

226-228

Winterocereus (Cactaceae) is the correct name for *Hildewintera*

Detlev Metzing¹ & Roberto Kiesling²

¹ AG Pflanzenökologie, Fakultät 5: Institut für Biologie und Umweltwissenschaften, Carl von Ossietzky Universität Oldenburg, 26111 Oldenburg, Germany. detlev.metzing@uni-oldenburg.de (author for correspondence)

² CONICET-IADIZA, C. C. 507, (5500) Mendoza, Argentina

Winterocereus Backeberg is accepted in preference to "*Hildewintera* F. Ritter", a well established name that was published slightly earlier, but not validly. A new combination in *Winterocereus* is provided here.

KEYWORDS: *Cactaceae*, *Hildewintera*, nomenclature, *Winterocereus*

INTRODUCTION

The tribe *Borzicactinae* is a group of globular to columnar cacti, with predominantly ornithophilous flowers, occurring in Bolivia, Peru and Argentina. Depending on the classification concept, a variable number of genera are accepted in this group (Bregman, 1992). One such genus, with particular, distinctive flower morphology (double perianth) was described in 1962 as a new (monotypic) genus and species, *Winteria aureispina* F. Ritter (1962). Because of the parahomonymy to *Winteria* Murray, a name attributed in 1784 to a genus of the family *Winteraceae*, the homonymy with *Winteria* Saccardo 1878, the genus name had to be replaced (cf. Rowley, 1964), which was done independently, in the same year, by Ritter (1966) himself and by Backeberg (1966). *Hildewintera* was published by F. Ritter three or four months earlier than *Winterocereus* Backeberg (1966; see Rowley, 1978; Eggli & Taylor, 1991). Irrespective of taxonomic acceptance of the genus, validity of the name *Hildewintera* has not hitherto been questioned by authors and indexers (e.g., Rowley, 1968; Buxbaum, 1974a, b; Eggli & Taylor, 1991; Anderson, 2005).

In 2003 a new species of this genus was described twice independently by two teams of authors (Diers & Krahn, 2003; Foik & Foik, 2003). The confusing history of these descriptions as well as the peculiar flower morphology of the new species have been treated by us in a previous paper (Kiesling & Metzing, 2004). In a comment on this paper, W. Greuter (pers. comm.) has kindly drawn our attention to the *Hildewintera* entry in ING (Index Nominum Genericorum), where the "incomplete reference to basionym of type species" is mentioned. Indeed, it had been overlooked by all former authors, including ourselves, that the reference to the basionym given by Ritter (1966) is not "full and direct" as the page number was omitted. This is true, not only for the basi-

onym of the species name but also for the replaced generic name, and therefore *Hildewintera* was not validly published (Art. 33.4 and Note 1 of the ICBN, McNeill & al., 2006). Consequently the name *Winterocereus* published by Backeberg (1966: 455), which fulfils all requirements of the Code, is the earliest available name for this genus. The entry in the index by Rowley (1968) resulted in subsequent valid publication of *Hildewintera*, but there it is illegitimate as *Winterocereus* Backeberg 1966 is listed as a synonym (ICBN Art. 52).

NOMENCLATURE

Winterocereus Backeberg, *Kakteenlexikon*: 455. 1966 ≡ *Winteria* F. Ritter in *Kakteen Sukk.* 13: 4–8. 1962 (non *Winteria* Murray 1784 nec *Winteria* Saccardo 1878; Art 53.3) ≡ *Hildewintera* F. Ritter ex G.D. Rowley, *Regnum Veg.* 54: 15. 1968, nom. illeg. (Art. 52) [*Hildewintera* F. Ritter" in *Kakteen Sukk.* 17: 11. 1966, non rite publ., Art. 33.4] ≡ *Loxanthocereus* subgen. *Hildewintera* Buxbaum in Krainz (ed.), *Die Kakt.*, part 58: CVc. 1974 – Type: *Winteria aureispina* F. Ritter.

Backeberg (1966: 455) failed to cite the basionym of the combination *Winterocereus aureispinus* (F. Ritter) Backeberg explicitly. But it is evident from his text that he referred to *Winteria aureispina* F. Ritter. Hence Backeberg's combination is validly published according to Art 33.4 of the Vienna Code (McNeill & al., 2006) (Art. 33.3 in the St. Louis Code, Greuter & al., 2000). In the index "Repertorium Plantarum Succulentarum" the combination *Winterocereus aureispinus* is not accepted but listed as an illegitimate name (Rowley, 1968: 24), *Hildewintera* being accepted as the correct generic name (l.c.: 15).

Winterocereus aureispinus (F. Ritter) Backeberg, Kakteenlexikon: 455. 1966 = *Winteria aureispina* F. Ritter in Kakteen Sukk. 13: 4–8. 1962 = *Hildewintera aureispina* (F. Ritter) F. Ritter ex G.D. Rowley in Regnum Veg. 54: 15. 1968 [“*Hildewintera aureispina* (F. Ritter) F. Ritter”, Kakteen Sukk. 17: 11. 1966, non rite publ. (Art. 33.4, 43.1)] = *Borzicactus aureispinus* (F. Ritter) G.D. Rowley in Rep. Pl. Succ. 24: 6. 1975 = *Loxanthocereus aureispinus* (F. Ritter) Buxbaum in Krainz (ed.), Die Kakt., part 57: CVb. 1974 = *Cleistocactus aureispinus* (F. Ritter) D.R. Hunt in Bradleya 5: 92. 1987, nom illeg. (non Fric 1928) = *Cleistocactus winteri* D.R. Hunt in Bradleya 6: 100. 1988 – Holotype: *F. Ritter 846* (U!).

The second species of this genus was published twice in the same year: as “*Hildewintera polonica* Foik & Foik” (2003) and as *Hildewintera colademononis* Diers & Krahn (2003). The former is not a validly published name as the single herbarium or collection in which the type was conserved was not specified (Art. 37.7), and as an attempt to correct this (Foik & Foik, 2004: 50) lacked a direct reference to the original description (Art. 32.5 & 33.4). *Hildewintera colademononis* has, therefore, been accepted as the correct name for the species (Kiesling & Metzing, 2004; Egli & Zappi, 2005). The discovery that *Hildewintera* was originally not validly published and, when published, was illegitimate makes a new combination in *Winterocereus* necessary. As the name *Hildewintera colademononis* is not illegitimate (Art. 55.1), the epithet *colademononis* must be used.

In a recent paper Hunt (in Hunt & Taylor, 2005) speculates whether the epithet “*colademononis*” should be corrected to “*colademono*” (cf. Rec. 60G.1.a). Clearly, Art. 60.11 is not applicable here as the epithet “*colademononis*” is not derived from a personal name (Rec. 60C.1) nor from Greek or Latin words (Rec. 60G.1). At the rank of species the epithet “*colademononis*” is not correctable. However, as Hunt (in Hunt & Taylor, 2005) considered this taxon as a subspecies of *Cleistocactus winteri*, he could legitimately substitute the epithet “*colademono*” and did so in publishing a nomen novum in that rank (see below).

In our opinion this taxon has several characters that justify the rank of species (Kiesling & Metzing, 2004), at which it was published by the Diers & Krahn (2003) and Foik & Foik (2003). The floral characters of this species and *Winterocereus aureispinus* justify maintaining the two of them in a genus separate from *Cleistocactus* (and other genera of *Borzicactinae*), as explained by Kiesling & Metzing (2004). The correct species name is validly published here:

Winterocereus colademononis (Diers & Krahn) Metzing & R. Kiesling, **comb. nov.** = *Hildewintera*

colademononis Diers & Krahn in Kakteen Sukk. 54: 221. 2003 = *Cleistocactus winteri* subsp. *colademono* D.R. Hunt in Cactaceae Syst. Init. No. 20: 14. 2005 (as nom. nov.) = *Cleistocactus colademononis* (Diers & Krahn) Mottram in Cactusworld 24: 21. 2006 – Holotype: Bolivia, Prov. Florida, Cerro El Fraile, 2000, *Wolfgang Krahn (WK) 950* (KOELN) [= “*Hildewintera polonica* Foik & Foik in Cactaceae etc. 13: 68–70. 2003, non rite publ. (Art. 37.7); in Cactaceae etc. 14: 50. 2004, non rite publ. (Art. 32.5 & 33.4) – Intended type cited as: “Bolivia, Dept. Santa Cruz, Prov. Florida, 30 km SE from Samaipata, November 2002, *R. Kiesling & al. 10067* (LPB!, SI!)”]. *Hildewintera* is demonstrative of the chaotic state of *Cactaceae* nomenclature. The numerous contraventions of the rules in the history of these names is not a matter of neglect of the rules that govern nomenclature, but rather, it shows the complexity of the Code (McNeill & al., 2006) and its many pitfalls.

ACKNOWLEDGEMENTS

We thank both W. Greuter, who initiated the discussion about *Hildewintera*, and J. McNeill for their most valuable comments. An anonymous reviewer is thanked for improvement of the manuscript.

LITERATURE CITED

- Anderson, E.F. 2005. *Das große Kakteen-Lexikon*. E. Ulmer, Stuttgart.
- Backeberg, C. 1966. *Das Kakteenlexikon*. G. Fischer, Jena.
- Bregman, R. 1992. Seed studies in the subtribe *Borzicactinae* Buxbaum (*Cactaceae*); morphology, taxonomy, phylogeny and biogeography. *Bot. Jahrb. Syst.* 114: 201–150.
- Buxbaum, F. 1974a. *Loxanthocereus aureispinus* (Ritter) F. Buxbaum comb. nov. Part 57: CVb (2 sheets) in: Krainz, H. (ed.), *Die Kakteen*. Franckh, Stuttgart.
- Buxbaum, F. 1974b. Gattung *Loxanthocereus*. Part 58: CVb (5 sheets) in: Krainz, H. (ed.), *Die Kakteen*. Franckh, Stuttgart.
- Diers, L. & Krahn, W. 2003. *Hildewintera colademononis* Diers & Krahn, spec. nov. *Kakteen Sukk.* 54: 221.
- Eggl, U. & Taylor, N. (eds.). 1991. *IOS Index of Names of Cactaceae Published 1950–1990*. Royal Botanic Gardens, Kew & Städtische Sukkulentsammlung, Zürich.
- Eggl, U. & Zappi, D. (eds.). 2005. *Repertorium Plantarum Succulentarum LIV (2003)*. IOS, Zürich.
- Foik, E. & Foik, V. 2003. *Hildewintera polonica* E. Foik & V. Foik. *Cactaceae etc.* 13: 68–70.
- Foik, E. & Foik, V. 2004. Botanicke potulky po Bolivii. *Cactaceae etc.* 14: 43–50.
- Greuter, W., McNeill, J., Barrie, F.R., Burdet, H.M., Demoulin, V., Filgueiras, T.S., Nicolson, D.H., Silva, P.C., Skog, J.E., Trehane, P., Turland, N.J. & Hawksworth,

- D.L. (eds.).** 2000. *International Code of Botanical Nomenclature (Saint Louis Code) adopted by the Sixteenth International Botanical Congress St. Louis, Missouri, July–August 1999*. Koeltz Scientific Books, Königstein. [Regnum Veg. 138]
- Hunt, D. & Taylor, N. (eds.).** 2005. *Notulae systematicae Lexicon Cactacearum spectantes VI. Cactaceae Syst. Init.* No. 20: 11–25.
- Kiesling, R. & Metzing, D.** 2004. An amazing species of *Hildewintera* (Cactaceae)—characters and systematic position. *Cact. Succ. J. (Los Angeles)* 76: 4–12.
- McNeill, J., Barrie, F.R., Burdet, H.M., Demoulin, V., Hawksworth, D.L., Marhold, K., Nicolson, D.H., Prado, J., Silva, P.C., Skog, J.E., Wiersema, J.H. & Turland, N.J. (eds.).** 2006. *International Code of Botanical Nomenclature (Vienna Code) adopted by the Seventeenth International Botanical Congress Vienna, Austria, July 2005*. Gantner Verlag, Ruggell, Liechtenstein. [Regnum Veg. 146]
- Ritter F.** 1962. *Winteria*, eine neue Cereengattung aus Bolivien. *Kakteen Sukk.* 13: 4–8
- Ritter F.** 1966. *Hildewintera* Ritter nom. nov. *Kakteen Sukk.* 17: 11.
- Rowley, G.D.** 1964. Repertorium Plantarum Succulentarum XIII—1962. *Regnum Veg.* 32: 1–15.
- Rowley, G.D.** 1968. Repertorium Plantarum Succulentarum XVII—1966. *Regnum Veg.* 54: 1–24.
- Rowley, G.D.** 1978. *The Illustrated Encyclopedia of Succulents*. Salamander Books, London.