **Type number** – rad, corp, ar, sp
- loc. 3:** Bolivia: Tarija; "Strasse von Yacuiba nach Palmar Grande" = road from Yacuiba to Palmar Grande / "nördl. Yacuiba" = N of Yacuiba.
SGO 125374 – corp, ar, sp
- loc. 4:** Bolivia: Tarija: Mendez; "Fluss unterh. Alto de España" = river below Alto de España / "Rio Cajas".
SGO 125375 – corp, ar, sp
- loc. 5:** Bolivia: Tarija: Mendez; "Schlucht Cajas" = gorge Cajas. – / 4. / 1958.
ZSS SR14497 – sem

Ritter 881: *Pfeiffera mataralensis* F. Ritter var. *floccosa* F. Ritter – Taxon 13(3): 116, 1964.

Typus (*T*): Ritter 881 (U 117887B, SGO) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: Cochabamba: Campero; Quiroga.
U 117887B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Bolivia: Cochabamba: Campero; "Abstieg nach Pte. Arce. Quiroga" = descent to Puente Arce. Quiroga / "Quiroga". – The locality "Quiroga" on the first original label was added later.
SGO 125376 **ISO** – corp, ar, sp, fr, sem (Includes juvenile material.)

Ritter 882: *Pfeiffera gracilis* F. Ritter – Kakt. Südamer. 2: 505, fig. 350, 1980.

Typus (T): Ritter 882 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Cochabamba: Mizque / Campero; "Chuyllas, Grenze der Provinzen Mizque und Campero" = Chuyllas, frontier of Prov. Mizque and Campero. – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS ("VII 58.", locality simply given as "Chuyllas") and to specimen at U ("1958").
SGO 125377 **ISO** – (corp, ar, sp) (Locality simply given as "Chuyllas").
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present at U.)
ZSS S12408 **Type number** – sem (Leg. Fa. Winter 1961. No locality associated with this specimen.)
ZSS SR14498 **ISO** – sem

Ritter 883: *Pfeiffera erecta* F. Ritter – Taxon 13(3): 116, 1964.

Typus (T): Ritter 883 (U 117523, ZSS [seeds only, status ?]) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Bolivia: Santa Cruz: Valle Grande; W of Valle Grande on slopes to Río Mizque. – / – / 1958.
U 117523B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S10371 **Type number** – sem (Ex cult. ZSS 1964.)

loc. 2: Bolivia: Santa Cruz: Valle Grande; "über Marqueza" = above Marqueza. – / 7. / 1958.
ZSS SR14499 **Type number** – sem

Ritter 886: *Rhypsalis* sp.

- Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 8".
SGO 125588 – corp, ar, sp

Ritter 887: *Acanthorhypsalis monacantha* (Grisebach) Britton & Rose – The Cact. 4: 212, 1923.

loc. 1: Bolivia / Peru ? : sine loco.
ZSS S9956 – sem (Leg. F. Ritter c. 1955.)

loc. 2: Bolivia: Tarija; "Yacuiba, Nr. 2".
SGO 125589 – corp, ar, sp

loc. 3: Bolivia: Tarija; "Yacuiba". – / 3. / 1958. – The locality "Yacuiba" is on the Argentina – Bolivia border and the place is variously cited to belong to either of the two countries. The original Ritter seed sample at ZSS was filed with Argentinian material by Ritter.

ZSS SR13723 – sem

Ritter 888: *Acanthorhopsalis incahuasina* Cárdenas – Cactus (Paris) 7(34): 127, ill., 1952. (Through a printer's mistake, the name *A. paranganiensis* was substituted for the correct epithet; this was later corrected and a correction slip was supplied to cover the mistake.)

Typus (T): Cardenas 4857 (BOLV).

- Bolivia: Chuquisaca; "Pte. Acero, Nr. 6" = Puente Acero.
SGO 125590 – corp, ar, sp

Ritter 889: *Austrocyllindropuntia verschaffeltii* (Cels ex F. A. C. Weber) Backeberg – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

loc. 1: Bolivia: Chuquisaca: Sud-Cinti; "Cueva, Nr. 5". – / 4. / 1958.
SGO 121933 – (corp), ar, sp

loc. 2: Bolivia: Potosí; "Don Diego".
SGO 121934 – corp, ar, sp

Ritter 891: *Austrocyllindropuntia vestita* (Salm-Dyck) Backeberg – Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

- Bolivia: Chuquisaca; "Abstieg v. Yamparaez" = descent from Yamparaez. – / 8. / 1958. – One of the two original labels was first numbered as "891", crossed out and replaced with "60". Identified as "*Austrocyllindropuntia vestita* (Salm-Dyck) Backeberg var." in the field-number list in KS 4.
SGO 121911 – corp, ar, sp

Ritter 892: *Cumulopuntia rossiana* (Heinrich & Backeberg) F. Ritter – Kakt. Südamer. 2: 486-488, 1980.

loc. 1: Bolivia / Argentina: Sucre; Yamparaez, and towards Iturbe (Prov. Jujuy). 2800 m. - 3800 m. – Locality data according to KS.
ZSS A486 – rad, corp, ar, sp (Ex cult. ZSS 81 2524, 18. 1. 1988)

loc. 2: Bolivia: "Chanchancui, Nr. 14".
SGO 121877 – rad, corp, ar, sp

loc. 3: Bolivia: Chuquisaca: Sud-Cinti; "Culpina, Nr. 13". – One of the original labels identifies this specimen as *Pseudotephrocactus adpressus* F. Ritter (*nom. nud.*).
SGO 121878 – (rad), corp, ar, sp

loc. 4: Bolivia: Potosí: Saavedra; "halbwegs Otuyo - Betanzos" = halfway between Otuyo - Betanzos / "südl. Otuyo" = S of Otuyo. – One of the original labels identifies this specimen as *Pseudotephrocactus adpressus* F. Ritter (*nom. nud.*).
SGO 121879 – corp, ar, sp

loc. 5: Bolivia: La Paz: Avilez; "Abstieg von Copacabana, km 11, Nr. 3" = descent from Copacabana, km 11 / "unterh. Copacabana" = below Copacabana. – "Exemplar der Blütenbeschreibg. (5-köpfig)" = specimen of the flower description (5-headed). One of the original labels identifies this specimen as *Tephrocactus adpressus* F. Ritter (*nom. nud.*).

SGO 121880 – corp, ar, sp

loc. 6: Bolivia: Chuquisaca; "Yamparaez, Nr. 3". – The original labels identify this specimen as (*Pseudo-*) *Tephrocactus adpressus* F. Ritter (*nom. nud.*).

SGO 121881 – rad, corp, ar, sp

loc. 7: Bolivia: Tarija: Mendez; "San Antonio". – One of the original labels identifies this specimen as *Tephrocactus adpressus* F. Ritter (*nom. nud.*).

SGO 121882 – corp, ar, sp

ZSS SR14500 – sem ("von mehreren Exemplaren") = from several specimens.)

loc. 8: Bolivia: Potosí: Sud-Chichas; "Mal Paso". – One of the original labels identifies this collection as *Cumulopuntia adpressa* F. Ritter (*nom. nud.*).

SGO 121883 – rad, corp, ar, sp

loc. 9: Bolivia: Potosí; "10 km w. Cuchoingenio" = 10 km W of Cuchoingenio.

SGO 121884 – corp, ar, sp

loc.10: Bolivia: Potosí; "Yocalla".

SGO 121885 – corp, ar, sp

loc.11: Bolivia: Chuquisaca; "Culpina". – / 5. / 1958.

ZSS SR14501 – sem

loc.12: Bolivia: Potosí: Saavedra; "zw. Betanzos u. Otuyo" = between Betanzos and Otuyo.

ZSS SR14502 – sem

loc.13: Bolivia: Potosí; "9 km nördl. Potosí" = 9 km N of Potosí.

ZSS SR14503 – sem

Ritter 892a: *Cumulopuntia rossiana* (Heinrich & Backeberg) F. Ritter – Kakt. Südamer. 2: 486-488, 1980.

– Argentina: Jujuy; "Iturbe". – / 4. / 1962. – Collection date according to specimen at SGO. The original label identifies this collection as *Cumulop.[untia] adpressa* var. *erectispina* F. Ritter (*nom. nud.*). Identified as "*Cumulopuntia rossiana* var./fa." in the field-number list in KS 4.

SGO 121887 – corp, ar, sp

ZSS SR13724 – sem (No date shown on the original label.)

Ritter 892b: *Cumulopuntia rossiana* (Heinrich & Backeberg) F. Ritter – Kakt. Südamer. 2: 486-488, 1980.

– Bolivia: Chuquisaca: Sud-Cinti; "oberh. Cueva" = above Cueva. – Identified as "*Cumulopuntia rossiana* var." in the field-number list in KS 4.

SGO 121888 – (corp), ar, sp

Ritter 893: *Opuntia discolor* Britton & Rose – The Cact. 2: 218, ill., 1919. *Typus* (T): Shafer 111 (US, G).

loc. 1: Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 4". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122032 – corp, ar, sp

- loc. 2:** Bolivia: Tarija: Gran Chaco; "Palmar Grande, Nr. 11". – / 4. / 1958. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122033 – corp, ar, sp
- loc. 3:** Argentina: Tucumán; "31 km nördl. Tucumán" = 31 km N of Tucumán / "Tapia (Tucum.)" = Tapia (Tucumán). – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125340 – corp, ar, sp
- loc. 4:** Paraguay: Boquerón; "Filadelfia". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR13589 – sem

Ritter 894: *Opuntia* sp.

- Bolivia: Cochabamba: Ayopaya; "Sta. Rosa, Nr. 2a". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122036 – corp, ar, sp

Ritter 895: *Opuntia conjungens* (F. Ritter) P. J. Braun & E. Esteves Pereira – Succulenta 74(3): 133, 1995. (Name first used by Ritter in Kakt. Südamer. 2: 494-495, 1980, as synonym.)

- loc. 1:** Bolivia: Tarija: Mendez; "Cajas", Nr. 10. – / – / 1958. – Collection date according to the protologue. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122031 ISO – corp, ar, sp
- loc. 2:** Bolivia: Tarija: Mendez; "von Cajas" = from Cajas. – / – / 1963. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U 160666B HOLO – corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
- loc. 3:** Bolivia: Tarija: Mendez; sine loco.
B GH29046 – corp, ar, sp, ic (corp, fl) (Ex cult. BG Berlin, 24. 2. 1992
(cult. ex sem. Cat. H. Winter 1959). Collection number inferred.)
- loc. 4:** Bolivia: Tarija: Mendez; "Alto Española".
ZSS SR14504 – sem

Ritter 896: *Opuntia pestifer* Britton & Rose – The Cact. 1: 217, 1919. (*Nom. nov. pro Cactus nanus* Kunth, *non Opuntia nana* Visiani.)

- loc. 1:** Bolivia: La Paz: Sud-Yungas; "Plazuela, Nr. 5". – "kleinste" = smallest. Ritter identifies this collection as *Platyopuntia nana* (Humboldt, Bonpland & Kunth) Ritter; the name here used is treated as synonymous by him.
SGO 122034 – corp, ar, sp
- loc. 2:** Bolivia: Cochabamba: Ayopaya; "Puente Pilatos, Nr. 10". – "Aufrechte Stämmchen. Wie Plazuela ?" = erect small stems as Plazuela ?. Ritter identifies this collection as *Platyopuntia nana* (Humboldt, Bonpland & Kunth) Ritter; the name here used is treated as synonymous by him.
SGO 122035 – corp, ar, sp

Ritter 897: *Opuntia pestifer* Britton & Rose – The Cact. 1: 217, 1919. (*Nom. nov. pro Cactus nanus* Kunth, *non Opuntia nana* Visiani.)

loc. 1: Bolivia: Santa Cruz: Florida; "Mairana, Nr. 3". – Ritter identifies this collection as *Platyopuntia nana* (Humboldt, Bonpland & Kunth) Ritter; the name here used is treated as synonymous by him.

SGO 122037 – corp, ar, sp

loc. 2: Bolivia: Tarija: Mendez; "grosse Schlucht unterhalb España, Nr. 10" = large gorge below España / "Rio Cajas". – Ritter identifies this collection as *Platyopuntia nana* (Humboldt, Bonpland & Kunth) Ritter; the name here used is treated as synonymous by him.

SGO 122038 – corp, ar, sp

Ritter 898: *Opuntia pestifer* Britton & Rose – The Cact. 1: 217, 1919. (*Nom. nov. pro Cactus nanus* Kunth, *non Opuntia nana* Visiani.)

– Bolivia: Tarija: O'Connor; "Tacuarandi, Nr. 5". – Ritter identifies this collection as *Platyopuntia nana* (Humboldt, Bonpland & Kunth) Ritter; the name here used is treated as synonymous by him.

SGO 122039 – corp, ar, sp

Ritter 899: *Opuntia salmiana* Parmentier ex Pfeiffer – Enum. Cact., 172, 1837.

– Bolivia: Santa Cruz: Valle Grande; "Comarapa, Nr. 11". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122040 – corp, ar, sp

ZSS SR14505 – sem ("nur 1 Samenkorn war entwickelt") = only one seed was developed.)

Ritter 900: *Opuntia* sp.

– Bolivia: Cochabamba: Ayopaya; "Rio Sta. Rosa, oberhalb Einmündung" = Río Santa Rosa, above mouth. – / 6. / 1958. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122041 – corp, ar, sp

Ritter 901: *Opuntia ficus-indica* (Linné) Miller – Gard. Dict., ed. 8, [unpaged, no. 2], 1768. (Treated as combination by Leuenberger (Taxon 40: 625, 1991); sometimes also treated as new taxon independent from the Linnean name.)

– Bolivia: La Paz; "Quiabaya". – / 5. / 1958. – Identification of material very doubtful (B. Leuenberger & U. Egli). Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122042 – (corp, ar, sp)

Ritter 902: *Quiabentia verticillata* (Vaupel) Backeberg – in Backeberg & Knuth, Kaktus ABC, 100, 1936. (Dated 1935, publ. Febr. 1936.)

– Bolivia: Tarija: O'Connor; "Villamontes".

SGO 121902 – corp, ar, sp

ZSS SR14506 – sem

Ritter 903: *Quiabentia pereziensis* Backeberg – Descr. Cact. Nov. [1:] 6, 1957. (Dated 1956, publ. 1957.)

- Bolivia: Cochabamba / Santa Cruz; "Abstieg zum Río Mizque, Nr. 24" = descent to the Río Mizque.
SGO 121903 – corp, ar, sp

Ritter 904: *Pereskia diaz-romeroana* Cárdenas – Lilloa 23: 15-18, fig. 1, t. 1, 1950.

Typus (T): Cardenas 4388 (US [lecto], US).

- loc. 1:** Bolivia: Cochabamba / Santa Cruz; Río Mizque. – Locality information from herbarium material (SGO) cited by Leuenberger, Mem. New York Bot. Gard. 41: 73.

ZSS B1464 – corp, ar, sp, fol, fl, fr, sem (Leg. ex cult. Jardin Botanique "Les Cèdres", cult. ex sem. (received from H. Winter).)

- loc. 2:** Bolivia: Cochabamba / Santa Cruz; "Abstieg zum Río Mizque, Nr. 17" = descent to the Río Mizque / "Mizque-Fl." = Mizque river. – / 7. / 1958. – Collection date according to original Ritter seed sample at ZSS. The first original label at SGO has the collection number only as "FR 328" and identifies the material as *Pereskia weberiana* crossed out with *P. diaz-romeroana* added on the reverse. The second original at SGO label has the collection number "FR 328" crossed out and replaced with FR 904. The label at ZSS identifies the collection as "fa. *roseiflora*".

SGO 125352 – corp, ar, sp
ZSS SR14507 – sem

Ritter 905: *Lobivia* sp.

- Bolivia: Santa Cruz: Valle Grande; "Passhöhe zw. Sta. Ana und Valle Grande, untere Lagen" = culmination of pass between Santa Ana and Valle Grande, lower altitudes.
SGO 121382 – rad, corp, ar, sp

Ritter 910: *Loxanthocereus sextonianus* (Backeberg) Backeberg – Repert. Spec. Nov. Regni Veget. 51: 65, 1942.

- loc. 1:** Peru: Arequipa; "Quebrada Tambo, Höhen südlich" = Quebrada Tambo, altitudes to the South / "südl. Tambo" = S of Tambo.
SGO 121994 – corp, ar, sp

- loc. 2:** Peru: Arequipa; "südl. Tambo-Schlucht, Nr. 6" = S of the Tambo gorge. – / 11. / 1958.
ZSS SR14108 – sem

Ritter 911: *Matucana multicolor* Rauh & Backeberg var. *hystrix* (Backeberg) F. Ritter (*nom. inval.* Art. 33.2) – Kakt. Südamer. 4: 1499, 1981.

- Peru: Ayacucho; "unterh. (7 km) Galeras" = 7 km below Galeras / "westl. Galeras" = W of Galeras.
SGO 122205 – (corp), ar, sp

Ritter 912: *Parodia suprema* F. Ritter – Cactus (Paris) 17(76): 51-52, 1962.
Typus (T): Ritter 912 (U 117907B, SGO [status ?], ZSS).

- loc. 1:** Bolivia: Tarija: Mendez; San Antonio. 3500 m. – / 12. / 1958.
 B GH24792 – ic (corp, fl) (Ex cult. BG Berlin, 1988 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
 U 117907B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS S10416 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.)
 ZSS T5093 **ISO** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. 1960.)
- loc. 2:** Argentina / Bolivia ? : Jujuy ?; "San Antonio (Prov. Jujuy [sic !])." – The localization of this San Antonio is questionable; the taxon is only reported from Bolivia (Mendez) by Ritter in KS 2, but Ritter has collected at San Antonio (Argentina: Salta) as well as at San Antonio (Bolivia: Tarija: Mendez).
 SGO 125390 **Type number** – (corp), ar, sp, (al, fl)
- loc. 3:** Bolivia: Tarija: Mendez; "Caña Cruz".
 SGO 125391 – (corp), ar, sp
- loc. 4:** Bolivia: Tarija: Mendez; "San Antonio". – / 5. / 1959.
 ZSS SR14508 **ISO** – sem

Ritter 913: *Parodia otuyensis* F. Ritter – Cactus (Paris) 17(76): 52-53, ill., 1962.
Typus (T): Ritter 913 (U 117586B, SGO, ZSS [seeds only]).

- loc. 1:** Bolivia: Potosí: Saavedra; Otuyo. – / 12. / 1958.
 U 117586B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
 ZSS S10423 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1969.)
- loc. 2:** Bolivia: Potosí: Saavedra; "oberh. Otuyo" = above Otuyo. – / 12. / 1959.
 SGO 125392 **ISO** – rad, corp, ar, sp
 ZSS SR14509 **ISO** – sem (The original label is dated "XII 58".)

Ritter 914: *Parodia cardenasii* F. Ritter – Succulenta 43(4): 58, 1964.
Typus (T): Ritter 914 (U 160398B, ZSS [seeds only]).

- loc. 1:** Bolivia: Tarija: O'Connor; "von Angosto de Villa Montes" = from Angosto de Villamontes. – / – / 1963. – Collection date according to specimen at U.
 U 160398B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
 ZSS S10412 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.
 No locality data associated with this specimen.)
- loc. 2:** Bolivia: "5 km über Brücke Pilcomayo" = 5 km above bridge Pilcomayo.
 SGO 125393 – (rad), corp, ar, sp
- loc. 3:** Bolivia: Tarija: O'Connor; "west. Villamontes" = W of Villamontes. – / 3. / 1959.
 ZSS SR14510 **ISO** – sem

Ritter 915: *Parodia scoparia* F. Ritter – Kakt. Südamer. 2: 421-422, fig. 274, 1980.
Typus (T): Ritter 915 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Jujuy; "südl. Humahuaca" = S of Humahuaca. – / – / 1959. –
Collection date according to specimen at U.
SGO 125394 **ISO** – rad, corp, ar, sp, (al)
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
the holotype as this is the only specimen at U.)
- loc. 2:** Argentina: Jujuy; "Humahuaca". – / 1. / 1959.
ZSS SR13725 **ISO** – sem

Ritter 916: *Parodia aureicentra* Backeberg – in Backeberg & Knuth, Kaktus-ABC, 268, 416, 1936. (Dated 1935, publ. Febr. 1936.)

- loc. 1:** Argentina: Salta; "vom Typstandorte bei Cachi" = from the type locality at Cachi. – Identified as *Parodia aureicentra* var. *aureicentra* in KS 4: 1638.
U 117675B – (corp), ar, sp ("Vergleichsprobe zu den anderen Varietäten" = comparative specimen to the other varieties.)
- loc. 2:** Argentina: Salta; "40 km vor Cachi, Nr. 8" = 40 km before Cachi. – Identified as *Parodia aureicentra* var. *aureicentra* in KS 4: 1638.
SGO 125395 – (corp), ar, sp
- loc. 3:** Argentina: Salta; "40 km östl. Cachi" = 40 km E of Cachi. – / 2. / 1959.
ZSS SR13726 – sem

Ritter 916a: *Parodia varicolor* F. Ritter – Taxon 13(3): 117, 1964. (Sphalm. 'variicolor'.)
Typus (T): Ritter 916a (U 117531B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Argentina: Salta; N of Cachi, along road to Poma.
U 117531B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Argentina: Salta; "12 km nach Poma, Nr. 8" = 12 km from Poma.
SGO 125396 **ISO** – (corp), ar, sp
- loc. 3:** Argentina: Salta; "12 km N. von Cruce nach Poma" = 12 km N of Cruce towards Poma. – / 2. / 1959.
ZSS SR13727 **ISO** – sem

Ritter 916b: *Parodia varicolor* F. Ritter var. *robustispina* F. Ritter – Taxon 13(3): 117, 1964. (Sphalm. 'variicolor'.)
Typus (T): Ritter 916b (U 116940B, SGO) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Argentina: Salta; mountains E of Cachi. 3000 m.
U 116940B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Argentina: Salta; "Strasse 24 km vor Cachi bei 3000 m, Nr. 6" = road 24 km before Cachi. 3000 m.
SGO 125397 **ISO** – (corp), ar, sp

Ritter 916c: *Parodia aureicentra* Backeberg var. *omniaurea* F. Ritter – Cactus (Paris) 17(75): 24, ill., 1962.
Typus (T): Ritter 916c (U 117587B, SGO, ZSS [seeds only]).

- loc. 1:** Argentina: Salta; below Cachi. – / 2. / 1959.
U 117587B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Argentina: Salta; "Cachi, Nr. 8". – / 2. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125398 **ISO** – (corp), ar, sp
ZSS SR13728 **ISO** – sem

Ritter 916d: *Parodia aureicentra* Backeberg var. *albifusca* F. Ritter – Cactus (Paris) 17(75): 24, ill. (p. 23), 1962.

Typus (T): Ritter 916d (U 117811B, SGO, ZSS [seeds only]).

- loc. 1:** Argentina: Salta; S of Cachi. – / 2. / 1959.
U 117811B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Argentina: Salta; "12 km über Cachi nach Süd, Nr. 9" = 12 km over Cachi towards the South.
SGO 125399 **ISO** – (corp), ar, sp
- loc. 3:** Argentina: Salta; "12 km südl. Cachi Nr. 9" = 12 km S of Cachi. – / 2. / 1959.
ZSS SR13729 **ISO** – sem

Ritter 917: *Parodia riojensis* F. Ritter & Weskamp ex Weskamp – Gattung *Parodia*, 474-476, fig. 75, 1987.

Typus (T): Ritter 917 (DR, SGO [status ?]).

- loc. 2:** Argentina: Catamarca; "23 km östl. Mazan Richtg. Chumbicha" = 23 km E of Mazan towards Chumbicha.
SGO 125400 **Type number** – rad, corp, ar, sp
- loc. 3:** Argentina: Catamarca; "31 km über Mazan, Richtg. Chumbicha" = 31 km above Mazan towards Chumbicha.
SGO 125401 **Type number** – (corp), ar, sp
- loc. 4:** Argentina: Catamarca; "25 km östl. Mazán" = 25 km E of Mazán. – / 2. / 1959.
ZSS SR13730 **Type number** – sem

Ritter 918: *Parodia microsperma* (F. A. C. Weber) Spegazzini – Anales Soc. Ci. Argentina 96: 73, 1923.

- loc. 1:** Argentina: sine loco. – According to KS 2: 431, this collection number is from the type locality.
ZSS S10411 – sem (Leg. Dodonaeus 1967.)
- loc. 2:** Argentina: Tucumán; "Trancas". – / 2. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125402 – (corp), ar, sp
ZSS SR13731 – sem

Ritter 919: *Parodia uebelmanniana* F. Ritter – Kakt. Südamer. 2: 425-426, fig. 282, 1980.

Typus (T): Ritter 919 (U [not found], SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: Salta; "Lumbreras". – / 2. / 1959. – Collection date according to the protologue.

SGO 125428 **ISO** – (corp), ar, sp (Collection number not given on the original label but inferred from the locality and the identification.)

loc. 2: Argentina: Salta; "Rio Juramento".

SGO 125403 – (rad), corp, ar, sp

loc. 3: Argentina: Salta; "Lumbrado" [= Lumbreras (Salta)]. – / 2. / 1959. – The locality is given as "Lumbreras" in the protologue.

ZSS SR13732 **Type number** – sem

Ritter 920: *Parodia betaniana* F. Ritter – Kakt. Südamer. 2: 426-427, fig. 284, 1980.

Typus (T): Ritter 920 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Argentina: Salta; "Betania". – / 1. / 1959. – Originally discovered 1931. Collection date according to original Ritter seed sample at ZSS ("I. 59.") and the specimen at U ("1959").

SGO 125404 **ISO** – rad, corp, ar, sp

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR13733 **ISO** – sem

Ritter 921: *Parodia chlorocarpa* F. Ritter – Kakt. Südamer. 2: 427, figs. 286-287, 1980.

Typus (T): Ritter 921 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Argentina: Salta; "Mojotoro". – / 1. / 1959. – Collection date according to original Ritter seed sample at ZSS ("I. 59.") and the specimen at U ("1959").

SGO 125405 **ISO** – rad, corp, ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR13734 **ISO** – sem

ZSS S8504 **Type number** – sem (Ex Fa. Köhres 1977. No locality directly associated with this specimen.)

Ritter 922: *Parodia aureispina* Backeberg – Blätt. Kakt.-forsch. 1934(7): [unpaged], 1934.

– Argentina: Salta; "Bahnbrücke Mojotoro" = railway bridge Mojotoro. – / 2. / 1959. – Collection date according to original Ritter seed sample at ZSS. Identified as "*Parodia aureispina* var." in KS 4.

SGO 125406 – rad, corp, ar, sp

ZSS SR13735 – sem

Ritter 923: *Parodia glischrocarpa* F. Ritter – Kakt. Südamer. 2: 427-428, fig. 285, 1980.

Typus (T): Ritter 923 (U, SGO [status ?], ZSS) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Salta; "Alemania", towards the north. – / – / 1959. – Locality data supplemented from the protologue; collection date according to specimen at U.
 U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
 ZSS S10430 **Type number** – sem (Leg. Fa. Wessner 1974 (ex cult.). No locality data associated with this specimen.)
 ZSS T5051 **ISO** – corp, ar, sp (Leg. F. Ritter.)
 ZSS T5147 **Type number** – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n., 1987 (ex coll. Wessner 1974).)
- loc. 2:** Argentina: Salta; "99 südl. Salta, Weg nach Cafayate" = 99 [km] S of Salta on path to Cafayate / "Alemania".
 SGO 125407 **Type number** – rad, corp, ar, sp
- loc. 3:** Argentina: Salta; "6 km nördl. Alemania" = 6 km N of Alemania. – / 1. / 1959.
 ZSS SR13736 **Type number** – sem

Ritter 924: *Parodia rubristaminea* F. Ritter – Kakt. Südamer. 2: 428, fig. 290, 1980.

Typus (T): Ritter 924 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Salta; "südwestlich von Alemania" = SW of Alemania. – / – / 1959. – Collection date according to specimen at U.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Argentina: Salta; "28 km über Alemania" = 28 km above Alemania.
 SGO 125408 **Type number** – (corp), ar, sp
- loc. 3:** Argentina: Salta; "13 km über Alemania" = 13 km above Alemania.
 SGO 125409 **Type number** – rad, corp, ar, sp
- loc. 4:** Argentina: Salta; "13 - 28 km westl. Alemania" = 13 - 28 km W of Alemania. – / 1. / 1959.
 ZSS SR13737 **Type number** – sem

Ritter 925: *Parodia rubristaminea* F. Ritter – Kakt. Südamer. 2: 428, fig. 290, 1980.

Typus (T): Ritter 924 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- Argentina: Salta; "28 km westl. Alemania" = 28 km W of Alemania. – / 1. / 1959. – "Aus Samen von FR 924 ausgesiebte grössere, schwarze Körner, nebst anschein. Hybriden mit FR 924" = Larger black seeds separated from seeds of FR 924, besides apparent hybrids with FR 924. FR 924 is the type number of *Parodia rubristaminea*, while FR 925 is identified as "*Parodia rubristaminea* var." in the field-number list in KS 4 where the locality of FR 925 is given as "15 km westlicher als der Artypus" = 15 km more to the West than the typical species.
 ZSS SR13738 – sem

Ritter 926: *Parodia heteracantha* F. Ritter ex Weskamp – Kakt. / Sukk. 21(4):

83-84, 116 (ill.), 1986. (Name first used provisionally by F. Ritter in *Kakt. Südamer.* 2: 430-431, 1980.)

Typus (T): Ritter 926 (DR, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Argentina: Salta; "Cachi, Nr. 6".

SGO 125410 **Type number** – (corp), ar, sp

loc. 2: Argentina: sine loco. – / 2. / 1959.

ZSS SR13739 **Type number** – sem

Ritter 927: *Parodia sanagasta* Fric ex B. Weingart – *Kaktusar* (Brno) 7(3): 49-51, ill., (6): 61, 1936. (Y. Ito published this name (*Explan. Diagr. Austroechinocactinae*, 270, 1957) as a combination for *Microspermia sanagasta* Fric (*nom. inval.*), and this reference is given as valid place of publication in RPS 8.)

loc. 1: Argentina: Salta; "12 km über Cachi, Nr. 8" = 12 km above Cachi" / "Cachi".
SGO 125411 – (rad), corp, ar, sp

loc. 2: Argentina: Salta; "Cafayate". – / 1. / 1959. – Collection date according to original Ritter seed sample at ZSS.

SGO 125412 – rad, corp, ar, sp

ZSS SR13740 – sem

loc. 3: Argentina: Salta; "60 km über Cafayate" = 60 km above Cafayate / "60 km südl. Cafayate" = 60 km S of Cafayate.

SGO 125413 – rad, corp, ar, sp

Ritter 928: *Parodia sanagasta* (Fric) Weingart var. *minimiseminea* F. Ritter (*nom. inval.* Art. 36.1) – *Kakt. Südamer.* 2: 431, 1980. (Published as provisional name.)

Based on Ritter 928.

loc. 1: Argentina: Catamarca; "33 km über Sta. Maria" = 33 km above Santa Maria.
SGO 125414 – rad, corp, ar, sp

loc. 2: Argentina: Catamarca; "33 km südl. Sta. Maria" = 33 km S of Santa Maria. – / 1. / 1959.

ZSS SR13741 – sem

Ritter 929: *Parodia sanagasta* (Fric) Weingart var. *tenuispina* F. Ritter (*nom. inval.* Art. 36.1) – *Kakt. Südamer.* 2: 431, 1980. (Published as provisional name.)

Based on Ritter 929.

– Argentina: Catamarca; "94 km südl. Sta. Maria" = 94 km S of Santa Maria. – / 1. / 1959. – Collection date according to original Ritter seed sample at ZSS.

SGO 125415 – rad, corp, ar, sp

ZSS SR13742 **ISO** – sem

Ritter 930: *Parodia sanagasta* (Fric) Weingart var. *grandiflora* F. Ritter (*nom. inval.* Art. 36.1) – *Kakt. Südamer.* 2: 431, 1980. (Published as provisional name.)

Based on Ritter 930.

- Argentina: Catamarca; "Belen" = Belén. – / 1. / 1959. – Collection date according to the original Ritter seed sample at ZSS.
SGO 125429 – rad, corp, ar, sp (The original label also contains the information "+ cf. 917 ?"; FR 917 is *Parodia riojensis* according to the field-number list in KS 4.)
ZSS SR13743 – sem

Ritter 931: *Parodia sanguiniflora* Fric ex Backeberg – Blätt. Kakt.-forsch. 1934(12): [unpaged], 1934.

- loc. 1: Argentina: Catamarca (?); "112 km über La Puerta" = 112 km above La Puerta.
SGO 125416 – rad, corp, ar, sp, (fl)
- loc. 2: Argentina: Catamarca (?); "112 km westl. La Puerta" = 112 km W of La Puerta. – / 2. / 1959.
ZSS SR13744 – sem

Ritter 931?: *Parodia sanguiniflora* Fric ex Backeberg – Blätt. Kakt.-forsch. 1934(12): [unpaged], 1934.

- Argentina: Catamarca; "30 km über Catamarca Richtg. La Puerta" = 30 km above Catamarca towards La Puerta.
SGO 125417 – (corp), ar, sp

Ritter 932: *Parodia sanguiniflora* Fric ex Backeberg var. *comata* F. Ritter – Kakt. Südamer. 2: 428-429, fig. 289, 1980.

Typus (T): Ritter 932 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Argentina: Catamarca (Tucumán ?); "über Tafi" = above Tafi. 3000 m. – / – / 1959. – Altitude and collection date according to the protologue. The protologue gives the locality as "einige km über den Bergpass hinaus westlich von Tafi, Prov. Catamarca, bei nahezu 3000 m Höhe"; and this would indicate that the locality is still in Prov. Tucumán, as the first mountain chain W of Tafi lies entirely within this province.
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2: Argentina: Catamarca (Tucumán ?); sine loco. – See note for loc. 1.
SGO 125418 **Type number** – rad, corp, ar, sp
- loc. 3: Argentina: Catamarca (Tucumán ?); "27 km westl. Tafi" = 27 km W of Tafi del Valle. – / 2. / 1959. – The province is given as Catamarca in the protologue, but the locality appears to be in Tucumán.
ZSS SR13745 **Type number** – sem

Ritter 933: *Parodia nivosa* Fric ex Backeberg – Blätt. Kakt.-forsch. 1934(12): [unpaged], 1934. (Based on *Microspermia nivosa* Fric & Kreuzinger (*nom. nud.*)).

- Argentina: Salta; "Chorrillos". – / 2. / 1959.
SGO 125419 – rad, corp, ar, sp
ZSS SR13746 – sem
- Ritter 934: *Parodia faustiana*** Backeberg – in Backeberg & Knuth, Kaktus-ABC, 266, 415, 1936.
- loc. 1:** Argentina: Salta; "Puerta Tastil, Nr. 10" / "Strasse nach San Antonio" = road to San Antonio.
SGO 125420 – (corp), ar, sp, (fr)
- loc. 2:** Argentina: Salta; "Strasse P. Tastil nach San Antonio bei 3400 m." = road Puerta Tastil towards San Antonio at 3400 m. 3400 m. – / 2. / 1959.
ZSS SR13747 – sem
- Ritter 935: *Rebutia leucanthera*** Rausch var. *cocciniflora* F. Ritter (*nom. inval.* Art. 37.1) – Succulenta 56(3): 63-64, (8): 189, ill., 1977. (Based on two syntypes, Ritter 772 and Ritter 935; erroneously reported as valid in RPS.)
- loc. 1:** Bolivia: Chuquisaca: Nor-Cinti; "nördlich Camargo" = N of Camargo. – / – / 1962. – Collection date according to specimen at U. Distributed as *Rebutia melachlora* Ritter (*nom. nud.*).
U SYN – rad, corp, ar, sp (Collection number inferred.)
- loc. 2:** Bolivia: Chuquisaca: Nor-Cinti; "35 km nördl. Camargo Nr. 9" = 35 km N of Camargo. – Originally labelled as *Rebutia melachlora* F. Ritter (*nom. nud.*).
SGO 124600 SYN – rad, corp, ar, sp
- Ritter 936: *Rebutia paucicostata*** F. Ritter – Kakt. and. Sukk. 28(4): 77, 1977.
Typus (T): Ritter 936 (U, SGO).
- Bolivia: Tarija: Mendez; "San Antonio". – / 4. / 1962. – Collection date according to specimens at SGO and U.
SGO 124601 ISO – rad, corp, ar, sp
U HOLO – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
- Ritter 936?: *Rebutia paucicostata*** F. Ritter – Kakt. and. Sukk. 28(4): 77, 1977.
Typus (T): Ritter 936 (U, SGO).
- Bolivia: La Paz: Avilez; "Abstieg von Copacabana km 11, Nr. 8" = descent from Copacabana km 11. – "Scheint nicht diese Nr." = does not seem to be this number.
SGO 124602 – rad, corp, ar, sp
- Ritter 937: *Rebutia salpingantha*** F. Ritter – Kakt. and. Sukk. 28(4): 77, 1977.
Typus (T): Ritter 937 (U, SGO).
- loc. 1:** Bolivia: Potosí: Sud-Chichas; "Villazón". – / 1. / 1959. – Collection date according to specimen at U.
U HOLO – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Bolivia: Potosí: Sud-Chichas; "Villazón oberste Seitenschlucht" = Villazón uppermost lateral gorge.

SGO 124603 **ISO** – rad, corp, ar, sp

loc. 3: Bolivia: La Paz: Avilez; "Abstieg von Copacabana km 11 Nr. 9" = descent from Copacabana km 11.

SGO 124604 – rad, corp, ar, sp

Ritter 938: *Rebutia cintiensis* F. Ritter – *Ashingtonia* 2(10): 206, ill., 1978.

Typus (T): Ritter 938 (U, SGO).

loc. 1: Bolivia: Chuquisaca: Nor-Cinti; "nördlich Camargo" = N of Camargo.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Bolivia: Chuquisaca: Nor-Cinti; "35 km nördl. Camargo, Nr. 14" = 35 km N of Camargo.

SGO 124605 **ISO** – rad, corp, ar, sp

Ritter 939: *Rebutia vulpina* F. Ritter – *Succulenta* 56(3): 66, (8): 191, ill., 1977.

Typus (T): Ritter 939 (U, SGO, ZSS [seeds only, status]).

loc. 1: Bolivia: Tarija: Mendez; "westlich Tarija" = W of Tarija. – / – / 1959. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS S10428 **Type number** – sem (Leg. Köhres 1973 (ex cult.). No locality data associated with this specimen.)

loc. 2: Bolivia: Tarija: Mendez; "Aufstieg von Tarija, Nr. 2" = ascent from Tarija.

SGO 124606 **ISO** – rad, corp, ar, sp

Ritter 940: *Rebutia fusca* F. Ritter – *Kakt. and. Sukk.* 28(4): 78, 1977.

Typus (T): Ritter 940 (U, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Bolivia: Tarija; "westlich Tarija" = W of Tarija. – / – / 1959. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS S10438 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1975. No locality data associated with this specimen.)

loc. 2: Bolivia: Tarija; "Passgebiet östl. Sama" = pass region E of Sama / "grosser Aufstieg von Tarija, Nr. 3" = great ascent from Tarija. – / 2. / 1963. – Collection date according to first original label.

SGO 124607 **Type number** – rad, corp, ar, sp

Ritter 941: *Rebutia senilis* Backeberg – *Kakteenfreund* (Mannheim) 1932: 124, 1932.

– Argentina: Salta; "Castellanos bei Salta" = Castellanos near Salta.

SGO 124608 – rad, corp, ar, sp

Ritter 941a: *Rebutia senilis* Backeberg – *Kakteenfreund* (Mannheim) 1932:

124, 1932.

- Argentina: Salta; "Strasse nach Cachi, 3. Flussübergang" = road to Cachi, 3. river crossing. - Locality given as "Aufstieg nach Cachi" = ascent to Cachi, in KS 4: 1639, where the material is identified as "*Rebutia senilis* var.". SGO 124609 - rad, corp, ar, sp

Ritter 942: *Rebutia* sp.

- Argentina: Salta; "Chorillos". SGO 124610 - rad, corp, ar, sp

Ritter 943: *Blossfeldia liliputana* Werdermann var. *formosa* F. Ritter - Kakt. Südamer. 2: 435, fig. 293, 1980.

Typus (T): Ritter 89b (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: Salta; "35 km über Alemania" = 35 km above Alemania. SGO 125019 - rad, corp, ar, sp

loc. 2: Argentina: Salta; "35 km über Alemania" = 35 km above Alemania. - / 1. / 1959. ZSS SR13748 - sem

Ritter 944: *Sulcorebutia pampagrlandensis* Rausch - Kakt. and. Sukk. 25(5): 97-98, ill., 1974.

Typus (T): Rausch 466 (W [not found], ZSS).

- Bolivia: Cochabamba; "17 km südl. Totora" = 17 km S of Totora. SGO 122084 - rad, corp, ar, sp

Ritter 945: *Sulcorebutia mentosa* F. Ritter - Succulenta 43(7): 102, 1964.

Typus (T): Ritter 945 (U 117843B, SGO).

- Bolivia: Cochabamba: Campero; "Aiquile". SGO 122083 ISO - rad, corp, ar, sp
U 117843B HOLO - rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. The original label has no locality data.)

Ritter 946: *Sulcorebutia* sp.

- Bolivia: sine loco. ZSS T5148 - corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. 1987.)

Ritter 946a: *Sulcorebutia losenickyana* Rausch - Kakt. and. Sukk. 25(3): 49, ill., 1974.

Typus (T): Rausch 477 (ZSS) (Type cited for W but placed in ZSS.).

loc. 1: Bolivia: Chuquisaca: Oropeza; "Strasse Sucre - Ravelo, km 38, Nr. 4" = road Sucre - Ravelo, km 38. 3000 m. - / - / 1959.

SGO 122086 - rad, corp, ar, sp

ZSS T1696 - corp, ar, sp (Ex cult. ZSS 75 2163, 18. 1. 1988) (Leg. Brinkmann.)

loc. 2: Bolivia: Chuquisaca: Oropeza; "38 km westl. Sucre, Nr. 3" = 38 km W of Sucre.

SGO 122082 – (corp), ar, sp

loc. 3: Bolivia: Chuquisaca: Oropeza; "zwischen Sucre und Ravelo" = between Sucre and Ravelo. – / – / 1959. – Collection date according to specimen at U. Distributed as *Sulcorebutia sucrensis* Ritter (*nom. nud.*).

U – rad, corp, ar, sp (Collection number inferred.)

Ritter 947: *Uebelmannia gummifera* (Backeberg & Voll) Buining – Succulenta 46: 161, 1967.

loc. 1: Brazil: Minas Gerais; "Penha de França". – / 4. / 1959.

ZSS SR14622 – sem

loc. 2: Brazil: Minas Gerais; "Penha de França". – / 11. / 1964.

ZSS SR14623 – sem ("73 Korn" = 73 seeds [not counted].)

Ritter 948: *Frailea gracillima* (Monville *ex* Lemaire) Britton & Rose – The Cact. 3: 209, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 23, 1935.)

loc. 2: Brazil: Rio Grande do Sul; "ca. 30 km von Mina Camaca nach Ost" = ca. 30 km from Mina Camaca towards the east.

SGO 121737 – (rad), corp, ar, sp

loc. 3: Brazil: Rio Grande do Sul; "Porto Alegre".

SGO 125067 – rad, corp, ar, sp

ZSS SR14624 – sem

loc. 4: Brazil: Rio Grande do Sul; "Itapoã" [Itapuã].

ZSS SR14625 – sem

loc. 5: Brazil: Rio Grande do Sul; "30 km östl. Mina Camaquã" = 30 km E of Camaquã mine. – / – / 1966.

ZSS SR14626 – sem

Ritter 948a: *Frailea gracillima* (Monville *ex* Lemaire) Britton & Rose – The Cact. 3: 209, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 23, 1935.)

– Brazil: Rio Grande do Sul; "Encruzilhada" [Encruzilhada do Sul]. – Identified as "*Frailea gracillima* var." in the field-number list in KS 4.

ZSS SR14627 – sem

Ritter 949: *Discocactus hartmannii* (K. Schumann) Britton & Rose – The Cact. 3: 217, 1922.

loc. 1: Paraguay: Caaguazú; "Yhú".

SGO 121738 – (corp), ar, sp, (ceph)

ZSS SR13590 – sem

loc. 2: Paraguay: "Yhi-Aty".

SGO 125066 – (corp), ar, sp

loc. 3: Paraguay: Amambay; "nordwestl. Ypytá" = NW of Ypytá.
ZSS SR13591 – sem

Ritter 950: *Discocactus placentiformis* (Lehmann) K. Schumann – in Engler & Prantl, Nat. Pfl.fam. [ed. 1] 3(6a)[part 103]: 190, 1894. (Combination frequently attributed to Buining & Brederoo.)

loc. 1: Brazil: Minas Gerais; "Diamantina". – / 11. / 1964.
ZSS SR14628 – sem

loc. 2: Brazil: Minas Gerais; "Joaquim Felicio". – / 11. / 1964.
ZSS SR14629 – sem

Ritter 951: *Melocactus bahiensis* (Britton & Rose) Lützelburg – Estud. Bot. Nordeste 3: 111, 1923.

– Brazil: Minas Gerais; "Itamarandiba" / "Weg nach Penha de França" = path to Penha de França. – There are two labels in this jar, and two slightly differing fragments. The label with the Penha de França locality also has the number FR 1334 (= also identified as *M. bahiensis* in KS 4) added and FR 951 is in brackets. Identified as "*Melocactus bahiensis* (Britton & Rose) Werdermann var." in the field-number list in KS 4.
SGO 122116 – (corp), ar, sp, ceph

Ritter 952: *Parodia sanagasta* Fric ex B. Weingart – Kaktusar (Brno) 7(3): 49-51, ill., (6): 61, 1936. (Y. Ito published this name (Explan. Diagr. Austroechinocactinae, 270, 1957) as a combination for *Microspermia sanagasta* Fric (*nom. inval.*), and this reference is given as valid place of publication in RPS 8.)

– Argentina: Salta; "24 km vor Cachi, Nr. 7" = 24 km before Cachi / "Cachi".
– Identified as "*Parodia sanagasta* var. oder forma" in KS 4.
SGO 125421 – rad, corp, ar, sp

Ritter 953: *Weingartia sucrensii* F. Ritter – Nation. Cact. Succ. J. 16(1): 7-8, ill., 1961.

Typus (T): Ritter 953 (U 097792, SGO).

loc. 1: Bolivia: Chuquisaca ?; Cuesta del Desmeador, E of Sucre. 2500 m. – / 12. / 1958.
U 097792 **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. The original label does not contain locality data and the collection number was later added in a different hand-writing.)

loc. 2: Bolivia: Chuquisaca; "Aufstieg nach Sucre, 2600 m." = ascent to Sucre. 2600 m.
SGO 121322 **ISO** – rad, corp, ar, sp

Ritter 954: *Weingartia gracilisipina* F. Ritter – Kakt. Südamer. 2: 658, fig. 636, 1980.

Typus (T): Ritter 954 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Oropeza; "Schlucht Rio Chico, Beginn Aufstieg" = gorge of Río Chico, beginning of ascent (dort wo die Fahrstrasse nach Sucre den Grund der Schlucht verlässt, etwa 2100 m hoch = place where the road to Sucre departs from the bottom of the gorge, c. 2100 m alt.). 2100 m. – Additional locality information according to the protologue.
SGO 121323 ISO – (corp), ar, sp
- loc. 2:** Bolivia: Chuquisaca: Oropeza; "Rio Chico Schlucht" = gorge of the Río Chico. – / 5. / 1959. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 955: *Rhipsalis houlettiana* Lemaire – Ill. Hort. 5: misc: 64, 1858.

- loc. 1:** Brazil: Rio Grande do Sul; "Berlin + Corvo" / "Berlin".
SGO 125591 – corp, ar, sp
- loc. 2:** Brazil: Rio Grande do Sul; "Canela".
SGO 125592 – corp, ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Canela Nr. 3 (oben)" = Canela (above).
ZSS SR14630 – sem ("37 K." = 37 seeds [not counted].)
- loc. 4:** Brazil: Rio Grande do Sul; sine loco.
ZSS SR14631 – sem

Ritter 956: *Pilosocereus zehntneri* (Britton & Rose) F. Ritter – Kakt. Südamer. 1: 74, 1979.

- loc. 1:** Brazil: Bahia; "B. J. de Lapa" = Bom Jesus da Lapa.
SGO 125467 – (corp), ar, sp
- loc. 2:** Brazil: Minas Gerais; "Montes Claros Nr. 3". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS (where the collection is variously identified as *P. gounellei* var. nov. or *P. zehntneri* on the original label).
SGO 125468 – (corp), ar, sp
ZSS SR14632 – sem
- loc. 3:** Brazil: Minas Gerais; "Januaria".
SGO 125469 – corp, ar, sp

Ritter 956a: *Pilosocereus gounellei* (F. A. C. Weber) Byles & G. D. Rowley – Cact. Succ. J. Gr. Brit. 19: 67, 1957.

- loc. 1:** Brazil: Maranhão; "Barão Grajaú" / "Barão Grajaú Nr. 2".
SGO 125471 (in 2 parts) – rad, corp, ar, sp (Includes rooted seedlings.)
- loc. 2:** Brazil: Bahia; "Ourives". – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125472 – (corp), ar, sp
ZSS SR14633 – sem
- loc. 3:** Brazil: Maranhão / Piauí; "Barão Grajaú u. Gaturiano" = Barão [de] Grajaú and Gaturiano. – / 12. / 1963. – First identified as "*Pilosocereus glaucescens* var. grüne Varietät" = green variety on the original label.
ZSS SR14634 – sem

Ritter 957: *Pilosocereus densiareolatus* F. Ritter – Kakt. Südamer. 1: 73-74, fig. 43, 1979.

Typus (T): Ritter 957 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Minas Gerais; "Montes Claros". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS ("IV 59."); locality given as "Montes Claros Nr. 4") and to specimen at U ("1959").
SGO 125473 **ISO** – corp, ar, sp, ceph
U **HOLO** – corp, ar, sp, ceph (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U. – "Normalrippen und Rippen der Blühzone" = normal ribs and ribs from the floriferous zone. The cephalium parts of the specimen are very probably representing a different taxon (ue.).)
ZSS S10401 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965. No locality data associated with this specimen.)
ZSS SR14635 **ISO** – sem

Ritter 958: *Pilosocereus azureus* F. Ritter – Kakt. Südamer. 1: 73, 1979.

Typus (T): Ritter 958 (U, SGO) (Type cited for U l.c., iii.).

- Brazil: Minas Gerais; "Januaria, Nr. 5". – / 4. / 1959. – Collection date according to specimens at U and SGO.
SGO 125475 **ISO** – corp, ar, sp, ceph (Includes a rooted seedling.)
U **HOLO** – (corp), ar, sp, ceph (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 959: *Pilosocereus werdermannianus* (Buining & Brederoo) F. Ritter var. *diamantinensis* F. Ritter – Kakt. Südamer. 1: 77, fig. 47, 1979.

Typus (T): Ritter 959 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Minas Gerais; "Diamantina". – / 3. / 1959. – Collection date according to original Ritter seed sample at ZSS ("III 59.") and to specimen at U ("1959").
SGO 125476 **ISO** – (corp), ar, sp, (ceph)
U **HOLO** – (corp), ar, sp ("Rippe aus der Blühzone" = rib from the floriferous zone. Collection number inferred. Assumed to be the holotype as this is the only specimen present at U. Originally identified as *Pilosocereus saxatilis* var. *diamantinensis* (nom. nud.).)
ZSS SR14636 **ISO** – sem
- loc. 2:** Brazil: Minas Gerais; "Gouvea". – / 9. / 1959.
SGO 125477 – corp, ar, sp, (ceph)

Ritter 960: *Pilosocereus werdermannianus* (Buining & Brederoo) F. Ritter var. *densilanatus* F. Ritter – Kakt. Südamer. 1: 77, figs. 48-49, 1979.

Typus (T): Ritter 960 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Minas Gerais; "Penha da França". – / 11. / 1964. – Collection date according to original Ritter seed sample at ZSS ("XI 64.") and to specimen at U ("1964"). The protologue gives the collection date as 1959.

SGO 125478 **ISO** – (corp), ar, sp, (ceph)

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U. Originally identified as *Pilosocereus saxatilis* var. *densilanatus* (nom. nud.).)

ZSS S10402 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Pilosocereus densilanus*). No locality data associated with this specimen.)

ZSS SR14637 **ISO** – sem

Ritter 960a: *Pilosocereus werdermannianus* (Buining & Brederoo) F. Ritter – Kakt. Südamer. 1: 76, fig. 46 (p. 291), 1979.

– Brazil: Minas Gerais; "Conceição", on rocks. – / – / 1964. – Collection date according to specimen at U. Identified as *Pilosocereus werdermannianus* var. *werdermannianus* in KS 4: 1639.

SGO 125479 – (corp), ar, sp

U – (corp), ar, sp, (ceph) ("Normalrippen und Rippen der Blühregion" = normal ribs and ribs of the floriferous zone. Collection number inferred; originally identified as *Pilosocereus saxatilis*.)

ZSS SR14638 – sem

Ritter 961: *Gymnocalycium glaucum* F. Ritter – Sukkulentenkunde 7/8: 37-38, ill., 1963.

Typus (T): Ritter 961 (U 116980B, SGO, ZSS [seeds only]).

loc. 1: Argentina: Catamarca; SE of Tinogasta, near frontier to Prov. La Rioja. – / 2. / 1959.

U 116980B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Argentina: Catamarca; "30 km südöstl. Tinogasta" = 30 km SE of Tinogasta. – / 2. / 1959. – Collection date according to original Ritter seed sample at ZSS.

SGO 124671 **ISO** – (corp), ar, sp

ZSS SR13749 **ISO** – sem

Ritter 962: *Gymnocalycium lumbrerasense* F. Ritter (nom. inval. Art. 36.1) – Kakt. Südamer. 2: 477, 1980. (Published as provisional name.)

Based on Ritter 962.

loc. 1: Argentina: Salta; "Lumbreras" / "Rio Juramento".

SGO 124672 – (corp), ar, sp

loc. 2: Argentina: Salta; "Juramento". – / – / 1967. – Collection date according to original Ritter seed sample at ZSS.

SGO 124673 – (corp), ar, sp

ZSS SR13750 – sem

loc. 3: Argentina: Salta; "Lumbreras". – / 2. / 1959.

ZSS SR13751 – sem

Ritter 963: *Gymnocalycium antherostele* F. Ritter – Kakt. Südamer. 2: 475-476, 1980.

Typus (T): Ritter 963 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:

iii, 1979.).

loc. 1: Argentina: Salta; "General Moldes". – / 1. / 1959.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR15012 **ISO** – sem

loc. 2: Argentina: Salta; "60 km südl. Salta" = 60 km S of Salta. – This seems to be from the type locality ('General Moldes' = Coronel Moldes); this place is c. 64 km S of Salta.

SGO 124674 **ISO** – (corp), ar, sp

loc. 3: Argentina: Salta; General Moldes. – Locality according to the protologue.

ZSS S12411 **Type number** – sem (Leg. Fa. Winter 1961.)

Ritter 965: *Pyrrhocactus bulbocalyx* (Werdermann) Backeberg – Die Cact. 3: 1565, 1959.

– Argentina: Catamarca; "25 km östl. Tinogasta" = 25 km E of Tinogasta. – / 2. / 1959. – Collection date according to original Ritter seed sample at ZSS.

SGO 121660 – (corp), ar, sp
ZSS SR13752 – sem

Ritter 966: *Trichocereus bruchii* (Britton & Rose) F. Ritter – Kakt. Südamer. 2: 450, 1980.

loc. 1: Argentina: Tucumán; "14 km oberhalb Tafi" = 14 km above Tafi / "oberh. Tafi" = above Tafi. – / 2. / 1959.

SGO 121853 – (rad, corp), ar, sp (Includes a rooted seedling.)

loc. 2: Argentina: sine loco.

ZSS S12602 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 966a: *Trichocereus bruchii* (Britton & Rose) F. Ritter var. ***brevispinus*** F. Ritter – Kakt. Südamer. 2: 450, 1980.

Typus (T): Ritter 966a (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Argentina: Tucumán; "Tafi del Valle" / "Tafi". – / 2. / 1959.

SGO 121852 **Type number** – (corp), ar, sp

loc. 2: Argentina: Tucumán; "Strasse nach Tafi del Valle" = road to Tafi del Valle / "östl. Tafi" = E of Tafi del Valle. – / 2. / 1959.

SGO 121854 **Type number** – (rad, corp), ar, sp (Includes a rooted seedling.)

loc. 3: Argentina: Tucumán; "Tafi del Valle, ca. 2000 m hoch". 2000 m. – / – / 1959. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 967: *Acanthocalycium chionanthum* (Spegazzini) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 225, 1936. (Dated 1935, publ. Febr. 1936.)

- Argentina: Salta; "Cachi, Nr. 5".
SGO 124933 – (corp), ar, sp, (fl)

Ritter 968: *Acanthocalycium brevispinum* F. Ritter – Taxon 13(4): 144, 1964.
Typus (T): Ritter 968 (U 117786B, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Argentina: Salta; S of Cafayate, near frontier to Prov. Tucumán.
U 117786B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S12583 – sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 2:** Argentina: Salta; "7 km über Cafayate, Nr. 7" = 7 km above Cafayate / "südl. Cafayate" = S of Cafayate.
SGO 124934 **ISO** – rad, corp, ar, sp
- loc. 3:** Argentina: Salta; "7 km südl. Cafayate" = 7 km S of Cafayate. – / 1. / 1959.
ZSS SR13753 **ISO** – sem

Ritter 969: *Acanthocalycium catamarcense* F. Ritter – Kakt. Südamer. 2: 465, figs. 309-310, 1980.
Typus (T): Ritter 969 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Catamarca; "ca. 35 km südlich Sta. Maria" = c. 35 km S of Santa Maria. – / 1. / 1959. – Collection date according to KS; the specimen at U only gives "1959".
U **HOLO** – (corp), ar, sp (Assumed to represent the holotype, as this is the only specimen at U. Collection number inferred.)
- loc. 2:** Argentina: Catamarca; "33 km über Sta. Maria" = 33 km above Santa Maria / "33 km südl. Sta. Maria" = 33 km S of Santa Maria.
SGO 125199 **ISO** – rad, corp, ar, sp, (al)
- loc. 3:** Argentina: Catamarca; sine loco.
ZSS S12584 – sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 4:** Argentina: Catamarca; "33 km südl. Sta. Maria" = 33 km S of Santa Maria. – / 2. / 1959.
ZSS SR13754 **ISO** – sem

Ritter 970: *Acanthocalycium glaucum* F. Ritter – Taxon 13(4): 143-144, 1964.
Typus (T): Ritter 970 (U 117834B) (Holotype cited for U l.c. 12(1): 28.).

- loc. 1:** Argentina: Catamarca; N of Belén.
B GH12097 – fl, ic (corp, fl) (Ex cult. BG Berlin, 22. 6. 1982 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred.)
U 117834B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)
- loc. 2:** Argentina: Catamarca; "124 km über Sta. Maria" = 124 km above Santa Maria / "124 km südl. Sta. Maria" = 124 km S of Santa Maria.
SGO 125200 – rad, corp, ar, sp, (al)
- loc. 3:** Argentina: Catamarca; "124 km südl. Sta. Maria" = 124 km S of Santa Maria. – / 2. / 1959.
ZSS SR13755 – sem

Ritter 971: *Cinnabarinea pseudocinnabarina* (Backeberg) F. Ritter var. *microthelis* F. Ritter (*nom. inval.* Art. 43.1) – Kakt. Südamer. 2: 636-637, fig. 615, 1980. (Erroneously included as valid in RPS 31.)
Based on Ritter 971 (U) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Bolivia: Cochabamba; "50 km Ost Cochab.ba" = 50 km E of Cochabamba. – Identified as *Cinnabarinea pseudocinnabarinea* in KS 4: 1639.
SGO 121383 – (corp), ar, sp

loc. 3: Bolivia: Cochabamba; "50 km östl. von Cochabamba" = 50 km E of Cochabamba. – / – / 1958. – Identified as *Cinnabarinea pseudocinnabarinea* in KS 4: 1639.

U – (corp), ar, sp (Collection number inferred. Probably intended as holotype as this is the only specimen present at U.)

Ritter 972: *Lobivia* sp.

– Bolivia: La Paz; "Calacoto". – Locality given as "Calacato" in KS 4: 1639.
SGO 124465 – corp, ar, sp

Ritter 973: *Cinnabarinea walterspielii* (Bödeker) F. Ritter – Kakt. Südamer. 2: 634-635, 1980.

loc. 1: Bolivia: Potosí: Saavedra; "Otuyo".
SGO 121384 – rad, corp, ar, sp

loc. 2: Bolivia: Potosí: Saavedra; "halbwegs Otuyo - Betanzos" = halfway Otuyo - Betanzos.
SGO 121385 – (corp), ar, sp

loc. 3: Bolivia: Potosí; "Betanzos, Nr. 4 vom Abstieg nach Don Diego" = Betanzos, descent to Don Diego.
SGO 121386 – (corp), ar, sp

Ritter 973a: *Cinnabarinea walterspielii* (Bödeker) F. Ritter var. *sanguiniflora* F. Ritter – Kakt. Südamer. 2: 635, figs. 613-614, 1980.

Typus (T): Ritter 973a (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: "südl. Puna" = S of Puna. – Locality given as "südlich von Puno" = S of Puno in KS 2: 635.
SGO 121387 ISO – (corp), ar, sp

loc. 2: Bolivia: "südl. Puna" = S of Puna. – / – / 1962. – Locality given as "südlich von Puno" = S of Puno in KS 2: 635.
SGO 122058 ISO – (corp), ar, sp

Ritter 974: *Lobivia horrida* F. Ritter – Taxon 12(3): 124, 1963.

Typus (T): Ritter 974 (U 117691B, SGO) (Holotype cited for U l.c. (1): 28, 1963.).

– Bolivia: Tarija: Mendez; "20 km südl. El Puente" = 20 km S of El Puente / "ca. 20 km über El Puente" = c. 20 km above El Puente. 3000 m. – Altitude supplemented from the protologue.
SGO 124469 ISO – rad, corp, ar, sp ("Foto-Exemplar" = specimen of

photograph.)

U 117691B **HOLO** – ar, sp (Labelled as "Holotypus" by Ritter, but without locality data.)

Ritter 975: *Lobivia hystrix* F. Ritter – Succulenta 54(6): 84, 1966.

Typus (T): Ritter 975 (U 160337B, SGO).

loc. 1: Bolivia: Tarija; "Pass über Sama" = pass above Sama. – Locality given as "westl. von Tarija, bei über 3000 m. Höhe, östl. des Sama-Passes, 1959" = W of Tarija, above 3000 m., E of Sama pass, in KS 2: 574. The protologue only gives "in the S of Prov. Mendez".

SGO 121388 **ISO** – (corp), ar, sp (Type status debatable; the holotype at U is dated 1963, but this might represent the accession date of the specimen at U.)

loc. 2: Bolivia: Tarija: Mendez; "vom Süden der Provinz Mendez" = from the S of Prov. Mendez. – / – / 1963. – Collection date according to specimen at U.

U 160337B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

Ritter 977: *Lobivia adpressipina* F. Ritter – Kakt. Südamer. 2: 576-577, fig. 478, 1980.

Typus (T): Ritter 977 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: La Paz: Avilez; "Copacabana", very rare. – / – / 1958. – Collection data according to specimen at U.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present at U.)

loc. 2: Bolivia: La Paz: Avilez; "Abstieg v. Copacabana, km 11, Nr. 5" = descent from Copacabana, km 11. – The specimen at SGO has one of the heads cut away; and it could be speculated that this head is the holotype specimen at U.

SGO 124478 **ISO** – rad, corp, ar, sp

Ritter 978: *Lobivia chrysochete* (Werdermann) Werdermann *ex* Wessner – Beitr. Sukk.-Kunde Pflege 1938: 71, 1938. (The combination is frequently attributed to Werdermann, but he published the taxon as "*Echinopsis (Lobivia) chrysochete*".)

– Argentina: Jujuy; "wahrscheinl. von Huacalera" = probably from Huacalera. SGO 124480 – (corp), ar, sp

Ritter 979: *Lobivia* sp.

– Argentina: Jujuy; "unterhalb Humahuaca" = below Humahuaca. – Locality given as "20 km unterhalb Humahuaca" = 20 km below Humahuaca in KS 4: 1639.

SGO 124481 – ar, sp

Ritter 980: *Trichocereus spachianoides* F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 2: 448, 1980. (First used in catalogues of Fa. H. Winter. Published as provisional name.)

Based on Ritter 980.

- loc. 1:** Argentina: Salta; near frontier to Prov. Jujuy. 1400 m.
ZSS A4269 – fr, sem (Ex cult. ZSS 84 4263, 18. 7. 1985)
ZSS S4163 – sem (Cult. sub ZSS 88 1004.)
- loc. 2:** Argentina: Salta ?; "50 km südl. Jujuy" = 50 km S of Jujuy. – The second label was later numbered 996 by Ritter, which must be an error according to the locality data given.
SGO 121214 – corp, ar, sp

Ritter 981: *Lobivia miniatinigra* F. Ritter – Kakt. Südamer. 2: 462-463, fig. 564, 1980.

Typus (T): Ritter 981 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Jujuy; "Gebirge westlich Purmamarca bei 4000 m" = mountains W of Purmamarca. 4000 m. – / 7. / 1959. – Collection date according to specimen at U, and probably erroneous.
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

- loc. 2:** Argentina: Jujuy; "Pass westl. Purmamarca" = pass W of Purmamarca / "westl. Purmamarca" = W of Purmamarca.
SGO 124479 **ISO** – rad, corp, ar, sp
SGO 124482 **ISO** – (rad), corp, ar, sp

Ritter 982: *Hymenorebutia drijveriana* (Backeberg) F. Ritter – Kakt. Südamer. 4: 473, 1980.

- loc. 1:** Argentina: Salta; "24 km vor Cachi, Nr. 8" = 24 km before Cachi / "östl. Cachi" = E of Cachi.
SGO 122055 – rad, corp, ar, sp, (fl)
- loc. 2:** Argentina: Salta; "49 km östl. Cachi" = 40 km E of Cachi.
SGO 124483 – corp, ar, sp

Ritter 983: *Echinopsis* sp.

- Argentina: Salta; "30 km östl. Cafayate" = 30 km E of Cafayate. –
Echinopsis aurea cf., det. Leuenberger & Eggl 1991.
SGO 121389 – rad, corp, ar, sp

Ritter 984: *Lobivia schreiteri* A. Castellanos – Monatsschr. Deutsche Kakt.-Ges. 2: 59-60, ill., 1930.

Typus (T): Castellanos 29/41 (Herb. Mus. Buenos Aires, B [iso ?]) (Leuenberger in Cact. Succ. J. Gr. Brit. 40: 104, 1978, reports a probable isotype, but *Schreiter s.n.* is not the type collection.).

- Argentina: Tucumán; "oberh. Tafi d. Valle" = above Tafi del Valle.
SGO 124484 – (corp), ar, sp

Ritter 985: *Hymenorebutia aurea* (Britton & Rose) F. Ritter var. *callochrysea* F. Ritter – Kakt. Südamer. 2: 468-469, figs. 317-318, 1980.

Typus (T): Ritter 985 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Argentina: Salta; "13 km über Alemania" = 13 km above Alemania.
SGO 121390 **ISO** – rad, corp, ar, sp
- loc. 2:** Argentina: Salta; "37 km über Alemania" = 37 km above Alemania / "37 km westl. Alemania" = 37 km W of Alemania.
SGO 121391 – rad, corp, ar, sp
- loc. 4:** Argentina: Salta; "13 km westl. Alemania" = 13 km W of Alemania. – / – / 1959.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)
- loc. 5:** Argentina: Salta; "Cachi, Nr. 9".
SGO 124485 – (corp), ar, sp

Ritter 986: *Echinopsis* sp.

- loc. 1:** Bolivia: Chuquisaca: Oropeza; "Strasse Sucre - Ravelo, km 38" = road Sucre - Ravelo, km 38. – Labelled as *Echinopsis rubens* (*nom. nud.*) on the original label.
SGO 121392 – (corp), ar, sp
- loc. 2:** Bolivia: Chuquisaca: Sucre; "Hda. Ressini" = Hacienda Ressini. – "Das grössere wohl Mischform nach *fiebrigii*" = the larger one probably intermediate to *fiebrigii*. Labelled as *Echinopsis rubens* (*nom. nud.*) on the original label. The jar contains 2 very dissimilar fragments.
SGO 121393 – (corp), ar, sp

Ritter 987: *Echinopsis tubiflora* (Pfeiffer) Zuccarini in A. Dietrich – Allg. Gartenzeit. 14: 306, 1846.

- Argentina: Tucumán; "Trancas".
SGO 121394 – (rad), corp, ar, sp

Ritter 989: *Trichocereus bertramianus* Backeberg – Blätt. Kakt.-Forsch. 1935(6): [unpaged], 1935.

- Bolivia: La Paz; "Comancho" / "Comanche".
SGO 125540 (in 2 parts) – (corp), ar, sp

Ritter 990: *Trichocereus totorensis* (Cárdenas) F. Ritter – Kakt. Südamer. 2: 562, 1980.

- loc. 1:** Bolivia: sine loco. – No locality published in KS 2: 562, where this taxon is mentioned briefly.
B GH27982 – fl, ic (corp) (Ex cult. BG Berlin, 23. 5. 1991 (cult. ex sem. Cat. H. Winter 1961). Collection number inferred.)
- loc. 2:** Bolivia: Cochabamba / Santa Cruz; "km 105 Strasse Cochab. - Sta. Cruz" = km 105 of road Cochabamba - Santa Cruz. – / 12. / 1958.
ZSS SR14511 – sem

Ritter 991: *Trichocereus scopulicola* F. Ritter – Cactus (Paris) 21(87): 14-15, ill., 1966. (Erroneously included as invalid in the IOS Index Cact. Names 1991.)

Typus (T): Ritter 991 (U 160438B, ZSS [seeds only]).

loc. 1: Bolivia: Tarija; O'Connor; "von Tapequa" = from Tapequa. - / 1. / 1963. - Collection date according to original Ritter seed sample at ZSS ("I. 63.") and to specimen at U ("1963"); the protologue gives the collection date as 1959.

U 160438B **HOLO** - (corp), ar, sp (Labelled as "Holotypus" by Ritter.

Collection number inferred. Includes a seedling plant.)

ZSS SR14512 **ISO** - sem

ZSS S4178 **Type number** - sem (Cult. sub ZSS 88 1006 (ex cult.))

loc. 2: Bolivia: Tarija; Gran Chaco; "grosse Höhen zw. Cañada u. Palos Blancos" = upper altitudes between Cañada and Palos Blancos / "24 km westl. Palos Blancos Nr. 3" = 24 km W of Palos Blancos.

SGO 121276 - (corp), ar, sp

Ritter 992: *Trichocereus* sp.

loc. 1: Bolivia: Potosí; "Yocalla". - / 3. / 1963. - Collection date according to original Ritter seed sample.

SGO 121215 - (corp), ar, sp ("3 Altersstadien" = 3 samples of different age.)

ZSS SR14513 - sem

loc. 2: Bolivia: Potosí; "36 km nordw. Potosi" = 36 km NW of Potosí.

SGO 121216 - (corp), ar, sp ("Altersform, 2 ..., 1 junger u. 1 besonders starkst. Ganz junge ..." = Old form, 2 ..., 1 young and 1 specially strong-spined. Very young)

Ritter 993: *Trichocereus terscheckioides* F. Ritter (nom. inval. Art. 37.1) - Kakt. Südamer. 2: 446, figs. 299, 301, 1980. (Based on two syntypes, Ritter 17 and Ritter 993. Erroneously included as valid in RPS 31.)

loc. 1: Argentina: Salta; "Cafayate". - Identified as "*Trichocereus terscheckioides* fa." in KS 4: 1640.

SGO 121217 **SYN** - (corp), ar, sp

loc. 2: Argentina: La Rioja; "Famatina". - / - / 1955. - Collection date according to specimen at U. Identified as "*Trichocereus terscheckioides* fa." in KS 4: 1640.

U **SYN** - (corp), ar, sp (Collection number inferred.)

loc. 3: Argentina: Salta; "(54 km westl.) Belen = (54 km W of) Belén. - / 2. / 1959.

ZSS SR13756 **SYN** - sem

Ritter 994: *Trichocereus tacnaensis* F. Ritter - Kakt. Südamer. 4: 1326, 1981.

Typus (T): Ritter 994 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Tacna; "oberhalb Tacna" = above Tacna / "74 km Weg Charaña - Tacna bei 3500 m." = 74 km at path Charaña - Tacna. 3500 m.

SGO 121188 **ISO** - ar, sp

loc. 2: Peru: Tacna; "südöstl. von Tacna" = SE of Tacna. - / - / 1959. - Collection date according to specimen at U.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 995: *Trichocereus* sp.

- Bolivia: Tarija: Gran Chaco; "24 km westl. Palos Blancos Nr. 4" = 24 km W of Palos Blancos. – One of the two original labels for this specimen gives the collection number as FR 992 which must be erroneous on account of the locality data given (cf. field-number list in KS 4).
SGO 121181 – corp, ar, sp

Ritter 996: *Trichocereus* sp.

- loc. 1: Argentina: Catamarca; "112 km über La Puerta Nr. 2" = 112 km above La Puerta / "112 km w. La Puerta Nr. 2" = "112 km W of La Puerta".
SGO 121278 – (corp), ar, sp
- loc. 2: Argentina: Catamarca; "64 km über La Puerta Nr. 3" = 64 km above La Puerta / "64 km westl. La Puerta Nr. 3" = 64 km W of La Puerta.
SGO 121279 – (corp), ar, sp

Ritter 997: *Lobivia purpureominiata* F. Ritter – Kakt. Südamer. 2: 460-461, figs. 9, 325, 1980.

Typus (T): Ritter 997 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Argentina: Catamarca; "zwischen La Puerta und Andalgalá" = between La Puerta and Andalgalá. – / – / 1959. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
- loc. 2: Argentina: Catamarca; "112 km nw. La Puerta Nr. 4a" = 112 km NW of La Puerta. – / 2. / 1959. – One of the two labels associated with this specimen (a single fragment) gives the number Ritter 1431 which refers to a *Trichocereus* ? from the same locality and which was apparently assigned only later. The fragment seems to be identical to the material illustrated as *L. purpureominiata* in KS 2: col. ill. 9; cf. also p. 454, 460. See also the specimen Ritter 1431.
SGO 121185 Type number – (corp), ar, sp

Ritter 998: *Trichocereus andalgalensis* (F. A. C. Weber) Kreuzinger – Verzeichn. Sukk. & Rev. Syst. Kakt., 36, 1935. (Repeated by Hosseus, Arch. Esc. Farm. Ci. Med. Córdoba 9: 69, 1939.)

- Argentina: Catamarca; "112 km westl. La Puerta Nr. 3" = 112 km W of La Puerta / "112 km über La Puerta" = 112 km above La Puerta.
SGO 121195 – corp, ar, sp

Ritter 999: *Trichocereus strigosus* (Salm-Dyck) Britton & Rose var. *flaviflorus* F. Ritter – Kakt. Südamer. 2: 440, 1980.

Typus (T): Ritter 999 (U, SGO [status ?], ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Argentina: La Rioja; "nahe östlich von Famatina" = vicinity E of Famatina. – / 2. / 1955. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be

the holotype as this is the only specimen present at U.)
 ZSS AX4240 **Type number** – ar, sp, fl (Ex cult. ZSS 85 1844, 10. 6.
 1985) (Leg. H. Friedrich. Seeds received from F. Ritter 1960.)

loc. 2: Argentina: La Rioja; "Chilecito". – / 5. / 1962.
 SGO 121198 – (corp), ar, sp

loc. 3: Argentina: Catamarca; "31 km über Belén" = 31 km above Belén. – "Wie
 Belén Nr. 3".
 SGO 121199 – (corp), ar, sp

loc. 4: Argentina: Catamarca; "Tinogasta".
 SGO 121203 – (corp), ar, sp

loc. 5: Argentina: La Rioja; "Famatina nach Ost" = Famatina towards the East. – /
 5. / 1962.
 SGO 121204 **Type number** – (corp), ar, sp

loc. 6: Argentina: Catamarca; "südl. Sta. Maria" = S of Santa Maria / "94 km über
 Sta. Maria Nr. 11" = 94 km above Santa Maria.
 SGO 121280 – (corp), ar, sp

Ritter 1000: *Facheiroa pilosa* F. Ritter – Kakt. Südamer. 1: 219-220, 1979.

Typus (T): Ritter 1000 (U, SGO, ZSS [seeds only]) (Type cited for U l.c.,
 iii.).

– Brazil: Minas Gerais: Mpio. Januária; "Januária", rocky limestone landscape.
 – / 4. / 1959. – Collection date according to original Ritter seed sample at
 ZSS ("IV. 59.") and to specimen at U ("1959"); additional data from KS.
 SGO 121733 **ISO** – corp, ar, sp, ceph
 U **HOLO** – corp, ar, sp, ceph (Assumed to be the holotype as this is the
 only specimen present at U.)
 ZSS SR14639 **ISO** – sem

Ritter 1002: *Cleistocactus otuyensis* F. Ritter (*nom. inval.* Art. 36.1) – Kakt.

Südamer. 2: 677, 1980. (Published as provisional name.)

Based on Ritter 1002.

loc. 1: Bolivia: Potosí: Saavedra; Otuyo. – / – / 1958.
 B GH31641 – corp, ar, sp, ic (corp) (Ex cult. BG Berlin, 2. 8. 1993 (cult.
 ex sem. Cat. H. Winter 1960). Collection number inferred.)
 ZSS A9828 – fl (Ex cult. ZSS s.n. (leg. F. Ritter 1960).)

loc. 2: Bolivia: Potosí: Saavedra; "oberh. Otuyo" = above Otuyo / "Otyuo". – / 12. /
 1958.
 SGO 124822 – corp, ar, sp
 ZSS SR14514 – sem (Locality simply given as "Otuyo").

Ritter 1003: *Cleistocactus smaragdiflorus* (F. A. C. Weber) Britton & Rose –
 The Cact. 2: 174, 1920.

loc. 1: Argentina: Salta; "60 km südl. Salta" = 60 km S of Salta / "südl. Salta" = S of
 Salta.
 SGO 124823 – corp, ar, sp

loc. 2: Argentina: Salta; "Betania". – "16 Rippen" = 16 ribs.

SGO 124824 – corp, ar, sp

loc. 3: Argentina: Salta; "Betania". – / 1. / 1959.

ZSS SR13757 – sem

Ritter 1004: *Cleistocactus smaragdiflorus* (F. A. C. Weber) Britton & Rose –
The Cact. 2: 174, 1920.

– Argentina: Salta; "Mojotero; Caldera" / "westl. Mojotero" = W of Mojotero.

– "14 - 15 Rippen" = 14 - 15 ribs.

SGO 124825 – corp, ar, sp

Ritter 1006: *Cereus xanthocarpus* K. Schumann – Gesamtbeschr. Kakt.,
Nachtr., 32, 1903.

Typus (S): Anisits 59 (B [syn]) (Based on several syntypes from Paraguay.).

loc. 1: Paraguay: Concepción; "Concepcion (Par.)" = Concepción. – Treated as
Piptanthocereus (*nom. illeg.*) by Ritter.

SGO 121783 – (rad, corp, ar, sp) (Seedling only.)

loc. 2: Paraguay: Amambay; "Capitan Bado" = Capitán Bado. – Treated as
Piptanthocereus (*nom. illeg.*) by Ritter.

SGO 121784 – (rad, corp, ar, sp) (Seedlings only.)

loc. 3: Paraguay: Amambay; "Sierra Amambay". – Treated as *Piptanthocereus*
(*nom. illeg.*) by Ritter.

SGO 121785 – (corp), ar, sp

loc. 4: Brazil: Mato Grosso do Sul; "Corumba". – "Der kleinareolige Trieb ist so
verschieden, dass es mir zweifelhaft erscheint, ob er dazu gehört. Vgl.

alacrip. von San Geronimo." = The branch with the small areoles is so
different that it appears doubtful, whether it belongs here; cf. *alacriportanus*
from San Geronimo. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.

SGO 121786 – (corp), ar, sp

loc. 5: Paraguay: Amambay; "Hohlweg östl. Tororó (vom Apfelsinengarten),
Amambay" = path E of Tororó (from citrus orchard). – One of the two labels
in this jar is erroneously numbered "1106". Treated as *Piptanthocereus* (*nom.*
illeg.) by Ritter and identified as *P. peruvianus* on the original label.

SGO 121787 – (rad, corp, ar, sp) (Seedling only.)

loc. 6: Paraguay: "Bella Vista". – One of the two labels in this jar is erroneously
numbered "1106". Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter and
identified as *P. peruvianus* on the original label.

SGO 121861 – (rad, corp, ar, sp) (Seedling only.)

loc. 7: Paraguay: Amambay; "La Preferida, Nr. 4". – Treated as *Piptanthocereus*
(*nom. illeg.*) by Ritter.

SGO 121808 – (corp), ar, sp (Includes 3 small seedlings.)

loc. 9: Paraguay: "Ihy-Aty Nr. 4". – / 3. / 1959. – Treated as *Piptanthocereus*
(*nom. illeg.*) by Ritter.

ZSS SR13592 – sem

loc.10: Paraguay: Itapua; "Hohenau 2". – / 5. / 1973. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR13593 – sem

Ritter 1007: *Cereus bageanus* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1(a)) – Kakt. Südamer. 1: 238, in synonym., 1979.

- Brazil: Rio Grande do Sul; "Bagé". – / 5. / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to specimens at SGO and ZSS; specimen at U simply dated "1959".
B GH12757 – fl, ic (corp, fl) (Ex cult. BG Berlin, 29. 8. 1982 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred. No locality data associated with this specimen.)
B GH12757a – fl (Ex cult. BG Berlin, 27. 8. 1986 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred. No locality associated with this specimen.)
SGO 121788 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present.)
ZSS SR14640 ISO – sem

Ritter 1008: *Cereus alacriportanus* Pfeiffer – Enum. Diag. Cact., 87, 1837.

- loc. 1:** Brazil: Rio Grande do Sul; "Porto Alegre" / "Ponta Grossa bei Porto Alegre" = Ponta Grossa near Porto Alegre. – The jar contains 2 dissimilar fragments. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121789 – (corp), ar, sp
- loc. 2:** Brazil: Rio Grande do Sul; "San Jerónimo". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121790 – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Vinte Tiros". – / 4. / 1964. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14641 – sem
- loc. 4:** Brazil: Rio Grande do Sul; "Jansen". – / 4. / 1964. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. The collection number on the original label is given as "FR 1008 (?)".
ZSS SR14642 – sem
- loc. 5:** Brazil: Rio Grande do Sul; "Porto Alegre". – / 4. / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14643 – sem

Ritter 1009: *Cereus neonesioticus* (F. Ritter) P. J. Braun – Bradleya 6: 86, 1988.

- Brazil: Santa Catarina; "Florianópolis". – / 4. / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to original Ritter seed sample at ZSS.
B GH13147 – (fl), ic (corp) (Ex cult. BG Berlin, 21. 9. 1982 (cult. ex sem. Cat. H. Winter 1960). Collection number inferred. No locality associated with this specimen.)
B GH21015 – fl, ic (corp, fl) (Ex cult. BG Berlin, 13. 10. 1986 (cult. ex

sem. Cat. H. Winter 1960). Collection number inferred. No locality associated with this specimen.)

SGO 121791 ISO – (corp), ar, sp

ZSS SR14644 ISO – sem

Ritter 1010: *Cereus obtusus* Haworth – Rev. Pl. Succ. 70, 1821.

- Brazil: São Paulo; "Santos". – / 4. / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to original Ritter seed sample at ZSS. Identified as *P. obtusus* var. *lanatus* F. Ritter (*nom. nud.*) in the field number list in KS 4.
SGO 121792 – (corp), ar, sp
ZSS SR14645 – sem

Ritter 1011: *Cereus calcirupicola* (F. Ritter) Rizzini – Rev. Brasil. Biol. 46: 782, 1987. (Vol. for 1986, publ. 1987.)

- Brazil: Minas Gerais; "Montes Claros". – / – / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to specimen at U.
SGO 121793 ISO – (rad), corp, ar, sp (The jar contains a fragment of an adult plant and a very dissimilar looking rooted seedling.)
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 1012: *Cereus crassisepalus* Buining & Brederoo – in Krainz, Die Kakt. 53: CIVb, 1973.

Typus (T): Horst & Uebelmann HU 169 (U, ZSS).

- loc. 1:** Brazil: Minas Gerais; "Penha da França" / "Weg nach Penha da França" = path to Penha da França. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Identified as *Cereus permixtispinus* Ritter (*nom. nud.*) on the original label.
SGO 121794 – (corp), ar, sp
- loc. 2:** Brazil: Minas Gerais; "Serra do Ambrosio". – / – / 1959. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Identified as *Cereus permixtispinus* Ritter (*nom. nud.*) on the original label.
U – (corp), ar, sp (Collection number by inference. Originally identified as *Cereus permixtispinus* (*nom. nud.*))

Ritter 1013: *Cipocereus minensis* (Werdermann) F. Ritter – Kakt. Südamer. 1: 57, 1979.

- loc. 1:** Brazil: Minas Gerais; "Gouvea".
SGO 125024 – corp, ar, sp
- loc. 2:** Brazil: Minas Gerais; "Diamantina". – / 3. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125480 – (corp), ar, sp
ZSS SR14646 – sem

Ritter 1014: *Monvillea rhodoleucantha* (K. Schumann) A. Berger *ex* Backeberg & Knuth – Kaktus-ABC, 184, 1936. (Dated 1935, publ. Febr.

1936. Combination frequently attributed to Borg 1937.)

- Brazil: Mato Grosso do Sul; "Corumba". – The original label gives the number as "FR 1014 = 1173"; the two numbers are said to be equal in the field number list in KS 4.
SGO 121823 – (corp), ar, sp

Ritter 1015: *Monvillea alticostata* F. Ritter – Kakt. Südamer. 1: 251-253, figs. 204-206, 1979.

Typus (T): Ritter 1015 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Paraguay: Amambay; "Capitán Bado".
SGO 121825 **ISO** – rad, corp, ar, sp (Includes juvenile growth.)
ZSS SR13594 **ISO** – sem
- loc. 2:** Paraguay: "Bella Vista". – "Mit breiten Blütenblättern. Rippen auch viel höher als ... Muster" = with broad perianth segments. Also ribs much higher than in ... specimen.
SGO 121826 – corp, ar, sp (Probably only juvenile growth.)
- loc. 3:** Paraguay: Amambay; "Ypytá, ca. 70 km östl. La Preferida" = Ypytá, c. 70 km E of La Preferida..
SGO 121827 – corp, ar, sp
- loc. 4:** Paraguay: Amambay; "Sierra de Amambay".
SGO 121828 – (corp), ar, sp
- loc. 5:** Paraguay: Amambay; "Capitan Bado, Grenze Paraguay - Brasilien" = Capitán Bado, frontier Paraguay - Brazil. – / – / 1963. – Collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 6:** Paraguay: "Ypyta" = Ypytá.
ZSS SR13595 – sem
- loc. 7:** Paraguay: "Cerro Aca-Ay (unten)" = Cerro Aca-Ay (below).
ZSS SR13596 – sem
- loc. 8:** Paraguay: Presidente Hayes; "Chaco-i". – "1 Pflanze, hochrippig" = 1 plant, with tall ribs. The original label has the collection number as "FR 1015 (?)".
ZSS SR13597 – sem

Ritter 1016: *Monvillea* sp.

- Argentina: Corrientes; "Montes Caseros, Nr. 2". – Originally identified as *Monvillea paxtoniana* cf. on the original label, now crossed out.
SGO 121824 – corp, ar, sp

Ritter 1017: *Eriocereus* sp.

- Argentina: Salta; "Río Rosario bei Rosario" = Río Rosario, near Rosario. – "6 Rippen" = 6 ribs.
SGO 121718 – (corp), ar, sp

Ritter 1018: *Denmoza rhodacantha* (Salm-Dyck) Britton & Rose – The Cact.

3: 79, 1922.

loc. 1: Argentina: Catamarca; "94 km südl. Sta. Maria" = 94 km S of Santa Maria. – Identified as "*Denmoza sp.*, var. *zu rhodacantha* oder spec. nov." by Ritter in KS 4: 1640.

SGO 121700 – (corp), ar, sp, (al)

loc. 2: Argentina: Catamarca; "94 km über Sta. Maria" = 94 km above Santa Maria. – / 2. / 1959. – The year is difficult to decipher as part of the last cipher has been torn away.

ZSS SR13758 – sem

Ritter 1019: *Denmoza sp.*

– Argentina: Salta; "ca. 37 km über Alemania" = c. 37 km above Alemania. – = *Denmoza rhodacantha* (Salm-Dyck) Britton & Rose (det. B. E. Leuenberger 1991). The original label identifies the specimen as *Denmoza ducis-pauli*.

SGO 121701 – (corp), ar, sp

Ritter 1020: *Corryocactus otuyensis* Cárdenas – Cactus (Paris) No. 78: 87, 1963.

– Bolivia: Potosí: Saavedra; "Otuyo".

SGO 125055 – (corp), ar, sp

Ritter 1021: *Mediocactus coccineus* (De Candolle) Britton & Rose – The Cact. 2: 211, 1920.

loc. 1: Brazil: Rio de Janeiro; "Arraijal do Cabo" / "Arraial do Cabo".

SGO 125239 – rad, corp, ar, sp

loc. 2: Brazil: Rio de Janeiro; "Sacarema". – "Ausnahme-Exemplar" = exceptional specimen.

SGO 125240 – corp, ar

loc. 3: Brazil: Minas Gerais; "Montes Claros, Nr. 5" / "Montes Claros".

SGO 125241 – rad, corp, ar, sp

ZSS SR14647 – sem (Locality simply given as "Montes Claros" on the original label.)

loc. 4: Paraguay: Alto Paraguay; "Puerto Casado".

SGO 125242 – rad, corp, ar, sp

loc. 5: Paraguay: Alto Paraguay; "Tres Cerros".

SGO 125243 – rad, corp, ar, sp

loc. 6: Paraguay: Amambay; "Sierra Amambay".

SGO 125244 – corp, ar, sp

loc. 7: Paraguay: Central; "Asunción". 12. / 12. / 1972. – "(Im Bot. Garten wild.)" = naturally occurring in the Botanical Garden.

ZSS SR13598 – sem

Ritter 1022: *Epiphyllum phyllanthus* (Linné) Haworth – Syn. Pl. Succ., 197, 1812.

loc. 1: Paraguay: Amambay; "Sierro [sic!] Amambay" / "Amambay". – "Bewollte Areolen" = woolly areoles.
SGO 125089 – corp

loc. 2: Paraguay: Amambay; "Sierra de Amambay".
ZSS SR13599 – sem

Ritter 1023: *Hylocereus undatus* (Haworth) Britton & Rose – in Britton, Fl. Bermuda, 256, 1918.

– Brazil ?; São Paulo ?; "Santos".
SGO 121762 – corp, ar, sp

Ritter 1024: *Haageocereus decumbens* (Vaupel) Backeberg var. *brevispinus* F. Ritter – Kakt. Südamer. 4: 1392, 1981.
Typus (T): Ritter 1024 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Arequipa; einige Km "nördl. Ocoña" = some km N of Ocoña, mountain slopes above the coast. – Locality data supplemented from the protologue.
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Peru: Arequipa; "Höhen nördl. Ocoña, Nr. 3" = altitudes N of Ocoña / "nördl. Ocoña" = N of Ocoña.
SGO 124754 **ISO** – corp, ar, sp

loc. 3: Peru: Arequipa ?; "nördl. Camarones-Schlucht" = N of the Camarones gorge. – "(unentwickelt)" = undeveloped. The original label first had the locality as "Calaveritas", now crossed out.
ZSS SR14109 – sem

Ritter 1025: *Loxanthocereus camanaensis* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 15, 1957. (Dated 1956, publ. 1957.)

– Peru: Arequipa; "Abstieg nach Camana" = descent to Camaná / "Camaná".
SGO 124755 – corp, ar, sp

Ritter 1026: *Notocactus megapotamicus* Osten ex Herter var. *alacriportanus* F. Ritter – Kakt. Südamer. 1: 175, fig. 115, 1979.
Typus (T): Ritter 1026 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "b. Gloria bei Porto Alegre" = near Gloria near Porto Alegre. – / – / 1959. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "Porto Alegre Nr. 4". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125268 **Type number** – (corp), ar, sp
ZSS SR14648 **Type number** – sem

Ritter 1026a: *Notocactus linkii* (Lehmann) Herter – Cactus (Paris) No. 42: 120, 1954. (Repeated by Herter in Fl. Ill. Uruguay, 120, 1955, and by Y. Ito in Explan. Diagr. Austroechinocactinae, 249, 1957 (cf. RPS 8).)

- loc. 1:** Brazil: Rio Grande do Sul; "Fundplatz von *Notocactus megapotamicus* var. *vulgatus* Ritter" = locality of *N. megapotamicus* var. *vulgatus* (which is given as Quevedos in KS 1: 175). – / – / 1965. – Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
U – (corp), ar, sp (Labelled as "Neotypus" by Ritter, but no published neotypification found.)
- loc. 2:** Brazil: Rio Grande do Sul; "südl. Quevedo 14 km" = S of Quevedo, 14 km / "s. Quevedos" = S of Quevedos. – "Grösserer *Notoc.* Narb [sic!] gelb" = Larger *Notoc[actus]*. Stigma yellow. Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
SGO 125269 – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Berlin". – / 3. / 1964. – Collection date according to original Ritter seed sample at ZSS. Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
SGO 125270 – (corp), ar, sp
ZSS SR14649 – sem
- loc. 4:** Brazil: Rio Grande do Sul; "Rio Varzea" / "Rio Vazeza [sic !]". – "Narb [sic !] gelb" = stigma yellow. Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
SGO 125271 – (corp), ar, sp
- loc. 5:** Brazil: Rio Grande do Sul; "Pedras Altas (bei L. Horst)" = Pedras Altas (at L. Horst's place). – Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
ZSS SR14650 – sem
- loc. 6:** Brazil: Rio Grande do Sul; "nördl. Carazinha" = N of Carazinha. – Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
ZSS SR14651 – sem
- loc. 7:** Brazil: Rio Grande do Sul; "von Jaguari ca. 25 km nach Baragem" = from Jaguari c. 25 km towards Baragem. – Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
ZSS SR14652 – sem
- loc. 8:** Brazil: Rio Grande do Sul; "14 km südl. Quevedos" = 14 km S of Quevedos. – Identified as "*Notocactus linkii* var. *linkii* gelbnarbig" by Ritter in KS 4: 1640.
ZSS SR14653 – sem

Ritter 1026b: *Notocactus linkii* (Lehmann) Herter var. *buenekeri* F. Ritter – Kakt. Südamer. 1: 172, fig. 236, 1979.
Typus (T): Ritter 1026b (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Garibaldi". – / – / 1964. – Material discovered by R. Büneker but numbered by Ritter. Collection date according to specimen at U.
SGO 125272 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Assumed to represent the holotype as this is the only specimen present at U.)
ZSS SR14654 ISO – sem

Ritter 1026c: *Notocactus linkii* (Lehmann) Herter fa. *multiflorus* (Fric ex Buining) F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 1: 172, 1979. (Erroneously included as valid in RPS 30.)

loc. 1: Brazil: Rio Grande do Sul; "Strasse von Jaguari nach Barragem" = road from Jaguari to Barragem / "östl. Jaguari" = E of Jaguari.
SGO 125273 – (corp), ar, sp

loc. 2: Brazil: Rio Grande do Sul; "Livramento".
ZSS SR14655 – sem

loc. 3: Brazil: Rio Grande do Sul; "18 km W. S. Francisco" = 18 km W of São Francisco [de Assis ?].
ZSS SR14656 – sem

Ritter 1026d: *Notocactus linkii* (Lehmann) Herter – Cactus (Paris) No. 42: 120, 1954. (Repeated by Herter in Fl. Ill. Uruguay, 120, 1955, and by Y. Ito in Explan. Diagr. Austroechinocactinae, 249, 1957 (cf. RPS 8).)

loc. 1: Brazil: Rio Grande do Sul; "Tafelberg westl. Sao Pedro" = Tafelberg W of São Pedro / "W. Sao Pedro" = W of São Pedro. – "Narb [sic !] rot" = stigma red. Identified as "*Notocactus linkii* var. *linkii* rotnarbig" by Ritter in KS 4: 1640.
SGO 125274 – (corp), ar, sp

loc. 2: Brazil: Rio Grande do Sul; "20 km von St. Ana nach Caçapava, Sandsteinfelsen" = 20 km from Santa Ana to Caçapava, sandstone rocks / "St. Ana". – "Narb [sic !] rot" = stigma red. Identified as "*Notocactus linkii* var. *linkii* rotnarbig" by Ritter in KS 4: 1640.
SGO 125275 – (corp), ar, sp

loc. 3: Brazil: Rio Grande do Sul; "22 km westl. Julio de Castilho" = 22 km W of Julio de Castilho. – "Narb [sic !] rot" = stigma red. Identified as "*Notocactus linkii* var. *linkii* rotnarbig" by Ritter in KS 4: 1640.
SGO 125276 – (corp), ar, sp

loc. 4: Brazil: Rio Grande do Sul; "W. C. Branco" = W of Cerro Branco. – Identified as "*Notocactus linkii* var. *linkii* rotnarbig" by Ritter in KS 4: 1640.
ZSS SR14657 – sem

loc. 5: Brazil: Rio Grande do Sul; "W. J. de Castilho" = W of Julio de Castilho. – Identified as "*Notocactus linkii* var. *linkii* rotnarbig" by Ritter in KS 4: 1640.
ZSS SR14658 – sem

loc. 6: Brazil: Rio Grande do Sul; "nw. St. Ana" = NW of Santa Ana. – Identified as "*Notocactus linkii* var. *linkii* rotnarbig" by Ritter in KS 4: 1640.
ZSS SR14659 – sem

Ritter 1027: *Notocactus arechavaletae* (Spegazzini) Herter var. *alacriportanus* F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 1: 165-166, fig. 100a, 1979. (Sphalm. 'arechavaletai'. Erroneously regarded as valid in RPS, but based on two syntypes, *Ritter 1027* and *Ritter 1027a*.)

loc. 1: Brazil: Rio Grande do Sul; "Porto Alegre".
U SYN – (corp), ar, sp

loc. 2: Brazil: Rio Grande do Sul; "Porto Alegre Nr. 3". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS.

SGO 125277 **SYN** – (corp), ar, sp (Includes a small seedling.)

ZSS SR14660 **SYN** – sem

Ritter 1027a: *Notocactus arechavaletae* (Spegazzini) Herter var. ***buenekeri*** F. Ritter – Kakt. Südamer. 1: 166, fig. 100b, 1979. (Sphalm. 'arechavaletai').
Typus (T): Ritter 1027b (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Rio Grande do Sul; "Montenegro". – "(von L. Horst LH 27)" = from L. Horst LH 27.

ZSS SR14661 **SYN** – sem

Ritter 1027b: *Notocactus arechavaletae* (Spegazzini) Herter var. ***buenekeri*** F. Ritter – Kakt. Südamer. 1: 166, fig. 100b, 1979. (Sphalm. 'arechavaletai').
Typus (T): Ritter 1027b (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Rio Grande do Sul; "Serrinha". – / – / 1965. – Collected by R.

Büneker. Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14662 **ISO** – sem

Ritter 1027c: *Notocactus arechavaletae* (Spegazzini) Herter var. ***horstii*** F. Ritter – Kakt. Südamer. 1: 166, fig. 101, 1979. (Sphalm. 'arechavaletai').
Typus (T): Ritter 1027c (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Rio Grande do Sul; "Tres Pontes". – / – / 1966. – Collected by L. Horst. Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14663 **ISO** – sem

Ritter 1027d: *Notocactus arechavaletae* (Spegazzini) Herter var. ***rubescens*** F. Ritter – Kakt. Südamer. 1: 166, fig. 102, 1979. (Sphalm. 'arechavaletai').
Typus (T): Ritter & Horst 1027d (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Carazinha". – / – / 1965. – Discovered jointly by L. Horst and the collector. Collection date according to the protologue; the specimen at U is dated "1966".

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Brazil: Rio Grande do Sul; "nördlich Carazinha" = N of Carazinha.

ZSS SR14664 **Type number** – sem

Ritter 1028: *Rhipsalis linearis* K. Schumann – in Martius, Fl. Brasil. 4(2): 296, 1890. (Based on several syntypes).
Typus (S): Balansa 2500 (G [syn]).

- loc. 1:** Brazil: Rio Grande do Sul; "Berlin".
SGO 125593 – corp, ar, sp
- loc. 2:** Brazil: Rio Grande do Sul; "Canela".
SGO 125594 – corp, ar, sp
- loc. 3:** Paraguay: Guairá; "Colonia Independ.cia" = Colonia Independencia.
SGO 125595 – rad, corp, ar, sp

Ritter 1029: *Rhipsalis* sp.

- Paraguay: Amambay; "Sierra Amambay" / "Amambay". – Locality given as "Cerro Corá, Provinz Amambay" in KS 4: 1640.
SGO 125596 – corp, ar, sp

Ritter 1030: *Lepismium cruciforme* (Vellozo) Miquel – Bull. Sci. Nat. Néerl. 1838: 49, 1838.

- loc. 1:** Paraguay: Guairá; "Cerro Acatí". – One of the two original labels has the number FR 1030 crossed out and replaced with "FR 1186a"; these two are said to be equal in KS 4.
SGO 125074 – corp, ar, sp
- loc. 2:** Paraguay: "Yrpyté". – One of the two original labels has the number FR 1030 crossed out and replaced with "FR 1186"; these two are said to be equal in KS 4.
SGO 125075 – corp, ar, sp
- loc. 3:** Brazil: Santa Catarina; "Florianopolis, Nr. 3". – "3-rippig" = 3-ribbed.
SGO 125076 – corp, ar, sp
- loc. 4:** Brazil: Rio de Janeiro; "Arraial do Cabo" / "Arrayol do C." / "Arraya do Cabo".
SGO 125079 – corp, ar, sp
- loc. 5:** Brazil: "Brasil." [sine loco]. – / 4. / 1959.
ZSS SR14665 – sem
- loc. 6:** Brazil: Rio Grande do Sul; "Agudo". – / 3. / 1964.
ZSS SR14666 – sem
- loc. 7:** Brazil: Rio de Janeiro; "Arraial do Cabo Nr. 6".
ZSS SR14667 – sem

Ritter 1030a: *Lepismium cruciforme* (Vellozo) Miquel – Bull. Sci. Nat. Néerl. 1838: 49, 1838.

- Brazil: São Paulo; "Santos". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125077 – corp, ar, sp
ZSS SR14668 – sem

Ritter 1030b: *Lepismium cruciforme* (Vellozo) Miquel – Bull. Sci. Nat. Néerl. 1838: 49, 1838.

- Brazil: Rio Grande do Sul; "Porto Alegre" / Porto Alegre, Parada 83 Strasse nach Jaguarua. – The locality given above but not in quotes is added in different handwriting on the SGO label and has probably been copied from the back of the original label which is glued on.
SGO 125078 – corp, ar, sp

Ritter 1031: *Rhpsalis crispata* (Haworth) Pfeiffer – Enum. Diagn. Cact., 130, 1837.

- Brazil: Santa Catarina; "Florianopolis, Nr. 6". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "Florianopolis").
SGO 125600 – rad, corp, ar, sp
ZSS SR14669 – sem

Ritter 1032: *Rhpsalis heteroclada* Britton & Rose – The Cact. 4: 224, 1923.

- loc. 1:** Brazil: Rio Grande do Sul; "Strass. P. Alegre - Taquara, Berg bei Parada 73" = road Porto Alegre - Taquara, mountain at Parada 73 / "Porto Alegre".
SGO 125597 – corp, ar, sp
- loc. 2:** Brazil: Santa Catarina; "Florianopolis". – / 4. / 1959. – Collection date according to original Ritter seed sample at ZSS.
SGO 125598 – corp, ar, sp
ZSS SR14671 – sem
- loc. 3:** Brazil: São Paulo; "Santos".
SGO 125599 – corp, ar, sp
ZSS SR14670 – sem ("stielrunde") = terete one. The locality is given as "Santos (Plaza)" on the original label.)
- loc. 4:** Brazil: sine loco.
ZSS S12600 – sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 5:** Brazil: Rio Grande do Sul; "Porto Alegre". – / 4. / 1959.
ZSS SR14672 – sem

Ritter 1033: *Pereskia moorei* Britton & Rose – The Cact. 1: 15, fig. 8, 1919.
Typus (T): Moore 955 (BM, NY [drawing]).

- Brazil: Mato Grosso do Sul; "Corumbá" = Corumba. 18. / 3. / 1959. – The assignment of "Corumbá" to Mato Grosso do Sul is based on the reported type locality for *P. moorei*, and the locality is correctly written "Corumba" (there is also a 'Corumbá' in Goiás).
ZSS SR14673 – sem

Ritter 1034: *Quiabentia zehntneri* (Britton & Rose) Britton & Rose – The Cact. 4: 252, 1923.

- loc. 1:** Brazil: Minas Gerais; "Januaria".
SGO 121904 – corp, ar, sp
- loc. 2:** Brazil: Bahia; "Palmas do Monte Alto".
SGO 121905 – corp, ar, sp

Ritter 1035: *Opuntia saxatilis* (F. Ritter) P. J. Braun & E. Esteves Pereira –

Cact. Succ. J. (US) 63(2): 82, 1991.

- Brazil: Minas Gerais; "Montes Claros". - / 4. / 1959. - Collection date according to the original Ritter seed sample at ZSS ("IV 59.") and the specimen at U ("1959"). Identified as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122043 ISO - corp, ar, sp
U HOLO - corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen present at U.)
ZSS SR14674 ISO - sem

Ritter 1036: *Opuntia pituitosa* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) - Kakt. Südamer. 2: 404, in synonym., 1980.

- Argentina: Corrientes; "Monte Caseros". 3. / 5. / 1959. - Treated as *Platyopuntia* (*nom. illeg.*) by Ritter. Collection date according to specimen at U.
U HOLO - (corp), ar, sp (Labelled as "Herbartypus" by Ritter. Collection number inferred.)

Ritter 1037: *Opuntia vulgaris* Miller - Gard. Dict. ed. 8, no. 1, 1758. (*Nom. nov. pro Cactus opuntia* Linné 1753.)

- Brazil: Pernambuco; "Mercês" [= Engenho Pirajá]. - / 4. / 1959. - Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and identified as "*P. vulgaris* var." in the field-number list in KS 4, where the locality is given as "Diamantina", which would be in Minas Gerais.
ZSS SR14675 - sem

Ritter 1038: *Opuntia roborensis* Cárdenas - Cact. Succ. J. (US) 42: 32, 1970.

- Brazil: Mato Grosso do Sul; "Corumba". - Identified as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122044 - (corp), ar, sp

Ritter 1039: *Opuntia sulphurea* Salm-Dyck - Hort. Dyck. 1834, 360, 1834. (Usually attributed to "G. Don ex Loudon, Hort. Brit., 196, 1830" but no description is given there apart from some horticultural symbols.)

- Argentina: Salta; "22 km vor Cachi" = 22 km before Cachi / "östl. Cachi" = E of Cachi. - Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and identified as "*P. sulphurea* var. oder eigene Art" = *P. sulphurea* var. or separate species, in KS 4.
SGO 125341 - (corp), ar, sp

Ritter 1040: *Opuntia vulgaris* Miller - Gard. Dict. ed. 8, no. 1, 1758. (*Nom. nov. pro Cactus opuntia* Linné 1753.)

- loc. 1: Brazil: Rio Grande do Sul; "Porto Alegre" / "Porto Alegre - Gloria". - Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122045 - (corp), ar, sp
- loc. 2: Brazil: Rio Grande do Sul; "Porto Alegre". - / 4. / 1959. - Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14676 - sem

Ritter 1041: *Opuntia microdisca* F. A. C. Weber – in D. Bois, Dict. hort., 896, 1898.

- Argentina: Salta; "Chorrillos". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125342 – corp, ar, sp

Ritter 1042: *Opuntia orurensis* Cárdenas – Cact. Succ. J. (US) 28: 112-113, 1956.

- Bolivia: Tarija; "San Antonio". – / 12. / 1958. – Identified as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122046 – corp, ar, sp

Ritter 1043: *Opuntia microdisca* F. A. C. Weber – in D. Bois, Dict. hort., 896, 1898.

- loc. 1: Argentina: Catamarca; "94 km über Sta. Maria, Nr. 2" = 94 km above Santa Maria / "94 km südl. Sta. Maria" = 94 km S of Santa Maria. – "Photopfl. Die kleinere Pfl. ist die Photopflanze." = Specimen of the photograph. The smaller plant is the specimen of the photograph. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125343 – corp, ar, sp

- loc. 2: Argentina: Catamarca; "33 km über Sta. Maria" = 33 km above Santa Maria / "südl. Sta. Maria" = S of Santa Maria. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125344 – rad, corp, ar, sp

Ritter 1043a: *Opuntia microdisca* F. A. C. Weber – in D. Bois, Dict. hort., 896, 1898.

- loc. 1: Argentina: Salta; "12 km nach Poma" = 12 km from Poma / "südl. Poma (Salta)" = S of Poma. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125345 – corp, ar, sp
- loc. 2: Argentina: Salta; "22 km vor Cachi" = 22 km before Cachi / "Cachi". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125346 – corp, ar, sp

Ritter 1044: *Opuntia microdisca* F. A. C. Weber – in D. Bois, Dict. hort., 896, 1898.

- Argentina: Catamarca; "112 km über La Puerta, Nr. 5" / "westl. La Puerta" = W of La Puerta. – / 2. / 1959. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 125347 – corp, ar, sp

Ritter 1045: *Cumulopuntia galarasensis* F. Ritter – Kakt. Südamer. 4: 1249, 1981.

- Typus* (T): Ritter 1045 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Peru: Ayacucho; "Galeras". - / - / 1958. - Collection date according to specimen at U.

U **HOLO** - corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 3: Peru: Ayacucho; "Galeras Nr. 4".
SGO 125106 **ISO** - corp, ar, sp
ZSS SR14110 **ISO** - sem

Ritter 1046: *Maihueniopsis mandragora* (Backeberg) F. Ritter - Kakt. Südamer. 2: 389-390, 1980.

- Argentina: Salta; "Puerta Tastil" / "P. Tastil".
SGO 125225 - rad, corp, ar, sp
ZSS SR13759 - sem

Ritter 1047: *Austrocyliotropuntia vestita* (Salm-Dyck) Backeberg - Cactaceae (Jahrb. Deutsche Kakt.-Ges.) 1942(1): 13, 1942.

- Bolivia: Cochabamba; "50 km östl. Cochab.ba" = 50 km E of Cochabamba.
SGO 121941 - corp, ar, sp

Ritter 1048: *Austrocyliotropuntia weingartiana* (Backeberg) Backeberg - Cact. Succ. J. (US) 23(1): 14, 1951.

- Bolivia: Potosí; "Don Diego".
SGO 121942 - corp, ar, sp

Ritter 1049: *Tephrocactus bruchii* (Spegazzini) Spegazzini - Revista Argent. Bot. 1: 202, 1926.

loc. 1: Argentina: Catamarca; "30 km südöstl. Tinogasta" = 30 km SE of Tinogasta / "südöstl. Tinogasta" = SE of Tinogasta.
SGO 125443 - corp, ar, sp

loc. 2: Argentina: Catamarca; "20 km südöstl. Tinogasta" = 20 km SE of Tinogasta.
- / 2. / 1959.
ZSS SR13760 - sem

Ritter 1050: *Maihueniopsis leptoclada* F. Ritter - Kakt. Südamer. 2: 388, 1980. *Typus* (T): Ritter 1050 (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Argentina: Jujuy; "19 km südl. Tres Cruces, Nr. 5" = 19 km S of Tres Cruces / "südl. Tres Cruces" = S of Tres Cruces.
SGO 125226 **ISO** - corp, ar, sp

Ritter 1051: *Maihueniopsis hypogaea* (Werdermann) F. Ritter - Kakt. Südamer. 2: 386-388, 1980.

- Argentina: Jujuy / Salta; "Strasse nach San Antonio d. l. Cobres, Grenze Jujuy - Salta" = road to San Antonio de los Cobres, frontier Jujuy - Salta.
SGO 125227 - corp, ar, sp

Ritter 1055: *Pyrrhocactus vexatus* F. Ritter – Kakt. Südamer. 3: 981-982, figs. 881-883, 1980.

Typus (T): Ritter 1055 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "bei Antofagasta" = near Antofagasta. – / – / 1960. – Type locality reported as "auf der Höhe des Morro Moreno, nordwestlich von Antofagasta" = same latitude / altitude as Morro Moreno, NW of Antofagasta, according to KS 3: 981. Collection date according to specimen at U.

SGO 121661 **Type number** – rad, corp, ar, sp

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Chile: "Morro Moreno". – / 1. / 1960.

ZSS SR13545 **Type number** – sem

Ritter 1056: *Thelocephala duripulpa* (F. Ritter) F. Ritter – Kakt. Südamer. 3: 1010, 1980.

loc. 1: Chile: Atacama; "Nordchile". – / 10. / 1962. – No locality given in the protologue.

U 145271B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.)

loc. 2: Chile: "Vallenar".

SGO 125151 **Type number** – rad, corp, ar, sp

loc. 3: Chile: sine loco.

ZSS S12579 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 4: Chile: "Vallenar, Nord" = Vallenar, North. – / 12. / 1959. – The original label first had the direction as "Süd" = South, now crossed out and replaced with "Nord".

ZSS SR13546 **Type number** – sem

Ritter 1057: *Copiapoa tocopillana* F. Ritter – Kakt. Südamer. 3: 1072-1073, figs. 991-993, 1980.

Typus (T): Ritter 1057 (U 145295B, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Chile: "Holotypus der Typuslokalität nördlich Stadt Tocopilla" = holotype from the type locality N of the city Tocopilla. – / 10. / 1962. – Collection data and date according to specimen at U.

U 145295B **HOLO** – corp, ar, sp (Labelled as "Holotyp" by Ritter.)

loc. 3: Chile: "Cobija, unten" = Cobija, below. – This is the type number for the taxon, but the type locality is N of Tocopilla.

SGO 124910 – rad, corp, ar, sp

loc. 4: Chile: "Cobija, oben" = Cobija, above / "südl. Tocopilla, Beleg" = S of Tocopilla, voucher / "Cobija, südl. Tocopilla (oben)" = Cobija, S of Tocopilla (above).

SGO 124911 – rad, corp, ar, sp

loc. 5: Chile: "Tocopilla" / "nördl. Tocopilla" = N of Tocopilla.

SGO 124912 **ISO** – rad, corp, ar, sp

loc. 6: Chile: "Cobija". - / 1. / 1960.
ZSS SR13547 - sem

Ritter 1058: *Corryocactus tenuiculus* (Backeberg) Hutchison -
Sukkulentenkunde 7/8: 9, 1963.

- Peru: Ancash; "Valle Fortaleza". 3400 m. - / 3. / 1960. - This is the type collection of *Erdisia fortalezensis*, treated as synonym of this taxon by Ritter in KS 4: 1282. Altitude data according to specimen at SGO; collection date according to original Ritter seed sample at ZSS.
SGO 125172 **ISO** - (corp), ar, sp
U 117683B **HOLO** - corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
ZSS SR14111 **ISO** - sem

Ritter 1059: *Haageocereus vulpes* F. Ritter - Kakt. Südamer. 4: 1423, fig. 1271, 1981.

Typus (T): Ritter 1059 (U 160828B, SGO [stauts ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Lima: Chancay; hills S of river Huaura. - / - / 1960.
ZSS S12566 - sem (Leg. H. Winter (Cat. 1961/62).)
- loc. 2:** Peru: Lima: Chancay; "Berge südlich Huaura-Fluss" = mountains S of the Río Huaura. - / - / 1963. - Collection date according to specimen at U, and probably erroneous and representing the accession date.
U 160828B **HOLO** - corp, ar, sp (Labelled as "Holotypus" by Ritter.
Collection number inferred.)
- loc. 3:** Peru: Lima; "Südstrasse nach Sayan" = Southern road to Sayán. - / 3. / 1960. - Collection date according to original Ritter seed sample at ZSS.
SGO 124756 **Type number** - corp, ar, sp
ZSS SR14112 **Type number** - sem

Ritter 1060: *Armatocereus arduus* F. Ritter - Kakt. Südamer. 4: 1271, fig. 1137, 1981.

Typus (T): Ritter 1060 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: La Libertad; "El Chagual", along the Marañón river. 1500 m. - / 5. / 1960. - Additional locality data and altitude according to the protologue; collection date according to the original Ritter seed sample at ZSS.
SGO 124962 **ISO** - (corp), ar, sp
U **HOLO** - (corp), ar, sp (Assumed to be the holotype as it is the only specimen present at U. Collection number inferred.)
ZSS SR14113 **ISO** - sem
- loc. 2:** Peru: Cajamarca; "Río Crisnejas, Nr. 11" / "Pte. Crisnejas" = Puente Crisnejas.
SGO 124961 - corp, ar, sp
- loc. 3:** Peru: La Libertad; sine loco.
ZSS S12563 - sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 1061: *Espostoa mirabilis* F. Ritter var. *primigena* F. Ritter - Taxon

13(4): 143, 1964.

Typus (T): Ritter 1061 (U 117619B, SGO, ZSS) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Peru: Cajamarca; frontier of Dept. Cajamarca and Dept. Amazonas, middle part of Marañón gorge. – / – / 1960. – Locality data from the protologue. Ritter in KS gives a different locality for this number: Dept. La Libertad, Prov. Patas, El Chagual. The specimens at U and ZSS are without locality data.

U 117619B **HOLO** – corp, ar, sp, cephal (Labelled as "Holotypus" by Ritter, but without locality on the original label.)

ZSS S12554 – sem (Leg. H. Winter (Cat. 1961/62).)

ZSS T5052 **ISO** – corp, ar, sp (Leg. F. Ritter.)

loc. 2: Peru: La Libertad; "El Chagual".

SGO 122171 **Type number** – corp, ar, sp, cephal

loc. 3: Peru: La Libertad; "El Chagual (unten)" = El Chagual, below. – / 4. / 1960.

ZSS SR14114 **ISO** – sem

loc. 4: Peru: La Libertad; "oberh. El Chagual bei 2200 m." = above El Chagual. 2200 m.

ZSS SR14115 **ISO** – sem ("172 K." = 172 seeds [not counted]. "grosse saftige Körner" = large juicy grains.)

Ritter 1062: *Gymnanthocereus macracanthus* F. Ritter – Kakt. Südamer. 4: 1317, fig. 1307, 1981.

Typus (T): Ritter 1062 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: La Libertad; "El Chagual" at the upper Marañón. – / 4. / 1960. – Locality data supplemented from the protologue; collection date according to the original Ritter seed sample at ZSS ("IV. 60.") and to the specimen at U ("1960").

SGO 121996 **ISO** – corp, ar, sp

U **HOLO** – corp, ar, sp ("Jungpflanze und Alterstrieb (letzterer stachellos)" = juvenile plant and older stem (the latter spineless).

Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14116 **ISO** – sem

loc. 3: Peru: La Libertad; El Chagual.

ZSS S12569 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter 1063: *Matucana purpureoalba* F. Ritter – Kakt. Südamer. 4: 1502-1503, figs. 43, 1394, 1407, 1981.

Typus (T): Ritter 1063 (U) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: La Libertad; "östlich von Huamachuco" = E of Huamachuco. – / – / 1960. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

- loc. 2:** Peru: La Libertad; "Aricapampa". - / 4. / 1960. - Collection date according to original Ritter seed sample at ZSS.
SGO 122206 - (corp), ar, sp
ZSS SR14117 - sem ("Same saftig" = seed juicy.)

Ritter 1064: *Monvillea pugionifera* F. Ritter - Kakt. Südamer. 4: 1305-1306, figs. 1165-1166, 1981.

Typus (T): Ritter 1064 (U) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Cajamarca; "unterhalb Zangal" = below Zangal. 2000 m. - / - / 1956. - Altitude supplemented from the protologue. Collection date according to specimen at U.

U **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

- loc. 2:** Peru: Cajamarca; "unterhalb Sn. Pablo" = below San Pablo.

SGO 121829 - (corp), ar, sp

- loc. 3:** Peru: Lambayeque; "Valle Saña, 700 - x m.". 700 m.

SGO 121830 - (corp), ar, sp

- loc. 4:** Peru: Cajamarca; sine loco.

ZSS S12571 - sem (Leg. H. Winter (Cat. 1961/62).)

- loc. 5:** Peru: Cajamarca; "Chilete". - / 4. / 1960.

ZSS SR14118 - sem

Ritter 1065: *Thrixanthocereus cullmannianus* F. Ritter - Kakt. and. Sukk. 12(8): 118-121, ill., 1961.

Typus (T): Ritter 1065 (U 097840B, SGO, ZSS [seeds only]).

- loc. 1:** Peru: Cajamarca; Puente Crisnejas. - / - / 1957.

U 097840B **HOLO** - corp, ar, sp, ceph (Labelled as "Holotypus" by Ritter.)

- loc. 2:** Peru: Cajamarca; "Pte. Crisneja" = Puente Crisnejas / "Pte. Crisnejas". - / 4. / 1960. - Collection date according to original Ritter seed sample at ZSS.

SGO 125516 **ISO** - corp, ar, sp, ceph, (fl) (Includes a rooted juvenile plant.)

ZSS SR14119 **ISO** - sem (Locality simply given as "Pte. Crisnejas".)

Ritter 1066: *Weberbauerocereus winterianus* F. Ritter var. *australis* F. Ritter - Kakt. and. Sukk. 13(4): 56, 1962.

Typus (T): Ritter 1066 (U 117595B, ZSS [seeds only]).

- loc. 1:** Peru: Ancash; gorge of Huecocho, a branch of the Casma-gorge. 2000 m.

U 117595B **HOLO** - corp, ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS S12578 - sem (Leg. H. Winter (Cat. 1961/62).)

- loc. 2:** Peru: Ancash; "Gebirge nördlich Yautan" = mountains N of Yaután.

SGO 121132 - corp, ar, sp

- loc. 3:** Peru: Ancash; "Quebrada Huecocho (Yaután)". - / 6. / 1960.

ZSS SR14120 **ISO** - sem

Ritter 1067: *Haageocereus fulvus* F. Ritter var. *yautanensis* F. Ritter - Kakt.

Südamer. 4: 1393-1394, fig. 1266, 1981.

Typus (T): Ritter 1067 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ancash; "Yautan" = Yaután, in forests of *Espositoa haagei*. – / – / 1960. – Locality data supplemented from the protologue. Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Peru: Ancash; "nordöstl. Yautan" = NE of Yaután / "Yautan" = Yaután.

SGO 124757 **ISO** – corp, ar, sp

loc. 3: Peru: Ancash; sine loco.

ZSS S12564 – sem (Leg. H. Winter (Cat. 1961/62).)

loc. 4: Peru: Ancash; "Quebrada Huécocho (Yaután)". – / 6. / 1960.

ZSS SR14121 **ISO** – sem

Ritter 1068: *Borzicactus calviflorus* F. Ritter – Taxon 13(3): 118, 1964.

Typus (T): Ritter 1068 (U, SGO, ZSS [seeds only]) (Holotype cited for U l.c. 12(1): 28.).

loc. 1: Peru: Ancash; "Chavin". – / 3. / 1960. – Collection date according to original Ritter seed sample at ZSS.

U 117731B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. No locality given on the original label.)

ZSS SR14122 **ISO** – sem

loc. 2: Peru: Ancash; "4 km unterhalb Chavin" = 4 km below Chavin.

SGO 125036 **ISO** – ar, sp

Ritter 1069: *Thrixanthocereus longispinus* F. Ritter – Kakt. Südamer. 4: 1484-1485, fig. 1360, 1981.

Typus (T): Ritter 1069 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Peru: La Libertad; "El Chagual". – / – / 1960. – Collection date according to specimen at U.

SGO 121292 **ISO** – corp, ar, sp, ceph

U **HOLO** – corp, ar, sp, (ceph) (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14123 **ISO** – sem

Ritter 1070: *Corryocactus huincoensis* F. Ritter – Kakt. Südamer. 4: 1288-1289, 1981.

Typus (T): Ritter 1070 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Lima; "Huinco", Eulalia valley. 1800 m. – / – / 1960. – Locality data supplemented from the protologue; collection date according to specimen at U.

SGO 125173 **ISO** – corp, ar, sp

U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14124 ISO – sem

Ritter 1071: *Corryocactus pilispinus* F. Ritter – Kakt. Südamer. 4: 1291, 1981.

Typus (T): Ritter 1071 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: La Libertad; above "El Pallar". 2800 m. – / – / 1960. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Peru: La Libertad; "oberh. westl. von El Pallar" = above W of El Pallar / "El Pallar".

SGO 125174 ISO – corp, ar, sp

loc. 3: Peru: La Libertad; "Abstieg nach El Pallar" = descent to El Pallar.

ZSS SR14125 ISO – sem

Ritter 1072: *Matucana formosa* F. Ritter var. *minor* F. Ritter – Taxon 12(3): 125, 1963.

Typus (T): Ritter 1072 (U, SGO, ZSS [seeds only]) (Holotype cited for U l.c. (1): 28, 1963.).

– Peru: La Libertad; "El Chagual".

SGO 122207 ISO – (corp), ar, sp

U 117891B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS SR14126 ISO – sem

Ritter 1073: *Matucana tuberculosa* F. Ritter – Kakt. Südamer. 4: 1505, figs. 1403-1404, 1981.

Typus (T): Ritter 1073 (U) (Type cited for U l.c. 1: iii, 1979.).

– Peru: La Libertad; "Höhen über El Chagual" = altitudes above El Chagual. 2400 m. – / – / 1960. – Altitude supplemented from protologue; collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 1074: *Haageocereus zangalensis* F. Ritter – Kakt. Südamer. 4: 1224, 1981.

Typus (T): Ritter 1074 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Cajamarca; "unterhalb Zangal" = below Zangal. 2000 m. – / – / 1960. – Collection date according to specimen at U. Altitude data supplemented from the protologue.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Peru: Cajamarca; "Zangal, Nr. 13" / "Zangal". – / – / 1960.

SGO 124758 ISO – corp, ar, sp

Ritter 1075: *Loxanthocereus erectispinus* Rauh & Backeberg – in Backeberg, Descr. Cact. Nov. [1:] 15, 1957. (Dated 1956, publ. 1957.)

- Peru: Lima; "unterh. Churin bei 2150 m." = below Churín / "Valle Churin".
2150 m.
SGO 121997 – corp, ar, sp

Ritter 1076: *Matucana pallarensis* F. Ritter – Kakt. Südamer. 4: 1501, figs. 1382, 1386, 1981.

Typus (T): Ritter 1076 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Peru: La Libertad; "El Pallar". 2300 m. – / – / 1960. – Collection date according to specimen at U; altitude added from the protologue.
SGO 122208 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

Ritter 1077: *Cumulopuntia unguispina* (Backeberg) F. Ritter var. *major* F. Ritter – Kakt. Südamer. 4: 1251-1252, 1981.

Typus (T): Ritter 1077 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Arequipa; "Lomas". – / – / 1960. – Collection date according to specimen at U.
SGO 125107 ISO – corp, ar, sp
U HOLO – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

Ritter 1078: *Borzicactus sammensis* F. Ritter – Taxon 13(3): 118, 1964.

Typus (T): Ritter 304 (ZSS T4889, SGO [status ?]).

- loc. 1:** Peru: Ancash; "oberh. Pariacoto" / "Pariacoto".
SGO 125037 – (corp), ar, sp
- loc. 2:** Peru: Ancash; "Quebrada Huécocho bei ca. 2000 m.". 2000 m.
SGO 125038 – (corp), ar, sp
- loc. 3:** Peru: Ancash; "östl. Pariacoto" = E of Pariacoto. – / 6. / 1957.
ZSS SR14127 – sem
- loc. 4:** Peru: Ancash; "Quebrada Huécocho (Yaután)". – / 6. / 1960. – The original label is numbered as "FR 1078 cf.".
ZSS SR14128 – sem

Ritter 1079: *Pereskia* sp.

- Peru: La Libertad; "El Chagual".
SGO 125356 (in 2 parts) – corp, ar, sp, (fol)

Ritter 1080: *Arequipa australis* F. Ritter – Kakt. Südamer. 3: 1123-1124, figs. 28, 1082, 1980.

Typus (T): Ritter s.n. (U, SGO [status ?, sub Ritter 1080]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Tarapacá; "östl. Camiña bei 3800 m." = E of Camiña. 3800 m. – This seems to represent the type collection for the name, but the protologue does not give a collection number, and the holotype specimen at U is unnumbered.
SGO 124984 Type ? – (corp), ar, sp

- loc. 2:** Chile: Tarapacá; "östl. Camiña bei ca. 3500 m." = E of Camiña. 3500 m. – / 9. / 1960. – This seems to represent the type collection for the name, but the protologue does not give a collection number, and the holotype specimen at U is unnumbered.

SGO 125727 **Type ?** – (fl), fr

ZSS SR13548 **Type ?** – sem

Ritter 1081: *Weingartia* sp.

- Bolivia: Chuquisaca: Azurduy; "Rio Pilcomayo unterh. Capajtala Nr. 19" = Río Pilcomayo below Capajtala.
SGO 121325 – (corp), ar, sp

Ritter 1081+1082: *Weingartia* sp.

- Bolivia: Chuquisaca; "Capajtala Nr. 19" [1081] + "südl. Sotomayor Nr. 6" = S of Sotomayor [1082]. – / 7. / 1958.
ZSS SR14515 – sem

Ritter 1085: *Pyrrhocactus scoparius* F. Ritter – Succulenta 1962(5): 51-53, ill., 1962.

Typus (T): Ritter 1085 (U 117707B, SGO, ZSS [seeds only, status ?]).

- loc. 1:** Chile: Atacama; heights N-wards and above airstrip of Chañaral.
U 117707B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. No locality is given on the original label.)

- loc. 2:** Chile: "nördl. Chañ.l, Nr. 2, Höhen" = N of Chañaral, upper altitudes. – Second label included with this collection has the number 213c (= *Pyrrhocactus intermedius* according to field number list in KS 4) crossed out and replaced with 1085; the other label has only 213c, but comparison of the material with the illustrations in KS show that 1085 must relate to the specimen.

SGO 121477 **ISO** – rad, corp, ar, sp

- loc. 3:** Chile: "(Same einer Fr. in Saucache l. XII. 60) nördl. Chañaral, Höhen" = (seeds of one fruit in Saucache l. Dec. 1960) N of Chañaral, altitudes. 1. / 12. / 1960.

ZSS SR13549 **Type ?** – sem

Ritter 1086: *Copiapoa pseudocoquimbana* F. Ritter – Taxon 12(1): 30, 1963.

Typus (T): Ritter 1086 (U 145207B) (Holotype cited for U l.c., 28.).

- loc. 1:** Chile: Atacama; "Typuslokalität nördlich von Choros Bajos" = type locality N of Choros Bajos. – Identified as *Copiapoa pseudocoquimbana* var. *pseudocoquimbana* by Ritter in KS 4: 1641.

U 145207B **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

- loc. 2:** Chile: Coquimbo; "30 km N. La Serena". – Identified as *Copiapoa pseudocoquimbana* var. *pseudocoquimbana* by Ritter in KS 4: 1641.

SGO 124913 – (corp), ar, sp

- loc. 3:** Chile: Atacama; "25 km von Carrizalillo nach Toto." = 25 km from Carrizalillo towards Toto[ral] / "südl. Carrizalillo" = S of Carrizalillo. – Identified as *Copiapoa pseudocoquimbana* var. *pseudocoquimbana* by Ritter in KS 4: 1641.
SGO 124914 – (corp), ar, sp
- loc. 4:** Chile: "ca. 30 km nördl. La Serena" = c. 30 km N of La Serena. – / 10. / 1961. – Identified as *Copiapoa pseudocoquimbana* var. *pseudocoquimbana* by Ritter in KS 4: 1641.
ZSS SR13550 – sem
- loc. 5:** Chile: "Tres Cruces". – Identified as *Copiapoa pseudocoquimbana* var. *pseudocoquimbana* by Ritter in KS 4: 1641.
ZSS SR13551 – sem

Ritter 1087: *Copiapoa vallenarensis* F. Ritter – Kakt. Südamer. 3: 1077-1078, fig. 994, 1980.

Typus (T): Ritter 1087 (U 160892B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "am Flugplatz von Vallenar" = at the airstrip of Vallenar. – / – / 1963. – Collection date according to specimen at U.
U 160892B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred. Deposited as *C. coquimbana* var. *vallenarensis*.)
- loc. 2:** Chile: "30 km östl. Vallenar" = 30 km E of Vallenar.
SGO 124915 **Type number** – (corp), ar, sp
- loc. 3:** Chile: "Maitencillo".
SGO 124916 – (corp), ar, sp
- loc. 4:** Chile: "Vallenar, Flugplatz".
SGO 124917 **ISO** – rad, corp, ar, sp
- loc. 5:** Chile: "Huasco, hoher Berg im Norden" = Huasco, high mountain in the North / "nördl. Huasco" = N of Huasco. – The original label first had the number "FR 230" (= *Copiapoa pseudocoquimbana* var. *vulgata* according to KS 4).
SGO 124918 – (corp), ar, sp
- loc. 6:** Chile: "über Freirina, bei ca. 600 - x m." = above Freirina / "südl. Freirina" = S of Freirina. 600 m. – The original label also has the altitude as "100 = ca. 500 m." (sic!) and first had the number "FR 230" (= *Copiapoa pseudocoquimbana* var. *vulgata* according to KS 4).
SGO 124919 – (corp), ar, sp
- loc. 7:** Chile: "Vallenar". – / 4. / 1963.
ZSS SR13552 **ISO** – sem

Ritter 1088: *Neoporteria vallenarensis* F. Ritter – Kakt. Südamer. 3: 1032-1033, figs. 928-929, 1980.

Typus (T): Ritter 1088 (U) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "halbwegs zwischen Vallenar and Freirina" = halfway between Vallenar and Freirina, on rocks. – / – / 1960. – Collection date according to specimen at U; locality data supplemented from the protologue.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Chile: "Maitencillo". – / – / 1965. – Collection date according to original Ritter seed sample at ZSS.

SGO 121662 – rad, corp, ar, sp
ZSS SR13553 – sem

loc. 3: Chile: sine loco.

ZSS T16353 – rad, corp, ar, sp (Ex cult. ZSS 93 1800, 10. 2. 1995) (Leg. Diers ex cult.)

Ritter 1091: *Copiapoa pseudocoquimbana* F. Ritter var. *domeykoensis* F.

Ritter – Kakt. Südamer. 3: 1077, fig. 1007, 1980.

Typus (T): Ritter 1091 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; "18 km südwestl. von Domeyko" = 18 km SW of Domeyko. – / – / 1961. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Chile: Atacama; "16 1/2 km westl. Domeyko" = 16.5 km W of Domeyko.
SGO 124920 **Type number** – (corp), ar, sp

loc. 3: Chile: Atacama; "ca. 20 km westl. Domeyko, Seitenschlucht" = c. 20 km W of Domeyko, lateral gorge.

SGO 124921 **Type number** – rad, corp, ar, sp

loc. 4: Chile: "18 km westl. Domeyko" = 18 km W of Domeyko. – / 10. / 1961. – The distance on the original label first read "18 1/2 km"; "1/2" was later crossed out.

ZSS SR13554 **Type number** – sem

Ritter 1092: *Theleocephala tenebrica* F. Ritter – Kakt. Südamer. 3: 1001-1002, figs. 895, 914, 1980.

Typus (T): Ritter 1092 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; "Dept. Freirina", sine loco. – / – / 1961. – No detailed locality information given in the protologue. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Chile: Atacama; sine loco. – No detailed locality information given in the protologue.

SGO 125445 **Type number** – rad, corp, ar, sp

loc. 3: Chile: "12 km südöstl. Carrizalillo" = 12 km SE of Carrizalillo. – / 10. / 1961.

ZSS SR13555 **Type number** – sem

Ritter 1093: *Maihuegniopsis domeykoensis* F. Ritter – Kakt. Südamer. 3: 878-879, fig. 721, 1980.

Typus (T): Ritter 1093 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:

iii, 1979.).

- Chile: Atacama; "20 km westl. Domeyko" = 20 km W of Domeyko. – / – / 1961. – Collection date according to specimens at SGO, U and ZSS.
SGO 125228 ISO – corp, ar, sp
U HOLO – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR13556 ISO – sem

Ritter 1094: *Hymenorebutia aurea* (Britton & Rose) F. Ritter var.

catamarcensis F. Ritter – Kakt. Südamer. 2: 468, fig. 315, 1980.

Typus (T): Ritter 1094 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Argentina: Catamarca; mountains above "Catamarca, bei 1450 m". 1450 m.
– Locality data supplemented from the protologue.
SGO 121396 ISO – (corp), ar, sp
- loc. 2: Argentina: Catamarca; "oberhalb Catamarca" = above Catamarca. – / – / 1962.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1095: *Acanthocalycium violaceum* (Werdermann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 226, 1936. (Dated 1935, publ. Febr. 1936.)

- Argentina: San Luis; "Termas de Zapallar". – / 3. / 1962. – Collection date according to original Ritter seed sample at ZSS.
SGO 124935 – (corp), ar, sp
ZSS SR13761 – sem

Ritter 1096: *Parodia fechseri* Backeberg (*nom. inval.* Art. 9.5) – Descr. Cact. Nov. 3: 11, 1963. (Erroneously included as valid in RPS 14.)

- loc. 1: Argentina: La Rioja; "Gob. Gordillo. Chemical" = Gobernador Gordillo. Chemical / "Chemical".
SGO 125422 – (rad), corp, ar, sp
- loc. 2: Argentina: La Rioja; "Chemical". – / 5. / 1962.
ZSS SR13762 – sem

Ritter 1097: *Gymnocalycium* sp.

- loc. 1: Argentina: San Luis; "Quines, unten, nahe Ortschaft" = Quines, below, near village. – Identified as being close to *Gymnocalycium quehlianum* in KS 4: 1642.
SGO 124675 – (corp), ar, sp
- loc. 2: Argentina: San Luis; "Termas Zapallar, Nr. 4". – / 3. / 1962. – Collection date according to original Ritter seed sample at ZSS. Identified as being close to *Gymnocalycium quehlianum* in KS 4: 1642.
SGO 124676 – rad, corp, ar, sp
ZSS SR13763 – sem

- loc. 3:** Argentina: San Luis; "Luján, Ebene am Fuss der Berge (San Luis)" = Luján, plain at foot of mountains / "Luján". – Identified as being close to *Gymnocalcium quehlianum* in KS 4: 1642.
SGO 124677 – (corp), ar, sp
- Ritter 1098:** *Tephrocactus ovatus* (Pfeiffer) F. Ritter – Kakt. Südamer. 2: 395, 1980.
- loc. 2:** Argentina: Mendoza; "Challao". – / 5. / 1962. – Collection date according to original Ritter seed sample at ZSS.
SGO 125444 – corp, ar, sp
ZSS SR13764 – sem
- Ritter 1099:** *Tephrocactus paediophilus* (A. Castellanos) F. Ritter – Kakt. Südamer. 2: 395-396, 1980. (See the basionym entry for notes on the spelling of the epithet.)
- Argentina: La Rioja; "Patquia". – / 5. / 1962. – Collection date and locality according to original Ritter seed sample at ZSS.
ZSS SR13765 – sem (The original label was first numbered "FR 1098", now crossed out. FR 1098 is *Tephrocactus ovatus* according to the field-number list in KS 4.)
- Ritter 1100:** *Hymenorebutia aurea* (Britton & Rose) F. Ritter var. *lariojensis* F. Ritter – Kakt. Südamer. 2: 467-468, figs. 313-314, 1980.
Typus (T): Ritter 1100 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).
- loc. 1:** Argentina: La Rioja; "Chamical, Berge" = Chamical, mountains. – / 5. / 1962. – Locality given as "Chamical (Gobernador Gordillo)" in the protologue.
SGO 121397 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Argentina: La Rioja; "oberh. Chamical" = above Chamical. – / – / 1966. – Collection date according to original Ritter seed sample at ZSS.
ZSS SR13766 ISO – sem
- Ritter 1101:** *Hymenorebutia quinesensis* (Rausch) F. Ritter – Kakt. Südamer. 2: 469-472, 1980.
- Argentina: San Luis; "südl. Quines, bei 1000 m." = S of Quines / "Sierra Quines". 1000 m. – One of the two original labels originally had the number FR 2101, corrected to 1001, which must be an error for 1101, as 1001 relates to *Puya raymondii* according to the field number list in KS 4.
SGO 121395 – (corp), ar, sp
- Ritter 1102:** *Weingartia pygmaea* F. Ritter – Kakt. Südamer. 2: 652-653, fig. 628, 1980.
Typus (T): Ritter 1102 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Potosí: Sud-Chichas; "Mal Paso bei 3800 m.", along road between Tupiza and Impora, nearly 4000 m. 3800 m. - 4000 m. – Locality information supplemented from the protologue.

SGO 121324 ISO – (corp), ar, sp

loc. 2: Bolivia: Potosí: Sud-Chichas; "Mal Paso". – / 3. / 1962. – Collection date according to original Ritter seed sample at ZSS.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14516 ISO – sem

Ritter 1103: *Gymnocalycium* sp.

– Argentina: San Luis; "Sierra südl. Quines, Nr. 5" = Sierra S of Quines / "Sierra Quines Nr. 5".

SGO 124678 – (corp), ar, sp

Ritter 1104: *Gymnocalycium mostii* (Gürke) Britton & Rose – Addisonia 3: 5, 1918.

– Argentina: San Luis; "Sierra südl. Quines, 1200 - 1400 m." = Sierra S of Quines / "Sierra Quines". 1200 m. - 1400 m. – Identified as "*Gymnocalycium mostii* var." in KS 4: 1642.

SGO 124679 – rad, corp, ar, sp

Ritter 1105: *Gymnocalycium* sp.

– Argentina: La Rioja; "Chamical Nr. 15 (Höhen)" = Chamical (altitudes) / "oberh. Chamical, Höhen" = above Chamical, altitudes / "Chamical Nr. 15".
– "Junger Trieb" = young shoot.

SGO 124680 – corp, ar, sp

Ritter 1106: *Rebutia colorea* F. Ritter – Kakt. and. Sukk. 28(4): 78, 1977.

Typus (T): Ritter 1106 (U).

loc. 1: Bolivia: Tarija: Mendez; "San Antonio". – / – / 1962. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Bolivia: La Paz: Avilez; "Abstieg von Copacabana km 11, Nr. 7" = descent from Copacabana km 11 / "nördl. Copacabana" = N of Copacabana.

SGO 124611 – rad, corp, ar, sp

Ritter 1107: *Rebutia pygmaea* (R. E. Fries) Britton & Rose – The Cact. 3: 47, 1922.

loc. 1: Argentina: Jujuy; "11 km südl. Abra Pampa" = 11 km S of Abra Pampa. – Identified as "*Rebutia pygmaea* cf." in KS 4: 1642. One of the original labels also has the number "FR 339" crossed out (FR 339 is *R. orurensis* according to KS 4) and is numbered "FR 1106 cf." (= *R. colorea*).

SGO 124612 – rad, corp, ar, sp

- loc. 2:** Argentina: Jujuy; "Gebirge 7 km südl. Iturbe" = mountains 7 km S of Iturbe / "Iturbe". - / 4. / 1962. - Identified as "*Rebutia pygmaea* cf." in KS 4: 1642.
SGO 124613 - rad, corp, ar, sp
- loc. 3:** Argentina: Jujuy; "19 km südl. Tres Cruces" = 19 km S of Tres Cruces. - Identified as "*Rebutia pygmaea* cf." in KS 4: 1642.
SGO 124614 - rad, corp, ar, sp
- Ritter 1108: *Rebutia mixticolor*** F. Ritter - Kakt. and. Sukk. 28(4): 77, 1977.
Typus (T): Ritter 1108 (U).
- Bolivia: Tarija; Mendez; "San Antonio". - / - / 1966. - Collection date according to specimen at U.
U **HOLO** - corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- Ritter 1109: *Rebutia brunneoradicata*** F. Ritter - Kakt. and. Sukk. 28(4): 77-78, 1977.
Typus (T): Ritter 1109 (U, SGO [status ?], ZSS [seeds only, status ?]).
- loc. 1:** Bolivia: Tarija; Mendez; "San Antonio". - / - / 1962.
U **HOLO** - rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS 59621 **Type number** - sem (Leg. Köhres (ex cult.). No locality associated with this specimen.)
- loc. 2:** Bolivia: Tarija; Mendez; "westl. San Antonio, Nr. 12" = W of San Antonio.
SGO 124615 **Type number** - rad, corp, ar, sp
SGO 124616 **Type number** - rad, corp, ar, sp ("mit zinnober Blüte" = with crimson flower.)
- Ritter 1111: *Cumulopuntia famatinensis*** F. Ritter - Kakt. Südamer. 2: 400-401, fig. 259, 1980.
Typus (T): Ritter 1111 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).
- loc. 1:** Argentina: La Rioja; "westl. Famatina" = W of Famatina. - Locality given as "Famatina mountains" in the protologue.
SGO 121889 **Type number** - corp, ar, sp
- loc. 2:** Argentina: La Rioja; "Famatina-Gebirge". - / - / 1962. - Collection date according to specimen at U.
U **HOLO** - corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- Ritter 1113: *Rebutia rutiliflora*** F. Ritter - Kakt. and. Sukk. 28(4): 76, 1977.
Typus (T): Ritter 1113 (U, SGO).
- loc. 1:** Bolivia: Potosí; Sud-Chichas; "Mal Paso", along road from Tupiza to Impora. - / - / 1966. - Locality data supplemented from the protologue and KS. Collection date according to specimen at U.
SGO 124618 **ISO** - corp, ar, sp
U **HOLO** - corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Bolivia: Potosí: Sud-Chichas; "Mal Paso Nr. 4". – "2. Foto-Exemplar" = 2. specimen of photograph.

SGO 124617 **ISO** – rad, corp, ar, sp

Ritter 1114: *Rebutia tropaeolipicta* F. Ritter – Kakt. and. Sukk. 28(4): 78, 1977. (Originally 'corrected' to 'tropaeoliptica' in the RPS database.)
Typus (T): Ritter 1114 (U, ZSS [status ?]).

– Bolivia: Potosí: Sud-Chichas; "Mal Paso". – / – / 1962. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS A10503 **Type number** – ar, corp, fl (Ex cult. ZSS s.n., 5. 5. 1983. No locality data associated with this specimen.)

ZSS T15228 **Type number** – corp, ar, sp (Ex cult. ZSS 82 1664, 20. 1. 1994) (Leg. Uebelmann. No locality data directly associated with this accession. Collection date according to specimen at U.)

Ritter 1115: *Rebutia rosalbiflora* F. Ritter – Kakt. and. Sukk. 28(4): 76, 1977.
Typus (T): Ritter 1115 (U, ZSS [status ?]).

– Bolivia: Potosí: Sud-Chichas; "Mal Paso". – / – / 1962. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS A10500 **Type number** – fl (Ex cult. ZSS 80 3388, 30. 4. 1982. No locality data associated with this specimen.)

ZSS S10441 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1975. No locality data associated with this specimen.)

Ritter 1117: *Rebutia torquata* F. Ritter & Buining – Succulenta 56(3): 63, (8): 188, ill., 1977.

Typus (T): Ritter 1117 (U [not found], SGO [status ?]).

loc. 2: Bolivia: Potosí: Sud-Chichas; "Mal Paso, oben, Nr. 4" = Mal Paso, above. – / 11. / 1962.

SGO 124619 **Type number** – (rad, corp), ar, sp

Ritter 1118: *Rebutia gracilispina* F. Ritter – Kakt. and. Sukk. 28(4): 76, 1977.
Typus (T): Ritter 1118 (U, SGO).

loc. 1: Bolivia: Potosí: Sud-Chichas; "Mal Paso". – / – / 1962. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Bolivia: Potosí: Sud-Chichas; "Mal Paso, Passhöhe" = Mal Paso, culmination of pass. – "feinstach." = thin spined.

SGO 124620 **ISO** – rad, corp, ar, sp

Ritter 1119: *Rebutia rosalbiflora* F. Ritter var. *amblypetala* F. Ritter – Kakt. and. Sukk. 28(4): 76, 1977.

Typus (T): Ritter 1119 (U [not found], SGO [status ?]).

loc. 2: Bolivia: Potosí: Sud-Chichas; "oberh. Torata" = above Torata.
SGO 124621 **Type number** – rad, corp, ar, sp

Ritter 1120: *Rebutia iscayachensis* Rausch – Succulenta 56(1): 3, ill. (p. 1), 1977.

Typus (T): Rausch 335B (ZSS).

– Bolivia: Tarija: Mendez; "oberhalb Cañ (sic!) Cruz" = above Caña Cruz. – Identified as "wohl var. zu 1122" in KS 4: 1642; 1122 is *Rebutia iscayachensis*.
SGO 124622 – rad, corp, ar, sp

Ritter 1121: *Rebutia pauciareolata* F. Ritter – Kakt. and. Sukk. 28(4): 77, 1977.

Typus (T): Ritter 1121 (U, SGO).

loc. 1: Bolivia: Tarija: Mendez; "San Antonio". – / – / 1962. – Collection date according to specimen at U.

U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Bolivia: Tarija: Mendez; "San Antonio, Höhen" = San Antonio, altitudes. – "kleine seltene" = the small rare one.

SGO 124623 **ISO** – corp, ar, sp

Ritter 1122: *Rebutia iscayachensis* Rausch – Succulenta 56(1): 3, ill. (p. 1), 1977.

Typus (T): Rausch 335B (ZSS).

loc. 1: Bolivia: Tarija: Mendez; "San Antonio". – / – / 1962. – Collection date according to specimen at U, which is identified as *Rebutia pseudopygmaea* Ritter (*nom. nud.*).

U – rad, corp, ar, sp (Collection number inferred.)

loc. 2: Bolivia: Tarija: Mendez; "westl. San Antonio, Nr. 9" = W of San Antonio.

SGO 124624 – rad, corp, ar, sp

Ritter 1124: *Rebutia minutissima* F. Ritter – Kakt. and. Sukk. 28(4): 78, 1977.

Typus (T): Ritter 1124 (U [not found], SGO [status ?]).

loc. 2: Bolivia: Tarija; "Abstieg nach Tarija". – "Kleinste, einzige" = the smallest, only one.

SGO 124625 **Type number** – corp, ar, sp

Ritter 1125: *Parodia obtusa* F. Ritter – Succulenta 43(3): 44, 1964.

Typus (T): Ritter 1125 (U 160844B, SGO, ZSS [seeds only]).

– Bolivia: Potosí: Nor-Chichas; "von Cotagaita" = from Cotagaita. – / 11. / 1962. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "Cotagaita"). The specimen at U is dated "1963".
SGO 125423 (in 2 parts) **ISO** – (corp), ar, sp (Locality simply given as "Cotagaita").

U 160844B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

ZSS S10417 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) c. 1964.
No locality data associated with this specimen.)
ZSS SR14517 **ISO** – sem

Ritter 1125a: *Parodia obtusa* F. Ritter – Succulenta 43(3): 44, 1964.

Typus (T): Ritter 1125 (U 160844B, SGO, ZSS [seeds only]).

- Bolivia: Potosí: Nor-Chichas; "25 km von Cotagaita nach Quechisla" = 25 km from Cotagaita towards Quechisla / "25 km W. Cotagaita" = 25 km W of Cotagaita. – / – / 1963. – Identified as "*Parodia obtusa* var." in KS 4.
SGO 125424 – (corp), ar, sp

Ritter 1126: *Cleistocactus hildegardiae* F. Ritter – Kakt. Südamer. 2: 685, fig. 13 (p. 710), 1980.

Typus (T): Ritter 1126 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Tarija: Mendez; Cana Cruz [Caña Cruz]. – / – / 1962. – Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

ZSS AX399 **Type number** – corp, ar, sp, fl (Ex cult. ZSS 89 2435, 15. 6. 1989) (No collection data associated with this specimen.)

loc. 2: Bolivia: Tarija: Mendez; "Caña Cruz". – / 12. / 1962. – Collection date according to original Ritter seed sample at ZSS.

SGO 124826 **ISO** – rad, corp, ar, sp

ZSS SR14518 **ISO** – sem

Ritter 1128: *Cleistocactus villamontesii* Cárdenas – Cact. Succ. J. (US) 33: 76, 1961.

- Bolivia: Santa Cruz: Cordillera; "10 km w. Boyuibe, Nr. 13" = 10 km W of Boyuibe / "W. Boyuibe" = W of Boyuibe. – Identified as "*Cleistocactus villamontesii* cf." in KS 4: 1642.
SGO 124827 – corp, ar, sp

Ritter 1129: *Cleistocactus brookei* Cárdenas var. *flavispinus* F. Ritter – Kakt. Südamer. 2: 680, fig. 664, 1980.

Typus (T): Ritter 1129 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Santa Cruz: Cordillera; some km NW of "Boyuibe", on earthy steep slopes. – / – / 1963. – Locality data supplemented from the protologue.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Bolivia: Santa Cruz: Cordillera; "10 km westl. Boyuiba" = 10 km W of Boyuiba [Boyuibe] / "W. Boyuibe" = W of Boyuibe.

SGO 124828 **ISO** – corp, ar, sp

loc. 3: Bolivia: Santa Cruz: Cordillera; "westl. Boyuibe" = W of Boyuibe. – / 1. / 1963.

ZSS SR14519 **ISO** – sem

Ritter 1130: *Monvillea spegazzinii* (F. A. C. Weber) Britton & Rose – The Cact. 2: 23, 1920.

- Bolivia: Santa Cruz: Cordillera; "unmittelbar bei Boyuibe" = close near Boyuibe. – "*Monvillea spegazzinii* var. *boliviana* oder Hybrid dieser mit *Monv. ebenacantha* ? FR 1130 oder Hybrid 1130 x 1480 ?"; FR 1130 is identified as *Monvillea spegazzinii* var. *boliviensis*, 1480 as *M. ebenacantha* in the field number list in KS 4. *Monvillea spegazzinii* var. *boliviana* is a *nom. nud.* of Ritter.

SGO 121834 – corp, ar, sp

Ritter 1130a: *Monvillea spegazzinii* (F. A. C. Weber) Britton & Rose – The Cact. 2: 23, 1920.

- loc. 1: Paraguay: Alto Paraguay; "Puerto Casado". – Identified as *Monvillea spegazzinii* var. *spegazzinii* in KS 4: 1642.
SGO 121831 – (corp), ar, sp (Includes juvenile growth.)
- loc. 2: Paraguay: Alto Paraguay; "Tres Cerros". – One of the original labels also has the locality information "Puerto Riso", but crossed out. Identified as *Monvillea spegazzinii* var. *spegazzinii* in KS 4: 1642.
SGO 121832 – rad, corp, ar, sp

- loc. 3: Paraguay: Presidente Hayes; "Chaco-i" = Chaco-í. – / – / 1963. – Collection date according to original Ritter seed sample at ZSS. Identified as *Monvillea spegazzinii* var. *spegazzinii* in KS 4: 1642.

SGO 121833 – corp, ar, sp

ZSS SR13600 – sem

Ritter 1131: *Gymnocalycium armatum* F. Ritter – Kakt. Südamer. 2: 662-663, figs. 645-647, 1980.

Typus (T): Ritter 1131 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Bolivia: Tarija: Mendez; "El Paicho". – / 12. / 1962. – Collection date according to specimen at U.

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

- loc. 2: Bolivia: Potosí ?; "unterh. Capilla" = below Capilla.

SGO 124682 – rad, corp, ar, sp

- loc. 3: Bolivia: Tarija; "Quebrada Paicho". – "(Same von 2 Früchten)" = seeds from 2 fruits.

ZSS SR15013 ISO – sem

Ritter 1132: *Echinopsis subdenudata* Cárdenas – Cact. Succ. J. (US) 28(3): 71-72, 1956. (Sphalm. 'subdenudatus'.)

- Bolivia: Santa Cruz: Cordillera; "10 km westl. Boyuibe" = 10 km W of Boyuibe.

SGO 121398 – (corp), ar, sp

Ritter 1133: *Gymnocalycium tudaе* Y. Ito var. *bolivianum* F. Ritter – Kakt. Südamer. 2: 663, figs. 648-649, 1980.

Typus (T): Ritter 1133 (U 160457B, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Santa Cruz: Cordillera; "Süden der Provinz Cordillera" = S of Prov. Cordillera, Boyuibe. – / – / 1963. – Collection date according to specimen at U. Locality supplemented from the protologue.

U 160457B **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter (sub *Gymnocalycium brevistylum*, *nom. nud.*). Collection number inferred.)

loc. 2: Bolivia: Santa Cruz: Cordillera; "Boyuibe".

SGO 124681 **ISO** – (corp), ar, sp (Seedling plant only.)

ZSS SR15014 **ISO** – sem

loc. 3: Bolivia: Santa Cruz; "9 1/2 km nördlich Buen Retiro" = 9.5 km N of Buen Retiro.

ZSS SR15015 – sem

loc. 4: Bolivia: Santa Cruz; sine loco.

ZSS S10387 – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Gymnocalycium brevistylum*.)

Ritter 1134: *Parodia purpureo-aurea* F. Ritter – Succulenta 43(4): 57, 1964.

(No collection number is cited for the type in the protologue; the typification here is according to KS 2: 545.)

Typus (T): Ritter 1134 (U 160321, SGO, ZSS [seeds only]) (No location is cited for the holotype.).

loc. 1: Bolivia: Tarija: O'Connor, Serere. – / – / 1963. – Collection date according to specimen at U.

U 160321 **HOLO** – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter.)

ZSS S10380 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

loc. 2: Bolivia: Tarija: O'Connor, "östl. Sereré" = E of Sereré. – / 1. / 1963. – Collection date according to original Ritter seed sample at ZSS.

SGO 125425 **ISO** – (corp), ar, sp (The first original label first had the locality as "westl. Sereré" = W of Sereré.)

ZSS SR14520 **ISO** – sem

Ritter 1135: *Parodia chaetocarpa* F. Ritter – Succulenta 43(4): 58, 1964.

Typus (T): Ritter 1135 (U 160313B).

loc. 1: Bolivia: Santa Cruz: Cordillera; "von Salinas" = from Salinas. – / – / 1963. – Collection date according to specimen at U.

U 160313B **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter.

Collection number inferred.)

loc. 2: Bolivia: Santa Cruz; "Buen Retiro".

SGO 125426 – corp, ar, sp

loc. 3: Bolivia: Santa Cruz; "9 1/2 km nördl. Buen Retiro (Dep. Sta. Cruz)" = 9.5 km N of Buen Retiro.

ZSS SR14521 – sem

Ritter 1136: *Lobivia* sp.

loc. 1: Bolivia: Potosí: Nor-Lipez; "Colchac". – Compared with *Lobivia ferox* in KS 4: 1642.

SGO 121399 (in 2 parts) – rad, corp, ar, sp

loc. 2: Bolivia: Potosí: Nor-Lipez; "zwischen San Juan und Colchac" = between San Juan and Colchac. – Compared with *Lobivia ferox* in KS 4: 1642.

SGO 124486 – (corp), ar, sp

Ritter 1137: *Lobivia pictiflora* F. Ritter – Succulenta 45(6): 84-85, 1966.

(Sphalm. 'pictiflora').

Typus (T): Ritter 1137 (U 160772B, SGO).

loc. 1: Bolivia: Tarija: Mendez; "Cieneguillas". – / – / 1958. – Locality given as "in the S of Prov. Mendez" only in the protologue; data supplemented according to KS 2: 571-572 and to specimen at SGO. Collection date according to specimen at U.

SGO 124487 **ISO** – (corp), ar, sp

SGO 124489 **ISO** – rad, corp, ar, sp ("Blüten zweifarbig rosa" = flowers bi-coloured rose". The original label also has the number "R 71" crossed out.)

U 160772B **HOL**O – ar, sp (Labelled as "Holotypus" by Ritter and dated "1963". Collection number inferred.)

loc. 2: Bolivia: Tarija: Mendez; "Höhen über Caña Cruz" = altitudes above Caña Cruz.

SGO 121400 – (corp), ar, sp

loc. 3: Bolivia: Tarija: Mendez; "oberhalb Cieneguillas" = above Cieneguillas.

SGO 124488 **Type number** – (corp), ar, sp

Ritter 1139: *Rebutia poecilantha* F. Ritter – Kakt. and. Sukk. 28(4): 77, 1977.

Typus (T): Ritter 1139 (U).

– Bolivia: Chuquisaca: Nor-Cinti; "nördl. Camargo" = N of Camargo. – / – / 1963. – Collection date according to specimen at U.

U **HOL**O – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1141: *Rebutia cajasensis* F. Ritter – Succulenta 56(3): 64, 1977.

Typus (T): Ritter 1141 (U [not found], SGO, ZSS [status ?]).

loc. 1: Bolivia: Tarija: Mendez; Cajas. – / – / 1963.

ZSS A10501 **Type number** – rad, corp, ar, sp, (fl), fr (Ex cult. ZSS 78 2156, 29. 6. 1982.)

ZSS S10440 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1975.)

loc. 2: Bolivia: Tarija: Mendez; "Cajas" / "Cajas, oben, nahe Bergkamm" = Cajas, above near mountain ridge. – "Einziges Exemplar" = the only specimen.

SGO 124626 **ISO** – rad, corp, ar, sp

Ritter 1142: *Rebutia tamboensis* F. Ritter – Ashingtonia 2(10): 207, ill., 1977.

Typus (T): Ritter 1142 (U, SGO, ZSS [status ?]).

- loc. 1:** Bolivia: Tarija: O'Connor, "Beginn der Tamboschlucht" = upper end of Tambo gorge. – / – / 1962. – Collection date according to specimen at U.
 U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS A10504 **Type number** – ar, sp, fl (Ex cult. ZSS (cult. ex sem. ex Fa. Köhres 1975), 5. 5. 1983. No locality data associated with this specimen.)
 ZSS S10436 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1975. No locality data associated with this specimen.)
- loc. 2:** Bolivia: Tarija: O'Connor, "Strasse von Lunacas nach Tambo bei Erreichung Schluchtgrund" = road from Lunacas to Tambo at reaching bottom of gorge. – The jar contains 3 specimens, of which one is looking very dissimilar (UE & BEL).
 SGO 124627 **ISO** – rad, corp, ar, sp

Ritter 1143: *Monvillea chacoana* F. Ritter – Kakt. Südamer. 2: 509-510, figs. 367, 582, 1980.
Typus (T): Ritter 844 (U 160241B, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Tarija: Gran Chaco; "Taringuiti". – Identified as "*Monvillea chacoana* var. oder fa." in the field-number list in KS 4.
 ZSS SR14522 – sem

Ritter 1144: *Monvillea parapetiensis* F. Ritter – Kakt. Südamer. 2: 510-511, 1980.

Typus (T): Ritter 1144 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Santa Cruz: Cordillera; "Camiri", steep slopes of the Parapeti river. – / – / 1963. – Locality data supplemented from the protologue; collection date according to specimen at U.
 SGO 121835 **ISO** – (corp), ar, sp
 U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14523 **ISO** – sem

Ritter 1145: *Cleistocactus pseudostrausii* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1642, 1981. (Published as provisional name.)
 Based on Ritter 1145.

- Bolivia: Potosí ?; "unterh. Capilla" = below Capilla. – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS. Locality given as "Paicho-Schlucht" = gorge of Paicho in KS 4; date given as "1962" in KS 2: 679.
 SGO 124829 – (corp), ar, sp
 ZSS SR14524 **Type collection** – sem ("(1 Pfl.)" = 1 plant.)

Ritter 1146: *Cleistocactus smaragdiflorus* (F. A. C. Weber) Britton & Rose – The Cact. 2: 174, 1920.

loc. 1: Bolivia: Tarija: Gran Chaco; "Höhen östl. Cañada" = altitudes above Cañada / "Tapecua".

SGO 124830 – (corp), ar, sp

loc. 2: Bolivia: Tarija: Gran Chaco; "Tapecua". – / 1. / 1963.

ZSS SR14525 – sem

Ritter 1147: *Cleistocactus villamontesii* Cárdenas – Cact. Succ. J. (US) 33: 76, 1961.

– Bolivia: Tarija: O'Connor; "Angosto de Villa Montes" / "Angosto V.M.". – / 1. / 1963. – Collection date according to original Ritter seed sample at ZSS (locality given as "Angosto de Villa M.").

SGO 124831 – corp, ar, sp

ZSS SR14526 – sem

Ritter 1148: *Copiapoa paposoensis* F. Ritter – Kakt. Südamer. 3: 1068-1069, fig. 986, 1980. (Treated as invalidly published (Art. 37) so far, but a collection without collection number is in fact cited.)

Typus (T): Ritter s.n. (U, SGO [status ?], sub Ritter 1148) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "22 km N. Paposo bei 1300 m." = 22 km N of Paposo. 1300 m.

SGO 124926 (in 2 parts) **Type ?** – (corp), ar, sp (The data for this collection concurs with that given for the type, for which no collection number is cited, however.)

loc. 2: Chile: "22 km nördl. Paposo, Höhen" = 22 km N of Paposo, altitudes.

ZSS SR13557 **Type ?** – sem

Ritter 1149: *Copiapoa hornilloensis* F. Ritter – Kakt. Südamer. 3: 1060, fig. 973, 1980.

Typus (T): Ritter 1149 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: "Cerro Hornillo, nördlich Planta Esmeralda" = Cerro Hornillo, N of Planta Esmeralda. – / – / 1963. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Chile: "Tal zw. Cifuncho u. Esmer.a" = valley between Cifuncho and Esmeralda" / "nördl. Esmeralda" = N of Esmeralda.

SGO 124922 (in 2 parts) **Type number** – corp, ar, sp

loc. 3: Chile: "Schlucht zw. Esmeralda u. Cifuncho" = gorge between Esmeralda and Cifuncho.

ZSS SR13558 **Type number** – sem

Ritter 1150: *Copiapoa melanohystris* F. Ritter – Kakt. Südamer. 3: 1096-1097, fig. 1043, 1980.

Typus (T): Ritter 1150 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: "südöstl. von Esmeralda" = SE of Esmeralda. – / – / 1963. – Identified as *Echinopsis* spec. nov. in KS 4: 1642, but also cited as type of *Copiapoa melanoxystris* in the protologue in KS 3: 1096-1097.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Chile: "Esmeralda" / "Höhen über Esmeralda" = altitudes above Esmeralda. – "Das Muster mit nur 3 - 4 St. bei kleinen Ar. ist vielleicht Hybrid mit *columna-alba* (*longistaminea* wächst küstennah)." = The specimen with only 3 - 4 spines and small areoles is probably a hybrid with [*Copiapoa*] *columna-alba* ([*C.*] *longistaminea* grows near the coast). Identified as *Echinopsis* spec. nov. in KS 4: 1642, but also cited as type of *Copiapoa melanoxystris* in the protologue in KS 3: 1096-1097.
SGO 124923 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: "südöstl. Esmeralda, Höhen" = SE of Esmeralda, altitudes. – Identified as *Echinopsis* spec. nov. in KS 4: 1642, but also cited as type of *Copiapoa melanoxystris* in the protologue in KS 3: 1096-1097.
ZSS SR13559 **Type number** – sem

Ritter 1151: *Echinopsis* sp.

- loc. 1:** Bolivia: Santa Cruz: Cordillera; "westl. Camiri" = W of Camiri. – This number is lacking in the number list in KS 4: 1642; the data seems to fit 1150 there.
SGO 121401 – (rad), corp, ar, sp
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Höhen zw. Palos Bl. u. Cañadas Tapequa" = altitudes between Palos Blancos and Cañadas Tapequa. – This number is lacking in the number list in KS 4: 1642; the data seems to fit 1150 there.
SGO 121402 – rad, corp, ar, sp

Ritter 1152: *Parodia occulta* F. Ritter – Kakt. Südamer. 2: 528-529, figs. 390, 571, 1980.

Typus (T): Ritter 1152 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Tarija: Mendez; "Caña Cruz". – / 2. / 1963. – Collection date according to specimen at U.
SGO 125427 **ISO** – rad, corp, ar, sp
U HOLO – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen at U.)
ZSS SR14527 **ISO** – sem ("kleine rote von Caña Cruz" = small red one from Caña Cruz.)

Ritter 1153: *Parodia setispina* F. Ritter – Succulenta 43(4): 57-58, 1964.

Typus (T): Ritter 1153 (U 160764B, SGO [status ?], ZSS [seeds only, status ?]).

- loc. 1:** Bolivia: Tarija: O'Connor; centre of the E part of the Prov. O'Connor. – / – / 1963. – Collection date according to specimen at U.
U 160764B **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

- loc. 2:** Bolivia: Tarija: O'Connor, "Cañada". - / 1. / 1963. - Collection date according to original Ritter seed sample at ZSS.
 SGO 124554 **Type number** - (corp), ar, sp
 ZSS SR14528 **Type number** - sem (The original label first had the collection number as "FR 1134a", which is set equal to FR 1153 in the field-number list in KS 4.)

Ritter 1154: *Sulcorebutia tarijensis* F. Ritter - *Ashingtonia* 3(1): 13, ill. (pl. after p. 14), 1978.

Typus (T): Ritter 1154 (U).

- Bolivia: Tarija; "westlich Tarija" = W of Tarija. - / - / 1966. - Collection date according to specimen at U.
 U **HOLO** - corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1155: *Trichocereus randallii* Cárdenas - *Cact. Succ. J. (US)* 1963: 158, 1963.

- loc. 1:** Bolivia: Tarija: Mendez; "über Caña Cruz" = above Caña Cruz. - Collection identified as *Trichocereus superbus* Ritter (*nom. nud.*) on the original herbarium label.

SGO 121197 (in 2 parts) - (corp), ar, sp, al

- loc. 2:** Bolivia: Tarija: Mendez; "aus dem Süden der Provinz Mendez" = from the S of the Prov. Mendez. - / - / 1963. - Distributed as *Trichocereus superbus* Ritter (*nom. nud.*).

U 160836B - (corp), ar, sp, (al) (Labelled as "Holotypus" (of *Trichocereus superbus*) by Ritter. Collection number inferred.)

Ritter 1156: *Trichocereus quadratumbonatus* F. Ritter - *Kakt. Südamer.* 2: 566, fig. 455, 1980. (Erroneously given as 'quadriumbonatus' in RPS 31.)
Typus (T): Ritter 1156 (U) (Type cited for U l.c. 1: iii, 1979.).

- Bolivia: Santa Cruz: Cordillera; "12 km westl. Boyuibe" = 12 km W of Boyuibe. - / - / 1963. - Collection date according to specimen at U.
 U **HOLO** - (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

Ritter 1157: *Bolivicereus* sp.

- Bolivia: Santa Cruz: Cordillera; "westl. Camiri" = W of Camiri.
 SGO 121998 - rad, corp, ar, sp

Ritter 1159: *Pyrrhocactus pygmaeus* F. Ritter - *Taxon* 12(1): 32, 1963.

Typus (T): Ritter 519 (U 117858B, SGO [status ?], ZSS [status ?])
 (Holotype cited for U l.c., 28.).

- Chile: "21 km N. Chañaral, Nr. 8" = 21 km N of Chañaral. - Identified as "*Pyrrhocactus pygmaeus* Ritter fa." in the field-number list in KS 4.
 SGO 121663 - rad, corp, ar, sp

Ritter 1160: *Hymenorebutia torataensis* F. Ritter - *Kakt. Südamer.* 2: 589, fig. 479, 1980.

Typus (T): Ritter 1160 (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Potosí: Sud-Chichas; "oberh. Torata bei 3200 m., Nr. 9" = above Torata. 3200 m.

SGO 121403 ISO – rad, corp, ar, sp

loc. 2: Bolivia: Potosí: Sud-Chichas; "Torata". – / – / 1962.

SGO 122056 ISO – (corp), ar, sp

Ritter 1161: *Lobivia varispina* F. Ritter – Kakt. Südamer. 2: 577-578, fig. 468, 1980. (Sphalm. 'variispina'.)

Typus (T): Ritter 1161 (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).

– Bolivia: Tarija: Mendez; "oberh. Caña Cruz, Nr. 16" = above Caña Cruz. – "angefressen, an einer Seite noch einige bestach. Areolen vorhanden" = partly eaten, on one side some spiny areoles persisting.

SGO 121404 ISO – (rad, corp)

Ritter 1163: *Cumulopuntia pentlandii* (Salm-Dyck) F. Ritter – Kakt. Südamer. 2: 488-490, 1980.

loc. 1: Bolivia: Tarija: Mendez; "westl. Sn. Antonio, bei 4200 m." = W of San Antonio. 4200 m. – Identified as "*Cumulopuntia pentlandii* (Salm-Dyck) Ritter var." in the field-number list in KS 4.

SGO 121890 – corp, ar, sp

loc. 2: Bolivia: La Paz: Murillo; "westl. Cumbre (Prov. Murillo)" = W of Cumbre. – Identified as "*Cumulopuntia pentlandii* (Salm-Dyck) Ritter var." in the field-number list in KS 4.

ZSS SR14529 – sem

Ritter 1164: *Cumulopuntia* sp.

– Bolivia: Potosí; "Uyuni-Pass, nach Pulacayo" = Uyuni-pass, after Pulacayo" / "Uyuni". – Locality given as "östl. Uyuni" = E of Uyuni, in the field number list in KS 4.

SGO 121886 – rad, corp, ar, sp

Ritter 1165: *Cumulopuntia hystrix* F. Ritter – Kakt. Südamer. 3: 883-884, figs. 727-728, 1980.

Typus (T): Ritter 1165 (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Chile: Antofagasta; "Sta. Barbara" = Santa Barbara. 3000 m. - 3200 m. – / – / 1962. – Collection date and altitude range according to the protologue.

ZSS SR13560 ISO – sem

Ritter 1166: *Opuntia pyrhantha* (F. Ritter) P. J. Braun & E. Esteves Pereira – Succulenta 74(3): 133, 1995. (First used by F. Ritter in Kakt. Südamer. 2: 497-498, 1980, as synonym.)

- loc. 1:** Bolivia: Tarija: Gran Chaco / O'Connor ?; "45 km von Villamontes nach Ibibobo, Taringuiti" = 45 km from Villa Montes to Ibibobo, Taringuiti. – Locality given as "Taringuiti, E of Villa Montes" in the protologue. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122047 ISO – (corp), ar, sp
- loc. 2:** Bolivia: Tarija: Gran Chaco; "Taringuiti". – / – / 1963. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14531 ISO – sem (Locality given as "Taringuiti Nr. 1" on the original label.)
- loc. 3:** Bolivia: Santa Cruz: Cordillera; "Camiri Nr. 3". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14530 – sem

Ritter 1167: *Opuntia interjecta* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1c) – Kakt. Südamer. 2: 499, in synonym., 1980.

- Bolivia: Tarija: Gran Chaco; "Palmar Grande". – / – / 1963. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)
ZSS SR14532 ISO – sem (Locality given as "Palmar Grande Nr. 5" on the original label.)

Ritter 1168: *Neoporteria* sp.

- Chile: "Pte. Teniente" = Puente Teniente.
SGO 121664 – (rad), corp, ar, sp

Ritter 1170: *Hymenorebutia pusilla* (F. Ritter) F. Ritter – Kakt. Südamer. 2: 588, 1980.

- loc. 1:** Bolivia: Tarija: Arce; "Orozas". – / – / 1958. – Locality given as "in the N of Prov. Arce, Dept. Tarija" in the protologue; the locality data here given is in accordance with KS 2: 588-589.
SGO 121405 Type number – corp, ar, sp
- loc. 2:** Bolivia: Tarija; "aus dem Norden der Provinz Arce" = from the N of Prov. Arce. – / – / 1963. – The locality is given as "Orozas" in the field number list in KS 4. The type number of the taxon, FR 1170, is said to equal FR 906.
U 160449B HOLO – rad, corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
- loc. 3:** Bolivia: Tarija: Arce / Cercado; "Angostura". – The locality is given as "Orozas" in the field number list in KS 4. The type number of the taxon, FR 1170, is said to equal FR 906.
SGO 124490 – rad, corp, ar, sp

Ritter 1172: *Echinopsis cajasensis* F. Ritter – Kakt. Südamer. 2: 630, fig. 598, 1980.

- Typus* (T): Ritter 1172 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Tarija: Mendez; "Cajas, unten" = Cajas, below / "Cajas, Aufstieg vom Schluchtgrund" = Cajas, ascent from bottom of gorge". – "*Echinopsis* sp. weissblüh." = white-flowering.
SGO 121406 ISO – (corp), ar, sp
- loc. 2:** Bolivia: Tarija: Mendez; "unterhalb Cajas" = below Cajas. – / – / 1966.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 3:** Bolivia: Tarija: Mendez; "Schlucht Cajas (unten)" = gorge Cajas (below). – "(weissblühend)" = white-flowering.
ZSS SR14533 ISO – sem ("(1 Frucht)" = 1 fruit.)

Ritter 1173: *Monvillea rhodoleucantha* (K. Schumann) A. Berger ex Backeberg & Knuth – Kaktus-ABC, 184, 1936. (Dated 1935, publ. Febr. 1936. Combination frequently attributed to Borg 1937.)

- loc. 1:** Paraguay: Concepción; "Concepción".
SGO 121836 – corp, ar, sp
ZSS SR13601 – sem
- loc. 2:** Paraguay: Presidente Hayes; "Chaco-i" = Chaco-í.
SGO 121837 – corp, ar, sp (The original label has the following comment: "FR 1173 u. Mischung mit FR 1015 ?" = 1173 and mix with 1015 ? - FR 1015 is identified as *Monvillea alticostata* in the field-number list in KS 4.)
ZSS SR13602 – sem ("2 Früchte" = 2 fruits.)
- loc. 3:** Paraguay: "Puerto Rosario".
ZSS SR13603 – sem
- loc. 4:** Paraguay: "Carmen de la Sierra".
ZSS SR13604 – sem (The collection number is given as "FR 1173 (cf.)" on the original label.)

Ritter 1174: *Monvillea paxtoniana* (Monville ex Salm-Dyck) Backeberg var. *borealis* F. Ritter – Kakt. Südamer. 1: 251, fig. 203, 1979.
Typus (T): Ritter 1174 (U, SGO) (Type cited for U l.c., iii.).

- loc. 1:** Paraguay: Alto Paraguay; "Puerto Casado". – / – / 1963. – Collection date according to specimen at U.
SGO 121838 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Paraguay: Alto Paraguay; "Tres Cerros". – This is the type number for the taxon, but the type locality is Puerto Casado.
SGO 121839 – (corp), ar, sp
- loc. 3:** Paraguay: Chaco; "Weg nach Cerro León" = path to Cerro León. – This is the type number for the taxon, but the type locality is Puerto Casado.
SGO 121840 – corp, ar, sp

Ritter 1174a: *Monvillea paxtoniana* (Monville ex Salm-Dyck) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 183, 1936. (If this reference is not acceptable as new combination, the name has been published by Borg,

Cacti, 97, 1937, where it is attributed to Britton & Rose.)

- Paraguay: Guairá; "Cerro Pelado bei Villarrica" = Cerro Pelado near Villarrica. – Identified as *Monvillea paxtoniana* var. *paxtoniana* in KS.
SGO 121841 – corp, ar, sp

Ritter 1175: *Monvillea phatnosperma* (K. Schumann) Britton & Rose – The Cact. 2: 24, 1920.

loc. 1: Paraguay: Chaco; "Cerro León".
SGO 121842 – corp, ar, sp

loc. 2: Paraguay: Boquerón; "Filadelfia". – "var. nov. (4-6-rippig)" = new variety (4-6 ribs).
SGO 121843 – corp, ar, sp

Ritter 1176: *Gymnocalycium stenopleurum* F. Ritter – Kakt. Südamer. 1: 265-266, figs. 212-213, 1979.

Typus (T): Ritter 1176 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Paraguay: Chaco; "Cerro León". – / 9. / 1963. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Paraguay: Chaco; "Cerro León Nr. 2".
SGO 125201 **ISO** – corp, ar, sp
ZSS SR13605 **ISO** – sem

loc. 3: Paraguay: Chaco; Cerro León.
ZSS S8563 **Type number** – sem (Leg. Köhres ex cult., 1977.)

Ritter 1177: *Gymnocalycium paediophilum* Schütz – Kaktusy 13(5): 100-101, ill., 1977. (Sphalm. 'paediophylum'. The typification is unclear, the number Ritter 1179 is cited in the text (but not in the description), but F. Ritter reports his number 1177 as pertaining to this taxon. The taxon was redescribed by F. Ritter in Kakt. Südamer. 1: 269, fig. 215 (p. 340), 1979.)

Typus (T): Ritter 1177 (PL, SGO [status ?], U [status ?], ZSS [seeds only, status ?]).

loc. 1: Paraguay: Chaco; "Cerro León". – / – / 1963. – Collection date according to specimen at U.

U **Type number** – (corp), ar, sp (Collection number inferred.)

ZSS S10389 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965. No locality data associated with this specimen.)

ZSS S8189 **Type number** – sem (Leg. Köhres. No locality data associated with this specimen.)

ZSS S9493 **Type number** – sem (Ex cult. R. Jacobi. Cult. sub ZSS 78 2844. No locality data associated with this specimen.)

loc. 2: Paraguay: Chaco; "Cerro León Nr. 1".
SGO 125202 **Type number** – (corp), ar, sp
ZSS SR13606 **Type number** – sem

Ritter 1178: *Gymnocalycium eurypleurum* Plesnik ex F. Ritter – Kakt.

Südamer. 1: 268, 1979. (First published by F. Plesnik in Kaktusy 1972: 78, but the type is said to be a living plant in the collection of the author (cf. W. Weitzel in *Gymnocalycium*-Brief No. 2: 9-12, 1984). The name was first mentioned by F. Ritter in 1963.)

Typus (T): Ritter 1178 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Paraguay: Chaco; "Cerro León". – /9. / 1963. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Paraguay: Chaco; "Cerro León am Wege, Ebene" = Cerro León along path, plain / "Cerro León, unten" = Cerro León, below.

SGO 125203 **ISO** – (corp), ar, sp, (al)

loc. 3: Paraguay: Chaco; Cerro León.

ZSS S10388 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

ZSS S8186 **Type collection** – sem (Leg. Köhres ex cult., 1977.)

loc. 4: Paraguay: Chaco; "Weg nach Cerro León" = path to Cerro León.

ZSS SR13607 **ISO** – sem

Ritter 1179: *Gymnocalycium damsii* (K. Schumann) Britton & Rose – The Cact. 3: 163, 1922.

loc. 1: Paraguay: Alto Paraguay / Concepción; "Tres Cerros" / "(Puerto Riso) Tres Cerros".

SGO 125204 – (corp), ar, sp

loc. 2: Paraguay: Alto Paraguay; "Tres Cerros bei Puerto Casado".

ZSS SR13608 – sem

Ritter 1180: *Gymnocalycium tudae* Y. Ito – Explan. Diagr. Austroechinocacti, 172, 292, 1957.

– Paraguay: Boquerón; "Filadelfia Nr. 1" / "Filadelfia".

SGO 125205 – (corp), ar, sp

ZSS SR13609 – sem

Ritter 1181: *Gymnocalycium mihanovichii* (Fric & Gürke) Britton & Rose var. *filadelfiense* Backeberg (*nom. inval.* Art. 37.1) – Kakt.-Lex., 170, 1966.

(First mentioned by Pazout in *Friciana* 29: 10, 1965. Erroneously included as valid in RPS 17.)

loc. 1: Paraguay: Boquerón; "Filadelfia".

SGO 125206 – rad, corp, ar, sp

loc. 2: Paraguay: "zw. Tte. Martinez u. Tte. Montania" = between Teniente Martinez and Teniente Montania / "Tte. Montania" = Teniente Montania.

SGO 125207 – rad, corp, ar, sp

loc. 3: Paraguay: Boquerón; "Filadelfia Nr. 2".

ZSS SR13610 – sem

Ritter 1182: *Eriocactus ampliocostatus* F. Ritter (*incorrect name* Art. 11.3) – Kakt. Südamer. 1: 253-255, 1979.

Based on Ritter 1182 (U [not found], ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 2: Paraguay: Paraguairí; "Paraguairí" = Paraguairí.
ZSS SR13611 ISO – sem

Ritter 1182a: *Eriocactus grossei* (K. Schumann) Backeberg var. *aureispinus* F. Ritter (*incorrect name* Art. 11.3) – Kakt. Südamer. 1: 253, 1979.

Based on Ritter 1182a (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Paraguay: Guairá; Cerro Acatí, Colonia Independencia. – / – / 1963. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Paraguay: Guairá; "Cerro Acatí (Independencia)" / "Cerro Acatí".
SGO 125061 ISO – rad, corp, ar, sp

loc. 3: Paraguay: Guairá; "Cerro Pelado".
SGO 125062 – rad, corp, ar, sp

loc. 4: Paraguay: Guairá; "vom Cerro Acatí" = from the Cerro Acatí. – / – / 1963.
ZSS SR13612 ISO – sem

Ritter 1182b: *Eriocactus grossei* (K. Schumann) Backeberg (*incorrect name* Art. 11.3) – Beitr. Sukk.-kunde Pflge 1942: 38, 1942.

– Paraguay: "Cerro Aca-ay" / "Cerro Aca-hay". – / 11. / 1963. – Collection date according to original Ritter seed sample at ZSS. Identified as *Eriocactus grossei* var. *grossei* in KS 4.
SGO 125064 – (corp), ar, sp
ZSS SR13613 – sem

Ritter 1183: *Pilosocereus paraguayensis* F. Ritter – Kakt. Südamer. 1: 249, 1979.

Typus (T): Ritter 1183 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Paraguay: Amambay; "Cerro Corá". – / – / 1963. – Collection date according to specimen at U.
U HOLO – (corp), ar, sp, ceph (Assumed to be the holotype as this is the only specimen at U. "Normalrippe und Rippen der Blühregion" = normal rib and ribs of the floriferous zone. Collection number inferred.)

loc. 2: Paraguay: Amambay; "Berg westl. Cerro Corá" = mountain W of Cerro Corá / "Rio Aceite".
SGO 125481 Type number – (corp), ar, sp, ceph

loc. 3: Paraguay: "Carmen de la Sierra".
ZSS SR13614 Type number – sem

Ritter 1184: *Eriocereus martinii* (Labouret) Riccobono – Boll. R. Orto Bot. Palermo 8: 241, 1909.

loc. 1: Paraguay: Alto Paraguay; "Puerto Casado".
SGO 121719 – rad, corp, ar, sp
ZSS SR13615 – sem

loc. 2: Paraguay / Argentina?: "Rosario". – "(mit stacheligen Blüten)" = with spiny flowers.
SGO 121720 – (rad, corp, ar, sp) (Seedlings only.)

Ritter 1185: *Cleistocactus croceiflorus* F. Ritter – Kakt. Südamer. 1: 272, 1979.
Typus (T): Ritter 1185 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Paraguay: Alto Paraguay; "Puerto Casado", near Cerro Gavan [= Cerro Galván ?], on level ground. – / – / 1963. – Locality data supplemented from the protologue (where the province is incorrectly given as "Boquerón"); collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Paraguay: Alto Paraguay; "Ebene von Cerro Gavan" = plain of Cerro Gaván / "Cerro Gaván" [= Cerro Galván ?].
SGO 124832 **ISO** – corp, ar, sp

loc. 3: Paraguay: Alto Paraguay; "Ebene von Cerro Gaván bei Puerto Casado" = plain of Cerro Gaván [= Cerro Galván ?] near Puerto Casado.
ZSS SR13616 **ISO** – sem

Ritter 1185a: *Cleistocactus croceiflorus* F. Ritter – Kakt. Südamer. 1: 272, 1979.

Typus (T): Ritter 1185 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c., iii.).

– Paraguay: Alto Paraguay; "Tres Cerros bei Puerto Casado" = Tres Cerros near Puerto Casado. – Identified as "*Cleistocactus croceiflorus* var." in the field-number list in KS 4.
ZSS SR13617 – sem

Ritter 1185b: *Cleistocactus paraguariensis* F. Ritter – Kakt. Südamer. 1: 232, 1979.

Typus (T): Ritter 1185b (U, SGO [status ?]) (Type cited for U l.c., iii.).

loc. 1: Paraguay: Paraguari; rocky mountain near "Paraguari", rare. – / – / 1963. – Locality data supplemented from the protologue.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Paraguay: Presidente Hayes; "Chaco-í".
SGO 124833 – corp, ar, sp, (fl)

loc. 3: Paraguay: Paraguari; "Paraguari, Berghöhen" = Paraguari, altitudes of mountains.
SGO 124834 **Type number** – corp, ar, sp

Ritter 1186: *Lepismium cruciforme* (Vellozo) Miquel – Bull. Sci. Nat. Néerl. 1838: 49, 1838.

- Paraguay: "Yrpypté".
ZSS SR13618 – sem

Ritter 1186a: *Lepismium cruciforme* (Vellozo) Miquel – Bull. Sci. Nat. Néerl. 1838: 49, 1838.

- loc. 1: Paraguay: "Cerro Aca-ai" / "Cerro Aca-hay".
SGO 125073 – corp, ar, sp

Ritter 1187: *Rhipsalis* sp.

- Paraguay: Concepción; "Cerro Membuy". – Identified as variety of FR 1029 which is said to be a new species in KS 4. Locality given as "Cerro Memby" in KS 4: 1643.
SGO 125601 – corp, ar, sp

Ritter 1188: *Rhipsalis* sp.

- Paraguay: "Cerro Charará". – Locality given as "bei Independencia, Paraguay" in KS 4: 1643.
SGO 125602 – corp, ar, sp

Ritter 1190: *Rhipsalis cereuscula* Haworth – Philos. Mag. 7: 112, 1830.

- loc. 1: Paraguay: "Yrpypté".
SGO 125603 – rad, corp, ar, sp
- loc. 2: Paraguay: Amambay; "Strasse nach Cerro Ubocoby Nr. 3 (Prov. Amambay)" = road to Cerro Ubocoby.
ZSS SR13619 – sem
- loc. 3: Brazil: Rio de Janeiro; "Corcovado Nr. 4". – / 1. / 1965. – The original label has the collection number as "FR 1190 cf.".
ZSS SR14677 – sem ("80 K." = 80 seeds [not counted].)

Ritter 1191: *Mediocactus coccineus* (De Candolle) Britton & Rose – The Cact. 2: 211, 1920.

- loc. 1: Paraguay: "Cerro Acahay" / "Cerro Aca-hay".
SGO 125245 – (corp), ar, sp
- loc. 2: Paraguay: Guairá; "Cerro Pelado östl. Villarica" = Cerro Pelado E of Villarica / "Cerro Pelado".
SGO 125246 – (corp, ar, sp)

Ritter 1192: *Epiphyllum phyllanthus* (Linné) Haworth – Syn. Pl. Succ., 197, 1812.

- Paraguay: Guairá; "Cerro Pelado östl. Villarica, unten" = Cerro Pelado E of Villarica, below / "Cerro Pelado, unten" = Cerro Pelado, below.
SGO 125090 – (corp)

Ritter 1194: *Cereus stenogonus* K. Schumann – Monatsschr. Kakt.-kunde 9:

165, 1899.

loc. 1: Paraguay: Amambay; "La Preferida, Nr. 5". – "*stenogonus* ? Aber Kanten dicker wie *peruvianus*." = *stenogonus* ?, but ribs thicker than/as *peruvianus*. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121796 – (corp), ar, sp

loc. 2: Paraguay: Alto Paraguay; "Puerto Casado". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121797 – (rad, corp, ar, sp) (Seedling plant only.)

loc. 3: Paraguay: Presidente Hayes; "Chaco-i" = Chaco-í. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121798 – (corp), ar, sp ("*stenogonus* ? Aber Kanten dicker wie *peruvianus*." = *Cereus stenogonus* ?, but ribs thicker than/as *Cereus peruvianus*.)
ZSS SR13620 – sem

Ritter 1194: *Eriocereus guelichü* (Spegazzini) A. Berger ex Backeberg & Knuth – Kaktus-ABC, 178, 1936. (Dated 1935, publ. Febr. 1936. Name first used (but not accepted) by A. Berger, Kakteen, 130, 1929.)

loc. 4: Paraguay: Boquerón; "Filadelfia" / "Paguari Nr. 3". – This collection number is identified as (*Piptantho-*) *Cereus stenogonus* in the field number list in KS 4, but one of the original labels identifies the material as *Eriocereus guelichü*, which appears to be correct.
SGO 121800 (in 2 parts) – corp, ar, sp

Ritter 1195: *Cereus pachyrhizus* K. Schumann – Gesamtb. Kakt. Nachtr. 33, 1903.

Typus (*T*): Anisits 39.

loc. 1: Paraguay: "Berg nördl. Carmen de la Sierra" = mountain N of Carmen de la Sierra. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121802 – (corp), ar, sp

loc. 2: Paraguay: Paraguari; "Paraguari, Nr. 6". – "Vielleicht abnormes Exemplar von *peruv.* ? oder vielleicht Hybridstufe mit Art von Cerro Pelado Nr. 8. FR 1006 x 1196 ?" = probably aberrant specimen of [*Piptanthocereus peruvianus*, or hybrid segregate with species from Cerro Pelado Nr. 8; FR 1006 is identified as (*Piptantho-*) *Cereus xanthocarpus* var., 1196 as (*Piptantho-*) *Cereus lanosus* according to the field number list in KS 4. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121803 – (corp), ar, sp

loc. 3: Paraguay: Alto Paraguay; "Tres Cerros bei Puerto Casado" = Tres Cerros near Puerto Casado. – "Etw. jüngere Exemplare" = somewhat younger specimens. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. The original label identifies this collection as (*Piptantho-*) *Cereus polyrhizus*, which is presumably a slip of the pen for 'pachyrhizus'.
SGO 121804 – (corp), ar, sp

Ritter 1196: *Cereus lanosus* (F. Ritter) P. J. Braun – Bradleya 6: 86, 1988.

- loc. 1:** Paraguay: Guairá; "Cerro Pelado östl. Villa Rica" = Cerro Pelado E of Villarrica / "Cerro Pelado". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121805 – (corp), ar, sp
- loc. 2:** Paraguay: "nordöstl. Cristo Rey" = NE of Cristo Rey. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121806 – (corp), ar, sp
- loc. 3:** Paraguay: "Cerro Aca-hay oben auf den Felsen" = Cerro Aca-hay, above on the rocks. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121807 – (corp), ar, sp
- loc. 4:** Paraguay: La Cordillera; "Caacupé". – / – / 1963. – Collection date according to specimen at U. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1197: *Cereus lamprosperrus* K. Schumann – Monatschr. Kakt.-kunde 9: 166, 1899.

- Paraguay: Chaco; "Weg nach Cerro Leon" = path to Cerro León / "Cerro León, unten" = Cerro León, lower altitudes. – "Grosse Art" = Large species. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121799 – (corp), ar, sp

Ritter 1198: *Echinopsis paraguayensis* Mundt ex F. Ritter – Kakt. Südamer. 1: 264, fig. 211, 1979. (Derived from a *nomen nudum* by Mundt.)
Typus (T): Ritter 1198 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Paraguay: Guairá; "Cerro Charará", Colonia Independencia, on rocky terrain. – / – / 1962. – Locality data supplemented from the protologue; collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR13621 **ISO** – sem
- loc. 2:** Paraguay: Guairá; "Cerro Pelado östl. Villarrica" = Cerro Pelado E of Villarrica.
SGO 125158 – (corp), ar, sp

Ritter 1199: *Eriocereus guelichii* (Spegazzini) A. Berger ex Backeberg & Knuth – Kaktus-ABC, 178, 1936. (Dated 1935, publ. Febr. 1936. Name first used (but not accepted) by A. Berger, Kakteen, 130, 1929.)

- Paraguay: "Cerro Aca-ai" / "Cerro Aca-hay".
SGO 121721 – (rad, corp), ar, sp

Ritter 1200: *Quiabentia* sp.

- Paraguay: Boquerón; "Filadelfia".
SGO 121906 – (corp), ar, sp ("Stamm u. Wirtel" = stem and whorl.)

Ritter 1201: *Opuntia retrorsa* Spegazzini – Anal. Mus. Nac. Buenos Aires 4:

517, 1905.

- Paraguay: Alto Paraguay ?; "km 160" = 160 km W of Puerto Casado. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter and identified as '*P. retrorsa* var.' in the field-number list in KS 4.
ZSS SR13622 – sem

Ritter 1202: *Opuntia cognata* (F. Ritter) P. J. Braun & E. Esteves Pereira – Succulenta 74(3): 132-133, 1995. (Name first used by Ritter in Kakt. Südamer. 1: 246, 1979, as synonym.)

- loc. 2:** Paraguay: "km 160 Nr. 10". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter. The locality given is very similar to the original label for FR 1201, where the field-number list specifies the locality as "160 km W of Puerto Casado", which might also apply to this collection.
ZSS SR13623 ISO – sem

Ritter 1203: *Opuntia limitata* (F. Ritter) P. J. Braun & E. Esteves Pereira – Succulenta 74(3): 133, 1995. (Name first used by Ritter in Kakt. Südamer. 1: 245-246, 1979, as synonym.)

- Paraguay: Alto Paraguay; "Puerto Casado, Nr. 4" at the Río Paraguay. – / – / 1963. – Locality data supplemented from the protologue; collection date according to specimen at U which has the locality simply as "Puerto Casado". Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122048 ISO – (corp), ar, sp
U HOLO – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

Ritter 1203+1204: *Opuntia* sp.

- Paraguay: Alto Paraguay; "Puerto Casado Nr. 4 + Nr. 5". – FR 1203 is (*Platy-*) *Opuntia limitata* (= Puerto Casado Nr. 4) and FR 1204 is (*Platy-*) *Opuntia cardiosperma* (= Puerto Casado Nr. 5).
ZSS SR13624 – sem

Ritter 1204: *Opuntia cardiosperma* K. Schumann – Monatsschr. Kakt.-kunde 9: 150, 1899.

Typus (T): Anisits 64 (B).

- Paraguay: Alto Paraguay; "Puerto Casado, Nr. 5". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122049 – corp, ar, sp

Ritter 1205: *Echinopsis rhodotricha* K. Schumann var. *brevispina* F. Ritter – Kakt. Südamer. 1: 263, 1979.

Typus (T): Ritter 1205 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Paraguay: Presidente Hayes; "Chaco-í", W of Asunción. – Locality data supplemented from the protologue.
SGO 125159 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be

the holotype as this is the only specimen at U. Deposited as
Echinopsis rhodantha var. *brevispina*.)
 ZSS SR13625 ISO – sem

Ritter 1206: *Melocactus zehntneri* (Britton & Rose) Lützelburg – *Estud. Bot. Nordeste* 3: 111, 1923.

- Brazil: Pernambuco; "Petrolina".
 SGO 122117 – (corp), ar, sp, (ceph)

Ritter 1206a: *Melocactus zehntneri* (Britton & Rose) Lützelburg var. *viridis* F. Ritter – *Kakt. Südamer.* 1: 132, 1979.

Typus (T): Ritter 1206a (U 531268B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Piauí; "Gaturiano" near Picos. – / 12. / 1963. – Locality data supplemented from the protologue; collection date according to the original Ritter seed sample at ZSS ("XII. 63.") and the specimen at U ("1963").
 SGO 122118 ISO – (corp), ar, sp, (ceph)
 U 531268B HOLO – ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
 ZSS SR14678 ISO – sem

Ritter 1207: *Melocactus interpositus* F. Ritter – *Kakt. Südamer.* 1: 140-141, 1979.

Typus (T): Ritter 1207 (U 531258B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Bahia; "Iaçu, Nr. 4", on rocks. – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS ("I. 64") and to specimen at U ("1964") (both have the locality simply as "Iaçu" / "Iacu"); locality data supplemented from the protologue.
 SGO 122119 ISO – (corp), ar, sp, (ceph) (Includes a rooted seedling.)
 U 531258B HOLO – (corp), ar, sp, (ceph) ("Rippe mit beginnendem Cephalium" = Rib with start of cephalium. Collection number inferred; deposited as *Melocactus longispinus* var. *exiguispinus* F. Ritter (*nom. nud.*)).
 ZSS SR14679 ISO – sem

Ritter 1208: *Melocactus acispinosus* Buining & Brederoo – in Krainz, *Die Kakt. Lief.* 62: C Vid, figs., 1975. (Photo of plant apex represents *M. krainzianus* Buining & Brederoo, cf. N. P. Taylor, *Bradleya* 9: 28, 1991.)
Typus (T): Horst & Uebelmann HU 258A (U 531308, ZSS [fruit only]) (Type given as 'Horst 258' in the protologue.).

- Brazil: Bahia; "Jacobina". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS ("I. 64") and the specimen at U ("1964").
 SGO 122120 – (corp), ar, sp, (ceph)
 U 531265B – (corp), ar, sp, (ceph) ("Rippe mit beginnendem Cephalium" = rib with starting cephalium. Collection number inferred.)
 Deposited as *Melocactus rectispinus* F. Ritter (*nom. nud.*).
 ZSS SR14680 – sem

Ritter 1209: *Melocactus macrodiscus* Werdermann – Blüh. Kakt., part 12:
[unpaged], 1932. (= Repert. Spec. Nov. Regni Veg. Sonder-Beiheft C.)

loc. 1: Brazil: Bahia; "Brejinho".

SGO 122121 – (corp), ar, sp

loc. 2: Brazil: Bahia; "unterh. Caitité" = below Caetité.

SGO 122122 – rad, corp, ar, sp (2 rooted seedlings only.)

loc. 3: Brazil: Bahia; "Caetité Nr. 3 u. Brejinho Nr. 2" = Caetité and Brejinho. – / – / 1964.

ZSS SR14681 – sem

Ritter 1209a: *Melocactus macrodiscus* Werdermann var. *minor* F. Ritter –
Kakt. Südamer. 1: 133, 1979.

Typus (T): Ritter 1209a (U 531256B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 2: Brazil: Bahia; "Rui Barbosa, Nr. 3". – / – / 1964. – Collection date according to the original Ritter seed sample and the specimen at U and the protologue. The specimen at U has the locality simply as "Rui Barbosa".

SGO 122123 ISO – corp, ar, sp, (ceph)

U 531256B HOLO – (corp), ar, sp, (ceph) ("mit beginnendem Cephalium" = with starting cephalium. Collection number inferred.

Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14682 ISO – sem

Ritter 1209b: *Melocactus macrodiscus* Werdermann – Blüh. Kakt., part 12:
[unpaged], 1932. (= Repert. Spec. Nov. Regni Veg. Sonder-Beiheft C.)

– Brazil: Bahia; "Ourives, Nr. 13". – "Gemäss der Formung der Ri.-Kanten und der relativen Dünne der St. u. Fehlen der Hakigkeit handelt es sich um Nr. 18" = According to the shape of the ribs and the relative thinness of the spines and the lack of hooked spines, this is Nr. 18. On the original label, both number 13 and number 18 have later been crossed out and replaced with number 20. Identified as "*Melocactus macrodiscus* Werdermann var." in the field-number list in KS 4.

SGO 122124 – (corp), ar, sp

Ritter 1210: *Melocactus nitidus* F. Ritter – Kakt. Südamer. 1: 139-140, fig. 80,
1979. (= *Melocactus longispinus* F. Ritter *nom. nud.* (*non M. longispinus* Buining & Brederoo).)

Typus (T): Ritter 1210 (U 531257B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Ourives, Nr. 18".

SGO 122125 – (corp), ar, sp

loc. 2: Brazil: Bahia; "Flamengo, Nr. 13".

SGO 122126 – (corp), ar, sp, ceph

loc. 3: Brazil: Minas Gerais; "Itaobim, Nr. 9. – / 1. / 1965. – Collection date according to original Ritter seed sample at ZSS; the specimen at U is dated "1965" and has the locality simply as "Itaobim".

SGO 122127 ISO – (corp), ar, sp

U 531257B **HOLO** – (corp), ar, sp, (ceph) ("Rippe mit beginnendem Cephalium" = rib with starting cephalium. Collection number inferred. Assumed to be the holotype as this is the only specimen at U. Deposited as *Melocactus longispinus* F. Ritter (*nom. nud.*, non Buining & Brederoo).)
ZSS SR14683 **ISO** – sem

loc. 4: Brazil: Bahia; "Riacho de St. Ana" = Riacho de Santana. – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS (locality written as "Riacho de Sant'Ana").
SGO 122128 – (ar), sp
ZSS SR14684 – sem

loc. 5: Brazil: Bahia; "10 km nördl. Ituaçu, Nr. 4" = 10 km N of Ituaçu.
SGO 122129 – (corp), ar, sp

Ritter 1211: *Espostoopsis dybowskii* (Roland-Gosselin) Buxbaum – in Krainz, Die Kakt. CVa, 1968.

– Brazil: Bahia; "Flamengo". – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS.
SGO 125070 – corp, ar, sp, ceph
ZSS SR14685 – sem

Ritter 1212: *Micranthocereus ruficeps* F. Ritter – Kakt. Südamer. 1: 106-107, 1979.

Typus (T): Ritter 1212 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Bahia; "Jacobina". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS; the specimen at U is dated "1963".
SGO 125229 **ISO** – corp, ar, sp, (ceph)
U **HOLO** – corp, ar, sp, ceph, (fl) (Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14686 **ISO** – sem

Ritter 1213: *Micranthocereus polyanthus* (Werdermann) Backeberg – Blätt. Kakt.-forsch. 1938(6): [unpaged], 1938.

loc. 1: Brazil: Bahia; "Brejinho" = Brejinho das Ametistas. – / – / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 124967 – rad, corp, ar, sp, ceph
ZSS SR14687 – sem

loc. 2: Brazil: Bahia; "7 km unterh. Caitité" = 7 km below Caitité.
ZSS SR14688 – sem ("1 Frucht" = 1 fruit.)

Ritter 1214: *Micranthocereus monteazulensis* F. Ritter – Kakt. Südamer. 1: 105-106, fig. 69, 1979.

Typus (T): Ritter 1214 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Minas Gerais; "Gebirge von Monte Azul" = mountains of Monte Azul, together with *Floribunda pusilliflora*. – / – / 1964. – Locality data supplemented from the protologue; collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Minas Gerais; "Monte Azul". – / 11. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 124968 **ISO** – corp, ar, sp, ceph
ZSS SR14689 **ISO** – sem

Ritter 1215: *Pilosocereus* sp.

– Brazil: Mato Grosso do Sul; "Rondonopolis, Wasserwerk" = Rondonopolis, water reservoir.
SGO 125482 – corp, ar, sp

Ritter 1216: *Pilosocereus saudadensis* F. Ritter – Kakt. Südamer. 1: 82-83, fig. 54, 1979.

Typus (T): Ritter 1216 (U, SGO) (Type cited for U l.c., iii.).

– Brazil: Mato Grosso; "Serra da Saudade". – / 12. / 1963. – Collection date according to specimen at U.
SGO 125483 **ISO** – (corp), ar, sp (Locality given as "C. da Saudade" and "Saudade" on this label.)
U **HOLO** – (corp), ar, sp, ceph (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1217: *Pilosocereus flavipulvinatus* (Buining & Brederoo) F. Ritter var. *carolinensis* (F. Ritter) F. Ritter – Kakt. Südamer. 2: 707, 1980.

loc. 1: Brazil: Maranhão; "Carolina", on sandstone cliffs, localized. – / 12. / 1963. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS ("XII. 63.") and the specimen at U ("1963"). This is the type number of *Pilosocereus carolinensis*.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14690 **ISO** – sem

loc. 2: Brazil: Maranhão; "Carolina Nr. 1" / "Carolina". – This is the type number of *Pilosocereus carolinensis*.

SGO 125484 **ISO** – (corp), ar, sp (Includes a rooted seedling.)

Ritter 1217a: *Pilosocereus carolinensis* F. Ritter var. *robustispinus* F. Ritter – Kakt. Südamer. 1: 81, fig. 53, 1979.

Typus (T): Ritter 1217a (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Maranhão; "Barão Grajaú", near frontier to Piauí. – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS. Locality data supplemented from the protologue. Identified as *Pilosocereus flavipulvinatus* var. *flavipulvinatus* in KS 4: 1644, of which *Pilosocereus carolinensis* var. *robustispinus* is a synonym (cf. KS 2: 707).

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14691 **ISO** – sem ("(grössere Art)" = larger species.)

- loc. 2:** Brazil: Maranhão; "Barao Grajaú Nr. 3". – Identified as *Pilosocereus flavipulvinatus* var. *flavipulvinatus* in KS 4: 1644, of which *Pilosocereus carolinensis* var. *robustispinus* is a synonym (cf. KS 2: 707).
SGO 125485 **ISO** – (corp), ar, sp

Ritter 1218: *Pilosocereus gaturianensis* F. Ritter – Kakt. Südamer. 1: 81-82, 1979.

Typus (T): Ritter 1218 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Piauí; "Gaturiano" near Picos. – / – / 1963. – Collection date according to specimen at U. Locality data supplemented from the protologue.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

- loc. 2:** Brazil: Piauí; "Gaturiano Nr. 5".
SGO 125486 **ISO** – (corp), ar, sp (Includes a rooted juvenile plant.)
ZSS SR14692 **ISO** – sem

Ritter 1219: *Pilosocereus pernambucoensis* F. Ritter – Kakt. Südamer. 1: 65-66, 1979.

Typus (T): Ritter 1219 (U, SGO) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Pernambuco; "Arapipina". – / – / 1963. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen present at U.)

- loc. 2:** Brazil: Pernambuco; "Arapipina Nr. 2".
SGO 125487 **ISO** – (corp), ar, sp

Ritter 1219+1220: *Pilosocereus pernambucoensis* F. Ritter – Kakt. Südamer. 1: 65-66, 1979.

Typus (T): Ritter 1219 (U, SGO) (Type cited for U l.c., iii.).

- Brazil: Pernambuco / Bahia; "FR 1219 von Araripina + FR 1220 von Petrolina + Flamengo" = FR 1219 from Araripina, and FR 1220 from Petrolina and Flamengo. – / 12. / 1963. – FR 1219 is identified as *Pilosocereus pernambucoensis* in the field-number list in KS 4, FR 1220 as *P. pernambucoensis* var. *caesius*.
ZSS SR14693 – sem

Ritter 1220: *Pilosocereus pernambucoensis* F. Ritter var. *caesius* F. Ritter – Kakt. Südamer. 1: 66, 1979.

Typus (T): Ritter 1220 (U, SGO) (Type cited for U l.c., iii.).

- Brazil: Pernambuco; "Petrolina", frontier towards Bahia. – / – / 1963. – Locality data supplemented from the protologue; collection date according to specimen at U.

SGO 125488 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1221: *Pilosocereus pentaedrophorus* (Cels) Byles & G. D. Rowley – Cact. Succ. J. Gr. Brit. 19: 67, 1957.

loc. 1: Brazil: Bahia; "Jaguarary Nr. 2" / "Jaguarari Nr. 2".
SGO 125489 – (corp), ar, sp

loc. 2: Brazil: Bahia; "Jaguarari Nr. 2 + Bonfim Nr. 2 + Jacobina + Rui Barbosa Nr. 2". – / 12. / 1963. – The date on the original label is given as "XII. 63 / I. 64".
ZSS SR14694 – sem

loc. 3: Brazil: Bahia; "Anacé bei Conquista" = Anagé near [Vitoria da] Conquista. – / 12. / 1964.
ZSS SR14695 – sem

loc. 4: Brazil: Bahia; "Brumado + Ourives". – / 12. / 1964.
ZSS SR14714 – sem

Ritter 1222: *Pilosocereus catiugicola* (Gürke) Byles & G. D. Rowley – Cact. Succ. J. Gr. Brit. 19: 66, 1957.

– Brazil: Bahia; "Jaguarari Nr. 8" / "Jaguarari". – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS.
SGO 125490 – (corp), ar, sp
ZSS SR14696 – sem

Ritter 1223: *Pilosocereus pachycladus* F. Ritter – Kakt. Südamer. 1: 70-71, figs. 5, 40-41, 1979.

Typus (T): Ritter 1223 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Urandi". – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp ("Normalrippen und Rippe aus der Blühzone" = normal ribs and rib from the floriferous zone. Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "Urandi Nr. 9". – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS.
SGO 125491 **ISO** – (corp), ar, sp
ZSS SR14697 **ISO** – sem

loc. 3: Brazil: Minas Gerais; "Monte Azul, unten, Nr. 1" = Monte Azul, below. – / 11. / 1964.
SGO 125492 – (corp), ar, sp

Ritter 1224: *Pilosocereus splendidus* F. Ritter – Kakt. Südamer. 1: 69, fig. 37, 1979.

Typus (T): Ritter 1224 (U, SGO) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Bahia; mountains above "Urandi", rocky terrain. -/-/1964. -
Locality data supplemented from the protologue. Collection date according
to specimen at U.
U **HOLO** - (corp), ar, sp, ceph ("Normalrippe und Rippe der Blühzone"
= normal rib and rib of the floriferous zone. Collection number
inferred. Assumed to be the holotype as this is the only specimen at
U.)
- loc. 2:** Brazil: Bahia; "Caitité" = Caetité. -/12./1963. - Collection date
according to original Ritter seed sample at ZSS (locality given as "Caitité Nr.
4").
SGO 125493 - (corp, ar, sp) (A juvenile rooted plant.)
ZSS SR14698 - sem
- loc. 3:** Brazil: Minas Gerais; "Monte Azul, Nr. 7".
SGO 125494 - (corp), ar, sp
- loc. 4:** Brazil: Bahia; "Urandi, Nr. 11".
SGO 125495 (in 2 parts) **ISO** - (corp), ar, sp (Includes a rooted seedling.)

**Ritter 1225: *Pilosocereus pernambucoensis* F. Ritter var. *montealtoi* F. Ritter -
Kakt. Südamer. 1: 66, 1979.**

Typus (T): Ritter 1225 (U, SGO) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Bahia; "Palma de Monte Alto", on rocky terrain. -/-/1964. -
Locality data supplemented from the protologue; collection date according
to specimen at U.
U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be
the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Bahia; "P. de M. Alto Nr. 7" = Palmas de Monte Alto / "Palma de M.
Alto" = Palmas de Monte Alto.
SGO 125496 **ISO** - (corp), ar, sp (Includes a rooted seedling.)

Ritter 1226: *Pilosocereus oreus* F. Ritter - Kakt. Südamer. 1: 69-70, 1979.

Typus (T): Ritter 1226 (U, SGO) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Minas Gerais; "Höhen über Monte Azul" = altitudes above Monte
Azul. -/-/1964. - Collection date according to specimen at U.
U **HOLO** - (corp), ar, sp, ceph ("Normalrippen und Pseudocephalium" =
normal ribs and pseudo-cephalium. Collection number inferred.
Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Minas Gerais; "Monte Azul, Nr. 10".
SGO 125497 (in 2 parts) **ISO** - corp, ar, sp, ceph

**Ritter 1227: *Stephanocereus leucostele* (Gürke) A. Berger -
Entwicklungslinien Kakt., 97, 1927.**

- loc. 1:** Brazil: Bahia; "Iaçú Nr. 7". -/1./1964. - Collection date according to
original Ritter seed sample at ZSS (locality simply given as "Iaçú").
SGO 121290 - corp, ar, sp, ceph
ZSS SR14699 - sem

loc. 2: Brazil: Bahia; "Palma de Monte Alto". – / 1. / 1964.
ZSS SR14700 – sem

Ritter 1228: *Zehntnerella polygona* F. Ritter – Kakt. Südamer. 1: 214, 1979.

Typus (T): Ritter 1228 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Bahia; "Flamengo". – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS (locality given as "Flamengo Nr. 12") and to specimen at U ("1963").

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14701 **ISO** – sem

Ritter 1229: *Zehntnerella chaetacantha* F. Ritter – Kakt. Südamer. 1: 215, 1979.

Typus (T): Ritter 1229 (U) (Type cited for U l.c., iii.).

– Brazil: Bahia; "Guanambi". – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1229a: *Zehntnerella chaetacantha* F. Ritter var. *montealtoi* F. Ritter – Kakt. Südamer. 1: 215-216, 1979.

Typus (T): Ritter 1229a (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Bahia; "Palma de Monte Alto". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS (locality given as "Palma de Monte Alto Nr. 8") and to specimen at U ("1964").

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14702 **ISO** – sem (The original label first had the collection number as "FR 1229", later amended in a different pen to read "FR 1229a".)

Ritter 1230: *Pseudoacanthocereus brasiliensis* (Britton & Rose) F. Ritter – Kakt. Südamer. 1: 47, 1979.

– Brazil: Bahia; "Jaguarari, Nr. 10".

SGO 125358 – corp, ar, sp (Includes juvenile material.)

Ritter 1231: *Leocereus urandianus* F. Ritter – Kakt. Südamer. 1: 222-223, figs. 177-178, 1979. (Erroneously given as 'urandiensis' in RPS 30.)

Typus (T): Ritter 1231 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Urandi". – / 1. / 1964. – Collection data according to specimens at U and the original Ritter seed sample at ZSS.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14703 **ISO** – sem

loc. 2: Brazil: Bahia; "östl. von Urandi" = E of Urandi / "Urandi".
SGO 125071 ISO – corp, ar, sp

loc. 3: Brazil: Bahia; "Monte Azul". – / 11. / 1964.
ZSS SR14704 – sem

Ritter 1232: *Floribunda pusilliflora* F. Ritter – Kakt. Südamer. 1: 58-59, figs. 32-33, 223, 1979.

Typus (*T*): Ritter 1232 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Minas Gerais; mountains above "Monte Azul", small place in shrubby forest on pure leafmould on rocks. – / 11. / 1964. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS.

U **HOLO** – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

ZSS SR14705 ISO – sem

ZSS SR14706 – sem ("Samen von Buining 1972" = seeds [received from] Buining 1972. No locality given on this original label.)

Ritter 1233: *Coleocephalocereus luetzelburgii* (Vaupel) Buxbaum – in Krainz, Die Kakt. Lief. 48-49: C IVb, 1972.

– Brazil: Bahia; "Jacobina". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 121291 – (corp), ar, sp
ZSS SR14707 – sem

Ritter 1234: *Coleocephalocereus goebelianus* (Vaupel) Buining – Kakt. and Sukk. 21: 202-206, 1970. (First mentioned invalidly (Art. 33.2) by Backeberg (and ascribed to F. Ritter) in Kakt.-Lex., 92, 1966.)

loc. 1: Brazil: Bahia; "Ourives".
SGO 122059 (in 2 parts) – corp, ar, sp, ceph (Includes a small seedling.)

loc. 2: Brazil: Bahia; "Palmas do Monte Alto".
SGO 122060 – rad, corp, ar, sp (A rooted seedling.)

loc. 3: Brazil: Bahia; sine loco.
ZSS S10393 – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

loc. 4: Brazil: Bahia; "Guanambi".
SGO 122054 (in 2 parts) – corp, ar, sp, ceph

loc. 5: Brazil: Bahia; "Urandi". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS. This appears to be the type collection of *Coleocephalocereus pachystele* F. Ritter, now treated as a synonym (cf. KS 1: 123).

SGO 122062 **Type ?** – corp, ar, sp, ceph
ZSS SR14709 **Type ?** – sem

loc. 6: Brazil: Bahia; "Urandi". – This appears to be the type collection of *Coleocephalocereus pachystele* F. Ritter, now treated as a synonym (cf. KS 1: 123).

SGO 122063 (in 2 parts) **Type ?** – corp, ar, sp, ceph

loc. 7: Brazil: Bahia; "Guanambi + Palma de Monte Alto". – / 1. / 1964.
ZSS SR14708 – sem

Ritter 1235: *Eriocereus adscendens* (Gürke) A. Berger ex Backeberg & Knuth
– Kaktus-ABC, 178, 1936. (Dated 1935, publ. Febr. 1936. Combination
first used but not accepted by A. Berger, Kakteen, 129, 1929.)

– Brazil: Pernambuco; "Arapipina". – / 12. / 1963.
ZSS SR14710 – sem

Ritter 1236: *Mirabella albicaulis* (Britton & Rose) F. Ritter – Kakt. Südamer.
1: 110, 1979.

– Brazil: Piauí; "Gaturiano, Nr. 7". – / 12. / 1963. – Collection date according
to original Ritter seed sample at ZSS. The original label at SGO identifies
this collection as *Mirabella albicaulis* var. *piauënsis* F. Ritter (*nom. nud.*).
SGO 121755 – corp, ar, sp (Includes juvenile stems.)
ZSS SR14711 – sem

Ritter 1237: *Mirabella albicaulis* (Britton & Rose) F. Ritter – Kakt. Südamer.
1: 110, 1979.

loc. 1: Brazil: Bahia; "Flamengo, Nr. 14".
SGO 121756 – corp, ar, sp

loc. 2: Brazil: Bahia; "P. de Monte Alto, Nr. 11" = Palmas de [do] Monte Alto.
SGO 121757 – corp, ar, sp (Includes juvenile growth.)

loc. 3: Brazil: Minas Gerais; "Eng. Omar" = Engenheiro Omar. – Identification of
material doubtful, appears to be *Mirabella minensis* (U. Eggli).
SGO 121758 – corp, ar, sp (Includes juvenile growth.)

Ritter 1238: *Mirabella minensis* F. Ritter – Kakt. Südamer. 1: 111-112, 1979.

Typus (T): Ritter 1238 (U, SGO, ZSS [seeds only, status ?]) (Type cited for
U l.c., iii.).

loc. 1: Brazil: Minas Gerais; "Mirabela".
SGO 121760 – rad, corp, ar, sp (Includes juvenile growth.)

loc. 2: Brazil: Minas Gerais; "15 km W. Agua Boa" = 15 km W of Agua Boa, sandy
plain. – Locality data supplemented from the protologue.
SGO 121759 ISO – corp, ar, sp, fl

loc. 3: Brazil: Minas Gerais; "von Agua Boa (15 km nach West)" = from Agua Boa
(15 km to the West). – / – / 1964.
U HOLO – corp, ar, sp (Labelled as "Typus" by Ritter. Collection
number inferred.)

loc. 4: Brazil: Minas Gerais; "Agua Boa".
ZSS SR14712 Type number – sem

Ritter 1239: *Brasilicereus phaeacanthus* (Gürke) Backeberg – Cactaceae
(Jahrb. DKG) 1942(1): 50, 1942.

- loc. 1:** Brazil: Bahia; "Rui Barbosa". – Both original labels have the number as "FR 1240 = 1239" and the two numbers are said to be equal in KS 4.
SGO 124988 – corp, ar, sp
- loc. 2:** Brazil: Bahia; "Urandi". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 124989 – (corp), ar, sp
ZSS SR14713 – sem
- loc. 3:** Brazil: Bahia; "Caiteté" / "Caitité".
SGO 124990 – (corp), ar, sp

Ritter 1241: *Arrojadoa rhodantha* (Gürke) Britton & Rose – The Cact. 2: 170, 1920.

- loc. 1:** Brazil: Bahia; "... de Guanambi" = ... de Guanambi.
SGO 121891 – (corp), ar, sp, (ceph)
- loc. 2:** Brazil: Pernambuco; "Araripina".
SGO 121892 – corp, ar, sp, ceph
- loc. 3:** Brazil: Pernambuco / Bahia; "Araripina + Petrolina + Flamengo". – / 12. / 1963.
ZSS SR14715 – sem
- loc. 4:** Brazil: Bahia; "Guanambi - Untás - Palma de Monte Alto". – / 1. / 1964.
ZSS SR14716 – sem
- loc. 5:** Brazil: Bahia; "Ourives Nr. 17". – / 12. / 1964. – The collection number on the original label is given as "FR [1336] = 1241. FR 1336 is identified as "*Arrojadoa rhodantha* var." in the field-number list in KS 4.
ZSS SR14717 – sem

Ritter 1241a: *Arrojadoa rhodantha* (Gürke) Britton & Rose var. *minensis* F. Ritter (*nom. inval.* Art. 34.1, 36.1) – Kakt. Südamer. 1: 88, 1979.
(Previously mentioned repeatedly in catalogues of the firm H. Winter.)
Based on Ritter 1241a.

- loc. 1:** Brazil: Bahia; "Urandi". – / 1. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 121893 – corp, ar, sp, ceph
ZSS SR14718 **Type collection** – sem
- loc. 2:** Brazil: Minas Gerais; "Monte Azul". – / 11. / 1964.
ZSS SR14719 – sem
- loc. 3:** Brazil: Bahia; "Conquista" = Vitória da Conquista. – / 12. / 1964. – The collection number on the original label is given as "FR 1241a cf.".
ZSS SR14720 – sem ("1 Frucht" = 1 fruit.)

Ritter 1242: *Arrojadoa penicillata* (Gürke) Britton & Rose – The Cact. 2: 171, 1920.

- loc. 1:** Brazil: Bahia; "Jaguarari, Nr. 5". – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "Jaguarari").
SGO 121894 – rad, corp, ar, sp, ceph
ZSS SR14721 – sem

loc. 2: Brazil: Bahia; "Ourives". – / 12. / 1964.
ZSS SR14722 – sem

Ritter 1242a: *Arrojadoa penicillata* (Gürke) Britton & Rose var. *decumbens*
Backeberg & Voll – Arq. Jard. Bot. Rio de Janeiro 9: 164-166, ill. (p. 159),
1950. (Volume for 1949, published 1950.)

– Brazil: Bahia; "Iaçú, Nr. 9". – / 1. / 1964. – Collection date according to
original Ritter seed sample at ZSS (locality simply given as "Iaçú").
SGO 121895 – corp, ar, sp, ceph
ZSS SR14723 – sem

Ritter 1243: *Arrojadoa multiflora* F. Ritter – Kakt. Südamer. 1: 89-90, figs.
62-63, col. fig. 2, 1979.

Typus (T): Ritter 1243 (U, SGO, ZSS [seeds only]) (Type cited for U l.c.,
iii.).

loc. 2: Brazil: Bahia; "15 km von Caitité in Richtg. Sant'Ana" = 15 km from Caitité
in direction of [Riacho de] Santana.
SGO 121896 – corp, ar, sp, ceph

loc. 3: Brazil: Bahia; "Brejinho". – / 1. / 1964. – Collection date according to
original Ritter seed sample at ZSS and to specimen at U ("1964").

SGO 121897 ISO – corp, ar, sp, ceph

U HOLO – corp, ar, sp, ceph (Assumed to be the holotype as this is the
only specimen at U.)

ZSS SR14724 ISO – sem

loc. 4: Brazil: Bahia; "ca. 15 km nördl. Caitité" = c. 15 km N of Caitité.
ZSS SR14725 – sem

Ritter 1244: *Arrojadoa* × *albiflora* Buining & Brederoo – Succulenta 54(2):
21-27, ill., 1975. (Probably of hybrid origin (P. J. Braun & E. Esteves
Pereira, l.c. 74(2): 81, 1995).)

Typus (T): Horst & Uebelmann HU 401 (U, ZSS [type number]).

loc. 1: Brazil: Bahia; "Urandi, Nr. 17". – Identified as *Arrojadoa oreophila* Ritter
(*nom. nud.*) on the original label.

SGO 121898 – corp, ar, sp, ceph

ZSS SR14726 – sem ("80 Korn" = 80 seeds [not counted].)

loc. 2: Brazil: Bahia; Urandi. – / – / 1964. – Identified as *Arrojadoa oreophila*
Ritter (*nom. nud.*) on the original label.

U – (corp), ar, sp (Collection number inferred.)

loc. 3: Brazil: Bahia; "Engenheiro Omar, Höhen" = Engenheiro Omar, altitudes. – /
11. / 1964.

ZSS SR14727 – sem

Ritter 1245: *Rhipsalis cassutha* Gaertner – De Fruct. Sem. Pl. 1: 137, t. 28,
1788. (The specific epithet is frequently mis-spelled 'cassytha'.)

– Brazil: Bahia; "7 km nördl. Rui Barbosa" = 7 km N of Rui Barbosa. – One of
the original labels has the collection number "FR 1245" in brackets and FR 1
added, the other simply has FR 1. FR 1245 is identified as "*Rhipsalis* sp. Rui

Barbosa unten" = *Rhipsalis* sp., Rui Barbosa, below, in KS 4: 1644.
SGO 125541 – corp, ar, sp

Ritter 1247: *Rhipsalis monteazulensis* F. Ritter – Kakt. Südamer. 1: 42, fig. 17, 1979.

Typus (T): Ritter 1247 (U [not found], SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 2:** Brazil: Minas Gerais; "Monte Azul". – / 11. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125604 ISO – corp, ar, sp ("Für Herbar" = for the herbarium; crossed out again.)
ZSS SR14728 ISO – sem

Ritter 1249: *Cereus jamacaru* De Candolle – Prodr. Syst. 3: 467, 1828.

Typus (N): Taylor, Zappi & Eggli 1369 (CEPEC [neo], HRCB, K, ZSS) (Conserved type, proposed by Taylor & Zappi in Taxon 41: 590-591, 1992, and accepted in l.c. 43(2): 276, 1994.).

- loc. 1:** Brazil: Bahia; "Urandi". – "in 1 1/2 m Höhe + Areole in 1 m Höhe" = at 1.5 m alt. + areole from 1 m. alt. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121809 – (corp), ar, sp
- loc. 2:** Brazil: Pernambuco; "Petrolina". – / 12. / 1963. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14729 – sem
- loc. 3:** Brazil: Pernambuco; "Arapipina". – / 12. / 1963. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14730 – sem
- loc. 4:** Brazil: Bahia; "Palma de M. Alto + Urandi" = Palma de Monte Alto + Urandi. – / 1. / 1964. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14731 – sem

Ritter 1250: *Pereskia bahiensis* Gürke – Monatsschr. Kakt.-Kunde 18: 86, 1908.

Typus (L): Ule 7050 (HBG [lecto], L) (Selected by Leuenberger in Mem. New York Bot. Gard. 41: 119, 1986.).

- loc. 1:** Brazil: Bahia; "Flamengo".
SGO 125357 – corp, ar, sp
- loc. 2:** Brazil: Bahia; "Caitité" = Caetité.
ZSS SR14732 – sem

Ritter 1251: *Pereskia stanantha* F. Ritter – Kakt. Südamer. 1: 21, figs. 3-4, 1979.

Typus (T): Ritter 1251 (U [not found]).

- loc. 2:** Brazil: Bahia; "Mutás de Guanambi". – The first part of the locality is difficult to decipher.
ZSS SR14733 – sem

Ritter 1252: *Opuntia inamoena* K. Schumann – in Martius, Fl. Brasil. 4(2): 306, 1890.

loc. 1: Brazil: Maranhão; "Barao Grajaú" = Barão Grajaú. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122050 – rad, corp, ar, sp
ZSS SR14734 – sem

loc. 2: Brazil: Bahia; "Iaçú Nr. 5". – / 1. / 1964. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14735 – sem

Ritter 1252a: *Opuntia inamoena* K. Schumann fa. *spinigera* (F. Ritter) P. J. Braun & E. Esteves Pereira – Cact. Succ. J. (US) 61(6): 272, 1989.

loc. 1: Brazil: Bahia; "Höhen über Urandi" = altitudes above Urandi. – / – / 1964. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

U HOLO – corp, ar, sp (Collection number inferred. Assumed to represent the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "Urandi (Höhen)" = Urandi (altitudes). – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14736 ISO – sem

Ritter 1253: *Opuntia palmadora* Britton & Rose – The Cact. 1: 202, 1919.

loc. 1: Brazil: Pernambuco; "Arapipina". – / 12. / 1963. – Collection date according to original Ritter seed sample at ZSS. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122051 – rad, corp, ar, sp (Juvenile plants only.)
ZSS SR14737 – sem

loc. 2: Brazil: Bahia; "Jaguarary" = Jaguarari. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

SGO 122052 – corp, ar, sp

loc. 3: Brazil: Bahia; "Flamengo Nr. 20". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.

ZSS SR14738 – sem

Ritter 1254: *Opuntia catingicola* Werdermann – Notizbl. Bot. Gart. Berlin-Dahlem 12: 122, 1934.

Typus (T): Werdermann 3998 (B †).

– Brazil: Bahia; "Iaçú". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
SGO 122053 – corp, ar, sp

Ritter 1255: *Brasiliopuntia* sp.

– Brazil: Bahia: Mpio. Rui Barbosa; "Rui Barbosa, c. 7 km nach Nord" = Rui Barbosa, c. 7 km to the North.
SGO 121907 – (corp), ar, sp

Ritter 1256: *Tacinga funalis* Britton & Rose – The Cact. 1: 39-40, 1920.

- loc. 1:** Brazil: Bahia; "Jaguarari + Caitité" = Jaguarari and Caetité. – "Caitité" was only added later by Ritter, and the specimen may consist of at least 2 different gatherings.
SGO 121139 – corp, ar, sp
- loc. 2:** Brazil: Bahia; "7 km unterh. Caitité" = 7 km below Caetité.
ZSS SR14739 – sem
- loc. 3:** Brazil: Bahia; "Caitité" = Caetité. – / 1. / 1964.
ZSS SR14740 – sem
- Ritter 1257: *Frailea grahliana*** (Haage jr. ex K. Schumann) Britton & Rose – The Cact. 3: 209, 1922.
- Paraguay: Central; "Nueva Italia" [= Colonia Nueva Italia].
SGO 125068 – rad, corp, ar, sp
ZSS SR13626 – sem
- Ritter 1258: *Arthrocereus campos-portoi*** (Werdermann) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 211, 1936. (Dated 1935, publ. Febr. 1936.)
- Brazil: Minas Gerais; "Belo Horizonte".
SGO 124964 – rad, corp, ar, sp
ZSS SR14741 – sem
- Ritter 1259: *Cereus obtusus*** Haworth – Rev. Pl. Succ. 70, 1821.
- loc. 1:** Brazil: Rio de Janeiro; "Arraial do Cabo, Nr. 7". – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121810 – (corp), ar, sp
- loc. 2:** Brazil: Rio de Janeiro; "Arraial do Cabo, Nr. 8". – / 2. / 1964. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
ZSS SR14742 – sem
- Ritter 1260: *Pilosocereus arrabidae*** (Lemaire) Byles & G. D. Rowley – Cact. Succ. J. Gr. Brit. 19: 66, 1957. (Sphalm. 'arribidae'.)
- Brazil: Rio de Janeiro; "Arraial de Cabo, Nr. 3" / "Arraial do Cabo".
SGO 125499 – (corp), ar, sp (Includes a small rooted seedling.)
ZSS SR14743 – sem
- Ritter 1261: *Pilosocereus ulei*** (K. Schumann) Byles & G. D. Rowley – Cact. Succ. J. Gr. Brit. 19: 69, 1957. (*Non Cephalocereus ulei* Gürke 1908.)
- loc. 1:** Brazil: Rio de Janeiro; Arraial de Cabo. – Locality as given in KS 1: 83; maps give the spelling as 'Arraial do Cabo'.
ZSS S10406 – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)
- loc. 2:** Brazil: Rio de Janeiro; "Arraial de Cabo Nr. 4" / "Arraial do Cabo". – / – / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125498 – (corp), ar, sp (Includes a small rooted seedling.)
ZSS SR14744 – sem

Ritter 1262: *Coleocephalocereus fluminensis* (Miquel) Backeberg – Blätt. Kakt.-forsch. 1938(6): [unpaged], 1938.

- Brazil: Rio de Janeiro; "Arraial do Cabo". – / – / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 122064 – (corp), ar, sp, ceph (Includes a rooted seedling.)
ZSS SR14745 – sem

Ritter 1263: *Rhipsalis dissimilis* (G. A. Lindberg) K. Schumann – in Martius, Fl. Brasil. 4(2): 286, 1890.

- loc. 1:** Brazil: Rio de Janeiro; "Arraial de Cabo, Nr. 8" / "Arraial do Cabo".
SGO 125605 – corp, ar, sp
- loc. 2:** Brazil: Rio de Janeiro; "Corcovado Nr. 3". – / 1. / 1965. – The collection number on the original label is given as "FR 1263 cf."
ZSS SR14746 – sem

Ritter 1264: *Notocactus linkii* (Lehmann) Herter var. *guaibensis* F. Ritter – Kakt. Südamer. 1: 172, fig. 113, 1979.

Typus (T): Ritter 1264 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; mountains near "Guaíba". – / 3. / 1964. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS and specimen at U ("1964").
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14747 **ISO** – sem
- loc. 2:** Brazil: Rio Grande do Sul; "sw. Guaíba, Nr. 3" = SW of Guaíba.
SGO 125278 **ISO** – (corp), ar, sp

Ritter 1264: *Rhipsalis* sp.

- p.p.:** Brazil: Bahia; "Rui Barbosa".
SGO 125606 – corp, ar, sp

Ritter 1265: *Notocactus ottonis* (Lehmann) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 254, 1936. (Dated 1935, publ. Febr. 1936. Some sources (e.g. Bergner in Internoto 9: 73, 1988) give the author as: (Lehmann) A. Berger ex Krainz. A. Berger (Kakteen, 212, 1929) used the combination, but did not accept *Notocactus* at generic level.)

- loc. 1:** Brazil: Rio Grande do Sul; "von Entroncado" / "Arroyo dos Ratos".
SGO 125280 – (corp), ar, sp
- loc. 2:** Brazil: Rio Grande do Sul; "Loreto".
SGO 125281 – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "nördl. Cazapava" = N of Caçapava do Sul.
ZSS SR14748 – sem
- loc. 4:** Brazil: Rio Grande do Sul; "Quarai".
ZSS SR14749 – sem

- loc. 5:** Brazil: Rio Grande do Sul; "Encruzilhada".
ZSS SR14750 – sem
- loc. 6:** Brazil: Rio Grande do Sul; "Arroyo dos Ratos". – The collection number on the original label was first given as "FR 1265a".
ZSS SR14751 – sem
- loc. 7:** Brazil: Rio Grande do Sul; "östl. Livramento". – The collection number on the original label was first given as "FR 1265a (?)".
ZSS SR14752 – sem

Ritter 1266: *Notocactus laetevirens* F. Ritter – Kakt. Südamer. 1: 167-168, figs. 105-106, 1979. (Sphalm. 'laetevirens'.)

Typus (T): Ritter 1266 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Taquarichim". – / – / 1964. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "östl. Taquarichim" = E of Taquarichim.
SGO 125282 **ISO** – (corp), ar, sp
ZSS SR14753 **ISO** – sem
- loc. 3:** Brazil: Rio Grande do Sul; "Taquarichim Nr. 2".
ZSS SR14754 **ISO** – sem ("1 Pfl.") = 1 plant.)

Ritter 1266a: *Notocactus ottonis* (Lehmann) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 254, 1936. (Dated 1935, publ. Febr. 1936. Some sources (e.g. Bergner in Internoto 9: 73, 1988) give the author as: (Lehmann) A. Berger ex Krainz. A. Berger (Kakteen, 212, 1929) used the combination, but did not accept *Notocactus* at generic level.)

- loc. 1:** Brazil: Rio Grande do Sul; "Ibaré".
ZSS SR14755 – sem
- loc. 2:** Brazil: Bahia; "westl. Pantano Grande" = W of Pantano Grande.
ZSS SR14756 – sem

Ritter 1266b: *Notocactus ottonis* (Lehmann) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 254, 1936. (Dated 1935, publ. Febr. 1936. Some sources (e.g. Bergner in Internoto 9: 73, 1988) give the author as: (Lehmann) A. Berger ex Krainz. A. Berger (Kakteen, 212, 1929) used the combination, but did not accept *Notocactus* at generic level.)

- Brazil: Bahia; "Berg Itaguajá westl. São Pedro" = mount Itaguajá W of São Pedro.
ZSS SR14757 – sem

Ritter 1266c: *Notocactus ottonis* (Lehmann) A. Berger ex Backeberg var. *acutangularis* F. Ritter – Kakt. Südamer. 1: 163, 1979.

Typus (T): Ritter 1266c (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Sanga de Arreia". – / – / 1966. – Discovered by L. Horst. Collection date according to specimen at U.
SGO 125283 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "C.o Branco" = Cerro Branco.
ZSS SR14758 – sem
- loc. 3:** Brazil: Rio Grande do Sul; "n. Quevedos" = N of Quevedos.
ZSS SR14759 – sem
- loc. 4:** Brazil: Rio Grande do Sul; "Sanga de Arreia Nr. 2". – / 3. / 1964. – The collection number on the original label was originally probably "1265", now written over.
ZSS SR14760 **Type number** – sem

Ritter 1267: *Notocactus muricatus* (Otto) A. Berger *ex* Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 254, 1935. (Dated 1935, publ. Febr. 1936. Combination first used but not accepted by A. Berger, *Kakteen*, 210, 1929.)

- Brazil: Rio Grande do Sul; "Sango [sic !] de Arreia Nr. 3" = Sanga de Arreia. – / 3. / 1964.
ZSS SR14761 – sem

Ritter 1267a: *Notocactus muricatus* (Otto) A. Berger *ex* Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 254, 1935. (Dated 1935, publ. Febr. 1936. Combination first used but not accepted by A. Berger, *Kakteen*, 210, 1929.)

- Brazil: Rio Grande do Sul; "Taquarichim Nr. 4".
ZSS SR14762 – sem ("1 Pfl." = 1 plant.)

Ritter 1268: *Notocactus purpureus* F. Ritter – *Succulenta* 49(7): 109, 1970. *Typus* (*T*): Ritter 1268 (U, ZSS [seeds only, status ?]).

- loc. 1:** Brazil: Rio Grande do Sul; "Serra Geral". – / – / 1966. – Collection date according to specimen at U.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
ZSS S10382 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Notocactus herteri*). No locality data associated with this specimen.)
- loc. 2:** Brazil: Rio Grande do Sul; "Cascada de Sta. Maria" = Cascada de Santa Maria. – The original label has the additional number "L.H. 20c" which appears to be L. Horst 20c.
ZSS SR14763 **Type number** – sem

Ritter 1269: *Notocactus horstii* F. Ritter – *Succulenta* 45(1): 3-4, ill. (p. 1), 1966.
Typus (*T*): Ritter 1269 (U, SGO [status ?], ZSS [seeds only, status ?]).

- loc. 1:** Brazil: Rio Grande do Sul; "Südseite der Serra Geral" = S side of the Serra Geral. 18. / 3. / 1964. – Discovered together with L. Horst. Collection date according to specimen at U.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS S10385 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965. No locality associated with this specimen.)
- loc. 2:** Brazil: Rio Grande do Sul; "Agudo".
 SGO 125279 **Type number** – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Cerro Agudo". – / – / 1963. – The collection date is given as "Ende 1963" = end of year 1963.
 ZSS SR14764 **Type number** – sem

Ritter 1269a: *Notocactus horstii* F. Ritter var. *purpureiflorus* F. Ritter – Kakt. Südamer. 1: 184, figs. 8, 130, 1979.

Typus (T): Ritter 1269a (U [not found], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 2:** Brazil: Rio Grande do Sul; "Cerro Botucarai". – The original label has the following additional data: "(von Horst) (L.H. 20b)" = [received] from Horst. L. Horst 20b.
 ZSS SR14765 **Type number** – sem

Ritter 1270: *Eriocactus magnificus* F. Ritter (*incorrect name* Art. 11.3) – Succulenta 45(4): 50-53, ill., 1966.

Based on Ritter 1270 (U, SGO [status ?], ZSS [seeds only, status ?]).

- loc. 1:** Brazil: Rio Grande do Sul; "Serra Geral". 19. / 3. / 1964. – Found jointly by L. Horst and F. Ritter. Collection data according to specimen at U and the protologue.
 U **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)
- loc. 2:** Brazil: Rio Grande do Sul; "Toropi". – / 3. / 1964. – Collection date according to original Ritter seed sample at ZSS.
 SGO 125063 **Type number** – (corp), ar, sp
 ZSS SR14766 **Type number** – sem
- loc. 3:** Brazil: Rio Grande do Sul; "Usina São Pedro".
 ZSS SR14767 **Type number** – sem

Ritter 1271: *Echinopsis oxygona* (Link) Zuccarini – in Pfeiffer & Otto, Abb. Beschr. Cact. 1: t. 4, 1839.

- loc. 1:** Brazil: Rio Grande do Sul; "Toropi" / "Toropi".
 SGO 125160 – (corp), ar, sp
- loc. 2:** Brazil: Rio Grande do Sul; "westl. Santiago westl. Cerro Branco" = W of Santiago W of Cerro Branco / "w. C.o Branco" = W of Cerro Branco.
 SGO 125161 – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Toropi (Brasil.) + Loreto". – / 3. / 1964. – The original label was first numbered "FR 1256", but this must be erroneous because FR 1256 is *Tacinga funalis* according to the field-number list in KS

4.
ZSS SR14768 – sem

loc. 4: Brazil: Rio Grande do Sul; "Loreto (Brasil.)". – / 3. / 1964. – The original label was first numbered "FR 1256", but this must be erroneous because FR 1256 is *Tacinga funalis* according to the field-number list in KS 4.
ZSS SR14769 – sem

Ritter 1272: *Wigginsia leprosorum* F. Ritter – Kakt. Südamer. 1: 194-195, figs. 146-147, 1979.

Typus (T): Ritter 1272 (U) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "südöstlich von Porto Alegre" = SE of Porto Alegre, near the lepra station. – Locality data supplemented from the protologue.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "Itapoa". – / 3. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 121145 – (corp), ar, sp ("4 Stücke von Köpfen mit Wollschaiteln. Kopf der fein...." = 4 specimens from heads with woolly apex. Head of the fine)

ZSS SR14770 – sem

Ritter 1273: *Wigginsia polyacantha* (Link & Otto) F. Ritter – Kakt. Südamer. 1: 193, 1979.

loc. 1: Brazil: Rio Grande do Sul; "Entrocado nach Sn. Geronimo" = turnoff to São Geronimo. – "Von Köpfen mit Wollschaiteln" = from heads with woolly apex.

SGO 121142 – (corp), ar, sp

loc. 2: Brazil: Rio Grande do Sul; "Arroio dos Ratos". – / 3. / 1964.

ZSS SR14771 – sem

loc. 3: Brazil: Rio Grande do Sul; sine loco.

ZSS S10381 – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Malacocarpus langsdorffii*.)

Ritter 1274: *Eriocactus leninghausii* (Haage jr.) Backeberg (*incorrect name* Art. 11.3) – Cactaceae (Jahrb. DKG) 1942(2): 37, 1942.

– Brazil: Rio Grande do Sul; "Corvo". – / – / 1963. – Collection date according to original Ritter seed sample at ZSS.

SGO 125065 – (corp), ar, sp

ZSS SR14772 – sem (The original label first had a different collection number, but this is now illegible.)

Ritter 1274a: *Eriocactus leninghausii* (Haage jr.) Backeberg var. *minor* F.

Ritter (*incorrect name* Art. 11.3) – Kakt. Südamer. 1: 156, figs. 3, 94, 1979.

Based on Ritter 1274a (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Klein's Berg", S of Montenegro. – / – / 1964. – Locality data supplemented from the protologue; collection data according to specimen at U.

SGO 125284 **ISO** – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

ZSS S10383 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Notocactus leninghausii* var. *longispinus*). No locality data associated with this specimen.)

loc. 2: Brazil: Rio Grande do Sul; "w. Montenegro" = W of Montenegro. – "(von Horst L. H. 49)" = from L. Horst 49.

ZSS SR14773 **Type number** – sem

Ritter 1275: *Brasilicactus haselbergii* (F. Haage) Backeberg – Beitr. Sukk.-kunde & -pflege 1942: 38, 1942.

loc. 1: Brazil: Rio Grande do Sul; "Gastro Filho". – / – / 1963. – The original label was first numbered as "FR 1260", which must be erroneous, as FR 1260 is identified as *Pilosocereus arrabidae* in the field-number list in KS 4.

ZSS SR14774 – sem

loc. 2: Brazil: Rio Grande do Sul; "Cerro Botucaraí (Candelaria)". – / – / 1964. – The original label was first numbered as "FR 1260", which must be erroneous, as FR 1260 is identified as *Pilosocereus arrabidae* in the field-number list in KS 4.

ZSS SR14775 – sem

Ritter 1275b: *Brasilicactus haselbergii* (F. Haage) Backeberg – Beitr. Sukk.-kunde & -pflege 1942: 38, 1942.

– Brazil: Rio Grande do Sul; "Trombudo". – "von L. Horst" = from L. Horst. The material is identified as "*Brasilicactus haselbergii* var." on the original label. There is no entry for this number in the field-number list in KS 4.

ZSS SR14776 – sem

Ritter 1276: *Brasilicactus graessneri* (K. Schumann) Backeberg – Cactaceae (Jahrb. DKG) 1942(1): 36, 1942.

– Brazil: Rio Grande do Sul; "São Francisco da Paula". – / – / 1963. – The collection number on the original label was first given as "FR 1261", which must be erroneous because FR 1261 is identified as *Pilosocereus ulei* in the field-number list in KS 4.

ZSS SR14777 – sem

Ritter 1276a: *Brasilicactus graessneri* (K. Schumann) Backeberg var. *stellatus* F. Ritter (*nom. inval.* Art. 36.1, 37.1) – Kakt. Südamer. 1: 144, 1979. (Based on *Brasilicactus haselbergii* var. *stellatus* hort. (*nom. nud.*))

– Brazil: Rio Grande do Sul; "Vacaria". – "(von L. Horst L.H. 39)" = from L. Horst L.H. 39.

ZSS SR14778 – sem

Ritter 1277: *Brasiliparodia brevihamata* (W. Haage) F. Ritter – Kakt. Südamer.

1: 151, 1979.

- Brazil: Rio Grande do Sul; "Jaquirana".
SGO 124992 – corp, ar, sp

Ritter 1277a: *Brasiliparodia brevihamata* (W. Haage) F. Ritter var. *mollispina*
F. Ritter – Kakt. Südamer. 1: 151, 1979. (Appears to be based on two syntypes and was therefore declared invalidly published (Art. 37.1) in RPS 37: 20; the typography makes it clear, however, that the Ritter-collection enumerated is the nomenclatural type.)

Typus (T): Ritter 1277a (U [not found], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 2:** Brazil: Rio Grande do Sul; "westl. Cambara, Abzweig nach Jaquirana" = W of Cambará, turnoff to Jaquirana. – The collection number on the original label is given as "FR 1277a (HU 43a)"; HU 43a relates to the simultaneous collection by Horst & Uebelmann.

ZSS SR14779 **Type number** – sem

Ritter 1277b: *Brasiliparodia brevihamata* (W. Haage) F. Ritter fa. *conjungens*
F. Ritter – Kakt. Südamer. 1: 151, 1979. (Appears to be based on several syntypes and was therefore declared invalidly published (Art. 37.1) in RPS 37: 20; the typography makes it clear, however, that the Ritter-collection enumerated is the nomenclatural type.)

Typus (T): Ritter 1277b (U [not found], ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "nahe nw. Cambará" = near and NW of Cambará.
– The collection number on the original label is given as "FR 1277a (HU 71)"; HU 71 relates to the simultaneous collection by Horst & Uebelmann.
ZSS SR14780 **ISO** – sem

Ritter 1278: *Brasiliparodia buenekeri* (Buining) F. Ritter – Kakt. Südamer. 1: 149, 1979.

- Brazil: Rio Grande do Sul; "Aparados da Serra". – / – / 1963.
ZSS SR14781 – sem

Ritter 1279: *Brasiliopuntia* sp.

- Brazil: Rio de Janeiro; "Arraial do Cabo". – / 2. / 1964.
ZSS SR14782 – sem

Ritter 1280: *Rhipsalis grandiflora* Haworth – Suppl. Pl. Succ., 83, 1819.

- Brazil: São Paulo; "Guarujá". – / 2. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125607 – corp, ar, sp
ZSS SR14783 – sem

Ritter 1281: *Melocactus bahiensis* (Britton & Rose) Lützelburg – Estud. Bot. Nordeste 3: 111, 1923.

- Brazil: Bahia; Jaguarari. – The original labels have the number FR 1334 (identified as *M. bahiensis* in KS 4) added. The collection is identified as "*Melocactus bahiensis* (Britton & Rose) Werdermann var." in the field-number list in KS 4.
SGO 122139 – (corp), ar, sp, (ceph)

Ritter 1282: *Cereus goiasensis* (F. Ritter) P. J. Braun – Bradleya 6: 86, 1988.

- Brazil: Maranhão / Goiás; "Carolina", frontier of Goiás and Maranhão. – / 12. / 1963. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS and specimen at U ("1963").
SGO 121811 (in 2 parts) **ISO** – corp, ar, sp ("Normaltriebe und Jugendtrieb" = normal stems and juvenile stem.)
U **HOLO** – (corp), ar, sp (Collection number by inference. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14784 **ISO** – sem

Ritter 1283: *Eriocactus claviceps* F. Ritter (*incorrect name* Art. 11.3) – Succulenta 45(8): 113, 115-116, ill., 1966.

Based on Ritter 1283 (U, ZSS [seeds only]).

- Brazil: Rio Grande do Sul; "Julio de Castilho". – / – / 1963. – Collection date according to original Ritter seed sample at ZSS; the specimen at U is dated "1964".
U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14785 **ISO** – sem (Dated "Ende 1963" = end of 1963.)
ZSS SR14786 **Type number** – sem ("(von L. Horst)" = [received] from L. Horst.)

Ritter 1284: *Brasiliparodia buenekeri* (Buining) F. Ritter var. *intermedia* F. Ritter – Kakt. Südamer. 1: 151, 1979. (Appears to be based on two syntypes and was therefore declared invalidly published (Art. 37.1) in RPS 37: 20; the typography makes it clear, however, that the Ritter-collection enumerated is the nomenclatural type.)

Typus (*T*): Ritter 1284 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "3 - 4 km nordöstl. Cambará" = 3 - 4 km NE of Cambará. – "FR 1284 = HU 42"; HU stands for *Horst & Uebelmann*.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "3 km hinter Cambará" = 3 km behind Cambará. – "(L. Horst L.H. 42)".
ZSS SR14787 **ISO** – sem
- loc. 3:** Brazil: Rio Grande do Sul; "3 km östl. Cambara" = 3 km E of Cambará. – The collection number on the original label is given as "FR 1284 (HU 42)"; HU stands for the collectors Horst & Uebelmann.
ZSS SR14788 **ISO** – sem

Ritter 1284a: *Brasiliparodia buenekeri* (Buining) F. Ritter fa. *conjungens* F.

Ritter – Kakt. Südamer. 1: 150, 1979. (Appears to be based on several syntypes and was therefore declared invalidly published (Art. 37.1) in RPS 37: 20; the typography makes it clear, however, that the Ritter-collection enumerated is the nomenclatural type.)

Typus (T): Ritter 1284a (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "südöstlich von Cambará" = SE of Cambará, along old road to Fortaleza. – / – / 1964. – Additional locality data from the protologue; collection date according to specimen at U. The material was probably collected jointly with L. Horst and was alternatively numbered *Horst & Uebelmann* HU 44.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "12 km in Richtg. Fortaleza" = 12 km towards Fortaleza / "12 km nach Fortaleza" = 12 km from Fortaleza. – The material was probably collected jointly with L. Horst and was alternatively numbered *Horst & Uebelmann* HU 44.

SGO 124993 **Type number** – corp, ar, sp

loc. 3: Brazil: Rio Grande do Sul; "östl. Tainhas" = E of Tainhas. – The material was probably collected jointly with L. Horst and was alternatively numbered *Horst & Uebelmann* HU 44.

SGO 124994 – corp, ar, sp

loc. 4: Brazil: Rio Grande do Sul; "Standort ?" = locality ? [sine loco]. – The original label has the collection number as "FR 1284a ? = HU 186"; HU stands for the collectors Horst & Uebelmann.

ZSS SR14789 **Type number** – sem

loc. 5: Brazil: Rio Grande do Sul; "4 km von Cambará in Richtung Fortaleza" = 4 km from Cambará in the direction of Fortaleza. – The original label has the collection number as "FR 1284a = HU 351"; HU stands for the collectors Horst & Uebelmann.

ZSS SR14790 **ISO** – sem

loc. 6: Brazil: Rio Grande do Sul; "12 km Richtg. Fortaleza (im Cajón Grande 1966)" = 12 km in the direction of Fortaleza (in the Cajón Grande). – / – / 1966.

ZSS SR14791 **Type number** – sem

loc. 7: Brazil: Rio Grande do Sul; "12 km nach Abzweig nach Fortaleza" = 12 km from turnoff to Fortaleza. – "von L. Horst L.H. 46" = [received] from L. Horst LH 46.

ZSS SR14792 **Type number** – sem

loc. 8: Brazil: Rio Grande do Sul; "hinter S. Fran.co da Paula" = behind São Francisco de Paula. – "(L. Horst L.H. 44)".

ZSS SR14793 – sem

loc. 9: Brazil: Rio Grande do Sul; "São Francisco da Paula gegen Osten" = São Francisco de Paulo, towards the East. – / – / 1963.

ZSS SR14794 – sem

Ritter 1285: *Rhipsalis flosculosa* F. Ritter – Kakt. Südamer. 1: 42-43, figs. 18-

19, 1979.

Typus (T): Ritter 1285 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Berlin über Corvo" = Berlin above Corvo. -/-/ 1964. - Collection date according to specimen at U.

U **HOLO** - corp, ar (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "Berlin". -/-/ 1964.

SGO 125608 **ISO** - corp, ar, sp

loc. 3: Brazil: Rio Grande do Sul; "Berlin (Rio Gr. do Sul)". -/-/ 1967.

ZSS SR14795 **Type number** - sem

Ritter 1286: *Rhipsalis alboareolata* F. Ritter - Kakt. Südamer. 1: 41-42, fig. 16, 1979.

Typus (T): Ritter 1286 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Berlin bei Corvo" = Berlin near Corvo. -/-/ 1964. - Collection date according to specimen at U.

U **HOLO** - corp, ar (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "Berlin, Nr. 8 / 9".

SGO 125609 **ISO** - corp, ar, sp

loc. 3: Brazil: Rio Grande do Sul; "Berlin Nr. 9". - "(dünne Form)" = slender form.

ZSS SR14796 **ISO** - sem

Ritter 1287: *Rhipsalis warmingiana* K. Schumann - in C. Martius, Fl. Brasil. 4(2): 291, 1890.

loc. 1: Brazil: Rio Grande do Sul; "Agudo".

SGO 125610 - rad, corp, ar, sp

loc. 2: Brazil: Rio Grande do Sul; "Cerro Agudo". - / 3. / 1964.

ZSS SR14797 - sem

Ritter 1289: *Monvillea alticostata* F. Ritter - Kakt. Südamer. 1: 251-253, figs. 204-206, 1979.

Typus (T): Ritter 1015 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Paraguay: Caaguazú; "San Joaquin". - The original label also has the number 1015 (also identified as *Monvillea alticostata* in KS 4), but crossed out.

SGO 121844 - (corp), ar, sp

Ritter 1294: *Browningia columnaris* F. Ritter - Kakt. Südamer. 4: 1323-1324, 1981.

Typus (T): Ritter 1294 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Ayacucho; "Valle Pampas". – / – / 1965.

U **HOLO** – (corp), ar, sp ("Jungtrieb und Blühtrieb" = young stem and floriferous stem. Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Peru: Ayacucho; "Valle Rio Pampas". – / 9. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 124986 **ISO** – (corp), ar, sp
ZSS SR14129 **ISO** – sem

Ritter 1295: *Calymmanthium fertile* F. Ritter – Kakt. Südamer. 4: 1266-1267, fig. 1129-1130, 1981. (This seems to be the valid publication place for this taxon. First invalidly published (without type) in *Succulenta* 45: 117, 135, ill., 1966 (this citation erroneously given as valid publication in RPS 17).) *Typus (T)*: Ritter 1295 (U, SGO, ZSS [seeds only]).

– Peru: Amazonas; "östlich Balsas" = E of Balsas, in upper altitudes. – / 7. / 1964. – Collection data supplemented from the protologue, collection date according to the original Ritter seed sample at ZSS.

SGO 125021 **ISO** – corp, ar, sp
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14130 **ISO** – sem

Ritter 1296: *Cleistocactus villaazulensis* F. Ritter – Kakt. Südamer. 4: 1359-1360, fig. 1248, 1981.

Typus (T): Ritter 1296 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Huancavelica; "Villa Azul". 2000 m. – / 9. / 1964. – Altitude according to the protologue, collection date according to the original Ritter seed sample at ZSS.

SGO 124970 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
ZSS SR14131 **ISO** – sem
ZSS S9876 **Type number** – sem (Leg. Jardin Exotique de Monaco, ex cult. No locality data associated with this specimen.)

Ritter 1297: *Cleistocactus brevispinus* F. Ritter – Kakt. Südamer. 4: 1360-1361, fig. 1237, 1981.

Typus (T): Ritter 1297 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Apurimac; Pachaca-Schlucht near "Abancay". – / – / 1964. – Locality data supplemented from the protologue.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Peru: Apurimac; "Valle Pachachaca".

SGO 124835 **Type number** – corp, ar, sp

Ritter 1298: *Corryocactus ayacuchoensis* Rauh & Backeberg – in Backeberg,

Descr. Cact. Nov. [1:] 12, 1957. (Dated 1956, publ. 1957.)

loc. 1: Peru: Apurimac; "6 km oberh. Chalhuanca" = 6 km above Chalhuanca.
SGO 125056 – (corp), ar, sp

loc. 2: Peru: Apurimac; "oberhalb Chalhuanca" = above Chalhuanca. – / 9. / 1964.
ZSS SR14132 – sem ("1 Frucht" = 1 fruit.)

Ritter 1299: *Corryocactus gracilis* F. Ritter – Kakt. Südamer. 4: 1282-1283,
figs. 1146-1147, 1981.

Typus (T): Ritter 1299 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:
iii, 1979.).

loc. 1: Peru: Ayacucho; "Valle Río Pampas, ca. 2200 m." = valley of the Río
Pampas. 2200 m. – / – / 1964. – Collection date according to specimen at
U.

U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only
specimen present at U.)

loc. 2: Peru: Ayacucho; "Río Pampas-Schlucht" = gorge of Río Pampas.
SGO 125175 **ISO** – corp, ar, sp

loc. 3: Peru: Ayacucho; "Valle Río Pampas (oben, gegen Nord)" = Valle Río Pampas
(above, towards the North). – / 9. / 1964.
ZSS SR14133 **ISO** – sem

Ritter 1300: *Corryocactus apiciflorus* (Vaupel) Hutchison – Sukkulantenkunde
7/8: 9, 1963.

– Peru: Huanuco; "oberhalb Mejorada" = above Mejorada.
SGO 125057 – corp, ar, sp

Ritter 1301: *Corryocactus odoratus* F. Ritter – Kakt. Südamer. 4: 1285-1286,
figs. 1150-1151, 1981.

Typus (T): Ritter 1301 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Huancavelica; "Pampas, ca. 3300 m.". 3300 m. – / – / 1964. –
Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only
specimen present at U.)

loc. 2: Peru: Huancavelica; "13 km über Pampas" = 13 km above Pampas. – / – /
1964.

SGO 125058 **ISO** – (corp), ar, sp

Ritter 1302: *Corryocactus serpens* F. Ritter – Kakt. Südamer. 4: 1285, fig.
1152, 1981.

Typus (T): Ritter 1302 (U) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Huancavelica; "Colcambamba". 2700 m. – / – / 1964. – Collection
date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only
specimen present at U.)

loc. 2: Peru: Huancavelica; "Villa Azul".
SGO 125176 – corp, ar, sp
ZSS SR14134 – sem

Ritter 1303: *Lasiocereus fulvus* F. Ritter – Kakt. Südamer. 4: 1479, 1981.
(First mentioned (without type, but with Latin diagnosis) in Succulenta 45(8): 119, 1966.)
Typus (T): Ritter 1303 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Amazonas; E of Balsas at higher elevations. – / – / 1964.
ZSS A5530 **Type number** – corp, ar, sp (Ex cult. ZSS s.n. 1991.)
ZSS S10407 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)
ZSS S8203 **Type number** – sem (Leg. Köhres.)

loc. 2: Peru: Amazonas; "östl. Balsas" = E of Balsas. – / 7. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 121999 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Labelled as "Holotypus" by Ritter.)
ZSS SR14135 **ISO** – sem

Ritter 1304: *Matucana weberbaueri* (Vaupel) Backeberg – Beitr. Sukk.-Kunde 1939: 42, 1939.

– Peru: Amazonas; "östl. Balsas, 1700 - x m." = E of Balsas. 1700 m. – / 7. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 122209 – rad, corp, ar, sp
ZSS SR14136 – sem

Ritter 1305: *Matucana myriacantha* (Vaupel) Buxbaum – in Krainz, Die Kakt. Lief. 54: C Vb, 1973.

loc. 1: Peru: Amazonas; "östl. Balsas, 2550 - x m." = E of Balsas. 2550 m.
SGO 122210 – (corp), ar, sp

loc. 2: Peru: Amazonas; "östl. Balsas, Bergkamm bei 2550 - x m." = E of Balsas, mountain ridge. 2550 m. – / 7. / 1964.
ZSS SR14137 – sem

Ritter 1306: *Matucana hastifera* F. Ritter – Kakt. Südamer. 4: 1496-1497, fig. 1383, 1981.

Typus (T): Ritter 1306 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Peru: Ancash: Huari; "Berge über Palca" = mountains above Palca. – / 7. / 1964. – Collection date according to original Ritter seed sample at ZSS. Province / department information according to the protologue; the gazetteers consulted locate "Palca" in Dept. Junín.
SGO 122211 **Type number** – (corp), ar, sp
ZSS SR14138 **Type number** – sem

loc. 3: Peru: Ancash: Huari; "Provinz Huari, ca. 3500 m. Höhe" = Prov. Huari, ca. 3500 m altitude. 3500 m. – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1307: *Matucana fruticosa* F. Ritter – Succulenta 46(1): 3-4, ill., 1967. (Latin diagnosis published without type in l.c. 45(8): 117-118, 1966.)
Typus (T): Ritter 1307 (U, SGO, ZSS [status ?]) (No herbarium cited for the type.).

loc. 1: Peru: Cajamarca; "San Juan". – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to represent the holotype as this is the only specimen present.)

ZSS AX9827 **Type number** – corp, ar, sp, fl (Ex cult. ZSS 80 2527 (ex coll. Locuty). Flower added July 1992. No locality information directly associated with this specimen.)

ZSS T9823 **Type number** – corp, ar, sp (Ex cult. ZSS 77 2148 (ex coll. Locuty). No locality information directly associated with this specimen.)

loc. 2: Peru: Cajamarca; "oberh. San Juan" = above San Juan. – / 7. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 122212 **ISO** – (corp), ar, sp

ZSS SR14139 **ISO** – sem

Ritter 1308: *Matucana calliantha* F. Ritter – Kakt. Südamer. 4: 1490-1491, fig. 48, 1981.

Typus (T): Ritter 1308 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: Amazonas; "östlich von Balsas in 1700 m Höhe" = E of Balsas. 1700 m. – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Peru: Amazonas; "östl. Balsas" = E of Balsas. 1700 m. – / – / 1964. – Collection date and altitude added according to the protologue.

SGO 122213 **ISO** – (corp), ar, sp

ZSS SR14140 **ISO** – sem

Ritter 1308a: *Matucana calliantha* F. Ritter var. *prolifera* F. Ritter – Kakt. Südamer. 4: 1491, fig. 1364, 1981.

Typus (T): Ritter 1308a (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Amazonas ?; "Balsas" am Marañón. 900 m. – / – / 1968. – Collection date according to original Ritter seed sample at ZSS. Locality supplemented from the protologue. The gazetteers consulted locate "Balsas" in Dept. Amazonas.

ZSS SR14141 **ISO** – sem

Ritter 1309: *Morawetzia sericata* F. Ritter – Kakt. Südamer. 4: 1367-1368, figs. 46, 1250, 1981.

Typus (T): Ritter 1309 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1:

iii, 1979.).

loc. 1: Peru: Huancavelica; Villa Azul, below Colcabamba. – / – / 1964. – Locality data according to protologue, the specimen at U only has "Dept. Huancavelica" and is dated "1964".

U **HOLO** – (corp), ar, sp, (ceph) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS B12795 – corp, ar, sp, fl (Ex cult. ZSS 93 1754, 10. 8. 1993) (From plants of unknown origin, probably raised from seeds.)

ZSS S10409 **Type number** – sem (Leg. Fa. Schenkel.)

loc. 2: Peru: Huancavelica; "Villa Azul". – / 9. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 121732 **ISO** – corp, ar, sp, ceph

ZSS SR14142 **ISO** – sem

Ritter 1310: *Matucana aureiflora* F. Ritter – Kakt. and. Sukk. 16(12): 229-230, 1965. (See also l.c. 17(1): 4-5, ills., 1966.)

Typus (T): Ritter 1310 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 17(1): 5, 1966.).

loc. 1: Peru: Cajamarca; "Baños del Inca", near Cajamarca. – / 7. / 1964. – Locality data supplemented from KS 4; collection date according to original Ritter seed sample at ZSS.

SGO 122214 **ISO** – (corp), ar, sp

ZSS SR14143 **ISO** – sem ("1 Pflze." = 1 plant.)

loc. 2: Peru: Cajamarca; "Cajamarca". – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

Ritter 1311: *Eomatucana oreodoxa* F. Ritter – Kakt. and. Sukk. 16(12): 230, 1965. (See also l.c. 17(2): 24-25, ill., 1966.)

Typus (T): Ritter 1311 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 17(21): 25, 1966.).

loc. 2: Peru: Ancash; "Berge südl. Palca" = mountains S of Palca.

SGO 121765 **Type number** – corp, ar, sp

loc. 3: Peru: Ancash; "Gebirgskette nördlich des Rio Pushea" = mountain chain N of the Río Pushea.

U **HOLO** – rad, corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 4: Peru: Ancash; "Berge über Palca" = mountains above Palca. – / 8. / 1964. – Gazetteers consulted locate "Palca" in Dept. Junín while Ritter gives the department consistently as Ancash in his publications.

ZSS SR14144 **Type number** – sem

Ritter 1312: *Neolobivia winteriana* (F. Ritter) F. Ritter – Kakt. Südamer. 4: 1333-1334, 1981.

- Peru: Huancavelica; Villa Azul below Colcabamba. 2500 m. -/-/ 1964. -
Locality information from KS 4: 1333, 1981. Collection date according to
specimen at U.
SGO 124492 **ISO** – (corp), ar, sp
U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be
the holotype as this is the only specimen at U.)
ZSS A6149 – ar, sp, fl (Ex cult. ZSS 78 2226, 2. 6. 1982) (Leg. Rausch ex
cult.)
ZSS T1768 – corp, ar, sp (Ex cult. ZSS 78 2226, 1. 9. 1988) (Leg. Rausch
ex cult.)

Ritter 1313: *Neolobivia wrightiana* (Backeberg) Y. Ito – Explan. Diagr.
Austroechinocactinae, 55, 1957.

- loc. 1:** Peru: Junín; mountains above Huancayo.
ZSS AX4242 – fl (Ex cult. Neuer Reservegarten Schönbrunn (Wien).)
- loc. 2:** Peru: "Abstieg nach Mantacra" = descent to Mantacra.
SGO 124493 – rad, corp, ar, sp

Ritter 1314: *Espostoa calva* F. Ritter – Kakt. Südamer. 4: 1432, fig. 1292, 1981.
Typus (T): Ritter 1314 (U, SGO) (*Type cited for U l.c. 1: iii, 1979.*)

- Peru: Amazonas; "östl. Balsas, c. 1900 m." = E of Balsas. 1900 m. -/-/
1964.
SGO 122172 **ISO** – (corp), ar, sp, ceph
U **HOLO** – corp, ar, sp, ceph (There is no original label present, and the
collection number is inferred. Assumed to be the holotype as this is
the only specimen present at U.)

Ritter 1315: *Thrixanthocereus hybr.*

- Peru: Amazonas; "Balsas Nr. 3". – "*Thrixanthocereus blossfeldiorum* ×
Matucana formosa".
SGO 121297 – (corp), ar, sp

Ritter 1316: *Copiapoa calderana* F. Ritter var. *spinosior* F. Ritter (*nom. inval.*
Art. 37.1) – Kakt. Südamer. 3: 1082, fig. 1013, 1980. (Based on two
syntypes, *Ritter 722* and *Ritter 1316*; erroneously included as valid in RPS.)

- loc. 1:** Chile: "Kleine von östl. Flamenco" = small one from E of Flamenco / "östl.
Flamenco" = E of Flamenco.
SGO 124924 **SYN** – (corp), ar, sp
- loc. 2:** Chile: "25 km südl. Chañaral" = 25 km S of Chañaral.
SGO 124925 (in 2 parts) **SYN** – (corp), ar, sp
- loc. 3:** Chile: "20 km südl. Barquito" = 20 km S of Barquito. – The distance "20
km" was only added later to the original label.
ZSS SR13561 **SYN** – sem

Ritter 1317: *Rhipsalis micrantha* (Kunth) De Candolle – Prodr. Syst. 3: 476,
1828. (Combination repeated by G. Don, Gen. Syst. Gard. & Bot. 3: 177,
1834.)

- Peru: Cajamarca; "oberh. Cascas" = above Cascas. – Identified as "*Rhipsalis micrantha* fa. oberhalb Cascas" in the field number list in KS 4.
SGO 125611 – corp, ar, sp
ZSS SR14145 – sem (Locality given as "oberh. Cascas" on the original label.)

Ritter 1318: *Armatocereus rupicola* F. Ritter – Kakt. Südamer. 4: 1278, fig. 1130, 1981.

Typus (T): Ritter 1318 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Cajamarca; "westlich von San Miguel" = W of San Miguel, felsige Stelle. 2000 m. – / – / 1964. – Altitude data from the protologue.
U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
- loc. 2:** Peru: Cajamarca; "44 km W San Miguel".
SGO 124963 **ISO** – (corp), ar, sp

Ritter 1319: *Browningia albiceps* F. Ritter – Kakt. Südamer. 4: 1322, 1981.

Typus (T): Ritter 1319 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Peru: Cajamarca; "La Florida". 1000 m. – / – / 1964. – Altitude according to the protologue.
U **HOLO** – (corp), ar, sp ("Astareolen und Stammareolen" = areoles from a branch and areoles from the trunk. Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
- loc. 2:** Peru: Lambayeque ?; "Sañatal bei 1200 - x m. Höhe westl. Hda. La Florida" = Saña valley at 1200 m altitude W of Hacienda La Florida / "Saña". 1200 m.
SGO 125127 **ISO** – (corp), ar, sp

Ritter 1321: *Thelocephala longirapa* F. Ritter – Kakt. Südamer. 3: 1019, fig. 913, 1980.

Typus (T): Ritter 1321 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; a small coastal stretch between *Theloc. malleolata* var. *solitaria* in the N and *Theloc. kraussii* in the S. – / – / 1965. – Collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Chile: "südl. Flamenco" = S of Flamenco.
SGO 125152 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: "25 km südl. Chañaral" = 25 km S of Chañaral.
SGO 125446 **Type number** – rad, corp, ar, sp
- loc. 4:** Chile: "Flamenco". – / – / 1965.
ZSS SR13562 **Type number** – sem

Ritter 1322: *Opuntia inaequilateralis* A. Berger var. *angustior* (F. Ritter) hort. (nom. inval. Art. 29.1)

- loc. 1:** Peru: Huancavelica; "Prov. Tayacaja". 1800 m. - / - / 1964. – Altitude and collection date according to the protologue. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U **HOLO** – (corp), ar, sp (Labelled as "Typus" by Ritter.)
- loc. 2:** Peru: Huancavelica; sine loco. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14146 – sem
- loc. 3:** Peru: Huancavelica; "östl. (Villa Azul) Mantarotal bei ca. 2000 m." = E (of Villa Azul) Mantaro-valley. 2000 m. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14534 **Type number** – sem
- Ritter 1322a:** *Opuntia inaequilateralis* A. Berger – Bot. Jahrb. Syst. 36: 453, 1905.
– Peru: Huancavelica; "östl. Mantarotal bei ca. 2300 m." = E Mantaro valley. 2300 m. – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14147 – sem
- Ritter 1323:** *Opuntia apurimacensis* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) – Kakt. Südamer. 4: 1257, in synon., 1981.
- loc. 1:** Peru: Apurimac; "Valle Pacacocha". - / - / 1964. – Collection date according to the protologue. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U **HOLO** – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number by inference.)
- loc. 2:** Peru: Apurimac; "Valle Pachachaca". – Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
ZSS SR14148 – sem
- Ritter 1324:** *Cumulopuntia tumida* F. Ritter – Kakt. Südamer. 4: 1254-1255, fig. 1105, 1981.
Typus (T): Ritter 1324 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).
- loc. 1:** Peru: Arequipa; "Chala Vieja". - / - / 1964. – Collection date according to specimen at U.
U **HOLO** – corp, ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Peru: Arequipa; "nördl. Chala Vieja, Küste" = N of Chala Vieja, coast.
ZSS SR14149 **ISO** – sem
- Ritter 1325:** *Pilosocereus aurilanatus* F. Ritter – Kakt. Südamer. 1: 77-78, fig. 50, 1979.
Typus (T): Ritter 1325 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).
- loc. 1:** Brazil: Minas Gerais; "Joaquim Felício". - / - / 1964. – Collection date according to specimen at U.
SGO 125500 **ISO** – (corp), ar, sp, ceph (Locality given as "Joaqu. Felício".)

U **HOLO** – (corp), ar, sp, (ceph) ("Normalrippen und Pseudocephalumrippe" = normal rib and rib from the pseudo-cephalium. Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS S10400 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965. No locality data associated with this specimen.)

loc. 2: Brazil: Minas Gerais; "Joaquim Felicio Nr. 3".
ZSS SR14798 **ISO** – sem

Ritter 1326: *Pilosocereus coeruleus* (Lemaire) F. Ritter – Kakt. Südamer. 1: 75, 1979.

– Brazil: Minas Gerais; "Alto Palacio". – / 11. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125501 – (corp), ar, sp
ZSS SR14799 – sem

Ritter 1327: *Cipocereus pleurocarpus* F. Ritter – Kakt. Südamer. 1: 54-55, figs. 27-28, 222, 1979.

Typus (T): Ritter 1327 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Minas Gerais; "Serra de Cipo", on rocks. – / 11. / 1964.
U **HOLO** – corp, ar, sp (Labelled as "Holotypus" by Ritter. Collection number inferred.)

loc. 2: Brazil: Minas Gerais; "Alto Palacio". – / 11. / 1964. – Collection date according to original Ritter seed sample at ZSS.
SGO 125025 **Type number** – corp, ar, sp
ZSS SR14800 **Type number** – sem

Ritter 1328: *Micranthocereus haematocarpus* F. Ritter – Kakt. Südamer. 1: 105, 1979.

Typus (T): Ritter 1328 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Ituaçu", on flat rocks. – / – / 1964. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – (corp), ar, sp, ceph (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "10 km östl. Ituaçu" = 10 km E of Ituaçu.
SGO 125230 **Type number** – corp, ar, sp, ceph

loc. 3: Brazil: Bahia; "nördl. Ituaçu" = N of Ituaçu.
ZSS SR14801 **Type number** – sem

Ritter 1329: *Micranthocereus purpureus* (Gürke) F. Ritter – Kakt. and. Sukk. 19: 157, 1968.

– Brazil: Bahia; "Serra de Sincorá 1150 - x m.". 1150 m. – / 12. / 1965. – Collection date according to original Ritter seed sample at ZSS (locality given without altitude).

SGO 125231 – (corp), ar, sp, (ceph)
ZSS SR14802 – sem

Ritter 1330: *Melocactus rubrispinus* F. Ritter – Kakt. Südamer. 1: 135-136, 1979. (This name has also been used provisionally by W. Uebelmann in Feld-Nummern, [unpaged], 1972 for the taxon later described as *M. erythracanthus*.)

Typus (T): Ritter 1330 (U 531267B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Minas Gerais; "Granjas Reunidas", at the railway line from Montes Claros to the S, near the village. – / 11. / 1964. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS and specimen at U ("1964").

SGO 122130 **ISO** – (corp), ar, sp, (ceph)

U 531267B **HOLO** – (corp), ar, sp, (ceph) ("Rippe mit beginnendem Cephalium" = rib with starting cephalium. Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14803 **ISO** – sem (The collection number on the original label first read "FR 1286", which must be erroneous because this is *Rhipsalis* according to the field-number list in KS 4.)

Ritter 1331: *Melocactus inconcinus* Buining & Brederoo – Kakt. and. Sukk. 26: 193-195, 1975.

Typus (T): Buining 1003 (U 531295).

loc. 1: Brazil: Bahia; "Brumado". – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS and specimen at U ("1964").

SGO 122131 – (corp), ar, sp, (ceph)

U 531271B – (corp), ar, sp, (ceph) ("Rippe mit beginnendem Cephalium" = rib with starting cephalium. Collection number inferred. Det. as *Melocactus salvadorensis* Werdermann by N. P. Taylor.)

ZSS SR14804 – sem

loc. 2: Brazil: Bahia; "Licínio Almeida". – The original label was first numbered as FR 1357 which was placed in brackets later with the number 1331 added. FR 1357 is identified as "*Melocactus inconcinus* Buining & Brederoo fa." in the field-number list in KS 4.

SGO 122132 – rad, corp, ar, sp (Seedling material only.)

loc. 3: Brazil: Bahia; "Ituaçu". – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 122137 – (corp), ar, sp, (ceph)

ZSS SR14805 – sem

Ritter 1332: *Melocactus bahiensis* (Britton & Rose) Lützelburg – Estud. Bot. Nordeste 3: 111, 1923.

loc. 1: Brazil: Bahia; "Ourive, Nr. 19" = Ourives. – / 12. / 1964. – The original labels have the number 1332 in brackets, with FR 1334 (also identified as *M. bahiensis* in KS 4) added. Identified as "*M. bahiensis* fa." in KS 4. Collection date according to original Ritter seed sample at ZSS.

SGO 122133 – (corp), ar, sp
ZSS SR14806 – sem

loc. 2: Brazil: Bahia; "10 km nördl. Ituaçu, Nr. 5" = 10 km N of Ituaçu. – One of the original labels has the number 1332 in brackets, with FR 1334 (also identified as *M. bahiensis* in KS 4) added. Identified as "*M. bahiensis* fa." in KS 4.

SGO 122134 – (corp), ar, sp, (ceph)

loc. 3: Brazil: Bahia; "Brejinho". – "Nach Werd. irrüml. *M. oreas*" = according to Werdermann erroneously *M. oreas*. The original labels have the number "1334 var." added in brackets; 1334 is *M. bahiensis* according to KS 4. Identified as "*M. bahiensis* fa." in KS 4.

SGO 122135 – (corp), ar, sp

loc. 4: Brazil: Bahia; "unterhalb Caitité" = below Caitité. – The original labels have the number "1334" (also identified as *M. bahiensis* in KS 4) added in brackets. Identified as "*M. bahiensis* fa." in KS 4.

SGO 122136 – rad, corp, ar, sp (2 rooted seedlings only.)

Ritter 1333: *Melocactus canescens* F. Ritter – Kakt. Südamer. 1: 134, fig. 230, 1979.

Typus (*T*): Ritter 1333 (U 531248B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Bahia; "Ourives, Nr. 10", near Brumado. – / 12. / 1964. – Locality data from the protologue; collection date according to original Ritter seed sample at ZSS and specimen at U ("1964", locality simply given as "Ourives").

SGO 122138 ISO – (corp), ar, sp, (ceph)

U 531248B HOLO – (corp), ar, sp (ceph) (Collection number inferred.)

Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14807 ISO – sem

Ritter 1334: *Melocactus bahiensis* (Britton & Rose) Lützelburg – Estud. Bot. Nordeste 3: 111, 1923.

loc. 1: Brazil: Bahia; "Anacé" = Anagé. – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS (locality given as "Anacé bei Conquista" = Anagé near [Vitoria da] Conquista).

SGO 122140 – (corp), ar, sp, (ceph)

ZSS SR14808 – sem

loc. 2: Brazil: Minas Gerais; "Itaobim, Nr. 8". – / – / 1964. – Collection date according to specimen at U which has the locality simply as "Itaobim".

SGO 122141 – (corp), ar, sp, (ceph)

U 531255B – (corp), ar, sp, (ceph) ("Rippe mit Cephalium-Beginn" = rib with start of cephalium. Collection number inferred.)

ZSS SR14809 – sem

loc. 3: Brazil: Minas Gerais; "zw. Itamarandiba u. Penha da França" = between Itamarandiba and Penha da França. – / 4. / 1959. – The collection number on the original label was first given as FR 951, now put in brackets, and the material is identified as *Melocactus neglectus*. FR 951 is identified as "*Melocactus bahiensis* var." in the field-number list in KS 4.

ZSS SR14810 – sem

- loc. 4:** Brazil: Bahia; "Jaguarary" = Jaguarari. – / 12. / 1963. – The collection number on the original label was first given as FR 1281, now put in brackets, and the material is identified as *Melocactus neglectus*. FR 1281 is identified as "*Melocactus bahiensis* var." in the field-number list in KS 4.

ZSS SR14811 – sem

- loc. 5:** Brazil: Bahia; "nördl. Ituaçu Nr. 5" = N of Ituaçu. – / 12. / 1964. – The collection number on the original label was first given as FR 1332, now put in brackets, and the material is identified as *Melocactus neglectus*. FR 1332 is identified as "*Melocactus bahiensis* fa." in the field-number list in KS 4.

ZSS SR14812 – sem

Ritter 1335: *Arrojadoa penicillata* (Gürke) Britton & Rose – The Cact. 2: 171, 1920.

- Brazil: Minas Gerais; "Itaobim". – / 1. / 1965. – Identified as *Arrojadoa medinensis* Ritter (*nom. nud.*) on the original label at SGO. Identified as "*Arrojadoa penicillata* var." in the field-number list in KS 4. Collection date according to original Ritter seed sample at ZSS.

SGO 121899 – corp, ar, sp, ceph

ZSS SR14813 – sem

Ritter 1337: *Brasilicereus breviflorus* F. Ritter – Kakt. Südamer. 1: 228, fig. 183, 1979.

Typus (T): Ritter 1337 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Minas Gerais; "Itaobim". – / 1. / 1965. – Collection date according to original Ritter seed sample at ZSS.

SGO 124991 ISO – (corp), ar, sp

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14814 ISO – sem

Ritter 1338: *Pseudoacanthocereus brasiliensis* (Britton & Rose) F. Ritter – Kakt. Südamer. 1: 47, 1979.

- Brazil: Minas Gerais; "Itaobim". – / 1. / 1965. – Collection date according to original Ritter seed sample at ZSS. Identified as "*Pseudoacanthocereus brasiliensis* var." in KS 4.

SGO 125359 – corp, ar, sp

ZSS SR14815 – sem

Ritter 1339: *Coleocephalocereus flavisetus* F. Ritter – Kakt. Südamer. 1: 127-128, 1979.

Typus (T): Ritter 1339 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Minas Gerais; c. 10 km S of "Engenheiro Caldas" (N of Caratinga), on rock walls. – / 1. / 1965. – Locality data supplemented from the protologue; collection date according to original Ritter seed sample at ZSS and specimen at U ("1965").

U **HOLO** – (corp), ar, sp, (ceph) (Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14816 **ISO** – sem

loc. 2: Brazil: Minas Gerais; "ca. 60 km nördl. Caratinga" = c. 60 km N of Caratinga.
SGO 122065 **ISO** – (corp), ar, sp, ceph

Ritter 1340: *Coleocephalocereus decumbens* F. Ritter – Kakt. and. Sukk.

19(8): 160-161, ill., 1968.

Typus (T): Ritter 1340 (U, SGO).

loc. 1: Brazil: Minas Gerais; "Agua Vermelha". – / – / 1965. – Collection data added according to specimen at U.

SGO 122066 **ISO** – corp, ar, sp, (ceph)

U **HOLO** – (corp), ar, sp, (ceph) (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Brazil: Minas Gerais; "Padre Paraíso". – / 1. / 1965. – "gemischt mit *paulensis*" = mixed with [*Coleocephalocereus paulensis*].
ZSS SR14818 – sem

Ritter 1341: *Coleocephalocereus aureus* F. Ritter – Kakt. and. Sukk. 19(8):

158-160, ill., 1968.

Typus (T): Ritter 1341 (U, SGO [status ?], ZSS [seeds only, status ?]).

loc. 1: Brazil: Minas Gerais; "Nordosten Minas Gerais" = NE of Minas Gerais. 21. / 12. / 1964.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

loc. 2: Brazil: Minas Gerais; "Itaobim". – / 1. / 1965. – Collection date according to original Ritter seed sample at ZSS.

SGO 122068 **Type number** – (corp), ar, sp, ceph

ZSS SR14819 **Type number** – sem

loc. 3: Brazil: Minas Gerais; sine loco.

ZSS S10392 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965.)

Ritter 1342: *Pilosocereus quadricostatus* F. Ritter – Kakt. Südamer. 1: 78-79, fig. 51, 1979.

Typus (T): Ritter 1342 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Minas Gerais; "Agua Vermelha". – / – / 1965. – Collection date according to specimen at U.

U **HOLO** – corp, ar, sp, ceph ("Jüngere Normalrippe und Rippe der Blühregion" = younger normal rib and rib of the floriferous zone. Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Minas Gerais; "n. Padre Paraíso (= Agua Vermelha)" = N of Padre Paraíso (= Agua Vermelha).

SGO 125502 **ISO** – (corp), ar, sp

loc. 3: Brazil: Minas Gerais; "Padre Paraiso". - / 1. / 1965.
ZSS SR14820 **ISO** - sem

Ritter 1343: *Pilosocereus superbus* F. Ritter var. *regius* F. Ritter - Kakt.
Südamer. 1: 67, 1979.

Typus (T): Ritter 1343 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "nordöstlich Brumado" = NE of Brumado. - / - / 1964. -
Collection date according to specimen at U.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS S10403 **Type number** - sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Pilosocereus nobilis*). No locality data associated with this specimen.)

loc. 2: Brazil: Bahia; "Ourives, Nr. 2". - / 12. / 1964. - Collection date according to original Ritter seed sample at ZSS.

SGO 125474 - (corp), ar, sp
ZSS SR14821 - sem

Ritter 1343a: *Pilosocereus superbus* F. Ritter var. *gacapaensis* F. Ritter - Kakt.
Südamer. 1: 68, fig. 36, 1979.

Typus (T): Ritter 1343a (U, SGO [status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Serra de Gacapa". - / - / 1964. - Collection date according to specimen at U.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "Serra östl. St. Ana" = Serra E of Santa Ana.

SGO 125504 **Type number** - (corp), ar, sp

Ritter 1343b: *Pilosocereus superbus* F. Ritter var. *lanosior* F. Ritter - Kakt.
Südamer. 1: 68, 1979.

Typus (T): Ritter 1343b (U, SGO [status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "15 km westlich Caitité" = 15 km W of Caetité. - / - / 1964.
- Collection date according to specimen at U. The protologu gives the locality as E of Caetité in the latin diagnosis, as W of Caetité in the German text.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "15 km n. Caitité" = 15 km N of Caetité.

SGO 125505 **Type number** - (corp), ar, sp

Ritter 1344: *Pilosocereus robustus* F. Ritter - Kakt. Südamer. 1: 72, figs. 42, 224, 1979. (*Non Cephalocereus robustus* Britton & Rose.)

Typus (T): Ritter s.n. (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii; no type number given but the type seems to be F. Ritter 1344.).

loc. 1: Brazil: Bahia; "Ourives". – / – / 1964. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp ("Normalrippe und Rippe aus der Blühregion" = normal rib and rib from the floriferous zone. Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS S10404 **Type number** – sem (Leg. F. Ritter (ex Fa. Winter) 1965. No locality data associated with this specimen.)

loc. 2: Brazil: Bahia; "Ourive, Nr. 16" / "Ourives". – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS (locality given as "Ourives Nr. 16").

SGO 125506 **ISO** – (corp), ar, sp

ZSS SR14822 **ISO** – sem

Ritter 1345: *Pilosocereus magnificus* (Buining & Brederoo) F. Ritter – Kakt. Südamer. 1: 72, 1979.

loc. 1: Brazil: Minas Gerais; Itaobim. – / – / 1964. – Locality from KS 1: 73.

ZSS S10405 – sem (Leg. F. Ritter (ex Fa. Winter) 1965 (sub *Pilosocereus supremus*.)

loc. 2: Brazil: Minas Gerais; "Itaobim, Nr. 5". – / 1. / 1965. – Collection date according to original Ritter seed sample at ZSS.

SGO 125507 – (corp), ar, sp

ZSS SR14823 – sem

loc. 3: Brazil: Minas Gerais; "s. Agua Vermelha" = S of Agua Vermelha.

SGO 125508 – (corp), ar, sp

Ritter 1346: *Pilosocereus multicostatus* F. Ritter – Kakt. Südamer. 1: 79-80, fig. 52, 1979.

Typus (T): Ritter 1346 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Minas Gerais; "Itaobim", on quartzite rocks. – / 1. / 1965. – Collection date according to original Ritter seed sample at ZSS and specimen at U ("1965"). Locality data supplemented from the protologue.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14824 **ISO** – sem

loc. 2: Brazil: Minas Gerais; "Itaobim, Nr. 12".

SGO 125509 (in 2 parts) **ISO** – (corp), ar, sp (Includes a rooted seedling.)

Ritter 1347: *Pilosocereus superbus* F. Ritter – Kakt. Südamer. 1: 67, fig. 34, 1979.

Typus (T): Ritter 1347 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Anacé" [Anagé] near Vitoria da Conquista, on rocky terrain. – / – / 1964. – Locality data supplemented from the protologue. Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "Anacé, Nr. 4" = Anagé. – / 12. / 1964. – Collection date according to original Ritter seed sample at ZSS.

SGO 125510 **ISO** – (corp), ar, sp (Includes a rooted seedling.)
ZSS SR14825 **ISO** – sem ("1 Frucht" = 1 fruit.)

Ritter 1348: *Pilosocereus* sp.

– Brazil: Bahia; "Anacé, Nr. 9". – Noted as being "sehr selten" = very rare, in KS 4: 1646.

SGO 125511 – corp, ar, sp

Ritter 1349: *Pilosocereus atrovispinus* F. Ritter – Kakt. Südamer. 1: 68, 1979.

Typus (T): Ritter 1349 (U, SGO) (Type cited for U l.c., iii.).

loc. 1: Brazil: Bahia; "Ituaçu", on rocks. – / – / 1964.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Bahia; "Ituaçu, Nr. 8". – "Rippen ca. 8" = ribs c. 8.

SGO 125512 **ISO** – (corp), ar, sp

Ritter 1350: *Hattoria salicornioides* (Haworth) Britton & Rose – in Bailey, Stand. Cycl. Hort. 3: 1433, 1915.

– Brazil: Rio de Janeiro; "Corcovado". – / 1. / 1965.

ZSS SR14826 – sem

Ritter 1351: *Brasiliopuntia* sp.

– Brazil: Rio de Janeiro; "Corcovado". – / 1. / 1965.

ZSS SR14827 – sem

Ritter 1352: *Coleocephalocereus paulensis* F. Ritter – Kakt. and. Sukk. 19(8): 161-162, ill., 1968.

Typus (T): Ritter 1352 (U).

– Brazil: São Paulo; "Ilhabela". – / – / 1965. – Collection date according to specimen at U.

SGO 122069 **ISO** – (corp), ar, sp, ceph

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14828 **ISO** – sem ("gemischt mit *decumbens*" = mixed with [*Coleocephalocereus*] *decumbens*.)

Ritter 1353: *Frailea horstii* F. Ritter – Succulenta 49: 124, 184-185, 1970.

(Republished in Kakt. Südamer. 1: 202, figs. 153-154, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1353 (U, ZSS [seeds only]).

– Brazil: Rio Grande do Sul; "Caçapava". – / – / 1966. – Collected together with L. Horst. Collection date according to specimen at U.

U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14829 ISO – sem

Ritter 1354: *Arthrocerus odorus* F. Ritter – Kakt. Südamer. 1: 225, fig. 180, 1979.*Typus* (T): Ritter 1354 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).**loc. 1:** Brazil: Minas Gerais; "Westfuss der Serra de Cipo" = W foot of the Serra de Cipó. – / – / 1964.

U HOLO – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)

loc. 2: Brazil: Minas Gerais; "Veraneio Hotel".SGO 124965 **Type number** – corp, ar, spZSS SR14830 **Type number** – sem**Ritter 1355:** *Arthrocerus rondonianus* Backeberg & Voll – Cact. Succ. J. (US) 23(4): 120, 1951. (First mentioned (without Latin diagnosis) in Backeberg, Blätt. Kakt.-forsch. 1935(4).)

– Brazil: Minas Gerais; "Joaquim Felício".

SGO 124966 – corp, ar, sp

ZSS SR14831 – sem

Ritter 1356: *Melocactus diersianus* Buining & Brederoo – Kakt. and. Sukk. 26(8): 169-171, ill., 1975.*Typus* (T): Horst & Uebelmann HU 404 (U 531287, ZSS [fruits, seeds]).– Brazil: Minas Gerais; "Montes Claros". – / – / 1964. – The original label at SGO was first numbered as "FR 1206" (= *Melocactus zehntneri* according to the field-number list in KS 4). Collection date according to specimen at U.

SGO 122142 – ar, sp

U 531250 – (corp), ar, sp (Collection number inferred; deposited as *Melocactus arachnites* Ritter (*nom. nud.*)).**Ritter 1358:** *Melocactus montanus* F. Ritter – Kakt. Südamer. 1: 141, 1979.*Typus* (T): Ritter 1358 (U 531254B, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).**loc. 1:** Brazil: Bahia; "Urandi" / "oberh. Eng. Omar, nach West" = above Engenheiro Omar, towards the West. – The locality is given as "above Urandi, along the railway line to Engenheiro Omar" in the protologue.SGO 122143 **Type number** – rad, corp, ar, sp (Consisting of a large and a small seedling plant.)**loc. 2:** Brazil: Bahia; "oberhalb Urandi" = above Urandi. – / – / 1964. – Collection date according to specimen at U.

U 531254B HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 3: Brazil: Bahia; "westl. Eng. Omar" = W of Engenheiro Omar. – / 1. / 1964.ZSS SR14832 **Type number** – sem**Ritter 1359:** *Pilosocereus bradei* (Backeberg & Voll) Byles & G. D. Rowley –

Cact. Succ. J. Gr. Brit. 19: 66, 1957.

- Brazil: Minas Gerais; "Joaquim Felicio".
SGO 125514 – (corp), ar, sp

Ritter 1360: *Pilosocereus brasiliensis* (Britton & Rose) Backeberg – Die Cact. 4: 2423, 1960.

- Brazil: Rio de Janeiro; "Strasse Niteroi - Araruama, km 43 1/2" = road Niteroi - Araruama [Araruara ?], km 43.5. – Locality could also read "Araruara".
SGO 125513 – (corp), ar, sp

Ritter 1361: *Notocactus tenuicylindricus* F. Ritter – Succulenta 49(7): 108, 1970.

Typus (T): Ritter 1361 (U [none of 2 specimens annotated as holotype], SGO, ZSS [seeds only, status ?]).

- loc. 1:** Brazil: Rio Grande do Sul; Alegrete, ad meridem versus. – / – / 1966. – Collection date according to specimen at U; locality data according to the protologue.

U **Type collection** – (corp), ar, sp

- loc. 2:** Brazil: Rio Grande do Sul; "halbwegs zwischen Passo da Guarda u. Quarai" = halfway between Paso da Guarda and Quarai. – / 2. / 1966. – Collection date according to original Ritter seed sample at ZSS and specimen at U ("1966").

SGO 125285 **ISO** – (corp), ar, sp

U **Type collection** – (corp), ar, sp

ZSS SR14833 **Type number** – sem

Ritter 1362: *Frailea phaeodisca* (Spegazzini) Y. Ito – Explan. Diagr. Austroechinocactinae, 237, 1957.

- Brazil: Rio Grande do Sul; sine loco. – / 1. / 1966. – "(einzige)" = the only one.

ZSS SR14834 – sem

Ritter 1363: *Frailea asterioides* Werdermann var. *harmoniana* F. Ritter – Kakt. Südamer. 1: 211, fig. 171, 1979.

Typus (T): Ritter 1363 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Harmonia". – / – / 1965. – Discovered by L. Horst and the collector. Collection date according to specimen at U.

U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

- loc. 2:** Brazil: Rio Grande do Sul; sine loco. – / – / 1966.

ZSS SR14835 **Type number** – sem

Ritter 1363a: *Frailea asterioides* Werdermann var. *backebergii* F. Ritter – Kakt. Südamer. 1: 210-211, fig. 170, 1979.

Typus (T): Ritter 1363a (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Quaraí", frontier of Rio Grande do Sul towards Uruguay. – / – / 1965. – Collection date according to specimen at U; the original Ritter seed sample at ZSS is dated "1966". Locality data supplemented from protologue.
U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14836 **ISO** – sem

Ritter 1364: *Frailea pumila* (Lemaire) Britton & Rose – The Cact. 3: 209, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 23, 1935, and probably used previously in catalogues.)

- Brazil: Rio Grande do Sul; "7 km sw. Harmonia" = 7 km SW of Harmonia. – / 2. / 1966.
ZSS SR14837 – sem

Ritter 1364a: *Frailea pumila* (Lemaire) Britton & Rose – The Cact. 3: 209, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 23, 1935, and probably used previously in catalogues.)

- Brazil: Rio Grande do Sul; "12 km nördl. Livramento" = 12 km N of Livramento. – Identified as "*Frailea pumila* fa." in the field-number list in KS 4.
ZSS SR14838 – sem

Ritter 1364b: *Frailea pumila* (Lemaire) Britton & Rose var. *maior* F. Ritter – Kakt. Südamer. 1: 206, fig. 242, 1979.

Typus (T): Ritter 1364b (U) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Livramento". – / – / 1966. – Discovered by L. Horst and the collector. Collection date according to specimen at U; the protologue gives the year as 1965.
U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1365: *Frailea pumila* (Lemaire) Britton & Rose – The Cact. 3: 209, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 23, 1935, and probably used previously in catalogues.)

- Brazil: Rio Grande do Sul; "12 km W. Alegrete" = 12 km W of Alegrete. – Identified as "*Frailea pumila* fa." in KS 4: 1646.
SGO 121739 – rad, corp, ar, sp
ZSS SR14839 – sem

Ritter 1366: *Frailea pygmaea* (Spegazzini) Britton & Rose var. *planicosta* F. Ritter – Kakt. Südamer. 1: 204-205, fig. 161, 1979.

Typus (T): Ritter 1366 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "nördl. São Francisco de Assis" = N of São Francisco de Assis. – / – / 1965.

U **HOLO** – (corp, ar, sp) (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "14 km nw. Strasse S. Franc.o - Santiago" = 14 km NW of road São Francisco - Santiago. - / - / 1966.
ZSS SR14840 **Type number** – sem

Ritter 1367: *Frailea pumila* (Lemaire) Britton & Rose – The Cact. 3: 209, 1922. (Combination repeated by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and Sukk., 23, 1935, and probably used previously in catalogues.)

– Brazil: Rio Grande do Sul; "Cerro Branco". - / 2. / 1966. – Identified as "*Frailea pumila* fa." in the field-number list in KS 4.
ZSS SR14841 – sem

Ritter 1368: *Frailea asperispina* F. Ritter – Succulenta 49: 124, 184-185, 1970. (Republished in Kakt. Südamer. 1: 208, fig. 243, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1368 (U, SGO).

loc. 1: Brazil: Rio Grande do Sul; "São Pedro". - / - / 1965. – Original labels at SGO and U without collection number, number assigned by inference from collection data in KS 1: 208. Specimen at U dated "1966".

SGO 121742 **ISO** – ar, sp (= Ritter & Horst 1368.)

U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "westl. S. Pedro" = W of São Pedro.
ZSS SR14842 – sem ("21 Korn" = 21 seeds [not counted].)

Ritter 1369: *Frailea pygmaea* (Spegazzini) Britton & Rose var. *longispina* F. Ritter – Kakt. Südamer. 1: 204, fig. 159, 1979.

Typus (T): Ritter 1369 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Quevedos". - / - / 1965.

SGO 121745 **ISO** – (corp), ar, sp (Collection number inferred. Collected together with L. Horst according to KS 1: 204.)

U **HOLO** – (corp, ar, sp) (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "12 km südl. Quevedos" = 12 km S of Quevedos.

SGO 125069 **Type number** – rad, corp, ar, sp

ZSS SR14843 **Type number** – sem

Ritter 1370: *Frailea pygmaea* (Spegazzini) Britton & Rose var. *major* F. Ritter – Kakt. Südamer. 1: 204, fig. 158, 242, 1979. (Sphalm. 'maior' in the text, but correctly as 'major' in the captions to the illustrations.)

Typus (T): Ritter 1370 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Caçapava". - / - / 1965. – Collected by L. Horst but numbered in Ritter's series.

SGO 121749 **ISO** – (corp), ar, sp (Collection number inferred.)

U **HOLO** – (corp, ar, sp) (Assumed to be the holotype as this is the only specimen at U.)

- loc. 2:** Brazil: Rio Grande do Sul; "nördl. Caçapava" = N of Caçapava. – / – / 1965.
 ZSS SR14844 **Type number** – sem
 ZSS SR14845 **Type number** – sem (This sample is dated "1966" and has
 the comment: "(mehrere Früchte)" = several fruits.)

Ritter 1370a: *Frailea pygmaea* (Spegazzini) Britton & Rose var. ***altigibbera*** F.
 Ritter – Kakt. Südamer. 1: 203, fig. 156, 1979.

Typus (T): Ritter 1370a (U, SGO, ZSS [seeds only]) (Type cited for U l.c.,
 iii.).

- Brazil: Rio Grande do Sul; "Ibaré". – / – / 1965. – Collection date according
 to the protologue.
 SGO 121752 **ISO** – (corp), ar, sp (Collection number inferred.)
 U **HOLO** – (corp, ar, sp) (Assumed to be the holotype as this is the only
 specimen at U.)
 ZSS SR14846 **ISO** – sem

Ritter 1371: *Frailea pygmaea* (Spegazzini) Britton & Rose var. ***curvispina*** F.
 Ritter – Kakt. Südamer. 1: 204, fig. 160, 1979.

Typus (T): Ritter 1371 (U, SGO, ZSS [seeds only]) (Type cited for U l.c.,
 iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "km 137 1/2, Strasse westl. Pantano Gr." = km
 137,5, road W of Pantano Grande / "km 137 1/2 ö. P. Gr." = km 137,5 E of
 Pantano Grande.

SGO 121740 **ISO** – (rad), corp, ar, sp

- loc. 2:** Brazil: Rio Grande do Sul; "westl. Pantano Grande" = W of Pantano Grande.
 – / – / 1965. – Original label without collection number, number assigned
 by inference from collection data cf. KS 1: 204.

SGO 121748 **ISO** – (corp), ar, sp

- loc. 3:** Brazil: Rio Grande do Sul; "Pantano Grande".

U **HOLO** – (corp, ar, sp) (Assumed to be the holotype as this is the only
 specimen at U.)

- loc. 4:** Brazil: Rio Grande do Sul; "w. Pant.o Gr., km 137 1/2" = W of Pantano
 Grande, km 137.5. – / – / 1966.

ZSS SR14847 **ISO** – sem

Ritter 1372: *Gymnocalycium denudatum* (Link & Otto) Pfeiffer var.
backebergii Pazout – Friciana 15: 6, 1963. (Sphalm. 'backebergii',
 'backebergii'.)

- loc. 1:** Paraguay: "Strasse nach Ceibal" = road to Ceibal.

SGO 125208 – rad, corp, ar, sp

- loc. 2:** Brazil: Rio Grande do Sul; "Strasse Caçapava nach Lavras" = road Caçapava
 towards Lavras. – "(von L. Horst) (L.H. 7)" = from L. Horst (LH 7).

ZSS SR15016 – sem

Ritter 1373: *Gymnocalycium denudatum* (Link & Otto) Pfeiffer – Abb. Besch.
 Cact. 2: t. 1, 1845.

- Brazil: Rio Grande do Sul; "Ibaré". – Identified as *Gymnocalycium denudatum* var. *denudatum* in KS 4.
SGO 125209 – corp, ar, sp
ZSS SR15017 – sem ("1 Frucht" = 1 fruit.)

Ritter 1374: *Gymnocalycium uruguayense* (Arechavaleta) Britton & Rose – The Cact. 3: 162, 1922.

- loc. 1:** Uruguay: "Chamberlain".
ZSS SR15018 – sem
- loc. 2:** Brazil: Rio Grande do Sul; "zw. Harmonia u. Quarai" = between Harmonia and Quarai. – / – / 1965.
ZSS SR15019 – sem

Ritter 1375: *Notocactus securituberculatus* F. Ritter var. *miniatispinus* F. Ritter – Kakt. Südamer. 1: 169, fig. 111, 1979.

Typus (T): Ritter 1375 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Santiago". – / – / 1965. – Collection date according to the protologue; the specimen at U is dated "1966".
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "südöstl. Santiago" = SE of Santiago.
ZSS SR14848 **Type number** – sem

Ritter 1376: *Notocactus glaucinus* F. Ritter – Kakt. Südamer. 1: 168, fig. 107, 1979.

Typus (T): Ritter & Horst 1376 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Santiago". – / – / 1965. – Discovered jointly by L. Horst and the collector. Collection date according to protologue and specimen at U.
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
ZSS S10432 **Type number** – sem (Leg. Fa. Köhres (ex cult.) 1974. No locality data associated with this specimen.)
ZSS SR14849 **ISO** – sem
- loc. 2:** Brazil: Rio Grande do Sul; "westl. Santiago, Nr. 5" = W of Santiago. – The original label first had the locality as "nord. Santiago" = N of Santiago.
SGO 125286 **Type number** – (corp), ar, sp

Ritter 1376a: *Notocactus glaucinus* F. Ritter var. *depressus* F. Ritter – Kakt. Südamer. 1: 169, fig. 109, 1979.

Typus (T): Ritter 1376a (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Quevedos". – / – / 1965. – Discovered by L. Horst and the collector. Collection date according to the protologue; specimen at U dated "1966".

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

ZSS S8531 **Type number** – sem (Leg. Köhres ex cult., 1977. No locality associated with this specimen.)

loc. 2: Brazil: Rio Grande do Sul; "12 km südl. Quevedos" = 12 km S of Quevedos.
ZSS SR14850 **Type number** – sem

Ritter 1377: *Notocactus acutus* F. Ritter – Kakt. Südamer. 1: 169-170, fig. 235, 1979.

Typus (T): Ritter 1377 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Quevedos". – / – / 1965. – Discovered together with L. Horst. Collection date according to the protologue; the specimen at U is dated "1966".

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "12 km südl. Quevedos" = 12 km S of Quevedos.
ZSS SR14851 **Type number** – sem

Ritter 1377a: *Notocactus securituberculatus* F. Ritter – Kakt. Südamer. 1: 169, fig. 110, 1979.

Typus (T): Ritter & Horst 1377a (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Quevedos". – / – / 1965. – Discovered by L. Horst and the collector. Collection date according to the protologue; the specimen at U is dated "1966".

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "14 km südl. Quevedos" = 14 km S of Quevedos.
ZSS SR14852 **Type number** – sem

Ritter 1378: *Notocactus glaucinus* F. Ritter var. *gracilis* F. Ritter – Kakt. Südamer. 1: 168-169, fig. 108, 1979.

Typus (T): Ritter 1378 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "São Francisco Nr. 5" = São Francisco de Assis. – / – / 1965. – Discovered by L. Horst and the collector. Collection year according to the protologue; the specimen at U is dated "1966" (and has the locality as "São Francisco de Assis").

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14853 **ISO** – sem

loc. 2: Brazil: Rio Grande do Sul; sine loco. – The original label has the collection number as "FR [1426] 1378 cf." and has the comment: "(einziges Exemplar)" = only specimen. The two numbers FR 1378 and FR 1426 are set equal in the field-number list in KS 4.

ZSS SR14854 – sem

Ritter 1379: *Notocactus fuscus* F. Ritter – Kakt. Südamer. 1: 178, fig. 121, 1979.

Typus (T): Ritter 1379 (U [not found], ZSS [status ?]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "15 km westl. San [sic !] Francisco de Assis" = 15 km W of São Francisco de Assis. – / 3. / 1965. – Collection date according to the protologue. Discovered by L. Horst and the collector.

ZSS SR14855 ISO – sem

ZSS T2026 **Type number** – corp, ar, sp (Ex cult. ZSS 81 4075, 26. 6. 1988) (Ex cult. Köhres. No locality associated with this specimen.)

Ritter 1379a: *Notocactus fuscus* F. Ritter var. *longispinus* F. Ritter – Kakt. Südamer. 1: 179, fig. 122, 1979.

Typus (T): Ritter 1379a (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "18 km westlich von São Francisco de Assis" = 18 km W of São Francisco de Assis. – / 3. / 1965. – Discovered by L. Horst and the collector. Collection date according to the protologue; the specimen at U is simply dated "1965".

SGO 125287 ISO – (corp), ar, sp

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14856 ISO – sem

Ritter 1379b: *Notocactus spinibarbis* F. Ritter – Kakt. Südamer. 1: 186-187, fig. 134, 1979.

Typus (T): Ritter 1379b (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "12 km nördl. Livramento" = 12 km N of Livramento. – / – / 1965. – Discovered by L. Horst and the collector. Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

- loc. 2:** Brazil: Rio Grande do Sul; "n. Livramento" = N of Livramento. – / – / 1966.

ZSS SR14857 **Type number** – sem

Ritter 1379c: *Notocactus rauschii* van Vliet – Succulenta 48(1): 3-5, ill., 1969.

Typus (T): van Vliet 34 (U, ZSS [status ?]).

- Uruguay: Rivera; "Riveras" = Rivera. – The original label first had the collection number as "FR 1379b", which is identified as *Notocactus spinibarbis* in the field-number list in KS 4.

ZSS SR14858 – sem

Ritter 1380: *Notocactus megapotamicus* Osten ex Herter var. *horstii* F. Ritter – Kakt. Südamer. 1: 175-176, fig. 116, 1979.

Typus (T): Ritter 1380 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Matacobra nördl. Carazinho" = Matacobra N of Carazinho. – / – / 1965. – Discovered by L. Horst but numbered by F. Ritter. Collection date according to specimen at U.
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "Usina Carazinho, Matacobra". – / – / 1965.
SGO 125288 ISO – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Tres Pontes bei Soledade" = Tres Pontes at Soledade. – / – / 1965.
SGO 125289 – (corp), ar, sp
- loc. 4:** Brazil: Rio Grande do Sul; "Matacobra".
ZSS SR14859 Type number – sem
- loc. 5:** Brazil: Rio Grande do Sul; "Soledade". – "von L. Horst" = from L. Horst.
ZSS SR14860 – sem

Ritter 1380a: *Notocactus megapotamicus* Osten ex Herter var. *vulgatus* F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 1: 175, fig. 114, 1979. (Based on two syntypes, *Ritter 1380a* and *Ritter 1380c*. Erroneously included as valid in RPS.)

- loc. 1:** Brazil: Rio Grande do Sul; "Quevedos". – / – / 1965. – Locality and collection date according to specimen at U.
U SYN – (corp), ar, sp
ZSS S9865 – sem (Leg. Köhres (ex cult.))
- loc. 2:** Brazil: Rio Grande do Sul; "ca. 36 km westl. Julio de Castilho" = c. 36 km W of Julio de Castilho. – "Narb [sic !] orange" = stigma orange.
SGO 125290 SYN – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "14 km südl. Quevedo" = 14 km S of Quevedos / "14 km südl. Quevedos". – "Kleinerer *Notoc.* Narb [sic !] zitron" = Smaller *Notoc[actus]*. Stigma lemon-yellow.
SGO 125291 SYN – (corp), ar, sp
- loc. 4:** Brazil: Rio Grande do Sul; "Usina Sao Pedro am Toropi-Fluss" = Usina São Pedro at the Toropi river.
SGO 125292 SYN – (corp), ar, sp ("Narb [sic !] zitron" = stigma lemon-yellow.)
ZSS SR14861 SYN – sem (Locality given simply as "Usina São Pedro".)
- loc. 5:** Brazil: Rio Grande do Sul; "Barragem de Jaguari". – / – / 1965.
SGO 125293 SYN – (corp), ar, sp
ZSS SR14862 SYN – sem

Ritter 1380b: *Notocactus megapotamicus* Osten ex Herter var. *crucicentrus* F. Ritter – Kakt. Südamer. 1: 176, fig. 117, 1979.
Typus (T): Ritter 1380b (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "nördlich São Francisco de Assis" = N of São Francisco de Assis. – / – / 1965. – Discovered by L. Horst and the collector. Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "nw. Strasse S. Franc.o - Santiago" = NW of road São Francisco de Assis - Santiago.

ZSS SR14863 **Type number** – sem

Ritter 1380c: *Notocactus megapotamicus* Osten ex Herter var. *vulgatus* F. Ritter (*nom. inval.* Art. 37.1) – Kakt. Südamer. 1: 175, fig. 114, 1979. (Based on two syntypes, *Ritter 1380a* and *Ritter 1380c*. Erroneously included as valid in RPS.)

loc. 1: Brazil: Rio Grande do Sul; "Vinte Tiros".

ZSS SR14864 – sem

loc. 2: Brazil: Rio Grande do Sul; "nördlich Caçapava" = N of Caçapava. – The original label had the collection number first as "FR 1380a", now written over.

ZSS SR14865 – sem

loc. 3: Brazil: Rio Grande do Sul; "W. Julio de Castilho" = W of Julio de Castilhos. – /3. /1965. – The original label had the collection number first as "FR 1380a", now written over.

ZSS SR14866 – sem

Ritter 1381: *Notocactus muricatus* (Otto) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 254, 1935. (Dated 1935, publ. Febr. 1936. Combination first used but not accepted by A. Berger, Kakteen, 210, 1929.)

– Brazil: Rio Grande do Sul; "Cerro Branco Nr. 5".

SGO 125294 – (corp), ar, sp

ZSS SR14867 – sem (Locality simply given as "C.o Branco".)

Ritter 1382: *Notocactus mammulosus* (Lemaire) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 254, 1936. (Dated 1935, publ. Febr. 1936. Combination probably first published by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and. Sukk., 21, 1935, and used before but not accepted by A. Berger, Kakteen, 212, 1929.)

loc. 1: Brazil: Rio Grande do Sul; "Strasse Sao Francisco - Cerro Branco (km 23)" = road São Francisco - Cerro Branco, km 23 / "nöstl. Sao Franc.o" = NE of São Francisco.

SGO 125295 – (corp), ar, sp

loc. 2: Brazil: Rio Grande do Sul; "Strasse nach Mina Saival".

ZSS SR14868 – sem ("(von L. Horst)" = [received] from L. Horst.)

ZSS SR14869 – sem

Ritter 1383: *Echinopsis oxygona* (Link) Zuccarini fa. *brevispina* F. Ritter – Kakt. Südamer. 1: 239-240, fig. 4, 1979. (*Nom. nov. pro Echinopsis eyriesii* var. *grandiflora* R. Meyer 1911.)

Typus (T): Ritter 1383 (U [not found], SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 2:** Brazil: Rio Grande do Sul; "westl. Santiago".
SGO 125162 **Type number** – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "São Francisco [de Assis] + Cerro Branco".
ZSS SR14870 **Type number** – sem
- loc. 4:** Brazil: Rio Grande do Sul; "Rincon de Segredo". – The collection number on the original label is given as "FR 1383 cf." and the material is identified as "*Echinopsis kurzstachl.*" = short-spined.
ZSS SR14871 **Type number** – sem

Ritter 1384: *Wigginsia sellowii* (Link & Otto) F. Ritter – Kakt. Südamer. 1: 196, 1979.

- loc. 2:** Brazil ?; "Weg nach Cabral". – The locality could also read "Ceibral".
SGO 121908 – (corp), ar, sp
- loc. 3:** Brazil: Rio Grande do Sul; "Lavras".
ZSS SR14872 – sem
- loc. 4:** Brazil: Rio Grande do Sul; "Strasse nach Mina Saibas" = road to Mina Saibas.
ZSS SR14873 – sem

Ritter 1384a: *Wigginsia sellowii* (Link & Otto) F. Ritter var. *macracantha* (Arechavaleta) F. Ritter – Kakt. Südamer. 1: 197, 1979.

- loc. 1:** Brazil: Rio Grande do Sul; "Quarai".
SGO 121144 – (corp), ar, sp
- loc. 2:** Brazil: Rio Grande do Sul; "Passo de Guarda".
ZSS SR14874 – sem

Ritter 1385: *Frailea perumblicata* F. Ritter – Succulenta 49: 125, 184-185, 1970. (Republished in Kakt. Südamer. 1: 206-207, fig. 164, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1385 (U, SGO, ZSS [seeds only, status ?]).

- loc. 1:** Brazil: Rio Grande do Sul; "südl. Passo da Guarda" = S of Passo da Guarda. – / – / 1965. – Collected by L. Horst but numbered by Ritter.
SGO 121751 **ISO** – (corp), ar, sp (Collection number inferred.)
- loc. 2:** Brazil: Rio Grande do Sul; "zwischen Livramento und Passo da Guarda" = between Livramento and Passo da Guarda. – / – / 1966. – Collection date according to specimen at U. Collected by L. Horst but numbered by F. Ritter.
U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 3:** Brazil: Rio Grande do Sul; "50 km s. Passo da Guarda" = 50 km S of Paso da Guarda. – / – / 1966.
ZSS SR14875 **Type number** – sem

Ritter 1385a: *Frailea albicolumnaris* F. Ritter – Succulenta 49: 124, 184-185, 1970. (Republished in Kakt. Südamer. 1: 207-208, fig. 167, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1385a (U, SGO, ZSS [seeds only]).

- loc. 1:** Brazil: Rio Grande do Sul; "nordöstl. Livramento" = NE of Livramento. - / - / 1965. - Collected by L. Horst but numbered by F. Ritter.
SGO 121744 ISO - (corp), ar, sp (Collection number inferred.)
- loc. 2:** Brazil: Rio Grande do Sul; "Livramento". - / - / 1965. - Collected by L. Horst but numbered by F. Ritter.
U HOLO - (corp, ar, sp) (Assumed to be the holotype as this is the only specimen present at U. Collection number inferred.)
- loc. 3:** Brazil: Rio Grande do Sul; "ca. 12 km nö. Livramento" = c. 12 km N [or NE] of Livramento. - / 2. / 1966.
ZSS SR14876 ISO - sem ("1 Frucht" = 1 fruit.)

Ritter 1385b: *Frailea pygmaea* (Spegazzini) Britton & Rose var. *lilalunula* F. Ritter - Kakt. Südamer. 1: 203-204, fig. 157, 1979.

Typus (T): Ritter 1385b (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "östl. Livramento" = E of Livramento. - / - / 1965. - Collected by L. Horst but numbered by F. Ritter.
SGO 121747 ISO - (corp), ar, sp (Collection number inferred.)
- loc. 2:** Brazil: Rio Grande do Sul; "Livramento".
U HOLO - (corp, ar, sp) (Assumed to be the holotype as this is the only specimen at U.)
- loc. 3:** Brazil: Rio Grande do Sul; "15 km östl. Livram.o" = 15 km E of Livramento. - / - / 1966.
ZSS SR14877 ISO - sem

Ritter 1385c: *Frailea perumbilicata* F. Ritter var. *spinosior* F. Ritter - Succulenta 49: 125, 184-185, 1970. (Republished in Kakt. Südamer. 1: 207, figs. 165-166, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1385c (U, SGO, ZSS [seeds only, status ?]).

- loc. 1:** Brazil: Rio Grande do Sul; "nördl. Livramento" = N of Livramento. - / - / 1965. - Collected by L. Horst but numbered by F. Ritter.
SGO 121750 ISO - (corp), ar, sp (Collection number inferred.)
U HOLO - (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U. Label dated "1966".)
- loc. 2:** Brazil: Rio Grande do Sul; "75 km südl. Passo da Guarda" = 75 km S of Passo da Guarda.
ZSS SR14878 Type number - sem

Ritter 1386: *Frailea aureispina* F. Ritter - Succulenta 49: 124, 184-185, 1970. (Republished in Kakt. Südamer. 1: 209, fig. 168, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1386 (U, SGO, ZSS [seeds only]).

- loc. 1:** Brazil: Rio Grande do Sul; "nördl. Quaraí" = N of Quaraí. - / - / 1965.
SGO 121743 ISO - (corp), ar, sp (Collection number inferred.)
U HOLO - (corp, ar, sp) (Assumed to be the holotype as this is the only specimen at U. Label dated "1966".)

loc. 2: Brazil: Rio Grande do Sul; "30 km n. Quarai" = 30 km N of Quarai. – / – / 1965.

ZSS SR14879 ISO – sem

Ritter 1387: *Notocactus herteri* (Werdermann) Buining & Kreuzinger – Succulenta 29(2): 17-19, 1950. (Combination frequently attributed to Werdermann, or it is assumed that Werdermann published the taxon originally under *Notocactus*.)

– Brazil: Rio Grande do Sul; "Livramento".

SGO 125296 – (corp), ar, sp, (al) ("Ab Beginn Blühbarkeit" = from start of flowering age.)

ZSS SR14880 – sem

Ritter 1388: *Notocactus globularis* F. Ritter – Kakt. Südamer. 1: 167, figs. 23, 104, 1979.

Typus (T): Ritter & Horst 1388 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

– Uruguay: Rivera; "Riveras", close to frontier with Brazil. – / – / 1965. – Locality data and collection date supplemented from the protologue; the specimen at U is dated "1966". The locality is given as "Riveras" in the protologue, but maps show the correct spelling as "Rivera".

U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14881 ISO – sem ("typische" = typical ones.)

ZSS S16058 **Type number** – sem (Leg. H. Ruoff (sub 81/178, 30. 12. 1983), said to have been taken from an original import-plant at Köhres.)

ZSS S8530 **Type number** – sem (Leg. Köhres ex cult., 1977. No locality associated with this specimen.)

Ritter 1389: *Notocactus arechavaletae* (Spegazzini) Herter var. *nanus* F. Ritter – Kakt. Südamer. 1: 165, fig. 100, 1979. (Sphalm. 'arechavaletai'.)

Typus (T): Ritter 1389 (U, ZSS [status ?]) (Type cited for U l.c., iii.).

– Brazil: Rio Grande do Sul; on a mountain c. 15 km E of "Livramento". – / – / 1965. – Discovered jointly by L. Horst and the collector. Collection date according to the protologue; the specimen at U is dated "1966". Locality data supplemented from the protologue.

U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

ZSS T3581 **Type number** – corp, ar, sp (Ex cult. ZSS 90 3271, 6. 9. 1990) (Ex cult. ZSS 1990. No locality associated with this specimen.)

Ritter 1390: *Notocactus eremiticus* F. Ritter – Kakt. Südamer. 1: 180-181, figs. 124, 237, 1979.

Typus (T): Ritter 1390 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; solitary 'Tafelberg' in the plains E of Livramento. – Discovered by L. Horst on a joint trip with the collector.

U HOLO – corp, ar, sp (Labelled as "Typus" by Ritter. "Einziges Exemplar" = only specimen. No locality given on the original label.)

loc. 2: Brazil: Rio Grande do Sul; "20 km östl. Livramento, Tafelberg" = 20 km E of Livramento, table-mountain. – / – / 1966. – "Einziges Exemplar" = only specimen.

ZSS SR14882 ISO – sem

Ritter 1391: *Frailea aureispina* F. Ritter var. *pallidior* F. Ritter – Succulenta 49: 125, 184-185, 1970. (Republished in Kakt. Südamer. 1: 209, fig. 169, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1391 (U, SGO, ZSS [seeds only]).

loc. 1: Brazil: Rio Grande do Sul; E of "Livramento". – / – / 1965. – Locality data supplemented from protologue; collection date according to specimen at U.

U **HOLO** – (corp, ar, sp) (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "nö. Livramento" = N [or NE] of Livramento.

SGO 121741 ISO – corp, ar, sp

ZSS SR14883 ISO – sem

Ritter 1392: *Frailea albifusca* F. Ritter – Succulenta 49: 124, 184-185, 1970. (Republished in Kakt. Südamer. 1: 202, figs. 155, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

Typus (T): Ritter 1392 (U, SGO, ZSS [seeds only]).

– Uruguay: Rivera; "Rivera". – / – / 1966. – Collection date according to specimen at U; KS 1: 202 gives the collection date as 1965. The locality is given as "Riveras" in the protologue, but maps show the correct spelling as "Rivera".

SGO 121746 ISO – (corp), ar, sp (Collection number inferred.)

U **HOLO** – (corp, ar, sp) (Assumed to be the holotype as this is the only specimen present at U.)

ZSS SR14884 ISO – sem

Ritter 1393: *Notocactus scopia* (Sprengel) A. Berger ex Fric & Kreuzinger – in Kreuzinger, Verzeichn. Amerik. and. Sukk., 23 (in adnot. ad ill.), 1935. (First used but not accepted by A. Berger, Kakteen, 208, 1929. Repeated by Backeberg in Backeberg & Knuth, Kaktus-ABC (dated Dec. 1935, publ. Febr. 1936).)

– Brazil: Rio Grande do Sul; "Rincón de Segredo" / "Rincón Segredo".

SGO 125297 – corp, ar, sp

ZSS SR14885 – sem

Ritter 1393a: *Notocactus scopia* (Sprengel) A. Berger ex Fric & Kreuzinger – in Kreuzinger, Verzeichn. Amerik. and. Sukk., 23 (in adnot. ad ill.), 1935. (First used but not accepted by A. Berger, Kakteen, 208, 1929. Repeated by Backeberg in Backeberg & Knuth, Kaktus-ABC (dated Dec. 1935, publ. Febr. 1936).)

– Brazil: Rio Grande do Sul; "Pedras Altas". – "(von L. Horst L.H. 52)" = [received] from L. Horst LH 52. Identified as *Notocactus scopia* var. *scopia* in the field-number list in KS 4.

ZSS SR14886 – sem

Ritter 1393b: *Notocactus scopa* (Sprengel) A. Berger *ex* Fric & Kreuzinger – in Kreuzinger, Verzeichn. Amerik. and. Sukk., 23 (in adnot. ad ill.), 1935. (First used but not accepted by A. Berger, Kakteen, 208, 1929. Repeated by Backeberg in Backeberg & Knuth, Kaktus-ABC (dated Dec. 1935, publ. Febr. 1936).)

- Brazil: Rio Grande do Sul; "Rincon de Inferno". – / 3. / 1972. – Identified as "*Notocactus scopa* var." in the field-number list in KS 4.
ZSS SR14887 – sem

Ritter 1394: *Notocactus crassigibbus* F. Ritter – Succulenta 49(7): 108, 1970.
Typus (T): Ritter 1394 (U).

- loc. 1: Brazil: Rio Grande do Sul; Lavras.
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2: Brazil: Rio Grande do Sul; "Strasse nach Mina Saival" = road to Mina Saival.
ZSS SR14888 – sem

Ritter 1395: *Notocactus arachnitis* F. Ritter – Succulenta 49(7): 108-109, 1970. (This is the spelling used in the original diagnosis; several authorities are of the opinion that it needs to be corrected to 'arachnites'.)
Typus (T): Ritter 1395 (U, ZSS [seeds only, status ?]).

- loc. 1: Brazil: Rio Grande do Sul; Serra do Herval. – Originally collected by L. Horst.
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2: Brazil: Rio Grande do Sul; "Quarita; von Caçapava ca. 45 km nach Minas Camaquã" = Quarita; from Caçapava c. 45 km towards Minas Camaquã.
ZSS SR14889 **Type number** – sem
- loc. 3: Brazil: Rio Grande do Sul; "Rincon de Segredo".
ZSS SR14890 **Type number** – sem

Ritter 1395a: *Notocactus arachnitis* F. Ritter var. *minor* F. Ritter – Succulenta 49(7): 108-109, 1970.
Typus (T): Ritter 1395a (U).

- loc. 2: Brazil: Rio Grande do Sul; "östl. Camaquã" = E of Camaquã. – / – / 1968. – Collection date according to original Ritter seed sample at ZSS.
ZSS SR14891 **ISO** – sem

Ritter 1396: *Notocactus arechavaletae* (Spegazzini) Herter var. *aureus* F. Ritter – Kakt. Südamer. 1: 166-167, fig. 103, 1979. (Sphalm. 'arechavaletai'.)
Typus (T): Ritter 1396 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "südl Rio Pardo" = S of Rio Pardo, rare. - / - / 1966. - Discovered by L. Horst. Collection date according to specimen at U.
U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "km 137 1/5 westl. Pantano Grande" = km 137.5 W of Pantano Grande. - / - / 1966.
ZSS SR14892 **Type number** - sem

Ritter 1397: *Notocactus neobuenekeri* F. Ritter - Kakt. Südamer. 1: 181-182, fig. 126, 1979.

Typus (T): Ritter 1397 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Camaquã". - / 2. / 1965. - Discovered jointly by Büneker, Horst and the collector. The specimen at U is simply dated "1965".
U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "Mina Camaquã".
ZSS SR14893 **ISO** - sem

Ritter 1398: *Notocactus campestris* F. Ritter - Kakt. Südamer. 1: 177, fig. 119, 1979.

Typus (T): Ritter 1398 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Campestre". - / - / 1965. - Discovered by L. Horst but numbered by F. Ritter. Collection date according to the protologue; specimen at U dated "1966".
SGO 125298 **ISO** - (rad), corp, ar, sp
U **HOLO** - (rad), corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR14894 **ISO** - sem ("(von L. Horst)" = [received] from L. Horst. "L. Horst Nr. 23".)

Ritter 1399: *Notocactus succineus* F. Ritter - Succulenta 49(7): 109, 1970. (Sphalm. 'sucineus').

Typus (T): Ritter 1399 (U, ZSS [seeds only]).

- loc. 1:** Brazil: Rio Grande do Sul; "São Gabriel". - / - / 1965. - Collection date according to specimen at U.
U **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "südl. São Gabriel" = S of São Gabriel. - "(gelbstachl.)" = yellow-spined.
ZSS SR14895 **ISO** - sem

Ritter 1400: *Eriocactus warasii* F. Ritter (*incorrect name* Art. 11.3) - Bradea 1(34): 353-355, ill., 1973.

Based on Büneker s.n. (herb. Ritter [holo, apparently lost], HB).

- Brazil: Rio Grande do Sul; "Rio Pardo ?" = Rio Pardo ?.
ZSS SR14896 Type ? – sem

Ritter 1401: *Brasiliparodia catarinensis* F. Ritter – Kakt. Südamer. 1: 152, figs. 88, 234, 1979. (Appears to be based on two syntypes and therefore declared invalidly published (Art. 37.1) in RPS 37: 20; the order of the enumeration makes it clear, however, that the Ritter-collection enumerated is the nomenclatural type.)

Typus (T): Ritter 1401a (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Strasse Bom Jesus nach Rio Pelotas" = road from Bom Jesus to Rio Pelotas. – Identified as "new species" or variety of *B. catarinensis* in KS 4.
SGO 124995 – corp, ar, sp
ZSS SR14955 – sem (The collection number on the original label is given as "FR 1401 (= L.H. 45)"; L.H. stands for the collector L. Horst. The locality is given as "Strasse ... Pelotas, rechts" = road ... Pelotas, right.)

Ritter 1401a: *Brasiliparodia catarinensis* F. Ritter – Kakt. Südamer. 1: 152, figs. 88, 234, 1979. (Appears to be based on two syntypes and therefore declared invalidly published (Art. 37.1) in RPS 37: 20; the order of the enumeration makes it clear, however, that the Ritter-collection enumerated is the nomenclatural type.)

Typus (T): Ritter 1401a (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Santa Catarina; "Bom Jardim da Serra", on rocks. – / – / 1965. – Collection date according to specimen at U. Discovered by L. Horst and alternatively numbered *Horst & Uebelmann* HU 40.
SGO 124996 ISO – (rad), corp, ar, sp
U HOLO – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)
ZSS SR14956 ISO – sem (The collection number on the original label is given as "FR 1401a (HU 40)"; HU stands for Horst & Uebelmann.)

Ritter 1402: *Wigginsia horstii* F. Ritter var. *juvenaliformis* F. Ritter – Kakt. Südamer. 1: 200, fig. 151, 1979.

Typus (T): Ritter 1402 (U) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "Cazapava" [Caçapava].

U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Rio Grande do Sul; "Quarita".

SGO 121143 – (corp), ar, sp
ZSS SR14957 – sem

Ritter 1402a: *Wigginsia horstii* F. Ritter – Kakt. Südamer. 1: 199-200, fig. 150, 1979.

Typus (T): Ritter 1402a (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Mina Camaqua". - / 2. / 1965. - Discovered by L. Horst and the collector. Collection date according to original Ritter seed sample at ZSS.
 U **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14958 **ISO** - sem

Ritter 1403: *Wigginsia prolifera* F. Ritter - Kakt. Südamer. 1: 199, fig. 149, 1979.

Typus (T): Ritter 1403 (U) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Cazapava" [Caçapava]. - Discovered by L. Horst but numbered by F. Ritter.
 U **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "Rincón de Segredo".
 ZSS SR14959 - sem

Ritter 1403a: *Wigginsia longispina* F. Ritter - Kakt. Südamer. 1: 198-199, fig. 241, 1979.

Typus (T): Ritter 1403a (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "westl. Lavras" = **W** of Lavras. - Found by L. Horst according to KS 1: 199.
 SGO 121141 **ISO** - (corp), ar, sp
 U **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: Rio Grande do Sul; "Strasse von Lavras nach Bagé" = road from Lavras to Bagé.
 ZSS SR14960 **Type number** - sem

Ritter 1404: *Echinopsis eyriesii* (Turpin) Zuccarini - in Pfeiffer & Otto, Abb. Besch. Cact. 1: t. 4 + text, 1839.

- Brazil: Rio Grande do Sul; "30 km n. Quarai" = 30 km N of Quarai. - "(Körner tot)" = seeds dead.
 ZSS SR14961 - sem

Ritter 1405: *Rhipsalis* sp.

- Brazil: São Paulo; "Ilhabela Nr. 5".
 ZSS SR14962 - sem

Ritter 1406: *Melocactus melocactoides* (Hoffmannsegg) De Candolle - Prodr. Syst. 3: 461, 1828.

- Brazil: Rio de Janeiro; "Sacarema" / "Sacaremas". - / - / 1965. - Collection date according to original Ritter seed sample at ZSS (locality written as "Sacarema").
 SGO 122144 - (corp), ar, sp, (ceph)
 ZSS SR14963 - sem

Ritter 1407: *Opuntia rubrogemmia* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) – Kakt. Südamer. 1: 33, in synon., 1979.

- Brazil: Rio Grande do Sul; "Quarita". – / – / 1965. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14964 **ISO** – sem (Locality given as "Quarita Nr. 1" on the original label.)

Ritter 1408: *Opuntia brunneogemmia* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) – Kakt. Südamer. 1: 34, in synon., 1979.

- Brazil: Rio Grande do Sul; "Quarita". – / – / 1965. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14965 **ISO** – sem (Locality given as "Quarita Nr. 2" on the original label.)

Ritter 1409: *Monvillea piedadensis* F. Ritter – Kakt. Südamer. 1: 114-115, fig. 228, 1979.

Typus (T): Ritter 1409 (U, SGO, ZSS [seeds only]) (Type cited for U i.c., iii.).

- loc. 1:** Brazil: São Paulo; "nördl. Piedade" = N of Piedade, on rocks. – / – / 1965. – Locality data supplemented from the protologue; collection date according to protologue and specimen at U.
 SGO 121845 **ISO** – (corp), ar, sp
 U **HOLO** – (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Brazil: São Paulo; "nördl. Piedade (im Cajón Grande)" = N of Piedade (in the Cajón Grande). – / – / 1970. – "(Same hybridisiert mit FR 1015 *M. alticostata* Ritt.)" = seed hybridized with FR 1015 *Monvillea alticostata* F. Ritter.
 ZSS SR14966 **ISO** – sem

Ritter 1410: *Cereus sericifer* (F. Ritter) P. J. Braun – Bradleya 6: 86, 1988.

- Brazil: Rio de Janeiro; "Tres Rios, Nr. 1" at the Río Paraíba, on rocks. – / – / 1965. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection data supplemented from the protologue. Collection date according to specimen at U which has the locality simply as "Tres Rios".
 SGO 121812 **ISO** – (corp), ar, sp
 U **HOLO** – (corp), ar, sp (Collection number by inference. Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14967 **ISO** – sem (Locality given as "Tres Rios (Rio de Janeiro)" on the original label.)

Ritter 1411: *Cereus cipoensis* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) – Kakt. Südamer. 1: 236, in synon., 1979.

loc. 1: Brazil: Minas Gerais; "Westfuss der Serra do Cipó" = W foot of Serra do Cipó, on sandstone and limestone rocks. - / - / 1965. - Collection date according to specimen at U. Locality data supplemented from the protologue. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Brazil: Minas Gerais; "Veraneio Hotel". - Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.

SGO 121813 **Type number** - (corp), ar, sp (Includes seedling material.)

Ritter 1412: *Cereus cabralensis* (F. Ritter) F. Ritter (*nom. inval.* Art. 34.1) - Kakt. Südamer. 1: 235-236, in synon., 1979.

loc. 1: Brazil: Minas Gerais; Serra do Cabral, "Joaquim Felício". - / - / 1964. - Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. The protologue gives the locality simply as "Serra do Cabral". Collection date supplemented from the protologue.

SGO 121814 **ISO** - (corp), ar, sp

loc. 2: Brazil: Minas Gerais; "Serra do Cabral". - / - / 1965. - Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter. Collection date according to specimen at U.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1413: *Pereskia aureiflora* F. Ritter - Kakt. Südamer. 1: 22, fig. 5, 1979.
Typus (T): Ritter 1413 (U [not found], ZSS [seeds only]).

- Brazil: Minas Gerais; "Itaobim".
ZSS SR14968 **ISO** - sem

Ritter 1414: *Notocactus harmonianus* F. Ritter - Kakt. Südamer. 1: 176-177, fig. 118, 1979.

Typus (T): Ritter 1414 (U [not found], ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "16 km sw. Harmonia" = 16 km SW of Harmonia. - / - / 1965. - Collection date according to the protologue.
ZSS SR14969 **ISO** - sem

Ritter 1415: *Notocactus arechavaletae* (Spegazzini) Herter var. *limiticola* F. Ritter - Kakt. Südamer. 1: 164-165, fig. 99, 1979. (Sphalm. 'arechavaletai'.)

Typus (T): Ritter & Horst 1415 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Livramento". - / - / 1965. - Discovered jointly by L. Horst and the collector. Collection date according to the protologue; the specimen at U is dated "1966".

U **HOLO** - (corp), ar, sp (Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14970 **ISO** - sem

Ritter 1415a: *Notocactus* sp.

- Brazil: Rio Grande do Sul; "ca. 20 km östl. Livramento" = c. 20 km E of Livramento. – Said to represent intermediate forms between FR 1415 (= *Notocactus archavaletae* var. *limiticola*) and FR 1376 (*N. glaucinus*) in the field-number list in KS 4, where the locality is given as "18 km E of Livramento").
ZSS SR14971 – sem

Ritter 1416: *Micranthocereus* sp.

- Brazil: Bahia; "Licinio Almeida". – Appears to represent *Micranthocereus albicephalus* (ue.).
SGO 125233 (in 2 parts) – corp, ar, sp, ceph

Ritter 1417: *Opuntia viridirubra* (F. Ritter) P. J. Braun & E. Esteves Pereira – Succulenta 74(3): 133, 1995. (First used by F. Ritter, Kakt. Südamer. 1: 35, 1979, as synonym.)

- Brazil: Rio Grande do Sul; "von 30 km nördlich Quaraí" = from 30 km N of Quaraí. – / – / 1965. – Collection date according to specimen at U. Treated as *Platyopuntia* (*nom. illeg.*) by Ritter.
U HOLO – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)
ZSS SR14972 ISO – sem ("(schmaltriebige, kleine)" = slender-stemmed, small one.)

Ritter 1418: *Austrocylindropuntia lauliacoana* F. Ritter – Kakt. Südamer. 4: 1247-1248, fig. 34, 1981.

Typus (T): Ritter 1449 (U) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Ancash ?; "Valle Fortaleza, 3600 m." 3600 m. – / – / 1964.
SGO 121943 – corp, ar, sp

Ritter 1419: *Acanthorhispalis brevispina* F. Ritter – Kakt. Südamer. 4: 1260, fig. 1114, 1981. (Treated as invalid in RPS (type indicated as 'Typusort' and without collection number), but this is questionable.)

Typus (T): Ritter s.n. (U, SGO [status ?, sub Ritter 1419]) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Amazonas; "östl. Balsas bei ca. 1800 m." = E of Balsas. 1800 m. – This is probably the type collection, which is given as *Ritter s.n.*
SGO 125091 **Type ?** – corp, ar, sp
ZSS SR14150 **Type ?** – sem (Locality simply given as "östl. Balsas" on the original label.)

Ritter 1421: *Cereus neonesioticus* (F. Ritter) P. J. Braun var. *interior* (F. Ritter) P. J. Braun – Bradleya 6: 86, 1988.

- loc. 1:** Brazil: São Paulo; "nördl. Piedade" = N of Piedade. – Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.
SGO 121815 ISO – (corp), ar, sp

loc. 2: Brazil: São Paulo; "Piedade". -/-/ 1965. - Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.

U HOLO - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1423: *Rebutia singularis* F. Ritter - *Ashingtonia* 3(1): 12-13, ill., 1978.
Typus (T): Ritter 1423 (U).

- Bolivia: Tarija; Arce; "Padcaya". -/-/ 1966. - Collection date according to specimen at U.

U HOLO - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1425: *Thelocephala nuda* F. Ritter - *Kakt. Südamer.* 3: 1004-1005, fig. 32, 1980.

Typus (T): Ritter 1425 (U, SGO [status ?], ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama: Freirina; Dept. Freirina, more to the N than *Theloceph. napina*, near the coast. -/-/ 1965. - No detailed locality information given in the protologue. - Collection date according to specimen at U.

U HOLO - corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Chile: "Carriz. Bajo" = Carrizal Bajo. -/-/ 1965. - Collection date according to the original Ritter seed sample at ZSS (where the locality is written in full).

SGO 125153 **Type number** - rad, corp, ar, sp
ZSS SR13563 **Type number** - sem

Ritter 1427: *Wigginsia courantii* (Lemaire) F. Ritter - *Kakt. Südamer.* 1: 195, 1979.

loc. 1: Brazil: Rio Grande do Sul; "Strasse Ibaré nach Sao Gabriel" = road Ibaré to São Gabriel / "s. Sao Gabriel" = S of São Gabriel.

SGO 121909 - (corp), ar, sp

loc. 2: Brazil: Rio Grande do Sul; "südl. São Gabriel" = S of São Gabriel. - The collection number on the original label was first given as "FR 1384", now crossed out. FR 1384 is identified as *Wigginsia sellowii* in the field-number list in KS 4.

ZSS SR14973 - sem

Ritter 1428: *Rebutia potosina* F. Ritter - *Kakt. and. Sukk.* 28(4): 77, 1977.
Typus (T): Ritter 1428 (U).

- Bolivia: Potosí; Fria; "Potosí". -/-/ 1963. - Collection date according to specimen at U.

U HOLO - rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1429: *Rebutia mixta* F. Ritter - *Kakt. and. Sukk.* 28(4): 76, 1977.
Typus (T): Ritter 1429 (U [not found], ZSS [seeds only]).

- Bolivia: Potosí: Sud-Chichas; "westl. Mal Paso Nr. 16 und Mal Paso, unten Nr. 5" = W of Mal Paso and Mal Paso, below. – / 11. / 1962. – Collection date according to original Ritter seed sample at ZSS.
ZSS SR14535 ISO – sem

Ritter 1430: *Rebutia* sp.

- Argentina: Salta; "La Caldera". – Locality given as "8 km nördlich Caldera" = 8 km N of Caldera, in KS 4: 1648. The original label identifies the material as "*Rebutia senilis* cf.". SGO 124628 – rad, corp, ar, sp

Ritter 1431: *Trichocereus* sp.

- Argentina: Catamarca; "112 km nw. La Puerta Nr. 4a" = 112 km NW of La Puerta. – Collected together and mixed up with Ritter 997, the type number of *Lobivia purpureominiata* (cf. comment for material at SGO of Ritter 997). SGO 121191 – (corp), ar, sp

Ritter 1432: *Pyrrhocactus transiens* F. Ritter – Kakt. Südamer. 3: 977-978, figs. 22, 892, 1980.

Typus (T): Ritter 1432 (U) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; "nördl. Caldera" = N of Caldera, in rock crevices, rare. – / – / 1965. – Locality data supplemented from the protologue. Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

- loc. 2:** Chile: "28 km S. Flamenco" = 28 km S of Flamenco.
ZSS SR13564 – sem

Ritter 1433: *Lobivia ferox* Britton & Rose var. *camargensis* F. Ritter – Kakt. Südamer. 2: 571, fig. 466, 1980.

Typus (T): Ritter 1433 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Bolivia: Chuquisaca: Nor-Cinti; "... km nördl. Camargo" / .. km N of Camargo. 3000 m. – "Das feinerstachl. Muster wohl *L. culpiniensis* oder Hybride" = the finer-spined specimen probably *L. culpiniensis* or hybrid. Identified as *Lobivia interjuncta* Ritter (*nom. nud.*) on the original label. The collection altitude is according to KS 2: 571.

SGO 121440 **Type number** – (corp), ar, sp

- loc. 2:** Bolivia: Chuquisaca: Nor-Cinti; "nördlich Camargo bei 3000 m Höhe" = N of Camargo. 3000 m. – / – / 1963. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U. Deposited as *Lobivia interjuncta* F. Ritter (*nom. nud.*)).

Ritter 1434: *Rebutia iridescens* F. Ritter – Kakt. and. Sukk. 28(4): 76, 1977. (*Non Rebutia iridescens* W. Rausch *nom. nud.*)

Typus (T): Ritter 1434 (U).

- Bolivia: Potosí: Sud-Chichas; "westl. Mal Paso" = W of Mal Paso. - / - / 1962. - Collection date according to specimen at U.
U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1435: *Trichocereus angelesiae* Kiesling – Darwiniana 21(2-4): 314-315, 1978. (Sphalm. 'angelesii').

Typus (T): Kiesling 1302 (SI).

loc. 1: Argentina: Salta; "13 km über / sw. Alemania" = 13 km above / SW of Alemania.

SGO 121200 - (corp), ar, sp

loc. 2: Argentina: Salta; "ca. 30 km sw. Alemania" = ca. 30 km SW of Alemania.

SGO 121201 - (corp), ar, sp

loc. 3: Argentina: Salta; "28 km über Alemania" = 28 km above Alemania.

SGO 121202 - (corp), ar, sp

Ritter 1437: *Melocactus canescens* F. Ritter var. *montealto* F. Ritter – Kakt. Südamer. 1: 134, 1979.

Typus (T): Ritter 1437 (U 531249B, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Bahia; "Palma do Monte Alto". - / 1. / 1964. - Collection date according to original Ritter seed sample at ZSS and to specimen at U ("1964").

SGO 122145 **ISO** – rad, corp, ar, sp, (ceph) (Includes a large seedling plant.)

U 531249B **HOLO** – (corp), ar, sp ("Rippe mit Cephalium-Beginn" = rib with start of cephalium. Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

ZSS SR14974 **ISO** – sem (The original label was first numbered as "FR 1206", now crossed out. FR 1206 is identified as *Melocactus zehntneri* in the field-number list in KS 4.)

Ritter 1438: *Cereus uruguayanus* Kiesling – Darwiniana 24: 448, 1982.

(Based on *Piptanthocereus uruguayanus* F. Ritter (*nom. inval.*, Art. 36.1).)

Typus (T): Cabrera 16545 (LP).

- Argentina: Corrientes; "Monte Caseros, Nr. 4". - The original label first had the number "1006" (= *Piptanthocereus xanthocarpus* var. according to KS 4), crossed out and replaced first with 1437 (identified as a species of *Melocactus* in KS 4 and most certainly a slip of the pen) and then with 1438. Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter.

SGO 121795 - (corp), ar, sp

Ritter 1439: *Pyrrhocactus coliguayensis* F. Ritter – Kakt. Südamer. 3: 929-930, fig. 798, 1980.

Typus (T): Ritter 1439 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Valparaíso; "Coliguay". – / 11. / 1967. – Collection date according to specimen at U.
SGO 121665 ISO – (corp), ar, sp
U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U. A fragment with 2 areoles only.)
ZSS SR13565 ISO – sem (Dated "I. 1968" on the original label, in contrast to the date given on the assumed holotype at U.)

Ritter 1440: *Coleocephalocereus brevicylindricus* (Buining) F. Ritter – Kakt. Südamer. 1: 122, 1979.

- Brazil: Minas Gerais ?; sine loco.
SGO 122070 – corp, ar, sp

Ritter 1442: *Notocactus buiningii* Buxbaum – Kakt. and. Sukk. 19(12): 229-231, ill., 1968.

- Typus* (T): Horst & Uebelmann HU 90 (U, ZSS [seeds only]).
- Uruguay: sine loco.
ZSS SR14975 – sem

Ritter 1443: *Copiapoa olivana* F. Ritter – Kakt. Südamer. 3: 1088, fig. 1027, 1980.

Typus (T): Ritter 1443 (U [not found], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Chile: "nördl. Fundpl. der *Cop. montana*" = N of locality of *Copiapoa montana*. – / 1. / 1968. – The original label was first numbered "522a" which is identified as *Copiapoa montana* in the field-number list in KS 4. Its locality is given as N of Taltal.
ZSS SR13566 ISO – sem

Ritter 1444: *Copiapoa tenebrosa* F. Ritter – Kakt. Südamer. 3: 1098-1099, figs. 1045, 1058, 1980.

Typus (T): Ritter 1444 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 2:** Chile: Antofagasta; "östl. Taltal, Höhen" = E of Taltal, altitudes. – / – / 1963. – Collection date according to specimen at U.

U HOLO – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

- loc. 3:** Chile: Antofagasta; "hoher Berg östl. Taltal bei 850 - x m." = high mountain E of Taltal. 850 m. – "Die beiden Muster mit gespreizten dünneren St., kleineren u. entfernteren Ar. und niedrigeren Ri. haben vielleicht Einschlag von *Co. haseltoniana* die sich wohl nördlich tiefer findet." = Both specimens with more spreading thinner spines and smaller more distant areoles and lower ribs probably show introgression from *Co[piapoa] haseltoniana*, which should be found at lower altitudes to the north.

SGO 124927 (in 2 parts) ISO – (corp), ar, sp

loc. 4: Chile: "Berg östl. Taltal" = mountain E of Taltal. - / 3. / 1963. - The original label was first numbered "FR 476a" which is set equal to FR 1444 in the field-number list in KS 4.

ZSS SR13567 ISO - sem

Ritter 1445: *Lobivia tegeleriana* Backeberg - Jahrb. Deutsche Kakt.-Ges. 1: 82, 1936.

- Peru: "Berge über Mantacra" = mountains above Mantacra.
SGO 124491 - rad, corp, ar, sp

Ritter 1446: *Trichocereus huascha* (F. A. C. Weber) Britton & Rose - The Cact. 2: 142, figs. 208-210 (pp. 141-142), 1920.

- Argentina: La Rioja: "Chamical". - There are two labels in this jar, both originally giving the number Ritter 999 (= *Trichocereus strigosus* var. *flaviflorus* according to KS 4), later crossed out and replaced with 1446. One of the two labels gives the additional locality information "Gob. Gordillo Nr. 18". The Chamical locality is mentioned in KS 2: 439. According to maps of La Rioja, Chamical and Est. Gobernador Gordillo refer to the same place.
SGO 121194 - (corp), ar, sp

Ritter 1447: *Copiapoa varispinata* F. Ritter - Kakt. Südamer. 3: 1070, fig. 981-982, 1980. (Sphalm. 'variispinata')

Typus (T): Ritter 1447 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Antofagasta; "ca. 50 km nördlich Paposo" = c. 50 km N of Paposo. - / 7. / 1968. - Collection date according to original Ritter seed sample at ZSS ("VII. 1968"; distance given as "50 km N ...") and specimen at U ("1968").
U HOLO - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR13568 ISO - sem

Ritter 1448: *Pyrrhocactus truncatipetalus* F. Ritter - Kakt. Südamer. 3: 980-981, fig. 891, 1980.

Typus (T): Ritter 1448 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: "unterhalb Baños del Flaco" = below Baños del Flaco, upper reaches of the Río Tinguiririca. 750 m. - / - / 1968. - Locality data and altitude supplemented from the protologue. Collection date according to specimen at U.
U HOLO - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
ZSS SR13569 ISO - sem (Original label dated "1968/69" and with the comment, now crossed out, "Probe da" = specimen present.)

Ritter 1449: *Austrocylindropuntia lauliacoana* F. Ritter - Kakt. Südamer. 4: 1247-1248, fig. 34, 1981.

Typus (T): Ritter 1449 (U) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Lima; "Lauliaco, Rimactal" = Lauliaco, Rimac valley. 3600 m. -/-/1964. – Altitude data added from the protologue.
U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1450: *Pyrhocactus krausii* F. Ritter – Kakt. Südamer. 3: 953-954, fig. 21, 1980.

Typus (T): Ritter 1450 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: sine loco. -/-/1969. – Collection date according to specimen at U. Collected by F. Kraus but numbered by F. Ritter.
SGO 121667 **ISO** – corp, ar, sp ("Von Fr. Kraus (durch R. Binder), Sämling. Hybrid ?" = From Fr. Kraus (via R. Binder), seedling. Hybrid ? The material in the jar seems to derive from a cultivated specimen.)
U **HOLO** – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)
ZSS SR13570 **ISO** – sem (Original label dated "1968".)

Ritter 1451: *Thelocephala fankhauseri* F. Ritter – Kakt. Südamer. 3: 1002-1003, fig. 897, 1980.

Typus (T): Ritter 1451 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Atacama; "Berge nordwestlich von Domeyko" = mountains NW of Domeyko. -/-/1969. – Collection date according to specimen at U. Collected by Fankhauser but numbered by Ritter in his series.
U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
- loc. 2:** Chile: Atacama; sine loco. – Probably collected by Fankhauser but numbered by Ritter in his series.
SGO 125447 **Type number** – rad, corp, ar, sp
- loc. 3:** Chile: "Mina Algarrobo". -/1./1969. – "(aus einer verwitterten Fr. vom I. 1969)" = from a weathered fruit from Jan. 1969. The reverse of the original label has the comment: "Das Korn ist so abweichend, dass es wohl keiner Kaktsee zugehört" = The seed is so different that it probably does not belong to a cactus. Ritter's opinion is supported by examination of the single preserved seed (ue.).
ZSS SR13571 – sem

Ritter 1452: *Copiapoa rarissima* F. Ritter – Kakt. Südamer. 3: 1088-1089, fig. 1028, 1980.

Typus (T): Ritter 1452 (U, SGO [status ?], ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1:** Chile: Antofagasta; "Küste Dept. Taltal" = coast of Dept. Taltal. -/-/1969. – Collection date according to specimen at U.
U **HOLO** – rad, corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U. Ritter in KS 3: 1089 mentions that the single extant specimen was lost in transfer to

Europe, but this seems to be incorrect.)
ZSS SR13572 ISO – sem

loc. 2: Chile: Antofagasta; "südl. Paposo". – / – / 1969.
SGO 124928 **Type number** – (corp), ar, sp

Ritter 1453: *Pyrrhocactus tenuis* F. Ritter – Kakt. Südamer. 3: 976-977, 1980.
Typus (T): Ritter 1453 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Antofagasta; "Paposo", in the lower coastal strip, in loose soil, very rare. – / – / 1969. – Locality data supplemented from the protologue; collection data according to specimen at U.

U **HOLO** – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

loc. 2: Chile: "3 km s. Paposo" = 3 km S of Paposo. – / 1. / 1969.
ZSS SR13573 ISO – sem

Ritter 1454: *Corryocactus* sp.

– Bolivia: "oberh. Convento, ca. 2500 m." = above Convento. 2500 m. – Identified as "*Corryocactus* sp. ähnliche *aureus*" = similar to *C. aureus*, in KS 4.

SGO 125059 – corp, ar, sp

Ritter 1455: *Notocactus permutatus* F. Ritter – Kakt. Südamer. 1: 188-189, figs. 142-143, 1979.

Typus (T): Ritter 1455 (U [not found], ZSS [seeds only]) (Type cited for U l.c., iii.).

– Brazil: Rio Grande do Sul; "südl. São Gabriel" = S of São Gabriel. – / – / 1968. – Collection date according to original Ritter seed sample at ZSS. ZSS SR14976 ISO – sem ("Pfl. Büneker" = plant of Büneker, probably indicating that the material was collected by R. Büneker. "(Same trocken)" = seed dry.)

Ritter 1456: *Eriosyce algarrobensis* F. Ritter – Kakt. Südamer. 3: 914, fig. 776, 1980.

Typus (T): Ritter 1456 (U, SGO, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Atacama; "Mina Algarrobo". – / 1. / 1969. – Collection date according to the original Ritter seed sample at ZSS.

SGO 121694 ISO – (corp), ar, sp
ZSS SR13574 ISO – sem

loc. 2: Chile: Atacama; "südlich der Mine Algarrobo" = S of the Algarrobo mine. – / – / 1969. – Collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1457: *Copiapoa esmeraldana* F. Ritter – Kakt. Südamer. 3: 1064-1065, fig. 978, 1980.

Typus (T): Ritter 1457 (U, ZSS [seeds only]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Chile: Antofagasta; "südlich von Esmeralda" = S of Esmeralda. – / – / 1969.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS S2658 **Type number** – sem (Leg. Meregalli ex cult. Cult. sub ZSS 89 2233. No locality associated with this specimen.)

loc. 2: Chile: "Steilküste südl. Esmeralda" = steep coast S of Esmeralda.
 ZSS SR13575 **ISO** – sem

Ritter 1458: *Neolobivia incaica* (Backeberg) F. Ritter – Kakt. Südamer. 4: 1335, 1981.

– Peru: Cuzco; "Pisac".
 SGO 124494 – (corp), ar, sp

Ritter 1459: *Neolobivia prolifera* F. Ritter – Kakt. Südamer. 4: 1335-1336, fig. 37, 1981.

Typus (T): Ritter 1459 (U) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Cuzco; "Berge über Pisac" = mountains above Pisac. 3400 m. – / – / 1969. – Altitude supplemented from the protologue. Collection date according to specimen at U.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1460: *Lobivia glaucescens* F. Ritter – Kakt. Südamer. 4: 1331-1332, fig. 1196, 1981.

Typus (T): Ritter 1460 (U) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Moquegua; "Cuaiones". 4000 m. – / – / 1969. – Collected together with A. F. H. Buining.
 U **HOLO** – (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1461: *Copiapoa coquimbana* (Rümppler) Britton & Rose var. *armata* F. Ritter – Kakt. Südamer. 3: 1075, fig. 1002, 1980.

Typus (T): Ritter 1461 (U [not found], SGO) (Type cited for U l.c. 1: iii, 1979.).

– Chile: upper reaches of the Río Choros. – Discovered by R. Wagenknecht.
 SGO 124929 (in 2 parts) **ISO** – corp, ar, sp

Ritter 1462: *Islaya minuscula* F. Ritter – Kakt. Südamer. 4: 1303, fig. 1164, 1981.

Typus (T): Ritter 1462 (U) (Type cited for U l.c. 1: iii, 1979.).

– Peru: Arequipa; "Atico". – / – / 1969.
 U **HOLO** – (corp), ar, sp (Labelled as "Herbar-Typus" by Ritter and assumed to represent the holotype. Collection number inferred.)

Ritter 1463: *Brasiliparodia rechensis* (Buining) F. Ritter – Kakt. Südamer. 1:

149, 1979.

- Brazil: Rio Grande do Sul; "Ana Rech". - / - / 1969.
ZSS SR14977 - sem

Ritter 1464: *Notocactus mueller-melchersii* Fric ex Backeberg - Backeberg & Knuth, Kaktus-ABC, 254, 415, 1936. (Dated 1935, publ. Febr. 1936. Name first used by Fric in Kakteenjäger, 12, 1929, and in his 1929-catalogue, as well as in Kreuzinger, Verzeichn. amerik. Kakt. and Sukk., 22, 1935 (*nom. inval.*)).

- Brazil: Rio Grande do Sul; "Rio Grande". - / - / 1969. - The original label has the additional number "HU 94"; HU stands for the collectors Horst & Uebelmann. The collection is identified as "*Notocactus mueller-melchersii* var." in the field-number list in KS 4.
ZSS SR14978 - sem

Ritter 1467: *Trichocereus torataensis* F. Ritter - Kakt. Südamer. 4: 1325-1326, fig. 1193, 1981.

Typus (T): Ritter 1467 (U, SGO [status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 2: Peru: Moquegua; "Cuajones, ca. 3000 m.". 3000 m.
SGO 121146 **Type number** - (corp), ar, sp

loc. 3: Peru: Moquegua; "westl. Cuajones" = W of Cuajones. - / - / 1969. -
Collection date according to specimen at U.
U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

Ritter 1469: *Loxanthocereus trujilloensis* F. Ritter - Kakt. Südamer. 4: 1472-1473, fig. 1332, 1981.

Typus (T): Ritter 1469 (U, SGO) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Peru: La Libertad; "hoher Berg nordwestlich von Trujillo" = high mountain NW of Trujillo. 700 m. - / - / 1964. - Altitude supplemented from the protologue. Collection date according to specimen at U.

U **HOLO** - (corp), ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Peru: La Libertad; "Hoher Berg 20 km nördl. Trujillo bei 720-x m" = High mountain 20 km N of Trujillo at 720-x m. 720 m. - Originally numbered FR 578 (= *Loxanthocereus parvitesellatus* according to the field-number list in KS 4).

SGO 122000 **ISO** - (corp), ar, sp

Ritter 1470: *Leocereus bahiensis* Britton & Rose - The Cact. 2: 108, 1920.

Typus (T): Zehntner 266 (US, K).

- Brazil: Bahia; "Ituaçu".
SGO 125072 - corp, ar, sp

Ritter 1471: *Bolivocereus croceus* F. Ritter - Kakt. Südamer. 2: 704-705, fig. 694, 1980.

Typus (T): Ritter 1471 (U, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

loc. 1: Bolivia: Chuquisaca: Azero / Tomina; "vermutlich von Puente Azero, Grenze der Provinzen Azero und Tomina" = probably from Puente Azero, frontier of Prov. Azero and Tomina. – The locality information is tentative on the original label and in the protologue, and the material was collected inadvertently.

U **HOLO** – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

loc. 2: Bolivia: Chuquisaca: Azero / Tomina; sine loco. – / 1. / 1970. – Collection date according to original Ritter seed sample at ZSS.
ZSS SR14536 **Type number** – sem

Ritter 1472: *Uebelmannia pectinifera* Buining – Nation. Cact. Succ. J. 22: 65, 86-87, 1967.

loc. 1: Brazil: Minas Gerais; sine loco. – The collection number on the original label is given as "FR 1472 (= HU 106)"; HU stands for the collectors Horst & Uebelmann.

ZSS SR14979 – sem

loc. 2: Brazil: Minas Gerais; "nördl. Diamantina" = N of Diamantina. – The collection number on the original label is given as "Horst-Übelmann Nr. 106 FR 1472".

ZSS SR14980 – sem

Ritter 1473: *Uebelmannia meninensis* Buining – Kakt. and. Sukk. 19: 151-152, 1968.

– Brazil: Minas Gerais; sine loco. – The collection number on the original label is given as "FR 1473 (= HU 108)"; HU stands for the collectors Horst & Uebelmann, and their HU 108 is from near Pedra Menina.

ZSS SR14981 – sem

Ritter 1474: *Uebelmannia buiningü* Donald – Nation. Cact. Succ. J. 23(1): 2-3, ill., 1968.

Typus (T): Horst & Uebelmann HU 141 (U, ZSS).

loc. 1: Brazil: Minas Gerais; "Am Hang der Serra Negra" = slope of the Serra Negra. – "Art ähnl. *gummifera*" = species similar to [*Uebelmannia*] *gummifera*. The collection number on the original label was first given as Horst-Übelmann Nr. 141; FR 1474 was only added later.

ZSS SR14982 **Type ?** – sem

loc. 2: Brazil: Minas Gerais; sine loco. – "(forma grünrotbraun)" = green-red-brown form. The collection number on the original label is given as "FR 1474 (= HU 141)"; HU stands for the collectors Horst & Uebelmann who collected their HU 141 in the Serra Negra.

ZSS SR14983 **Type ?** – sem

Ritter 1474a: *Uebelmannia buiningü* Donald – Nation. Cact. Succ. J. 23(1): 2-3, ill., 1968.

Typus (T): Horst & Uebelmann HU 141 (U, ZSS).

- Brazil: Minas Gerais; sine loco. - "forma rotbraun" = red-brown form. The collection number on the original label is given as "FR 1474a (= HU 283)"; HU stands for the collectors Horst & Uebelmann. They collected their HU 283 in the region of Itamarandiba.
ZSS SR14984 - sem

Ritter 1475: *Uebelmannia pectinifera* Buining var. *pseudopectinifera* Buining

- Kakt. and. Sukk. 23(5): 125-126, ill., 1972.

Typus (T): Horst & Uebelmann HU 280 (U, ZSS).

- Brazil: Minas Gerais; sine loco. - "ähnl. *pectinifera* (gespreizte St., 13 - 20 Ri.)" = similar to [*Uebelmannia*] *pectinifera* (spines spreading, 13 - 20 ribs). The collection number on the original label is given as "FR 1475 (= HU 280)"; HU stands for the collectors Horst & Uebelmann who collected their HU 280 near Datas and Serro.
ZSS SR14985 Type ? - sem

Ritter 1476: *Uebelmannia flavispina* Buining & Brederoo - Succulenta 52(1): 9-10, ill., 1973.

Typus (T): Horst & Uebelmann HU 361 (U, ZSS).

loc. 1: Brazil: Minas Gerais; sine loco. - All the original labels are identified as *Uebelmannia warasii* (nom. nud.).

ZSS SR14986 - sem ("Same des IX. 1973 gesandten Exemplars (der Samenbearbeitung im Manuskript)" = seed of the specimen sent Sept. 1973 (of the seed description in the manuscript).)

ZSS SR14987 - sem ("Same des Exemplars von Waras" = seed of the specimen from Waras.)

ZSS SR14988 - sem ("Same von Horst" = seed from Horst. "XII. 1971".)

loc. 2: Brazil: Minas Gerais: Mpio. Diamantina; "Conselheiro Mato". - / - / 1972.

- All the original labels are identified as *Uebelmannia warasii* (nom. nud.).

ZSS SR14989 - sem ("Same von Waras. Schwarzstachelig." = Seed from Waras. Black-spined".)

ZSS SR14990 - sem ("Same von Waras". Gelb-braun-stachelig." = Seed from Waras. Yellow-brown-spined.)

Ritter 1478: *Notocactus cristatoides* F. Ritter - Kakt. Südamer. 1: 190-191, 1979.

Typus (T): Ritter 1478 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

loc. 1: Brazil: Rio Grande do Sul; "von Ibaré" = from Ibaré. - / - / 1970. - Discovered by R. Büneker but numbered by F. Ritter. Collection date according to specimen at U.

U HOLO - corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

loc. 2: Brazil: Rio Grande do Sul; "Ibaré u. São Gabriel" = Ibaré and São Gabriel. - / 3. / 1971. - "ähnlich *eremiticus* (von Rudi Büneker)" = similar to [*Notocactus*] *eremiticus* (from Rudi Büneker).

ZSS SR14991 Type number - sem

Ritter 1479: *Notocactus curvispinus* F. Ritter – Kakt. Südamer. 1: 189, 1979.

Typus (T): Ritter 1479 (U [not found], ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; Dom Pedrito. – Discovered by L. Horst and originally numbered *Horst & Uebelmann HU 338*, then renumbered by F. Ritter in his own series.

ZSS SR14992 ISO – sem (No locality given on the original label which has the comment "von L. Horst" = from L. Horst. The collection number was first given as "FR 1455a" which is not included in the field-number list in KS 4.)

Ritter 1480: *Monvillea ebenacantha* F. Ritter – Kakt. Südamer. 2: 512-514, figs. 354, 368, 1980.

Typus (T): Ritter 1480 (U, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Bolivia: Santa Cruz: Cordillera; "westlich Boyuibe" = W of Boyuibe, along path to Camiri, very rare. – / – / 1963. – Collection date and supplemented locality according to the protologue.

U HOLO – corp, ar, sp (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)

- loc. 2: Bolivia: Santa Cruz: Cordillera; "[Boyuibe ?] c. 16 km nwestl. Boyuibe" = c. 16 km NW of Boyuibe. – The locality on the original label first had a different distance now illegible and written over, and the first mention of "Boyuibe" was only put in square brackets later in a different pen. The direction first read "westl. Boyuibe" = W of Boyuibe.

ZSS SR14537 Type number – sem

Ritter 1481: *Corryocactus pyroporphyranthus* F. Ritter – Kakt. Südamer. 4: 1284-1285, fig. 1149, 1981.

Typus (T): Ritter 1481 (U, SGO, ZSS [seeds only, status ?]) (Type cited for U l.c. 1: iii, 1979.).

- loc. 1: Peru: Ayacucho; "oberhalb der Stadt Ayacucho bei ca. 3300 m." = above the town of Ayacucho. 3300 m. – / – / 1964. – Collection date according to specimen at U.

SGO 125060 ISO – corp, ar, sp (The locality is simply given as "oberh. Ayacucho bei ca. 3300 m." = above Ayacucho at c. 3300 m.)

U HOLO – corp, ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

- loc. 2: Peru: Ayacucho; "oberh. Ayacucho (im Cajón Grande)" = above Ayacucho (in the Cajón Grande). – / – / 1969.

ZSS SR14151 Type number – sem

Ritter 1482: *Micranthocereus aureispinus* F. Ritter – Kakt. Südamer. 1: 107-108, 1979.

Typus (T): Ritter 1482 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- Brazil: Minas Gerais; "Gebirge südwestlich Monte Azul" = mountains SW of Monte Azul, rocky places, rare. – / 11. / 1971. – Locality data supplemented from the protologue; collection date according to specimen at U.

U **HOLO** – (corp), ar, sp (Labelled as "Typus" by Ritter. Collection number inferred.)

ZSS SR14993 **ISO** – sem (Locality given as "Berg sw. M.te Azul" = mountain SW of Monte Azul.)

Ritter 1483: *Discocactus horstii* Buining & Brederoo – in Krainz, Die Kakt. Lief. 52: C VIf, 3 pp., ill., 1973.

Typus (T): Horst & Uebelmann HU 360 (U, ZSS).

- Brazil: Minas Gerais; "kleine von Grão Mogol" = small one from Grão Mogol. – / – / 1972. – The collection number on the original label is given as "HU 360 | FR 1483"; HU stands for the collectors Horst & Uebelmann. ZSS SR14994 **Type ?** – sem

Ritter 1484: *Notocactus rubropedatus* F. Ritter – Kakt. Südamer. 1: 189-190, fig. 144, 1979.

Typus (T): Ritter 1484 (U, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "von Cerro do Ouro bei São Gabriel" from Cerro do Ouro near São Gabriel. – / – / 1970. – Discovered by R. Büneker but numbered by Ritter. Collection date according to specimen at U.

U **HOLO** – corp, ar, sp (Labelled as "Typus" by Ritter. Collection number inferred. The outer package had the erroneous collection number '1478'.)

- loc. 2:** Brazil: Rio Grande do Sul; "Cerro do Ouro sö. São Gabriel" = Cerro do Ouro SE of São Gabriel. – / – / 1971.

ZSS SR14995 **ISO** – sem

Ritter 1485: *Uebelmannia pectinifera* Buining var. *pseudopectinifera* Buining – Kakt. and. Sukk. 23(5): 125-126, ill., 1972.

Typus (T): Horst & Uebelmann HU 280 (U, ZSS).

- loc. 1:** Brazil: Minas Gerais; sine loco. – / – / 1971.

ZSS SR14996 – sem

- loc. 2:** Brazil: Minas Gerais; "von Datas" = from Datas. – "Same von Waras. Nach Angabe von Waras mit auseinanderstehenden Stacheln." = Seed from Waras. According to information from Waras with spreading spines.

ZSS SR14997 – sem

Ritter 1486: *Notocactus dalvae* F. Ritter (*nom. inval.* Art. 36.1) – Kakt. Südamer. 4: 1648, 1981. (Published as provisional name.)

Based on Ritter 1486.

- Brazil: Rio Grande do Sul; "Rincon de Inferno". – / 3. / 1972.

ZSS SR14998 – sem

Ritter 1487: *Rhipsalis clavellina* F. Ritter – Kakt. Südamer. 1: 43-44, figs. 20-21, 1979.

Typus (T): Ritter 1487 (U, SGO, ZSS [seeds only]) (Type cited for U l.c., iii.).

- loc. 1:** Brazil: Rio Grande do Sul; "Berg Botucaraí bei Candelária" = Mt. Botucaraí near Candelária. – / – / 1964. – Collection date according to specimen at U.
 U **HOLO** – corp, ar (Collection number inferred. Assumed to be the holotype as this is the only specimen at U.)
 ZSS SR14999 **ISO** – sem (Locality simply given as "Berg Botucaraí" on the original label.)
- loc. 2:** Brazil: Rio Grande do Sul; "Botucaraí". – / – / 1964.
 SGO 125677 **ISO** – corp, ar, sp

Ritter 1488: *Notocactus ottonis* (Lehmann) A. Berger ex Backeberg var. *paraguayensis* (F. Haage) Y. Ito – Explan. Diagr. Austroechinocactinae, 249, 1957. (Valid combination probably first published by Fric in Kreuzinger, Verzeichn. amerik. Kakt. and Sukk., 22, 1935. Bracket author frequently given as 'Heese'. Combination first mentioned but not accepted by A. Berger, Kakteen, 213, 1929.)

- Paraguay: Central; "Eusebio Ayala (östl. Asunción)" = Eusebio Ayala (E of Asunción).
 ZSS SR15000 – sem

Ritter s.n.: *Acanthorhopsalis brevispina* F. Ritter – Kakt. Südamer. 4: 1260, fig. 1114, 1981. (Treated as invalid in RPS (type indicated as 'Typusort' and without collection number), but this is questionable.)
Typus (T): Ritter s.n. (U, SGO [status ?, sub Ritter 1419]) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Amazonas; "östlich Balsas bei c. 2000 m." = E of Balsas. 2000 m. – / 7. / 1964. – No collection number is given in the protologue; the number 1419 probably relates to this collection.
 U **HOLO** – corp, ar, sp

Ritter s.n.: *Arequipa australis* F. Ritter – Kakt. Südamer. 3: 1123-1124, figs. 28, 1082, 1980.

Typus (T): Ritter s.n. (U, SGO [status ?, sub Ritter 1080]) (Type cited for U l.c. 1: iii, 1979.).

- Chile: Tarapacá; "Gebirge östlich Camiña" = mountains E of Camiña. 3500 m. - 4000 m. – / – / 1960. – No collection number is given in the protologue for this collection; it was probably later numbered as 1080.
 U **HOLO** – (corp), ar, sp (This is taken to represent the holotype, because it is the only specimen present at U.)

Ritter s.n.: *Borzicactus hybr.*

- Peru: Piura; "Huancabamba, Nr. 4". – The original label is numbered as "FR 288 × 295"; FR 288 is identified as *Borzicactella serpens*, FR 295 as *Borzicactus aurivillus* in the field-number list in KS 4.
 SGO 121961 – (corp), ar, sp

Ritter s.n.: *Cereus* sp.

- Brazil?: "Caranavi". - / 8. / 1970. - Treated as *Piptanthocereus* (*nom. illeg.*) by Ritter on the original label.
SGO 121816 - (corp), ar, sp

Ritter s.n.: *Cleistocactus* hybr.

- Bolivia: La Paz: Murillo; "Tirata". - / 10. / 1954. - A natural hybrid between *Cleistocactus glaucus* (FR 112) and *Oreocereus fossulatus* (FR 100) according to the specimen labels at ZSS. It is here treated as *Cleistocactus* *hybr.* until better evidence for the existence of this intergeneric cross is available. Collection date according to non-original seed sample at ZSS.
ZSS SR14237 - sem

Ritter s.n.: *Cleistocactus* hybr.

- Bolivia: Tarija: Gran Chaco; "Palos Blancos". - / 4. / 1958. - The collection number is given as "FR 829 × 842" and the identification as "*Cleistocactus ipotanus* × *Bolivocereus margaritanus* Hybrid". Both are *nomina nuda*; FR 829 is identified as *Cleistocactus crassicaulis* in the field-number list in KS 4, FR 842 as *C. chacoanus*.
ZSS SR14465 - sem

Ritter s.n.: *Cleistocactus* hybr.

- Bolivia: La Paz: Murillo; "Tirata". - / 10. / 1954. - A natural hybrid between *Cleistocactus glaucus* (FR 112) and *Oreocereus fossulatus* (FR 100) according to the specimen labels at ZSS. It is here treated as *Cleistocactus* *hybr.* until better evidence for the existence of this intergeneric cross is available. Collection date according to non-original seed sample at ZSS.
ZSS T5133 - corp, ar, sp (Leg. F. Ritter ex nat.)

Ritter s.n.: *Coleocephalocereus* hybr.

- Brazil: Minas Gerais; "Água Vermelha". - The original label is numbered as "FR 1340 × 1347", and the plant is thought to be a hybrid between *Coleocephalocereus* and *Pilosocereus* (FR 1340 is identified as *Coleocephalocereus flavisetus*, FR 1347 as *Pilosocereus superbus* in the field-number list in KS 4).
SGO 122067 - (corp), ar, sp, ceph

Ritter s.n.: *Coleocephalocereus* hybr.

- Brazil: Minas Gerais; "südl. Padre Paraíso, Min. Gerais" = S of Padre Paraíso. - "FR 1340 × FR 1345, *Coleocephalocereus decumbens* × *Pilosocereus supremus*-Hybrid".
ZSS SR14817 - sem

Ritter s.n.: *Copiapoa* sp.

- Chile: "Weg nach Cifuncho, 16 km" = path to Cifuncho, 16 km. - Only one of the original labels has a collection number, but this is illegible; it can tentatively be interpreted as "526", but the material seems to fit published Ritter-illustrations of *Copiapoa rupestris* (which would be FR 528) or *C. desertorum* (which would be FR 529). Both are reported from Cifuncho.

SGO 124890 (in 2 parts) – rad, corp, ar, sp (There are 2 specimen jars, the second one without any number, and it is assumed that the material belongs together.)

Ritter s.n.: Copiapoa sp.

- Chile: "Morro Moreno / Cerro Moreno". – "(kreidiger Überzug)" = chalky covering. There is a specimen from the same locality under the Ritter number FR 205 loc. 2, identified as *Copiapoa boliviana*.
SGO 124930 – rad, corp, ar, sp

Ritter s.n.: Copiapoa paposoensis F. Ritter – Kakt. Südamer. 3: 1068-1069, fig. 986, 1980. (Treated as invalidly published (Art. 37) so far, but a collection without collection number is in fact cited.)

Typus (T): Ritter s.n. (U, SGO [status ?, sub Ritter 1148]) (Type cited for U l.c. 1: iii, 1979).

- Chile: in the upper altitudes c. "20 km nördl. Paposo" = 20 km N of Paposo. 1100 m. – / – / 1956. – This collection has probably been numbered later as F. Ritter 1148.
U HOLO – (corp), ar, sp (Assumed to be the holotype as this is the only specimen present at U.)

Ritter s.n.: Copiapoa streptocaulon (Hooker) F. Ritter – Kakt. and. Sukk. 12: 4, 1961.

- Chile: "Morro Copiapó bei Caldera" = Morro Copiapó near Caldera. – / 1. / 1956.
U – sem (Treated as a synonym of *Copiapoa marginata* in KS 3: 1054.)

Ritter s.n.: Echinopsis sp.

- Bolivia: Santa Cruz: Valle Grande; "Comarapa". – The original label gives the following information: "FR 376a *Echinopsis huottii* var. + FR 786 *Echps. comarapana*, gemischt" = FR 376a + FR 786 mixed, probably indicating a mixup between the two numbers. The jars contain several similar-looking fragments.
SGO 121377 – (corp), ar, sp

Ritter s.n.: Echinopsis sp.

- Bolivia: Cochabamba: Campero; "Chuyllas, Nr. 6". – The original label gives the following information: "FR 376 (oder 377) x 786 *Echps. huottii* x comarapana, lokale Mischformen" = FR 376 (or 377) x 786, local intermediates. The jar contains several similar-looking fragments.
SGO 121378 – (corp), ar, sp

Ritter s.n.: Echinopsis sp.

- Bolivia: Santa Cruz: Valle Grande; "Aufstieg von Marqueza, Nr. 16, hohe Lagen" = ascent from Marqueza, upper altitudes. – The original labels both give the following information: "FR 786 (comarapana) x FR 787 (gemischt)"; FR 787 is *Echinopsis pereziiensis* cf. according to KS 4: 1636.
SGO 121379 – (corp), ar, sp

Ritter s.n.: *Echinopsis ayopayana* F. Ritter & Rausch – Succulenta 47: 85-86, ill., 1968.

Typus (T): Ritter 809 (U [not present ?], SGO, ZSS).

- Bolivia: Cochabamba: Ayopaya; "Pass zwischen Independencia u. Tiquiripaya" = pass between Independencia and Tiquiripaya". – / – / 1958. – This collection most probably is part of F. Ritter 809 (the type collection of *Echinopsis ayopayana*), but no collection number is actually given.
SGO 121376 **Type** ? – (corp), ar, sp

Ritter s.n.: *Eriocereus* sp.

- Paraguay: Alto Paraguay; "Puerto Casado". – "6 Rippen, dann 4 R., in 1 m Höhe 3 Rippen. 1 Exemplar junges und spätes 4 Rippen-Stadium, 1 Triebende" = 6 ribs, then 4 ribs, 3 ribs when 1 m tall. 1 individual of the young and later 4-rib-phase, 1 stem tip. The original label gives the number as "FR 25 x 1194"; FR 25 is *Eriocereus bonplandii* and 1194 as (*Piptantho-*) *Cereus stenogonus* according to the field-number list in KS 4, and the original label gives the material as hybrid between the two taxa. See comment in KS 1: 230.
SGO 121801 – (corp), ar, sp

Ritter s.n.: *Espostoa hybr.*

- Peru: Lima; "Matucana". – "Aufrechtes Exemplar c. 1 1/4 m. hoch. Hybrid mit *Espostoa* ? 22 Rippen." = erect specimen c. 1.25 m tall. Hybrid with *Espostoa* ? 22 ribs. / "Aufrechter Wuchs, Wollhaare (bei *acanthu.* stets fehlend ?), feinere + dichtere Bestachlg., die 22 Rippen (*acanth.* 13 - 18) weisen auf Hybrid mit *Espostoa haagei*." = Erect growth, woolly hairs (always lacking with *acanthurus* ?), finer and denser spination, the 22 ribs (13 - 18 for *acanthurus*) indicate a hybrid with *Espostoa haagei*. The original label has the number as "144 x 628 (?)", FR 144 is *Espostoa haagei*, 628 *Loxanthocereus acanthurus* according to the field-number list in KS 4.
SGO 121947 – (corp), ar, sp

Ritter s.n.: *Espostoa hybr.*

- Peru: Ancash; "unterh. Huallanca" = below Huallanca.
SGO 122151 – (corp), ar, sp, (ceph ?)

Ritter s.n.: *Espostoa hybr.*

- Peru: Cajamarca; "Pte. Crisnejas" = Puente Crisnejas. – The original label gives the number as "FR 660 x 656" and identifies the collection as the hybrid between *Espostoa lanianuligera* and *Weberbauerocereus longicomus*.
SGO 122165 – (corp), ar, sp, ceph

Ritter s.n.: *Euphorbia weberbaueri* Mansfeld – Repert. Spec. Nov. Regni Veg. 29(11-20): 221, 1931.

Typus (T): Weberbauer 3802 (B).

- Peru: Ayacucho; sine loco. – / 10. / 1953.
ZSS B5135 – (corp) (Leg. F. Ritter ex nat. (cristate plant).)

Ritter s.n.: *Facheiroa ulei* (Gürke) Werdermann – Brasilien und seine Säulenkakteen, 113, 1933.

- Brazil: sine loco. – / – / 1968. – "(von A. F. H. Buining), Typusort" = received from A. F. H. Buining, type locality.
SGO 121734 – corp, ar, sp, ceph

Ritter s.n.: *Frailea horstii* F. Ritter – Succulenta 49: 124, 184-185, 1970. (Republished in Kakt. Südamer. 1: 202, figs. 153-154, 1979 (cf. RPS 30: 6, corrected in RPS 36: 4).)

- Typus (T)*: Ritter 1353 (U, ZSS [seeds only]).
- Brazil: Rio Grande do Sul; "Rincón de Segredo". – Probably equalling F. Ritter 1353.
SGO 121753 – (corp), ar, sp

Ritter s.n.: *Frailea pygmaea* (Spegazzini) Britton & Rose var. *planicosta* F. Ritter – Kakt. Südamer. 1: 204-205, fig. 161, 1979.

Typus (T): Ritter 1366 (U, ZSS [seeds only, status ?]) (Type cited for U l.c., iii.).

- Brazil: Rio Grande do Sul; "Santiago". – / – / 1965. – Probably equalling F. Ritter 1366.
SGO 121754 – (corp), ar, sp

Ritter s.n.: *Haageocereus hybr.*

- Peru: Lima; "Churin Nr. 19b" = Churín. – Identified as a hybrid between 147e x 147; FR 147 is *Haageocereus multangularis*, FR 147 *H. multangularis* var. *dichromus* according to KS 4.
SGO 124715 – (corp), ar, sp

Ritter s.n.: *Haageocereus hybr.*

- Peru: Arequipa; "Tambo-Schlucht Süd" = Tambo gorge, South / "südl. Tambo-Schlucht" = S Tambo gorge. – "Exemplare der Früchte mit Blütenresten." = specimens of the fruits with floral remains. The original label identifies this collection as the hybrid "FR 187 x 126 ?"; 126 is *Haageocereus australis*, 187 *H. chalaensis*, according to KS 4.
SGO 124723 – (corp), ar, sp

Ritter s.n.: *Haageocereus hybr.*

- Peru: Arequipa; "Mollendo. Höhere Lagen" = Mollendo, upper altitudes. – Identified as the hybrid "FR 187a x 126 (?)"; 187a is *Haageocereus chalaensis*, 126 *H. australis* according to KS 4. "Wenigstens das dicht-stachel. Muster scheint eher *australis* zu sein" = At least the dense-spined specimen appears to represent *australis*.
SGO 124725 – corp, ar, sp

Ritter s.n.: × *Haagespostoa sp.*

- Peru: Lima; "Chosica". – "19 - 20 Rippen, starke Wollbüschel" = 19 - 20 ribs, well-developed bundles of woolly hairs. The original label identifies this variously as *Neobinghamia climaxantha* or as the hybrid "FR 144 × 147"; FR 144 is identified as *Espostoa haagei*, 147 as *Haageocereus multangularis*, in the field-number list in KS 4.
SGO 122149 – (corp), ar, sp, (ceph ?)

Ritter s.n.: × *Haagespostoa* sp.

- Peru: Lima; "Churín" = Churín / "Valle Churín" = Valle Churín. – / 6. / 1957.
– Collection date according to original Ritter seed sample at ZSS. The original labels give the number as "147e × 144"; FR 147e is *Haageocereus multangularis* var. *dichromus*, FR 144 *Espostoa haagei*, according to the field-number list in KS 4.
SGO 122173 – corp, ar, sp, ceph

Ritter s.n.: × *Haagespostoa* sp.

- Peru: Ancash; "Huallanca". – / 3. / 1960. – = Ritter 166 (*Espostoa nana*) × Ritter 585 (*Haageocereus chryseus*). Locality data and collection date according to original Ritter seed sample at ZSS.
ZSS S12560 – sem (Leg. H. Winter (Cat. 1961/62). No locality associated with this specimen.)

Ritter s.n.: × *Haagespostoa* sp.

- Peru: Ancash; Yaután. – = Ritter 144 (*Espostoa haagei* × Ritter 1067 (*Haageocereus fulvus* var. *yautanensis*). Locality according to KS 4: 1394.
ZSS S12561 – sem (Leg. H. Winter (Cat. 1961/62).)

Ritter s.n.: × *Haagespostoa* sp.

- Peru: Lima; "Churín" = Churín / "Valle Churín" = Valle Churín. – / 6. / 1957.
– Collection date according to original Ritter seed sample at ZSS. The original labels give the number as "147e × 144"; FR 147e is *Haageocereus multangularis* var. *dichromus*, FR 144 *Espostoa haagei*, according to the field-number list in KS 4.
ZSS SR13859 – sem

Ritter s.n.: × *Haagespostoa* sp.

- Peru: Ancash; "Quebrada Huecocho Nr. 7". – / 6. / 1960. – The collection number is given as "FR 144 × 1067"; FR 144 is *Espostoa haagei*, FR 1067 *Haageocereus fulvus* var. *yautanensis* according to the field-number list in KS 4.
ZSS SR13860 – sem

Ritter s.n.: × *Haagespostoa* sp.

- Peru: Ancash; "Huallanca". – / 3. / 1960. – = Ritter 166 (*Espostoa nana*) × Ritter 585 (*Haageocereus chryseus*). Locality data and collection date according to original Ritter seed sample at ZSS.
ZSS SR13905 – sem

Ritter s.n.: *Lasiocereus fulvus* F. Ritter – Kakt. Südamer. 4: 1479, 1981. (First mentioned (without type, but with Latin diagnosis) in Succulenta 45(8): 119, 1966.)

Typus (T): Ritter 1303 (U, SGO, ZSS [status ?]) (Type cited for U l.c. 1: iii, 1979.).

- Peru: Cajamarca; "San Marcos". – The original label only has the information "*Weberbauerocer*. San Marcos". A comparison of the material with the description and illustrations in KS 4: 1479, etc., makes it very possible that the material represents *Lasiocereus fulvus* (FR 1303) and that the locality given is erroneous. The material was originally stored in close association with a collection of *Lasiocereus rupicolus* which is indeed from San Marcos.

SGO 125729 Type ? – fr

Ritter s.n.: *Lobivia* sp.

- Bolivia: Potosí: Sud-Chichas; "oberh. Mal Paso" = above Mal Paso. – The original label is numbered as "FR 797 + 798 gemischt" = mix of 797 + 798; FR 797 is *Lobivia culpinensis*, FR 798 *L. campicola* according to KS 4.

SGO 124463 – (corp), ar, sp

Ritter s.n.: *Lobivia* hybr.

- Argentina: Jujuy; "Volcán, Höhen" = Volcán, altitudes. – The original label is numbered as "FR 55 × 403" and the plant is identified as "*Sulcorebutia chlorogona* × *uncinata* Ritter cf." (sic !). In the field-number list in KS 4, FR 55 is identified as *Lobivia buiningina*, FR 403 as *Hymenorebutia chlorogona*.

SGO 122071 – rad, corp, ar, sp

Ritter s.n.: *Lobivia* hybr.

- Bolivia: Oruro; "Oruro". – / 12. / 1954. – The original label was first numbered "Nr. 333 × 98", now amended to read "Nr. 107 × 98". FR 98 is identified as *Lobivia ferox* in the field-number list in KS 4, FR 107 is *Lobivia pentlandii* and FR 333 is set equal to FR 107. The original label identifies the collection as "Hybrid *Lob. boliv.* × *ferox* (= *Lob. wegheiana*)".

ZSS SR14233 – sem

Ritter s.n.: *Lobivia* hybr.

- Bolivia: Potosí; "Llallagua". – / 12. / 1954. – The collection is identified as "*Lob. pentlandii* × Llallagua Nr. 10 Hybrid"; the collection number was first given as "333a × 349", and was corrected to read now "107 × 349". FR 107 is *Lobivia pentlandii* according to the field-number list in KS 4, FR 333a is set equal to FR 107, and FR 349 is *Lobivia* sp.

ZSS SR14251 – sem

Ritter s.n.: *Loxanthocereus* hybr.

- Peru: Ayacucho; "Huayhua, Nr. 8, bei km 54" = Huayhua, at km 54. – The original labels have the number as "Nr. 581 × 148 ?"; FR 581 is identified as *Loxanthocereus montanus*, 148 as *L. variabilis* in the field-number list in KS

4.
SGO 121980 – (corp), ar, sp

Ritter s.n.: *Matucana paucicostata* F. Ritter – Taxon 12(3): 124-125, 1963.

Typus (T): Ritter 597 (U 117723B, SGO, ZSS [seeds only, status ?])
(Holotype cited for U l.c. (1): 28, 1963.).

- Peru: sine loco. – "Märchenhaft blühend. Viele Bl. im Scheitel. Die Blüt... aus dem Scheitel hb bewollte Röhre, aus d. Seiten unbewollte Röhre. Seltsam !" = Flowering fabulously. Many flowers from the apex. The flowers from the apex have a woolly tube, the ones from the sides tubes without wool. Curious ! - This probably represents Ritter 597, but there is no locality indicated on the specimen label.
SGO 125685 Type ? – (fl)

Ritter s.n.: × *Maturoya* sp.

- Peru: Ancash; "Recuay". – / 8. / 1964. – "FR 163 × 592b *Oroya borchersii* × *Matucana yanganucensis*-Naturhybrid" = natural hybrid.
ZSS SR13900 – sem

Ritter s.n.: *Mediocactus* sp.

- Brazil?: "Caranavi". – / 8. / 1970.
SGO 121764 – rad, corp, ar, sp

Ritter s.n.: *Micranthocereus* hybr.

- Brazil: Bahia; "Serra do Sincorá". – Identified as the hybrid "FR 1329 x 1221" = *Micranthocereus purpureus* × *Pilosocereus pentaedrophorus*.
SGO 125232 (in 2 parts) – corp, ar, sp, ceph

Ritter s.n.: *Neoporteria* sp.

- Chile: Curicó; Teno valley, near Los Cruces.
ZSS T5132 – corp, ar, sp (Leg. F. Ritter. Ex cult. ZSS s.n. 1960.)

Ritter s.n.: *Neoporteria* hybr.

- Chile: "Ovalle". – "Besonders stark stach. Exemplar von *N. nidus* oder andere Art. Bildet Übergänge zum typ. *senilis*" = Especially strongly spined specimen of *N. nidus* or a different species. Forms intermediates to typical *senilis*. The label gives the number as "258 × 474a"; FR 258 is *Neoporteria nigrihorrida*, FR 474a is *N. nidus* var. *nidus* according to the field-number list in KS 4.
SGO 121549 – (corp), ar, sp

Ritter s.n.: *Notocactus* sp.

- Brazil: Rio Grande do Sul; "Alegrete". – "Kleiner von Büneker" = small-one from Büneker; probably indicating that this (unnumbered) collection was made by Büneker. The material is reminiscent of *Notocactus tenuicylindricus*; cf. Ritter 1361 loc. 1.
SGO 125299 – (rad), corp, ar, sp

Ritter s.n.: *Notocactus caespitosus* (Spegazzini) Backeberg – in Backeberg & Knuth, Kaktus-ABC, 253, 1936. (Dated 1935, publ. Febr. 1936.)

- Uruguay: sine loco. – "HU 92" = Horst & Uebelmann 92. This material was assumedly collected by L. Horst in Uruguay and given to F. Ritter. The identification is as given on the original label (in Ritter's handwriting). Horst & Uebelmann 92 is reported from Uruguay, Livramento - Taquarimbó, according to unpublished sources.
SGO 125300 – corp, ar, sp

Ritter s.n.: *Notocactus muricatus* (Otto) A. Berger ex Backeberg – in Backeberg & Knuth, Kaktus-ABC, 254, 1935. (Dated 1935, publ. Febr. 1936. Combination first used but not accepted by A. Berger, Kakteen, 210, 1929.)

- Brazil: Rio Grande do Sul; "Santiago". – / – / 1965. – Identified as *Notocactus muricatus* var. *flavifuscus* F. Ritter (*nom. nud.*) on the original label, a name which was not used again in KS.
SGO 125301 – (corp), ar, sp

Ritter s.n.: *Opuntia hybr.*

- Bolivia: Potosi; "Oroya Nord" = Oroya, North / "Weg nach El Monte, Nr. 14" = path to El Monte. – The original label gives the number as "FR 604 × 554a ?" and identifies the plant as the hybrid "*Platyop. boliviensis* × *albisaetacens*"; FR 604 is identified as (*Platy-*) *Opuntia albisaetacens*, FR 554a as (*Platy-*) *Opuntia soehrensii* according to the field-number list in KS 4.
SGO 122029 – corp, ar, sp

Ritter s.n.: *Oreocereus hybr.*

- Bolivia: Chuquisaca: Sud-Cinti; "Aufstieg östl. Pte. San Pedro" = ascent E of Puente San Pedro. – / 2. / 1963. – Collection date according to original Ritter seed sample at ZSS (locality simply given as "Pte. San Pedro"). Identified as the hybrid "FR 78d × 67"; FR 78d is identified as ordinary form of *Oreocereus celsianus*, FR 67 as *Cleistocactus tupizensis*, according to KS 4.
SGO 125128 – (corp), ar, sp
ZSS SR14201 – sem

Ritter s.n.: *Pilosocereus hybr.*

- Brazil: Minas Gerais; "Januaria Nr. 3". – "*Pilosocereus sp.* wohl *glaucescens* Ausnahme-Exemplar nur 5 cm dick, 13 Rippen. Vielleicht Hybrid mit *P. azureus*, der ebenda wuchs; hatte bereits in 1 m Höhe Wollflocken, was bei *P. azur.* nicht vorkommt." = *Pilosocereus sp.*, probably exceptional specimen of *P. glaucescens*; only 5 cm diam., 13 ribs. Probably hybrid with *P. azureus* which grew there too; plant had woolly areoles already at 1 m which does not occur in *P. azureus*.
SGO 125470 – (corp), ar, sp

Ritter s.n.: *Pilosocereus hybr.*

- Brazil: Minas Gerais; "N. Agua Verm.a" = N of Agua Vermelha. – Identified as the hybrid "FR 1342 x 1345" on the original labels; FR 1342 is *Pilosocereus quadricostatus*, 1345 *P. magnificus*, according to KS 4.
SGO 125503 – (corp), ar, sp

Ritter s.n.: *Pyrrhocactus curvispinus* (Bertero ex Colla) A. Berger ex Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 262, 1936. (Dated 1935, publ. Febr. 1936. First invalidly published by A. Berger, *Kakteen*, 216, 1929.)

- Chile: Santiago; "Region Santiago". – Locality data according to index card associated with the seed sample at ZSS.
ZSS S10373 – sem (Leg. F. Ritter (via Fa. Winter) 1964 (sub "*Pyrrhocactus curvispinus* var."))

Ritter s.n.: *Pyrrhocactus curvispinus* (Bertero ex Colla) A. Berger ex Backeberg – in Backeberg & Knuth, *Kaktus-ABC*, 262, 1936. (Dated 1935, publ. Febr. 1936. First invalidly published by A. Berger, *Kakteen*, 216, 1929.)

- Chile: "Region Santiago". – Locality data according to index card associated with the seed sample at ZSS.
ZSS S10374 – sem (Leg. F. Ritter (ex Fa. Winter) 1964.)

Ritter s.n.: *Pyrrhocactus hybr.*

- Chile: "Coya, Nr. 3 x 2 (?)". – / 5. / 1955. – The original label gives the number as "Nr. 466 x 225 (?)"; FR 225 is *Pyrrhocactus curvispinus*, FR 466 *P. lissocarpus* according to the field-number list in KS 4.
SGO 121556 – (corp), ar, sp

Ritter s.n.: *Pyrrhocactus hybr.*

- Chile: "Pichidangui, (3 x 4 ?)". – / 5. / 1955. – The original label has the number "Nr. 470 x 238 (?)"; FR 238 is *Pyrrhocactus horridus*, FR 470 *P. odoriflorus* according to the field-number list in KS 4.
SGO 121562 – ar, sp

Ritter s.n.: *Pyrrhocactus hybr.*

- Chile: "Pichidangui, Nr. 3 x 5 (?)". – / 5. / 1955. – The original label has the number "Nr. 223a x 470"; FR 223a is *Pyrrhocactus horridus* fa., FR 470 *P. odoriflorus* according to the field number list in KS 4.
SGO 121563 – (corp), ar, sp

Ritter s.n.: *Pyrrhocactus hybr.*

- Chile: "S.n Francisco" = San Francisco. – / 5. / 1955. – Identified as the hybrid "FR 466a x 449" or "FR 449 x 466a" on the original labels; FR 449 is *Pyrrhocactus armatus*, FR 466a *P. lissocarpus* var. *gracilis*, according to the field number list in KS 4.
SGO 125454 – (corp), ar, sp

Ritter s.n.: *Pyrrhocactus kunzei* (Förster) Borg – *Cacti*, 262, 1937. (Sphalm.

'kuwzei'. Repeated by Y. Ito, Explan. Diagr. Austroechinocactinae, 228, 1957 (cf. RPS 8), and by F. Ritter in Succulenta 1959(10): 130, 1959 (cf. RPS 10).

- Chile: ca. 50 km südlich von Copiapo" = c. 50 km S of Copiapo. - / 1. / 1956.
U - sem

Ritter s.n.: *Pyrrhocactus paucicostatus* (F. Ritter) F. Ritter var. *viridis* (F. Ritter) F. Ritter – Succulenta 1959(10): 131, 1959.

- Chile: "Nord-Chile". – Locality data according to index card associated with the seed sample at ZSS.
ZSS S10375 – sem (Leg. F. Ritter (ex Fa. Winter) 1964.)

Ritter s.n.: *Rebutia hybr.*

- Bolivia: Tarija; O'Connor; "Narvaez Nr. 2 x 8 (?)". – Also identified as FR 754 x 762; 754 is *Rebutia albipilosa*, 762 is *Rebutia kupperiana* according to KS 4.
SGO 124468 – rad, corp, ar, sp

Ritter s.n.: *Sulcorebutia hybr.*

- Bolivia: Cochabamba; "Quillacollo, Nr. 7 x 8". – The original label is numbered as "FR 751 x 752, Mischform" = intermediates 751 x 752; FR 751 is identified as *Sulcorebutia* sp., 752 as *S. verticillacantha* var. *verticosior*, in the field-number list in KS 4.
SGO 122075 – rad, corp, ar, sp

Ritter s.n.: *Weberbauerocereus hybr.*

- Peru: Arequipa; "Quicacha". – = "*Weberbauerocereus rauhii* cf. FR 154 x *Weberbauerocereus weberbaueri* var. *horridispinus* FR 129a."
SGO 121131 – (corp), ar, sp

Ritter s.n.: *Weingartia hybr.*

- Bolivia: Santa Cruz; "Perez". - / 7. / 1958. – "Mischformen *Weing.* sp. nov. FR 814 x *hediniana* FR 1083". 814 was later described as *W. lanata*.
SGO 121326 – (corp), ar, sp

Ritter s.n.: *Echinopsis sp.*

- loc. 1: Bolivia: Santa Cruz: Florida; "westlich von Mairana" = W of Mairana. – The original label gives the number as "FR 378 + FR 379 + FR 778 ?"; the jar contains several similar fragments. FR 378 is identified as *Echinopsis rojasii* in the field-number list in KS 4, FR 379 and FR 778 as *E. sp.*
SGO 121374 – (corp), ar, sp

Ritter s.n.: *Espostoa hybr.*

- loc. 1: Peru: Huancavelica; "oberhalb Huancavelica" = above Huancavelica. – "Exemplar des Blütenphotos (bei Haus) (22 Rippen)" = specimen of the flower photograph (near house) (22 ribs). The original label has the number

as "FR 281 × 295" and identifies the collection as the hybrid between *Espostoa lanata* and *Seticereus (Borzicactus) aurivillus*.

SGO 122158 – (corp), ar, sp, ceph

Ritter s.n.: *Echinopsis* sp.

loc. 2: Bolivia: Cochabamba / Santa Cruz; "zw. Palmar u. Río Mizque, Passhöhe" = between Palmar and Río Mizque, culmination of pass. – The original label gives the number as "FR 378 + FR 379 + FR 778 ?"; the jar contains several similar fragments. FR 378 is identified as *Echinopsis rojasii* in the field-number list in KS 4, FR 379 and FR 778 as *E. sp.*

SGO 121375 – (corp), ar, sp

Ritter s.n.: *Espostoa* hybr.

loc. 2: Peru: Piura; "oberhalb Huancabamba" = above Huancabamba. – "Kleines Exemplar oberhalb des Seitenbaches" = small specimen from above the side-river. The original label has the number as "FR 281 × 295" and identifies the collection as the hybrid between *Espostoa lanata* and *Seticereus (Borzicactus) aurivillus*.

SGO 122159 – (corp), ar, sp

The Ritter Collections by Taxa

This alphabetic list of taxa includes all names accepted by Ritter in his field-number list in KS 4, plus all recorded combinations of these, or - respectively - their basionyms. These are cross-referenced to the names as used by Ritter. Names given in bold are nomenclaturally valid while those given in *italics* are nomenclaturally invalid, illegitimate or incorrect.

Please note that unidentified species are included at the *beginning* of each genus.

Acanthocalycium

brevispinum: Ritter 968

catamarcense: Ritter 969

chionanthum: Ritter 967

glaucum: Ritter 970

klimpelianum: Ritter 458

spiniflorum: Ritter 3

spiniflorum fa. *klimpelianum* → ***Acanthocalycium klimpelianum***

spiniflorum fa. *violaceum* → ***Acanthocalycium violaceum***

spiniflorum var. *klimpelianum* → ***Acanthocalycium klimpelianum***

thionanthum var. *brevispinum* → ***Acanthocalycium brevispinum***

thionanthum var. *chionanthum* → ***Acanthocalycium chionanthum***

thionanthum var. *glaucum* → ***Acanthocalycium glaucum***

violaceum: Ritter 1095

Acanthocereus

albicaulis → ***Mirabella albicaulis***

brasiliensis → ***Pseudoacanthocereus brasiliensis***

Acantholobivia

haagei → ***Rebutia haagei***

Acanthopetalus

mirabilis → ***Setiechinopsis mirabilis***

Acanthorhopsalis

sp.: Ritter 417

brevispina: Ritter 1419; Ritter s.n.

houlettiana → ***Rhopsalis houlettiana***

incahuasina: Ritter 888

monacantha: Ritter 887

monacantha var. *samaipatana* → ***Acanthorhopsalis samaipatana***

paranganiensis: Ritter 343

samaipatana: Ritter 361

Arequipa

aurantiaca → ***Matucana aurantiaca***

australis: Ritter 1080; Ritter s.n.

clavata → ***Neoporteria clavata***

hempeliana: Ritter 127a; Ritter 598

hempeliana var. *subtilispina*: Ritter 598a

leucotricha → ***Oreocereus leucotrichus***

myriacantha → *Matucana myriacantha*

rettigii: Ritter 127

rettigii var. *borealis*: Ritter 127b

spinosissima: Ritter 196

varicolor → *Oreocereus varicolor*

Arequipiopsis

hempeliana → *Arequipa hempeliana*

Armatocereus

arduus: Ritter 1060

balsasensis: Ritter 273a

cartwrightianus: Ritter 297

ghiesbreghtii: Ritter 139; Ritter 139a

ghiesbreghtii var. *oligogonus*: Ritter 296

laetus: Ritter 285

mataranus: Ritter 672

mataranus var. *ancashensis*: Ritter 672a

oligogonus → *Armatocereus ghiesbreghtii* var. *oligogonus*

procerus: Ritter 566

procerus var. *armatus*: Ritter 131

rauhii: Ritter 273

rupicola: Ritter 1318

Arrojadoa

albiflora: Ritter 1244

multiflora: Ritter 1243

penicillata: Ritter 1242; Ritter 1335

penicillata var. *decumbens*: Ritter 1242a

polyantha → *Micranthocereus polyanthus*

rhodantha: Ritter 1241

rhodantha var. *minensis*: Ritter 1241a

Arthroocereus

bylesianus → *Pygmaocereus bylesianus*

campos-portoi: Ritter 1258

mirabilis → *Setiechinopsis mirabilis*

odorus: Ritter 1354

rondonianus: Ritter 1355

Austrocactus

hibernus: Ritter 226

spiniflorus: Ritter 462

Austrocephalocereus

dybowskii → *Espostopsis dybowskii*

fluminensis → *Coleocephalocereus fluminensis*

Austrocylindropuntia

exaltata: Ritter 137

floccosa: Ritter 136; Ritter 171; Ritter 563

intermedia: Ritter 305

lagopus: Ritter 152

lagopus fa. *rauhii*: Ritter 136a

lauliacoana: Ritter 1418; Ritter 1449
machacana: Ritter 701
pachypus: Ritter 172
salmiana → *Opuntia salmiana*
shaferi → *Austrocylindropuntia vestita* var. *shaferi*
subulata: Ritter 652
teres: Ritter 97
verschaffeltii: Ritter 410; Ritter 410a; Ritter 410b; Ritter 889
vestita: Ritter 1047; Ritter 114; Ritter 891
vestita var. *shaferi*: Ritter 61
weingartiana: Ritter 1048; Ritter 60

Aylostera

albiflora → *Rebutia albiflora*
albipilosa → *Rebutia albipilosa*
camargoensis → *Rebutia camargoensis*
fiebrigii → *Rebutia fiebrigii*
kupperiana → *Rebutia kupperiana*
muscula → *Rebutia muscula*
pulvinosa → *Rebutia pulvinosa*
spgazziniana var. *atroviridis* → *Rebutia spgazziniana* var. *atroviridis*
steinmannii → *Rebutia steinmannii*
tuberosa → *Rebutia tuberosa*

Azureocereus

hertlingianus → *Browningia hertlingiana*
viridis → *Browningia viridis*

Binghamia

acanthura → *Loxanthocereus acanthurus*
humboldtii → *Borzicactus humboldtii*

Blossfeldia

atroviridis: Ritter 748
atroviridis var. *intermedia*: Ritter 748a
liliputana: Ritter 89; Ritter 89a
liliputana var. *atroviridis* → *Blossfeldia atroviridis*
liliputana var. *formosa*: Ritter 89b; Ritter 943
minima: Ritter 750
pedicellata: Ritter 749

Bolivicereus

sp.: Ritter 1157
brevicaulis: Ritter 839
croceus: Ritter 1471
rufus: Ritter 840
samaipatanus: Ritter 355
samaipatanus var. *multiflorus*: Ritter 355a
serpens → *Borzicactella serpens*
tenuiserpens → *Borzicactella tenuiserpens*

Borzicactella

serpens: Ritter 288

- tenuiserpens*: Ritter 282
- Borzicactus
- sp.*: Ritter 427
- acanthurus* → *Loxanthocereus acanthurus*
- aurantiacus* → *Matucana aurantiaca*
- aurantiacus* var. *megalanthus* → *Matucana megalantha*
- aureiflorus* → *Matucana aureiflora*
- aureispinus* → *Hildewintera aureispina*
- aurivillus*: Ritter 295
- cajamaricensis*: Ritter 679
- calviflorus*: Ritter 1068
- celsianus* → *Oreocereus celsianus*
- celsianus* var. *trollii* → *Oreocereus trollii*
- decumbens* → *Haageocereus decumbens*
- doelzianus* → *Morawetzia doelziana*
- faustianus* → *Loxanthocereus faustianus*
- fieldianus*: Ritter 170
- fieldianus* var. *tessellatus*: Ritter 680
- formosus* → *Matucana formosa*
- fossulatus* → *Oreocereus fossulatus*
- fruticosus* → *Matucana fruticosa*
- gracilis* → *Loxanthocereus gracilis*
- gracilis* var. *camanaensis* → *Loxanthocereus camanaensis*
- hempelianus* var. *spinossissimus* → *Arequipa spinossissima*
- humboldtii*: Ritter 292
- hybr.*: Ritter 278; Ritter s.n.
- intertextus* → *Matucana intertexta*
- intertextus* var. *celendinensis* → *Matucana celendinensis*
- jajoianus* → *Loxanthocereus jajoianus*
- leucotrichus* → *Oreocereus leucotrichus*
- myriacanthus* → *Matucana myriacantha*
- neoroezlii*: Ritter 301
- oreodoxus* → *Eomatucana oreodoxa*
- paucicostatus* → *Matucana paucicostata*
- plagiostoma*: Ritter 577
- purpureus*: Ritter 577a
- ritteri* → *Matucana ritteri*
- samaipatanus* → *Bolivocereus samaipatanus*
- samaipatanus* var. *multiflorus* → *Bolivocereus samaipatanus* var. *multiflorus*
- samnensis*: Ritter 1078; Ritter 304
- serpens* → *Borzicactella serpens*
- sextonianus* → *Loxanthocereus sextonianus*
- straussii* → *Cleistocactus straussii*
- sulcifer* → *Loxanthocereus sulcifer*
- tenuiserpens* → *Borzicactella tenuiserpens*
- tessellatus* → *Borzicactus fieldianus* var. *tessellatus*

- tominensis* → *Cleistocactus tominensis*
trollii → *Oreocereus trollii*
weberbaueri → *Matucana weberbaueri*
weberbaueri var. *myriacanthus* → *Matucana myriacantha*

Borzipostoa

- sp.*: Rüter 281a; Rüter 281b

Brasilicactus

- graessneri*: Rüter 1276
graessneri var. *stellatus*: Rüter 1276a
haselbergii: Rüter 1275; Rüter 1275b

Brasilicereus

- breviflorus*: Rüter 1337
phaeacanthus: Rüter 1239
phaeacanthus ssp. *breviflorus* → *Brasilicereus breviflorus*

Brasiliopuntia

- sp.*: Rüter 1255; Rüter 1279; Rüter 1351; Rüter 367

Brasiliparodia

- brevihamata*: Rüter 1277
brevihamata fa. *conjungens*: Rüter 1277b
brevihamata var. *mollispina*: Rüter 1277a
buenekeri: Rüter 1278
buenekeri fa. *conjungens*: Rüter 1284a
buenekeri var. *intermedia*: Rüter 1284
catarinensis: Rüter 1401; Rüter 1401a
rechensis: Rüter 1463

Brasilocactus

- graessneri* → *Brasilicactus graessneri*
haselbergii → *Brasilicactus haselbergii*

Bridgesia

- cumingii* → *Weingartia cumingii*
villosa → *Neoporteria villosa*

Browningia

- sp.*: Rüter 193a
albiceps: Rüter 1319
altissima → *Gymnanthocereus altissima*
caineana → *Castellanosia caineana*
candelaris: Rüter 192; Rüter 192a; Rüter 426
chlorocarpa → *Gymnanthocereus chlorocarpus*
columnaris: Rüter 1294
herlingiana: Rüter 149
icaensis: Rüter 193
microsperma: Rüter 568
pilleifer → *Gymnanthocereus pilleifer*
riosaniensis → *Rauhocereus riosaniensis*
viridis: Rüter 669

Buiningia

- aurea* → *Coleocephalocereus aureus*

brevicylindrica → *Coleocephalocereus brevicylindricus*

Cactus

aureus → *Corryocactus aureus*
bahiensis → *Melocactus bahiensis*
chiloensis → *Trichocereus chiloensis*
chlorocarpus → *Gymnanthocereus chlorocarpus*
cruciformis → *Lepismium cruciforme*
curvispinus → *Pyrrhocactus curvispinus*
ficus-indica → *Opuntia ficus-indica*
gibbosus → *Gymnocalycium gibbosum*
horridus → *Pereskia horrida*
humboldtii → *Borzicactus humboldtii*
laetus → *Armatocereus laetus*
lanatus → *Espostoa lanata*
linkii → *Notocactus linkii*
melocactoides → *Melocactus melocactoides*
micranthus → *Rhipsalis micrantha*
ottonis → *Notocactus ottonis*
placentiformis → *Discocactus placentiformis*
serpens → *Borzicactella serpens*
villosus → *Neoporteria villosa*
zehntneri → *Melocactus zehntneri*

Calymanthium

fertile: Ritter 1295
substerile: Ritter 315

Castellanosia

caineana: Ritter 843

Cephalocereus

blossfeldiorum → *Thrixanthocereus blossfeldiorum*
bradei → *Pilosocereus bradei*
brasiliensis → *Pilosocereus brasiliensis*
fluminensis → *Coleocephalocereus fluminensis*
guentheri → *Vatricania guentheri*
leucostele → *Stephanocereus leucostele*
luetzelburgii → *Coleocephalocereus luetzelburgii*
minensis → *Cipocereus minensis*
penicillatus → *Arrojadoa penicillata*
polyanthus → *Micranthocereus polyanthus*
purpureus → *Micranthocereus purpureus*
rhodanthus → *Arrojadoa rhodantha*
tweedyanus → *Pilosocereus tweedyanus*
ulei → *Facheiroa ulei*
zehntneri → *Pilosocereus zehntneri*

Cephalocleistocactus

chrysocephalus: Ritter 326
pallidus: Ritter 324
ritteri → *Cleistocactus ritteri*

Cereus

- sp.*: Ritter 878; Ritter *s.n.*
acanthurus → *Loxanthocereus acanthurus*
acidus → *Eulychnia acida*
adscendens → *Eriocereus adscendens*
aethiops: Ritter 424
alacriportanus: Ritter 1008
alacriportanus var. *bageanus* → *Cereus bageanus*
albicaulis → *Mirabella albicaulis*
alticostatus → *Monvillea alticostata*
andalgalensis → *Trichocereus andalgalensis*
apiciflorus → *Corryocactus apiciflorus*
arequipensis → *Neoraimondia peruviana* fa. *arequipensis*
articulatus → *Tephrocactus articulatus*
atacamensis → *Trichocereus atacamensis*
aurivillus → *Borzicactus aurivillus*
bageanus: Ritter 1007
baumannii → *Cleistocactus baumannii*
bonplandii → *Eriocereus bonplandii*
brachypetalus → *Corryocactus brachypetalus*
brevistylus → *Corryocactus brevistylus*
bridgesii → *Trichocereus bridgesii*
cabralensis: Ritter 1412
calcirupicola: Ritter 1011
calcirupicola ssp. *cabralensis* → *Cereus cabralensis*
calcirupicola ssp. *cipoensis* → *Cereus cipoensis*
calcirupicola var. *cabralensis* → *Cereus cabralensis*
calcirupicola var. *cipoensis* → *Cereus cipoensis*
campinensis ssp. *piedadensis* → *Monvillea piedadensis*
campinensis var. *piedadensis* → *Monvillea piedadensis*
candelaris → *Browningia candelaris*
candicans → *Trichocereus candicans*
cartwrightianus → *Armatocereus cartwrightianus*
castaneus → *Eulychnia castanea*
catamarcensis → *Pyrrhocactus catamarcensis*
catingicola → *Pilosocereus catingicola*
cephalomacrostibas → *Weberbauerocereus cephalomacrostibas*
chilensis var. *eburneus* → *Trichocereus chiloensis* var. *eburneus*
chilensis var. *panhoplites* → *Trichocereus chiloensis* var. *panhoplites*
chlorocarpus → *Gymnanthocereus chlorocarpus*
cipoensis: Ritter 1411
coccineus → *Mediocactus coccineus*
colosseus: Ritter 387
comarapanus: Ritter 877
coquimbanus → *Trichocereus coquimbanus*
coryne → *Stetsonia coryne*
crassisepalus: Ritter 1012

- decumbens* → *Haageocereus decumbens*
deserticola → *Trichocereus deserticola*
diffusus → *Monvillea diffusa*
dybowskii → *Espositoopsis dybowskii*
euchlorus ssp. *alticostatus* → *Monvillea alticostata*
euchlorus ssp. *leucanthus* → *Monvillea leucantha*
euchlorus ssp. *rhodoleucanthus* → *Monvillea rhodoleucantha*
eyriesii → *Echinopsis eyriesii*
fascicularis → *Haageocereus fascicularis*
fernambucensis ssp. *sericifer* → *Cereus sericifer*
fluminensis → *Coleocephalocereus fluminensis*
forbesii: Ritter 20
forbesii var. *bolivianus*: Ritter 76; Ritter 76a
ghiesbreghtii → *Armatocereus ghiesbreghtii*
goiasensis: Ritter 1282
guelichii → *Eriocereus guelichii*
hildmannianus ssp. *xanthocarpus* → *Cereus xanthocarpus*
huascha → *Trichocereus huascha*
huilunchu: Ritter 105
humboldtii → *Borzicactus humboldtii*
ianthothele → *Pfeiffera ianthothele*
iquiquensis → *Eulychnia iquiquensis*
jamacaru: Ritter 1249
jamacaru ssp. *goiasensis* → *Cereus goiasensis*
laetus → *Armatocereus laetus*
lamprospermus: Ritter 1197
lamprospermus ssp. *colosseus* → *Cereus colosseus*
laniceps → *Cleistocactus laniceps*
lanosus: Ritter 1196
leucostele → *Stephanocereus leucostele*
limensis → *Haageocereus limensis*
litoralis → *Trichocereus litoralis*
luetzelburgii → *Coleocephalocereus luetzelburgii*
lumbricoides → *Rhipsalis lumbricoides*
martinii → *Eriocereus martinii*
melanotrichus → *Corryocactus melanotrichus*
microspermus → *Browningia microsperma*
minensis → *Cipocereus minensis*
minutiflorus → *Wilmattea minutiflora*
multangularis → *Haageocereus multangularis*
neonesioticus: Ritter 1009
neonesioticus var. *interior*: Ritter 1421
obtusus: Ritter 1010; Ritter 1259
ovatus → *Tephrocactus ovatus*
pachyrhizus: Ritter 1195
parviflorus → *Cleistocactus parviflorus*
paxtonianus → *Monvillea paxtoniana*

penicillatus → *Arrojadoa penicillata*
pentaedrophorus → *Pilosocereus pentaedrophorus*
phaeacanthus → *Brasilicereus phaeacanthus*
phaeacanthus var. *breviflorus* → *Brasilicereus breviflorus*
phatnospermus → *Monvillea phatnosperma*
plagiostoma → *Borzicactus plagiostoma*
rhodacanthus → *Denmoza rhodacantha*
rhodanthus → *Arrojadoa rhodantha*
rhodoleucanthus → *Monvillea rhodoleucantha*
ritteri ssp. *parapetiensis* → *Monvillea parapetiensis*
sericifer: Ritter 1410
smaragdiflorus → *Cleistocactus smaragdiflorus*
spgazzinii → *Monvillea spgazzinii*
spgazzinii var. *ebenacanthus* → *Monvillea ebenacantha*
spinibarbis → *Trichocereus spinibarbis*
stenogonus: Ritter 1194
strausii → *Cleistocactus strausii*
strigosus → *Trichocereus strigosus*
tacaquirensis → *Trichocereus tacaquirensis*
tarijensis → *Trichocereus tarijensis*
tephracanthus → *Eriocereus tephracanthus*
terscheckii → *Trichocereus terscheckii*
thelegonus → *Trichocereus thelegonus*
tominensis → *Cleistocactus tominensis*
trollii → *Oreocereus trollii*
tubiflorus → *Echinopsis tubiflora*
tupizensis → *Cleistocactus tupizensis*
undatus → *Hylocereus undatus*
uruguayanus: Ritter 1438
versicolor → *Haageocereus versicolor*
weberbaueri → *Weberbauerocereus weberbaueri*
xanthocarpus: Ritter 1006

Chilena

chilensis → *Pyrrhocactus chilensis*
jussieui → *Pyrrhocactus jussieui*
kunzei → *Pyrrhocactus kunzei*
napina → *Thelocephala napina*
nidus → *Neoporteria nidus*
odieri → *Thelocephala odieri*
subgibbosa → *Neoporteria subgibbosa*

Chileniopsis

villosa → *Neoporteria villosa*

Chileorebutia

aerocarpa → *Thelocephala aerocarpa*
duripulpa → *Thelocephala duripulpa*
esmeraldana → *Thelocephala esmeraldana*
glabrescens → *Thelocephala glabrescens*

krausii → *Thelocephala krausii*
malleolata → *Thelocephala malleolata*
malleolata var. *solitaria* → *Thelocephala malleolata* var. *solitaria*
napina → *Thelocephala napina*
odieri → *Thelocephala odieri*

Cinnabarinea

pseudocinnabarina var. *microthelis*: Ritter 971
walterspielii: Ritter 973
walterspielii var. *sanguiflora*: Ritter 973a

Cipocereus

bradei → *Pilosocereus bradei*
crassisepalus → *Cereus crassisepalus*
minensis → *Cipocereus minensis*
minensis: Ritter 1013
minensis ssp. *pleurocarpus* → *Cipocereus pleurocarpus*
pleurocarpus: Ritter 1327
pusilliflorus → *Floribunda pusilliflora*

Cleistocactus

sp.: Ritter 336; Ritter 358a; Ritter 413; Ritter 837
acanthurus → *Loxanthocereus acanthurus*
aureispinus → *Hildewintera aureispina*
ayopayanus: Ritter 834
azerensis: Ritter 836
baumannii: Ritter 19; Ritter 19a; Ritter 19b; Ritter 19c; Ritter 19d
baumannii ssp. *chacoanus* → *Cleistocactus chacoanus*
baumannii ssp. *croceiflorus* → *Cleistocactus croceiflorus*
baumannii var. *paraguariensis* → *Cleistocactus paraguariensis*
brevispinus: Ritter 1297
brookei var. *flavispinus*: Ritter 1129
buchtienii: Ritter 353; Ritter 353a; Ritter 353c; Ritter 824
candelilla: Ritter 357
capadalensis: Ritter 828
chacoanus: Ritter 841; Ritter 842
chacoanus var. *santacruzensis*: Ritter 356
chrysacanthus: Ritter 827
crassicaulis: Ritter 829
crassicaulis var. *paucispinus*: Ritter 829a
croceiflorus: Ritter 1185; Ritter 1185a
fieldianus → *Borzicactus fieldianus*
fusiflorus: Ritter 823
glaucus: Ritter 112
glaucus var. *plurispinus*: Ritter 112a
granjaensis: Ritter 106
hildegardiae: Ritter 1126
humboldtii → *Borzicactus humboldtii*
hybr.: Ritter s.n.
jujuyensis: Ritter 59; Ritter 59a; Ritter 820

jujuyensis var. *fulvus*: Ritter 59b
laniceps: Ritter 603
laniceps var. *plurispinus*: Ritter 603a
luribayensis: Ritter 832
micropetalus: Ritter 830
morawetzianus: Ritter 159
muyurinensis: Ritter 821
neoroezii → *Borzicactus neoroezii*
otuyensis: Ritter 1002
palhuayensis: Ritter 324
palhuayensis var. *camachoensis*: Ritter 835
paraguariensis: Ritter 1185b
parviflorus: Ritter 345
parviflorus var. *aiquilensis*: Ritter 359
parviflorus var. *comarapanus*: Ritter 358
pilcomayoensis: Ritter 825
pseudostrausii: Ritter 1145
pungens: Ritter 664
raeae: Ritter 113
rhodacanthus → *Denmoza rhodacantha*
ritteri: Ritter 325
rojai → *Cleistocactus smaragdiflorus* fa. *rojai*
samaipatanus → *Bolivocereus samaipatanus*
smaragdiflorus: Ritter 1003; Ritter 1004; Ritter 1146
smaragdiflorus fa. *rojai*: Ritter 831
strausii: Ritter 68
tarijensis: Ritter 69
tenuiserpens → *Borzicactella tenuiserpens*
tominensis: Ritter 826
tupizensis: Ritter 67; Ritter 67a
varispinus: Ritter 108
villazulensis: Ritter 1296
villamontesii: Ritter 1128; Ritter 1147
viridiflorus: Ritter 323
vulpis-cauda: Ritter 847

Clistanthocereus

calviflorus → *Borzicactus calviflorus*
hertlingianus → *Browningia hertlingiana*
samnensis → *Borzicactus samnensis*
tessellatus → *Borzicactus fieldianus* var. *tessellatus*

Coleocephalocereus

aureus: Ritter 1341
aureus ssp. *brevicylindricus* → *Coleocephalocereus brevicylindricus*
brevicylindricus: Ritter 1440
decumbens: Ritter 1340
dybowskii → *Espositoopsis dybowskii*
flavisetus: Ritter 1339

fluminensis: Ritter 1262
fluminensis ssp. *paulensis* → *Coleocephalocereus paulensis*
fluminensis var. *paulensis* → *Coleocephalocereus paulensis*
goebelianus: Ritter 1234
hybr.: Ritter s.n.
luetzelburgii: Ritter 1233
minensis → *Cipocereus minensis*
paulensis: Ritter 1352
pleurocarpus → *Cipocereus pleurocarpus*

Copiapoa

sp.: Ritter 444; Ritter s.n.
alticostata: Ritter 717
atacamensis var. *calderana* → *Copiapoa calderana*
boliviana: Ritter 205
bridgesii: Ritter 245
calderana: Ritter 507
calderana var. *spinosior*: Ritter 1316
carrizalensis: Ritter 508
carrizalensis var. *gigantea*: Ritter 508a
chaniaralensis: Ritter 527
cinerascens: Ritter 524
cinerascens var. *grandiflora* → *Copiapoa grandiflora*
cinerascens var. *intermedia*: Ritter 216
cinerea: Ritter 207; Ritter 207b
cinerea ssp. *columna-alba* → *Copiapoa columna-alba*
cinerea ssp. *gigantea* → *Copiapoa gigantea*
cinerea ssp. *longistaminea* → *Copiapoa longistaminea*
cinerea var. *albispina*: Ritter 207a; Ritter 266
cinerea var. *columna-alba* → *Copiapoa columna-alba*
cinerea var. *dealbata* → *Copiapoa dealbata*
cinerea var. *eremophila* → *Copiapoa eremophila*
cinerea var. *gigantea* → *Copiapoa gigantea*
cinerea var. *haseltoniana* → *Copiapoa gigantea* var. *haseltoniana*
cinerea var. *tenebrosa* → *Copiapoa tenebrosa*
columna-alba: Ritter 530
columna-alba var. *nuda*: Ritter 530a
coquimbana var. *alticostata* → *Copiapoa alticostata*
coquimbana var. *armata*: Ritter 1461
coquimbana var. *fiedleriana* → *Copiapoa fiedleriana*
coquimbana var. *pendulina* → *Copiapoa pendulina*
coquimbana var. *pseudocoquimbana* → *Copiapoa pseudocoquimbana*
coquimbana var. *vallenarensis* → *Copiapoa vallenarensis*
coquimbana var. *wagenknechtii*: Ritter 718
cuprea: Ritter 510
dealbata: Ritter 509
dealbata fa. *gigantea* → *Copiapoa carrizalensis* var. *gigantea*
dealbata var. *carrizalensis* → *Copiapoa carrizalensis*

- desertorum*: Rüter 529
desertorum var. *hornilloensis* → *Copiapoa hornilloensis*
desertorum var. *rubriflora* → *Copiapoa rubriflora*
desertorum var. *rupestris* → *Copiapoa rupestris*
dura: Rüter 546
echinata: Rüter 506
echinata fa. *pulla*: Rüter 506b
echinata var. *borealis*: Rüter 506a; Rüter 512
echinoides var. *cuprea* → *Copiapoa cuprea*
eremophila: Rüter 476
esmeraldana: Rüter 1457
fiedleriana: Rüter 251
gigantea: Rüter 208b
gigantea var. *haseltoniana*: Rüter 208
grandiflora: Rüter 523
haseltoniana → *Copiapoa gigantea* var. *haseltoniana*
hornilloensis: Rüter 1149
humilis: Rüter 464
humilis var. *esmeraldana* → *Copiapoa esmeraldana*
humilis var. *longispina* → *Copiapoa longispina*
humilis var. *paposoensis* → *Copiapoa paposoensis*
humilis var. *taltalensis* → *Copiapoa taltalensis*
hypogaea: Rüter 261
hypogaea var. *barquiténsis*: Rüter 654
krainziana: Rüter 210
krainziana var. *scopulina*: Rüter 209
longispina: Rüter 505
longistaminea: Rüter 531; Rüter 532
marginata: Rüter 245a; Rüter 511
marginata var. *bridgesii* → *Copiapoa bridgesii*
megarhiza: Rüter 231
megarhiza var. *echinata* → *Copiapoa echinata*
megarhiza var. *microrhiza*: Rüter 231a
melanohystris: Rüter 1150
mollicula: Rüter 525
montana: Rüter 211a; Rüter 522
olivana: Rüter 1443
paposoensis: Rüter 1148; Rüter s.n.
pendulina: Rüter 504
pepiniana var. *fiedleriana* → *Copiapoa fiedleriana*
pseudocoquimbana: Rüter 1086; Rüter 247
pseudocoquimbana var. *chaniarensis*: Rüter 230a
pseudocoquimbana var. *domeykoensis*: Rüter 1091
pseudocoquimbana var. *vulgata*: Rüter 230
rarissima: Rüter 1452
rubriflora: Rüter 211
rupestris: Rüter 528

serpentsulcata: Ritter 246; Ritter 246?
serpentsulcata var. *castanea*: Ritter 711
solaris: Ritter 541
streptocaulon: Ritter s.n.
taltalensis: Ritter 526
tenebrosa: Ritter 1444
tenuissima: Ritter 539; Ritter 540
tocopillana: Ritter 1057
vallenarensis: Ritter 1087
varispinata: Ritter 1447

Corryocactus

sp.: Ritter 1454; Ritter 442; Ritter 686
acervatus: Ritter 558
apiciflorus: Ritter 1300
aureus: Ritter 269
ayacuchoensis: Ritter 1298; Ritter 157
ayopayanus: Ritter 875
brachycladus: Ritter 657
brachypetalus: Ritter 271
brevistylus: Ritter 122; Ritter 122a
brevistylus var. *puquiensis*: Ritter 176
charazanensis: Ritter 119
chavinilloensis: Ritter 689
cuajonesensis: Ritter 638
erectus: Ritter 666
gracilis: Ritter 1299
huincoensis: Ritter 1070
matucanensis: Ritter 629
megarhizus: Ritter 559
melaleucus: Ritter 687
melanotrichus: Ritter 103; Ritter 103b; Ritter 103c
odoratus: Ritter 1301
otuyensis: Ritter 1020
pilispinus: Ritter 1071
prostratus: Ritter 180
pulquinensis: Ritter 876
puquiensis → *Corryocactus brevistylus* var. *puquiensis*
pyroporphyranthus: Ritter 1481
quadrangularis: Ritter 179; Ritter 179a
quivillanus: Ritter 688
serpens: Ritter 1302
solitarius: Ritter 634
spiniflorus → *Austrocactus spiniflorus*
tarijensis: Ritter 77
tenuiculus: Ritter 1058

Cumulopuntia

sp.: Ritter 1164

- alboareolata*: Ritter 184
berteri: Ritter 121; Ritter 121c; Ritter 121d; Ritter 242; Ritter 242a; Ritter 242b
boliviana: Ritter 395
crassicylindrica: Ritter 673
echinacea: Ritter 198; Ritter 198a; Ritter 198b
famatinensis: Ritter 1111
frigida: Ritter 346
galerasensis: Ritter 1045
hystrix: Ritter 1165
ignescens: Ritter 551; Ritter 552
ignota: Ritter 560
kuehnrchiana: Ritter 121a
multiareolata: Ritter 275
pampana: Ritter 395a
pentlandii: Ritter 1163; Ritter 394; Ritter 65e
pentlandii var. *colchana*: Ritter 65b
pentlandii var. *dactylifera*: Ritter 65; Ritter 65a; Ritter 65c; Ritter 65d
rossiana: Ritter 892; Ritter 892a; Ritter 892b
subterranea: Ritter 91
ticnamarensis: Ritter 574
tortispina: Ritter 550
tubercularis: Ritter 553
tumida: Ritter 1324
unguispina var. *major*: Ritter 1077

Cylindropuntia

- intermedia* → *Austrocyllindropuntia intermedia*
pachypus → *Austrocyllindropuntia pachypus*
salmiana → *Opuntia salmiana*
subulata → *Austrocyllindropuntia subulata*
teres → *Austrocyllindropuntia teres*
tunicata var. *aricensis*: Ritter 637
tunicata var. *chilensis*: Ritter 637a
verschaffeltii → *Austrocyllindropuntia verschaffeltii*
vestita → *Austrocyllindropuntia vestita*

Dactylanthocactus

- graessneri* → *Brasilicactus graessneri*

Denmoza

- sp.*: Ritter 1019
rhodacantha: Ritter 10; Ritter 1018; Ritter 10a

Digitorebutia

- brachyantha* var. *ritteri* → *Rebutia ritteri*
cincinnata → *Rebutia steinmannii* var. *cincinnata*
costata var. *eucaliptana* → *Rebutia eucaliptana*
friedrichiana → *Rebutia friedrichiana*
haagei → *Rebutia haagei*
haagei var. *orurensis* → *Rebutia orurensis*

iscayachensis → ***Rebutia iscayachensis***

orurensis → ***Rebutia orurensis***

steinmannii → ***Rebutia steinmannii***

Discocactus

hartmannii: Ritter 949

horstii: Ritter 1483

placentiformis: Ritter 950

Echinocactus

aspillagae → ***Pyrrhocactus aspillagae***

aurantiacus → ***Matucana aurantiaca***

bodenbenderianus → ***Gymnocalycium bodenbenderianum***

bolivianus → ***Copiapoa boliviana***

borchersii → ***Oroya borchersii***

bridgesii → ***Copiapoa bridgesii***

bulbocalyx → ***Pyrrhocactus bulbocalyx***

caespitosus → ***Notocactus caespitosus***

candicans → ***Trichocereus candicans***

capillensis → ***Gymnocalycium capillense***

chilensis → ***Pyrrhocactus chilensis***

chionanthus → ***Acanthocalycium chionanthum***

chrysacanthion → ***Parodia chrysacanthion***

cinerascens → ***Copiapoa cinerascens***

cinereus → ***Copiapoa cinerea***

clavatus → ***Neoporteria clavata***

courantii → ***Wigginsia courantii***

cumingii → ***Weingartia cumingii***

curvispinus → ***Pyrrhocactus curvispinus***

damsii → ***Gymnocalycium damsii***

denudatus → ***Gymnocalycium denudatum***

eyriesii → ***Echinopsis eyriesii***

famatimensis → ***Lobivia famatimensis***

fidaianus → ***Weingartia fidaiana***

fiebrigii → ***Rebutia fiebrigii***

fiedlerianus → ***Copiapoa fiedleriana***

formosus → ***Trichocereus formosus***

gibbosus → ***Gymnocalycium gibbosum***

gracillimus → ***Frailea gracillima***

graessneri → ***Brasilicactus graessneri***

grahlianus → ***Frailea grahliana***

grossei → ***Eriocactus grossei***

hartmannii → ***Discocactus hartmannii***

haselbergii → ***Brasilicactus haselbergii***

haynei → ***Matucana haynei***

herteri → ***Notocactus herteri***

horridus → ***Pyrrhocactus horridus***

humilis → ***Copiapoa humilis***

huottii → ***Echinopsis huottii***

hybogonus var. *saglioni* → *Gymnocalycium saglionis*
islayensis → *Islaya islayensis*
jussieui → *Pyrrhocactus jussieui*
kunzei → *Pyrrhocactus kunzei*
leucanthus → *Echinopsis leucantha*
leucotrichus → *Oreocereus leucotrichus*
linkii → *Notocactus linkii*
maassii → *Parodia maassii*
mammulosus → *Notocactus mammulosus*
marginatus → *Copiapoa marginata*
microspermus → *Parodia microsperma*
mostii → *Gymnocalycium mostii*
muricatus → *Notocactus muricatus*
myriacanthus → *Matucana myriacantha*
napinus → *Thelocephala napina*
nidus → *Neoporteria nidus*
obrepandus → *Echinopsis obrepanda*
odieri → *Thelocephala odieri*
ottonis → *Notocactus ottonis*
ottonis var. *paraguayensis* → *Notocactus ottonis* var. *paraguayensis*
oxygonus → *Echinopsis oxygona*
pentlandii → *Lobivia pentlandii*
peruvianus → *Oroya peruviana*
pflanzii → *Gymnocalycium pflanzii*
phaeodiscus → *Frailea phaeodisca*
polyacanthus → *Wigginsia polyacantha*
prolifer → *Gymnocalycium proliferum*
pumilus → *Frailea pumila*
pumilus var. *gracillimus* → *Frailea gracillima*
rhodacanthus → *Denmoza rhodacantha*
saglioni → *Gymnocalycium saglionis*
sanagastus → *Parodia sanagasta*
sandillon → *Eriosyce sandillon*
schickendantzii → *Gymnocalycium schickendantzii*
schwebsianus → *Parodia schwebsiana*
sellowii → *Wigginsia sellowii*
sellowii var. *macracanthus* → *Wigginsia sellowii* var. *macracantha*
spiniflorus → *Acanthocalycium spiniflorum*
steinmannii → *Rebutia steinmannii*
stellatus → *Gymnocalycium stellatum*
strausianus → *Pyrrhocactus strausianus*
streptocaulon → *Copiapoa streptocaulon*
stuemeri → *Parodia stuemeri*
stuemeri var. *tilcarensis* → *Parodia tilcarensis*
subgibbosus → *Neoporteria subgibbosa*
submammulosus → *Notocactus submammulosus*
taltalensis → *Copiapoa taltalensis*

umadeave → *Pyrrhocactus umadeave*
uruguayensis → *Gymnocalycium uruguayense*
villosus → *Neoporteria villosa*
weberbaueri → *Matucana weberbaueri*

Echinocereus

candicans → *Trichocereus candicans*

Echinopsis

sp.: Ritter 1151; Ritter 379; Ritter 778; Ritter 778a; Ritter 781; Ritter 781a; Ritter 785; Ritter 788; Ritter 789; Ritter 791; Ritter 792; Ritter 983; Ritter 986; Ritter *s.n.*

ancistrophora: Ritter 408

ancistrophora ssp. *arachnacantha* → *Echinopsis arachnacantha*

ancistrophora var. *densiseta* → *Echinopsis arachnacantha* var. *densiseta*

ancistrophora var. *polyancistra* → *Echinopsis polyancistra*

angelesiae → *Trichocereus angelesiae*

arachnacantha: Ritter 360; Ritter 360a

arachnacantha var. *densiseta*: Ritter 360b

atacamensis → *Trichocereus atacamensis*

aurea → *Hymenorebutia aurea*

aurea var. *callochrysea* → *Hymenorebutia aurea* var. *callochrysea*

aurea var. *catamarcensis* → *Hymenorebutia aurea* var. *catamarcensis*

aurea var. *depressicostata* → *Hymenorebutia aurea* var. *depressicostata*

aurea var. *lariojensis* → *Hymenorebutia aurea* var. *lariojensis*

aurea var. *quinesensis* → *Hymenorebutia quinesensis*

ayopayana: Ritter 809; Ritter *s.n.*

bertramiana → *Trichocereus bertramianus*

boyuibensis: Ritter 777a; Ritter 784

brevispina → *Acanthocalycium brevispinum*

bridgesii: Ritter 102

bridgesii ssp. *yungasensis* → *Echinopsis yungasensis*

bridgesii var. *tenuispina*: Ritter 102a

bruchii → *Trichocereus bruchii*

caespitosa → *Lobivia caespitosa*

caineana → *Lobivia caineana*

cajasensis: Ritter 1172

calliantholilacina: Ritter 350b; Ritter 776

camarguensis → *Trichocereus camarguensis*

candicans → *Trichocereus candicans*

catamarcensis → *Pyrrhocactus catamarcensis*

cephalomacrostibas → *Weberbauerocereus cephalomacrostibas*

chacoana var. *spinosior* → *Echinopsis rhodotricha* var. *spinosior*

chiloensis → *Trichocereus chiloensis*

chionantha → *Acanthocalycium chionanthum*

chrysochete → *Lobivia chrysochete*

comarapana: Ritter 376b; Ritter 786; Ritter 786a

cuzcoensis → *Trichocereus cuzcoensis*

deserticola → *Trichocereus deserticola*

- deserticola* var. *fulvilana* → *Trichocereus fulvilanus*
eyriesii: Rüter 1404
fallax var. *callochrysea* → *Hymenorebutia aurea* var. *callochrysea*
fallax var. *catamarcensis* → *Hymenorebutia aurea* var. *catamarcensis*
fallax var. *cylindrica* → *Hymenorebutia aurea* var. *cylindrica*
fallax var. *depressicostata* → *Hymenorebutia aurea* var. *depressicostata*
ferox → *Lobivia ferox*
formosa → *Trichocereus formosus*
fulvilana → *Trichocereus fulvilanus*
glauca → *Trichocereus glaucus*
glauca fa. *pendens* → *Trichocereus glaucus* fa. *pendens*
hempeliana → *Arequipa hempeliana*
hertrichiana → *Neolobivia hertrichiana*
herzogiana var. *totorensis* → *Trichocereus totorensis*
huascha → *Trichocereus huascha*
huascha var. *auricolor* → *Trichocereus auricolor*
huottii: Rüter 376; Rüter 376/377
huottii var. *longispina*: Rüter 377
hybr.: Rüter 788a
hystrichoides: Rüter 806
ibicutensis: Rüter 380
ingens → *Trichocereus ingens*
klimpeliana → *Acanthocalycium klimpelianum*
knuthiana → *Trichocereus knuthianus*
korethroides → *Trichocereus korethroides*
leucantha: Rüter 11
litoralis → *Trichocereus litoralis*
longispina → *Lobivia longispina*
mamillosa: Rüter 79a
mamillosa ssp. *silvatica* → *Echinopsis silvatica*
mamillosa var. *orozasana*: Rüter 779
mamillosa var. *rüteri*: Rüter 79
mamillosa var. *tamboensis*: Rüter 780
maximiliana → *Lobivia maximiliana*
mirabilis → *Setiechinopsis mirabilis*
nigra → *Lobivia longispina* var. *nigra*
obrepanda: Rüter 350; Rüter 350a
orurensis → *Trichocereus tarijensis* var. *orurensis*
oxygona: Rüter 1271
oxygona fa. *brevispina*: Rüter 1383
pachanoi → *Trichocereus pachanoi*
pampana → *Lobivia pampana*
paraguayensis: Rüter 1198
pasacana → *Trichocereus atacamensis* var. *pasacana*
pentlandii → *Lobivia pentlandii*
perezianis: Rüter 787
peruviana → *Trichocereus pachanoi* fa. *peruvianus*

- poco* → *Trichocereus tarijensis* var. *poco*
polyancistra: Rüter 42
pugionacantha → *Lobivia pugionacantha*
purpureopilosa → *Trichocereus purpureopilosus*
pygmaea → *Rebutia pygmaea*
quinesensis → *Hymenorebutia quinesensis*
randallii → *Trichocereus randallii*
rhodacantha → *Denmoza rhodacantha*
rhodotricha: Rüter 783b
rhodotricha var. *brevispina*: Rüter 1205
rhodotricha var. *spinosior*: Rüter 783; Rüter 783a
rüteri → *Echinopsis mamillosa* var. *rüteri*
rojasii: Rüter 378
rossii → *Lobivia rossii*
santaensis → *Trichocereus santaensis*
schieliana → *Lobivia schieliana*
silvatica: Rüter 782
silvestrii: Rüter 612
skottsbergii → *Trichocereus skottsbergii*
spinibarbis → *Trichocereus spinibarbis*
spiniflora → *Acanthocalycium spiniflorum*
strigosa → *Trichocereus strigosus*
subdenudata: Rüter 1132
tacaquirensis → *Trichocereus tacquirensis*
tamboensis → *Echinopsis mamillosa* var. *tamboensis*
tapecuana: Rüter 777
tarijensis → *Trichocereus tarijensis*
tegeleriana → *Lobivia tegeleriana*
terscheckii → *Trichocereus terscheckii*
thelegona → *Trichocereus thelegonus*
tiegeliana → *Hymenorebutia tiegeliana*
tubiflora: Rüter 987
tunariensis → *Trichocereus tunariensis*
uebelmanniana → *Trichocereus uebelmannianus*
violacea → *Acanthocalycium violaceum*
volliana → *Trichocereus vollianus*
werdermanniana → *Trichocereus werdermannianus*
yungasensis: Rüter 331
- Echinorebutia
fiebrigii → *Rebutia fiebrigii*
- Eomatucana
oreodoxa: Rüter 1311
- Epiphyllum
crispatum → *Rhipsalis crispata*
phyllanthus: Rüter 1022; Rüter 1192; Rüter 311; Rüter 311b
- Erdisia
sp.: Rüter 424; Rüter 430; Rüter 445

- erecta* → *Corryocactus erectus*
melanotricha → *Corryocactus melanotrichus*
quadrangularis → *Corryocactus quadrangularis*
sextoniana → *Loxanthocereus sextonianus*
spiniflora → *Austrocactus spiniflorus*
tenuicula → *Corryocactus tenuiculus*

Eriocactus

- ampliocostatus*: Rüter 1182
claviceps: Rüter 1283
grossei: Rüter 1182b
grossei var. *aureispinus*: Rüter 1182a
leninghausii: Rüter 1274
leninghausii var. *minor*: Rüter 1274a
magnificus: Rüter 1270
warasii: Rüter 1400

Erioccephala

- grossei* → *Eriocactus grossei*
leninghausii → *Eriocactus leninghausii*

Eriocereus

- sp.*: Rüter 1017; Rüter 849; Rüter s.n.
adscendens: Rüter 1235
bonplandii: Rüter 16; Rüter 25; Rüter 848
guelichii: Rüter 1194; Rüter 1199
martinii: Rüter 1184
polyacanthus: Rüter 413
tarijensis: Rüter 619
tephpracanthus: Rüter 393

Eriosyce

- aerocarpa* → *Thelocephala aerocarpa*
algarrobensis: Rüter 1456
aspillagae → *Pyrrhocactus aspillagae*
aurata var. *spinibarbis* → *Eriosyce spinibarbis*
ausseliana → *Eriosyce ihotzkyana* var. *ausseliana*
bulbocalyx → *Pyrrhocactus bulbocalyx*
chilensis → *Pyrrhocactus chilensis*
chilensis var. *albidiflora* → *Pyrrhocactus chilensis* var. *albidiflorus*
confinis → *Pyrrhocactus confinis*
crispa → *Pyrrhocactus crispus*
crispa ssp. *atroviridis* → *Pyrrhocactus atroviridis*
crispa var. *atroviridis* → *Pyrrhocactus atroviridis*
crispa var. *carrizalensis* → *Pyrrhocactus carrizalensis*
crispa var. *huascensis* → *Pyrrhocactus huascensis*
crispa var. *totalensis* → *Pyrrhocactus totalensis*
curvispina → *Pyrrhocactus curvispinus*
curvispina var. *aconcaguensis* → *Pyrrhocactus horridus* var.
aconcaguensis
curvispina var. *armata* → *Pyrrhocactus armatus*

- curvispina* var. *choapensis* → *Pyrrhocactus choapensis*
curvispina var. *mutabilis* → *Pyrrhocactus horridus* var. *mutabilis*
curvispina var. *robusta* → *Pyrrhocactus horridus* var. *robustus*
engleri → *Pyrrhocactus engleri*
esmeraldana → *Thelocephala esmeraldana*
garaventae → *Pyrrhocactus garaventae*
heinrichiana ssp. *intermedia* → *Pyrrhocactus setosiflorus* var. *intermedius*
heinrichiana ssp. *simulans* → *Pyrrhocactus simulans*
heinrichiana var. *intermedia* → *Pyrrhocactus setosiflorus* var. *intermedius*
heinrichiana var. *setosiflora* → *Pyrrhocactus setosiflorus*
ihotzkyana: Ritter 253; Ritter 253?
ihotzkyana var. *ausseliana*: Ritter 254
islayensis → *Islaya islayensis*
korethroides → *Trichocereus korethroides*
krausii → *Thelocephala krausii*
kunzei → *Pyrrhocactus kunzei*
kunzei var. *transitensis* → *Pyrrhocactus transitensis*
lapampaensis: Ritter 255
limariensis → *Pyrrhocactus limariensis*
marksiana → *Pyrrhocactus marksianus*
marksiana var. *gracilis* → *Pyrrhocactus lissocarpus* var. *gracilis*
marksiana var. *lissocarpa* → *Pyrrhocactus lissocarpus*
megacarpa: Ritter 514
napina → *Thelocephala napina*
napina var. *duripulpa* → *Thelocephala duripulpa*
odieri → *Thelocephala odieri*
odieri ssp. *fulva* → *Thelocephala fulva*
odieri ssp. *glabrescens* → *Thelocephala glabrescens*
recondita → *Pyrrhocactus reconditus*
rodentiophila: Ritter 264
rodentiophila var. *lanata*: Ritter 515
sandillon: Ritter 240; Ritter 240a
sandillon var. *algarrobensis* → *Eriosyce algarrobensis*
senilis ssp. *coimasensis* → *Neoporteria coimasensis*
sociabilis → *Neoporteria sociabilis*
spinibarbis: Ritter 534
strausiana → *Pyrrhocactus strausianus*
subgibbosa → *Neoporteria subgibbosa*
subgibbosa ssp. *clavata* → *Neoporteria clavata*
subgibbosa var. *castanea* → *Neoporteria castanea*
subgibbosa var. *clavata* → *Neoporteria clavata*
subgibbosa var. *litoralis* → *Neoporteria litoralis*
subgibbosa var. *nigrihorrida* → *Neoporteria nigrihorrida*
subgibbosa var. *vallenarensis* → *Neoporteria vallenarensis*
subgibbosa var. *wagenknechtii* → *Neoporteria wagenknechtii*
taltalensis → *Pyrrhocactus taltalensis*

taltalensis ssp. *echinus* → *Pyrrhocactus echinus*
taltalensis ssp. *paucicostata* → *Pyrrhocactus paucicostatus*
taltalensis ssp. *pilisipina* → *Pyrrhocactus pilispinus*
taltalensis var. *echinus* → *Pyrrhocactus echinus*
taltalensis var. *floccosa* → *Pyrrhocactus floccosus*
taltalensis var. *pygmaea* → *Pyrrhocactus pygmaeus*
tenebrica → *Thelocephala tenebrica*
umadeave → *Pyrrhocactus umadeave*
villosa → *Neoporteria villosa*

Erythrorhipsalis

cereuscula → *Rhipsalis cereuscula*

Espostoa

blossfeldiorum → *Thrixanthocereus blossfeldiorum*
calva: Ritter 1314
dybowskii → *Espostopsis dybowskii*
guentheri → *Vatricania guentheri*
haagei: Ritter 144
haagei var. *borealis*: Ritter 144b
haagei var. *sammensis*: Ritter 144a
huanucoensis: Ritter 665
hybr.: Ritter 586; Ritter s.n.
hylaea: Ritter 668
lanata: Ritter 281; Ritter 281c
lanata var. *floridaensis*: Ritter 281f
lanata var. *procera*: Ritter 281e
lanianuligera: Ritter 660; Ritter 660a
mirabilis: Ritter 670
mirabilis var. *primigena*: Ritter 1061
nana: Ritter 166
procera → *Espostoa lanata* var. *procera*
ritteri: Ritter 274
ruficeps: Ritter 573a
senilis → *Thrixanthocereus senilis*
superba: Ritter 572
superba fa. *cristata*: Ritter 572a
ulei → *Facheiroa ulei*

Espostopsis

dybowskii: Ritter 1211

Eulychnia

acida: Ritter 232
acida var. *elata*: Ritter 651
acida var. *procumbens*: Ritter 650
aricensis: Ritter 197
barquitensis: Ritter 215
breviflora: Ritter 214a
breviflora var. *taltalensis*: Ritter 214
breviflora var. *tenuis*: Ritter 215a

castanea: Ritter 241
iquiquensis: Ritter 202
iquiquensis var. *pullilana*: Ritter 479b
morromorenoensis: Ritter 202a; Ritter 479
ritteri: Ritter 276
saint-pieana: Ritter 479a
saint-pieana var. *barquitensis* → *Eulychnia barquitensis*
spinibarbis → *Trichocereus spinibarbis*

Euporteria

chilensis → *Pyrrhocactus chilensis*
clavata → *Neoporteria clavata*
nidus → *Neoporteria nidus*
subgibbosa → *Neoporteria subgibbosa*
villosa → *Neoporteria villosa*

Facheiroa

blossfeldiorum → *Thrixanthocereus blossfeldiorum*
chaetacantha → *Zehntnerella chaetacantha*
chaetacantha var. *montealtoi* → *Zehntnerella chaetacantha* var.
montealtoi
pilosa: Ritter 1000
squamosa ssp. *polygona* → *Zehntnerella polygona*
squamosa var. *polygona* → *Zehntnerella polygona*
ulei: Ritter s.n.

Floribunda

pusilliflora: Ritter 1232

Frailea

albicolumnaris: Ritter 1385a
albifusca: Ritter 1392
asperispina: Ritter 1368
asterioides var. *backebergii*: Ritter 1363a
asterioides var. *harmoniana*: Ritter 1363
aureispina: Ritter 1386
aureispina var. *pallidior*: Ritter 1391
caespitosa → *Notocactus caespitosus*
castanea ssp. *harmoniana* → *Frailea asterioides* var. *harmoniana*
gracillima: Ritter 948; Ritter 948a
gracillima ssp. *albifusca* → *Frailea albifusca*
gracillima ssp. *horstii* → *Frailea horstii*
grahliana: Ritter 1257
horstii: Ritter 1353; Ritter s.n.
perumbilicata: Ritter 1385
perumbilicata var. *spinosior*: Ritter 1385c
phaeodisca: Ritter 1362
pumila: Ritter 1364; Ritter 1364a; Ritter 1365; Ritter 1367
pumila ssp. *maior* → *Frailea pumila* var. *maior*
pumila var. *gracillima* → *Frailea gracillima*
pumila var. *maior*: Ritter 1364b

pygmaea ssp. *altigibbera* → *Frailea pygmaea* var. *altigibbera*

pygmaea ssp. *asperispina* → *Frailea asperispina*

pygmaea ssp. *aureispina* → *Frailea aureispina*

pygmaea ssp. *lilalunula* → *Frailea pygmaea* var. *lilalunula*

pygmaea var. *altigibbera*: Rüter 1370a

pygmaea var. *curvispina*: Rüter 1371

pygmaea var. *lilalunula*: Rüter 1385b

pygmaea var. *longispina*: Rüter 1369

pygmaea var. *major*: Rüter 1370

pygmaea var. *phaeodisca* → *Frailea phaeodisca*

pygmaea var. *planicosta*: Rüter 1366; Rüter s.n.

Furiolobivia

ferox → *Lobivia ferox*

longispina → *Lobivia longispina*

nigra → *Lobivia longispina* var. *nigra*

Gymnantha

cumingii → *Weingartia cumingii*

Gymnanthocereus

altissimus: Rüter 291

chlorocarpus: Rüter 290

macracanthus: Rüter 1062

microspermus → *Browningia microsperma*

pilleifer: Rüter 659

Gymnocalycium

sp.: Rüter 1097; Rüter 1103; Rüter 1105; Rüter 439

antherosteale: Rüter 963

armatum: Rüter 1131

bicolor: Rüter 433

bodenbenderianum: Rüter 23

calochlorum var. *proliferum* → *Gymnocalycium proliferum*

capillense: Rüter 434

cardenasianum: Rüter 88

cintiensis → *Weingartia cintiensis*

damsii: Rüter 1179

denudatum: Rüter 1373

denudatum var. *backebergii*: Rüter 1372

eurypleurum: Rüter 1178

fidaianum → *Weingartia fidaiana*

gibbosum: Rüter 12

glaucum: Rüter 961

guanchinense: Rüter 22

guanchinense var. *robustius*: Rüter 22b

guanchinense var. *tinogastense*: Rüter 22a

hamatum: Rüter 819

lumbrerasense: Rüter 962

mazanense: Rüter 432

mihanovichii var. *filadelfense*: Rüter 1181

mostii: Ritter 1104; Ritter 438
oenanthemum: Ritter 437
paediophilum: Ritter 1177
pflanzii: Ritter 29
pflanzii var. *albipulpa*: Ritter 397
proliferum: Ritter 440
pulquinense → *Weingartia pulquinensis*
quehlianum var. *rolfianum*: Ritter 442
quehlianum var. *stellatum* → *Gymnocalycium stellatum*
ritterianum: Ritter 436
saglionis: Ritter 21
saglionis var. *tilcarensis*: Ritter 21a; Ritter 51
schickendantzii: Ritter 444; Ritter 444b
schuetzianum: Ritter 430
spgazzinii: Ritter 33
stellatum: Ritter 435
stenopleurum: Ritter 1176
tudae: Ritter 1180
tudae var. *bolivianum*: Ritter 1133
uruguayense: Ritter 1374
villamercedense: Ritter 6
vorwerkii → *Neowerdermannia vorwerkii*
westii → *Weingartia westii*

Gymnocereus

altissimus → *Gymnanthocereus altissimus*
microspermus → *Browningia microsperma*

Haageocereus

sp.: Ritter 435
acranthus var. *fortalezensis* → *Haageocereus fulvus*
acranthus var. *metachrous* → *Haageocereus limensis* var. *metachrous*
albispinus: Ritter 678
albus → *Weberbauerocereus albus*
australis: Ritter 126; Ritter 126b; Ritter 126d
australis fa. *nanus*: Ritter 126c
australis fa. *subtilispinus*: Ritter 126a
cephalomacrostibas → *Weberbauerocereus cephalomacrostibas*
chalaensis: Ritter 187
choscicensis var. *albispinus* → *Haageocereus albispinus*
choscicensis var. *dichromus* → *Haageocereus multangularis* var.
dichromus
chryseus: Ritter 147a; Ritter 585
churinensis → *Weberbauerocereus churinensis*
cuzcoensis → *Weberbauerocereus cuzcoensis*
cuzcoensis var. *tenuiarboreus* → *Weberbauerocereus cuzcoensis* var.
tenuiarboreus
decumbens: Ritter 187b
decumbens fa. *spiniosior* → *Haageocereus decumbens* var. *spiniosior*

- decumbens* var. *brevispinus*: Rüter 1024
decumbens var. *spinosior*: Rüter 187a
deflexispinus → *Haageocereus limensis* var. *deflexispinus*
dichromus → *Haageocereus multangularis* var. *dichromus*
fascicularis: Rüter 125; Rüter 601
faustianus → *Loxanthocereus faustianus*
fulvus: Rüter 584
fulvus var. *yautanensis*: Rüter 1067
hybr.: Rüter s.n.
icensis: Rüter 146
icosagonoides: Rüter 169
icosagonoides fa. *heteracanthus*: Rüter 169a
johnsonii → *Weberbauerocereus johnsonii*
lanugispinus: Rüter 583
laredensis var. *pseudoversicolor* → *Haageocereus pacalaensis* var.
pseudoversicolor
limensis: Rüter 134
limensis var. *andicola*: Rüter 145
limensis var. *brevispinus*: Rüter 145c
limensis var. *deflexispinus*: Rüter 145b
limensis var. *metachrous*: Rüter 146a
limensis var. *zonatus*: Rüter 145a
longicomus → *Weberbauerocereus longicomus*
multangularis: Rüter 147
multangularis var. *aureus*: Rüter 147d
multangularis var. *dichromus*: Rüter 147e
multangularis var. *pseudomelanostele*: Rüter 133; Rüter 133a
multangularis var. *turbidus*: Rüter 147c; Rüter 182
pacalaensis: Rüter 294
pacalaensis var. *montanus*: Rüter 294a
pacalaensis var. *pseudoversicolor*: Rüter 294b
peculiaris → *Loxanthocereus peculiaris*
platinospinus: Rüter 318; Rüter 318a
platinospinus var. *pluriflorus*: Rüter 703
pluriflorus → *Haageocereus platinospinus* var. *pluriflorus*
pseudoversicolor → *Haageocereus pacalaensis* var. *pseudoversicolor*
rauhii → *Weberbauerocereus rauhii*
rauhii var. *laticornuus* → *Weberbauerocereus rauhii* var. *laticornuus*
subtilispinus: Rüter 582
tenuis: Rüter 126e
torataensis → *Weberbauerocereus torataensis*
turbidus → *Haageocereus multangularis* var. *turbidus*
versicolor: Rüter 302
versicolor fa. *fuscus* → *Haageocereus versicolor* var. *fuscus*
versicolor var. *fuscus*: Rüter 303
vulpes: Rüter 1059
weberbaueri → *Weberbauerocereus weberbaueri*

- weberbaueri* var. *horridispinus* → *Weberbauerocereus weberbaueri* var. *horridispinus*
winterianus → *Weberbauerocereus winterianus*
winterianus var. *australis* → *Weberbauerocereus winterianus* var. *australis*
zangalensis: Ritter 1074
zonatus → *Haageocereus limensis* var. *zonatus*
- Haagespostoa
sp.: Ritter 147b; Ritter s.n.
- Hariota
grandiflora → *Rhipsalis grandiflora*
- Harrisia
bonplandii → *Eriocereus bonplandii*
guelichii → *Eriocereus guelichii*
pomanensis ssp. *bonplandii* → *Eriocereus bonplandii*
pomanensis ssp. *tarijensis* → *Eriocereus tarijensis*
- Hatiora
salicornioides: Ritter 1350
- Helianthocereus
andalgalensis → *Trichocereus andalgalensis*
atacamensis → *Trichocereus atacamensis*
herzogianus var. *totorensis* → *Trichocereus totorensis*
huascha → *Trichocereus huascha*
huascha var. *auricolor* → *Trichocereus auricolor*
orurensis → *Trichocereus tarijensis* var. *orurensis*
poco → *Trichocereus tarijensis* var. *poco*
randallii → *Trichocereus randallii*
tarijensis → *Trichocereus tarijensis*
- Hildewintera
aureispina: Ritter 846
- Hildmannia
aspillagae → *Pyrrhocactus aspillagae*
curvispina → *Pyrrhocactus curvispina*
jussieui → *Pyrrhocactus jussieui*
kunzei → *Pyrrhocactus kunzei*
napina → *Thelocephala napina*
odieri → *Thelocephala odieri*
- Horridocactus
aconcaguensis → *Pyrrhocactus horridus* var. *aconcaguensis*
aconcaguensis var. *orientalis* → *Pyrrhocactus horridus* var. *orientalis*
andicola → *Pyrrhocactus andicola*
andicola var. *descendens* → *Pyrrhocactus andicola* var. *descendens*
andicola var. *mollensis* → *Pyrrhocactus andicola* var. *mollensis*
andicola var. *robustus* → *Pyrrhocactus andicola* var. *robustus*
armatus → *Pyrrhocactus armatus*
atroviridis → *Pyrrhocactus atroviridis*
carrizalensis → *Pyrrhocactus carrizalensis*

choapensis → *Pyrrhocactus choapensis*
crispus → *Pyrrhocactus crispus*
curvispinus → *Pyrrhocactus curvispinus*
echinus → *Pyrrhocactus echinus*
echinus var. *minor* → *Pyrrhocactus floccosus* var. *minor*
engleri → *Pyrrhocactus engleri*
eriosyzoides → *Pyrrhocactus eriosyzoides*
garaventae → *Pyrrhocactus garaventae*
grandiflorus → *Pyrrhocactus grandiflorus*
horridus → *Pyrrhocactus horridus*
lissocarpus → *Pyrrhocactus lissocarpus*
lissocarpus var. *gracilis* → *Pyrrhocactus lissocarpus* var. *gracilis*
marksianus → *Pyrrhocactus marksianus*
marksianus var. *tunensis* → *Pyrrhocactus marksianus* var. *tunensis*
paucicostatus → *Pyrrhocactus paucicostatus*
paucicostatus var. *viridis* → *Pyrrhocactus paucicostatus* var. *viridis*
vallenarensis → *Pyrrhocactus vallenarensis*

Hylocereus

sp.: Ritter 314
minutiflorus → *Wilmattea minutiflora*
peruvianus: Ritter 313
undatus: Ritter 1023

Hymenorebutia

sp.: Ritter 405
aurea: Ritter 5
aurea var. *callochrysea*: Ritter 985
aurea var. *catamarcensis*: Ritter 1094
aurea var. *cylindrica*: Ritter 445
aurea var. *depressicostata*: Ritter 18
aurea var. *lariojensis*: Ritter 1100
chlorogona: Ritter 403
cintiensis: Ritter 82; Ritter 82a; Ritter 82b; Ritter 82c; Ritter 82d
drijveriana: Ritter 982
kreuzingeri: Ritter 56
pusilla: Ritter 1170
quinesensis: Ritter 1101
tiegeliana: Ritter 384
tiegeliana var. *distefanoana*: Ritter 620
torataensis: Ritter 1160
torreana: Ritter 383

Islaya

bicolor: Ritter 589
brevicylindrica: Ritter 683
copiapoides: Ritter 684a
copiapoides var. *chalaensis*: Ritter 128
copiapoides var. *pseudomollendensis*: Ritter 128a
divaricatiflora: Ritter 588

flavida: Ritter 186
grandis: Ritter 682
islayensis: Ritter 684
islayensis var. ***copiapoides*** → ***Islaya copiapoides***
islayensis var. ***minor***: Ritter 307; Ritter 307a
krainziana: Ritter 200
maritima: Ritter 590
minor → ***Islaya islayensis*** var. ***minor***
minuscula: Ritter 1462
unguispina: Ritter 591

Lasiocereus

fulvus: Ritter 1303; Ritter s.n.
rupicola: Ritter 661

Lemaireocereus

cartwrightianus → ***Armatocereus cartwrightianus***
chlorocarpus → ***Gymnanthocereus chlorocarpus***
laetus → ***Armatocereus laetus***

Leocereus

bahiensis: Ritter 1470
bahiensis ssp. ***urandianus*** → ***Leocereus urandianus***
bahiensis var. ***urandianus*** → ***Leocereus urandianus***
urandianus: Ritter 1231

Lepismium

cruciforme: Ritter 1030; Ritter 1030a; Ritter 1030b; Ritter 1186; Ritter 1186a
dissimile → ***Rhipsalis dissimilis***
erectum → ***Pfeiffera erecta***
grandiflorum → ***Rhipsalis grandiflora***
houlettianum → ***Rhipsalis houlettiana***
ianthothele → ***Pfeiffera ianthothele***
lineare → ***Rhipsalis linearis***
lorentzianum → ***Rhipsalis lorentziana***
lumbricoides → ***Rhipsalis lumbricoides***
mataralense → ***Pfeiffera mataralensis***
mataralense var. ***floccosum*** → ***Pfeiffera mataralensis*** var. ***floccosa***
monacanthum → ***Acanthorhipsalis monacantha***
paranganiense → ***Acanthorhipsalis paranganiensis***
tucumanense → ***Rhipsalis tucumanensis***
warmingianum → ***Rhipsalis warmingiana***

Lobivia

sp.: Ritter 1136; Ritter 349; Ritter 396; Ritter 401; Ritter 796; Ritter 799;
 Ritter 800; Ritter 801; Ritter 802; Ritter 804; Ritter 805; Ritter 905;
 Ritter 972; Ritter 979; Ritter s.n.
aculeata var. ***walterspielii*** → ***Cinnabarinea walterspielii***
adpressispina: Ritter 977
albipectinata → ***Rebutia albopectinata***
andalgalensis → ***Trichocereus andalgalensis***

- arachnacantha* → *Echinopsis arachnacantha*
arachnacantha var. *densiseta* → *Echinopsis arachnacantha* var. *densiseta*
atrovirens var. *ritteri* → *Rebutia ritteri*
aurea → *Hymenorebutia aurea*
aurea var. *callochrysea* → *Hymenorebutia aurea* var. *callochrysea*
aurea var. *catamarcensis* → *Hymenorebutia aurea* var. *catamarcensis*
aurea var. *quinesensis* → *Hymenorebutia quinesensis*
backebergii ssp. *hertrichiana* → *Neolobivia hertrichiana*
backebergii ssp. *schieliana* → *Lobivia schieliana*
backebergii ssp. *wrightiana* → *Neolobivia wrightiana*
backebergii var. *hertrichiana* → *Neolobivia hertrichiana*
backebergii var. *schieliana* → *Lobivia schieliana*
backebergii var. *winteriana* → *Neolobivia winteriana*
backebergii var. *wrightiana* → *Neolobivia wrightiana*
bruchii → *Trichocereus bruchii*
buiningiana: Ritter 55
caespitosa: Ritter 808
caespitosa var. *altiplani*: Ritter 99a
caespitosa var. *rinconadensis*: Ritter 99
caineana: Ritter 347
campicola: Ritter 798
chionantha → *Acanthocalycium chionanthum*
chlorogona → *Hymenorebutia chlorogona*
chrysochete: Ritter 978
chrysochete var. *hystrix* → *Lobivia hystrix*
chrysochete var. *tenuispina* → *Lobivia tenuispina*
cinnabarina subvar. *walterspielii* → *Cinnabarinea walterspielii*
cinnabarina var. *walterspielii* → *Cinnabarinea walterspielii*
cintiensis → *Hymenorebutia cintiensis*
cruciaureispina: Ritter 667
culpinensis: Ritter 797
cylindrica → *Hymenorebutia aurea* var. *cylindrica*
densispina fa. *chlorogona* → *Hymenorebutia chlorogona*
densispina var. *kreuzingeri* → *Hymenorebutia kreuzingeri*
divaricata → *Neolobivia divaricata*
drijveriana → *Hymenorebutia drijveriana*
eucaliptana → *Rebutia eucaliptana*
famatimensis: Ritter 459
ferox: Ritter 382; Ritter 98; Ritter 98a
ferox fa. *camargensis* → *Lobivia ferox* var. *camargensis*
ferox fa. *pictiflora* → *Lobivia pictiflora*
ferox fa. *varispina* → *Lobivia varispina*
ferox var. *camargensis*: Ritter 1433
ferox var. *longispina* → *Lobivia longispina*
ferox var. *nigra* → *Lobivia longispina* var. *nigra*
formosa → *Trichocereus formosus*
formosa ssp. *bruchii* → *Trichocereus bruchii*

- formosa* ssp. *tarijensis* → *Trichocereus tarijensis*
formosa var. *bertramiana* → *Trichocereus bertramianus*
formosa var. *orurensis* → *Trichocereus tarijensis* var. *orurensis*
formosa var. *poco* → *Trichocereus tarijensis* var. *poco*
formosa var. *randallii* → *Trichocereus randallii*
formosa var. *tarijensis* → *Trichocereus tarijensis*
formosa var. *totorensis* → *Trichocereus totorensis*
formosa var. *uebelmanniana* → *Trichocereus uebelmannianus*
glaucescens: Ritter 1460
grandiflora var. *lobivoides* → *Trichocereus lobivoides*
haageana fa. *chrysantha* → *Lobivia haageana* var. *chrysantha*
haageana var. *chrysantha*: Ritter 53
haagei → *Rebutia haagei*
haagei var. *orurensis* → *Rebutia orurensis*
haagei var. *violascens* → *Rebutia violascens*
haematantha fa. *chlorogona* → *Hymenorebutia chlorogona*
haematantha var. *drijveriana* → *Hymenorebutia drijveriana*
hertrichiana → *Neolobivia hertrichiana*
hertrichiana fa. *divaricata* → *Neolobivia divaricata*
hertrichiana fa. *incaica* → *Neolobivia incaica*
hertrichiana fa. *minuta* → *Neolobivia minuta*
hertrichiana fa. *prolifera* → *Neolobivia prolifera*
horrida: Ritter 795; Ritter 974
huascha → *Trichocereus huascha*
huascha var. *andalgalensis* → *Trichocereus andalgalensis*
hybr.: Ritter s.n.
hystrix: Ritter 975
incaica → *Neolobivia incaica*
jajoiana fa. *buiningiana* → *Lobivia buiningiana*
jajoiana fa. *miniatinigra* → *Lobivia miniatinigra*
jajoiana var. *nigristoma*: Ritter 54
klimpeliana → *Acanthocalycium klimpelianum*
korethroides → *Trichocereus korethroides*
kupperiana: Ritter 600
lateritia var. *cintiensis* → *Hymenorebutia cintiensis*
lateritia var. *kupperiana* → *Lobivia kupperiana*
longispina: Ritter 80
longispina var. *nigra*: Ritter 52
maximiliana: Ritter 329; Ritter 329a; Ritter 329b
maximiliana ssp. *caespitosa* → *Lobivia caespitosa*
maximiliana var. *caespitosa* → *Lobivia caespitosa*
maximiliana var. *miniatiflora* → *Lobivia miniatiflora*
miniatiflora: Ritter 330
miniatinigra: Ritter 981
minuta → *Neolobivia minuta*
nigrostoma → *Lobivia jajoiana* var. *nigristoma*
orurensis → *Rebutia orurensis*

- pampana*: Ritter 190
pentlandii: Ritter 107; Ritter 333; Ritter 333a; Ritter 348a
pentlandii var. *maximiliana* → *Lobivia maximiliana*
pictiflora: Ritter 1137
pugionacantha: Ritter 81
pugionacantha var. *adpressispina* → *Lobivia adpressispina*
pugionacantha var. *campicola* → *Lobivia campicola*
pugionacantha var. *culpinensis* → *Lobivia culpinensis*
purpureominiata: Ritter 997
pusilla → *Hymenorebutia pusilla*
pygmaea → *Rebutia pygmaea*
pygmaea var. *colorea* → *Rebutia colorea*
pygmaea var. *friedrichiana* → *Rebutia friedrichiana*
pygmaea var. *iscayachensis* → *Rebutia iscayachensis*
rauschii: Ritter 807
rebutioides var. *chlorogona* → *Hymenorebutia chlorogona*
ritteri → *Rebutia ritteri*
rossii: Ritter 348b
rossii var. *bustilloensis*: Ritter 348
rossii var. *sayariensis*: Ritter 348c
saltensis var. *schreiteri* → *Lobivia schreiteri*
schieliana: Ritter 334; Ritter 334a
schreiteri: Ritter 984
shaferi ssp. *aurea* → *Hymenorebutia aurea*
shaferi var. *quinesensis* → *Hymenorebutia quinesensis*
silvestrii → *Echinopsis silvestrii*
spiniflora → *Acanthocalycium spiniflorum*
spiniflora var. *klimpeliana* → *Acanthocalycium klimpelianum*
spiniflora var. *violacea* → *Acanthocalycium violaceum*
steinmannii → *Rebutia steinmannii*
steinmannii var. *camargoensis* → *Rebutia camargoensis*
steinmannii var. *cincinnata* → *Rebutia steinmannii* var. *cincinnata*
tegeleriana: Ritter 1445
tegeleriana var. *puquiensis*: Ritter 175
tenuispina: Ritter 80a
thionantha var. *brevispina* → *Acanthocalycium brevispinum*
thionantha var. *catamarcensis* → *Acanthocalycium catamarcense*
thionantha var. *chionantha* → *Acanthocalycium chionanthum*
thionantha var. *glauca* → *Acanthocalycium glaucum*
tiegeliana → *Hymenorebutia tiegeliana*
tiegeliana fa. *distefanoana* → *Hymenorebutia tiegeliana* var. *distefanoana*
tiegeliana var. *distefanoana* → *Hymenorebutia tiegeliana* var. *distefanoana*
tiegeliana var. *pusilla* → *Hymenorebutia pusilla*
varispina: Ritter 1161
vilcabambae → *Neolobivia vilcabambae*

walterspielii → *Cinnabarinea walterspielii*
winteriana → *Neolobivia winteriana*
wrightiana → *Neolobivia wrightiana*
wrightiana var. *winteriana* → *Neolobivia winteriana*

Lobiviopsis

ancistrophora → *Echinopsis ancistrophora*
bridgesii → *Echinopsis bridgesii*

Loxanthocereus

sp.: Ritter 195; Ritter 320
acanthurus: Ritter 428; Ritter 628
bicolor: Ritter 173
camanaensis: Ritter 1025
convergens: Ritter 671
deserticola: Ritter 185
erectispinus: Ritter 1075; Ritter 147f
eremiticus: Ritter 174
faustianus: Ritter 161
formosus → *Matucana formosa*
gracilis: Ritter 317
grandütessellatus: Ritter 167
hybr.: Ritter s.n.
jajoianus: Ritter 189
montanus: Ritter 581
neglectus: Ritter 135
neglectus var. *chimbotensis*: Ritter 135a; Ritter 277a
otuscensis: Ritter 579
pacaranensis: Ritter 277; Ritter 286
parvütessellatus: Ritter 578
peculiaris: Ritter 681
puquiensis: Ritter 181
sextonianus: Ritter 910
sulcifer: Ritter 633
trujilloensis: Ritter 1469; Ritter 316
variabilis: Ritter 148; Ritter 148a; Ritter 148b; Ritter 319
xylorhizus: Ritter 321

Maihuenia

albolanata: Ritter 414
albolanata fa. *viridulispina*: Ritter 414a
cumulata: Ritter 415
latispina: Ritter 416
poepigii: Ritter 233

Maihueniopsis

albomarginata: Ritter 418
archiconoidea: Ritter 256
atacamensis: Ritter 548; Ritter 548?
boliviana → *Cumulopuntia boliviana*
camachoi: Ritter 547; Ritter 547a

colorea: Ritter 513
conoidea: Ritter 549
crassispina: Ritter 721
domeykoensis: Ritter 1093
grandiflora: Ritter 720
hypogaea: Ritter 1051; Ritter 66
leoncito: Ritter 497
leptoclada: Ritter 1050
mandragora: Ritter 1046
nigrispina → *Opuntia nigrispina*
ovata: Ritter 417
pentlandii → *Cumulopuntia pentlandii*
wagenknechtii: Ritter 719

Malacocarpus

caespitosus → *Notocactus caespitosus*
curvispinus → *Pyrrhocactus curvispinus*
grossei → *Eriocactus grossei*
haselbergii → *Brasilicactus haselbergii*
linkii → *Notocactus linkii*
mammulosus → *Notocactus mammulosus*
muricatus → *Notocactus muricatus*
sellowii → *Wigginsia sellowii*
sellowii var. *macracanthus* → *Wigginsia sellowii* var. *macracantha*

Maritimocereus

gracilis → *Loxanthocereus gracilis*

Matucana

aurantiaca: Ritter 596
aurantiaca var. *densispina*: Ritter 596a
aureiflora: Ritter 1310
calliantha: Ritter 1308
calliantha var. *prolifera*: Ritter 1308a
celendinensis: Ritter 692
comacephala: Ritter 587; Ritter 594
crinifera: Ritter 142a; Ritter 595
currundayensis: Ritter 164
elongata → *Matucana haynei* var. *elongata*
formosa: Ritter 658
formosa var. *minor*: Ritter 1072
fruticosa: Ritter 1307
hastifera: Ritter 1306
haynei: Ritter 142
haynei var. *elongata*: Ritter 142c
haynei var. *gigantea* → *Matucana multicolor*
humboldtii → *Borzicactus humboldtii*
hystrix → *Matucana multicolor* var. *hystrix*
intertexta: Ritter 693
intertexta var. *celendinensis* → *Matucana celendinensis*

megalantha: Ritter 593
multicolor: Ritter 142b
multicolor var. *hystrix*: Ritter 565; Ritter 911
myriacantha: Ritter 1305
myriacantha fa. *purpureoalba* → *Matucana purpureoalba*
oreodoxa → *Eomatucana oreodoxa*
pallarensis: Ritter 1076
paucicostata: Ritter 597; Ritter s.n.
purpureoalba: Ritter 1063
rarissima: Ritter 178
ritteri: Ritter 299
supertexta: Ritter 690
tuberculosa: Ritter 1073
weberbaueri: Ritter 1304
winteri: Ritter 691
yanganucensis: Ritter 592; Ritter 592b
yanganucensis var. *setosa*: Ritter 592a

Maturoya

sp.: Ritter s.n.

Mediocactus

sp.: Ritter s.n.

coccineus: Ritter 1021; Ritter 1191; Ritter 368

Mediolobivia

famatimensis → *Lobivia famatimensis*

haagei var. *orurensis* → *Rebutia orurensis*

orurensis → *Rebutia orurensis*

pectinata var. *orurensis* → *Rebutia orurensis*

pygmaea → *Rebutia pygmaea*

steinmannii → *Rebutia steinmannii*

Melocactus

acispinosus: Ritter 1208

bahiensis: Ritter 1281; Ritter 1332; Ritter 1334; Ritter 951

bahiensis fa. *acispinosus* → *Melocactus acispinosus*

bahiensis fa. *inconcinnus* → *Melocactus inconcinnus*

bellavistensis: Ritter 289

bellavistensis ssp. *onychacanthus* → *Melocactus onychacanthus*

canescens: Ritter 1333

canescens var. *montealtoi*: Ritter 1437

diersianus: Ritter 1356

diersianus fa. *rubrispinus* → *Melocactus rubrispinus*

huallancensis → *Melocactus peruvianus* fa. *huallancensis*

inconcinnus: Ritter 1331

interpositus: Ritter 1207

macrodiscus: Ritter 1209; Ritter 1209b

macrodiscus var. *minor*: Ritter 1209a

melocactoides: Ritter 1406

montanus: Ritter 1358

nitidus: Rüter 1210
onychacanthus: Rüter 700
onychacanthus var. *albescens*: Rüter 700b
onychacanthus var. *conicus*: Rüter 700a
oreas ssp. *bahiensis* → *Melocactus bahiensis*
oreas var. *bahiensis* → *Melocactus bahiensis*
peruvianus: Rüter 132; Rüter 132a; Rüter 140
peruvianus fa. *huallancensis*: Rüter 132b
rubrispinus: Rüter 1330
zehntneri: Rüter 1206
zehntneri ssp. *canescens* → *Melocactus canescens*
zehntneri var. *viridis*: Rüter 1206a

Mesechinopsis

ancistrophora → *Echinopsis ancistrophora*
polyancistra → *Echinopsis polyancistra*

Micranthocereus

sp.: Rüter 1416
aureispinus: Rüter 1482
haematocarpus: Rüter 1328
hybr.: Rüter s.n.
monteazulensis: Rüter 1214
polyanthus: Rüter 1213
purpureus: Rüter 1329
ruficeps: Rüter 1212

Microsperma

chrysacanthion → *Parodia chrysacanthion*
maassii → *Parodia maassii*
microsperma → *Parodia microsperma*

Mila

caespitosa: Rüter 162; Rüter 429; Rüter 432
caespitosa fa. *kubeana* → *Mila kubeana*
caespitosa ssp. *nealeana* → *Mila nealeana*
caespitosa var. *grandiflora*: Rüter 162a
colorea: Rüter 699
kubeana: Rüter 158
maxima: Rüter 576
nealeana: Rüter 141; Rüter 575
nealeana fa. *grandiflora*: Rüter 141a
nealeana fa. *senilis*: Rüter 557

Miqueliopuntia

miquelii: Rüter 257

Mirabella

albicaulis: Rüter 1236; Rüter 1237
minensis: Rüter 1238

Monvillea

sp.: Rüter 1016; Rüter 300; Rüter 845
albicaulis → *Mirabella albicaulis*

alticostata: Ritter 1015; Ritter 1289
chacoana: Ritter 1143; Ritter 844
diffusa: Ritter 279
ebenacantha: Ritter 1480
jaenensis: Ritter 293
leucantha: Ritter 391
minensis → *Mirabella minensis*
parapetiensis: Ritter 1144
paxtoniana: Ritter 1174a
paxtoniana var. *borealis*: Ritter 1174
phatnosperma: Ritter 1175
piedadensis: Ritter 1409
pugionifera: Ritter 1064
rhodoleucantha: Ritter 1014; Ritter 1173
spgazzinii: Ritter 1130; Ritter 1130a

Morawetzia

doelziana: Ritter 150a
doelziana fa. *calva*: Ritter 150
doelziana var. *calva* → *Morawetzia doelziana* fa. *calva*
sericata: Ritter 1309

Neocardenasia

herzogiana → *Neoraimondia herzogiana*

Neochilenia

aricensis → *Pyrrhocactus aricensis*
aspillagae → *Pyrrhocactus aspillagae*
calderana → *Pyrrhocactus calderanus*
chorosensis → *Pyrrhocactus chorosensis*
confinis → *Pyrrhocactus confinis*
dimorpha → *Pyrrhocactus dimorphus*
duripulpa → *Thelocephala duripulpa*
eriosyzoides → *Pyrrhocactus eriosyzoides*
esmeraldana → *Thelocephala esmeraldana*
floccosa → *Pyrrhocactus floccosus*
glaucescens → *Pyrrhocactus glaucescens*
gracilis → *Pyrrhocactus gracilis*
huascensis → *Pyrrhocactus huascensis*
intermedia → *Pyrrhocactus intermedius*
jussieui → *Pyrrhocactus jussieui*
krausii → *Thelocephala krausii*
kunzei → *Pyrrhocactus kunzei*
lembckei → *Thelocephala lembckei*
malleolata → *Thelocephala malleolata*
malleolata var. *solitaria* → *Thelocephala malleolata* var. *solitaria*
napina → *Thelocephala napina*
odieri → *Thelocephala odieri*
odoriflora → *Pyrrhocactus odoriflorus*
paucicostata → *Pyrrhocactus paucicostatus*

paucicostata var. *viridis* → *Pyrrhocactus paucicostatus* var. *viridis*
pilisipina → *Pyrrhocactus pilispinus*
pygmaea → *Pyrrhocactus pygmaeus*
recondita → *Pyrrhocactus reconditus*
residua → *Pyrrhocactus residuus*
robusta → *Pyrrhocactus horridus* var. *robustus*
robusta var. *vegasana* → *Pyrrhocactus horridus* fa. *vegasanus*
scoparia → *Pyrrhocactus scoparius*
setosiflora → *Pyrrhocactus setosiflorus*
setosiflora var. *intermedia* → *Pyrrhocactus setosiflorus* var. *intermedius*
simulans → *Pyrrhocactus simulans*
taltalensis → *Pyrrhocactus taltalensis*
totalensis → *Pyrrhocactus totalensis*
transitensis → *Pyrrhocactus transitensis*
wagenknechtii → *Pyrrhocactus wagenknechtii*

Neodiscocactus

hartmannii → *Discocactus hartmannii*

Neohickenia

microsperma → *Parodia microsperma*

Neolobivia

divaricata: Ritter 696

hertrichiana: Ritter 694

incaica: Ritter 1458

minuta: Ritter 695

prolifera: Ritter 1459

ritteri → *Rebutia ritteri*

vilcabambae: Ritter 697; Ritter 698

winteriana: Ritter 1312

wrightiana: Ritter 1313

Neoporteria

sp.: Ritter 1168; Ritter 443; Ritter s.n.

aricensis → *Pyrrhocactus aricensis*

aricensis var. *floribunda* → *Pyrrhocactus floribundus*

aricensis var. *saxifraga* → *Pyrrhocactus saxifragus*

armata → *Pyrrhocactus armatus*

aspillagae → *Pyrrhocactus aspillagae*

atroviridis → *Pyrrhocactus atroviridis*

bicolor → *Islaya bicolor*

bulbocalyx → *Pyrrhocactus bulbocalyx*

calderana → *Pyrrhocactus calderanus*

calderana fa. *gracilis* → *Pyrrhocactus gracilis*

carrizalensis → *Pyrrhocactus carrizalensis*

carrizalensis var. *totalensis* → *Pyrrhocactus totalensis*

castanea: Ritter 236

castanea var. *tunensis*: Ritter 236a

catamarcensis → *Pyrrhocactus catamarcensis*

chilensis → *Pyrrhocactus chilensis*

- choapensis* → *Pyrrhocactus choapensis*
chorosensis → *Pyrrhocactus chorosensis*
clavata: Rüter 482
clavata fa. *grandiflora*: Rüter 482a
clavata var. *parviflora*: Rüter 482b
clavata var. *procera*: Rüter 716
coimasensis: Rüter 473
coimasensis fa. *crassispina*: Rüter 473b
coimasensis fa. *tenuispina*: Rüter 473a
coimasensis var. *robusta*: Rüter 473c
confinis → *Pyrrhocactus confinis*
crispa → *Pyrrhocactus crispus*
curvispina → *Pyrrhocactus curvispinus*
curvispina fa. *descendens* → *Pyrrhocactus andicola* var. *descendens*
curvispina fa. *gracilis* → *Pyrrhocactus lissocarpus* var. *gracilis*
curvispina fa. *minor* → *Pyrrhocactus floccosus* var. *minor*
curvispina fa. *mollensis* → *Pyrrhocactus andicola* var. *mollensis*
curvispina fa. *orientalis* → *Pyrrhocactus horridus* var. *orientalis*
curvispina fa. *robusta* → *Pyrrhocactus andicola* var. *robustus*
curvispina var. *aconcaguensis* → *Pyrrhocactus horridus* var. *aconcaguensis*
curvispina var. *andicola* → *Pyrrhocactus andicola*
curvispina var. *carrizalensis* → *Pyrrhocactus carrizalensis*
curvispina var. *echinus* → *Pyrrhocactus echinus*
curvispina var. *engleri* → *Pyrrhocactus engleri*
curvispina var. *garaventae* → *Pyrrhocactus garaventae*
curvispina var. *grandiflora* → *Pyrrhocactus grandiflorus*
curvispina var. *lissocarpa* → *Pyrrhocactus lissocarpus*
curvispina var. *marksiana* → *Pyrrhocactus marksianus*
curvispina var. *transitensis* → *Pyrrhocactus transitensis*
curvispina var. *vallenarensis* → *Pyrrhocactus vallenarensis*
dimorpha → *Pyrrhocactus dimorphus*
echinus → *Pyrrhocactus echinus*
echinus var. *floccosa* → *Pyrrhocactus floccosus*
engleri → *Pyrrhocactus engleri*
eriocephala var. *glaucescens* → *Pyrrhocactus glaucescens*
eriosyzoides → *Pyrrhocactus eriosyzoides*
eriosyzoides var. *domeykoensis* → *Pyrrhocactus eriosyzoides* var. *domeykoensis*
esmeraldana → *Thelocephala esmeraldana*
esmeraldana var. *malleolata* → *Thelocephala malleolata*
floccosa → *Pyrrhocactus floccosus*
garaventae → *Pyrrhocactus garaventae*
gerocephala → *Neoporteria nidus* var. *gerocephala*
horrida → *Pyrrhocactus horridus*
horrida var. *armata* → *Pyrrhocactus armatus*
horrida var. *aspillagae* → *Pyrrhocactus aspillagae*

- horrida* var. *coliguayensis* → *Pyrrhocactus coliguayensis*
horrida var. *limariensis* → *Pyrrhocactus limariensis*
horrida var. *odoriflora* → *Pyrrhocactus odoriflorus*
huascensis → *Pyrrhocactus huascensis*
hybr.: Ritter 224b; Ritter s.n.
intermedia → *Pyrrhocactus intermedius*
intermedia fa. *gracilis* → *Pyrrhocactus gracilis*
intermedia fa. *pygmaea* → *Pyrrhocactus pygmaeus*
intermedia var. *calderana* → *Pyrrhocactus calderanus*
intermedia var. *pilisipina* → *Pyrrhocactus pilispinus*
intermedia var. *pulchella* → *Pyrrhocactus pulchellus*
intermedia var. *scoparia* → *Pyrrhocactus scoparius*
islayensis → *Islaya islayensis*
islayensis fa. *brevicylindrica* → *Islaya brevicylindrica*
islayensis fa. *minor* → *Islaya islayensis* var. *minor*
islayensis var. *copiapoides* → *Islaya copiapoides*
islayensis var. *divaricatiflora* → *Islaya divaricatiflora*
islayensis var. *grandis* → *Islaya grandis*
jussieui → *Pyrrhocactus jussieui*
jussieui var. *chaniarensis* → *Pyrrhocactus chaniarensis*
jussieui var. *chorosensis* → *Pyrrhocactus chorosensis*
jussieui var. *dimorpha* → *Pyrrhocactus dimorphus*
jussieui var. *huascensis* → *Pyrrhocactus huascensis*
jussieui var. *setosiflora* → *Pyrrhocactus setosiflorus*
jussieui var. *trapichensis* → *Pyrrhocactus trapichensis*
jussieui var. *wagenknechtii* → *Pyrrhocactus wagenknechtii*
krainziana → *Islaya krainziana*
kunzei → *Pyrrhocactus kunzei*
kunzei var. *confinis* → *Pyrrhocactus confinis*
laniceps: Ritter 483
limariensis → *Pyrrhocactus limariensis*
litoralis: Ritter 219
litoralis var. *intermedia*: Ritter 224a
marksiana → *Pyrrhocactus marksianus*
marksiana var. *tunensis* → *Pyrrhocactus marksianus* var. *tunensis*
microsperma: Ritter 535
microsperma var. *graciana*: Ritter 535a
microsperma var. *serenana*: Ritter 716a
multicolor: Ritter 243
napina → *Thelocephala napina*
napina fa. *glabrescens* → *Thelocephala glabrescens*
napina fa. *nuda* → *Thelocephala nuda*
napina var. *aerocarpa* → *Thelocephala aerocarpa*
napina var. *duripulpa* → *Thelocephala duripulpa*
napina var. *fankhauseri* → *Thelocephala fankhauseri*
napina var. *fulva* → *Thelocephala fulva*
napina var. *lembckei* → *Thelocephala lembckei*

- neohankeana* → *Pyrrhocactus neohankeanus*
nidus: Ritter 221; Ritter 474a
nidus var. *gerocephala*: Ritter 474
nidus var. *matancillana*: Ritter 474b
nidus var. *multicolor* → *Neoporteria multicolor*
nigrihorrida: Ritter 218; Ritter 258
nigrihorrida fa. *crassispina*: Ritter 481
odieri → *Thelocephala odieri*
odieri var. *krausii* → *Thelocephala krausii*
odieri var. *longirapa* → *Thelocephala longirapa*
odieri var. *malleolata* → *Thelocephala malleolata*
paucicostata → *Pyrrhocactus paucicostatus*
paucicostata var. *echinus* → *Pyrrhocactus echinus*
paucicostata var. *floccosa* → *Pyrrhocactus floccosus*
paucicostata var. *glaucescens* → *Pyrrhocactus glaucescens*
paucicostata var. *neohankeana* → *Pyrrhocactus neohankeanus*
paucicostata var. *viridis* → *Pyrrhocactus paucicostatus* var. *viridis*
pilisipina → *Pyrrhocactus pilisipinus*
pilisipina fa. *pygmaea* → *Pyrrhocactus pygmaeus*
pilisipina var. *pygmaea* → *Pyrrhocactus pygmaeus*
pulchella → *Pyrrhocactus pulchellus*
recondita → *Pyrrhocactus reconditus*
recondita var. *residua* → *Pyrrhocactus residuus*
recondita var. *vexata* → *Pyrrhocactus vexatus*
reichei fa. *aerocarpa* → *Thelocephala aerocarpa*
reichei fa. *duripulpa* → *Thelocephala duripulpa*
reichei fa. *floribunda* → *Pyrrhocactus floribundus*
reichei fa. *krausii* → *Thelocephala krausii*
reichei fa. *lembckei* → *Thelocephala lembckei*
reichei fa. *solitaria* → *Thelocephala malleolata* var. *solitaria*
reichei var. *aerocarpa* → *Thelocephala aerocarpa*
reichei var. *malleolata* → *Thelocephala malleolata*
residua → *Pyrrhocactus residuus*
robusta → *Neoporteria coimasensis* var. *robusta*
scoparia → *Pyrrhocactus scoparius*
setosiflora → *Pyrrhocactus setosiflorus*
setosiflora var. *intermedia* → *Pyrrhocactus setosiflorus* var. *intermedius*
simulans → *Pyrrhocactus simulans*
sociabilis: Ritter 655
sociabilis var. *napina*: Ritter 655a
strausiana → *Pyrrhocactus strausianus*
subgibbosa: Ritter 224
subgibbosa fa. *castanea* → *Neoporteria castanea*
subgibbosa fa. *litoralis* → *Neoporteria litoralis*
subgibbosa fa. *serenana* → *Neoporteria microsperma* var. *serenana*
subgibbosa fa. *tunensis* → *Neoporteria castanea* var. *tunensis*
subgibbosa var. *castanea* → *Neoporteria castanea*

subgibbosa var. *intermedia* → *Neopterteria litoralis* var. *intermedia*
subgibbosa var. *litoralis* → *Neopterteria litoralis*
subgibbosa var. *microsperma* → *Neopterteria microsperma*
subgibbosa var. *orientalis*: Rüter 224c
subgibbosa var. *robusta* → *Neopterteria coimasensis* var. *robusta*
taltalensis → *Pyrrhocactus taltalensis*
taltalensis var. *transiens* → *Pyrrhocactus transiens*
totalensis → *Pyrrhocactus totalensis*
totalensis var. *carrizalensis* → *Pyrrhocactus carrizalensis*
transiens → *Pyrrhocactus transiens*
transitensis → *Pyrrhocactus transitensis*
tuberisulcata var. *armata* → *Pyrrhocactus armatus*
tuberisulcata var. *atroviridis* → *Pyrrhocactus atroviridis*
tuberisulcata var. *robusta* → *Pyrrhocactus horridus* var. *robustus*
tuberisulcata var. *vegasana* → *Pyrrhocactus horridus* fa. *vegasanus*
umadeave → *Pyrrhocactus umadeave*
vallenarensis: Rüter 1088; Rüter 486
vallenarensis var. *atroviridis* → *Pyrrhocactus atroviridis*
vallenarensis var. *crispa* → *Pyrrhocactus crispus*
vallenarensis var. *domeykoensis* → *Pyrrhocactus eriosyzoides* var.
domeykoensis
vallenarensis var. *transitensis* → *Pyrrhocactus transitensis*
villosa: Rüter 250; Rüter 259; Rüter 259?
villosa var. *laniceps* → *Neopterteria laniceps*
wagenknechtii: Rüter 715
wagenknechtii var. *microsperma* → *Neopterteria microsperma*
wagenknechtii var. *napina*: Rüter 714
wagenknechtii var. *vallenarensis* → *Neopterteria vallenarensis*

Neoraimondia

sp.: Rüter 441
arequipensis → *Neoraimondia peruviana* fa. *arequipensis*
arequipensis var. *roseiflora* → *Neoraimondia peruviana* fa. *roseiflora*
gigantea → *Neoraimondia peruviana* fa. *gigantea*
herzogiana: Rüter 398
peruviana fa. *arequipensis*: Rüter 272
peruviana fa. *gigantea*: Rüter 168
peruviana fa. *roseiflora*: Rüter 130
peruviana fa. *sayanensis*: Rüter 130a
roseiflora → *Neoraimondia peruviana* fa. *roseiflora*

Neowerdermannia

chilensis: Rüter 199
peruviana: Rüter 191
vorwerkii: Rüter 342

Notocactus

sp.: Rüter 1415a; Rüter s.n.
acutus: Rüter 1377
ampliocostatus → *Eriocactus ampliocostatus*

- arachnitis*: Ritter 1395
arachnitis var. *minor*: Ritter 1395a
arechavaletae var. *alacriportanus*: Ritter 1027
arechavaletae var. *aureus*: Ritter 1396
arechavaletae var. *buenekeri*: Ritter 1027a; Ritter 1027b
arechavaletae var. *horstii*: Ritter 1027c
arechavaletae var. *limiticola*: Ritter 1415
arechavaletae var. *nanus*: Ritter 1389
arechavaletae var. *rubescens*: Ritter 1027d
brevihamatus → *Brasiliparodia brevihamata*
brevihamatus fa. *conjungens* → *Brasiliparodia brevihamata* fa.
conjungens
brevihamatus var. *mollispinus* → *Brasiliparodia brevihamata* var.
mollispina
buenekeri → *Brasiliparodia buenekeri*
buenekeri fa. *conjungens* → *Brasiliparodia buenekeri* fa. *conjungens*
buenekeri var. *intermedius* → *Brasiliparodia buenekeri* var. *intermedia*
buiningii: Ritter 1442
caespitosus: Ritter s.n.
campestrensis: Ritter 1398
catarinensis → *Brasiliparodia catarinensis*
claviceps → *Eriocactus claviceps*
concinnus var. *eremiticus* → *Notocactus eremiticus*
courantii → *Wigginsia courantii*
crassigibbus: Ritter 1394
cristatoides: Ritter 1478
curvispinus: Ritter 1479
dalvae: Ritter 1486
eremiticus: Ritter 1390
erinaceus subvar. *courantii* → *Wigginsia courantii*
fuscus: Ritter 1379
fuscus var. *longispinus*: Ritter 1379a
glaucinus: Ritter 1376
glaucinus var. *depressus*: Ritter 1376a
glaucinus var. *gracilis*: Ritter 1378
globularis: Ritter 1388
graessneri → *Brasilicactus graessneri*
grossei → *Eriocactus grossei*
grossei fa. *aureispinus* → *Eriocactus grossei* var. *aureispinus*
grossei var. *aureispinus* → *Eriocactus grossei* var. *aureispinus*
harmonianus: Ritter 1414
haselbergii → *Brasilicactus haselbergii*
herteri: Ritter 1387
horstii: Ritter 1269
horstii fa. *purpureiflorus* → *Notocactus horstii* var. *purpureiflorus*
horstii fa. *purpureus* → *Notocactus purpureus*
horstii var. *purpureiflorus*: Ritter 1269a

laetevirens: Rüter 1266
langsдорffii fa. *prolifer* → *Wigginsia prolifera*
langsdorffii var. *leprosororum* → *Wigginsia leprosororum*
langsdorffii var. *longispinus* → *Wigginsia longispina*
leninghausii → *Eriocactus leninghausii*
leninghausii fa. *minor* → *Eriocactus leninghausii* var. *minor*
leninghausii var. *minor* → *Eriocactus leninghausii* var. *minor*
leprosororum → *Wigginsia leprosororum*
linkii: Rüter 1026a; Rüter 1026d
linkii fa. *multiflorus*: Rüter 1026c
linkii var. *buenekeri*: Rüter 1026b
linkii var. *guaibensis*: Rüter 1264
longispinus → *Wigginsia longispina*
macracanthus → *Wigginsia sellowii* var. *macracantha*
magnificus → *Eriocactus magnificus*
mammulosus: Rüter 1382
megapotamicus fa. *multiflorus* → *Notocactus linkii* fa. *multiflorus*
megapotamicus var. *alacriportanus*: Rüter 1026
megapotamicus var. *crucicentrus*: Rüter 1380b
megapotamicus var. *horstii*: Rüter 1380
megapotamicus var. *vulgatus*: Rüter 1380a; Rüter 1380c
miniatispinus → *Notocactus securituberculatus* var. *miniatispinus*
minimus var. *tenuicylindricus* → *Notocactus tenuicylindricus*
mueller-melchersii: Rüter 1464
muricatus: Rüter 1267; Rüter 1267a; Rüter 1381; Rüter s.n.
neobuenekeri: Rüter 1397
neohorstii fa. *juvenaliformis* → *Wigginsia horstii* var. *juvenaliformis*
neohorstii var. *juvenaliformis* → *Wigginsia horstii* var. *juvenaliformis*
ottonis: Rüter 1265; Rüter 1266a; Rüter 1266b
ottonis var. *acutangularis*: Rüter 1266c
ottonis var. *globularis* → *Notocactus globularis*
ottonis var. *linkii* → *Notocactus linkii*
ottonis var. *multiflorus* → *Notocactus linkii* fa. *multiflorus*
ottonis var. *paraguayensis*: Rüter 1488
oxycostatus fa. *acutus* → *Notocactus acutus*
oxycostatus fa. *miniatispinus* → *Notocactus securituberculatus* var. *miniatispinus*
oxycostatus fa. *securituberculatus* → *Notocactus securituberculatus*
permutatus: Rüter 1455
polyacanthus → *Wigginsia polyacantha*
prolifer → *Wigginsia prolifera*
purpureus: Rüter 1268
rauschii: Rüter 1379c
rechensis → *Brasiliparodia rechensis*
rubropedatus: Rüter 1484
schumannianus var. *ampliocostatus* → *Eriocactus ampliocostatus*
scopa: Rüter 1393; Rüter 1393a; Rüter 1393b

securituberculatus: Ritter 1377a
securituberculatus var. *miniatispinus*: Ritter 1375
sellowii → *Wigginsia sellowii*
sellowii fa. *macracanthus* → *Wigginsia sellowii* var. *macracantha*
sellowii var. *courantii* → *Wigginsia courantii*
sellowii var. *macracanthus* → *Wigginsia sellowii* var. *macracantha*
spinibarbis: Ritter 1379b
submammulosus: Ritter 4; Ritter 425
succineus: Ritter 1399
tenuicylindricus: Ritter 1361
warasii → *Eriocactus warasii*

Opuntia

sp.: Ritter 1203+1204; Ritter 138; Ritter 337; Ritter 439; Ritter 446; Ritter 453; Ritter 455; Ritter 457; Ritter 704; Ritter 894; Ritter 900
albisaetacens: Ritter 604
alexanderi → *Tephrocactus alexanderi*
alexanderi var. *bruchii* → *Tephrocactus bruchii*
alko-tuna: Ritter 118
apurimacensis: Ritter 1323
articulata → *Tephrocactus articulatus*
atacamensis → *Maihueniopsis atacamensis*
boliviana → *Cumulopuntia boliviana*
brachyacantha: Ritter 117
bruchii → *Tephrocactus bruchii*
brunneogemmia: Ritter 1408
camachoi → *Maihueniopsis camachoi*
cardiosperma: Ritter 1204
catingicola: Ritter 1254
cochabambensis: Ritter 344
cognata: Ritter 1202
conjungens: Ritter 895
conoidea → *Maihueniopsis conoidea*
cordobensis: Ritter 153a; Ritter 624; Ritter 92
corrugata: Ritter 412
crassicylindrica → *Cumulopuntia crassicylindrica*
dactylifera → *Cumulopuntia pentlandii* var. *dactylifera*
discolor: Ritter 893
echinacea → *Cumulopuntia echinacea*
exaltata → *Austrocyliandropuntia exaltata*
ficus-indica: Ritter 153; Ritter 901
floccosa → *Austrocyliandropuntia floccosa*
hybr.: Ritter s.n.
hypogaea → *Maihueniopsis hypogaea*
hypogaea fa. *rossiana* → *Cumulopuntia rossiana*
ianthinantha: Ritter 644
ignescens → *Cumulopuntia ignescens*
ignota → *Cumulopuntia ignota*

- inaequilateralis*: Ritter 1322a; Ritter 151
inaequilateralis var. *angustior*: Ritter 1322
inamoena: Ritter 1252
inamoena fa. *spinigera*: Ritter 1252a
infesta: Ritter 309
interjecta: Ritter 1167
kuehnrchiana → *Cumulopuntia kuehnrchiana*
lagopus → *Austrocyllindropuntia lagopus*
leoncito → *Maihueniopsis leoncito*
limitata: Ritter 1203
longispina var. *corrugata* → *Opuntia corrugata*
mandragora → *Maihueniopsis mandragora*
microdisca: Ritter 1041; Ritter 1043; Ritter 1043a; Ritter 1044; Ritter 423
miquelii → *Miqueliopuntia miquelii*
monacantha ssp. *brunneogemmia* → *Opuntia brunneogemmia*
nigrispina: Ritter 90
orurensis: Ritter 1042; Ritter 338
ovata → *Maihueniopsis ovata*
pachypus → *Austrocyllindropuntia pachypus*
paediophila → *Tephrocactus paediophilus*
palmdora: Ritter 1253
palmdora ssp. *catingicola* → *Opuntia catingicola*
pentlandii → *Cumulopuntia pentlandii*
pentlandii var. *rossiana* → *Cumulopuntia rossiana*
pestifer: Ritter 564; Ritter 896; Ritter 897; Ritter 898
pituitosa: Ritter 1036
poepigii → *Maihuenia poepigii*
pyrrhantha: Ritter 1166
quimilo: Ritter 37
quitensis: Ritter 298; Ritter 308
rauhii → *Austrocyllindropuntia lagopus* fa. *rauhii*
retrorsa: Ritter 1201; Ritter 36; Ritter 388
roborensis: Ritter 1038
rubrogemmia: Ritter 1407
salagria: Ritter 422
salmiana: Ritter 452; Ritter 610; Ritter 614; Ritter 899
saxatilis: Ritter 1035
shaferei → *Austrocyllindropuntia vestita* var. *shaferei*
soehrensii: Ritter 554; Ritter 554a; Ritter 554b; Ritter 554c; Ritter 554d;
 Ritter 554e; Ritter 62
soehrensii var. *grandiflora*: Ritter 554g
soehrensii var. *transiens*: Ritter 554f
spinibarbis: Ritter 94
spinibarbis var. *grandiflora*: Ritter 94a
spiniflora → *Austrocactus spiniflorus*
spinigera → *Opuntia inamoena* fa. *spinigera*
strobiliformis → *Tephrocactus strobiliformis*

subterranea → *Cumulopuntia subterranea*
subulata → *Austrocyliodropuntia subulata*
subulata var. *exaltata* → *Austrocyliodropuntia exaltata*
sulphurea: Ritter 1039; Ritter 38
sulphurea ssp. *brachyacantha* → *Opuntia brachyacantha*
sulphurea ssp. *spinibarbis* → *Opuntia spinibarbis*
teres → *Austrocyliodropuntia teres*
tilcarensis: Ritter 63
tunicata var. *chilensis* → *Cylindropuntia tunicata* var. *chilensis*
verschaffeltii → *Austrocyliodropuntia verschaffeltii*
vestita → *Austrocyliodropuntia vestita*
viridirubra: Ritter 1417
viridirubra ssp. *rubrogemmia* → *Opuntia rubrogemmia*
vitelliniiflora: Ritter 389
vitelliniiflora ssp. *interjecta* → *Opuntia interjecta*
vulgaris: Ritter 1037; Ritter 1040
weberi → *Tephrocactus weberi*

Oreocereus

sp.: Ritter 409
australis → *Arequipa australis*
celsianus: Ritter 78; Ritter 78b; Ritter 78c; Ritter 78d; Ritter 78f
celsianus var. *fossulatus* → *Oreocereus fossulatus*
celsianus var. *ritteri* → *Oreocereus ritteri*
celsianus var. *trollii* → *Oreocereus trollii*
celsianus var. *varicolor* → *Oreocereus varicolor*
doelzianus → *Morawetzia doelziana*
doelzianus fa. *calva* → *Morawetzia doelziana* fa. *calva*
fossulatus: Ritter 100
fossulatus var. *rubrispinus*: Ritter 100a
hempelianus → *Arequipa hempeliana*
hybr.: Ritter s.n.
leucotrichus: Ritter 123; Ritter 123a; Ritter 123c; Ritter 123d
ritteri: Ritter 177; Ritter 177a; Ritter 177b
tacnaensis: Ritter 124; Ritter 124a
trollii: Ritter 44; Ritter 44a
varicolor: Ritter 123b; Ritter 478; Ritter 478a

Oroya

borchersii: Ritter 163
cumingii → *Weingartia cumingii*
gibbosa: Ritter 143a
laxiareolata var. *pluricentralis* → *Oroya peruviana* var. *pluricentralis*
peruviana: Ritter 143
peruviana var. *pluricentralis*: Ritter 143b
subocculta var. *pluricentralis* → *Oroya peruviana* var. *pluricentralis*

Parodia

sp.: Ritter 35
ampliocostata → *Eriocactus ampliocostatus*

- aureicentra*: Rüter 916
aureicentra var. *albifusca*: Rüter 916d
aureicentra var. *omniaurea*: Rüter 916c
aureicentra var. *varicolor* → *Parodia varicolor*
aureispina: Rüter 922
ayopayana: Rüter 746
ayopayana var. *depressa*: Rüter 746b
ayopayana var. *elata*: Rüter 746a
betaniana: Rüter 920
borealis: Rüter 120
brevihamata → *Brasiliparodia brevihamata*
brevihamata var. *mollispina* → *Brasiliparodia brevihamata* var. *mollispina*
bueneri → *Brasiliparodia bueneri*
bueneri var. *intermedia* → *Brasiliparodia bueneri* var. *intermedia*
buiningii → *Notocactus buiningii*
caespitosa → *Notocactus caespitosus*
camargensis: Rüter 86
camargensis var. *camblayana*: Rüter 724
camargensis var. *castanea* → *Parodia castanea*
camargensis var. *prolifera*: Rüter 723
cardenasii: Rüter 914
castanea: Rüter 726
catamarcensis: Rüter 24
catamarcensis var. *riojensis* → *Parodia riojensis*
catarinensis → *Brasiliparodia catarinensis*
chaetocarpa: Rüter 1135
chlorocarpa: Rüter 921
chrysacanthion: Rüter 45
cintiensis: Rüter 85a; Rüter 85b
claviceps → *Eriocactus claviceps*
columnaris: Rüter 386
columnaris var. *ochraceiflora*: Rüter 386a
comarapana: Rüter 743
comarapana var. *paucicostata*: Rüter 743a
commutans: Rüter 729
comosa: Rüter 111
compressa: Rüter 385; Rüter 385a
crassigibba → *Notocactus crassigibbus*
echinus: Rüter 747
faustiana: Rüter 934
fehseri: Rüter 1096
formosa: Rüter 735
fulvispina: Rüter 46a; Rüter 727
fulvispina var. *brevihamata*: Rüter 727a
gibbulosa: Rüter 736
glischrocarpa: Rüter 923

- gracilis*: Ritter 740
graessneri → *Brasilicactus graessneri*
grossei → *Eriocactus grossei*
grossei var. *aureispina* → *Eriocactus grossei* var. *aureispinus*
gummifera → *Uebelmannia gummifera*
haselbergii → *Brasilicactus haselbergii*
herteri → *Notocactus herteri*
heteracantha: Ritter 926
horstii → *Notocactus horstii*
leninghausii → *Eriocactus leninghausii*
leninghausii var. *minor* → *Eriocactus leninghausii* var. *minor*
liliputana → *Blossfeldia liliputana*
linkii → *Notocactus linkii*
maassii: Ritter 46h
maassii fa. *camblayana* → *Parodia camargensis* var. *camblayana*
maassii fa. *castanea* → *Parodia castanea*
maassii fa. *distortihamata*: Ritter 46f
maassii fa. *maxima* → *Parodia maxima*
maassii fa. *prolifera* → *Parodia camargensis* var. *prolifera*
maassii var. *albescens*: Ritter 46d
maassii var. *camargensis* → *Parodia camargensis*
maassii var. *carminatiflora*: Ritter 46c
maassii var. *commutans* → *Parodia commutans*
maassii var. *intermedia*: Ritter 46e
maassii var. *rectispina*: Ritter 46g
maassii var. *rubida* → *Parodia rubida*
maassii var. *shaferi*: Ritter 46
maassii var. *subterranea* → *Parodia subterranea*
maassii var. *suprema* → *Parodia suprema*
magnifica → *Eriocactus magnificus*
mairanana: Ritter 744
mammulosa → *Notocactus mammulosus*
maxima: Ritter 87
microsperma: Ritter 918
minuta: Ritter 737
mueller-melchersii → *Notocactus mueller-melchersii*
multicostata: Ritter 733
mutabilis var. *sanguiniflora* → *Parodia sanguiniflora*
nivosa: Ritter 933
obtusa: Ritter 1125; Ritter 1125a
ocampoi: Ritter 385; Ritter 738
occulta: Ritter 1152
ottonis → *Notocactus ottonis*
otuyensis: Ritter 913
paucicostata → *Parodia comarapana* var. *paucicostata*
procera: Ritter 742
purpureo-aurea: Ritter 1134

rechensis → *Brasiliparodia rechensis*
riojensis: Ritter 917
ritteri: Ritter 85
ritteri var. *cintiensis* → *Parodia cintiensis*
robustihamata: Ritter 731a
roseoalba: Ritter 728a
roseoalba var. *australis*: Ritter 728
rubida: Ritter 46b; Ritter 725; Ritter 86a
rubristaminea: Ritter 924; Ritter 925
sanagasta: Ritter 927; Ritter 952
sanagasta var. *grandiflora*: Ritter 930
sanagasta var. *minimiseminea*: Ritter 928
sanagasta var. *tenuispina*: Ritter 929
sanguiniflora: Ritter 931; Ritter 931?
sanguiniflora var. *comata*: Ritter 932
schuetziana: Ritter 48
schwebsiana: Ritter 354
scoparia: Ritter 915
setispina: Ritter 1153
sotomayorensis: Ritter 734
stuemeri: Ritter 34
submammulosa → *Notocactus submammulosus*
subterranea: Ritter 730; Ritter 731
subtiliamata: Ritter 741
succinea → *Notocactus succineus*
suprema: Ritter 912
tilcarensis: Ritter 47
tredecimcostata: Ritter 739
tredecimcostata var. *aurea*: Ritter 739b
tredecimcostata var. *minor*: Ritter 739a
tuberculata: Ritter 732
uebelmanniana: Ritter 919
varicolor: Ritter 916a
varicolor var. *robustispina*: Ritter 916b
warasii → *Eriocactus warasii*

Parviopuntia

boliviana → *Cumulopuntia boliviana*
diademata var. *ovata* → *Maihueniopsis ovata*
ignescens → *Cumulopuntia ignescens*
pentlandii → *Cumulopuntia pentlandii*
tilcarensis → *Opuntia tilcarensis*

Pereskia

sp.: Ritter 1079
aureiflora: Ritter 1413
bahiensis: Ritter 1250
diaz-romeroana: Ritter 904
horrida: Ritter 284

humboldtii: Ritter 283+284
moorei: Ritter 1033
poepigii → *Maihuenia poepigii*
sparsiflora: Ritter 640
stenantha: Ritter 1251
subulata → *Austrocylindropuntia subulata*
vargasii: Ritter 283
verticillata → *Quiabentia verticillata*
weberiana: Ritter 328
zehntneri → *Quiabentia zehntneri*

Peruvocereus

albispinus → *Haageocereus albispinus*

Pfeiffera

brevispina → *Acanthorhopsalis brevispina*
erecta: Ritter 883
gracilis: Ritter 882
ianthothele: Ritter 43
ianthothele var. *boliviana*: Ritter 43a
ianthothele var. *tarijensis*: Ritter 880
incahuasina → *Acanthorhopsalis incahuasina*
incahuasina var. *samaipatana* → *Acanthorhopsalis samaipatana*
mataralensis: Ritter 363
mataralensis var. *floccosa*: Ritter 881
monacantha → *Acanthorhopsalis monacantha*
paranganiensis → *Acanthorhopsalis paranganiensis*

Philippicereus

castaneus → *Eulychnia castanea*

Pilocereus

arrabidae → *Pilosocereus arrabidae*
bradei → *Pilosocereus bradei*
celsianus → *Oreocereus celsianus*
coerulescens → *Pilosocereus coerulescens*
fossulatus → *Oreocereus fossulatus*
gounellei → *Pilosocereus gounellei*
gounellei var. *zehntneri* → *Pilosocereus zehntneri*
leninghausii → *Eriocactus leninghausii*
leucostele → *Stephanocereus leucostele*
luetzelburgii → *Coleocephalocereus luetzelburgii*
pasacana → *Trichocereus atacamensis* var. *pasacana*
ulei → *Pilosocereus ulei*

Pilocopiapoa

solaris → *Copiapoa solaris*

Pilosocereus

sp.: Ritter 1215; Ritter 1348
arrabidae: Ritter 1260
atroflavispinus: Ritter 1349
aurilanatus: Ritter 1325

- aurisetus* ssp. *aurilanus* → *Pilosocereus aurilanus*
aurisetus ssp. *densilanus* → *Pilosocereus werdermannianus* var.
densilanus
aurisetus ssp. *werdermannianus* → *Pilosocereus werdermannianus*
azureus: Ritter 958
bradei: Ritter 1359
brasiliensis: Ritter 1360
carolinensis → *Pilosocereus flavipulvinatus* var. *carolinensis*
carolinensis var. *robustispinus*: Ritter 1217a
catingicola: Ritter 1222
catingicola ssp. *robustus* → *Pilosocereus robustus*
coerulescens: Ritter 1326
densiareolatus: Ritter 957
flavipulvinatus ssp. *carolinensis* → *Pilosocereus flavipulvinatus* var.
carolinensis
flavipulvinatus var. *carolinensis*: Ritter 1217
flavipulvinatus var. *robustispinus* → *Pilosocereus carolinensis* var.
robustispinus
floccosus ssp. *quadrilocostatus* → *Pilosocereus quadrilocostatus*
gaturianensis: Ritter 1218
gounellei: Ritter 956a
gounellei ssp. *zehntneri* → *Pilosocereus zehntneri*
gounellei var. *zehntneri* → *Pilosocereus zehntneri*
hybr.: Ritter s.n.
luetzelburgii → *Coleocephalocereus luetzelburgii*
magnificus: Ritter 1345
minensis → *Cipocereus minensis*
multilocostatus: Ritter 1346
oreus: Ritter 1226
pachycladus: Ritter 1223
pachycladus ssp. *pernambucoensis* → *Pilosocereus pernambucoensis*
paraguayensis: Ritter 1183
pentaedrophorus: Ritter 1221
pernambucoensis: Ritter 1219; Ritter 1219+1220
pernambucoensis var. *caesius*: Ritter 1220
pernambucoensis var. *montealtoi*: Ritter 1225
piuhyensis ssp. *gaturianensis* → *Pilosocereus gaturianensis*
pleurocarpus → *Cipocereus pleurocarpus*
pusilliflorus → *Floribunda pusilliflora*
quadrilocostatus: Ritter 1342
robustus: Ritter 1344
saudadensis: Ritter 1216
splendidus: Ritter 1224
superbus: Ritter 1347
superbus var. *gacapaensis*: Ritter 1343a
superbus var. *lanosior*: Ritter 1343b
superbus var. *regius*: Ritter 1343

tweedyanus: Ritter 280
ulei: Ritter 1261
werdermannianus: Ritter 960a
werdermannianus var. *densilanatus*: Ritter 960
werdermannianus var. *diamantinensis*: Ritter 959
zehntneri: Ritter 956

Piptanthocereus

aethiops → *Cereus aethiops*
alacriportanus → *Cereus alacriportanus*
bageanus → *Cereus bageanus*
cabralensis → *Cereus cabralensis*
calcirupicola → *Cereus calcirupicola*
cipoensis → *Cereus cipoensis*
colosseus → *Cereus colosseus*
comarapanus → *Cereus comarapanus*
crassisepalus → *Cereus crassisepalus*
forbesii var. *bolivianus* → *Cereus forbesii* var. *bolivianus*
goiasensis → *Cereus goiasensis*
huilunchu → *Cereus huilunchu*
lamprospermus → *Cereus lamprospermus*
lanosus → *Cereus lanosus*
neonesioticus → *Cereus neonesioticus*
neonesioticus var. *interior* → *Cereus neonesioticus* var. *interior*
obtusus → *Cereus obtusus*
pachyrhizus → *Cereus pachyrhizus*
sericifer → *Cereus sericifer*
stenogonus → *Cereus stenogonus*
xanthocarpus → *Cereus xanthocarpus*

Platyopuntia

albisaetacens → *Opuntia albisaetacens*
apurimacensis → *Opuntia apurimacensis*
atroglobosa → *Tephrocactus atroglobosus*
brachyacantha → *Opuntia brachyacantha*
brunneogemmia → *Opuntia brunneogemmia*
cardiosperma → *Opuntia cardiosperma*
chilensis: Ritter 562
cognata → *Opuntia cognata*
conjungens → *Opuntia conjungens*
cordobensis → *Opuntia cordobensis*
corrugata → *Opuntia corrugata*
discolor → *Opuntia discolor*
ianthinantha → *Opuntia ianthinantha*
inaequilateralis var. *angustior* → *Opuntia inaequilateralis* var. *angustior*
inamoena → *Opuntia inamoena*
inamoena fa. *spinigera* → *Opuntia inamoena* fa. *spinigera*
infesta → *Opuntia infesta*
interjecta → *Opuntia interjecta*

limitata → *Opuntia limitata*
microdisca → *Opuntia microdisca*
nigrispina → *Opuntia nigrispina*
orurensis → *Opuntia orurensis*
pituitosa → *Opuntia pituitosa*
pyrrhantha → *Opuntia pyrrhantha*
quimilo → *Opuntia quimilo*
quitensis → *Opuntia quitensis*
retrorsa → *Opuntia retrorsa*
rubrogemma → *Opuntia rubrogemma*
salmiana → *Opuntia salmiana*
saxatilis → *Opuntia saxatilis*
soehrensii → *Opuntia soehrensii*
soehrensii var. *grandiflora* → *Opuntia soehrensii* var. *grandiflora*
soehrensii var. *tilcarensis* → *Opuntia tilcarensis*
soehrensii var. *transiens* → *Opuntia soehrensii* var. *transiens*
spinibarbis → *Opuntia spinibarbis*
spinibarbis var. *grandiflora* → *Opuntia spinibarbis* var. *grandiflora*
sulphurea → *Opuntia sulphurea*
viridirubra → *Opuntia viridirubra*
vitelliniflora → *Opuntia vitelliniflora*
vulgaris → *Opuntia vulgaris*

Praecereus

jaenensis → *Monvillea jaenensis*

Pseudoacanthocereus

brasiliensis: Ritter 1230; Ritter 1338

Pseudoespostoa

nana → *Espostoa nana*

Pseudobivia

ancistrophora → *Echinopsis ancistrophora*
aurea → *Hymenorebutia aurea*
ferox → *Lobivia ferox*
longispina var. *nigra* → *Lobivia longispina* var. *nigra*
nigra → *Lobivia longispina* var. *nigra*
obrepanda → *Echinopsis obrepanda*
orozasana → *Echinopsis mamillosa* var. *orozasana*
polyancistra → *Echinopsis polyancistra*
rojasii → *Echinopsis rojasii*

Pseudopilocereus

arrabidae → *Pilosocereus arrabidae*
atroflavispinus → *Pilosocereus atroflavispinus*
aurilanatus → *Pilosocereus aurilanatus*
azureus → *Pilosocereus azureus*
bradei → *Pilosocereus bradei*
carolinensis → *Pilosocereus flavipulvinatus* var. *carolinensis*
carolinensis var. *robustispinus* → *Pilosocereus carolinensis* var.
robustispinus

- catingicola* → *Pilosocereus catingicola*
coerulescens → *Pilosocereus coerulescens*
densiareolatus → *Pilosocereus densiareolatus*
gaturianensis → *Pilosocereus gaturianensis*
gounellei → *Pilosocereus gounellei*
luetzelburgii → *Coleocephalocereus luetzelburgii*
magnificus → *Pilosocereus magnificus*
multicostatus → *Pilosocereus multicostatus*
oreus → *Pilosocereus oreus*
pachycladus → *Pilosocereus pachycladus*
pentaedrophorus → *Pilosocereus pentaedrophorus*
pernambucoensis → *Pilosocereus pernambucoensis*
pernambucoensis var. *caesius* → *Pilosocereus pernambucoensis* var.
caesius
pernambucoensis var. *montealtoi* → *Pilosocereus pernambucoensis* var.
montealtoi
quadricostatus → *Pilosocereus quadricostatus*
robustus → *Pilosocereus robustus*
saudadensis → *Pilosocereus saudadensis*
splendidus → *Pilosocereus splendidus*
superbus → *Pilosocereus superbus*
superbus var. *gacapaensis* → *Pilosocereus superbus* var. *gacapaensis*
superbus var. *lanosior* → *Pilosocereus superbus* var. *lanosior*
superbus var. *regius* → *Pilosocereus superbus* var. *regius*
ulei → *Pilosocereus ulei*
werdermannianus → *Pilosocereus werdermannianus*
werdermannianus var. *densilanatus* → *Pilosocereus werdermannianus*
var. *densilanatus*
werdermannianus var. *diamantinensis* → *Pilosocereus werdermannianus*
var. *diamantinensis*
zehntneri → *Pilosocereus zehntneri*
- Pseudotephrocactus
- atacamensis* → *Maihueniopsis atacamensis*
ovatus → *Maihueniopsis ovata*
penilandii → *Cumulopuntia pentlandii*
vestitus → *Austrocylindropuntia vestita*
- Pterocactus
- sp.*: Ritter 14; Ritter 450
- Puna
- subterranea* → *Cumulopuntia subterranea*
- Pygmaeocereus
- bylesianus*: Ritter 561; Ritter 561a; Ritter 561b
familiaris: Ritter 322
- Pygmaeolobivia
- haagei* → *Rebutia haagei*
- Pyrrhocactus
- sp.*: Ritter 213b; Ritter 252

- aconcaguensis* → *Pyrrhocactus horridus* var. *aconcaguensis*
aconcaguensis var. *orientalis* → *Pyrrhocactus horridus* var. *orientalis*
andicola: Rüter 468
andicola var. *descendens*: Rüter 468b
andicola var. *mollensis*: Rüter 468e
andicola var. *robustus*: Rüter 468d
aricensis: Rüter 268
armatus: Rüter 449; Rüter 449?
aspillagae: Rüter 237; Rüter 237a
atroviridis: Rüter 475
bulbocalyx: Rüter 965
calderanus: Rüter 496
carrizalensis: Rüter 493
catamarcensis: Rüter 9
chaniarensis: Rüter 490; Rüter 490a
chilensis: Rüter 599a
chilensis var. *albidiflorus*: Rüter 599
choapensis: Rüter 238; Rüter 238a
chorosensis: Rüter 489
coliguayensis: Rüter 1439
confinis: Rüter 494
crispus: Rüter 491
curvispinus: Rüter 225; Rüter s.n.
curvispinus var. *australis*: Rüter 480
curvispinus var. *campanensis*: Rüter 225h
curvispinus var. *combarbalensis*: Rüter 225c
curvispinus var. *felipensis*: Rüter 225b
curvispinus var. *fusciflorus*: Rüter 709
curvispinus var. *mostazalensis*: Rüter 225d
curvispinus var. *nidularis*: Rüter 225f
curvispinus var. *santiagensis*: Rüter 225a
curvispinus var. *tilamensis*: Rüter 225g
dimorphus: Rüter 707
echinus: Rüter 537
echinus var. *minor* → *Pyrrhocactus floccosus* var. *minor*
engleri: Rüter 235
erioszoides: Rüter 484
erioszoides var. *domeykoensis*: Rüter 484a
floccosus: Rüter 545
floccosus var. *minor*: Rüter 537a
floribundus: Rüter 201
garaventae: Rüter 467
glaucescens: Rüter 538
gracilis: Rüter 495
grandiflorus: Rüter 468a; Rüter 469
horridus: Rüter 223; Rüter 223a
horridus fa. *vegasanus*: Rüter 239

- horridus* var. *aconcaguensis*: Ritter 542
horridus var. *mutabilis*: Ritter 223b
horridus var. *orientalis*: Ritter 542a
horridus var. *robustus*: Ritter 239a; Ritter 471; Ritter 471a; Ritter 471a+b; Ritter 471b; Ritter 472; Ritter 543
huascensis: Ritter 260
hybr.: Ritter 225e; Ritter s.n.
intermedius: Ritter 213c; Ritter 244; Ritter 262
jussieui: Ritter 252a
jussieui var. *australis*: Ritter 252d
jussieui var. *spinosior*: Ritter 252b
krausii: Ritter 1450
kunzei: Ritter 220; Ritter 465; Ritter s.n.
limariensis: Ritter 222; Ritter 222b; Ritter 222c
lissocarpus: Ritter 466
lissocarpus var. *gracilis*: Ritter 466a
marksianus: Ritter 234
marksianus var. *tunensis*: Ritter 234a
neohankeanus: Ritter 212
neohankeanus var. *densispinus*: Ritter 212b
neohankeanus var. *elongatus*: Ritter 212d
neohankeanus var. *flaviflorus*: Ritter 212a
occultus: Ritter 267
occultus var. *spinosior*: Ritter 267b
odoriflorus: Ritter 470
pamaensis: Ritter 222a
paucicostatus: Ritter 521
paucicostatus var. *viridis*: Ritter 521a; Ritter s.n.
pilispinus: Ritter 217
platyacanthus: Ritter 448
pulchellus: Ritter 212c; Ritter 520; Ritter 520?
pygmaeus: Ritter 1159; Ritter 519
reconditus: Ritter 204
residuus: Ritter 203
robustus → *Pyrrhocactus horridus* var. *robustus*
robustus var. *vegasanus* → *Pyrrhocactus horridus* fa. *vegasanus*
saxifragus: Ritter 712
scoparius: Ritter 1085
setosiflorus: Ritter 708
setosiflorus var. *intermedius*: Ritter 708a
simulans: Ritter 488
strausianus: Ritter 447
taltalensis: Ritter 213; Ritter 213a
tenuis: Ritter 1453
totalensis: Ritter 492
transiens: Ritter 1432
transitensis: Ritter 485

- trapichensis*: Ritter 252c
truncatipetalus: Ritter 1448
umadeave: Ritter 32
vallenarensis: Ritter 486
vexatus: Ritter 1055
wagenknechtii: Ritter 487
- Quiabentia
- sp.*: Ritter 1200
pereziensis: Ritter 903
verticillata: Ritter 902
zehntneri: Ritter 1034
- Rauhocereus
- riosaniensis*: Ritter 287a
riosaniensis var. *jaenensis*: Ritter 287
- Rebulobivia
- haagei* → *Rebutia haagei*
- Rebutia
- sp.*: Ritter 1430; Ritter 407; Ritter 759; Ritter 942
albiareolata: Ritter 761
albiflora: Ritter 766a
albipilosa: Ritter 754
albopectinata: Ritter 758
archibuiningiana: Ritter 764
brunneoradicata: Ritter 1109
cajasensis: Ritter 1141
calliantha: Ritter 58
camargoensis: Ritter 341c
candiae → *Sulcorebutia candiae*
cincinnata → *Rebutia steinmannii* var. *cincinnata*
cintiensis: Ritter 938
colorea: Ritter 1106
costata f.a. *eucaliptana* → *Rebutia eucaliptana*
eucaliptana: Ritter 340
famatimensis → *Lobivia famatimensis*
fidaiana → *Weingartia fidaiana*
fiebrigii: Ritter 755; Ritter 83; Ritter 84; Ritter 84a
fiebrigii var. *densiseta*: Ritter 390
flavistyla: Ritter 756
friedrichiana: Ritter 757a
fusca: Ritter 940
graciliflora var. *occidentalis*: Ritter 341b
gracilispina: Ritter 1118
haagei: Ritter 57
haagei var. *orurensis* → *Rebutia orurensis*
hybr.: Ritter s.n.
iridescens: Ritter 1434
iscayachensis: Ritter 1120; Ritter 1122

- krainziana* fa. *calliantha* → *Rebutia calliantha*
kupperiana: Ritter 762; Ritter 762a
kupperiana var. *spiniflora*: Ritter 762b
leucanthemea: Ritter 772
leucanthemea var. *cocciniflora*: Ritter 935
mamillosa var. *australis*: Ritter 341a
menesesii → *Sulcorebutia menesesii*
mentosa → *Sulcorebutia mentosa*
minutissima: Ritter 1124
mixta: Ritter 1429
mixticolor: Ritter 1108
muscula: Ritter 753
nitida: Ritter 769
nogalesensis: Ritter 768
orurensis: Ritter 339
patericalyx: Ritter 757
pauciareolata: Ritter 1121
paucicostata: Ritter 936; Ritter 936?
poecilantha: Ritter 1139
potosina: Ritter 1428
pulvinosa: Ritter 766
pygmaea: Ritter 1107; Ritter 57a
pygmaea var. *colorea* → *Rebutia colorea*
pygmaea var. *friedrichiana* → *Rebutia friedrichiana*
pygmaea var. *iscayachensis* → *Rebutia iscayachensis*
ritteri: Ritter 402
robustispina: Ritter 763
robustispina var. *minor*: Ritter 763a
rosalbiflora: Ritter 1115
rosalbiflora var. *amblypetala*: Ritter 1119
rubiginosa: Ritter 767
rutiliflora: Ritter 1113
salpingantha: Ritter 937
sanguinea: Ritter 760
sanguinea var. *minor*: Ritter 760a
senilis: Ritter 941; Ritter 941a
singularis: Ritter 1423
spgazziniana var. *atroviridis*: Ritter 404
steinmannii: Ritter 341
steinmannii var. *cinninata*: Ritter 351
tamboensis: Ritter 1142
tarvitaensis: Ritter 773
tiraquensis → *Sulcorebutia tiraquensis*
torquata: Ritter 1117
tropaeolipicta: Ritter 1114
tuberosa: Ritter 770
violascens: Ritter 352

- vulpina*: Rüter 939
wessneriana fa. *calliantha* → *Rebutia calliantha*
wessneriana var. *calliantha* → *Rebutia calliantha*
- Reicheocactus
floribundus → *Pyrrhocactus floribundus*
- Rhipsalis
sp.: Rüter 1029; Rüter 115a; Rüter 1187; Rüter 1188; Rüter 1264; Rüter 1405; Rüter 886
alboareolata: Rüter 1286
brevispina → *Acanthorhipsalis brevispina*
cassutha: Rüter 1; Rüter 1245
cereuscula: Rüter 1190
clavellina: Rüter 1487
crispata: Rüter 1031
dissimilis: Rüter 1263
flosculosa: Rüter 1285
grandiflora: Rüter 1280
heteroclada: Rüter 1032
houleñiana: Rüter 955
hylaea: Rüter 116
leucorhaphis → *Rhipsalis lumbricoides* var. *leucorhaphis*
linearis: Rüter 1028
lorentziana: Rüter 362; Rüter 879
lumbricoides: Rüter 39; Rüter 460
lumbricoides var. *leucorhaphis*: Rüter 365
micrantha: Rüter 1317; Rüter 310
monacantha → *Acanthorhipsalis monacantha*
monacantha var. *samaipatana* → *Acanthorhipsalis samaipatana*
monteazulensis: Rüter 1247
paradoxa: Rüter 2
paranganiensis → *Acanthorhipsalis paranganiensis*
shaferi: Rüter 364
tucumanensis: Rüter 115; Rüter 366; Rüter 40; Rüter 40a
warmingiana: Rüter 1287
- Rhodocactus
horridus → *Pereskia horrida*
- Roseocereus
tephracanthus → *Eriocereus tephracanthus*
- Salmiopuntia
salmiana → *Opuntia salmiana*
- Salpingolobivia
andalgalensis → *Trichocereus andalgalensis*
aurea → *Hymenorebutia aurea*
cylindrica → *Hymenorebutia aurea* var. *cylindrica*
huascha → *Trichocereus huascha*
- Samaipaticereus
corroanus: Rüter 392

- inquisivensis* → *Yungasocereus inquisivensis*
- Sericocactus
haselbergii → *Brasilicactus haselbergii*
- Seticereus
chlorocarpus → *Gymnanthocereus chlorocarpus*
- Setiechinopsis
mirabilis: Ritter 446
- Soehrensia
formosa → *Trichocereus formosus*
ingens → *Trichocereus ingens*
korethroides → *Trichocereus korethroides*
uebelmanniana → *Trichocereus uebelmannianus*
- Spegazzinia
cumingii → *Weingartia cumingii*
fidaiana → *Weingartia fidaiana*
- Spinicalycium
klimpelianum → *Acanthocalycium klimpelianum*
spiniflorum → *Acanthocalycium spiniflorum*
violaceum → *Acanthocalycium violaceum*
- Stephanocereus
leucostele: Ritter 1227
luetzelburgii → *Coleocephalocereus luetzelburgii*
- Stetsonia
coryne: Ritter 15; Ritter 872
coryne var. *procera*: Ritter 873
glauca: Ritter 874
- Submatucana
aurantiaca → *Matucana aurantiaca*
aureiflora → *Matucana aureiflora*
celendinensis → *Matucana celendinensis*
currundayensis → *Matucana currundayensis*
formosa → *Matucana formosa*
formosa var. *minor* → *Matucana formosa* var. *minor*
intertexta → *Matucana intertexta*
myriacantha → *Matucana myriacantha*
paucicostata → *Matucana paucicostata*
ritteri → *Matucana ritteri*
weberbaueri → *Matucana weberbaueri*
- Sulcorebutia
sp.: Ritter 751; Ritter 946
candiae: Ritter 774
chilensis → *Neowerdermannia chilensis*
cintiensis → *Weingartia cintiensis*
erinacea → *Weingartia erinacea*
hediniana → *Weingartia hediniana*
hybr.: Ritter s.n.
lanata → *Weingartia lanata*

lepida: Ritter 369
longigibba → *Weingartia longigibba*
losenickyana: Ritter 946a
menesesii: Ritter 775
mentosa: Ritter 945
multispina → *Weingartia multispina*
pampagrandensis: Ritter 944
pulquinensis → *Weingartia pulquinensis*
riograndensis → *Weingartia riograndensis*
sucrensis → *Weingartia sucrensis*
tarijensis: Ritter 1154
tiraquensis: Ritter 374; Ritter 374a
totorensis var. *lepida* → *Sulcorebutia lepida*
verticillacantha: Ritter 752a
verticillacantha var. *losenickyana* → *Sulcorebutia losenickyana*
verticillacantha var. *verticosior*: Ritter 752
vorwerkii → *Neowerdermannia vorwerkii*
westii → *Weingartia westii*

Tacinga

funalis: Ritter 1256

Tephrocactus

alboareolatus → *Cumulopuntia alboareolata*
alexanderi: Ritter 419
alexanderi var. *bruchii* → *Tephrocactus bruchii*
aoracanthus var. *paediophilus* → *Tephrocactus paediophilus*
articulatus: Ritter 420; Ritter 421a
articulatus var. *ovatus* → *Tephrocactus ovatus*
atacamensis → *Maihueniopsis atacamensis*
atroglobosus: Ritter 95
bruchii: Ritter 1049
camachoi → *Maihueniopsis camachoi*
coloreus → *Maihueniopsis colorea*
conoideus → *Maihueniopsis conoidea*
crassicylindricus → *Cumulopuntia crassicylindrica*
dactyliferus → *Cumulopuntia pentlandii* var. *dactylifera*
echinaceus → *Cumulopuntia echinacea*
floccosus fa. *denudata* → *Austrocylindropuntia floccosa*
floccosus fa. *rauhii* → *Austrocylindropuntia lagopus* fa. *rauhii*
floccosus var. *lagopus* → *Austrocylindropuntia lagopus*
mandragora → *Maihueniopsis mandragora*
multiareolatus → *Cumulopuntia multiareolata*
ovatus: Ritter 1098
paediophilus: Ritter 1099
pentlandii var. *rossianus* → *Cumulopuntia rossiana*
rauhii → *Austrocylindropuntia lagopus* fa. *rauhii*
strobiliformis: Ritter 421
subterraneus → *Cumulopuntia subterranea*

weberi: Ritter 451

Thelocephala

aerocarpa: Ritter 498

duripulpa: Ritter 1056

esmeraldana: Ritter 518

fankhauseri: Ritter 1451

fulva: Ritter 500

glabrescens: Ritter 710; Ritter 713

hybr.: Ritter 503

krausii: Ritter 502

lembckei: Ritter 501

longirapa: Ritter 1321

malleolata: Ritter 517

malleolata var. *solitaria*: Ritter 517a

napina: Ritter 249

nuda: Ritter 1425

odieri: Ritter 499

tenebrica: Ritter 1092

Thrixanthocereus

blossfeldiorum: Ritter 306

cullmannianus: Ritter 1065

hybr.: Ritter 1315

longispinus: Ritter 1069

senilis: Ritter 569; Ritter 569b

Trichocereus

sp.: Ritter 109; Ritter 1431; Ritter 852; Ritter 854; Ritter 855; Ritter 857;
Ritter 858; Ritter 862; Ritter 863; Ritter 863a; Ritter 864; Ritter 865;
Ritter 870; Ritter 992; Ritter 995; Ritter 996

andalgalensis: Ritter 998

andalgalensis var. *auricolor* → *Trichocereus auricolor*

angelesiae: Ritter 1435

atacamensis: Ritter 555

atacamensis var. *pasacana*: Ritter 49; Ritter 49b; Ritter 49c

auricolor: Ritter 428

bertramianus: Ritter 989

bridgesii: Ritter 101

bruchii: Ritter 966

bruchii var. *brevispinus*: Ritter 966a

cajasensis: Ritter 869

camarguensis: Ritter 75

campos-portoi → *Arthrocereus campos-portoi*

candicans: Ritter 8

candicans fa. *rubriflorus*: Ritter 8a

caulescens: Ritter 73

chiloensis: Ritter 227a; Ritter 228

chiloensis var. *australis*: Ritter 228a

chiloensis var. *borealis*: Ritter 228d

- chiloensis* var. *conjungens*: Rüter 228c
chiloensis var. *eburneus*: Rüter 228b
chiloensis var. *panhoplites*: Rüter 227
chiquisacanus: Rüter 863b
clavatus: Rüter 327
coquimbanus: Rüter 533
crassicostatus: Rüter 853
cuzcoensis: Rüter 677a
cuzcoensis var. *knuthianus* → *Trichocereus knuthianus*
deserticola: Rüter 206; Rüter 265
eremophilus: Rüter 49a
fascicularis → *Haageocereus fascicularis*
formosus: Rüter 7
fulvilanus: Rüter 263
glaucus: Rüter 270
glaucus fa. *pendens*: Rüter 270a
glaucus var. *pendens* → *Trichocereus glaucus* fa. *pendens*
herzogianus var. *totorensis* → *Trichocereus totorensis*
huascha: Rüter 1446
hybr.: Rüter 426a; Rüter 74; Rüter 868
ingens: Rüter 431; Rüter 431a
knuthianus: Rüter 677
korethroides: Rüter 613
litoralis: Rüter 248
lobivioides: Rüter 427
microspermus → *Browningia microsperma*
orurensis → *Trichocereus tarijensis* var. *orurensis*
pachanoi: Rüter 567
pachanoi fa. *peruvianus*: Rüter 155
pallarensis: Rüter 676
peruvianus → *Trichocereus pachanoi* fa. *peruvianus*
poco → *Trichocereus tarijensis* var. *poco*
purpureopilosus: Rüter 429
quadratiumbonatus: Rüter 1156
randallii: Rüter 1155
riomizquensis: Rüter 856
santaensis: Rüter 567a
scopulicola: Rüter 991
shaferi: Rüter 41
skottsbergii: Rüter 229
spachianoides: Rüter 980
spinibarbis: Rüter 536
strigosus: Rüter 13; Rüter 13a
strigosus var. *flaviflorus*: Rüter 999
tacaquirensis: Rüter 72
tacnaensis: Rüter 155a; Rüter 994
tarijensis: Rüter 850

tarijensis var. *densispinus*: Ritter 399
tarijensis var. *orurensis*: Ritter 602; Ritter 602a
tarijensis var. *poco*: Ritter 71; Ritter 71d
tarijensis var. *totorillanus*: Ritter 851
tenuispinus: Ritter 616; Ritter 867
tenuispinus var. *pajonalensis*: Ritter 866
tephraacanthus → *Eriocereus tephraacanthus*
terscheckii: Ritter 26
terscheckioides: Ritter 17; Ritter 993
thelegonus: Ritter 28
torataensis: Ritter 1467
totoensis: Ritter 71c; Ritter 990
tunariensis: Ritter 861
uebelmannianus: Ritter 556
vatteri: Ritter 426
volcanensis: Ritter 400; Ritter 400a
vollianus: Ritter 860
werdermannianus: Ritter 70

Uebelmannia

buiningii: Ritter 1474; Ritter 1474a
flavispina: Ritter 1476
gummifera: Ritter 947
meninensis: Ritter 1473
pectinifera: Ritter 1472
pectinifera ssp. *flavispina* → *Uebelmannia flavispina*
pectinifera var. *flavispina* → *Uebelmannia flavispina*
pectinifera var. *pseudopectinifera*: Ritter 1475; Ritter 1485

Vatricania

guentheri: Ritter 838

Weberbauerocereus

albus: Ritter 571
cephalomacrostibas: Ritter 188
churinensis: Ritter 685
cuzcoensis: Ritter 662
cuzcoensis var. *tenuiarmoris*: Ritter 663
fascicularis var. *horridispinus* → *Weberbauerocereus weberbaueri* var.
horridispinus
horridispinus → *Weberbauerocereus weberbaueri* var. *horridispinus*
hybr.: Ritter s.n.
johnsonii: Ritter 570
longicomus: Ritter 656
rauhii: Ritter 154
rauhii var. *laticornuus*: Ritter 154a
torataensis: Ritter 194
weberbaueri: Ritter 129
weberbaueri var. *horridispinus*: Ritter 129a; Ritter 129b; Ritter 183
winterianus: Ritter 165; Ritter 165a

winterianus var. *australis*: Rüter 1066

Weberiopuntia

weberi → *Tephrocactus weberi*

Weingartia

sp.: Rüter 1081; Rüter 1081+1082

buiningiana: Rüter 816

candiae → *Sulcorebutia candiae*

chilensis → *Neowerdermannia chilensis*

cintiensis: Rüter 373; Rüter 373a

cumingü: Rüter 811; Rüter 811a

erinacea: Rüter 812

erinacea var. *catarirensis*: Rüter 812a

fidaiana: Rüter 623

fidaiana ssp. *cintiensis* → *Weingartia cintiensis*

gracilispina: Rüter 954

hediniana: Rüter 817

hybr.: Rüter s.n.

lanata: Rüter 371; Rüter 814

lanata ssp. *longigibba* → *Weingartia longigibba*

lanata ssp. *riograndensis* → *Weingartia riograndensis*

lepida → *Sulcorebutia lepida*

longigibba: Rüter 815

losenickyana → *Sulcorebutia losenickyana*

menesesii → *Sulcorebutia menesesii*

mentosa → *Sulcorebutia mentosa*

multispina: Rüter 372

neocumingü ssp. *pulquinensis* → *Weingartia pulquinensis*

neocumingü ssp. *sucrensis* → *Weingartia sucrensis*

neocumingü var. *hediniana* → *Weingartia hediniana*

neocumingü var. *multispina* → *Weingartia multispina*

neumanniana var. *aurantia*: Rüter 50

pampagrlandensis → *Sulcorebutia pampagrlandensis*

pulquinensis: Rüter 370

pygmaea: Rüter 1102

riograndensis: Rüter 813

sucrensis: Rüter 953

tiraquensis → *Sulcorebutia tiraquensis*

verticillacantha → *Sulcorebutia verticillacantha*

vorwerkii → *Neowerdermannia vorwerkii*

westii: Rüter 818

Wigginsia

courantii: Rüter 1427

horstii: Rüter 1402a

horstii var. *juvenaliformis*: Rüter 1402

leprosorum: Rüter 1272

longispina: Rüter 1403a

macracantha → *Wigginsia sellowii* var. *macracantha*

polyacantha: Ritter 1273

prolifera: Ritter 1403

sellowii: Ritter 1384

sellowii var. *macracantha*: Ritter 1384a

Wilmattea

minutiflora: Ritter 312

Winteria

aureispina → *Hildewintera aureispina*

Winterocereus

aureispinus → *Hildewintera aureispina*

Yungasocereus

inquisivensis: Ritter 332

Zehntnerella

chaetacantha: Ritter 1229

chaetacantha var. *montealtoi*: Ritter 1229a

polygona: Ritter 1228