

# THE GENUS REBUTIA

1895—1981



REBUTIA MUSCULA

No. 2 of a series of illustrated guide books by:-  
Brian Fearn and Leslie Pearcy

Published by Abbey Brook Cactus Nursery

*Published by:* Abbey Brook Cactus Nursery,  
Old Hackney Lane,  
Matlock, Derbyshire.

Copyright © ABCN 1981

*Illustrations:* All illustrations are by Brian Fearn

*Printed in Great Britain by:*  
Higham Press Ltd., Shirland, Derby., DE5 6BP

# THE GENUS REBUTIA

1895 - 1981



An up to date check list of the genus **Rebutia** and related groups including **Aylostera**, **Mediolobivia** and **Digitorebutia** together with photographs and descriptions of 20 of the more notable species.

*Brian Fearn*  *Leslie Pearcy*

No. 2 of a series of illustrated guide books by :-

Brian Fearn and Leslie Pearcy

*Published by ABBEY BROOK CACTUS NURSERY*

## Contents

Preface .....	3
Introduction .....	4
Nomenclature and Classification .....	5
Analytical key to the <b>Rebutia</b> Sections .....	7
Flowers and floral structure .....	8
Geographical Distribution .....	13
Distribution maps and locational data .....	15
Cultivation .....	23
Pests and Diseases .....	26
Descriptions - arranged in alphabetical order .....	27
Check list of Genera, Subgenera and Sections .....	52
Check list of <b>Aylostera</b> Speg. .....	53
Check list of <b>Digitorebutia</b> Frič & Kreuzgr. ex Buin. ....	54
Check list of <b>Mediolobivia</b> Backbg. ....	55
Check list of Genus <b>Rebutia</b> including specific, varietal and name combinations which have been used in connection with the genus .....	59
Friedrich Ritter field numbers .....	71
Alfred Lau field numbers .....	73
Walter Rausch field numbers .....	74
Karel Knize field numbers .....	77
Bibliography .....	78
Acknowledgements .....	79
Glossary .....	79

## Preface

'The Genus **Rebutia** 1895-1981' is the second in a planned series of publications by Abbey Brook Cactus Nursery. The first booklet '50 Choice **Mammillarias**' has been well received and the 1st edition has sold well and is now out of print. Two years have passed since its introduction and we apologise for the delay in the production of the 2nd booklet. The original intention was to produce a new booklet each year. In the meantime another booklet '**Lithops**' by Brian Fearn has been published by the National Cactus and Succulent Society and so the new booklet is really the 3rd that has been produced by Abbey Brook. We are thus still on target.

There seems to be no end to the publication of new general books on Cacti and other Succulent plants but our intention of producing inexpensive booklets with detailed information for the serious collector is as relevant now as it was when booklet No. 1 was published.

Brian Fearn and Leslie Pearcy  
Matlock 1981



**REBUTIA FLAVISTYLA**

Fig. 1 A superb species discovered by Friedrich Ritter and described in 1978 (FR756). Beautiful light orange flowers freely produced.

## Introduction

The genus **Rebutia** is one of the most widely cultivated groups of plants which belong to the family **Cactaceae**. Their ease of cultivation and free flowering nature endears them to all cactophiles. They are plants of the Andean mountain chain in South America occurring in northern Argentina and Bolivia. One of the reasons for their popularity is their ease of cultivation and adaptability to neglect. They do not exactly thrive on neglect, but nevertheless they will still produce their beautiful flowers in the spring, provided cool, dry conditions have been given during the winter months. As these are plants from the high Andes, they have the added ability to survive in an unheated greenhouse or porch when winter temperatures could fall to well below 0°C (32°F).

Nearly all the species are small growing plants, rarely needing more than a 3½" pot, with a range of body form from globular to short cylindrical stems. The spination is very varied and often very colourful. Some plants have snow white spines, others golden yellow. The flowers are often very large for the size of the plant. In the majority of cases the flower colours are vivid oranges, reds, yellows and purple but occasionally bicoloured flowers are produced. There are also a few white flowered species. These plants are of great horticultural value and no collection of cacti is complete without some representatives of this genus.



**REBUTIA FUSCA**

Fig. 2 Described by Friedrich Ritter in 1977 (FR940). It produces beautiful dark red flowers and is probably closely related to **R. spegazziniana** Backbg.

## Nomenclature and Classification

It is doubtful if two people will ever agree on the taxonomy of the genus **Rebutia** and as a result the nomenclature is a veritable minefield. This genus has suffered more than most from the over-enthusiastic naming of new species, revisions, and changes in names and status. This has resulted in a bewildering array of possible names and combinations of names. To be quite honest, far too many **Rebutia** species have been described because of the demand and commercial pressures. Consequently there is considerable confusion in this genus in trying to establish clear relationships between the many taxa. The result of all this activity has been an unwarranted cluttering of the synonymy of the group. Over 800 possible names and combinations have been found in a search of the literature and we are sure that there are many more that we have not found. One really begins to wonder when **Rebutia beryllioides** has been described as a species, as a variety of 2 different species, a subspecies and finally as a form of a third species. Is it any wonder that professional taxonomists rarely work on a group of plants that are of horticultural value? With apologies to the late Professor C. D. Darlington the following misquotation springs to mind 'cactus taxonomy is the pursuit of the impossible by the incompetent'.

We believe that the main cause of this confusion is that the genus **Rebutia** s.l. is in an active state of evolution. This possibility does not appear to have been grasped by the many individuals who have worked on the genus. It would account for the fact that although on paper there appear to be 4 main sections which can further be subdivided into 8 or more subsections, there are nevertheless some plants which cross the boundaries, having characteristics which are intermediate between two or more sections or subsections. The knowledge of the existence of these plants is largely due to the field work of Friedrich Ritter who has found and introduced a large number of new plants, some of which have intermediate characters. This makes the reduction from a multigeneric group to a single genus desirable. A further complication is the fact that many species are self fertile and inbreeding, so that the occurrence of local races and inbred lines is highly likely.

The activities in the field by Ritter, Rausch, Lau, Knize, Vasques and others have all helped in the proliferation of names. Although not all are to blame for the subsequent naming of their introductions, they have all collected in the same areas, often following in each others footsteps. The consequence of this has been the introduction of many 'new' species with the great possibility that there has been considerable duplication. Every hilltop or slope seems to be inhabited by yet another 'different' species which has been described at the earliest opportunity. Some of these plants have never been validly described but have been distributed with field numbers and/or tentative names. What has made this situation worse has been the careless subsequent propagation of some of this material. As a result there is a distinct possibility that the plants when distributed are frequently wrongly identified or wrongly numbered which renders them scientifically worthless.

It is with all this in mind that we have had a long hard cold look at the group as a whole and have come to certain conclusions which represent our own current thoughts on the taxonomy of the genus. It is not our intention to further clutter up the synonymy, and so in the main we use the original scheme proposed by Bertrand in 1951 together with a number of refinements. We accept the view of Donald (1975) that **Sulcorebutia** together with **Weingartia** have evolved from a separate evolutionary line and are thus excluded from **Rebutia**.

In proposing the following arrangement we realise that whatever scheme we propose it will not be universally accepted. We have not slavishly followed any one particular system but have attempted to amalgamate the best of a number of different arrangements. One of the criteria we have used is the breeding system, i.e. whether a species is self sterile or self fertile. This neatly divides the Section IV **Rebutia** into two workable subsections. It also divides the large Backeberg genus **Mediolobivia** into two distinct sections, Section II **Mediolobivia** and Section III **Digitorebutia**. There will always be a problem with those plants which bridge the gap between the different sections (being neither wholly self fertile, nor wholly self sterile), but we believe that ours is the most workable scheme to date.

The following is an attempt at producing a description for the whole genus and is based on Buxbaum (1958).

**Rebutia** K.Sch. emend Buining & Donald.

Dwarf, globular or slightly cylindrical plants usually making offshoots from the base. Tuberules often distinct, spirally arranged and sometimes formed into distinct ribs. Spines very variable in length and colour; sometimes short, stiff and bristle-like but often long and flexuous. Flowers always produced from old areoles, usually appearing crowded at the base and very large in relation to the size of the plant. The flowers are brilliantly coloured, red, yellow, purple and occasionally white, campanulate or funnel-shaped. The receptacular scales are sometimes naked but in others with copious hairs and bristles. Stamens are produced from the funnel part of the flower never from a ring in the throat. Occasionally the style is united to the receptacle wall. The fruit is a small capsule which opens by a circular split so that the lower half which remains on the plant is like a shallow bowl in which some of the seeds remain. Seeds small, black and shining but also dull and earth coloured in some species.

### Classification of the genus **Rebutia**

- Rebutia** K.Sch. emend. Buining & Donald      Type species **Rebutia minuscula** K.Sch.  
Section I **Aylostera** (type **Rebutia deminuta** (Web.) Br. & R.)  
Section II **Mediolobivia** (type **Rebutia aureiflora** Backbg.)  
    Subsection I **Setirebutiae**  
    Subsection II **Cylindrorebutiae**  
Section III **Digitorebutia** (type **Rebutia pygmaea** (R. E. Fries) Br. & R.)  
    Subsection I **Pygmaeae**  
    Subsection II **Euanthemaee**  
Section IV **Rebutia** (type **Rebutia minuscula** K.Sch.)  
    Subsection I **Rebutiae**  
    Subsection II **Mediorebutiae**

Lists of the species which belong to a particular Section or Subsection, together with distribution maps and locational data, are given in the chapter devoted to geographical distribution.

## Analytical key to the Rebutia Sections

For reasons which have been explained, this key will not separate those species which bridge the gap between the different sections i.e. those species with intermediate characters. It should nevertheless help to delimit the majority of species. It is based on a key published by Krainz (1967) and amended by B. Fearn.

- A Body globular or cylindrical with the tubercles arranged on distinct ribs, which may be vertical or spirally arranged. Body often suffused with amethyst particularly during the winter months.
- B Body cylindrical, flowers broad funnel-shaped to campanulate. Flowers self sterile. **Section II Medilobivia Subsection II Cylindrorebutiae**
- BB Body globular or short cylindrical, flowers narrow funnel shaped, lower part of receptacle usually fused with the base of style. Flowers self fertile. **Section III Digitorebutia**
- C Body obviously cylindrical, spines less than 5mm long, strongly appressed, areoles arranged in vertical rows. **Section III Digitorebutia Subsection I Pygmaeae**
- CC Body globular, spines 5mm. or longer, always slightly erect never appressed, areoles arranged spirally, occasionally in vertical rows. **Section III Digitorebutia Subsection II Euanthema**
- AA Body globular to flattened globular, with indistinct ribs. Body green. Plants usually densely spined.
  - C Receptacular scales with hairs and bristles, seeds ± earth coloured.
    - D Style not fused to the base of the receptacle. **Section II Medilobivia Subsection I Setirebutiae**
    - DD Basal portion of style usually fused with the lower portion of the receptacle. **Section I Aystoleta**
  - CC Receptacular scales naked (i.e. without hairs and bristles). Seeds black and glossy, dome shaped usually with a prominent white basal hylum area.
    - E Flowers self fertile. **Subsection I Rebutiae**
    - EE Flowers self sterile. **Subsection II Mediorebutiae**
- It is beyond the scope of this booklet to include a workable species key.

### Flowers

All species in the genus **Rebutia** are day flowering and insect pollinated. Most species are self fertile with the notable exception of 2 groups - Section II **Medilobivia** and Section IV Subsection II **Mediorebutiae**.

In Europe, **Rebutias** flower in late spring usually during the months of April and May. The first species to flower is **Rebutia marsoneri** which usually flowers at the end of February and beginning of March. It is thus one of the heralds of Spring. Occasionally it flowers much earlier than this and on one notable occasion a plant of this species was in flower at Abbey Brook on Christmas Day morning. The last plants to flower are some members of Section I **Aystoleta** such as **R. deminuta**, **R. pseudodeminiata** and **R. fiebrigii**. There appears to be a distinct sequence in the flowering of these plants. This time sequence may be of great biological significance because in habitat it would maintain biological isolation even when the plants were growing in close proximity to each other.

In cultivation it is possible to change the flowering times of these plants by the extension of cool temperatures. This has the effect of delaying the flowering time until late May or June. Flowering time can also be altered by increasing the minimum temperature during February thus shortening the winter period. This has the effect of making the plants flower in March.

Although it is possible to alter the timing of flowering, there is one overall requirement in the successful cultivation of these plants which appears to determine whether the plants actually produce or do not produce flowers. In our experience this is the winter rest period. It appears to be essential for the temperature to fall near to or below freezing for some considerable time. Having due regard to the high altitudes in the Andes of the natural habitats of these plants 1500-4000 metres altitude (4900-13,000ft.) it is not really surprising that this is the case. At Abbey Brook we now keep all our **Rebutia** plants in a cold unheated glasshouse during the winter together with two other genera **Lobivia** and **Oreocereus**.

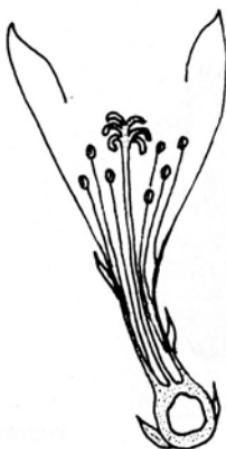
The cold requirement may well account for the poor flowering of these plants in Southern California and the total lack of flower production in the tropics. We have already suggested to our friends in the tropics that these plants should be wrapped in newspaper and placed in a refrigerator (not a deep freeze) for some weeks. We have not yet received the results of these experiments.

## Floral Structure

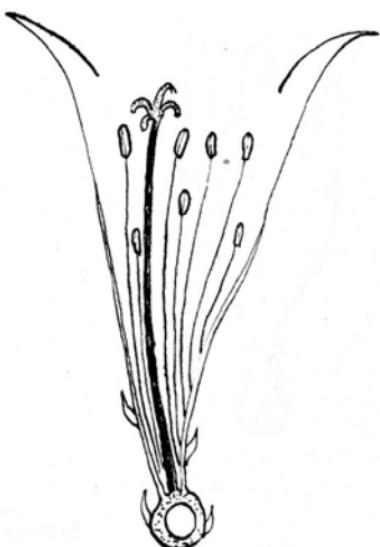
The floral structure of the genus **Rebutia** has in the past been used to justify splitting the single genus **Rebutia** into a number of separate genera. It is now appreciated that such a split cannot be justified on the basis of floral structure alone, as it has been observed that there are plants with a floral structure which is intermediate between the different sections.

For example, the genus **Aylostera** was separated from the rest of **Rebutia** on the observation that the base of the style was fused to the base of the corolla. In other groups for example **Mediolobivia** and **Rebutia** the style is completely free from the base of the corolla. **Digitorebutia** was an intermediate group in which the style was only partially free. It is now recognised that these differences are not exhibited by all the related species of a section and cannot therefore be used to justify the maintenance of a number of separate genera.

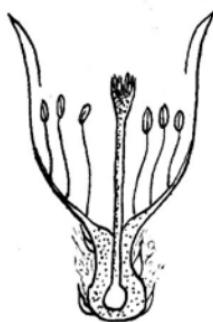
Similarly the presence or absence of hairs and bristles in the axils of the receptacle scales is again not a good universal character for splitting up the genus. It has been found that there are a number of species which bridge the gap between the previously recognised generic units. A number of fine illustrations of the floral characters of the genus have been published Krainz (1967), and Brederoo (Donald & Brederoo, 1978). The drawings in this booklet are by Brian Fearn and have not been published previously.



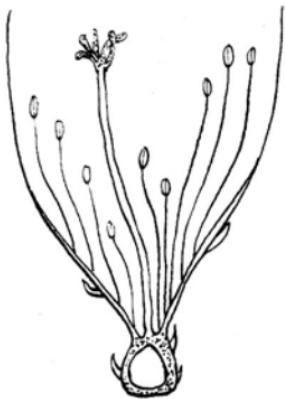
**Rebutia senilis f. stuemerri** nat. size



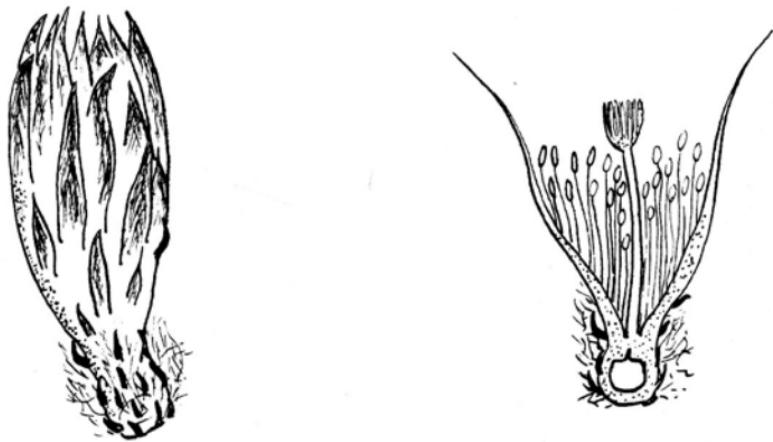
**Rebutia minuscula f. grandiflora** nat. size



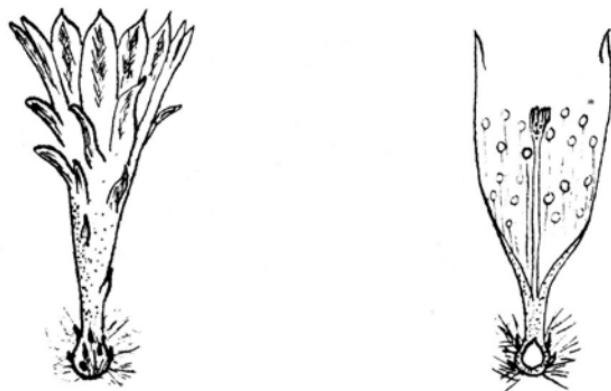
**Rebutia pygmaea** nat. size



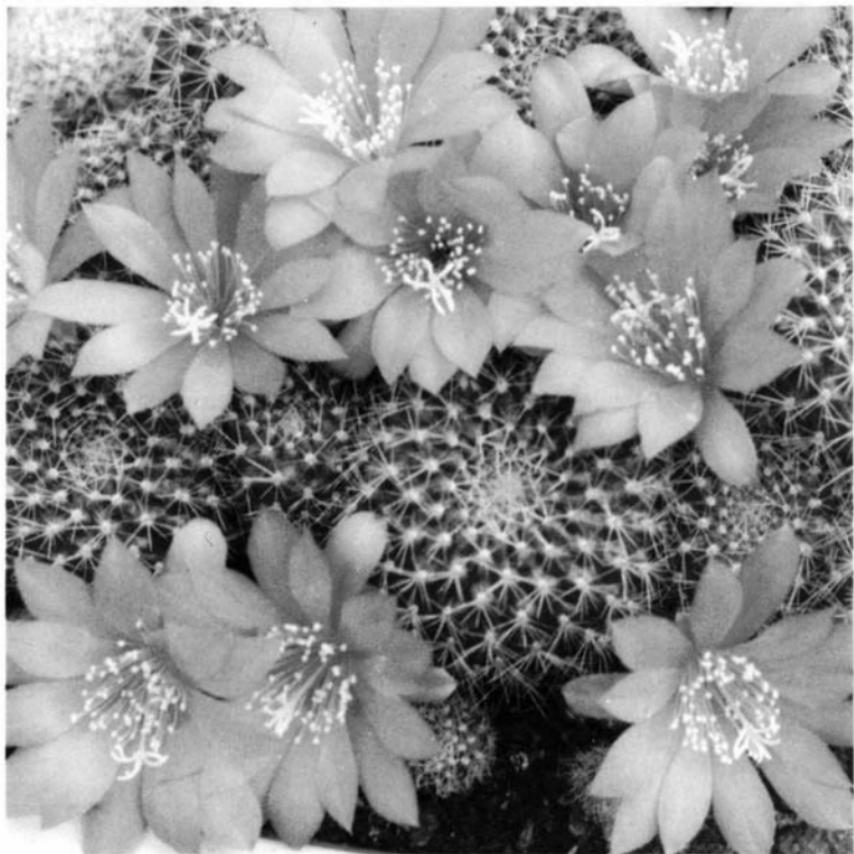
**Rebutia marsoneri** nat. size



**Rebutia einsteinii f. schmiedcheniana** nat. size



**Rebutia muscula** nat. size



### REBUTIA CHRYSACANTHA

Fig. 3 Beautiful large flowered species closely related to *R. senilis*.

## The Geographical Distribution of the genus Rebutia

The geographical distribution of the genus **Rebutia** occurs in North West Argentina and the southern provinces of Bolivia on the eastern side of the Andes. The altitude varies between 1500-4000 metres (4,900-13,000ft. above sea level). The genus can be split into four main taxonomic sections. Although these sections do not fall into distinct geographical groupings, certain trends can be detected. Map No. 1 shows the important place names and country boundaries and Maps 2-4 the geographical distribution of **Rebutia** species.

### Section I Aystostera (Map No. 4)

This section has a very extensive distribution in Argentina and Bolivia. It occurs from Tuome Province in the south, throughout Salta and Jujuy provinces in Argentina to Tarija, Potosi, Chuquisaca and Santa Cruz Departments of Bolivia.

- a) **Rebutia deminuta** Weber and allied species. **Rebutia deminuta** is the most southerly member of this group coming from Trancas, Tucuman province Argentina. The closely related form **Rebutia pseudominuscula** occurs over an extensive area from central Salta province through Jujuy province and into Tarija.
- b) **Rebutia pseudodeminuta** Backbg. and allied species. **Rebutia pseudodeminuta** is widely distributed from south Salta to central Tarija and into Chuquisaca and Potosi. Many of the recently described 'species' of Ritter, Rausch and Lau represent geographical forms of **R. pseudodeminuta**. (e.g. **R. maxima** FR755, **R. albiareolata** FR761, **R. tamboensis** FR1142 from Tarija and **R. nitida** FR769 from Chuquisaca.)
- c) **Rebutia kupperiana** Bod. and allied species. **Rebutia kupperiana** is restricted in habitat to an area around Narvaez in Tarija department Bolivia although several other related Ritter 'species' belonging to this group have been described as coming from south Chuquisaca. (e.g. **R. tuberosa** Ritt. and **R. rubiginosa** Ritt.)
- d) **Rebutia fiebrigii** (Guerke) Br. & R. and allied species. The **Rebutia fiebrigii** complex occurs over an extensive area of southern Bolivia and northern Argentina. The main area of distribution occurs from Tarija and Chuquisaca in Bolivia to northern Salta in Argentina. There is an outlier of distribution in Santa Cruz department where **Rebutia ithyacantha** (Card.) Diers, **R. donaldiana** Lau and Rowley and **R. vallegrandensis** Card. occur. **Rebutia spinosissima** has a very extensive distribution from north Salta in Argentina through Tarija and into south Chuquisaca in Bolivia.  
**Rebutia fiebrigii** itself has by far the largest distribution area of any member of this group occurring from La Quiaca in Jujuy province in Argentina to central Chuquisaca in Bolivia.
- e) **Rebutia spegazziniana** Backbg. and allied species. This species is found in Salta province near to the border with Bolivia and into Tarija department from Padcaya to Tarija. The closely related 'species' **R. fusca** Ritt., **R. vulpina** Ritt. and **R. tarvitaensis** Ritt., are all found in Chuquisaca department, Bolivia.
- f) **Rebutia heliosa** Rausch. This species has a limited distribution area near Narvaez in Tarija department, Bolivia. There are a number of 'species' closely related to **R. heliosa** apart from var. **cajasensis** and var. **conderensis**, these are **R. perplexa** and **R. espinosa**. Both of these are found in Tarija near to **R. heliosa** and at Southern Cinti **R. albopectinata** occurs.

## Section II Medilobivia

This series has a very limited distribution occurring only in Argentina in an area of north Salta and south Jujuy provinces.

**Subsection I Setirebutiae.** Plants in this section all occur near to the Salta - Jujuy border around Quebrada del Toro. *Rebutia aureiflora* var. *elegans* and related forms have the most southerly distribution of this group occurring around Quebrada Escoipe.

**Subsection II Cylindrorebutiae.** There is probably only a single species which belongs in this section - *R. einsteinii*. The myriad of different names appear to refer to geographical variants. These plants have been found in either Salta or Jujuy provinces.

## Section III Digitorebutia. (Map No. 2)

This section has a very extensive distribution from Salta and Jujuy provinces in Argentina in the south to the Bolivian departments of Tarija, Chuquisaca, Potosi and Oruro in the north.

There appear to be several separate centres of distribution where a number of named species occur in close proximity. It is here suggested that these 'species' should be subjected to an intensive ecological investigation to determine whether these populations are biologically isolated, by pollination vectors and flowering times. Admittedly members of this series are all self fertile, but their highly coloured flowers would attract pollinating insects. Gene flow between populations would occur if the populations which were in close proximity flowered at the same time.

We have determined that there are 5 separate areas of distribution for the majority of members of this Section.

- a) Argentina - Bolivia border areas, Jujuy province.  
e.g. *R. eos* Rausch, *R. costata* Werd., *R. pygmaea* (R. E. Fries) Br. & R.
- b) Mendez province, Tarija, Bolivia.  
e.g. *R. brunneoradicata* Ritt., *R. colorea* Ritt.
- c) Camargo - Culpina region, Cinti province, Chuquisaca, Bolivia.  
e.g. *R. diersiana* Rausch, *R. mixta* Ritt.
- d) South Chichas province, Potosi, Bolivia.  
e.g. *R. iridescens* Ritt., *R. rosalbiflora* Ritt.
- e) Environs of Potosi City, Potosi, Bolivia.  
e.g. *R. pygmaea*, *R. costata* f. *pilifera* Buin. & Donald.

The species found in Oruro also belong here. The proliferation of names which is particularly true of section III, are at best, geographical variants of very few species.

## Section IV Rebutia (Map No. 3)

### Subsection I Rebutiae.

This subsection contains three species complexes. These are *R. minuscula*, *R. senilis* and *R. xanthocarpa*. The *R. minuscula* complex includes *R. grandiflora* Backbg., *R. violaciflora* Backbg. and *R. kariusiana*. The group is totally Argentinian in distribution ranging from the north Tucuman to Salta and Jujuy provinces. The area is bounded by Tucuman City, Quebrada Escoipe, Cachipampa and Quebrada del Toro. *R. minuscula* occurs throughout this region apparently remaining

morphologically constant until reaching the northern limit of its distribution where it appears to intergrade with **R. violaciflora**.

#### Subsection II **Mediorebutiae**.

This subsection contains two species complexes. These are **R. wessneriana** and **R. marsoneri**. It appears that this subsection has a much wider distribution than Subsection I **Rebutiae**, ranging from south Salta province in Argentina e.g. **R. wessneriana** Bew. to Huari-Huari, Potosi department, Bolivia e.g. **R. binnewaldiana** W. Heinr. and **R. fiebigiana** W. Heinr. Some doubt has been raised as to the authenticity of the last two species. The habitat data may be incorrect. Seed distributed from these habitats has produced plants that resemble species of Series I **Aylostera** (Donald, Ashingtonia 2 67). If this is correct then the distribution is restricted to Jujuy and Salta provinces of Argentina and into Tarija department Bolivia where **R. wessneriana** is also found. The **R. marsoneri** complex is distributed throughout northern Jujuy province, Argentina.

### Distribution maps and locational data

The following is a list of the species together with locational data which have been used in preparing the distribution maps. It is interesting to note that often species belonging to the same **Rebutia** section (i.e. closely related) have often been collected at the same place. The altitude at the different sites may vary, but the vital information on genetic isolation is not available. Without this, together with ecological and experimental taxonomic data the suspicion is that these different 'species' are identical merely representing the range of species variation. For example the following species numbers 18, 20, 22, 24, 40, 41, 44, 45 have the same location - Mal Paso, Sth. Chichas, Potosi, Bolivia. Also species numbers 4, 12, 16, 26, 36, 46 occur at - Camargo - Culpina, Chuquisaca, Bolivia.

#### **Rebutia** Section III **Digitorebutia** (See Map No. 2)

- 1 *brachyantha* (Wessn.) Buin. & Donald. Tarija, Tarija, Bolivia.
- 2 *brunescens* Rausch. Huari-Huari, Potosi, Bolivia.
- 3 *brunneoradicata* Ritter. San Antonio, Mendez, Tarija, Bolivia.
- 4 *canacruzensis* Rausch. Camargo-culpina, Chuquisaca, Bolivia.
- 5 *carmeniana* Rausch. Caspala, Jujuy, Argentina.
- 6 *cincinnata* Rausch. Potosi, Potosi, Bolivia.
- 7 *colorea* Ritter. San Antonio, Mendez, Tarija, Bolivia.
- 8 *costata* (Werd.) Kraenz. La Quaica, Jujuy, Argentina.
- 9 *costata* f. *eucalyptana* (Backbg.) Buin. & Donald. Eucaliptos, La Paz, Bolivia.
- 10 *costata* f. *pilifera* Buin. & Donald. Potosi, Potosi, Bolivia.
- 11 *densispectinata* Ritter nomen nudum. Jucanas, Tarija, Bolivia.
- 12 *diersiana* Rausch. Camargo-culpina, Chuquisaca, Bolivia.
- 13 *eos* Rausch. Tafna, Jujuy, Argentina.

- 14 *euanthema* (Backbg.) Buin. & Donald. Quebrada de Humahuaca, Jujuy, Argentina.
- 15 *euanthema f. oculata* (Werd.) Buin. & Donald. Humahuaca, Jujuy, Argentina.
- 16 *friedrichiana* Rausch. Camargo-culpina, Chuquisaca, Bolivia.
- 17 *graciliflora* Backbg. Chichas, Potosi, Bolivia.
- 18 *gracilispina* Ritter. Mal Paso, Sth. Chichas, Potosi, Bolivia.
- 19 *hirsutissima* Card. Bueto, Villaserrano, Chuquisaca, Bolivia.
- 20 *iridescens* Ritter. Mal Paso, Sth. Chichas, Potosi, Bolivia.
- 21 *iscayachensis* Rausch. Iscayachi, Tarija, Bolivia.
- 22 *lanosiflora* Ritter. Mal Paso, Sth. Chichas, Potosi, Bolivia.
- 23 *minutissima* Ritter. Tarija, Tarija, Bolivia.
- 24 *mixta* Ritter. Mal Paso, Sth. Chichas, Potosi, Bolivia.
- 25 *mixticolor* Ritter. San Antonio, Mendez, Tarija, Bolivia.
- 26 *mudadensis* Rausch. Camargo-culpina, Chuquisaca, Bolivia.
- 27 *odontopetala* Ritter. Cueva, Sth. Cinti, Chuquisaca, Bolivia.
- 28 *patericalyx* Ritter. Cueva, Sth. Cinti, Chuquisaca, Bolivia.
- 29 *pauciareolata* Ritter. San Antonio, Mendez, Tarija, Bolivia.
- 30 *paucicostata* Ritter. San Antonio, Mendez, Tarija, Bolivia.
- 31 *poelcilantha* Ritter. North Cinti, Chuquisaca, Bolivia.
- 32 *potosina* Ritter. Potosi, Potosi, Bolivia.
- 33 *pseudopygmaea* Ritter nomen nudum. San Antonio, Mendez, Tarija, Bolivia.
- 34 *pygmaea* (R. E. Fries) Br. & R. Yavi, Jujuy, Argentina., Potosi, Potosi, Bolivia.
- 35 *pygmaea f. haefneriana* (Cullm.) Buin. & Donald. Oruro, Oruro, Bolivia, Iturbe, Argentina, Chichas, Potosi, Bolivia.
- 36 *raulii* Rausch. Camargo-culpina, Chuquisaca, Bolivia.
- 37 *rauschii* Zecher. Huari-Huari, Potosi, Bolivia.
- 38 *ritteri* (Wessn.) Buin & Donald, Iscayachi, Tarija, Bolivia.
- 39 *ritteri f. nigricans* (Wessn.) Buin. & Donald. Quebrada del Toro, Salta, Argentina.
- 40 *rosalbiflora* Ritter. Mal Paso, Sth. Chichas Province, Bolivia.
- 41 *rutiliflora* Ritter. Mal Paso, Sth. Chichas Province, Bolivia.
- 42 *salpingantha* Ritter. Villazon, Potosi, Bolivia.
- 43 *tarvitaensis* Ritter. Tarvita, Azurduy, Chuquisaca, Bolivia.
- 44 *torquata* Ritter. Mal Paso, Sth. Chichas Province, Bolivia.
- 45 *tropaeoliptica* Ritter. Mal Paso, Sth. Chichas Province, Bolivia.
- 46 *violascens* Ritter. Camargo, Cinti, Chuquisaca, Bolivia.

**Rebutia Section II Medilobivia Subsection I Setirebutiae (See Map No. 2)**

- 55 *R. aureiflora* Backbg. Quebrada del Toro, Salta, Argentina.
- 56 *R. aureiflora f. rubelliflora* (Backbg.) Buin. & Donald. Quebrada del Toro, Salta, Argentina.
- 57 *R. aureiflora f. duursmaiana* (Backbg.) Buin. & Donald. Yacones, Salta, Argentina.
- 58 *R. aureiflora f. boedeckeriana* (Backbg.) Buin. & Donald. Nr. Chani Volcano, Jujuy, Argentina.
- 59 *R. aureiflora v. elegans* (Backbg.) Buin. & Donald. Quebrada Escoipe, Salta, Argentina.

**Rebutia Section IV Rebutia Subsection I Rebutiae** (See Map No. 3)

- 60 *fabrisi* Rausch. Valle Grande, Salta, Argentina.  
 61 *minuscula* K.Sch. Tucuman, Tucuman Prov., Argentina.  
 62 *minuscula* var. *grandiflora* (Backbg.) Buin. & Donald. Quebrada Escoipe,  
Salta, Argentina.  
 63 *minuscula* var. *violaciflora* (Backbg.) Buin. & Donald. Quebrada Escoipe,  
Salta, Argentina.  
 64 *margaretha* Rausch. Iruya, Santa Victoria, Salta, Argentina.  
 65 *padcayensis* Rausch. Padcaya, Tarija, Bolivia.  
 66 *senilis* Backbg. Quebrada Escoipe, Salta, Argentina.  
 67 *xanthocarpa* Backbg. Quebrada del Toro, Salta, Argentina.

**Rebutia Section IV Rebutia Subsection II Mediorebutiae** (See Map No. 3)

- 68 *binnewaldiana* W. Heinr. Huari-Huari, Potosi, Bolivia.  
 69 *fiebigiana* W. Heinr. Huari-Huari, Potosi, Bolivia.  
 70 *krainziana* Kess. Yavi, Jujuy, Argentina.  
 71 *marsoneri* Werd. North Jujuy, Argentina.  
 72 *marsoneri* f. *saiperdaiana* (Buin.) Buin. & Donald. Salta, Salta, Argentina.  
 74 *wessneriana* Bewg. Quebrada de Humahuaca, Jujuy, Argentina; Salta,  
Salta, Argentina; Tarija, Bolivia and Guachipas, Escoipe, Salta, Argentina.

**Rebutia Section I Aylostera** (See Map No. 4)

- 76 *albiflora* Ritter & Buin. Rio Pilaya, North East Tarija, Bolivia.  
 77 *albipilosa* Ritter. Narvaez, Tarija, Bolivia.  
 78 *albiareolata* Ritter. Padcaya, Arce, Tarija, Bolivia.  
 79 *albopectinata* Rausch. Culpina, Chuquisaca, Bolivia.  
 80 *aureispina* Knize nomen nudum. Jucanas, Tarija, Bolivia.  
 81 *buiningiana* Rausch. Nr. Iruya, Salta, Argentina.  
 82 *camargoensis* Rausch. Camargo-Culpina, Chuquisaca, Bolivia.  
 83 *cajasensis* Ritter. Tarija, Tarija, Bolivia.  
 84 *cintiensis* Ritter. Camargo, Sth. Cinti, Chuquisaca, Bolivia.  
 85 *deminuta* (Weber.) Br. & R. Trancas, Tucuman, Argentina.  
 86 *donaldiana* Lau & Rowley. Pucara, Vallegrande, Santa Cruz, Bolivia.  
 87 *fiebrigii* (Guerke) Br. & R. Islayachi, Tarija, Bolivia.  
 88 *flavistyla* Ritter. Tarija, Tarija, Bolivia.  
 89 *froehlichiana* Rausch. Yuquina, Cinti, Chuquisaca, Bolivia.  
 90 *fulviseta* Rausch. Padcaya, Arce, Tarija, Bolivia.  
 91 *fusca* Ritter. Cinti, Chuquisaca, Bolivia.  
 92 *heliosa* Rausch. Road to Narvaez, Tarija, Bolivia.  
 93 *hoffmannii* Rausch. Santa Victoria, Salta, Argentina.  
 94 *huasiensis* Rausch. Inca Huasi, Cinti, Chuquisaca, Bolivia.  
 95 *ithyacantha* (Card.) Diers. North Comarapa, Valle Grande, Santa Cruz, Bolivia.  
 96 *jujuyana* Rausch. Quebrada de Humahuaca, Jujuy, Argentina.  
 97 *jujuyensis* Lau. Santa Victoria, Salta, Argentina.  
 98 *kieslingii* Rausch. Caspala, Jujuy, Argentina.  
 99 *kupperiana* Böd. Narvaez, Tarija, Bolivia.

- 100 *lauii* Donald. Cajas Pass, Tarija, Bolivia.  
101 *leucanthera* Rausch. Camargo-Culpina, Chuquisaca, Bolivia.  
102 *mamillosa* Rausch. Camargo, Chuquisaca, Bolivia.  
103 *muscula* Ritter & Thiele. Narvaez, Tarija, Bolivia.  
104 *napina* Ritter. South Cinti, Bolivia.  
105 *nitida* Ritter. Tarvita Azurduy, Chuquisaca, Bolivia.  
106 *nogalensis* Ritter. Tarvita Azurduy, Chuquisaca, Bolivia.  
107 *pseudodeminita* Backbg. South Salta, Argentina - to - Chuquisaca, Bolivia.  
108 *deminuta* f. *pseudominuscula* (Speg.) Buin. & Donald. Cachi, Salta, Argentina.  
109 *pulchell* Rausch. North of Padilla, Chuquisaca, Bolivia.  
110 *pulvinosa* Ritter & Buin. Narvaez, Tarija, Bolivia.  
111 *robustispina* Ritter. Tarija, Tarija, Bolivia.  
112 *rubiginosa* Ritter. South Cinti, Chuquisaca, Bolivia.  
113 *schatzliana* Rausch. Camargo-Culpina, Chuquisaca, Bolivia.  
114 *spiegazziniana* Backbg. Salta, Victoria - to - Tarija, Bolivia.  
115 *sphaerica* Ritter. Tarija, Tarija, Bolivia.  
116 *spinosisima* Backbg. Santa Victoria, Salta, Argentina.  
117 *supthutiana* Rausch. Camargo-Culpina, Chuquisaca, Bolivia.  
119 *tarijensis* Rausch. Tarija, Tarija, Bolivia.  
120 *tarvitaensis* Ritter. Tarvita, Azurduy, Chuquisaca, Bolivia.  
121 *tuberosa* Ritter. South Cinti, Chuquisaca, Bolivia.  
122 *vallegrandensis* Card. Candellaria, Valle Grande, Santa Cruz, Bolivia.  
123 *vulpina* Ritter. Cinti, Chuquisaca, Bolivia.  
124 *zecheri* Rausch. Iscayachi, Tarija, Bolivia.

**Rebutia Section II Mediolobivia Subsection II Cylindrorebutiae (See Map No. 4)**

- 125 *einsteinii* Frič ex Backbg. La Quiaca, Jujuy, Argentina.  
127 *einsteinii* var. *gonjianii* (Kies.) Donald. Tilcara, Jujuy, Argentina.  
128 *einsteinii* f. *schmiedcheniana* (Köhл.) Buin. & Donald. Chani Volcano, Jujuy,  
Argentina.  
129 *einsteinii* f. *rubriviridis* (Frič & Kreuzgr. ex. Backbg.) Donald.  
Quebrada del Toro, Salta, Argentina.  
130 *einsteinii* f. *conoidea* (Wessn.) Buin. & Donald. Chani Volcano, Jujuy, Argentina.

Map No. 1

0 50 100 150 200 250 Km.

PERU

Lake Titicaca

La Paz  
Calamarca

La Paz

Oruro

Lake de Poopo

Cochabamba

Mendoza

Cochabamba  
Tarata

Quillacollo

Oruro

Mizque

Comarapa

Valle Grande

Zudanetz

Villa Serrano

Padilla

Santa Cruz

Potosi

BOLIVIA

Cotagaita

Camargo

Culipina

R. Pilaya

Narvaez

Tarija

Entre Rios

R. Pilcomayo

R. Tarije

R. Grande

R. Bermejo

PARAGUAY

CHILE

Jujuy

La Quiaca

Tupiza

Cotagaita

Camargo

Culipina

R. Pilaya

Narvaez

Tarija

Entre Rios

R. Pilcomayo

R. Tarije

R. Grande

R. Bermejo

San Salvador de Jujuy

Iruya

Iturbe

Tilcara

Oran

San Pedro

Salta

Quebrada

Escope

Cerrillos

Salta

ARGENTINA

Trancas

Lake el Cadillal

San Miguel de Tucumén

Conception

Lake Rio Hondo

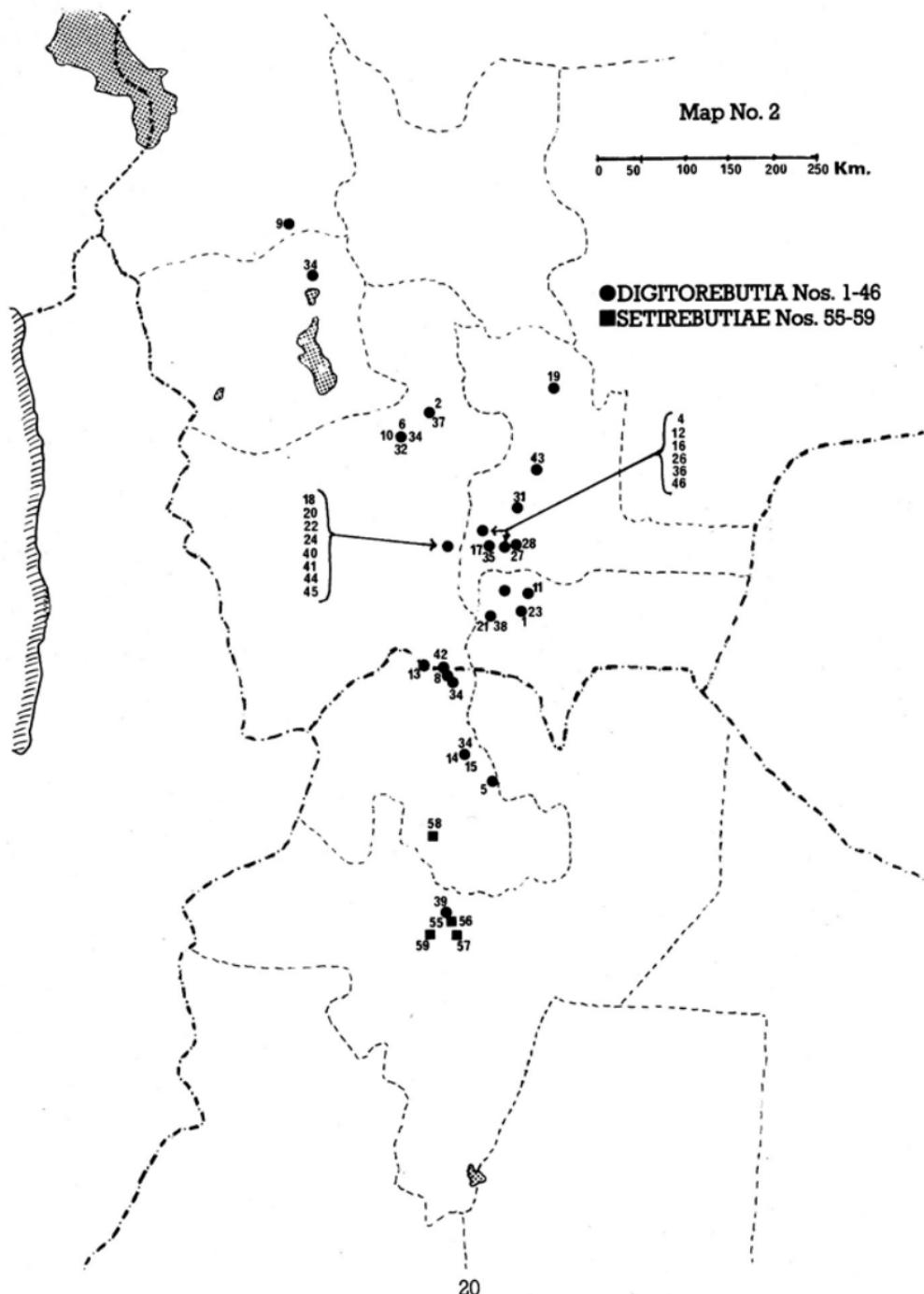
Santiago

Catamarca

Map No. 2

0 50 100 150 200 250 Km.

● DIGITOREBUTIA Nos. 1-46  
■ SETIREBUTIAE Nos. 55-59



Map No. 3

0 50 100 150 200 250 Km.

■ REBUTIAE Nos. 60-67  
● MEDIOREBUTIAE Nos. 68-74

69 ● 68

70 ●

74 ■

64 ■

74 ●

60 ■

67 ■

62 ■

63 ■

66 ■

72 ●

61 ■

74 ●

to N. SALTA

61 ■

Map No. 4

0 50 100 150 200 250 Km.

● **AYLOSTERA Nos. 76-124**

■ **CYLINDROREBUTIAE**

Nos. 125-130

84  
91  
102  
104  
105  
106  
109  
112  
120  
122  
123

82  
89  
101  
113  
117  
121  
124  
125  
127  
128  
130

79  
80  
92  
100  
103  
110  
99  
90  
78  
114  
97  
116  
81  
93  
96  
98  
108  
85  
107  
109  
111  
115  
119

■ 129

● 108

## Cultivation

Cultivation of the majority of species should present no real problems. In the growing season (March-October) they need a considerable amount of water. This may mean watering 2 or 3 times a week in hot sunny weather but normally once a week should be sufficient. Try not to get the soil soaking wet which leads to bloated plants which are very susceptible to soft rot. Wet soil also encourages Sciara Fly which can also lead to loss of plants. In the winter (October-March) the watering requirements are completely different as the plants are not growing. For successful flower production it appears to be essential for the temperature to fall near to or below freezing point for some considerable time. During this period the plants must be kept absolutely dry and you will then be rewarded by the production in early spring of the superb, brightly coloured flowers produced by all members of this genus.

All **Rebutia** species need plenty of light and a good sunny position is essential. Although these plants can be successfully grown on the window sill, a greenhouse or conservatory is a better place especially if you wish the plants to flower. We have found from long experience that plants that are watered and kept warm 7°C (45°F) or above in the winter are very shy flowering.

We can recommend the following compost although **Rebutias** can be grown successfully in virtually any mixture:- 3 or 4 parts of Fisons Levington Potting Compost and 1 part of coarse lime-free sand.

We grow the majority of our plants in this mixture. It has also been found beneficial to feed the plants during the growing season with a low nitrogen, high potash fertiliser such as Fisons Tomorite. We normally feed the plants 3 times during the growing season i.e. once every 6 weeks using the recommended strength fertilizer. Repotting is only necessary when the plants have outgrown the container they are growing in. Repotting is usually done at the beginning of the growing season. If regular feeding is given as recommended, repotting once in 2 or 3 years may be all that is necessary, particularly with the slower growing species.

**Vegetative Propagation.** **Rebutias** can be propagated by removing and rooting offsets but it is not a recommended practice as the plants are so easy to grow from seed. **R. albiflora** is the only real exception and this species is usually propagated by rooting offsets as seed is rarely available. Grafting is also sometimes used to propagate the slower growing species such as **R. aureiflora**, **R. einsteinii** and **R. heliosa** but it is not really necessary as the plants grow well on their own roots.

**Growing from seed.** **Rebutias** are best propagated from seed. If you are collecting your own seed it is best to collect the fruits when they are fully ripe at the end of the growing season. Many species produce copious quantities of seed, others have only a few seeds in each capsule. Carefully separate the seeds from any adhering capsule wall or debris. They can then be stored or sown immediately.

To be successful you must try to imitate the conditions in which the plants grow naturally. Cacti are nearly always found under scrub or small bushes, on rocky slopes or on level ground where the soil is porous. This is because :-

- (1) The slope and porous soil provide adequate drainage.
- (2) The scrub provides shade for the seedlings and young plants.
- (3) The rocks radiate warmth at night and the crevices between them trap pockets of humid air.

**When to sow.** If you do not have a heated propagator, the best time to sow is in Spring, i.e. from March until the end of May. Do not sow later than this as the seedlings will not be large enough to withstand the following winter.

If you have a heated propagator or a warm window sill (**Do not use the airing cupboard**) you can sow at any time of the year, but January and February are the best months.

**Compost.** We can recommend the following composts.

Either:

- (1) Equal parts of Fisons Levington potting compost and coarse lime-free sand.
- or (2) One part John Innes No. 1 or 2 and  $\frac{1}{4}$  part lime-free sand.

**Sowing.** Fill the seed trays or shallow pots to within  $\frac{1}{4}$ " of the top with compost and level the surface, removing any large lumps. Water with a watering can fitted with a fine hose. Scatter the seed thinly on the surface of the damp compost. Seeds can be spaced out and lightly pressed level with the surface using a pencil. Cactus seed need light before they will germinate, so do not cover the seeds with compost and do not put the containers in a dark cupboard.

**Temperature.** Temperatures of 12-22°C (55-70°F) are best for germination. Once the seedlings are 2-3 weeks old normal growing temperatures are adequate.

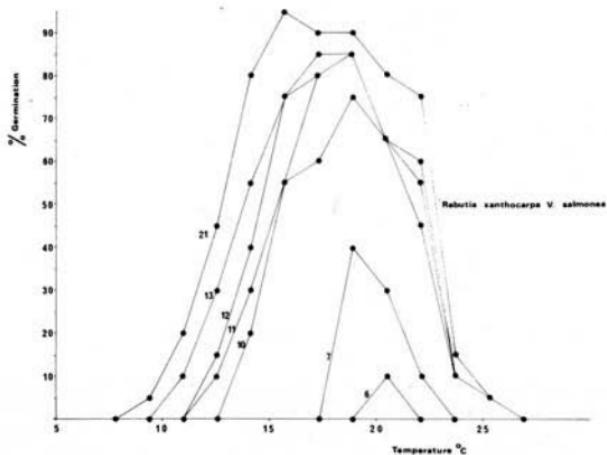
**Germination.** The percentage of seeds that germinate depends on the species, age of the seed and temperature, but there should be signs of germination within 2-3 weeks. A few seeds may be slow to germinate, and seedlings may not appear until 2-3 months after sowing.

**Watering.** If possible, water with a fine mist spray, or place the container in a saucer and water from below. Never let the compost dry out, particularly before germination has taken place, or the germinating seeds will be killed. Conversely, do not allow the compost to become waterlogged either, else the seeds will rot. After germination keep soil moist - not too wet, not too dry. During the first winter the seedlings can be kept completely dry in a minimum temperature of 2°C (35°F).

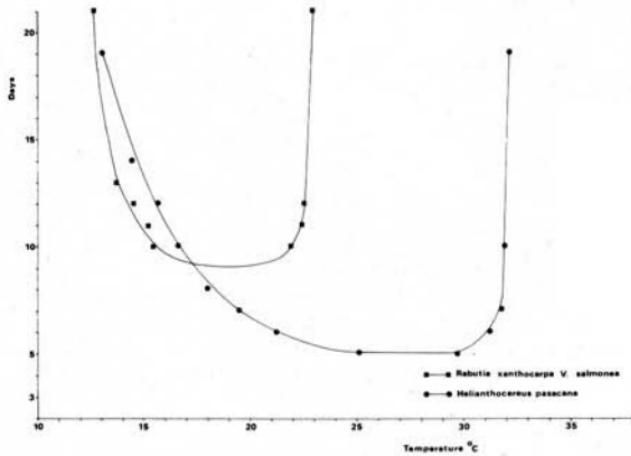
**Care of the young seedlings.** Keep the container in an airy place to prevent 'damping off'. Shade the seedlings with a single thickness of tissue or newspaper for the first two months, then avoid direct sunlight for a further 6 months. After that time treat as adult plants. Try to ensure the seedlings remain a healthy deep green (or occasionally brownish) colour - a bright red colour indicates that too much light has been given, thin spindly pale green seedlings results from too little light.

**Transplanting.** Do not transplant seedlings until they begin to touch one another in the container - this will depend on the rate of growth of individual species. If in doubt, leave the seedlings in the same container for 1 year, and do not transplant until the spring of the second year. They will not come to any harm even if they look overcrowded.

Detailed germination studies on *Rebutia xanthocarpa* f. *salmonaea* have been made Fearn (1974). It was found that no seed germinated below 9°C or above 26°C. It was found that this species when compared with other species from South America e.g. *Gymnocalycium spegazzinii*, *Frailea pumila* and *Helianthocereus pasacana* has a very restricted temperature range. At least 50% germination occurred between 11.5°C and 22.8°C (52°F - 70°F) a range of 11.3°C.



**Fig. 4** The germination of *R. xanthocarpa* f. *salmonnea* has been plotted on a day to day basis and the figures on the graph indicate the number of days incubated.



**Fig. 5** The curves obtained for *H. pasacana* and *R. xanthocarpa* f. *salmonnea* are shown. On successive days the maximum and minimum temperatures at which 50% of maximum germination was obtained. The resulting U shaped curves reflect the temperature span over which 50% germination occurred, the rate of germination at different temperatures and the position of maximum and minimum temperature at which 50% of maximum germination was reached.

## Pests and Diseases

**Mealy Bugs** are the most common pests of cacti. They look a bit like tiny wood lice but with a white waxy coat. They usually aggregate in areas which are not affected by overhead watering, e.g. in the axis of the tubercles and around the base of the plant. Spraying with Malathion or a combination with Dimethoate will eradicate them.

**Root Mealy Bugs** usually remain unseen until the plants are repotted. They occur as white woolly colonies which feed on the roots. Watering with a systemic insecticide such as Dimethoate should eradicate them. Repeat the dose after seven or ten days.

**Red Spider Mite** can be a serious pest. Its presence may remain undetected until the plants have become severely disfigured with a reddish-brown area on the epidermis. It is a very tiny reddish creature just visible to the naked eye. Water or spray the plants with a contact or systemic insecticide. Repeat the dose after ten days.

**Sciara Fly** is a relative newcomer as far as pests of Cacti are concerned. The first warning may be the presence of a few tiny black flies near the plants. The real pest is the larvae which lives just under the soil surface and can cause damage and rot the base of the plants. Total collapse of the plant may result. Watering with a systemic insecticide should eradicate the larvae.

**Aphids** are not an important pest in the cactus collection. They occasionally occur on flower buds and on young growth and any standard insecticide should deal with them.



**REBUTIA XANTHOCARPA f. VIOLACIFLORA**

A charming plant with delicate lilac-rose coloured flowers.

## Rebutia Descriptions

We have selected the following 20 species as representatives of the range of variation exhibited by the genus **Rebutia**. It includes plants from all the Sections and many of them are old favourites having been in cultivation for some considerable time e.g. *R. kupperiana*, and *R. minuscula*. Other species which have been included such as *R. albiflora*, *R. muscula* and *R. heliosa*, are among the best of recent introductions.



### REBUTIA ALBIFLORA

Fig. 6 A very distinctive and beautiful species with white flowers.

## **REBUTIA ALBIFLORA**

*Rebutia albiflora* Ritt. & Buin. Taxon (1963) 12 29

### **Synonyms**

*Aylostera albiflora* (Ritt. & Buin.) Backbg.

### **Classification**

Section I *Aylostera*

### **Body**

Individual heads up to 25mm. in diameter but usually much smaller than this. Plants freely offsetting from the base and eventually forming large clumps. Epidermis grey-green.

### **Areoles**

tiny, more or less circular, pure white

### **Spines**

differentiated into approximately 15 radials and 5 centrals, up to 5mm. long, straight and glassy white.

### **Flowers**

inner petals white, outer petals often with a pronounced pink mid-line, 25mm. wide and 30mm. long. The tube is pink and has short white bristles at the base.

### **Fruit**

small, 3-4mm. in diameter, reddish-pink and contains few seeds.

### **Seed**

small, matt black.

### **Type locality**

Rio Pilaya, N.E. Tarija, Bolivia. Map 4, No. 76.

### **Discovered by**

Friedrich Ritter (FR 766a)

### **Notes**

A very distinctive and beautiful species. It is unusual in both habitat and flower for a **Rebutia** species. The free clumping nature of this species produces beautiful small mounds of white heads. The white flowers are small, but the unusual colour makes the plant a real gem.

The majority of plants in cultivation appear to be self sterile and from the apparent lack of different clones, seed is rare. We believe that most of the plants in cultivation have been propagated vegetatively from the clone originally introduced by H. Winter of West Germany in the late 1950's.

Recently, an interesting hybrid has been produced with **R. heliosa**. The plants have the body form of **R. heliosa** but with white flowers. Kakt. u.a. Sukk. (1978) 29 184.

## **REBUTIA ALBIPILOSA**

*Rebutia albipilosa* Ritter Taxon (1963) 12 29

### **Synonyms**

*Aylostera albipilosa* (Ritt.) Backbg.

### **Classification**

Section I *Aylostera*.

### **Body**

up to 40mm. in diameter becoming caespitose with age. Epidermis dark green.

### **Areoles**

elliptical, with white wool, raised on short tubercles and arranged on ribs.

### **Spines**

c.20 in number, strongly differentiated in centrals and radials, mostly 7-10mm. long. However, a few spines become extremely long especially at the base of the plant. These spines are often 30-40mm. long. All spines are white, the longest ones having dark brown tips.

<i>Flowers</i>	45mm. long and 30mm. wide, petals orange-red in colour often with a darker red midstripe. Tube and ovary with hairs and bristles. Filaments and style white with a 6 lobed cream coloured stigma. Self fertile.
<i>Fruit</i>	5mm. in diameter, brownish-green and covered with hair and bristles.
<i>Seeds</i>	dome shaped, dull black.
<i>Type locality</i>	Narvaez, Department Tarcia, Bolivia. Map 4, No. 77.
<i>Notes</i>	This is another of the <b>Rebutia</b> species found by Friedrich Ritter (FR754) in the early 1960's. It is a very variable species particularly with reference to the length of the spines. Several other 'species' are probably referable here for example <b>R. vulpina</b> (FR939) and <b>R. robustispina</b> (FR763). The original plant depicted by Ritter with very long and dense white spines appears to be an extreme form. Nobody has yet recollected or seen another comparable plant. Donald (Ashingtonia 2 180) has speculated that Ritter's <b>R. flavistyla</b> (FR756) is the true <b>R. albipilosa</b> . If this is correct and confirmed by Ritter it calls into question a whole series of descriptions and relationships. It is interesting to note that Ritter found and described both species. (see colour plate and fig. 1.).



### REBUTIA AUREIFLORA

Fig. 7 An uncommon, slow growing species with very large flowers.

## **REBUTIA AUREIFLORA**

**Rebutia aureiflora** Backbg. D. Kaktfrd. (1932) 124

### **Synonyms**

- Mediolobivia aureiflora* (Backbg.) Backbg.  
*Mediolobivia aureiflora* var. *albiseta* Backbg.  
*Mediolobivia aureiflora* var. *albilongiseta* Backbg.  
*Mediolobivia aureiflora* var. *albispina* Backbg. nomen nudum  
*Mediolobivia spiralisperala* Schutz  
*Rebutia aureiflora* var. *albilongiseta* (Backbg.) Marshall & Bock. comb. nud.  
*Rebutia aureiflora* var. *albiseta* (Backbg.) Marshall & Bock. comb. nud.  
*Rebutia aureiflora* var. *longiseta* (Backbg.) Marshall & Bock. comb. nud.  
*Rebutia aureiflora* var. *densispina* Borg nomen nudum  
*Rebutia aureiflora* subsp. *aureiflora* (Backbg.) Donald

### **Classification**

Section II **Mediolobivia** Subsection II **Setirebutiae**

### **Body**

40mm. in diameter becoming caespitose from the base, eventually forming clumps 100mm. in diameter.

### **Areoles**

elliptical with white wool

### **Spines**

c.20, extremely variable not strongly differentiated into centrals and radials. Seedlings and offshoots on older plants with short spines 6-8mm. long yellowish at first, becoming all white and tipped yellowish-brown. Older plants with extremely long thin flexuous spines 50mm. or more in length, white tipped yellowish-brown.

### **Flowers**

very large, 50mm. long and 45mm. in diameter, orange-yellow petals, throat white, tube light brownish-orange with small greenish-brown scales long thin flexuous hair and bristles are produced up to 10mm. long. Stigma yellow, style and filaments white, self sterile.

### **Fruit**

large, 8mm. in diameter brownish-orange densely covered with long hairs.

### **Seeds**

dull brownish-black

### **Type locality**

Quebrada del Toro, Salta, Argentina. Map 2, No. 55.

### **Notes**

This species belongs to a group of slow growing plants which are self sterile. Plants are rarely offered for sale mainly because what seed is available germinates very erratically. In our experience 10% germination is all that can be expected. There are fourteen described varieties and in all probability they can all be included within the variation of the one species. For example var. *albilongiseta* has long pure white bristles, var. *albiseta* has 10mm. long white spines, var. *boedeckeriana* has 11-12 thin radial spines and pale orange flowers, var. *rubelliflora* with orange-red flowers, var. *rubriflora* with red flowers. In our opinion these differences do not justify varietal status.



### **REBUTIA COSTATA**

Fig. 8 A rare and slow growing species that is shy flowering. The plant in the photograph has been in cultivation at Abbey Brook for over 20 years.

### **REBUTIA COSTATA**

*Rebutia costata* Werd. Notizbl. Bot. Gart. u. Mus. Berlin (1934) 12:25

#### **Synonyms**

*Lobivia costata* (Werd.) Wessn.

*Digitorebutia costata* (Werd.) Buin.

*Mediolobivia costata* (Werd.) Krainz.

#### **Classification**

Section III Digitorebutia Sub Section II Euanthemaee

#### **Body**

up to 25mm. in diameter simple at first but becoming caespitose with age. Epidermis deep bluish-green.

#### **Areoles**

elliptical with brownish wool, raised on tubercles arranged in 8-10 distinct ribs.

<b>Spines</b>	centrals 0 (old areoles may have 1-2), radials 9-12 (14), pectinate and strongly projecting up to 7mm. long. White becoming yellowish-brown at the base.
<b>Flowers</b>	up to 35mm. long and 30mm. in diameter, deep orange, white throat buds green, tube greenish-brown with olive green scales and copiously hairy with a few long white bristles. Stigma cone shaped 5 lobed, greenish-yellow style greenish filaments lavender pink.
<b>Seeds</b>	brownish.
<b>Type locality</b>	The type locality is unknown. It has recently been recollected by W. Rausch at La Quiaca, Jujuy, Argentina (R508).
<b>Notes</b>	This is a rare, slow growing species - the plant depicted in fig. 8 has been in cultivation for over 20 years and is still in a 3ins. pot. It is shy flowering and rarely sets seed.



### REBUTIA DEMINUTA

Fig. 9 An easily flowered and widely grown species that was one of the first species to be discovered and described.

## **REBUTIA DEMINUTA**

**Rebutia deminuta** (Web.) Br. & R.

### **Synonyms**

*Echinopsis deminuta* Web. Bull Mus. Hist Nat. Paris (1904) 386  
*Echinocactus deminutus* (Web.) Gurke  
*echinorebutia deminuta* (Web.) Fric & Krzgr.  
*Aylostera deminuta* (Web.) Backbg.

### **Classification**

Section I **Aylostera**

### **Body**

individual heads about 50-60mm. high, dark green. Plants freely offsetting from the base and eventually forming large clumps more than 120mm. in diameter.

### **Areoles**

elliptical, light brownish.

### **Spines**

10-12, not strongly differentiated into centrals and radials. Spines white tipped brown and 5-6mm. long. Central when present usually all brown.

### **Flowers**

very free flowering, flowers up to 40mm. long and 30mm. broad. Petals deep orange-red with pink filaments and an 8 lobed white stigma. Small greenish scales and white hairs present on flower tube. Self fertile.

### **Fruit**

5mm. in diameter, greenish-red in colour and covered with bristles.

### **Seeds**

small, matt black.

### **Type locality**

Trancas, Tucuman State, N. Argentina. Map 4, No. 85.

### **Notes**

Easily flowered and widely grown species.

f. **pseudominuscula** (Speg.) Buin & Donald body grey-green, heads slightly smaller than the type, spines 7-14, longer, up to 8-9mm., yellowish white, brown at base and tip. Flowers as in the type.

## **REBUTIA EINSTEINII f. SCHMIEDCHENIANA**

**Rebutia einsteinii f. schmiedcheniana** (Köhler) Buin. & Donald

### **Synonyms**

*Lobivia schmiedcheniana* Köhler Beitr. z. Skde. u. pflege, (1939) 37  
*Cylindrorebutia schmiedcheniana* (Köhler) Donald  
*Mediolobivia schmiedcheniana* (Köhler) Krainz  
*Rebutia schmiedichenana* (Köhler) Marsh & Bock comb. nud. (should be Köhler and schmiedcheniana).

### **Classification**

Section II **Mediolobivia** Sub Section II **Cylindrorebutiae**

### **Body**

up to 35mm. in diameter becoming cylindrical with age. Some plants become caespitose but this is not always so. The epidermis is a dark brownish-green often tinged deep purple particularly during the winter.

### **Areoles**

elliptical with sparse brownish wool raised on short tubercles spirally arranged.

<b>Spines</b>	slightly differentiated into two series, 15 radials appressed, pectinate, 12 up to 75mm. long, greyish-white, brownish at the base, upper 3 longer up to 18mm. and projecting. 1 (2) central spines to the upper three radials. Upper spines and centrals light brownish.
<b>Flowers</b>	45mm. long and 35-40mm. in diameter, outer petals and sepals deep golden yellow. Stigma, style and filaments pale yellow tipped dark brownish yellow. Ovary and tube with copious white hair and long white bristles.
<b>Fruit</b>	large, 7mm, self fertile. Green tinged purple.
<b>Seed</b>	large, dome shaped, brownish.
<b>Type locality</b>	Chani volcano, Salta, N. Argentina. Map 4, No. 128.
<b>Notes</b>	This species has a very large underground tuberous root system and for this reason needs a gritty porous compost. Plants are most often seen grafted but this is unnecessary with careful cultivation.



### REBUTIA EINSTEINII f. SCHMIEDCHENIANUM

Fig. 10 An uncommon species with a very large tuberous root system and large golden yellow flowers.



### **REBUTIA EUANTHEMA**

Fig. 11 An easily grown popular species with very showy flowers.

### **REBUTIA EUANTHEMA**

**Rebutia euanthema** (Backbg.) Buin. & Donald

#### **Synonyms**

*Lobivia euanthema* Backbg. Blatt. f. Kakt. (1934) 2

*Mediolobivia euanthema* (Backbg.) Krainz.

*Acantholobivia euanthema* (Backbg.) Y. Ito

*Digitorebutia euanthema* (Backbg.) Buin.

*Echinolobivia euanthema* (Backbg.) Y. Ito

#### **Classification**

Section III **Digitorebutia** Subsection II **Euanthemaee**

#### **Body**

heads 30mm. in diameter, grey-green often tinged amethyst, freely offsetting from the base and forming clumps 70-80mm. in diameter.

#### **Areoles**

elliptical, light brownish in colour.

#### **Spines**

often pectinate, about 10 radials, centrals absent. Up to 10mm. long, white tipped brown. Spines always slightly erect never appressed. This is one of the distinguishing features of Subsection II from subsection I **Pygmaeae**. (see analytical key to the Rebutia section).

<i>Flowers</i>	very free flowering, 45mm. long and 30mm. wide with orange-red petals. Flower tube very hairy with occasional bristles. Stigma and style greenish-yellow, 6-lobed, filaments lavender pink.
<i>Fruit</i>	brownish-red, densely covered with white hairs.
<i>Seeds</i>	dull brownish-black.
<i>Type locality</i>	given by Backeberg as South Bolivia - North Argentina. This species has recently been recollected by W. Rausch at Quebrada de Humahuaca Jujuy, Argentina (R214).
<i>Notes</i>	this is an easily grown popular species with very showy flowers. It is very closely related to a number of other species belonging to subsection II namely <i>R. brachyantha</i> and <i>R. ritteri</i> . (see colour plate).



### REBUTIA FIEBRIGII

Fig. 12 This photograph depicts Abbey Brook species No. CF2630 originally collected at Hacienda Ressini and having pure white spines and orange flowers.

## **REBUTIA FIEBRIGII**

**Rebutia fiebrigii** (Guerke) Br. & R.

### **Synonyms**

- Echinocactus fiebrigii* Guerke: Notizke Bot. Gart. u. Mus. Berlin (1905) 4, 183  
*Echinorebutia fiebrigii* (Guerke) Frič & Kreuzgr.  
*Aylostera fiebrigii* (Guerke) Backbg.  
*Rebutia nivosa* Ritter nomen nudum  
*Rebutia fiebrigii f. densiseta* Cullm.  
*Rebutia fiebrigii* var. *densiseta* (Cullm.) Oeser

### **Classification**

#### **Section I Aylostera**

### **Body**

spherical becoming cylindrical with age, often 60mm. in diameter and 100-120mm. high. Older plants offsetting from the base.

### **Areoles**

prominent, elliptical, whitish in colour.

### **Spines**

30-40 bristle like radial white spines and 2-5 stiff centrals up to 20mm. or more long, white tipped brown, sometimes pure white.

### **Flowers**

35mm. long and 30mm. broad, flame red with white stamens. Stigma 6 lobed pale yellow. Ovary and tube scaly with a few white hairs and bristles.

### **Seed**

small, matt black.

### **Type locality**

Iscayache, Bolivia 3600m. Map 4, No. 87.

### **Notes**

Distinctive species and one of the first to be discovered and cultivated. Several recently described 'species' are probably referable here e.g. *R. jujuyana*, *R. pulchella*.

**R. fiebrigii, f. *densiseta*** Cullm (FR390) a form in which the spines are thinner and denser, spines tipped yellowish-brown, flowers orange. Originally collected at Hacienda Hura Khathalla ad Estancia Chujchi, Bolivia. Abbey Brook species No. CF2630, is a plant originally collected at Hacienda Ressini, Sucre by Gerhard Frank with longer spines than in the type, softer and all pure white, flowers clear orange. Attempts have been made to distinguish between the snow white populations and others having brown tipped spines. As Donald has pointed out, the original description by Guerke suggests an almost wholly white spined plant, but it could accommodate both white spined and the more commonly seen brown tipped spined plants.

## **REBUTIA HELIOSA**

**Rebutia heliosa** Rausch (1970) Kakt. u.a. Sukk. 21 30

### **Synonyms**

*Aylostera heliosa* Rausch comb. nud.

### **Classification**

#### **Section I Aylostera**

### **Body**

solitary at first then offsetting profusely, 20mm. high and 25mm. in diameter.

### **Areoles**

0-5mm. wide, 1mm. long, light brown, felty.

<b>Spines</b>	radials 24-26, 1mm. long, flattened against tubercles, diverted downwards, silvery-white, thickened and darker below. No central spines.
<b>Flowers</b>	50mm. long and 25mm. in diameter, pale orange outer petals with purplish mid-stripe. The flowers have a very long thin tube (2mm. in diameter and 20mm. long) making the flower stand away from the plant body. Tube purplish, filaments white, stigma 6 lobed and style yellowish.
<b>Fruit</b>	tiny 3mm. in diameter with few seeds, (10-20) in each fruit, greenish later turning violet. Fruit covered with white hair like bristles.
<b>Seed</b>	black, spherical to helmet shaped with a papillate testa.
<b>Type locality</b>	Road between Tarija City and Narvaez at 2400-2500m., Bolivia. Map 4, No. 92.



**REBUTIA HELIOSA**

Fig. 13 One of the most beautiful, distinctive and unusual **Rebutia** species.

<b>Varieties</b>	<b>Rebutia heliosa var. cajasensis</b> Lau 405
	<b>Rebutia heliosa var. condorensis</b> Lau 401 (Syn. <b>R. solisioides</b> Knize nomen nudum)
	<b>Rebutia heliosa x Rebutia albiflora.</b> An interesting new hybrid. (see under <b>R. albiflora</b> )
<b>Notes</b>	<p>One of the most beautiful and unusual <b>Rebutia</b> species, very distinctive. The plant seems to grow well on its own roots but plants are most often seen grafted which does tend to make the plants elongated and proliferate.</p> <p>Several 'species' are referable here, namely, <b>supthutiana</b>, <b>albopectinata</b>, <b>perplexa</b>, <b>schatzliana</b> and <b>densipectinata</b>. For an explanation of the confusion amongst these species an article in <i>Ashingtonia</i> (1979) 3 by John Donald helps to sort out the situation.</p>



### REBUTIA KRAINZIANA

Fig. 14 This is a superb and distinctive plant with very large flowers.

## **REBUTIA KRAINZIANA**

**Rebutia krainziana** Kesselring : Sukkulantenkunde (1948) II, 23-24

### **Synonyms**

*Rebutia calliantha* var. *densiseta* Bew. nomen nudum

*Rebutia calliantha* var. *kraenziana* (Kess.) Buin. & Donald

*Rebutia wessneriana* var. *densiseta* nomen nudum

*Rebutia wessneriana* var. *kraenziana* (Kess.) Buin. & Donald

### **Classification**

Section IV **Rebutia** Subsection II **Mediorebutiae**

### **Body**

up to 50mm. in diameter and becoming caespitose with age forming large clumps 100mm. or more in diameter.

### **Areoles**

very prominent, elliptical and with white felt.

### **Spines**

pectinate, adpressed, up to 12 radials pure white, centrals absent.

### **Flowers**

very large and beautiful, 40mm. long and 40mm. wide. Usually dark red but there is a form (*f. breviseta*) with clear orange flowers. 5 lobed stigma, style white, filaments yellow. Self sterile.

### **Fruit**

large, 8mm. in diameter with small brownish red scales.

### **Seeds**

black shiny, dome-shaped with white basal hymen area. Testa near hymen reticulate but becoming tuberculate at the apex.

### **Type locality**

is unknown. It has recently been recollected at Yavi, Jujuy, Argentina. Map 3, No. 70

### **Notes**

This is a superb and striking plant with very large beautiful flowers. When not in flower the plant is one of the most attractive species.

*R. kraenziana* f. *breviseta* with orange flowers may be a hybrid between *R. kraenziana* and *R. marsoneri*. The following combinations also belong with this taxa.

*R. kraenziana* var. *breviseta* (Backbg.) Donald

*R. kraenziana* f. *breviseta* (Backbg.) Kraenz & Haarm

*R. senilis* v. *breviseta* Backbg.

*R. senilis* f. *breviseta* (Backbg.) Backbg.

## **REBUTIA KUPPERIANA**

**Rebutia kupperiana** Böd. : Monatss D.K.G. (1932) 276-277

### **Synonyms**

*Aylostera kupperiana* (Böd.) Backbg.

*Echinorebutia kupperiana* (Böd.) Frič & Krzgr.

### **Classification**

Section I **Aylostera**

### **Body**

up to 40mm. in diameter and becoming caespitose with age. Epidermis very dark brownish-green.

### **Areoles**

circular with brownish wool, raised on short tubercles.

### **Spines**

strongly differentiated into centrals and radials. Centrals 2, upper 12-15mm. long, lower 20mm. long at first dark chocolate brown in age becoming greyish with a blackish tip. Radials 10-12, strongly projecting, 6-12mm. long, somewhat flexuous, white with dark brown tips.

<i>Flowers</i>	very large and beautiful 50mm. long and 40mm. in diameter, dark orange-red. Tube 15mm. long greenish with long bristles. Stigma 6 lobed, filaments and style white.
<i>Fruit</i>	greenish, 5mm. in diameter.
<i>Seeds</i>	greyish black.
<i>Type locality</i>	near Tarija at 2500m. altitude, Bolivia. Map 4, No. 99.
<i>Notes</i>	This is yet another magnificent species discovered by Friedrich Ritter in 1931.
<i>Varieties</i>	<i>Rebutia kupperiana</i> var. <i>spiniflora</i> Ritter (FR7626)



### REBUTIA KUPPERIANA

Fig. 15 This is yet another magnificent species discovered by Friedrich Ritter. It has dark brown spines and very large dark orange-red flowers.



### **REBUTIA MARSONERI**

Fig. 16 Another superb species with golden yellow flowers.

### **REBUTIA MARSONERI**

*Rebutia marsoneri* Werdermann : Kakteenkunde (1937) 2

#### **Synonyms**

*Rebutia marsoneri* var. *albescens* hort. nomen nudum  
*Rebutia marsoneri* var. *breviseta* hort. nomen nudum  
*Rebutia marsoneri* var. *brevispina* Donald nomen nudum  
*Rebutia marsoneri* var. *grandiflora* Donald nomen nudum  
*Rebutia marsoneri* var. *spathulata* Donald nomen nudum  
*Rebutia marsoneri* f. *spathulata* Donald nomen nudum  
*Rebutia marsoneri* var. *vatteri* Donald nomen nudum  
*Rebutia peruviana* hort nomen nudum

#### **Classification**

**Section IV Rebutia Subsection II Mediorebutiae**

#### **Body**

up to 70mm. in diameter becoming caespitose with age.

<b>Areoles</b>	elliptical with dense white wool.
<b>Spines</b>	very variable in size and number. c 10 undifferentiated into centrals and radials, up to 15mm. long, whitish or tinged yellow. In <i>f. brevispina</i> all the spines are pectinate, white and less than 5mm. long.
<b>Flowers</b>	large, 40mm. long and 35mm. in diameter. Usually golden yellow but sometimes lighter yellow, sometimes orange-yellow. Stigma 5-10 lobed, style and filaments golden yellow. The buds ospecies are variable in colour sometimes red and sometimes strikingly bright green.
<b>Fruit</b>	large, 8mm. in diameter.
<b>Seeds</b>	black, shiny, dome-shaped with white basal hylum area.
<b>Type locality</b>	North Jujuy, Argentina. Map 3, No. 71.
<b>Notes</b>	A superb species named after Oreste Marsoner, an Italian who has collected extensively in Argentina. This species is relatively rare in cultivation because it is self sterile and seed is not as readily available as self fertile species. There are a number of varieties and forms most of which are insufficiently different to warrant separate classification. (see colour plate).



**REBUTIA MINUSCULA**

Fig. 17 This is one of the easiest and most widely grown of all species of Cacti.

## **REBUTIA MINUSCULA**

*Rebutia minuscula* K.Sch. : Monats. f. Kakt (1895) 5, 102

### **Synonyms**

*Echinopsis minuscula* Web.

*Echinocactus minuscula* Web.

*Rebutia minuscula* v. *multiflora* Frič nomen nudum

*Rebutia petersonii* Hort. nomen nudum

### **Classification**

Section IV **Rebutia** Subsection I **Rebutiae**

### **Body**

up to 50mm. in diameter and becoming strongly caespitose with age soon forming large clumps 150mm. or more in diameter. Epidermis deep green.

### **Areoles**

circular with sparse white wool.

### **Spines**

numerous, c.40, undifferentiated into radials and centrals and arranged like needles on a pin cushion. Spines up to 5mm. long, whitish, sometimes becoming brownish at the base.

### **Flowers**

large, up to 40mm. long and 35mm. in diameter, bright red. 6 lobed stigma, style pinkish, filaments golden yellow.

### **Fruit**

6mm. in diameter, orange-red.

### **Seeds**

black, shining.

### **Type locality**

Tucuman, N. Argentina. Map 3, No. 61.

### **Notes**

One of the easiest and most widely grown of all species of Cacti. It can be flowered when only 1 year old from seed. It was the first species of **Rebutia** to be described.

There is a form in cultivation *R. minuscula* f. *grandiflora* which has a very elongated flower tube making the flower 70mm. long.

Consult the section on flowers and floral structure.

## **REBUTIA MUSCULA**

*Rebutia muscula* Ritter & Thiele: Taxon (1963) 12, 29

### **Synonyms**

*Aylostera muscula* (Ritter & Thiele) Backbg.

*Rebutia nivosa* Ritter nomen nudum

*Rebutia muscula* v. *nivosa* Knize comb. nud.

### **Classification**

Section I **Aylostera**

### **Body**

up to 5cm. in diameter becoming caespitose with age, individual heads becoming elongated.

### **Areoles**

circular with white wool.

### **Spines**

pure white, soft bristle like, centrals indistinguishable from the radials. 6mm. long, 50-55 in number.

<b>Flowers</b>	40mm. long and 25mm. in diameter, sepals greenish-orange, petals flame orange, throat white. Stigma very pale green, style white, filaments white. Flower tube and ovary with very small scales. Very thin flexuous white hairs up to 8mm. long produced from the axils of the scales.
<b>Seeds</b>	small, dull black, dome shaped.
<b>Type locality</b>	Narvaez, Dept. Tarija, Bolivia. Map 4, No. 103.
<b>Notes</b>	Beautiful pure white spined species with gorgeous clear orange flowers. Flowers are often produced at odd times during the year but the main flowering time is at the end of May beginning of June. Plants labelled as <i>R. nivosa</i> are referable here, there is no distinct difference and it was found at the same locality. (see illustration on front cover)

### **REBUTIA PSEUDODEMINUTA**

**Rebutia pseudodeminuta** Backbg. non Frič (1933) D.K.F. 7

<b>Synonyms</b>	<i>Aylostera pseudodeminuta</i> (Backbg.) Backbg.
<b>Classification</b>	Section I <i>Aylostera</i>
<b>Body</b>	globular up to 10cm. high, 5-6cm. wide, light green in colour, offsetting grousely at first but later forming large clumps 100mm. or more in diameter.
<b>Areoles</b>	small with sparse light brown wool.
<b>Spines</b>	radials ten or more, 3-7mm. long, glossy white. Centrals 2-3, yellowish-white at first later turning brown-tipped, up to 15mm. long.
<b>Flowers</b>	30mm. long and 30mm. wide, petals red, buds dark red. Style and filaments white united with the tube, 5 lobed stigma.
<b>Fruit</b>	round, small with many bristles.
<b>Seed</b>	very small, matt black.
<b>Habitat</b>	Salta, N. Argentina. Map 4, No. 107.
<b>Varieties</b>	<p>f. <i>albiseta</i> (Backbg.) Buin. &amp; Donald. Central spines entirely white.</p> <p>f. <i>grandiflora</i> (Backbg.) Buin. &amp; Donald. Flower 4cm. wide and 40mm. long.</p> <p>f. <i>schneideriana</i> (Backbg.) Buin. &amp; Donald. Central spines up to 35mm. long, dark tipped.</p> <p>f. <i>schumanniana</i> (Backbg.) Buin. &amp; Donald. Central spines golden brown, about 12mm. long.</p>
<b>Notes</b>	Another of the 'original' <b>Rebutias</b> , quite distinct with its prominent tubercles and spination.



### REBUTIA PYGMAEA

Fig. 18 A distinctive species with pectinate spines. It has very large flowers when compared to the size of the plants.

### REBUTIA PYGMAEA

*Rebutia pygmaea* (R. E. Fries) Br. & R.

#### Synonyms

- Echinopsis pygmaea* R. E. Fries Nov. Act. Soc. Sci Upsala (1905) IV  
120  
*Acantholobivia haagei* (Frič & Schelle) Y. Ito.  
*Digitorebutia digitiformis* (Backbg.) Buin.  
*Digitorebutia haagei* (Frič & Schelle) Frič  
*Digitorebutia haagei* var. *digitiformis* (Backbg.) Donald  
*Digitorebutia haagei* var. *oreurensis* (Backbg.) Donald  
*Digitorebutia haagei* var. *pectinata* (Backbg.) Donald  
*Digitorebutia oreurensis* (Backbg.) Buin.

*Digitorebutia pectinata* (Backbg.) Buin.  
*Digitorebutia pygmaea* (R. E. Fries) Donald  
*Digitorebutia steinmannii* sensu Buin.  
*Echinolobivia haagei* (Frič & Schelle) Y. Ito.  
*Lobivia neo-haageana* Backbg.  
*Lobivia pygmaea* (R. E. Fries) Backbg.  
*Mediolobivia haagei* (Frič & Schelle) Backbg.  
*Mediolobivia haagei* var. *digitiformis* (Backbg.) Donald  
*Mediolobivia haagei* var. *orurensis* (Backbg.) Donald  
*Mediolobivia haagei* var. *pectinata* (Backbg.) Donald  
*Mediolobivia haageana* Borg nomen nudum  
*Mediolobivia orurensis* (Backbg.) Backbg.  
*Mediolobivia pygmaea* (R. E. Fries) Backbg.  
*Mediolobivia pectinata* (Backbg.) Backbg. non Frič  
*Mediolobivia pectinata* var. *digitiformis* (Backbg.) Backbg.  
*Mediolobivia pectinata* var. *orurensis* (Backbg.) Backbg.  
*Mediolobivia pectinata* var. *neosteinmannii* Backbg.  
*Pygmaeolobivia odierata* Hort nomen nudum  
*Pygmaeolobivia pygmaea* (R. E. Fries)  
*Rebutia haagei* Frič & Schelle  
*Rebutia orurensis* Backbg.  
*Rebutia pectinata* Backbg.  
*Rebutia pectinata* var. *digitiformis* Backbg.  
*Rebutia pectinata* var. *orurensis* Backbg.

**Classification**

Section III **Digitorebutia** Subsection I **Pygmaeae**

**Body**

up to 25mm. in diameter, simple at first but becoming caespitose with age. The epidermis bluish-green often tinged deep purple particularly during the winter.

**Areoles**

elliptical with sparse greyish-brown wool, raised in the tubercles.

**Spines**

arranged in 12 distinct ribs. Centrals absent, radials strongly pectinate and adpressed, up to 12 in number, 4mm. long, greyish-white, brownish at the base.

**Flowers**

very variable, pink to salmon often bicoloured, 25mm. long and 20mm. in diameter with a white throat. Stigma 6 lobed green, style green, filaments white or pinkish. Tube brownish-green with green scales with copious white wool.

**Fruit**

dull brownish-black, dome shaped, testa finely pitted.

**Seed**

large, 7mm. in diameter, greenish-brown covered with white wool.

**Type locality**

Yavi, Jujuy Province, N. Argentina. Map 2, No. 35.

**Notes**

This species has a very wide geographical range and a large number of minor variations occur. Many of these minor variations have been described as 'new' species or varieties. There are for example a very large number of flower colour variants and also spine colour variants. It is indeed possible that this species could include 90% of all the species ascribed to the subsection **Pygmaeae!**

## **REBUTIA SENILIS f. STUEMERI**

**Rebutia senilis f. stuemeri** (Backbg.) Buin. & Donald

### **Synonyms**

*Rebutia senilis v. stuemeri* Backbg. D. Kakt. frd. (1932) 131  
*Rebutia senilis v. stuemeriana* Backbg.

### **Classification**

Section IV **Rebutia** Subsection I **Rebutiae**

### **Body**

up to 60mm. in diameter and becoming caespitose with age.

### **Areoles**

elliptical with white wool.

### **Spines**

pure white, stiff bristle like, centrals hardly distinguishable from the radials. 15-30 in number, size is variable - at the top of the plant spines up to 18mm. long. Older areoles at the base of the plant produce longer spines up to 25mm. long.

### **Flowers**

50mm. long and 40mm. in diameter, clear red with a yellowish throat. Stigma 5 lobed, style and filaments golden yellow. Self fertile.

### **Fruit**

yellowish, 7mm. in diameter.

### **Seed**

black, shiny, elongated dome-shaped with a white basal hylum area. Testa near hylum more or less reticulate but becoming tuberculate at the apex.

### **Type locality**

Quebrada Escoipe, Salta, Argentina. Map 3, No. 66.

### **Notes**

**R. almeyeri** W. Heinr. probably belongs here. In Backbg. (1977) it is described as a self fertile species with orange-red flowers with a yellowish throat and a yellow style, locality unknown.

## **REBUTIA SPINOSISSIMA**

**Rebutia spinosissima** Backbg. (1935) Kaktus A.B.C., 275

### **Synonyms**

*Aylostera spinosissima* (Backbg.) Backbg.

*Aylostera spinosissima* var. *brunispina* Backbg. nomen nudum

### **Classification**

Section I **Aylostera**

### **Body**

up to 35mm. in diameter becoming caespitose with age eventually forming large clumps.

### **Areoles**

circular to elliptical with greyish wool.

### **Spines**

soft and bristle like, about 20, not strongly differentiated into centrals and radials. 'Radial' spines up to 6mm. long, all white. 'centrals' at first yellow tipped brown later all brown.

### **Flowers**

40mm. long and 30mm. in diameter. Petals orange-red, tube greenish, 8 lobed stigma, filaments and style white.

### **Fruit**

greenish brown 4mm. in diameter with white hairs and bristles.

### **Seeds**

elongated dome shaped, dull brownish black.

### **Type locality**

Salta Province, N. Argentina. Map 4, No. 116.

### **Notes**

This is a beautiful species with soft bristle like spines and orange flowers. It is slow growing and an asset to any **Rebutia** collection. Closely related to **R. muscula** and **R. fiebrigii**.



### REBUTIA SPINOSISSIMA

Fig. 19 A slow growing species with soft bristle-like spines and orange flowers.

### REBUTIA WESSNERIANA

*Rebutia wessneriana* Bew. Sukkulantenkunde Jahrb. Schwiez. Kakt. Ges. (1948) 2 24

#### Synonyms

*Rebutia calliantha* Bew.

*Rebutia hyalacantha* (Backbg.) Backbg.

*Rebutia senilis* var. *hyalacantha* Backbg.

*Rebutia senilis* f. *hyalacantha* (Backbg.) ex Simon

*Rebutia wessneriana* var. *calliantha* (Bew.) Krainz

*Rebutia wessneriana* var. *permutata* (Heinr.) Buin & Donald

*Rebutia wessneriana* subsp. *wessneriana* f. *calliantha* (Bew.) Buin & Donald



### **REBUTIA WESSNERIANA**

Fig. 20 A superb large growing, large flowering species.

*Rebutia wessneriana* subsp. *wessneriana* var. *gokausei* (Heinr.) Donald

*Rebutia wessneriana* subsp. *wessneriana* var. *gokausei* f. *permutata* (Heinr.) Donald

**Classification**

Section IV **Rebutia** Subsection II **Mediorebutiae**

**Body**

large, up to 100m. in diameter, caespitose and forming large clumps with age

**Areoles**

elliptical raised up on tubercles with white wool

**Spines**

not differentiated into centrals and radials. c. 15, up to 20mm. long, pure white, stiff bristle like.

<b>Flowers</b>	very large, 45mm. long and 40mm. in diameter. Petals dark red, buds dark purplish-red. Stigma 6 lobed, style yellowish-white, filaments orange. Self sterile.
<b>Fruit</b>	large, 8mm. in diameter, yellowish
<b>Seed</b>	black, shiny, dome shaped with white basal hylum area.
<b>Type locality</b>	Quebrada de Humahuaca, Jujuy, Arg.? Map 3, No. 74.
<b>Notes</b>	A superb large growing large flowered species which is uncommon in collections because the plant is self sterile and seed is therefore not readily available. Originally <i>R. wessneriana</i> was separated from <i>R. calliantha</i> by flower colour, scarlet in <i>calliantha</i> and bluish-red in <i>wessneriana</i> , and on the observation that the spines cover the stem apex in <i>calliantha</i> but did not hide the stem apex in <i>wessneriana</i> . Such minor differences are not sustained and are only observed in extreme plants and are not exhibited by the population as a whole. (see colour plate).

### **REBUTIA XANTHOCARPA f. SALMONEA**

*Rebutia xanthocarpa f. salmonnea* (Frič ex Backbg.) Buin. & Donald

<b>Synonyms</b>	<i>Rebutia xanthocarpa</i> var. <i>salmonnea</i> Frič ex Backbg. (1951) Cact. Succ. J. Amer. 23: 83 <i>Rebutia salmonea</i> Frič non Backbg. nomen nudum <i>Rebutia senilis</i> var. <i>salmonnea</i> (Backbg.) Marsh.
<b>Classification</b>	Section IV <b>Rebutia</b> Subsection I <b>Rebutiae</b>
<b>Body</b>	40mm. in diameter, very slowly becoming caespitose with age.
<b>Areoles</b>	elliptical with greyish brown felt.
<b>Spines</b>	not differentiated into centrals and radials, c 15. Short stiff and bristle like, 2mm. long occasionally 4mm., white tinged yellow.
<b>Flowers</b>	small, 15mm. long and 15mm. in diameter. A beautiful salmon pink. Tube yellow with greenish yellow scales. Stigma 6 lobed, yellowish white. Style and filaments white.
<b>Fruit</b>	large 7mm. in diameter, golden yellow. (not pale red, Backbg. Lexicon P.439)
<b>Seeds</b>	small, black shining with white basal hylum area.
<b>Habitat</b>	unknown, but probably Salta area, Argentina. Map 3, No. 67.
<b>Notes</b>	An easily grown and flowered plant with a very characteristic and distinctive flower colour. (see colour plate).

## Check list of Genera, Subgenera and Sections

The following is a list of the more important genera to which members of the genus **Rebutia** have been assigned. There are in addition to the following list a number of additional generic names which have not been published in accordance with the code of Botanical Nomenclature and which are probably best forgotten. The correct **Rebutia** section for the plants which were originally placed under these names is indicated in brackets after the name. It follows the taxonomic arrangement used in this booklet. The original publication and date is given for the most important of these generic names.

- Acantholobivia** Y. Ito. non Backbg. (**Rebutia** Section III) (1957) Expl. Diagr. 130  
**Aylostera** Spieg. (**Rebutia** Section I) (1923) An. Soc. Cient. Argent. **96** 75  
**Cylindrorebutia** Frič & Kreuzgr. nomen nudum (**Rebutia** Section II) (1938) Succulenta 20 55 & 71  
**Cylindrorebutia** Buin. & Donald pro. sect. (**Rebutia** Section II) (1963) Sukkulantenkunde Jb. Schweiz Kakt. Ges. 8 98  
**Digitorebutia** Frič & Kreuzgr. nomen nudum (**Rebutia** Section III) (1938) Succulenta 20 54  
**Digitorebutia** Frič & Kreuzgr. ex. Buin. (**Rebutia** Section III) (1940) Succulenta **22** 51  
**Digitorebutia** Buin. & Donald pro. sect. (**Rebutia** Section III) (1963) Sukkulantenkunde Jb. Schweiz Kakt. Ges. 8 98  
**Echinocactus** Link & Otto (**Rebutia** Section I, II and IV) (1827) Verh. Ver. Beford. Gartenb. 3 420  
**Echinocactus** Weber. ex K. Sch. (**Rebutia** Section I, II and IV) (1898) Gesamtbexhr. Kakt. 396  
**Echinolobivia** Y. Ito. (**Rebutia** Section III) (1957) Expl. Diagr.  
**Echinopsis** Zucc. (**Rebutia** Section I, II and IV) (1837) Abh. Beyer. Akad. Wiss. München 2 675  
**Echinorebutia** Frič & Kreuzgr. nomen nudum (**Rebutia** Section I) (1935) Verzeichnis 26  
**Lobivia** Br. & R. (**Rebutia** Section II and III) (1922) The Cactaceae III 49  
**Lobivia** subgen. **Pygmaeolobivia** Backbg. nomen nudum (**Rebutia** Section II) (1934) Blatt. f. Kakteenf.  
**Mediolobivia** Backbg. (**Rebutia** Section I, II and III) (1934) Blatt. f. Kakteenf.  
**Mediolobivia** subgen. **Eumediolobivia** Backbg. (**Rebutia** Section II) (1942) Cact. Jb. D.K.G. 11 35  
**Mediolobivia** subgen. **Pygmaeolobivia** Backbg. (**Rebutia** Section III) (1941) Cact. Jb. D.K.G.  
**Mediorebutia** hort. nomen nudum (**Rebutia** Section IV)  
**Mediorebutia** Buin. & Donald pro. sect. (**Rebutia** Section IV)  
**Rebulobivia** Frič & Kreuzgr. (**Rebutia** Section II) (1936) Succulenta **18** 104  
**Rebutia** K. Sch. (1895) Monatschr. f. Kakteenfreunde **5** 102  
**Rebutia** K. Sch. emend Buin. & Donald (1963) Sukkulantenkunde **7** 96  
**Rebutia** subgen. **Eurebutia** Backbg. non. Frič. (**Rebutia** Section IV) (1934) Blatt. f. Kakteenf.  
**Rebutia** subgen. **Neorebutia** Bew. (**Rebutia** Section IV) (1949) Sukkulantenkunde Jb. Schweiz Kakt. Ges. 3 54  
**Setirebutia** Frič & Kreuzgr. nomen nudum (**Rebutia** Section II) (1935) Verzeichnis 26

**Setirebutia** Frič & Kreuzgr. (**Rebutia** Section II) (1938) **Succulenta** 20 53  
**Setirebutia** Buin. & Donald pro. sect. (**Rebutia** Section II) (1963) **Sukkulantenkunde Jb.**  
Schweiz Kakt. Ges. 7 98

### Check list of Genus **Aylostera** Speg.

- albiareolata* Ritter comb. nud. = **R. albiareolata**  
*albiflora* (Ritt. & Buin.) Backbg. = **R. albiflora**  
*albipilosa* (Ritt.) Backbg. = **R. albipilosa**  
*albopectinata* Rausch comb. nud. = **R. albopectinata**  
*buiningiana* Rausch comb. nud. = **R. buiningiana**  
*buiningiana* Ritter nomen nudum (not *R. buiningiana* Rausch) = **R. spinosissima**  
*caespitosa* Frič nomen nudum = ?  
*camarguensis* Rausch comb. nud. = **R. camarguensis**  
*deminuta* = **R. deminuta**  
*deminuta* var. *pseudominuscula* = **R. deminuta** f. *pseudominuscula*  
*densipectinata* Ritter comb. nud. = **R. densipectinata**  
*diersiana* Rausch comb. nud. = **R. diersiana**  
*fiebrigii* (Guerke) Backbg. = **R. fiebrigii**  
*fiebrigii* var. *castanea* Rausch nomen nudum = **R. fiebrigii**  
*fiebrigii* var. *densiseta* Cullm. = **R. fiebrigii** f. *densiseta*  
*fiebrigii* var. *spinosior* nomen nudum = **R. fiebrigii**  
*flavistyla* Ritter comb. nud. = **R. flavistyla**  
*fulviseta* Rausch comb. nud. = **R. fulviseta**  
*fulviseta* var. *albispina* Rausch nomen nudum  
*graciliflora* (Backbg.) Rausch comb. nud. = **R. graciliflora**  
*grandiflora* Frič nomen nudum = ? **R. pseudodeminuta** f. *grandiflora*  
*heliosa* Rausch nomen comb. = **R. heliosa**  
*hoffmannii* Diers. et Rausch comb. nud. = **R. hoffmannii**  
*huasiensis* Rausch comb. nud. = **R. huasiensis**  
*ithyacantha* Card. = **R. ithyacantha**  
*jujuyana* Rausch comb. nud. = **R. jujuyana**  
*kieslingii* Rausch comb. nud. = **R. kieslingii**  
*kruegerii* Card. = **Sulcorebutia kruegerii**  
*kupperiana* (Bod.) Backbg. = **R. kupperiana**  
*lampromeliana* Rausch nomen nudum = **R. pulchella**  
*leucanthera* Rausch comb. nud. = **R. leucanthera**  
*mamillosa* Rausch comb. nud. = **R. mamillosa**  
*maxima* Ritter nomen nudum = ?  
*muscula* (Ritt. & Thiele) Backbg. = **R. muscula**  
*narvaecense* Card. = **R. narvaecense**  
*odontopetala* Ritter comb. nud. = **R. odontopetala**  
*padcayensis* Rausch comb. nud. = **R. padcayensis**  
*patericalyx* Ritter comb. nud. = **R. patericalyx**  
*pectinata* Frič nomen nudum = **R. pygmaea**  
*pseudodeminuta* (Backbg.) Backbg. = **R. pseudodeminuta**  
*pseudodeminuta* var. *albiseta* Backbg. = **R. pseudodeminuta** f. *albiseta*  
*pseudodeminuta* var. *grandiflora* Backbg. = **R. pseudodeminuta** f. *grandiflora*

*pseudodeminuta* f. *ruberfilamentosa* Buin. & Donald comb. nud. = *R. pseudodeminuta* f. *ruberfilamentosa*  
*pseudodeminuta* var. *schneideriana* Backbg. = *R. pseudodeminuta* f. *schneideriana*  
*pseudodeminuta* var. *schumanniana* (Backbg.) Backbg. = *R. pseudodeminuta* f. *schumanniana*  
*pseudominuscula* (Speg.) Speg. = *R. deminuta* f. *pseudominuscula*  
*pulchella* Rausch comb. nud. = *R. pulchella*  
*pulvinosa* (Ritt. & Buin.) Backbg. = *R. pulvinosa*  
*robustiflora* Frič = ?  
*robustispina* (Ritt.) Backbg. = *R. robustispina*  
*rubiginosa* (Ritt.) Backbg. = *R. rubiginosa*  
*sanguinea* Ritter comb. nud. = *R. sanguinea*  
*schatzliana* Rausch comb. nud. = *R. schatzliana*  
*sordida* Rausch nomen nudum. = ?  
*spiegazziniana* (Backbg.) Backbg. = *R. spiegazziniana*  
*spiegazziniana* var. *atroviridis* Backbg. = *R. spiegazziniana* var. *atroviridis*  
*spiegazziniana* var. *waltheriana* Backbg. nomen nudum = *R. spiegazziniana*  
*spinossissima* (Backbg.) Backbg. = *R. spinossissima*  
*spinossissima* var. *aurea* Rausch nomen nudum = *R. spinossissima*  
*spinossissima* var. *brunispina* = *R. spinossissima*  
*spinossissima* var. *buiningiana* Ritter nomen nudum = *R. spinossissima*  
*steinmanii* (Solms-Laub) Backbg. = *R. steinmanii*  
[not *R. pygmaea* (R. E. Fries) B. & R.!]  
*supthutiana* Rausch comb. nud. = *R. supthutiana*  
*tarijensis* Rausch comb. nud. = *R. tarijensis*  
*tuberosa* (Ritter) Backbg. = *R. tuberosa*  
*umbraculiforma* Rausch nomen nudum = *R. camarguensis*  
*vallegrandensis* Card. = *R. vallegrandensis*  
*waltheriana* (Backbg.) Y. Ito. = ? *R. spiegazziniana*  
*zavaletae* Card. = *Sulcorebutia zavaletae* (Card.) Backbg.

### Check list of Genus *Digitorebutia* Frič. Kreuzgr. Buin.

*albopectinata* Rausch comb. nud. = *R. albopectinata*  
*atrovirens* (Backbg.) = *R. pygmaea* var. *atrovirens*  
*brachyantha* (Wessn.) Buin. = *R. brachyantha*  
*brachyantha* var. *ritteri* (Wessn.) Donald = *R. ritteri*  
*brunescens* Rausch comb. nud. = *R. brunescens*  
*canacruzensis* Rausch comb. nud. = *R. canacruzensis*  
*christinae* Rausch comb. nud. = *R. christinae*  
*cincinnata* Rausch comb. nud. = *R. cincinnata*  
*costata* (Werd.) Buin = *R. costata*  
*costata* var. *eucalyptana* (Backbg.) Donald = *R. costata* f. *eucalyptana*  
*diersiana* Rausch comb. nud. = *R. diersiana*  
*diersiana* var. *atrovirens* Rausch comb. nud. = *R. diersiana* v. *atrovirens*  
*digitiformis* (Backbg.) Buin. = *R. pygmaea*  
*donaldiana* Rausch nomen nudum = *R. steinmannii* v. *cincinnata*  
Rausch nomen nudum (R300)

*eucalyptana* (Backbg.) Buin. = **R. costata** f. *eucalyptana*  
*euanthema* (Backbg.) Buin. = **R. euanthema**  
*euanthema* var. *friciana* Donald & Cullm. comb. nud. = **R. euanthema** f. *fricii*  
*euanthema* var. *longispina* (Backbg.) Donald comb. nud. = **R. euanthema**  
*euanthema* var. *oculata* (Werd.) Donald = **R. euanthema** f. *oculata*  
*haagei* (Frič & Schelle) Frič = **R. pygmaea**  
*haagei* var. *digitiformis* (Backbg.) Donald = **R. pygmaea**  
*haagei* var. *atrovirens* (Backbg.) Donald = **R. pygmaea** v. *atrovirens*  
*haagei* var. *orensis* (Backbg.) Donald = **R. pygmaea**  
*haagei* var. *pectinata* (Backbg.) Donald = **R. pygmaea**  
*haefneriana* (Cullm.) Donald = **R. pygmaea** f. *haefneriana*  
*mudanensis* Rausch comb. nud. = **R. mudanensis**  
*nazarenensis* Rausch (1979) *Succulenta* 58 185.  
*nigricans* (Wessn.) Buin. = **R. ritteri** var. *nigricans*  
*orurensis* (Backbg.) Buin. = **R. pygmaea**  
*oculata* (Werd.) Buin. = **R. euanthema** f. *oculata*  
*oculata* var. *friciana* Donald & Cullm. = **R. euanthema** f. *fricii*  
*pectinata* (Backbg.) Buin. = **R. pygmaea**  
*peterseimii* (Frič & Kreuzr.) Donald comb. nud. =  
R. ritteri var. *nigricans* f. *peterseimii*  
*pygmaea* (R. E. Fries) Donald = **R. pygmaea**  
*rauschii* Zecher comb. nud. = **R. rauschii**  
*ritteri* (Wessn.) Buin. = **R. ritteri**  
*steinmannii* sensu Buin. = **R. pygmaea**  
*c.v. 'A.V. Frič'* Donald & Cullm. = **R. euanthema** f. *fricci*

### Check list of Genus *Mediolobivia* Backbg.

*albilongiseta* nomen nudum = **R. aureiflora**  
*albinidulans* Frič nomen nudum = ?  
*albiscoparia* Frič nomen nudum = ?  
*albiseta* Frič nomen nudum = **R. aureiflora**  
*albiseta* var. *aureiflora* Frič nomen nudum = **R. aureiflora**  
*albiseta* var. *ruberiflora* Frič nomen nudum = **R. aureiflora** f. *ruberiflora*  
*albispina* Frič nomen nudum = ? **R. aureiflora**  
*albopectinata* Rausch = **R. albopectinata**  
*antarctica* Hort nomen nudum = ?  
*apricusoides* Frič nomen nudum = ?  
*auranitida* (Wessn.) Krainz = **R. auranitida**  
*auranitida* var. *flaviflora* Backbg. = **R. auranitida**  
*auranitida* var. *gracilis* (Wessn.) Backbg. = **R. auranitida** f. *gracilis*  
*aureiflora* (Backbg.) Backbg. = **R. aureiflora**  
*aureiflora* var. *albiseta* Backbg. = **R. aureiflora**  
*aureiflora* var. *albi-longiseta* Backbg. = **R. aureiflora**  
*aureiflora* var. *albispina* Backbg. nomen nudum = **R. aureiflora**  
*aureiflora* var. *boedeckeriana* (Backbg.) Backbg. = **R. aureiflora** f. *boedeckeriana*  
*aureiflora* var. *brevispina* Backbg. nomen nudum = **R. aureiflora**

*aureiflora* var. *duursmaiana* (Backbg.) Backbg. = **R. aureiflora** f. *duursmaiana*  
*aureiflora* var. *haertlingiana* hort. nomen nudum = **R. aureiflora** f. *rubriflora*  
*aureiflora* var. *leucolutea* Backbg. nomen nudum = **R. aureiflora**  
*aureiflora* var. *lilacinostoma* Backbg. nomen nudum = **R. aureiflora**  
*aureiflora* var. *longiseta* Backbg. nomen nudum = **R. aureiflora**  
*aureiflora* var. *longispina* Wenzel nomen nudum = **R. aureiflora**  
*aureiflora* var. *rubelliflora* (Backbg.) Backbg. = **R. aureiflora** f. *rubelliflora*  
*aureiflora* var. *robustior* Backbg. nomen nudum = **R. aureiflora**  
*aureiflora* var. *rubriflora* (Backbg.) Backbg. = **R. aureiflora** f. *rubriflora*  
*aureiflora* var. *rubriflora* f. *kesselringiana* (Cullm.) Köhler = **R. aureiflora** f. *rubriflora*  
*aureiflora* var. *sarothroides* (Werd.) Backbg. = **R. aureiflora** f. *sarothroides*  
*aureiflora* var. *variegata* Backbg. nomen nudum = **R. aureiflora**  
*aureiflora* subvar. *leucolutea* (Backbg.) Backbg. = **R. aureiflora**  
*aureiflora* subvar. *lilacinostoma* (Backbg.) Backbg. = **R. aureiflora**  
*atrovirens* (Backbg.) Backbg. = **R. pygmaea** f. *atrovirens*  
*atroviridis* hort (catalogue 1974 Uhlig) U1396 = ?  
*blossfeldii* (Werd.) Buin. = **R. aureiflora** f. *rubriflora*  
*blossfeldii* var. *campactiflora* Wessn. = **R. aureiflora** f. *rubriflora*  
*blossfeldii* var. *nigrilongiseta* Wessn. = **R. aureiflora** f. *rubriflora*  
*boedeckeriana* Backbg. = **R. aureiflora** f. *boedeckeriana*  
*brachyantha* (Wessn.) Krainz = **R. brachyantha**  
*breviseta* Frič nomen nudum = ?  
*brunescens* (Rausch) Backbg. comb. nud. = **R. brunescens**  
*bruneoradicata* Ritter comb. nud. = **R. bruneoradicata**  
*brunicentra* Frič nomen nudum = ?  
*brunicentra* var. *roseiflora* Frič nomen nudum = ?  
*bruniscoperia* Frič nomen nudum = ?  
*bruniscoperia* var. *chata* Frič nomen nudum = ?  
*bulbispina* hort (catalogue 1974 Uhlig) U2250 = ?  
*cachiensis* Frič nomen nudum = ?  
*cajasensis* (Ritter) Backbg. comb. nud. = **R. cajasensis**  
*calenduliflora* Frič nomen nudum = ?  
*calva* Frič nomen nudum = ?  
*calva* var. *similis* Frič nomen nudum = ?  
*carminata* Backbg. ex Krainz nomen nudum = **R. aureiflora** f. *rubriflora*  
*citriauraria* Frič nomen nudum = ?  
*columnaris* (Wessn.) Krainz. = **R. einsteinii** f. *columnaris*  
*columnaris* Frič nomen nudum = ? **R. einsteinii** f. *columnaris*  
*conoidea* (Wessn.) Krainz. = **R. einsteinii** f. *conoidea*  
*conoidea* var. *columnaris* (Wessn.) Backbg. = **R. einsteinii** f. *columnaris*  
*costata* (Werd.) Krainz = **R. costata**  
*costata* var. *brachyantha* (Wessn.) Donald nomen nudum = **R. brachyantha**  
*costata* var. *eucalyptana* (Backbg.) Donald comb. nud. = **R. costata** f. *eucalyptana*  
*cuprea* Frič nomen nudum = ?  
*diersiana* Rausch comb. nud. = **R. diersiana**  
*digitiformis* (Backbg.) Backbg. = **R. pygmaea**  
*disciformis* Frič nomen nudum = ?  
*duursmaiana* Backbg. = **R. aureiflora** f. *duursmaiana*

*einsteinii* = **R. einsteinii**  
*einsteinii* var. *atrovirens* = ? **R. einsteinii** f. *rubriviridis*  
*elegans* Backbg. = **R. aureiflora** v. *elegans*  
*elegans* var. *gracilis* Backbg. nomen nudum = **R. aureiflora** v. *elegans*  
*eos* Rausch comb. nud. = **R. eos**  
*eos* var. *roseiflora* Rausch comb. nud. = **R. eos**  
*erythrantha* Backbg. nomen nudum = **R. aureiflora** f. *rubriflora*  
*escayachensis* Knize nomen nudum KK1686  
*euanthema* (Backbg.) Krainz = **R. euanthema**  
*euanthema* var. *fricci* (Hort) Backbg. = **R. euanthema** f. *fricci*  
*euanthema* var. *pygmaea* (Backbg.) Donald comb. nud. = **R. euanthema** f. *neopygmaea*  
*euanthema* var. *ritteri* (Wessn.) Donald comb. nud. = **R. ritteri**  
*eucalyptana* (Backbg.) Krainz = **R. costata** f. *eucalyptana*  
*fricci* hort = **R. euanthema** f. *fricci*  
*friedrichiana* Rausch comb. nud. = **R. friedrichiana**  
*fuauxiana* Backbg. = **R. fuauxiana**  
*grandiflora* Frič nomen nudum = ?  
*haageana* Borg nomen nudum = ? **R. pygmaea**  
*haagei* (Frič & Schelle) Backbg. = **R. pygmaea**  
*haagei* var. *atrovirens* (Backbg.) Donald comb. nud. = **R. pygmaea** f. *atrovirens*  
*haagei* var. *chamaeleon* Frič nomen nudum = **R. pygmaea** f. *flavovirens*  
*haagei* var. *digitiformis* (Backbg.) Donald comb. nud. = **R. pygmaea**  
*haagei* var. *flavovirens* (Backbg.) Backbg. = **R. pygmaea** f. *flavovirens*  
*haagei* var. *flavovirens* Frič nomen nudum = **R. pygmaea** f. *flavovirens*  
*haagei* var. *orurensis* (Backbg.) Donald comb. nud. = **R. pygmaea**  
*haagei* var. *pectinata* (Backbg.) Donald comb. nud. = **R. pygmaea**  
*haagei* var. *salmonae* Frič nomen nudum = **R. pygmaea** f. *flavovirens*  
*haagei* var. *tricolor* Frič nomen nudum = **R. pygmaea** f. *flavovirens*  
*haefneriana* Cullm. = **R. pygmaea** var. *haefneriana*  
*hartlingiana* Borg = ?  
*hirsutissima* Card. = **R. hirsutissima**  
*iscayachensis* Rausch comb. nud. = **R. iscayachensis**  
*ithyacantha* Card. = **R. ithyacantha**  
*kesselringiana* Cullm. = **R. aureiflora** f. *rubriflora*  
*longiflora* Frič nomen nudum = ?  
*longiseta* Backbg. nomen nudum = **R. aureiflora**  
*mammillata* Frič nomen nudum = ?  
*mamillosa* = ?  
*melanotricha* Frič nomen nudum = ?  
*miniflora* Frič nomen nudum = ?  
*minimiflora* Frič nomen nudum = ?  
*morenoensis* Rausch nomen nudum = ?  
*mudanensis* Rausch comb. nud. = **R. mudanensis**  
*multiflora* Frič nomen nudum = ?  
*neopygmaea* Backbg. = **R. euanthema** f. *neopygmaea*  
*neosteinmannii* (catalogue 1974 Uhlig) U1845 = **R. pygmaea** v. *neosteinmannii*  
*nidulans* Frič = ?

*nigra* Frič nomen nudum = ?  
*nigricans* (Wessn.) Krainz. = **R. ritteri** var. *nigricans*  
*nigricans* var. *peterseimii* Frič = **R. ritteri** f. *peterseimii*  
*nigriticentra* Frič nomen nudum = ?  
*orurensis* (Backbg.) Backbg. = **R. pygmaea**  
*padcayensis* Rausch comb. nud. = **R. pygmaea**  
*patericalyx* Ritter comb. nud. = **R. patericalyx**  
*patericalyx* var. *odontopetala* Ritter comb. nud. = **R. patericalyx**  
*paucipetala* Frič nomen nudum = ?  
*pectinata* (Backbg.) Backbg. non Frič = **R. pygmaea**  
*pectinata* var. *atrovirens* (Backbg.) Backbg. = **R. pygmaea** v. *atrovirens*  
*pectinata* var. *digitiformis* (Backbg.) Backbg. = **R. pygmaea**  
*pectinata* var. *gracilis* Knize nomen nudum (KK970)  
*pectinata* var. *neosteinmannii* Backbg. = **R. pygmae**  
*pectinata* var. *paznensis* Knize nomen nudum (KK969)  
*pectinata* var. *orurensis* (Backbg.) Backbg. = **R. pygmae**  
*permutata* Knize nomen nudum KK1046  
*pygmaea* (R. E. Fries) Krainz = **R. pygmaea**  
*pygmaea* var. *flavovirens* (Backbg.) Backbg. = **R. pygmaea** f. *flavovirens*  
*pygmaea* var. *longispina* nomen nudum  
*puchella* Frič nomen nudum = ?  
*pumilla* Frič nomen nudum = ?  
*pyrimidalis* Frič nomen nudum = ?  
*rauschii* Zecher comb. nud. = **R. rauschii**  
*reichii* Borg = **Neoporтерia reichii**  
*raulii* Rausch comb. nud. = **R. raulii**  
*ritteri* (Wessn.) Krainz = **R. ritteri**  
*ritteri* var. *pilifera* (Frič) Backbg. = **R. ritteri**  
*robusta* Hort nomen nudum = ?  
*rosalbiflora* Ritter comb. nud. = **R. rosalbiflora**  
*roseaurata* Frič nomen nudum = ?  
*rubelliflora* Backbg. = reddish-orange flowering plant, may be a natural hybrid  
between the red flowered **R. aureiflora** f. *rubriflora* and the yellow flowered  
**R. aureiflora** = **R. aureiflora** f. *rubelliflora*  
*rubriflora* Backbg. = **R. aureiflora** f. *rubriflora*  
*rubriflora* var. *blossfeldii* (Werd.) Krainz = **R. aureiflora** f. *rubriflora*  
*rubriflora* var. *nigrilongiseta* (Wessn.) Krainz = **R. aureiflora** f. *rubriflora*  
*sarothroides* Werd. = **R. aureiflora** f. *sarothroides*  
*schmiedcheniana* (Köhл.) Krainz. = **R. einsteinii** f. *schmiedcheniana*  
*schmiedcheniana* var. *einsteinii* (Frič) Backbg. = **R. einsteinii**  
*schmiedcheniana* var. *karreri* (Frič) Backbg. = **R. einsteinii**  
*schmiedcheniana* var. *rubrivididis* Frič & Kreuzgr. ex Backbg. =  
**R. einsteinii** f. *rubrivididis*  
*schmiedcheniana* var. *steineckeri* Frič & Kreuzgr. ex Backbg. =  
**R. einsteinii** f. *steineckeri*  
*scoparia* Frič nomen nudum = ?  
*scoparia* var. *cylindrica* Frič nomen nudum = ?  
*semicolumnaris* Frič nomen nudum = ?  
*spiralisepala* Schutz = cultivated form of **R. aureiflora**

*spiralisepala* Jajo ex Brederoo nomen nudum  
*steinmannii* (Solms-Laub) Kraenz = **R. steinmannii**  
*steinmannii* var. *complanata* Rausch nomen nudum  
*steinmannii* var. *rotundiseta* Rausch nomen nudum  
*steinmannii* var. *rubriflora* Rausch nomen nudum  
*stellata* Frič nomen nudum = ?  
*struwelpester* Frič nomen nudum = ?  
*suicomammillata* Frič nomen nudum = ?  
*tarvitaensis* Ritter comb. nud. = **R. tarvitaensis**  
*tarvitensis* = **R. tarvitaensis**  
*turbiniformis* Frič nomen nudum = ?  
*uniclaricentra* Frič nomen nudum = ?  
*unigrieentra* Frič nomen nudum = ?  
*waltheriana* Borg = **R. spegazziniana**

### Check list of **Rebutia** species

The following is a list of specific and varietal names which have been used in connection with the genus **Rebutia**. A large number of these names are invalid, unfortunately many of them are still in use and have therefore been included. Please realise that this is not a complete check list as we are sure there are many other names and combinations which have appeared in obscure publications and which are not included. Nursery catalogues are a fruitful source of misnames and invalid combinations. As it is, the list already contains nearly 800 names and combinations.

We do not pretend to know what are all the correct current names for many of the names in the following list for a variety of reasons.

- a) often living plants of many of the named 'species' are not in cultivation and in addition were sometimes inadequately described without photographs. This means that accurate assessment as to status or indeed relationship to a currently accepted name is extremely difficult and often impossible.
- b) names have sometimes been given to plants which after further field work appear to have been described from extreme geographical forms. They have never been recollected and probably never will be again (e.g. **R. albipilosa**)
- c) many of the names are names in the literature described without full description and so referral to the correct name is often impossible.
- d) a number of the names have not been published in accordance with the code of Botanical Nomenclature and have therefore to be excluded.

The complex and superfluous nature of the names in this genus is admirably illustrated by the example of **Rebutia senilis**, where there are no less than 50 possible combinations.

I Starred \* names have accurate locational data and have been used in the compilation of the distribution maps.

II The accepted species together with the names of plants which are reasonably distinct and identifiable are set in bold type.

III All other names are set in italic type.

## Check list of Rebutia Sensu Lato

*c.v. 'alabaster'* (hybrid *R. minuscula* v. *violaciflora* f.

*kariusiana* x *R. c.v. stirnadel's meisterstuck.*)

\**albiareolata* Ritter (FR761) (1977) Kakt. u.a. Sukk. 28 78

\**albiflora* Ritter & Buin. (FR766a) (1963) Taxon 12 29

\**albipilosa* Ritter (FR754) (1963) Taxon 12 29

*albisetia* Graessn. nomen nudum = ?*aureiflora*

\**albopectinata* Rausch (1972) Kakt. u.a. Sukk. 23 236

*allegraiana* Borg nomen nudum = *senilis* var. *elegans*

*almeyeri* W. Heinr. = ? *senilis* f. *stuemerii*

*archibuingiana* Ritter (1978) Ashingtonia 3 14

*arenacea* Card. = *Sulcorebutia arenacea* (Card.) Ritter

*auranitida* (Wessn.) Buin & Donald (1937) Kakt. u.a. Sukk. 9 130

“ var. *flaviflora* Backbg. = *auranitida*

“ var. *gracilis* (Wessn.) Donald = *auranitida* f. *gracilis*

“ f. *gracilis* (Wessn.) Buin. & Donald (1937) Kakt. u.a. Sukk. 9 130

*aurantiaca* hort (catalogue 1974 Uhlig) U1343 = ? U1343

\**aureiflora* Backbg. (1932) Deutsch Kakteenfreunde 124

“ var. *albilongiseta* (Backbg.) Marshall & Bock. comb. nud. = *aureiflora*

“ var. *albiseta* (Backbg.) Marshall & Bock. comb. nud. = *aureiflora*

“ f. *boedeckeriana* (Backbg.) Buin. & Donald (1934) Blatt. f. Kakteenf. 2

“ var. *densispina* Borg nomen nudum = *aureiflora*

\* “ var. *elegans* (Backbg.) Buin. & Donald (1934) Blatt. f. Kakteenf. 9

\* “ f. *duursmaiana* (Backbg.) Buin. & Donald (1934) Blatt. f. Kakteenf. 9

“ f. *kesselringiana* (Cullm.) Kohler = *aureiflora* f. *rubriflora*

“ var. *longiseta* (Backbg.) Marshall & Bock. comb. nud. = *aureiflora*

“ f. *rebelliflora* (Backbg.) Buin. & Donald (1935) Kaktus A.B.C. 247

“ var. *rubriflora* (Backbg.) Buin. & Donald

\* “ f. *rubriflora* (Backbg.) Buin. & Donald (1935) Kaktus A.B.C. 247

“ var. *sarothroides* (Werd.) Buin. & Donald (1936) Bluh. Sukk. f. 106

“ var. *sarothroides* (Werd.) Buin. & Donald (1936) Bluh. Sukk. f. 106

“ var. subsp. *aureiflora* (Backbg.) Donald = *aureiflora*

“ var. subsp. *aureiflora* var. *Blossfeldii* (Werd.) Donald =

*aureiflora* f. *rubriflora*

“ var. subsp. *elegans* (Backbg.) Donald = *aureiflora* var. *elegans*

“ var. subsp. *elegans* var. *sarothroides* (Werd.) Donald =

*aureiflora* f. *sarothroides*

*aurescens* hort. (catalogue 1974 Uhlig) U1344 = ?

*aureicantha* hort. (catalogue 1974 Uhlig) U1756 = ?

\**aureispina* Knize nomen nudum KK843 (also KK1694)

*beryllioides* Donald nomen nudum = *wessneriana* var. *beryllioides*

“ var. *densiseta* nomen nudum = *wessneriana* var. *beryllioides*

“ var. *longiseta* nomen nudum = *wessneriana* var. *beryllioides*

\**binnewaldiana* W. heinr. = ? *wessneriana*

- binghamiana* Borg nomen nudum = *Lobivia binghamiana*  
*blossfeldii* Werd. = *aureiflora f. rubriflora*  
*blossfeldiana* Werd ex Backbg. nomen nudum = ? *aureiflora f. rubriflora*  
*boedeckeriana* (Backbg.) Marshall & Bock. nomen nudum =  
*aureiflora f. boedeckeriana*  
*boliviensis* hort (catalogue 1974 Kohres) = ?  
**\*brachyantha** (Wessn.) Buin. & Donald (1937) Kakt. u.a. Sukk. 207  
*brachyantha* Card. = *Sulcorebutia breviflora* (Card.) Backbg.  
*breviflora* Card. nomen Illeg. = *Sulcorebutia breviflora* (Card.) Backbg.  
**\*brunescens** Rausch (R480) (1972) Kakt. u.a. Sukk. 23 235  
**\*brunneoradicata** Ritter (FR1109) Kakt. u.a. Sukk. 23 98  
*buiningiana* Ritter nomen nudum = ? *spinossima*  
**\*buiningiana** Rausch (R511) (1972) Kakt. u.a. Sukk. 23 98  
*cabratai* Borg nomen nudum = *Lobivia densispina*  
*caineana* Card. = *Sulcorebutia caineana* (Card.) Donald  
*cajasensis* Ritter (FR1141) (1977) Succulenta 56 64  
*calliantha* Bew. nomen nudum  
*calliantha* Wessn. = **wessneriana**  
 .. var. *breviseta* Backbg. = **wessneriana**  
 .. var. *beryllioides* Buin. & Donald = **wessneriana** var. *beryllioides*  
 .. var. *beryllioides* f. *breviseta* (Backbg.) Buin. & Donald = **wessneriana**  
 .. f. *hyalacantha* Buin. & Donald = **wessneriana**  
 .. var. *densiseta* Bew. nomen nudum = *kraenziana*  
 .. var. *kariusiana* Buin. & Donald = *minuscula* var. *violaciflora f. kariusiana*  
 .. var. *kraenziana* (Kess.) Buin. & Donald = *kraenziana*  
**\*camarguensis** Rausch (R3111) (1976) Succulenta 55 42  
**\*canacruzensis** Rausch (1976) Kakt. u.a. Sukk. 27 49 = a form of *pygmaea*  
*canaletas* Knize nomen nudum KK1565  
*candiae* Card. = *Sulcorebutia candiae* (Card.) Buin. & Donald  
*canigueralii* Card. = *Sulcorebutia canigueralii* (Card.) Buin. & Donald  
*caracarensis* Card. = *Sulcorebutia caracarensis* (Card.) Donald.  
**\*carmeniana** Rausch (1978) Kakt. u.a. Sukk. 29 105  
*carminea* Buin. = *minuscula* var. *violaciflora*  
*christinae* Rausch (R492a) (1975) Kakt. u.a. Sukk. 26 145  
*chrysacantha* Backbg. (1935) Kaktus ABC, 416  
 .. var. *densispina* nomen nudum  
 .. var. *elegans* (Backbg.) Backbg. = *senilis* var. *elegans*  
 .. var. *iseliniana* (Kraenz) Donald comb. nud. =  
*senilis* var. *iseliniana*  
 .. var. *kesselringiana* (Bew.) Donald comb. nud. =  
*senilis* var. *kesselringiana*  
**\*cincinnata** Rausch (R300) (1976) Kakt. u.a. Sukk. 27 4  
**\*cintiensis** Ritter (FR938) (1978) Ashingtonia 2 206  
*citricarpa* Frič & Backbg. = *xanthocarpa f. citricarpa*  
 .. var. *salmonaea* Frič. nomen nudum = *xanthocarpa f. salmonaea*  
**\*colorea** Ritter (FR1106?) (1977) Kakt. u.a. Sukk. 28 78  
*conoidea* Wessn. = *einsteinii* F. *conoidea*  
 .. var. *columnaris* Wessn. = *einsteinii* f. *columnaris*  
*corroana* Card. = *Sulcorebutia corroana* (Card.) Don. & Bred.

- \***costata** Werd. (1934) Notizbl. Bot. Gart. u. Mus. Berlin 12 25  
 " " f. **eucalyptana** (Backbg.) Buin. & Donald (1935) Kaktus ABC, 414  
 " " f. **pilifera** Buin. & Donald (1965) Cact. Succ. J. Gt. Brit. 27 40  
**dasyphrissa** Werd. = **xanthocarpa** f. **dasyphrissa**  
\***deminuta** (Web.) Br. & R. (1904) Bull. Mus. Hist. Nat. Paris, 386  
\* " " f. **pseudominuscula** (Speg.) Buin. & Donald (1905) Anal. Mus. Nac.  
 Buenos Aires Ser III, 488  
\***densipectinata** Ritter (FR758) nomen nudum = ? forme of **R. albopectinata**  
\***diersiana** Rausch (R631) (1975) Kakt. u.a. Sukk. 26 25  
 " var. **atrovirens** Rausch (R633) (1975) Kakt. u.a. Sukk. 26 26  
 " var. **minor** Rausch nomen nudum  
**donaldiana** Lau & Rowley (Lau 348) (1974) Ashingtonia 1 76  
**durispina** Frič nomen nudum = ?  
 " var. **violrosea** Frič nomen nudum = ?  
**duursmaiana** (Backbg.) Marshall & Bock. comb. nud. = **aureiflora** f. **duursmaiana**  
\***einsteinii** Frič ex Backbg. (1956) Descr. Cact. Nov. 30  
 " var. **atrovirens** Frič = ? **einsteinii** f. **rubriviridis**  
 " var. **columnaris** (Wessn.) Buin. & Donald = **einsteinii** f. **columnaris**  
 " f. **karreni** (Backbg.) Buin. & Donald = **einsteinii**  
 " var. **columnaris** f. **conoidea** (Wessn.) Buin. & Donald =  
 " " " **einsteinii** f. **conoidea**  
\* " " f. **columnaris** (Wessn.) Buin. & Donald (1940) Beitr. Sukk. u. pflege 4  
 " var. **conoidea** (Wessn.) Buin. & Donald = **einsteinii** f. **conoidea**  
\* " " f. **conoidea** (Wessn.) Buin. & Donald (1940) Beitr. Sukk. u. pflege 3  
\* " " var. **gonjianii** (Kies.) Donald (1973) Bol. Soc. Argentina Bot. 15 132  
 " var. **rubriviridis** (Frič & Kreuzgr. ex Backbg.) Buin. & Donald =  
 " " " **einsteinii** f. **rubriviridis**  
 " f. **rubriviridis** (Frič & Kreuzgr. ex Backbg.) Donald (1956)  
 " " " Descr. Cact. Nov 30  
\* " " f. **schmiedcheniana** (Köh.) Buin. & Donald (1939) Beitr. Sukk. u. pflege 37  
 " var. **steineckeri** (Frič & Kreuzgr. ex. Backbg.) Buin. & Donald =  
 " " " **einsteinii** f. **steineckeri**  
 " f. **steineckeri** (Frič & Kreuzgr. ex. Backbg.) Buin. & Donald (1956)  
 " " " Descr. Cact. Nov. 30  
**elegans** Backbg. = **aureiflora** var. **elegans**  
 " var. **gracilis** Backbg. = **aureiflora**  
\***eos** Rausch (R333) (1972) Succulenta 51 2  
 " var. **roseiflora** Rausch nomen nudum (R333a)  
**espinosae** Knize nomen nudum KK1518 = **R. narvaesensis**  
**euanthema** (Backbg.) Buin. & Donald (1956) Backbg. Descr. Cact. Nov. 30  
 " f. **fricci** (Backbg.) Buin. & Donald (1956) Backbg. Descr. Cact. Nov. 30  
 " f. **neopygmaea** (Backbg.) Buin. & Donald (1956) Backbg.  
 " " " Descr. Cact. Nov. 30  
 " f. **oculata** (Werd.) Buin. & Donald (1935) Bluh. Kakt. u.a. Sukk. 99  
**eucalyptana** (Backbg.) Donald = **costata** f. **eucalyptana** (Backbg.) Buin. & Donald  
\***fabrisii** Rausch (R688) (1977) Kakt. und Sukk. 28 52  
 " var. **aureiflora** Rausch (R687) (1977) Kakt. u.a. Sukk. 28 53  
**fametimensis** (Speg.) Speg. = **Lobivia densispina**

- \**fiebigiana* W. Heinr. = ? *wessneriana*  
\**fiebrigii* (Guerke) Br. & R. (1905) Notizbl. Bot. Gart. u. Mus. Berlin 4183  
" var. *densita* (Cullm.) Oeser = *fiebrigii* f. *densita*  
" var. *densiseta* Cullm.  
\**flavistyla* Ritter (FR756) (1978) Ashingtonia 3 12  
*friciana* Donald & Cullm. nomen nudum = *euanthema* f. *fricci*  
*fricci* (Hort) Backbg. nomen nudum = *euanthema* f. *fricci*  
\**freidrichiana* Rausch (R630) (R642) (1976) Succulenta 55 101  
\**froehlichiana* Rausch (R649) (1975) Succulenta 54 225  
*fuauxiana* (Backbg.) Backbg. = *R. pygmaea* f. *fuauxiana*  
\**fulviseta* Rausch (R583) (R319) (1970) Kakt. u.a. Sukk. 21 29  
" var. *albispina* Rausch nomen nudum (R495)  
\**fusca* Ritter (FR940) (1977) Kakt. u.a. Sukk. 28 78  
*fusca* Hort nomen nudum  
*gibbulosa* Knize nomen nudum KK1563  
*glanduliflora* Card. nom. prov. = *Sulcorebutia spec.?*  
*glaucescens* Backbg. nomen nudum = ?  
*glomeriseta* Card. = *Sulcorebutia glomeriseta* (Card.) Ritter  
*glomeriseta* Card. = *Sulcorebutia glomeriseta* (Card.) Buin. & Donald  
*gonjianii* Kiesl. = *einsteinii* var. *gonjianii*  
\**graciliflora* Backbg. (1963) Descr. Cact. Nov. 3 13  
*graciliflora* var. *borealis* Ritter nomen nudum FR341a  
*gracilis* Borg nomen nudum Hybrid - intermediate form between *R. senilis* and  
*R. xanthocarpa*  
\**gracilispina* Ritter (FR1118) (1977) Kakt. u.a. Sukk. 28 76  
*graessneri* Frič nomen nudum = *minuscula* var. *violaciflora*  
*grandiflora* Backbg. non Frič = *minuscula* var. *grandiflora*  
*x grandilacea* Johnson hybrid (*grandiflora* x *violaciflora*)  
*haageana* Frič ex Backbg. = *R. pygmaea*  
*haagei* Frič & Schelle (1930) Kaktusar 88 = *R. pygmaea*  
*haefneriana* Cullm. = *pygmaea* f. *haefneriana*  
*hahniana* Werd. = ? *ritteri* var. *nigricans* f. *hahniana*  
*hanii* Werd. = ?  
*halmii* Frič. nomen nudum = ?  
*haseltonii* Card. = *Sulcorebutia haseltonii* (Card.) Donald  
*heinrichiana* hort nomen nudum (catalogue 1977 Uhlig) = ?  
\**heliosa* Rausch (R314) (1970) Kakt. und Sukk. 21 30  
" var. *cajasensis* Donald (Lau401) (1979) Ashingtonia 5 144  
" var. *condorensis* Donald (Lau405) (1979) Ashingtonia 5 143  
*heliosa* x *albiflora* An interesting new hybrid  
*hertrichiana* comb. nud. = *Lobivia hertricheana*  
\**hirsutissima* Card. (1971) Cact. Succ. J. Am. 43 244  
\**hoffmannii* Diers & Rausch (R521a) (1977) Kakt. u.a. Sukk. 28 105  
\**huasiensis* Rausch (R313) (1977) Kakt. u.a. Sukk. 28 25  
*hyalacantha* (Backbg.) Backbg. = *wessneriana*  
*inflexiseta* Card. = *Sulcorebutia inflexiseta* (Card.) Donald  
\**iridescens* Ritter (FR1434) (1977) Kakt. u.a. Sukk. 28 76  
\**iscayachensis* Rausch (R335b) (1977) Sukkulenta 56 1  
\**ithyacantha* (Card.) Diers. (1972) Kakt. u.a. Sukk. 23 12

- \***jujuyana** Rausch (R220) (1973) Kakt. u.a. Sukk. 24 147  
*kariusiana* Wessn. Locality unknown - selected from 200 field collected plants of  
**R. senilis** and **R. marsoneri** imported by Uebelmann. (1963) Kakt. u.a. Sukk. 14 149 =  
 minuscula v. *violaciflora* f. *kariusiana*
- \***kieslingii** Rausch (R694) (1977) Kakt. u.a. Sukk 28 177  
*knuthiana* Backbg. (1935) Kaktus ABC 416 = *minuscula* var. *violaciflora* f. *knuthiana*
- \***krainziana** Kesselring (1948) Sukkulenkunde II Jb. Schweiz Kakt. Ges. 23  
 .. var. *breviseta* (Backbg.) Donald (1935) = ? Hybrid  
 .. *krainziana* x *marsoneri* Kaktus ABC 416
- .. f. *breviseta* (Backbg.) Krainz & Haarm  
 .. var. *breviseta* f. *beryllioides* (Buin. & Donald) Krainz & Haarm =  
 .. *wessneriana* var. *beryllioides*
- .. var. *hyalacantha* (Backbg.) Buchheim = *wessneriana*  
 .. var. *longiseta* nomen nudum = *wessneriana*  
 .. var. *wessneriana* (Bew.) Krainz & Haarm = *wessneriana*  
 .. var. *wessneriana* f. *calliantha* (Bew.) Krainz & Haarm = *wessneriana*
- kruegerii* (Card.) Backbg. = *Sulcorebutia kruegeri* (Card.) Ritter
- \***kupperiana** Böd (1932) Monats. D.K. Gesell. 276
- \***kupperiana** var. **spiniflora** Ritter (FR7626) (1977) Kakt. u.a. Sukk. 28 78
- \***lanosiflora** Ritter (FR1116) (1977) Kakt. u.a. Sukk. 28 77  
*lasseniana* hort nomen nudum = ?
- \***lauii** Donald (Lau416)  
*laterita* Knize nomen nudum KK1519
- \***leucanthema** Rausch (R305) (1975) Kakt. u.a. Sukk 26 125  
 .. var. *coccinifera* Ritter (1977) Sukkulenta 56 63
- longiflora* Frič nomen nudum = ?  
*longispina* Frič nomen nudum = ?  
*lucida* Frič nomen nudum = ?
- \***mamillosa** Rausch R302 (1972) Succulenta 51 69  
 .. var. *australis* Rausch (1977) Kakt. u.a. Sukk. 28 77 = ? var. or form of  
 .. *R. fulviseta*  
 .. var. *orientalis* Ritter (1977) Kakt. u.a. Sukk. 28 77 = ? var. or form of  
 .. *R. spegazziniana*
- maresii* Borg nomen nudum = *Lobivia densispina*
- \***margarethae** Rausch (R521) (1972) Kakt. und Sukk. 23 4
- \***marsoneri** Werd. (1937) Kakteenkunde 2  
 .. var. *albescens* hort nomen nudum  
 .. var. *breviseta* hort nomen nudum  
 .. var. *brevispina* Donald nomen nudum  
 .. var. *grandiflora* Donald nomen nudum  
 .. var. *saiperdaiana* (Buin.) Donald = *marsoneri* f. *saiperdaiana*  
 \* .. f. *saiperdaiana* (Buin.) Buin. & Donald (1941) Succulenta 23 15  
 .. var. *spathulata* hort nomen nudum  
 .. f. *spathulata* Donald nomen nudum  
 .. c.v. *spatula* Donald  
 .. var. *vatteri* Donald nomen nudum
- maximiflora* Frič nomen nudum = ?
- c.v. **meisterstuck** Hort. White flowered hybrid produced by Stirnaldei.  
 Rebutia spec x Echinopsis spec (polyancistra?)

- melachlora* Ritter & Buin. nomen nudum = *leucanthema c. cocciniflora*  
*melanea* Borg nomen nudum = *Lobivia densispina* ?  
**\*minuscula** K. Schum. (1895) Monatsschr Kakteenkde. 5 102  
 " f. *bruneo-aurantiaca* Simon nom. prov. = **minuscula**  
 " var. *citricarpa* (Frič) Simon = **xanthocarpa** f. *citricarpa*  
 " var. *coeruleascens* (Backbg.) Simon = **xanthocarpa** f. *coeruleascens*  
 " var. *grandiflora* Krainz nomen nudum  
 " var. *grandiflora* Marsh nom. prov.  
 \* " var. **grandiflora** (Backbg.) Buin. & Donald  
 " var. subspc. *grandiflora* (Backbg.) Donald = **minuscula** var. *grandiflora*  
 f. *knuthiana* (Backbg.) Buin. & Donald = **minuscula** var.  
violaciflora f. *knuthiana*  
 " var. *multiflora* Frič nomen nudum = **minuscula**  
 f. *kariusiana* (Wessn.) Buin. & Donald = **minuscula** var.  
violaciflora f. *kariusiana*  
 " var. *salmonea* (Frič) Simon = **xanthocarpa** f. *salmonea*  
 " var. *senilis* (Backbg.) Simon = **senilis**  
 \* " f. *violaciflora* (Backbg.) Buin. & Donald = **minuscula** var. *violaciflora*  
 " var. *violaciflora* (Backbg.) Buin. & Donald (1935) Blatt. f. Kakt. 8  
 " var. *violaciflora* f. *kariusiana* (Wessn.) Donald (1963) u.a. Sukk. 14 149  
 " var. *violaciflora* f. *rosiflora* nom. prov.  
 " var. *violaciflora* f. *knuthiana* (Backbg.) Buin. & Donald (1935) Kaktus  
ABC 277 & 416  
 " var. subspc. *violaciflora* (Backbg.) Donald = **minuscula** var. *violaciflora*  
 " var. subspc. *violaciflora* f. *kariusiana* (Wessn.) Donald = **minuscula** var.  
violaciflora f. *kariusiana*  
**\*minutissima** Ritter (FR1124) (1977) Kakt. u.a. Sukk. 28 78  
**\*mixta** Ritter (FR1429) (1977) Kakt. u.a. Sukk. 28 76  
**\*mixticolor** Ritter (FR1108) (1977) Kakt. u.a. Sukk. 27 169  
**\*mudanensis** Rausch (R689) (1976) Kakt. u.a. Sukk. 27 169  
*multicolor* Ritter nomen nudum (FR1108)  
*multiplex* (Pfeiff.) v. Roeder (1938) Kakteenkunde 124 = ? *Echinopsis multiplex*  
*multicostata* hort nomen nudum = ?  
*muricata* Frič nomen nudum = **minuscula** var. *violaciflora*  
**\*muscula** Ritter & Thiele (FR753) (1963) Taxon 12 1  
 " var. *nivosa* Knize comb. nud. KK1301  
**\*napina** Ritter (FR942) nomen nudum (nom. prov.?)  
*narvaecensis* (Card.) Donald (1971) Cact. & Succ. J. Am. 43 245  
*neopygmaea* Backbg. = **euanthema** f. *neopygmaea*  
*nicolaii* Frič nomen nudum = ? (1932) Mollers Deutsch Gartnerzeit 47 422  
*nidulans* Borg nomen nudum = ?  
*nigra* Frič nomen nudum = ?  
*nigricans* (Wessn.) Backbg. = **ritteri** var. *nigricans*  
**\*nitida** Ritter (FR769) (1978) Ashingtonia 3 14  
*nivea* nomen nudum = ? **muscula**  
*nivosa* Ritter nomen nudum = ? **muscula**  
**\*nogalensis** Ritter (FR768) (1977) Kakt. und Sukk. 28 78  
*oculata* Werd. (1935) Bluh Kakt. u.a. Sukk 99 = **euanthema** f. *oculata*  
**\*odontopetala** Ritter (FR757a) (1977) Kakt. u.a. Sukk. 28 76

- oderata* Hort nomen nudum = **wessneriana**  
*orurensis* Backbg. = **pygmaea**  
**\*padcayensis** Rausch (R322) Succulenta 56 233  
*pallida* Rausch (1977) Succulenta 56 233  
**\*patericalyx** Ritter (FR757) (1977) Kakt. u.a. Sukk. 28 74  
 .. var. *odontopetala* Ritter nomen nudum  
**\*pauciareolata** Ritter (FR1121) (1977) Kakt. u.a. Sukk. 28 77  
**\*paucicostata** Ritter (FR936) (1977) Kakt. u.a. Sukk. 28 77  
*pectinata* Backbg. = **pygmaea**  
 .. var. *atrovirens* = **pygmaea** var. *atrovirens*  
 .. var. *digitiformis* Backbg. = **pygmaea**  
 .. var. *neosteinmannii* Backbg. = **pygmaea** f. *neosteinmannii*  
 .. var. *orurensis* Backbg. = **pygmaea**  
*periferia* hort. nomen nudum = **xanthocarpa** (f. *salmonea*?)  
*permutata* Heinr. = **wessneriana**  
 .. var. *gokrausei* Heinr. = **wessneriana**  
*peruviana* hort nomen nudum = **marsoneri**  
*perplexa* Donald (Lau 329a) (not *narvaecense* (Card. Donald) (1979)  
Ashingtonia 3 150
  
*petersainii* Borg nomen nudum = **ritteri**  
*petersonii* hort nomen nudum = **minuscula**  
*pilayensis* Knize nomen nudum (KK863)  
*pilifera* (Buin. & Donald) Rausch nomen nudum = **costata** f. *pilifera*  
*pilosa* Knize nomen nudum (KK858)  
*polymorpha* Card. = **Sulcorebutia polymorpha** (Card.) Backbg.  
**\*potosina** Ritter (FR1428) (1977) Kakt. u.a. Sukk. 28 77  
*prolifera* Rausch nomen nudum = **fabrisii**  
*pseudodemiruta* Backbg. non Frič. (1933) D.K.F. 7  
 .. f. *albiseta* (Backbg.) Buin. & Donald (1951) Cact. Succ. J. Amer. 23 82  
 .. var. *longiseta* nomen nudum  
 .. f. *grandiflora* (Backbg.) Buin. & Donald (1951) Cact. Succ. J. Amer. 23 82  
 .. f. *ruberfilamentosa* Buin. & Donald (1963) Sukkulantenkunde 7 102  
 .. f. *schniederiana* (Backbg.) Buin. & Donald (1951)  
Cact. Succ. J. Amer. 23 82  
 .. f. *schumanniana* (Backbg.) Buin. & Donald (1933) Der Kakteenfr. 7  
*pseudoheliosa* nomen nudum = **albopectinata** (Lau 401)  
*pseudokrainziana* nomen nudum  
*pseudominuscula* (Speg.) Br. & R. = **deminuta** f. *pseudominuscula*  
**\*pseudopygmaea** Ritter (FR1122) nomen nudum  
**\*pulchella** Rausch (1972) Kakt. u.a. Sukk. 23 340  
*pulchera* Card. = **Sulcorebutia pulchera** (Card.) Donald  
**\*pulvinosa** Ritter & Buin. (FR766) (1963) Taxon 12 29  
*pulvispina* Knize nomen nudum KK1568  
*pseudograessneri* hort (catalogue 1974 Uhlig) U844 = ?  
**\*pygmaea** (R. E. Fries) Br. & R. (1905) Nov. Act. Soc. Sci. Upsala IV 120  
 .. f. *atrovirens* (Backbg.) Buin. & Donald (1935) Kaktus ABC 242  
 .. f. *flavovirens* (Backbg.) Buin. & Donald (1935) Kaktus ABC 243  
 .. f. *fauxiana* (Backbg.) Buin. & Donald (1956) Descr. Cact. Nov. 131  
 \* .. f. *haefneriana* (Cullm.) Buin. & Donald (1955) Kakt. u.a. Sukk. 6 119

- .. f. **neosteinmannii** (Backbg.) Buin. & Donald (1956) Descr. Cact. Nov. 130  
 .. var. *tupizensis* Rausch nomen nudum (R676)
- \*raulii** Rausch (R485) (1980) Kakt. u.a. Sukk. 31 170
- \*rauschii** Zecher (R297) (1977) Kakt. u.a. Sukk. 28 73  
*reichii* Borg nomen nudum = ? *Neoporteria reichii*  
*residua* Knize nomen nudum (KK1517)  
*rigidisepina* Frič nomen nudum = ?
- \*ritteri** (Wessn.) Buin. & Donald (1938) Beitr. z. Skde. u. pflege 3  
\* .. var. *nigricans* (Wessn.) Buin. & Donald (1938) Beitr. z. Sukk. u. Fl. 51  
.. var. *nigricans* f. *hahniana* Buin. & Donald (1965) Cact. Succ. J. Gt. Brit. 27 40  
.. var. *nigricans* f. *peterseimii* Buin. & Donald (1965)  
Cact. Succ. J. Gt. Brit. 27 40  
.. f. *peterseimii* Buin. & Donald = **ritteri** var. *nigricans* f. *peterseimii*  
.. f. *hahniana* Buin. & Donald = **ritteri** var. *nigricans* f. *hahniana*
- ritteriana** hort (catalogue 1974 Andreae) = ? **ritteri**
- \*robustispina** Ritter (FR618) (1977) Succulenta 56 64  
.. var. *minor* Ritter nomen nudum
- \*rosalbiflora** Ritter (FR1115) (1977) Kakt. u.a. Sukk. 28 76  
.. var. *amblypetala* Ritter (FR1119) (1977) Kakt. u.a. Sukk. 28 76  
***rubelliflora*** (Backbg.) Marshall & Bock comb. nud. = **aureiflora** f. ***rubelliflora***
- \*rubiginosa** Ritter (FR767) (1963) Taxon 12 29  
*rubispina* Graessner nomen nudum = ?  
*rubrispina* Backbg. = ?  
*ruberiflora* (Backbg.) Marshall & Bock. comb. nud. = **aureiflora** f. ***ruberiflora***
- \*rutiflora** Ritter (FR1113) (1977) Kakt. u.a. Sukk. 28 76  
*saiperdaiana* Buin. = **marsoneri** f. ***saiperdaiana***
- \*salpingantha** Ritter (FR937) (1977) Kakt. u.a. Sukk. 28 77  
*salmonea* Frič non Backbg. nomen nudum catalogue name = ?  
*sanguinea* Ritter (1977) Succulenta 56 65  
.. var. *minor* Ritter nomen nudum
- sarothrioides** Werd. = **aureiflora** f. ***sarothrioides***  
*scarlata* Frič nomen nudum = **minuscula**  
.. var. *brevispina* Frič nomen nudum = **minuscula**
- \*schatzliana** Rausch (R640) Kakt. u.a. Sukk. 26 244  
*schmiedickeana* (Köh) Marsh. & Bock. comb. nud. = **einsteinii** f. ***schmiedcheniana***
- schmiedcheniana* var. *karreri* Backbg. = **einsteinii**  
.. var. *rubriviridis* Frič = **einsteinii** f. ***rubriviridis***  
.. var. *steineckeri* Frič = **einsteinii** f. ***steineckeri***
- \*senilis** Backbg. (1932) D. Kaktfrd. 123  
.. f. subspec. *senilis* Backbg. = **senilis**  
.. f. subspec. *senilis* f. *lilacinorosea* (Backbg.) Buin. & Donald =  
.. f. subspec. *senilis* f. *stuemerii* (Backbg.) Buin. & Donald =  
.. f. subspec. *chrysacanthia* (Backbg.) Donald = **chrysacantha**

- .. f. subspec. *chrysacantha* f. *iseliniana* (Krainz) Buin. & Donald =  
     .. *senilis* var. *iseliniana*  
 .. f. subspec. *chrysacantha* f. *kesselringiana* (Backbg.) Buin. & Donald =  
     .. *senilis* var. *kesselringiana*  
 .. f. subspec. *chrysacantha* f. *elegans* (Backbg.) Buin. & Donald =  
     .. *senilis* var. *elegans*  
 .. var. *aurescens* Backbg. = ? This taxon probably belongs with  
     .. **R. wessneriana** rather than with **R. senilis**. In our experience  
         it is self sterile and fits better with Subsection II rather than Subsection I.  
 .. f. *blossfeldii* nomen nudum = **senilis**  
 .. var. *breviseta* Backbg. = **krainziana**  
 .. f. *breviseta* Backbg. = **krainziana**  
 .. var. *calva* Frič nomen nudum = ?  
 .. var. *cana* Borg nomen nudum = ?  
 .. var. *cana* Backbg. = **senilis**  
 .. f. *cana* Backbg. ex Simon. = **senilis**  
 .. var. *chrysacantha* (Backbg.) Donald comb. nud. = **chrysacantha**  
 .. var. *chrysacantha* f. *elegans* (Backbg.) Buin. & Donald =  
     .. **senilis** var. *elegans*  
 .. var. *chrysacantha* f. *iseliniana* (Krainz) Buin. & Donald =  
     .. **senilis** var. *iseliniana*  
 .. var. *chrysacantha* f. *kesselringiana* (Bew.) Buin. & Donald =  
     .. **senilis** var. *kesselringiana*  
 .. var. *citricarpa* (Frič) Marsh = **xanthocarpa** f. *citricarpa*  
 .. var. *colinsii* hort (catalogue 1974 Uhlig) U2667 = ?  
 .. var. *dasyphrissa* (Werd.) Marshall & Bock. comb. nud. =  
     .. **xanthocarpa** f. *dasyphrissa*  
 .. var. *dasyphrissa* (Werd.) Donald = **xanthocarpa** f. *dasyphrissa*  
 .. var. *gracilis* nomen nudum = ?  
 .. var. *elegans* (Backbg.) Backbg. (1951) Cact. Succ. J. Amer. 23 83  
 .. var. *erecta* hort nomen nudum = ?  
 .. var. *hyalacantha* Backbg. (Backbg.) Donald = **wessneriana**  
 .. var. *hyalacantha* f. *hyalacantha* (Backbg.) ex Simon = **wessneriana**  
 .. var. *hyalacantha* f. *blossfeldiana* Köhler nomen nudum = ?  
 .. var. *iseliniana* Krainz (1946) Schweizer Garten 284  
 .. var. *iseliniana* f. *chrysacantha* (Backbg.) Buin. & Donald = **chrysacantha**  
 .. var. *iseliniana* f. *elegans* (Backbg.) Buin. & Donald = **senilis** var. *elegans*  
 .. var. *iseliniana* f. *kesselringiana* (Bew.) Buin. & Donald =  
     .. **senilis** var. *kesselringiana*  
 .. var. *kesselringiana* Bew. (1947) Sukkulantenkunde I 9  
 .. f. *lilacinosea* (Backbg.) Buin. & Donald (1935) Kaktus ABC 416  
 .. var. *lilacinosea* Backbg. = **senilis** f. *lilacinosea*  
 .. var. *longiflora* nomen nudum = ?  
 .. var. *longispina* Frič nomen nudum = ?  
 .. var. *luteirosea* (Backbg.) Marsh = **xanthocarpa** var. *luteirosea*  
 .. var. *pallidor* (Backbg.) Donald nomen comb. subnud. = ?  
 .. var. *pallidor* (Backbg.) Donald comb. nud. = ? **xanthocarpa**  
 .. var. *saiperdaiana* (Buin.) Backbg. = **marsoneri** f. *saiperdaiana*

- .. var. *schieleana* Bew. = *senilis* f. *schieleana*  
 .. f. ***schieleana*** (Bew.) Donald (1957) Kakt. u.a. Sukk 8 105  
 .. var. *semperlorens* Poind. = ?  
 .. var. *stuemerii* Backbg. = *senilis* f. *stuemerii*  
 .. f. ***stuemerii*** (Backbg.) Buin. & Donald (1932) Deutsch Kakt. frd. 131  
 .. var. *stuemeriana* Backbg. = *senilis* f. *stuemerii*  
 .. var. *violaciflora* Backbg. nomen nudum = ?  
 .. var. *xanthocarpa* (Backbg.) Marsh = ***xanthocarpa***  
***singularis*** Ritter FR1423 (1978) Ashington 3 12  
*solisioides* Knize nomen nudum = ***heliosa*** var. ***condorensis***  
**\**spiegazziniana*** Backbg. (1934) Blatter. f. Kakteen forsch g. 2  
 .. ***atroviridis*** (Backbg.) Backbg. (1951) Cact. Succ. J. Am. 23 82  
**\**sphaerica*** Ritter (FR1140) nomen nudum  
**\**spinosissima*** Backbg. (1935) Blatt. f. Kakteenf. 1935-8  
 .. var. *brunispina* Backbg. nomen nudum = ***spinosissima***  
 .. var. *aurea* Rausch nomen nudum (R318)  
 .. var. *similis* Frič nomen nudum = ***spinosissima***  
***spiralisepala*** Jajo nomen nudum  
**\**steinmannii*** (Sols-Laub) Br. & R. (1907) Bt. Zeit. 65 153 (Section I **Aylostera!**)  
 .. var. *cincinnata* Rausch nomen nudum (R200) = ?  
 .. var. *nigricans* Wessn. = ***ritteri*** var. ***nigricans***  
 .. var. *pilifera* (Buin. & Donald) Rausch comb. nud. = ***costata*** f. ***pilifera***  
**\**suthutiana*** Rausch (R629) (1976) Kakt. u.a. Sukk. 27 121  
***steinbachii*** Werd. = ***Sulcorebutia steinbachii*** (Werd.) Backbg.  
 .. *rosiflora* Backbg. = ***Sulcorebutia steinbachii*** v. *rosiflora*  
 .. var. *violaciflora* Backbg. = ***Sulcorebutia steinbachii*** v. *violaciflora*  
 .. var. *violacifera* Backbg. = ***Sulcorebutia steinbachii*** v. *violacifera*  
***steineckeri*** Fric nomen nudum (1932) Mollers Deutsch Gartner Zeit. 47 422 = ?  
**\**tamboensis*** Ritter (FR1142) (1978) Ashingtonia 2 207  
*taratensis* Card. = ***Sulcorebutia taratensis*** (Card.) Buin. & Donald  
**\**tarijensis*** Rausch (R87) (1975) Kakt. u.a. Sukk. 26 195  
**\**tarvitaensis*** Ritter (FR773) (1977) Kakt. u.a. Sukk. 28 78  
*tiraquensis* Card. = ***Sulcorebutia tiraquensis*** (Card.) Ritter  
 .. var. *longisetia* Card. = ***Sulcorebutia tiraquensis*** (Card.) Donald  
**\**torquata*** Ritter & Buin. (FR1117) (1977) Succulenta 56 63  
*totorensis* Card. = ***Sulcorebutia totorensis*** (Card.) Ritter  
**\**tropaeolipitica*** Ritter (FR1114) (1977) Kakt. u.a. Sukk. 28 78  
*tuberculato-chrysacantha* Card. = ***Sulcorebutia tuberculato-chrysacantha***  
 .. (Card.) Bred. & Donald  
**\**tuberosa*** Ritter (FR770) (1963) Taxon 12 28  
*tunariensis* Card. = ***Sulcorebutia tunariensis*** (Card.) Buin. & Donald  
*turbinata* hort nomen nudum Winter catalogue name = ? ***wessneriana***  
**\**vallegrandensis*** Card. (1970) Cact. Succ. J. Amer. 42 35  
*violacea* Frič hort nomen nudum = ***xanthocarpa*** var. *violaciflora*  
 .. var. *albispina* Frič nomen nudum = ?  
 .. var. *densispina* Frič nomen nudum = ?  
 .. var. *paucipetala* Frič nomen nudum = ?  
 .. var. *rosea* Frič nomen nudum = ?

- „ var. *stellata* Frič nomen nudum = ?
- \****violascens*** Ritter (FR352) (1977) Kakt. u.a. Sukk. 28 76  
*violaciflora* Backbg. = *minuscula* var. *violaciflora*
  - „ var. *brunispina* hort (catalogue 1974 Uhlig) U1175
  - „ var. *carminea* (Buining) Donald = *minuscula* var. *violaciflora*
  - „ var. *densispina* nomen nudum = *minuscula* var. *violaciflora*
  - „ var. *graessneri* nomen nudum = *minuscula* var. *violaciflora*
  - „ var. *knuthiana* (Backbg.) Donald comb. nud. =
    - minuscula* var. *violaciflora* f. *knuthiana*
  - „ var. *luteispina* (Backbg.) Borg hort. nomen nudum =
    - minuscula* var. *violaciflora*
  - „ var. *rosea* hort (catalogue 1974 Uhlig) U1173
- violbrunispina* Frič nomen nudum = ?
- violsalmonea* Frič nomen nudum = ?
- vizcarrae*** Card. = ***Sulcorebutia vizcarrae*** (Card.) Donald  
*volcanensis* hort (1974 catalogue Andraea) = ?
- \****vulpina*** Ritter (FR939) (1977) Succulenta 56 66  
*waltheriana* Backbg. nomen nudum = ? ***spiegazziniana***
- \****wessneriana*** Bew (1948) Sukkulantenkunde Jakrb. Schwiez. Kakt. Ges. 2 24
  - „ var. *beryllioides* Buin. & Donald
  - „ var. *calliantha* (Bew.) Kraenz = ***wessneriana***
  - „ var. *densiseta* nomen nudum = ***kraenziana***
  - „ var. *kraenziana* (Kess) Buin. & Donald = ***kraenziana***
  - „ var. *permutata* (Heinr.) Buin. & Donald = ***wessneriana***
  - „ subspec. *beryllioides* Buin. & Donald = ***wessneriana*** var. *beryllioides*
  - „ subspec. *wessneriana* f. *calliantha* (Bew.) Buin. & Donald =
    - wessneriana***
  - „ subspec. *wessneriana* var. *gokausei* (Heinr.) Donald = ***wessneriana***
  - „ subspec. *wessneriana* var. *gokausei* f. *permutata* (Heinr.) Donald =
    - wessneriana***
- c.v. 'Ruby' Donald
- c.v. 'Turbine' Donald
- winterae* hort nomen nudum = ?
- winteriana* hort nomen nudum = ?
- \****xanthocarpa*** Backbg. (1932) D.K.F. 131
  - „ var. *citricarpa* Frič ex Backbg. = f. ***citricarpa***
  - „ f. ***citricarpa*** (Frič ex Backbg.) Buin. & Donald (1951) Cact. & Succ.
    - J. Amer. 23 83
  - „ var. *coerulescens* (Backbg.) Buin. & Donald = f. ***coerulescens***
  - „ f. ***coerulescens*** (Backbg.) Buin. & Donald (1956) Backbg. Descr. Cact.
    - Nov 31
  - „ var. *dasyphrissa* (Werd.) Backbg. = f. ***dasyphrissa***
  - „ f. ***dasyphrissa*** (Werd.) Buin. & Donald (1935) Bluh. Kakt. u.a. Sukk. 103
  - „ var. *elegans* Backbg. = *senilis* var. *elegans*
  - „ f. ***graciliflora*** (Backbg.) Donald (1963) Backbg. Descr. Cact. Nov. 3 13
  - „ var. *kesselringiana* comb. nud. = *senilis* var. *kesselringiana*
  - „ var. *lilacinorosea* nomen nudum = f. ***violaciflora***
  - „ var. ***luteirosea*** Backbg. (1951) Cact. Succ. J. Amer. 23 83
  - „ var. *magentaflora* Hort. nomen nudum = f. ***violaciflora***

..	<i>var pallidor</i> Backbg. = ? <i>xanthocarpa</i>	
..	<i>var ruficeps</i> hort nomen nudum = ?	
..	<i>var. salmonea</i> Frič ex Backbg. = <i>f. salmonea</i>	
..	<i>f. salmonea</i> (Frič ex Backbg.) Buin. & Donald (1951) Cact. Succ. J. Amer.	23 83
..	<i>f. sanguinea</i> nomen nudum = ?	
..	<i>var. violaciflora</i> (Backbg.) Backbg. = <i>f. violaciflora</i>	
..	<i>f. violaciflora</i> (Backbg.) Buin. & Donald (1956) Backbg. Descr. Cact.	

Nov. 31

*zavaletae* Card. = *Sulcorebutia zavaletae* (Card.) Backbg.\**zecheri* Rausch (R650) (1977) Succulenta 56 29

**Digitorebutia nazarenoensis** Rausch. This new species was described by Walter Rausch in 1979. As it has not been described as a **Rebutia** the following combination has been made:-

**Rebutia nazarenoensis** (Rausch). Fearn & Pearcy comb. nov.

Digitorebutia nazarenoensis Rausch (1979) Succulenta 58 185.

### Field Data

The following lists of field numbers are those which have been assigned to **Rebutia** plants collected by Friedrich Ritter, Walter Rausch, Alfred Lau and Karel Knize, all of whom have collected extensively in Bolivia and Argentina.

### Friedrich Ritter Field Numbers

(All these field numbers are prefixed by the letters FR)

- 57 *Digitorebutia haagei*
- 57a " *brachyantha* (*pygmaea*?)
- 57b " *haagei* form
- 58 *Rebutia calliantha*
- 83 " *fiebrigii* f. *densiseta* (*nivosa*)
- 84 " *fiebrigii*
- 84a " *fiebrigii* var.
- 84b " *fiebrigii* var. *vulpes*
- 337 " spec (*brachyantha*?)
- 339 *Mediolobivia orurensis*
- 340 " *eucalyptana*
- 341 " *haefneriana steinmannii*
- 341a *Rebutia (mamillosa v. australis) graciliflora* v. *borealis*
- 341b " *mamillosa* v. *orientalis*
- 351 " *haagei steinmannii*
- 352 " (*violascens*) *haefneriana*
- 390 " *fiebrigii* v. *densiseta*
- 402 *Mediolobivia pilifera*
- 404 *Aylostera spegazzinii* v. *atroviridis*
- 405 *Mediolobivia sarothroides*
- 406 *Rebutia euanthema*
- 407 *Mediolobivia aureiflora*

618	<i>Aylostera robustispina</i>	
622	"	spec
752	"	<i>pseudodeminuta</i>
753	"	<i>muscula</i>
754	"	<i>albipilosa</i>
755	"	<i>maxima</i>
756	"	<i>flavistyla</i>
757	"	<i>patericalyx</i>
757a	"	var. <i>odontopetala</i>
758	"	<i>densipectinata</i> (dark form)
759	"	<i>densipectinata</i> (pale form)
760	"	<i>sanguinea spegazziniana</i>
760a	"	<i>sanguinea</i> var. <i>minor</i>
761	"	<i>albiareolata</i>
762	<i>Rebutia kupperiana</i>	
762a	"	" form
762b	"	var. <i>spiniflora</i>
763	"	<i>robustispina</i>
763a	"	" var. <i>minor</i>
765	"	spec.
766	<i>Aylostera pulvinosa</i>	
766a	"	<i>albiflora</i>
767	"	<i>rubiginosa</i>
768	<i>Rebutia nogalensis</i>	
769	"	<i>nitida</i>
770	"	<i>tuberosa</i>
771	"	spec
772	"	spec
773	"	<i>tarvitaensis</i>
935	"	<i>melachlora</i>
936	"	<i>ritteri v. peucicostata</i>
937	"	<i>salpingantha costata</i>
938	"	<i>cintiensis</i>
939	"	<i>vulpina</i>
939a	"	<i>vulpina</i> var.
940	"	<i>fusca</i>
941	"	<i>senilis</i>
941a	"	spec.
942	<i>Rebutia napina</i>	
1101	"	<i>gracilis</i>
1106	"	<i>colorea</i>
1106a	"	<i>colorea</i> var.
1107	"	<i>pygmaea</i>
1108	"	<i>mixticolor</i>
1109	"	<i>brunneoradicata</i>
1110	"	<i>mamillosa</i> var. <i>australis - grandiflora</i>
1113	"	<i>rutiliflora</i>
1113a	"	spec
1114	"	<i>tropaeolipicta</i>

1115	"	<i>rosalbiflora</i>
1115a	"	<i>spec</i>
1116	"	<i>lanosiflora</i>
1117	"	<i>torquata</i>
1118	"	<i>gracilispina</i>
1118a	"	<i>gracilispina</i> var.
1119	"	<i>rosalbiflora</i> v. <i>amblypetala</i>
1120	"	<i>spec</i>
1121	"	<i>pauciareolata</i>
1122	"	<i>pseudopygmaea</i>
1123	"	<i>ritteri</i>
1124	"	<i>minutissima</i>
1130	"	<i>spec</i>
1138	"	<i>mamillosa</i> v. <i>orientalis</i>
1138a	"	<i>mamillosa</i> var.
1139	"	<i>paecilantha</i>
1140	"	<i>sphaerica</i>
1141		<i>Mediolobivia cajasensis</i>
1142		<i>Rebutia tamboenensis</i>
1142a	"	<i>pseudodeminuta</i>
1142b	"	<i>pseudodeminuta</i> form
1423	"	<i>singularis</i>
1428	"	<i>potosina</i>
1429	"	<i>mixta</i>
1434	"	<i>iridescens</i>

### Rebutias collected by Alfred Lau

(All these field numbers are prefixed by the word LAU)

- 323 *R. fiebrigii* forma *nova*. 2700m Mina Asientos, Cochabamba.  
 329 *R. fiebrigii* var. *densiseta*. 2600m Mina Asientos, Cochabamba.  
 329a *R. narvaecensis*  
 346 *R. fiebrigii* form, shorter and darker centrals. 2400m Pucara-La Higuera,  
Santa Cruz.  
 346a *R. spinosissima* var. *nova*. 2400m Pucara-La Higuera, Santa Cruz.  
 348 *R. donaldiana*. 2500m Pucara-Vallegrande, Santa Cruz.  
 348a *R. fiebrigii*. 2500m Pucara-Vallegrande, Santa Cruz.  
 350 *R. ithyacantha*. 2600m Pucara-Vallegrande, Santa Cruz.  
 351 *R. vallegrandensis*. 2100m Pucara-Vallegrande, Santa Cruz.  
 353 *R. vallegrandensis*. 2600m Pucara-Vallegrande Pass, Santa Cruz.  
 383 *R. brunescens*. 3500m Tarabuco, Chuquisaca.  
 393 *R. fiebrigii* form. 2900m. Calle Calle Mts., Chuquisaca.  
 401 *R. albopectinata*. 2450m Condor Pass, Tarija.  
 402 *R. rubiginosa*. 1600m Narvaez, Tarija.  
 402a *R. fiebrigii* form. 1600m Narvaez, Tarija.  
 404 *R. buiningiana* Ritt. nomen nudum (*R. spinosissima*?) 2500m Cara del Diablo,  
Tarija.  
 405 *R. albopectinata* form. 2400m Cajas Pass, Tarija.

- 407 *R. rubiginosa* form. 2400m. 10km. W. Narvaez, Tarija.  
 409 *R. spec. nova*. 3500m Tarija to Iscayachi.  
 410 *R. tuberosa*. 3500m Tarija to Iscayachi.  
 411 *R. christinae*. Tarija to Iscayachi.  
 411a *R. spegazzinniana* var. *atroviridis* 3000m Tarija to Iscayachi.  
 412 *R. spegazzinniana* var. *nova*. Road to Cajas, Tarija.  
 413 *R. padcayensis*. Caradel Diablo, Tarija.  
 415 = 405 *R. albopectinata*. 3200m Iscayachi, Tarija.  
 416 *R. lauui*. 2400m Cajas Pass, Tarija.  
 422a *R. spec. nova*. 3350m Otavi-Camargo, Chuquisaca.  
 422b *R. spec. nova*. 3350m Otavi-Camargo, Chuquisaca.  
 424 *R. spec.* 3300m Camargo, Chuquisaca.  
 431 *R. pygmaea*. 3800m El Aquilar, Jujuy.  
 442 *R. minuscula* var. 1500m Sierra Medina, Tucuman Province.  
 476 *R. einsteinii* var. *gonjianii*. 3500m Quebrado del Toro, Jujuy.  
 477 *R. einsteinii* var. *gonjianii*. 3200m Quebrado del Toro, Jujuy.  
 519 *R. haagei*. 3100m Humahuaca, Jujuy.  
 520 *R. spec.* (similar to *R. costata* and *R. fuauxiana*). 3000m East of Volcan, Jujuy.  
 522 *R. pseudodeminuta*. 2700m East of Volcan, Jujuy.  
 533 *R. spec. nova* (possibly *R. aurantida* var. *gracilis*). 2700m above Tastil, Salta.  
 541 *R. spec. (nigricans?)* 3800m Tafne, Jujuy.  
 541a *R. spec. (costata?)* 3600m Tafne, Jujuy.  
 541b *R. eos*. 3600m Tafne, Jujuy.  
 541c *R. eos* var. *nova?* 3600m. Tafne, Jujuy.  
 544 *R. margarethae*. 2100-3000m Santa Victoria, Salta.  
 544a *R. margarethae*. 2400m Santa Victoria, Salta.  
 545 *R. jujuvensis*. 2300m Santa Victoria, Salta.  
 546 *R. spec. nova*. 2200m Santa Victoria, Salta.  
 546a *R. spec. nova*. 2200m Santa Victoria, Salta.  
 547 *R. spegazziniana* v. *atroviridis* 2300-3000m Santa Victoria, Salta.  
 550 *R. margarethae*. 2800m Road from La Quiaca, Santa Victoria Pass, Salta.  
 550a *R. pseudodeminuta* form? 2800m Road from La Quiaca, Santa Victoria Pass, Salta.  
 554 *R. margarethae*. 3500m Road from La Quiaca, Santa Victoria Pass, Salta.  
 557 *R. wessneriana* v. *berylliooides*. 2400m Leon, Jujuy Province.  
 560 *R. xanthocarpa* v. *lilacinorosea*. 10km North West of Antilla, Salta.  
 561 *R. pseudodeminuta* form. 10km North West of Antilla, Salta.

### Walter Rausch Field Numbers

(All these field numbers are prefixed by the letter R)

- 1 *Rebutia xanthocarpa*  
 11 *Aylostera pseudominuscula*  
 14 *Mediolobivia nigricans* var. Piedra de Molinos  
 35 " *haagei*  
 67 *Aylostera ithyacantha*  
 71 *Mediolobivia steimannii* var.  
 87 " *tarijensis* (Ritter?)

- 88 *Aylostera robustispina*  
 89     " *fiebrigii* v. *densiseta*  
 91 *Mediolobivia spec.*  
 158     " *aureiflora*  
 162     " *nigricans*  
 163     " *einsteinii* v. *atrovirens* (*viridis?*)  
 167 *Rebutia senilis*  
 208 *Mediolobivia steinmannii* var.  
 208a    " *haefneriana*  
 210    " *orurensis*  
 214    " *euanthema*  
 220 *Aylostera sordida/jujuyana*  
 234 *Rebutia wessneriana*  
 274 *Aylostera vallegrandensis*  
 295 *Rebutia rosalbiflora* Potosí  
 295a    " *spec.* Iscayache  
 296 *Mediolobivia steinmannii* v. *pilifera*  
 297    " *rauschii*  
 300    " *steinmannii* v. *cincinnata*  
 301    " *pectinata* (yellow)  
 302 *Rebutia mammillosa*  
 304 *Mediolobivia pectinata* (white)  
 305 *Rebutia leucanthera*  
 311 *Aylostera umbraculiforma* = *camarguensis*  
 312 *Mediolobivia albopectinata*  
 313 *Rebutia huasiensis*  
 314 *Aylostera heliosa*  
 317    " *spinosissima*  
 318    " var. *aurea?* var. *buiningiana?*  
 319    " *fulviseta*  
 320    " *lampromeliana* = *pulchella*  
 321    " *fiebrigii* v. *castanea*  
 322    " *padcayensis*  
 324    " *kupperiana*  
 333 *Mediolobivia eos*  
 333a    " *eos* var. *roseiflora*  
 334    " *steinmannii* v. *rotundipetala*  
 335 *pygmaea* (Villazon)  
 335a    " *pygmaea* (Iscayachi)  
 335b    " *iscayachensis* (Corda)  
 454    " *eucalyptana*  
 480 *Rebutia brunescens* (Tarabuco?)  
 484 *Mediolobivia mudanensis*  
 485    " *rauhii* (Rio Honda)  
 486    " *steinmannii* v. *camplanata* (Rio Honda)  
 492 *Aylostera graciliflora* (Iscayachi)  
 492a *Rebutia christinae* (Santa Victoria)  
 493    " *brunescens* var.  
 494 *Mediolobivia steinmannii* v. *rubiflora*

- 495 *Rebutia fulviseta c. albispina*  
 496 *Aylostera spegazziniana*  
 501 *Mediolobivia haagei*  
 502     "     *haagei*  
 503 *Aylostera fiebrigii*  
 503a     "     *fiebrigii* f. brown spine  
 506 *Mediolobivia pygmaea* var.  
 507     "     *haagei* var. (Santa Victoria-Purmamarca)  
 507a     "     *haagei* var.  
 508     "     *costata*  
 508a     "     *pygmaea* v. *longispina*  
 509     "     *einsteinii*  
 511 *Rebutia buiningiana*  
 515 *Mediolobivia haefneriana*  
 518 *Rebutia margarethae*  
 520 *Mediolobivia nitten*  
 521 *Rebutia margarethae*  
 521a     "     *hoffmanni*  
 522 *Mediolobivia morenoensis*  
 576     "     *pygmaea*  
 577     "     *nigricans*  
 578 *Rebutia einsteinii* v. *gonjiana*  
 579 *Mediolobivia pygmaea*  
 583 *Rebutia fulviseta*  
 597     "     *pulchella* var.  
 629     "     *supthutiana*  
 630 *Rebutia friedrichiana* (*pygmaea*?)  
 631     "     *diersiana*  
 632     "     *haefneriana*  
 633     "     *diersiana* var. *atrovirens*  
 640     "     *schatzliana*  
 641     "     *schatzliana* var.  
 642     "     *friedrichiana*  
 643     "     *spinossissima*  
 644     "     *steinmannii* var.  
 646 *Mediolobivia friedrichiana*  
 649 *Rebutia frohlichiana*  
 650 *Aylostera zecheri*  
 654     "     *pseudominuscula* var.  
 655     "     *pseudominuscula*  
 660 *Rebutia violascens*  
 661     "     *senilis*  
 676     "     *pygmaea* v. *tupizensis*  
 679 *Aylostera pseudodeminuta* var.  
 680 *Rebutia aureiflora* var. *duirsmaiana*  
 681     "     *violaciflora*  
 687     "     *fabrisii* var. *aureiflora*  
 688     "     *fabrisii*  
 689 *Mediolobivia mudanensis*

690	<i>Rebutia pseudominuscula (carmeniana)</i>
694	" <i>kieslingii</i>
697	" <i>pseudodeminuta</i>
700	" <i>oculata</i>

### Karel Knize Field Numbers

(All these numbers are prefixed by the letters KK)

597	<i>Rebutia senilis</i> f. Huahata, 2200m, Arg.
598	" <i>pseudominuscula</i> . Catamarca, 2800m, Arg.
637	<i>Mediolobivia pectinata</i> . Oruro, 4000m, Bolivia.
797	" <i>haefneriana</i> . Oruro, Capulla, 300m, Bolivia.
798	" <i>pectinata</i> var. Oruro, Machacamarca, 4000m, Bolivia.
839	<i>Rebutia albipilosa</i> . Tarcia, Tarija, 2800m, Bolivia.
840	" <i>violaciflora</i> . Salta, Escoipe, 3100m, Arg.
841	" <i>narvaezensis</i> f. Narvaez, Tarija, 2300m, Bolivia.
842	" <i>muscula</i> . Piedra, Larga, 2300m, Bolivia.
843	" <i>aureispina</i> . Jucanas, Tarija, 3000m, Bolivia.
844	" <i>heliosa</i> . Jucanas, 3000m, Bolivia.
845	" <i>senilis</i> f. Salta, Escoipe, 3200m, Arg.
846	" <i>pseudominuta</i> . Piedra Larga, Tarija, 2800m, Bolivia.
847	" <i>deminuta</i> f. Narvaez, Tarija, 300m, Bolivia.
848	" <i>densiseta?</i> Jucanas, Tarija, 3000m, Bolivia.
849	" <i>densipectinata</i> . Jucanas, Tarija, 3000m, Bolivia.
852	" <i>albopectinata</i> . Sama, Tarija, 3800m, Bolivia.
853	" <i>fiebrigii</i> v. <i>densiseta</i> . Iscayache, Tarija, 3500m, Bolivia.
854	<i>Mediolobivia conoidea</i> . Iscayache, Tarija, 3000m, Bolivia.
855	<i>Rebutia fiebrigii</i> . El Molle, Tarija, 3000m, Bolivia.
856	" <i>spiegazzinii</i> . Iscayache, 3500m, Bolivia.
858	" <i>pilosa</i> . Jucanas, Las Cajas, 2800m, Bolivia.
859	" <i>ritteri/tuberosa</i> . Sama, Tarija, 3500m, Bolivia.
860	" <i>buiningiana</i> . Las cajas, Tarija, 2800m, Bolivia.
861	" <i>rubiginosa</i> . San Antonio, Iscayache, 3200m, Bolivia.
862	" <i>tuberosa</i> . Sama, Tarija, 3500m, Bolivia.
863	" <i>pilayensis</i> . El Nogal, Tarija, 2500m, Bolivia.
871	<i>Mediolobivia euanthaema</i> . Sama, Iscayache, 4300m, Bolivia.
872	" <i>auranitida?</i> Sama, Iscayache, 4300m, Bolivia.
873	" <i>auranitida</i> v. <i>gracilis</i> . Sama, Tarija, 4200m, Bolivia.
968	" <i>orurensis</i> . Oruro, Paria, 4100m, Bolivia.
969	" <i>pectinata</i> v. <i>paznensis</i> . Pazna, 4100m, Bolivia.
970	" <i>pectinata</i> v. <i>gracilis</i> . Pazna, 4300m, Bolivia.
971	" <i>eucalyptana</i> . Eucalyptos, 4100m, Bolivia.
972	" <i>pectinata</i> v. <i>chalia</i> . Challapata, 4000m, Bolivia.
973	" <i>euanthaema</i> v. <i>oculata</i> . Challapata, 4100m, Bolivia.
974	" <i>pectinata</i> v. <i>Poopo</i> , 4200m, Bolivia.
978	" spec. Huari, 4000m, Bolivia.
1046	" <i>permutata?</i>

1052 *Rebutia ithyacantha*. La Cueva, Tarija, 2500m, Bolivia.  
 1096 " *violaciflora v. knuthiana*. Slatas, El Aguilar, 2800m, Arg.  
 1150 " *narvaezensis*. Pedro Larga, 2500m, Bolivia.  
 1151 " *muscula v. nivosa*. Piedra Larga, 2600m, Bolivia.  
 1152 " *spec.*  
 1232 *Mediolobivia ritteri*. Iscayache, 3800m, Bolivia.  
 1242 *Rebutia grandiflora* f. Salta, Escoipe, 3300m, Arg.  
 1243 " *senilis* f. Salta, Iscayache, 3500m, Arg.  
 1244 " *xanthocarpa*. Salta, El Aguilar, 3800m, Arg.  
 1301 " *muscula v. nivosa*. Narvaez, Tarija, 3000m, Bolivia.  
 1302 " *narvaezensis*. Narvaez, Tarija, 2800m, Bolivia.  
 1464 *Mediolobivia elegans*. Salta, 3800m, Arg.  
 1465 " *pygmaea*. El Aguilar, 4000m, Arg.  
 1466 " *nigricans*. Salta, 3800m, Arg.  
 1467 " *pectinata v. digitiformis*. Escoipe, 3800m, Arg.  
 1468 " *auranitida* var. Sierra Padjoja, 4100m, Bolivia.  
 1469 " *auranitida* var. Sierra Padjoja, 4100m, Bolivia.  
 1516 *Rebutia cintiensis*  
 1517 " *residua*  
 1518 " *espinosae*  
 1519 " *laterita*  
 1563 " *gibbulosa*  
 1565 " *canaletas*  
 1568 " *pulvispina*  
 1686 *Mediolobivia iscayachensis*  
 1694 *Rebutia aureispina*  
 1695 " *potosina*

## Bibliography

The following is a list of the most important publications concerning the genus *Rebutia*

- Backeberg C. (1932) Der Kakteenfreund

Backeberg C. (1951) Some Results of Twenty Years of Cactus Research.  
Cactus Succ. J. Amer. 23 81-83

Backeberg C. (1959) Die Cactaceae Vol. II Fischer Verlag, Jena.

Backeberg C. (1961) Die Cactaceae Vol. VI Fischer Verlag, Jena.

Backeberg C. (1966) Kakteen Lexikon Fischer Verlag, Jena.

Backeberg C. (1977) Cactus Lexicon Blandford Press, Poole.

Backeberg C. & Knuth F.M. (1935) Kaktus ABC Gyldendalske Boghandel,  
Denmark.

Berger A. (1929) Kakteen, Stuttgart

Bertrand A. (1951) Genre 66 Rebutia K.Sch. emend A. Bertrand. Cactus (Paris) 28 53

Brederoo A.J. (1955) **Rebutiae** Succulenta, 36

Brederoo A.J. (1956) **Aylostera** Succulenta, 56

Brederoo A.J. (1956) **Mediolobivia** Succulenta, 92

Brederoo A.J. (1957) **Digitorebutia** Succulenta, 53

Brederoo A.J. (1957) **Mediolobivia spiralisepala** Jajo Succulenta, 92

- Brederoo A.J. (1959) **Cylindrorebutia** Succulenta, 121
- Brinkman K.H. (1976) Die Gattung **Sulcorebutia** Kakt. u.a. Sukk.
- Britten N.L. & Rose J.N. (1923) The Cactaceae 1st Ed. Carnegie Institute,  
Washington Publication No. 248
- Borg J. (1937) Cacti. Macmillan, London
- Buining A.F.H. & Donald J.D. (1963) Die Gattung **Rebutia** Sukkulantenkunde Jb.  
Schweiz Kakt. Ges. 97
- Buxbaum F. (1938) Was ist **Rebutia**, was **Aylostera**? Beitr. Sukk. u. Pflege, 69.
- Buxbaum F. (1958) Cactus Culture based on Biology. Blandford, London
- Buxbaum F. (1967) **Rebutia**, Krainz Die Kakteen 37
- Donald J.D. (1950) An introduction to some new genera and subgenera proposed  
by Backeberg. Natn. Cactus Succ. J. 5 67
- Donald J.D. (1955) A **Rebutia** Reference and Synonymy Brit. Sect. IOS Publ. No. 2.
- Donald J.D. (1956) **Rebutiae**, Succulenta 84
- Donald J.D. (1957) Guide to the **Rebutiae** I The Nomenclature of the **Rebutiae**,  
Natr. Cactus Succ. J. 12 3
- Donald J.D. (1957) Guide to the **Rebutiae** II Key to the **Rebutiae**, Natn. Cactus Succ.  
J. 12 9
- Donald J.D. (1957) Notes and observations on New Cacti, I **Rebutia krainziana**  
and its varieties, Natn. Cactus Succ. J. 12 27
- Donald J.D. (1957) Was ist **Rebutia violaciflora** und was **Rebutia carminea**,  
Kakt. u.a. Sukk. 8 24
- Donald J.D. (1959) New plants Nr. 2 **Rebutia calliantha** and **Rebutia wessneriana**  
Natr. Cactus Succ. J. 14 4
- Donald J.D. (1973) **Rebutia albopectinata** Ashingtonia 1 23
- Donald J.D. (1974) The **Rebutias** From the Lau expeditions to Bolivia and Argentina,  
Ashingtonia 1 64
- Donald J.D. (1976) Studies over **Rebutia**, **Echinopsis en Lobivia**, Succulenta 55 235
- Donald J.D. (1974-1978) The Classification of the **Rebutias**, Ashingtonia 1 - 3
- Donald J.D. (1977) **Echinopsis**, **Lobivia**, **Rebutia**. Where to draw the line?  
Cact. Succ. J. Gt. Brit. 39 11
- Donald J.D. (1977) Further observations on the **Rebutia**, **Sulcorebutia**, **Weingartia**  
problem, IOS Bulletin 3 167
- Donald J.D. & Brederoo A.J. (1978) The systematics of **Rebutia** Pt. 7. Ashingtonia 3
- Fearn B. (1974) An investigation into the effect of temperature on the seed  
germination of nine species of Cacti using thermal gradient bars.  
Cactus Succ. J. Amer. 46 215
- Fearn B. (1977) An investigation into the effect of age on the germination potential  
of seeds of 600 species of Cacti. Excelsa 7 103
- Fritz G. (1979) **Rebutia albopectinata** Rausch. Kakt. u.a. Sukk. 30 12
- Frits G. (1980) Nochmals zu **Rebutia** spec. Lau 401/405. Kakt. u.a. Sukk. 31 81
- Glass C. & Foster R. (1980) Whats New. Cactus Succ. J. Am. 52 164
- Goemas W. Maretlmans L. & Wacker Fde. (1959) **Rebutia**, Succulenta 38 30 & 53
- Köhler von U. (1957) Die rosaviolett-Bluhenden Rebutian, Kakt. u.a. Sukk. 8 28
- Köhler von U. (1961) **Medio (Pygmaea) Lobivia pygmaea** (Fries) Backbg. Kakt.  
u.a. Sukk. 12 105
- Köhler von U. (1963) Zweibrücker Hybride 1962 15 113
- Krainz H. (1967) **Rebutia**, Die Kakteen.
- Marshall W.T. & Bock T.M. (1941) Cactaceae. Abbey Garden Press, Pasadena.

- Marshall W.T. & Woods R.S. (1945) Glossary of Succulent Plant Terms  
Abbey Gdn. Press Pasadena.
- Rausch W. (1975) Walter Rausch comments Ashingtonia 1 128
- Ritter F. (1977) Nieuwe cactussen uit Zuid-Amerika Succulenta 66
- Stace C.A. (1980) Plant Taxonomy and Biosystematics, Contemporary Biology,  
Edward Arnold
- Schumann K. (1897) Gesamtbeschreibung der Kakteen, Neudamm.
- Schumann K. & Guerke M. (1898) Blühende Kakteen, Neudamm.

### Acknowledgements

We sincerely wish to thank all the various persons who have helped in the preparation of this booklet. The descriptions are based on plants in cultivation at Abbey Brook.

For technical suggestions and helpful advice to Mr. N. Wall of Higham Press and Carol and Ann at Abbey Brook for typing the original manuscript. Also to the Librarian, Royal Botanic Gardens, Kew for the use of facilities, to Dr. Gillian Fearn for help in proof reading and to Thelma Stuart for photographic assistance.

### Glossary

acicular	needle shaped.
apomixis	a biological system which can produce viable seeds by a process other than by direct fertilisation of the egg cell.
apomictic	a species which can produce seeds by the process of apomixis.
areole	a restricted area from which spines and/or flowers are produced.
bristle	hair-like spine.
caespitose	growing in clumps.
campanulate	bell-shaped.
central spine	the spine or spines arising from or near the centre of an areole, usually the largest spine or spines.
filament	the stalk upon which is borne the anther or pollen sac.
funnel-form	a flower which gradually widens from the base.
globose	shaped like a globe.
hilum	the scar at the base of the seed making the point of attachment to the funicle.
spine	a pointed more or less rigid structure which is homologous with a leaf.
stamen	the male floral organ which bears the pollen grains. It consists of a stalk called the filament and an anther or pollen sac.
stigma	the part of the flower that is the pollen receptor.
style	the stalk joining the stigma to the ovary.
type locality	the place where a type specimen was collected.

## **The Cactus Centre of England**

Abbey Brook is the oldest established Cactus Nursery in the U.K. and we celebrated our 25th Anniversary in 1981. We have a vast range of plants for sale (well over 2,000 species) and more than 500,000 plants on view.

Plants and seeds of a wide range of **Rebutia** species available.

Comprehensive colour illustrated plant list available, stamp appreciated.

We also produce a separate seed list.

### **Nursery Visits**

The nursery is open to visitors 6 days a week throughout the year including Saturdays and Sundays.

**2p.m. - 6p.m. (Closed all day Tuesdays)**

We are open on all Bank Holidays except Christmas Day, Boxing Day and New Years Day.

The nursery is situated just north of Matlock on the A6 trunk road.

**Abbey Brook Cactus Nursery  
Old Hackney Lane,  
Matlock, Derbyshire, England.**

**fax National 0629 55360**

**fax International + 44 629 55360**



R. euanthema ▲

R. wessneriana ▼



▲ R. xanthocarpa f. salmonnea

▼ R. albipilosa



R. senilis v. elegans ▼



▼ R. marsoneri

