

The Cactician



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THE GENERITAXA OF THE CACTACEAE: An annotated index

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Summary

This index is based on that first published as *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa* (5 Feb 1990).

The present edition has been substantially revised and updated and now also includes early infrageneric names published without rank to complete the historical record.

New nothogeneric names first published here, necessary for internal consistency with the 63 recognised genera, are:

Nothogenera

- | | |
|---------------------------|--------------------------|
| × <i>Aporicereus</i> | × <i>Echinulocactus</i> |
| × <i>Austrocereus</i> | × <i>Epicereus</i> |
| × <i>Carlrettigara</i> | × <i>Epipilosocereus</i> |
| × <i>Cereopsis</i> | × <i>Epipuntia</i> |
| × <i>Cleistepiphyllum</i> | × <i>Rhipsaliphyllum</i> |
| × <i>Echinomillaria</i> | |

Chimaera nothogenera

- + *Arioechinopsis*
- + *Coryopuntia*
- + *Echinastrophytum*
- + *Echinogymnocalycium*
- + *Epigymnocalycium*
- + *Myrtigymnocalycium*

Cultivars

- + *Arioechinopsis* 'Horst Ewald' Mottram. Replacement name for + *Ariocereus ewaldii* P.V.Heath. p.24
- + *Echinogymnocalycium* 'Japan' Mottram. = *Echinopsis eyriesii* (Turpin) Pfeiff. & Otto + *Gymnocalycium stenopleurum* F.Ritter. p.103

New priority for a simultaneous publication proposed here in accordance with Art. 11.5: *Tomentosae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.) takes priority over *Macdougalianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.) when they are united. p.334

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THE GENERITAXA OF THE *CACTACEAE*:

An annotated index

Infrageneric ranks were popular during the first half of the 19th century, and authors created their own new names rather indiscriminately.

Salm-Dyck did the most detailed infrageneric classifications, but he frequently changed their application. He ranked names using the symbols §, *, & †, but occasionally supported this by use of the words “section” or “subsection” in the descriptions.

However, although largely referring to § as sections, he also referred to the symbol * inconsistently as both sections and subsections. In this index, therefore, his names and those of other authors are only given a rank whenever they are explicitly referred to as such in their protologues.

Salm-Dyck is notable for being one of the earliest authors to have used the word “type” in 1850 when making a designation (see *Opuntiacei*), just pipped to the post by Lemaire who used the word to designate a type for *Aulacothele* in 1847.

German authors of the late 19th century frequently applied the rank of Reihe. This is not a recognised botanical rank, although it has often been translated as ‘series’.

Occasionally, it was applied to the rank of ordo, and in other instances it was used for any unranked name. In the present list such names are treated as being of an unspecified infrageneric rank.

After the 1906 *Vienna Code*, however, German authors applied the ranks Gattung, Untergattung, Sektion, Untersektion, Reihe and Unterreihe consistently as the German vernacular equivalents of genus, subgenus, sectio, subsectio, series and subseries.

Although the equivalent vernacular ranks have never received recognition as such in published German editions of the *Code*,

they have been adopted here when applied to names published after 1905.

The 63 generic names applied here for reference constitute a conservative system that may be followed by anyone. The large numbers of segregates applied elsewhere are weakly defined and unstable and are more valuable when used at infrageneric ranks. Most have more to do with emotional attachments to popular names than they do to serve scientific understanding.

Systemists should be very circumspect about creating weakly defined divisions at generic level because of the unnecessary complexity that atomisation has on the nomenclature. The 63 genera recognised here are adequate for a family of this size, and it is recommended that segregates chosen to be used by systemists be confined to infrageneric ranks where they cannot continually disturb and destabilise the nomenclature.

The system of 63 genera recognised here has so far given rise to 44 nothogenera, out of the 204 already published, not counting the names of graft-chimaeras. Theoretically there are a maximum of around 2000 possible bigeneric combinations using the conservative system outlined here. However, in the case of the 123 genera accepted by Hunt, *The new Cactus Lexicon* (2006), there are a potential 8000 possible nothogenera, so that system has twice the number of genera but four times the number of nothogenera.

Intergeneric allopolyploids are invariably treated nomenclaturally as nothogenera, because they behave like normal taxa. However, they are not hybrids in the conventional sense. Allopolyploids increase

the maximum number of nothogenera enormously because unlike hybrids no gene matching takes place at meiosis and there are therefore theoretically no genetic barriers to prevent very wide taxonomic unions. The ICN makes no mention of allopolyploids, although Art. H.3.3 Note 1 Ex.3 appears to hint that they should be treated as botanical taxa without the hybridity symbol “×”.

Key to abbreviations:

Art. Article (rule) of the *ICN* (Botanical Code).

Autotype A type generated by application of the rules, rather than cited by the author or otherwise designated.

Bas. Basionym. Name on which a taxon is based.

Cult.Art. Article (rule) of the *ICNCP* (Cultivar Code).

Etym. Etymology. Origin of a name.

gen. Genus.

Gr-chim. Graft-chimaera. Names of these are governed by the *ICNCP* Cult-Art. 24.

ICN International code of nomenclature for algae, fungi, and plants. (Melbourne Code, 2012), 13th. edition: *Regnum Vegetabile* 154. (Dec 2012).

ICNCP International code of nomenclature for cultivated plants. The Cultivar Code, 8th. edition: *Scripta Horticulturae* 10. (Oct 2009).

infragen. Infragenus. An unspecified rank.

Lectotyp. A replacement type selected from elements cited in the protologue.

nom. cons. (nomen conservandum) Name conserved to preserve current usage if an earlier name has priority under the rules.

nom. fict. (nomen fictitium) An invented fictional name, usually as a demonstration or as a joke (sometimes also called *nom. nugax*, a frivolous name). None are validly published.

nom. illeg. (nomen illegitimum) Superfluous name or homonym (Art. 52.1, 53.1).

nom. incorr. (nomen incorrectio) Taxon below the rank of genus whose epithet has not been combined with the earliest legitimate genus (Art. 11.4).

nom. inval. (nomen invalidum) Names not validly published in compliance with Art. 38.1.

nom. nov. (nomen novum) New replacement name for one that cannot be used, usually one that was illegitimate.

nom. nud. (nomen nudum) Name published without, or with inadequate, description for validation.

nom. prov. (nomen provisorium) Undescribed provisional name.

nom. rej. (nomen rejiciendum) Suppressed name that would cause disadvantageous nomenclatural change (Art. 56).

nom. vulg. (nomen vulgatum) A common name.

nothogen. (nothogenus) Genus of hybrid origin.

Obs. (observatio) An observation.

Par. (parentes) Parentage of hybrids and allopolyploids.

pro As

Ref. A conservative, broadly circumscribed genus to which the taxon belongs. Because generic names are part of the plant name it is in the interests of nomenclatural stability that there should be as few such names as possible. Therefore generic names which have a weak foundation, morphological or otherwise, have been disregarded here. This also considerably limits the potential number of acceptable nothogenera, which, under conventional nomenclature, are becoming an excessive burden. This particularly applies to the wide crosses brought about by allopolyploidy. See Appendix

2 for a list of accepted generic names.

Rep. Syn. Replaced synonym. An illegitimate or otherwise unusable name on which a new name has been based. Not the same as the basionym of new combination.

sensu In the sense of.

Syn. Homotypic synonym (sharing the same type).

Typ. Type species. A name explicitly designated by the author overrides any autotype.

tantum quoad typ. Only in the sense of the type.

unest. (unestablished) A cultivar name that is not established. The cultivar equivalent of being invalid.

Generic and nothogeneric names accepted here are underlined. All scientific names and book & journal titles are shown in italics in accordance with international convention.

Author abbreviations are the internationally accepted standard forms given in Brummitt & Powell, *Authors of plant names* (1992).

Abscisoseminea Pažout (pro sect. *Gymnocalycium* Mittler), K členění rodu *Gymnocalycium*, *Fričiana* 5(29): 22, 24, 26, 27, 30. 1965 (“*Abscisosemineae*”) nom.inval. (Art. 22.2, 39.1).

Etym. From the Latin *abscisus*, cut off, and *semen*, seed.

Typ. Not cited, but includes the type of *Gymnocalycium* Mittler.

Obs. Intended as a replacement name for *Ovatiseminea* Kreuz. nom. inval. (1935) at a new rank.

Ref. *Gymnocalycium* Mittler.

Acanthanthus Y.Itô, *The Cactaceae, classification & illustration of cacti*: 354. 1981 nom. inval. (Art. 39.1, 40.1).

Etym. From the Greek *akantha*, spiny, & *anthos*, flower.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Acanthechinopsis Y.Itô, *Illustration of flower-cacti*: 7, 9, 70. 1967.

Etym. From the Greek *akantha*, spiny, & the substantive name *Echinopsis*.

Typ. *Echinopsis berlingii* Y.Itô.

Ref. *Echinopsis* Zucc.

The rules of nomenclature and the Articles cited in this document are those contained in: McNeill, J., Barrie, F. R., Buck, W. R., Demoulin, V., Greuter, W., Hawksworth, D. L., Herendeen, P. S., Knapp, S., Marhold, K., Prado, J., Prud’homme van Reine, W. F., Smith, G. F., Wiersema, J. H., & Turland, N. J. (ed.) *International code of nomenclature for algae, fungi, and plants* (Melbourne Code) adopted by the Eighteenth International Botanical Congress Melbourne, Australia, July 2011. *Regnum Vegetabile* 154. Koeltz Scientific Books, Königstein, for the International Association for Plant Taxonomy, Bratislava, 2012.

The names of types are shown in the form of nomenclatural basionyms, thereby aiding comparisons. By typing such a base name into the pdf search facility, researchers can now quickly find all those taxa based upon the same type. Finding any other name or combination of letters is also just as simple using the standard pdf search box.

×*Acanthinopsis* P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 94. 1992.

Etym. Condensed formula.

Par. *Acanthocalycium* Backeb. × *Echinopsis* Zucc.

Ref. *Echinopsis* Zucc.

Acanthocalycium Backeb., in Backeberg & Knuth, *Kaktus-ABC*: 224, 412. (12 Feb) 1936.

Etym. From the Greek *akanthos*, spiny, and *kalix*, cup. A reference to the spiny-tipped outer floral segments.

Typ. *Echinocactus spiniflorus* K.Schum.

Ref. *Echinopsis* Zucc.

Acanthocalycium (Backeb.) A.Cast. & Lelong (pro subgen. *Echinopsis* Zucc.), *Opuntiales* vel *Cactales*, *Cactaceae*, in Descole, *Genera et species plantarum Argentinorum* 1: 90. 1943 nom. illeg. (Art. 52.1).

Bas. *Acanthocalycium* Backeb. (1936, pro gen.).

Syn. *Spiniflora* (Werderm.) A.Cast. & Lelong (1938). The name that should have been used.

Ref. *Echinopsis* Zucc.

Acanthocarpi Backeb. (pro ser. *Eriocereus* (A.Berger) Riccob.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941 Zweiter Teil*: 45. (Jun) 1942 nom.inval. (Art. 39.1).

Etym. From the Greek *akantha*, spine, and *karpos*, fruit.

Typ. *Cereus tortuosus* J.Forbes ex Otto & A.Dietr.

Ref. *Echinopsis* Zucc.

Acanthocephalus Backeb. (pro subgen. *Notocactus* (K.Schum.) Frič), in Backeberg & Knuth, *Kaktus-ABC*: 68, 256. (12 Feb) 1936 nom. inval. (Art. 39.1).

Typ. Not cited.

Obs. Published without a Latin diagnosis.

Ref. *Parodia* Speg.

Acanthocephala Backeb., Die Diagnosen neuer Gattungen und Untergattungen. *Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [9], [12], [15], [18]. 1938.

Etym. From the Greek *akantha*, spine, and *kephale*, head.

Typ. *Echinocactus graessneri* K.Schum.

Syn. *Brasilicactus* Backeb. nom. illeg. (1942).

Obs. *Brasilicactus* Backeb. was superfluously published as a substitute for *Acanthocephala*, because under the rules of the day, it was considered to be a later homonym of

Acanthocephalus Kar. & Kir. (1842, *Asteraceae*).

Since 2000, however, the ICN has revised the rule on generic names differing in spelling only in their genders to be treated as different, not homonyms.

Because of extensive existing current usage, a proposal to conserve *Brasilicactus* over *Acanthocephala* was made by Doweld, in *Taxon* 49(3): 564-565. 2000, but rejected in 51(4): 795. 2002. It was reconsidered and declared unresolved on a 7:7 vote with 1 abstention in *Taxon* 53(3): 813. 2004. It was finally rejected by the Spermatophyta Committee in *Taxon* 54(4): 1096. 2005, by a unanimous 0-14 vote.

Ref. *Parodia* Speg.

Acanthocephalus (Backeb.) Havlíček (pro subgen. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 78. 1988 (publ. 1989) (“*Acanthocephala*”).

Bas. Acanthocephala Backeb. (1938, pro gen.)

Ref. Parodia Speg.

Acanthocereus Engelm. (pro subgen. *Cereus* (L.) Mill.), Additions to the cactus flora of the territory of the United States, *Transactions of the Academy of Science of St. Louis* **2**: 202-204. 1863. [Collected works p.225-226].

Etym. From the Greek *akanthos*, and the substantive *Cereus*, referring to the spiny areoles of the pericarpel.

Typ. Cereus variabilis Engelm. nom. illeg. = *Cactus tetragonus* L., the only included species.

Ref. Acanthocereus (Engelm.) Britton & Rose.

Acanthocereus (Engelm.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 77-78. (31 May) 1905.

Bas. Acanthocereus Engelm. (1863, pro subgen. *Cereus* (L.) Mill.)

Ref. Acanthocereus (Engelm.) Britton & Rose.

Acanthocereus (Engelm.) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 432. (21 Jul) 1909.

Bas. Acanthocereus Engelm. (1863, pro subgen. *Cereus* (L.) Mill.)

Acantholobivia Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae* Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil: 32, 76. (Jun) 1942.

Etym. From the Greek *akantha*, spine, and the substantive *Lobivia*.

Typ. Lobivia tegeleriana Backeb.

Ref. Echinopsis Zucc.

Acantholobivia Y.Itô [non Backeb.], *Explanatory diagram of the Austroechinocactinae*: 130, 290. 1957 nom. illeg. (Art. 53.1).

Typ. Lobivia neohaageana Backeb.

Ref. Echinopsis Zucc.

Acanthopetalus Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 141, 292. 1957 nom. illeg. (Art. 52.1).

Typ. Echinopsis mirabilis Speg.

Syn. Setiechinopsis (Backeb.) De Haas (1940).

Ref. Echinopsis Zucc.

Acanthorhipsisalis K.Schum. (pro sect. *Rhipsisalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 199. (Apr 18) 1894.

Etym. From the Greek *akantha*, spine, & the substantive *Rhipsisalis*.

Typ. *Rhipsisalis lorentziana* Griseb. Autotype (Art. 10.2). The only included species.

Obs. The lectotypification with *Cereus micranthus* Vaupel by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 21. (Jun) 1942 is superfluous.

Ref. *Rhipsisalis* Gaertn.

Acanthorhipsisalis (K.Schum.) K.Schum. (pro subgen. *Rhipsisalis* Gaertn.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 615. (1 Oct) 1898.

Bas. *Acanthorhipsisalis* K.Schum. (1894, pro sect. *Rhipsisalis* Gaertn.).

Obs. In his work Schumann treated *Rhipsisalis lorentziana* Griseb. as a synonym of *R. monacantha* Griseb. and cited the latter as its only included species. However, in modern treatments they are generally regarded as distinct species, so the type is *Rhipsisalis lorentziana* Griseb.

Ref. *Rhipsisalis* Gaertn.

Acanthorhipsisalis (K.Schum.) Britton & Rose, *The Cactaceae* 4: 208, 211. (24 Dec) 1923.

Bas. *Acanthorhipsisalis* K.Schum. (1894, pro sect. *Rhipsisalis* Gaertn.).

Ref. *Rhipsisalis* Gaertn.

Acanthorhipsisalis (Britton & Rose) Barthlott (pro subgen. *Lepismium* Pfeiff.), *New names in Rhipsalidinae, Bradleya* 5: 99. 1987.

Bas. *Acanthorhipsisalis* K.Schum. (1894, pro sect. *Rhipsisalis* Gaertn.).

Ref. *Rhipsisalis* Gaertn.

×***Acanthosalpingolobivia*** Y.Itô, *Illustration of flower-cacti*: 7, 9, 71. 1967 nom. inval. (H.6.2).

Etym. Incorrectly formed condensed formula.

Par. *Chamaelobivia* Y.Itô × *Salpingolobivia* Y.Itô.

Ref. *Echinopsis* Zucc.

Acentracantha Buxb. (pro subgen. *Chilita* Orcutt), *Die Gattungen der Mammillarienstufe, Sukkulantenkunde* 5: 25. (May) 1954.

Etym. From the Greek *a-* not, *kentron*, centre, and *akantha*, spine, for the absence of central spines.

Typ. *Mammillaria lasiacantha* Engelm.

Ref. *Mammillaria* Haw.

Acentracantha (Buxb.) Doweld (pro sect. *Escobariopsis* Doweld), *Nomenclatural adjustments in Cactaceae II, Sukkulenty* 3(1-2): 42. 2000.

Bas. *Acentracantha* Buxb. (pro subgen. *Chilita* Buxb.).

Ref. *Mammillaria* Haw.

Acharagma N.P.Taylor (pro sect. *Escobaria* Britton & Rose), Die Arten der Gattung *Escobaria* 5 (Schluß), *Kakteen und andere Sukkulente* **34**(8): 185. 1983.

Etym. From the Greek *a-* not, *charis*, separation, and *agma*, fracture. A reference to the tubercle meristem and axillary meristem not being separated by a groove.

Rep. Syn. *Escobaria* subgen. *Primibaria* Václav. John & Říha (1981).

Typ. *Echinocactus roseanus* Boed.

Ref. *Pediocactus* Britton & Rose.

Acharagma (N.P.Taylor) Zimmerman, in Glass, *Identification guide to threatened cacti of Mexico: Acharagma aguirreana* unpagged [1]. 1998.

Bas. *Acharagma* Taylor (1983, pro sect. *Escobaria* Britton & Rose).

Ref. *Pediocactus* Britton & Rose.

Ackermannia K.Schum. (pro sect. *Phyllocactus* Link nom. illeg.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 204. (20 Oct) 1897 nom. incorr. (Art. 11.4).

Etym. Based on the name of an included species.

Typ. *Epiphyllum ackermannii* Haw.

Obs. Combined with an illegitimate generic name. Includes the type of *Nopalxochia* Britton & Rose (1923, pro gen.).

Ref. *Epiphyllum* Haw.

Ackermannia (K.Schum.) Vaupel (pro subgen. *Phyllocactus* Link nom. illeg.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 646. (Dec) 1925 nom. incorr. (Art. 11.4).

Bas. *Ackermannia* K.Schum. (1897, pro sect. *Phyllocactus* Link nom. illeg.)

Obs. Combined with an illegitimate generic name. Includes the type of *Nopalxochia* Britton & Rose (1923, pro gen.).

Ref. *Epiphyllum* Haw.

Ackermannia (K.Schum.) Barthlott (pro subgen. *Disocactus* Lindl.), *Disocactus*, in Hunt & Taylor (ed.), Notes on miscellaneous genera of *Cactaceae*, *Bradleya* **9**: 87. 1991.

Bas. *Ackermannia* K.Schum. (1897, pro sect.)

Obs. Includes the type of *Nopalxochia* Britton & Rose (1923, pro gen.).

Ref. *Epiphyllum* Haw.

Acranthi Vaupel (pro infragen. [Gruppe] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus acranthus* K.Schum. ex Vaupel. Autotype (Art. 22.6).

Ref. *Haageocereus* Backeb.

Acranthi Y.Itô (pro ser. *Chamaecereus* Britton & Rose), *Illustration of flower-cacti*: 7. 1967 nom. inval. (Art. 39.1, 40.1).

Etym. From the Greek *akros*, pointed, and *anthos*, flower.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Aculeatae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 155. (Feb) 1837 nom. nud.

Etym. From the Latin adjective *aculeatus*, prickly.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Aculeatae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 157. (Feb) 1837.

Etym. From the Latin adjective *aculeatus*, prickly.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Aculeati Backeb. (pro ser. *Pterocactus* K.Schum.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 20. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin adjective *aculeatus*, prickly.

Typ. *Pterocactus hickenii* Britton & Rose.

Ref. *Pterocactus* K.Schum.

Acutanguli Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 49. 1850.

Etym. Named for an included species.

Typ. *Cereus acutangulus* Pfeiff.

Obs. Repeated by Vaupel, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Acutisquamae Buxb. (pro ser. *Browningia* Britton & Rose), Gattung *Browningia*, in Krainz (ed.), *Die Kakteen* (31-32) CIV: 3, 6. (1 Nov) 1965 nom. inval. (Art. 22.2).

Etym. From the Latin *acutus*, narrowed to a point, and *squama*, scale. A reference to the large, acute receptacle and pericarpel scales.

Typ. *Cereus candelaris* Meyen.

Syn. *Browningia* Britton & Rose ser. *Browningia*.

Ref. *Browningia* Britton & Rose.

Adscendens A.R.Franck (pro sect. *Harrisia* Britton), in Franck & al., Phylogeny, biogeography, and infrageneric classification of *Harrisia*. *Systematic Botany* **38**(1): 218. 2013.

Etym. Based on the name of an included species.

Typ. *Cereus adscendens* Gürke.

Ref. *Echinopsis* Zucc.

Aegopodothele K.Schum. (pro subgen. *Ariocarpus* Scheidw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 604. (1 Oct) 1898.

Etym. From the Greek *aego-*, goat, *-podes*, footed and *thele*, nipple. A reference to the shape of the tubercles.

Typ. *Anhalonium kotschoubeyanum* Lem. Autotype (Art. 10.2). The only included species.

Ref. *Ariocarpus* Scheidw.

Agrocantholobivia Y.Itô (pro subgen. *Acantholobivia* Backeb.), *Illustration of flower-cacti*: 7, 138. 1967 nom. inval. (Art. 22.2, 39.1, 40.1).
Etym. From the Greek *agros*, land, and the substantive *Acantholobivia*. *Agros* is perhaps used here to indicate a cultivated origin.
Typ. Not cited, but includes the type of *Acantholobivia* Backeb.
Ref. *Echinopsis* Zucc.

Agrofuriolobivia Y.Itô (pro subgen. *Furiolobivia* Y.Itô), *Illustration of flower-cacti*: 7, 80. 1967 nom. inval. (Art. 22.2, 39.1, 40.1).
Etym. From the Greek *agros*, land, and the substantive *Furiolobivia*. *Agros* is perhaps used here to indicate a cultivated origin.
Typ. Not cited, but includes the type of *Furiolobivia* Y.Itô.
Ref. *Echinopsis* Zucc.

Agrolobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), *Illustration of flower-cacti*: 7, 80. 1967 nom. inval. (Art. 22.2, 39.1, 40.1).
Etym. From the Greek *agros*, land, and the substantive *Lobivia*. *Agros* is perhaps used here to indicate a cultivated origin.
Typ. Not cited, but includes the type of *Lobivia* Britton & Rose.
Ref. *Echinopsis* Zucc.

Agromesechinopsis Y.Itô (pro subgen. *Mesechinopsis* Y.Itô), *Illustration of flower-cacti*: 6, 60. 1967 nom. inval. (Art. 22.2, 39.1, 40.1).
Etym. From the Greek *agros*, land, and the substantive *Mesechinopsis*. *Agros* is perhaps used here to indicate a cultivated origin.
Typ. Not cited, but includes the type of *Mesechinopsis* Y.Itô.
Ref. *Echinopsis* Zucc.

Agrorebutia Y.Itô (pro subgen. *Rebutia*), *Illustration of flower-cacti*: 6, 13. 1967 nom. inval. (Art. 22.2, 39.1, 40.1).
Etym. From the Greek *agros*, land, and the substantive *Rebutia*.
Typ. Not cited, but includes the type of *Rebutia* K.Schum.
Ref. *Rebutia* K.Schum.

Agrosalpingolobivia Y.Itô (pro subgen. *Salpingolobivia* Y.Itô), *Illustration of flower-cacti*: 6, 50. 1967 nom. inval. (Art. 22.2, 39.1, 40.1).
Etym. From the Greek *agros*, land, and the substantive *Salpingolobivia*.
Typ. Not cited, but includes the type of *Salpingolobivia* Y.Itô.
Ref. *Echinopsis* Zucc.

Agrosoehrensia Y.Itô (pro subgen. *Soehrensia* Backeb.), *Illustration of flower-cacti*: 8, 142. 1967 nom. inval. (Art. 22.2).
Etym. From the Greek *agros*, land, and the substantive *Soehrensia*.
Typ. Not cited, but circumscription includes the type of *Soehrensia* Backeb.
Ref. *Echinopsis* Zucc.

Ahoplocarpus K.Schum. (pro subgen. *Pereskia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (12): 758. (25 Nov) 1898.

Etym. From the Greek *a-*, not, *hopl-*, armed, and *karpos*, fruit.

Typ. Not cited.

Obs. Includes all species of *Pereskia* except *P. aculeata*.

Ref. *Pereskia* (L.) Mill.

Airampoa Frič, *Neue Kakteen der südamerikanischen Hochgebirge. Samenernte der botanischen Expedition 1928/1929*: [1]. 1929.

Etym. Based on the local vernacular name, *Ayrampo* or *Airampo* (Quechua *ayrampú*), applied by the native population to all species of this genus, and to other opuntias that yield the same red dye from their fruits, used for colouring textiles, food, and for its medicinal properties (as a blood coagulant & for fever reduction).

Typ. *Airampoa aurata* Frič. This species was thought to be unidentifiable by Byles (1955: *Cactus & Succulent Journal* (US) **27**: 73-74) and Hunt & Iliff (2000: *Cactaceae Systematics Initiatives* **9**: 8-12). There may be a specimen in Frič's own herbarium at PR, not currently accessible to researchers, but it would in any case be referable to *Opuntia corrugata* Salm-Dyck, as are the specimens of *Airampoa albispinosa* Frič nom. nud. & *A. rubriflora* Frič nom. nud., preserved by Frič in 1928 that are readily available for inspection. *Neotyp.* *Opuntia microdisca* F.A.C.Weber = *Opuntia corrugata* Salm-Dyck. Designated by Backeberg, *Cactaceae Jahrbucher der DKG* 1941(2): 17. 1942.

Ref. *Opuntia* (L.) Mill.

Airampoa (Frič) Backeb. (pro ser. *Opuntia* (L.) Mill.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942 ("Airampoae").

Bas. *Airampoa* Frič (1929, pro gen.).

Ref. *Opuntia* (L.) Mill.

Akersia Buining, *Akersia roseiflora* Buining gen. et spec. nova, *Succulenta* **43**(3): 25-27. (Mar) 1961.

Etym. Named for John F. AKERS (1906-).

Typ. *Akersia roseiflora* Buining. Autotype (Art. 10.2). The only included species.

Ref. *Cleistocactus* Lem.

Alamosenses Vaupel (pro infragen. [Gruppe] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 639. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus alamosensis* J.M.Coult. Autotype (Art. 22.6).

Obs. Has the same type as *Rathbunia* Britton & Rose (1920, pro gen.).

Ref. *Stenocereus* (A.Berger) Riccob.

Alatae Salm-Dyck (pro sect. *Opuntia*), *Hortus Dyckensis*: 184, 359. 1834. See also *Cactaeae in horto Dyckensi cultae anno 1841*: 46. 1841 ("Alati"). nom. illeg. (Art. 52.1).

Etym. A Latin adjective, *alatus*, winged.

Typ. *Cactus brasiliensis* Willd. The only included species.

Syn. *Opuntia* (L.) Mill. sect. *Tenuilobae* DC. (1828)

Ref. *Opuntia* (L.) Mill.

Alatae (DC.) Salm-Dyck (pro infragen. *Rhipsalis* Gaertn.), *Hortus Dyckensis*: 65, 339-340. 1834. See also *Cactaeae in horto Dyckensi cultae anno 1841*: 36. 1841.

Bas. *Alati* Salm-Dyck ex DC. (pro infragen. *Cereus* (L.) Mill.).

Ref. *Rhipsalis* Gaertn.

Alatae (DC.) Walp. (pro sect. *Rhipsalis* Gaertn.), *Repertorium botanices systematicae* 2: 279. 1843.

Bas. *Alatae* Salm-Dyck (pro infragen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Alatae (DC.) K.Schum. (pro ser. *Rhipsalis* Gaertn.), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 268. (1 Sep) 1890.

Typ. *Alatae* Salm-Dyck (pro infragen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Alati Salm-Dyck ex DC. (pro infragen. *Cereus* Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 469. (Mar) 1828 (“*Alatae*”).

Etym. Based on the name of an included species.

Typ. *Cactus alatus* Willd. nom. illeg. = *Rhipsalis pachyptera* Pfeiff. Autotype (Art. 22.6).

Obs. Circumscription also includes the types of *Epiphyllum* Haw. (1812) & *Zygocactus* K.Schum. (1890). Also said to include *Phyllarthus* Neck., but that has no type and it would be misapplied here.

Ref. *Rhipsalis* Gaertn.

Alati Salm-Dyck ex Pfeiff. (pro infragen. *Cereus* (L.) Mill.), Vorschlag zu einer neuen natürlichen Umordnung der Cacteen, *Allgemeine Gartenzeitung* 3(40): 315. (3 Oct) 1835 nom. nud.

Etym. A Latin adjective, *alatus*, winged.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Albertbuiningia Braun & Esteves (pro subgen. *Arrojadoa* Britton & Rose), Nieuwe combinaties en namen voor cactussen uit Brasilië, Bolivia en Paraguay, *Succulenta* 74(2): 81. 1995.

Etym. Named for the Dutchman Albert Frederik Hendrick BUINING (1901-1980), public servant and horticulturist with a special interest in Brazilian cacti.

Typ. *Arrojadoa dinae* Buining & Brederoo.

Ref. *Arrojadoa* Britton & Rose.

Albiflorae Engelm. (pro infragen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 8. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 264. 1857] nom. nud.

Etym. A Latin compound adjective, from *albus*, white, and *flos*, flower.

Typ. Mammillaria papyracantha Engelm. Autotype (Art. 10.2). The only included species.
Ref. Sclerocactus Britton & Rose.

Albispinae Salm-Dyck (pro sect. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 185, 358-359. 1834.
Etym. A Latin compound adjective, from *albus*, white, and *spina*, spine.

Typ. Not cited.

Obs. Spelt as *Albispinosae* in *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 59. 1834 and by Britton & Rose and Backeberg. The lectotype *Opuntia eichlamii* Rose, designated by Backeberg (*Cactaceae Jahrbucher der DKG* 1941(2): 18. 1942) was not an element listed by Salm-Dyck.

Ref. Opuntia (L.) Mill.

Albispinae (Salm-Dyck) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections* no. 1786 **50**(4): 536. (20 Feb) 1908 (“Albispinosae”).

Bas. Albispinae Salm-Dyck (1834, pro sect. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Albispinae (Salm-Dyck) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.

Bas. Albispinae Salm-Dyck (1834, pro sect. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Alko-tunae Backeb. (pro ser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 390, 418. (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of the only included species.

Typ. Opuntia alko-tuna Cárdenas. Autotype (Art. 10.2). The only included species.

Ref. Opuntia (L.) Mill.

Amblyophori Y.Itô (pro subgen. *Acanthocalycium* Backeb.), A new classification of the Cactinae of South America, *Bulletin of the Takarazuka Insectarium* **71**: 17. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *amblys*, obtuse or blunt, and *phoros*, bearing, perhaps referring to the petal shape.

Typ. Not cited.

Ref. Echinopsis Zucc.

Ammophilae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 211. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. Opuntia ammophila Small. Autotype (Art. 10.2, 22.6).

Ref. Opuntia (L.) Mill.

Ammophilae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.
Bas. Ammophilae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Ref. Opuntia (L.) Mill.

Ammophilae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 450, 485. (Jan) 1958 nom. inval. (Art. 41.5).
Bas. Ammophilae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Ref. Opuntia (L.) Mill.

Amoena Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Sytematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 63. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. A Latin adjective, *amoenus*, pleasant or lovely.
Typ. Mammillaria pottsii Scheer.
Obs. First proposed as a name only in Backeberg, *Blätter für Kakteenforschung* 5(6): [10]. 1938.
Ref. Mammillaria Haw.

Amoena Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3099, 3101. (20 May) 1961 nom. inval. et illeg. (Art. 39.1, 53.1).
Etym. A Latin adjective, *amoenus*, pleasant or lovely.
Typ. Mammillaria eriacantha Link & Otto ex Pfeiff.
Obs. There was no list of included species, so it is not clear if this taxon was meant to differ from *Amoena* (1942, pro ser.). Berger (1929) mistook *Mammillaria pottsii* Scheer for a *Coryphantha*, followed by Backeberg (1961), so the change of type was probably justified by this belief.
Ref. Mammillaria Haw.

Anastrophytum Doweld (pro ser. *Astrophytum* Lem.), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* 3(1-2): 36. 2000.
Etym. From the Greek prefix *an-*, usually meaning not, but in this case probably meaning higher, with the substantive *Astrophytum*.
Typ. Echinocactus asterias Zucc.
Ref. Astrophytum Lem.

Ancistracanthae K.Schum. (pro infragen. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (9): 517, 538. (1 Aug) 1898.
Etym. From the Greek *ankistron*, Latin *ancistrum*, fish-hook, and *akantha*, spine.
Typ. Not cited.
Lectotyp. Mammillaria wilcoxii Toumey ex K.Schum. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 65. (Jun) 1942.
Ref. Mammillaria Haw.

Ancistracanthae (K.Schum.) Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* **5**: 3100, 3102. (20 May) 1961.

Bas. Ancistracanthae K.Schum. (1898, pro infragen. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Ancistracanthi K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (3): 163 (1 Aug). 1897 nom. nud.

Etym. From the Greek *ankistron*, Latin *ancistrum*, fish-hook, and *akantha*, spine.

Typ. Cereus bertinii F.Cels ex Hérincq. Autotype (Art. 10.2). The only included species.

Ref. Austrocactus Britton & Rose.

Ancistrechinosia Y.Itô (pro subgen. *Echinopsis* Zucc.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *ankistron*, Latin *ancistrum*, fish-hook, and the substantive *Echinopsis*.

Typ. Not cited.

Ref. Echinopsis Zucc.

Ancistrocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292 (1 Jan), (6): 334 (25 Feb). 1898.

Etym. From the Greek *ankistron*, fish-hook, and the substantive *Cactus*. A reference to the hooked spines.

Rep. Syn. Uncinati Salm-Dyck (1850, pro infragen. *Echinocactus* Link & Otto).

Typ. Echinocactus uncinatus Galeotti. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. This taxon has a history of superfluous lectotypifications based on the mistaken belief that it is the same taxon as that described as *Ancistrocactus* by Britton & Rose.

Echinocactus brevihamatus Engelm. was designated by Taylor, *Cactus and Succulent Journal* (GB) **41**(4): 90. 1979, but it was deemed inadmissible by Doweld & Greuter (*Taxon* **50**(3): 876. (Aug) 2001) because it was not an element of the *Uncinati* Salm-Dyck replaced synonym. Doweld & Greuter replaced it with *Echinocactus scheeri* Salm-Dyck, but overlooked the autotype.

At the rank of genus this taxon is correctly called *Glandulicactus* Backeb. (1938).

Ref. Sclerocactus Britton & Rose.

Ancistrocactus Britton & Rose [non K.Schum.], *The Cactaceae* **4**: 3. (9 Oct) 1923.

Etym. From the Greek *ankistron*, fish-hook, and the substantive *Cactus*. A reference to the hooked spines.

Typ. Echinocactus megarhizus Rose = *Echinocactus scheeri* Salm-Dyck.

Obs. This is not the same taxon as *Echinocactus* Link & Otto subgen. *Ancistrocactus* K.Schum. (1898) because its autotype was explicitly excluded, placed instead in *Ferocactus* Britton & Rose.

Ref. Sclerocactus Britton & Rose.

Ancistrocactus (Britton & Rose) N.P.Taylor (pro subgen. *Ferocactus* Britton & Rose), Notes on *Ferocactus* B. & R., *The Cactus and Succulent Journal of Great Britain* **41**(4): 90. (Nov) 1979.

Bas. Ancistrocactus Britton & Rose non K.Schum. (1923, pro gen.).

Obs. Published as a new combination of *Echinocactus* subgen. *Ancistrocactus* K.Schum. and type cited as *Echinocactus brevihamatus* Engelm. = *Echinocactus scheeri* Salm-Dyck, but really a recombination of *Ancistrocactus* Britton & Rose.

Ref. Sclerocactus Britton & Rose.

Ancistrophorae Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 63. (Jun) 1942 nom. inval. (Art. 39.1). Also *Die Cactaceae* 5: 3098, 3101 (20 May) 1961 nom. inval. (Art. 39.1).

Etym. From the Greek *ankistrōn*, fish-hook, and *phoros*, bearing.

Typ. Neomammillaria rekoii Britton & Rose nom. incorr. (Art. 11.4) = *Mammillaria rekoii* (Britton & Rose) Vaupel.

Ref. Mammillaria Haw.

Andenea Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 34. 1935 nom. inval. (Art. 39.1).

Etym. Latinised form of *Andes*, the South American mountain chain.

Typ. Lobivia staffenii Frič = *Echinopsis chrysantha* Werderm.

Ref. Echinopsis Zucc.

Andeopereskia Doweld (pro ser. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* 109(4): 45-46. 2004.

Etym. From the substantives *Andes* and *Pereskia*.

Typ. Pereskia weberiana K.Schum.

Ref. Pereskia (L.) Mill.

Andinopuntia Guiggi, *Cactology* 2 Suppl.: 1. 2011.

Etym. From the locality in the high Andes of Peru and Bolivia, and the substantive *Opuntia*.

Typ. Opuntia floccosa Salm-Dyck ex Winterfeld.

Ref. Opuntia (L.) Mill.

Angulares Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 10. 1841.

Etym. Based on the name of an included species.

Typ. Mammillaria angularis Pfeiff. = *Mammillaria compressa* DC. Autotype (Art. 22.6).

Ref. Mammillaria Haw.

Angulares (Salm-Dyck) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae* 2: 271. 1843.

Etym. Based on the name of an included species.

Bas. Angulares Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Angulatae K.Schum. (pro ser. *Rhipsalis* Gaertn.), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 268. (1 Sep) 1890.

Etym. From the Latin *angulatus*, angled.

Typ. Not cited.

Ref. *Rhipsalis* Gaertn.

Angulati Lem. (pro infragen. *Cereus* (L.) Mill.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 56, 77. (Feb) 1839 nom inval. (Art. 22.2).

Etym. From the Latin *angulatus*, angled.

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Syn. *Cereus* (L.) Mill. infragen. *Cereus*.

Ref. *Cereus* (L.) Mill.

Angulosae Salm-Dyck ex Pfeiff. (pro infragen. *Rhipsalis* Gaertn.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 132. (Feb) 1837.

Etym. From the Latin adjective *angulosus*, angular.

Typ. Not cited.

Ref. *Rhipsalis* Gaertn.

Angulosae (Pfeiff.) Walp. (pro sect. *Rhipsalis* Gaertn.), *Repertorium botanices systematicae* 2: 279. 1843.

Bas. *Angulosae* Pfeiff. (1837, pro infragen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Angulosae Salm-Dyck (pro sect. *Mammillaria* Haw.), *Cacteeae in horto Dyckensi cultae* 1849: 15, 78. 1850.

Etym. From the Latin *angulosus*, angulose, referring to the angular tubercles.

Typ. Not cited.

Lectotyp. *Mammillaria polyedra* Mart. Designated by Heath, Early infrageneric classification of the genus *Mammillaria* (part 2), *The Journal of the Mammillaria Society* 28(3): 28. 1988.

Obs. Rank indicated at the foot of p. 78. *Angulosae* is not the same as *Angulares* Salm-Dyck, because it differs by the exclusion of *Mammillaria angularis*, the type species of *Angulares*.

Ref. *Mammillaria* Haw.

Angulosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cacteeae in horto Dyckensi cultae*. *Anno 1841*: 24. 1841.

Etym. From the Latin adjective *angulosus*, angular.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Pilosocereus* Byles & G.D.Rowley.

Angustilobatae Haw. (pro sect. *Opuntia* (L.) Mill.), *Decas duodecima novarum plantarum succulentarum, Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. 7(38): 111. (Feb) 1830.

Etym. From the Latin *angustus*, narrow, and *lobatus*, lobed.

Typ. Not cited.

Obs. Created for two of the species of *Glomeratae* Pfeiff. (1837), including its type, so could displace that if *Angustilobatae* was to be lectotypified with *Opuntia glomerata* Haw.

Ref. *Opuntia* (L.) Mill.

Anhaloniopsis Buxb. (pro subgen. *Loxanthocereus* Backeb.), Gattung *Loxanthocereus*, in Krainz (ed.), *Die Kakteen* (58) CVB: [8]. (1 Jul) 1974.

Etym. From the substantive *Anhalonium*, and the Latin *-opsis*, -like.

Typ. *Borzicactus madisoniorum* Hutchison.

Ref. *Matucana* Britton & Rose.

Anhalonium Lem., *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 1, 102. (Feb) 1839.

Etym. From the Greek *an*, without, and *halonion*, areole. A reference to the apparent absence of tubercle tip areoles.

Typ. *Anhalonium prismaticum* Lem. = *Ariocarpus retusus* Scheidw.

Syn. *Ariocarpus* Scheidw. (1838).

Ref. *Ariocarpus* Scheidw.

Anhalonium (Lem.) Walp. (pro subgen. *Cactus* L. nom. rej.), *Repertorium botanices systematicae* 1(2): 309. (Sep) 1842.

Bas. *Anhalonium* Lem. (1839, pro gen.)

Ref. *Ariocarpus* Scheidw.

Anhalonium (Lem.) Engelm. (pro subgen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 14. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 270. 1857].

Bas. *Anhalonium* Lem. (1839, pro gen.)

Ref. *Ariocarpus* Scheidw.

Anisocereus Backeb., *Die Diagnosen neuer Gattungen und Untergattungen. Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1986(6): [6], [10], [15], [18]. 1938.

Etym. From the Greek *an*, without, *isos*, equal, and the substantive *Cereus*.

Typ. *Cereus lepidanthus* Eichlam.

Ref. *Stenocereus* (A.Berger) Riccob.

Anisocereus (Backeb.) P.V.Heath (pro sect. *Pachycereus* (A.Berger) Britton & Rose), *The restoration of Rathbunia, Calyx* 2(3): 108. 1992.

Bas. *Anisocereus* Backeb. (1938, pro gen.)

Ref. *Stenocereus* (A.Berger) Riccob.

Annemarnieria Buxb. (pro subgen. *Cleistocactus* Lem.), *La division du genre Cleistocactus, Cactus* (Paris) 11(51): 90. (Oct) 1956.

Etym. Named for *Anne*, the wife of the French horticulturist Julien MARNIER-LAPOSTOLLE.

Typ. *Cereus smaragdiflorus* F.A.C.Weber.

Ref. *Cleistocactus* Lem.

Anomali K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (1): 54 (Feb). 1897.

Etym. Unusual Cerei, from the Greek *a-*, not, & *homalos*, equal.

Typ. *Cereus obtusangulus* K.Schum. Autotype (Art. 10.2). The only included species.

Ref. *Rhipsalis* Gaertn.

Anstrophiolatae Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 80. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Greek prefix *an-*, not, and *strophiolata*, strophiole-bearing.

Typ. *Parodia alacriportana* Backeb. & Voll.

Ref. *Parodia* Speg.

Aoracanthi Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 16. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia aoracantha* Lem.

Ref. *Opuntia* (L.) Mill.

Aparadoa Vliet, De Notocactussen van de Aparados da Serra, *Succulenta* **65**(4): 83-86. 1986 nom. vern.

Obs. A vernacular name used by the author for the *Brasiliparodia* of the region of Rio Grande do Sul, Aparados da Serra.

Ref. *Parodia* Speg.

×***Aporberocereus*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(2): 46. (Jun) 1982.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Weberocereus* Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×***Aporechinopsis*** G.D.Rowley, *Name that succulent*: 113. 1980.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Echinopsis* Zucc.

×***Aporepicactus*** E.Meier, *Kaktusblüte*: 35. 2005 nom. inval. (Art. H.6.1).

Etym. Meant to be a condensed formula, but epicactus is not a taxon.

Par. *Aporocactus* Lem. × epicactus.

×***Aporepiphyllum*** G.D.Rowley, *Name that succulent*: 114. 1980.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Epiphyllum* Haw.

×***Aporicereus*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Selenicereus* (A.Berger) Britton & Rose.

Aporocactus Lem., *L'Illustration horticole* 7: Misc. 67. 1860.

Etym. From the Greek *aporos*, impassable, and the substantive *Cactus*. A reference to the flower tube being blocked from entry by the stamens.

Typ. Not cited.

Lectotyp. *Cactus flagelliformis* L. Designated by Britton & Rose, *Contributions from the U.S. National Herbarium* 12(10): 434. (21 Jul) 1909.

Aporocactus (Lem.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 82. (31 May) 1905.

Bas. *Aporocactus* Lem. (1860, pro gen.).

Ref. *Aporocactus* Lem.

Aporocactus (Lem.) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 109. (Jul-Aug) 1929.

Bas. *Aporocactus* Lem. (1860, pro gen.).

Ref. *Aporocactus* Lem.

Aporocactus (Lem.) Barthlott (pro subgen. *Disocactus* Lindl.), *Disocactus*, in Hunt & Taylor (ed.), Notes on miscellaneous genera of *Cactaceae*, *Bradleya* 9: 87. 1991.

Bas. *Aporocactus* Lem. (1860, pro gen.).

Ref. *Aporocactus* Lem.

Aporocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 15, 39. 1935 nom. illeg. (Art. 52.1).

Etym. From the substantives *Aporocactus* and *Cereus*.

Rep. Syn. *Aporocactus* Lem. (1860, pro gen.)

Typ. *Cactus flagelliformis* L. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Aporocactus* Lem.

Ref. *Aporocactus* Lem.

×***Aporochia*** G.D.Rowley, Genealogy of the large-flowered cactus hybrids, *Epiphytes* 4(1): 12. (Jul) 1972.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Nopalxochia* Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×***Aporocryptocereus*** Xhonneux, *Cactus Aventures International* (45): 24. (Jan) 2000.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Cryptocereus* Alexander.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×***Aporodisocactus*** C.Knebel, *Phyllokakteen*: 38. 1947.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Disocactus* Lindl.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×**Aporoheliocereus** C.Knebel, *Phyllokakteen*: 38. 1947 nom. inval. (Art. H.9.1).

Etym. Condensed formula.

Par. Not cited. Presumably *Aporocactus* Lem. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×**Aporoheliocereus** C.Knebel ex Hunt, in Willis, *Dictionary of flowering plants and ferns*, ed.7: 80. 1966.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×**Aporoheliochia** P.V.Heath, Six short notes - 2, *Epiphytes* **8**(30): 40. 1984.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×**Aporophyllum** H.Johnson, *Succulent parade 1955*: 13. 1955 nom. inval. (Art. 30.6).

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Epiphyllum* Haw.

Ref. ×*Aporepiphyllum* G.D.Rowley.

×**Aporotrichocereus** Hunt, in Willis, *Dictionary of flowering plants and ferns*, ed.8: 82. 1973.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Trichocereus* (A.Berger) Riccob.

Ref. ×*Aporechinopsis* G.D.Rowley.

Applanatae Engelm. (pro infragen. *Opuntia* (L.) Mill.), *Cactaceae*, in Gray, *Plantae Lindheimerianae*, *Boston Journal of Natural History* **6**(2): 206. 1850 nom. nud.

Etym. A Latin adjective, *applanatus*, flattened.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Archiebnerella Buxb. (pro subgen. *Ebnerella* Buxb.), Die Phylogenie der nordamerikanischen Echinocacteen. *Trib. Euechinocactinae* F. Buxb., *Österreichische botanische Zeitschrift* **98**(1-2): 88. (28 Apr) 1951.

Etym. From the Greek *archi*, splendid, and the substantive *Ebnerella*.

Typ. *Mammillaria zephyranthoides* Scheidw.

Ref. *Mammillaria* Haw.

Archiebnerella (Buxb.) Buxb. (pro subgen. *Chilita* Orcutt), Die Gattungen der Mammillarienstufe, *Sukkulantenkunde* **5**: 11. (May) 1954.

Bas. *Archiebnerella* Buxb. (1951, pro subgen. *Ebnerella* Buxb.).

Ref. *Mammillaria* Haw.

Archiebnerella (Buxb.) Buxb. (pro ser. *Chilita* Orcutt), Vorschläge zur Wiedervereinigung von Gattungen mit der Gattung *Mammillaria*, *Kakteen und andere Sukkulente* 7(1): 7 (Feb) 1956 nom. inval. (Art. 41.5).

Bas. Archiebnerella Buxb. (1951, pro subgen. *Ebnerella* Buxb.).

Ref. Mammillaria Haw.

Archiebnerella (Buxb.) Bravo (pro ser. *Mammillaria* Haw.), in Bravo & Sánchez-Mejorada, *Las Cactáceas de México* 3: 47. 1991.

Bas. Archiebnerella Buxb. (1951, pro subgen. *Ebnerella* Buxb.).

Ref. Mammillaria Haw.

Archipereskia Doweld (pro sect. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* 109(4): 45. 2004.

Etym. From the Greek *archi*, splendid, and the substantive *Pereskia*.

Typ. Pereskia lychnidiflora DC.

Ref. Pereskia (L.) Mill.

Arechavaletae Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 73. 1988 (publ. 1989) ("Arechavaletai") nom. inval. (Art. 22.2, 39.1).

Etym. Based on the name of an included species.

Typ. Echinocactus arechavaletae Speg. = *Cactus ottonis* Lehm. Autotype (Art. 22.6).

Ref. Parodia Speg.

Arenariae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 588, 599. (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of the only included species.

Typ. Opuntia arenaria Engelm. Autotype (Art. 10.2).

Ref. Opuntia (L.) Mill.

Arequipa Britton & Rose, *The Cactaceae* 3: 77, 100-101. (12 Oct) 1922.

Etym. Named for the town of Arequipa, Peru.

Typ. Arequipa leucotricha Britton & Rose = *Echinopsis hempeliana* Gürke.

Obs. The type as cited, *Echinocactus leucotrichus* Phil., is an error of identification. In reality based on plants found by Dr. Rose in the vicinity of Arequipa, which are identifiable as *Echinopsis hempeliana* Gürke, and on which the generic protologue is based.

Ref. Cleistocactus Lem.

Arequipiopsis Kreuz. & Buining, in Kreuzinger, Bemerkungen zu einigen Gattungen der Cactaceae, *Repertorium specierum novarum regni vegetabilis* 50: 195, 198-199. (26 Nov) 1941 nom. illeg. (Art. 52.1).

Etym. From the substantive *Arequipa* and the Latin suffix *-opsis*, -like.

Typ. Echinopsis hempeliana Gürke.

Syn. Arequipa Britton & Rose (1922).

Ref. Cleistocactus Lem.

Argyrochilenia Y.Itô (pro subgen. *Neochilenia* Backeb.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *argyreos*, silver, and the substantive *Chilenia*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Ariocarpus Scheidw., *Descriptio diagnostica nonnullarum Cactearum quae a domino Galeotti in provinciis Potosi et Guanaxato regni Mexicani inveniuntur*, *Bulletin de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique Bruxelles*, Ser. 1 **5**: 491. 1838.

Etym. From *arius*, dried, the passive perfect participle of the Latin *arere*, to become dry, and *carpus*, fruit.

Typ. *Ariocarpus retusus* Scheidw.

Ariocarpus (Scheidw.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Ariocarpus* Scheidw. (1838, pro gen.).

Ref. *Ariocarpus* Scheidw.

+ ***Ariocereus*** P.V.Heath, The Nothogenera of the Cactaceae, *Calyx* **1**(3): 98. 1992 unest. (Cult.Art. 24.3, 27.1d).

Etym. Condensed formula.

Gr.-chim. *Ariocarpus* Scheidw. + *Trichocereus* (A.Berger) Riccob.

Obs. Based on + *Ariocereus ewaldii* P.V.Heath (*Ariocarpus kotschoubeyanus* (Lem.) K.Schum. + *Trichocereus spachianus* (Lem.) Riccob.) in the collection of Horst Ewald where it was seen in 1974. Passed into the collection of Gordon Foster. A few years ago it was close to dying out, so maybe it no longer exists. Unfortunately it has never been described and there are no known images of it, so it is briefly characterised under the new name + *Arioechinopsis* Mottram.

Ref. + *Arioechinopsis* Mottram.

+ ***Arioechinopsis*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Rep. Syn. + *Ariocereus* P.V.Heath (1992).

Gr.-chim. *Ariocarpus* Scheidw. + *Echinopsis* Zucc. [+ *Arioechinopsis* 'Horst Ewald' Mottram **cult. nov.**]

Descr. The original plant was seen when it was about 10cm. high comprising a green trichocereus stock with small dark purple-pink blotches and the star-like rosettes of the ariocarpus appearing randomly over its surface, as though offsetting.

Horst was a friend and supplier of grafted plants to Gordon Foster, so a few years later when Horst ended his interest in cacti, his stock of this graft-chimaera went to Gordon. Gordon propagated it and created a small stock of plants, though none are known to have ever been distributed.

Obs. A second + *Arioechinopsis* is described in Muetter, *Succulenta* **93**(1): 33-34. (Feb) 2014.

Armatae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 700, 704. (1 Nov) 1898.

Etym. From the Latin adjective *armatus*, armed. Refers to the fierce spination.

Typ. Not cited.

Lectotyp. *Opuntia monacantha* (Willden.) Haw. Designated by Leuenberger (2002: 435).

Ref. *Opuntia* (L.) Mill.

Armatocereus Backeb., Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [6], [11], [17], [19]. 1938.

Etym. From the Latin adjective, *armatus*, armed, and the substantive *Cereus*.

Typ. *Cactus laetus* Humb., Bonpl. & Kunth.

Ref. *Jasminocereus* Britton & Rose.

Arrojadoa Britton & Rose, *The Cactaceae* 2: 2, 170. (9 Sep) 1920.

Etym. Named for Dr. Miguel ARROJADO Lisboa, Superintendent of Estrada de Ferro Central de Brazil and botanical explorer.

Typ. *Cereus rhodanthus* Gürke.

Arrojadoopsis Guiggi, A new genus of the tribe *Cereeae* from Bahia, Brazil (*Cactoideae*), *Cactology* 1: 25-27. (Jan) 2007.

Etym. From the substantive name *Arrojadoa*, and the Greek suffix *-opsis*, -like.

Typ. *Arrojadoa marylandiae* Soares Filho & M. Machado.

Obs. A putative allopolyploid.

Ref. *Arrojadoa* Britton & Rose Σ *Melocactus* (L.) Mill.

Arthrocerus A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 146. (Jul-Aug) 1929.

Etym. From the Greek *arthron*, joint, and the substantive *Cereus*. A reference to the articulated stems.

Typ. *Cereus microsphaericus* A.Berger non K.Schum. nom. illeg. = *Cereus glaziovii* K.Schum. typ. cons. Autotype (Art. 10.2). The only included species.

Obs. Berger misinterpreted *Cereus microsphaericus* K.Schum., and put *Cereus damazi-oi* K.Schum. in its synonymy. In that sense the type is correctly called *Cereus glaziovii* K.Schum.

Ref. *Echinopsis* Speg.

Arthrocerus (A.Berger) A.Berger, *Kakteen*: 146, 337. (Jul-Aug) 1929 nom. cons. 1993.

Bas. *Arthrocerus* A.Berger (1929, pro subgen. *Cereus* (L.) Mill.

Obs. Description at subgeneric rank on p.146, then transferred to generic rank on p.337.

Ref. *Echinopsis* Speg.

Articulati Pfeiff. (pro infragen. *Cereus* (L.) Mill.), Vorschlag zu einer neuen natürlichen Umordnung der Cacteen, *Allgemeine Gartenzeitung* 3(40): 315. (3 Oct) 1835.

Etym. Based on the name of an included species.

Typ. *Cereus articulatus* Pfeiff. Autotype (Art. 22.6).

Obs. Includes only tephrocacti plus *Opuntia moniliformis*. This is the earliest name for *Tephrocactus* Lem., which Pfeiffer suggested may be worthy of generic rank: "An genus

proprium?” However, in his *Enumeratio* (1837), Pfeiffer abandoned this name in favour of Salm-Dyck’s earlier name *Cereus* infragen. *Opuntiacei*. Confusingly, Salm-Dyck (1841) later applied the name *Cereus* infragen. *Articulati* in a completely different sense.
Ref. Opuntia (L.) Mill.

Articulati Salm-Dyck [non Pfeiff.] (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 29. 1841.

Etym. From the Latin *articulatus*, jointed.

Typ. Not cited.

Ref. Cereus (L.) Mill., *Acanthocereus* (A.Berger) Britton & Rose, *Jasminocereus* Britton & Rose, and *Nyctocereus* (A.Berger) Britton & Rose.

Articulati (Salm-Dyck) Walp. (pro sect. *Cereus* (L.) Mill.), *Repertorium botanices systematicae* 2: 277. 1843.

Bas. Articulati Salm-Dyck (1841, pro infragen. *Cereus* Mill.).

Ref. Cereus (L.) Mill., *Acanthocereus* (A.Berger) Britton & Rose, *Jasminocereus* Britton & Rose, *Nyctocereus* (A.Berger) Britton & Rose.

Articuliferae Pfeiff. (pro infragen. *Rhipsalis* Gaertn.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 136. (Feb) 1837.

Etym. From the Latin *articulatio*, joint, & *-fer*, -bearing.

Typ. Not cited.

Ref. Rhipsalis Gaertn.

Articuliferae (Pfeiff.) Walp. (pro sect. *Rhipsalis* Gaertn.), *Repertorium botanices systematicae* 2: 280. 1843.

Bas. Articuliferae Pfeiff. (1837, pro infragen. *Rhipsalis* Gaertn.).

Ref. Rhipsalis Gaertn.

Asetosi Backeb. (pro ser. *Haageocereus* Backeb.), *Die Cactaceae* 2: 1163, 1167. (Mar) 1959 nom. inval. (Art. 39.1, 40.1).

Etym. From the Latin prefix *a-*, not, and *setosus*, bristly.

Typ. Not cited.

Ref. Haageocereus Backeb.

Assurgentes Vaupel (pro infragen. [Gruppe] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 639. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Cereus assurgens C.Wright ex Griseb. Autotype (Art. 22.6).

Ref. Leptocereus (A.Berger) Britton & Rose.

Asteroides Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactae in horto Dyckensi cultae. Anno 1841*: 20-21. 1841.

Etym. From the Greek *aster*, star, and *-oides*, -like.

Typ. Astrophytum myriostigma Lem. Autotype (Art. 10.2). The only included species.

Ref. Astrophytum Lem.

Asteroidi (Salm-Dyck) Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 2: 274. 1843.

Bas. *Asteroidi* Salm-Dyck (pro infragen. *Echinocactus* Link & Otto).

Obs. The priority name for *Astrophytum* Lem. at the rank of section.

Ref. *Astrophytum* Lem.

Astrocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *aster*, star, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

×**Astromelocactus** Gapon, *Kaktus-Klub* (Moscow) 3(2): 20-21. 1999 nom. fict.

A hoax *Astrophytum* × *Melocactus* hybrid.

Astrophyton Lawr., Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 321. 1841 nom. illeg. (Art. 52.1).

Etym. Graecisation of the Latin substantive *Astrophytum*.

Rep. Syn. *Astrophytum* Lem. (1939).

Ref. *Astrophytum* Lem.

Astrophytum Lem., *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 3, 105. (Feb) 1839.

Etym. From the Greek *aster*, star, and *phyton*, plant.

Typ. *Echinocactus myriostigma* Salm-Dyck. Autotype (Art. 10.2). The only included species.

Obs. The spelling *Astrophyton* on p.105 is treated as an error to be corrected.

Astrophytum (Lem.) K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292, 320. (1 Jan) 1898.

Bas. *Astrophytum* Lem. (1839, pro gen.).

Ref. *Astrophytum* Lem.

Athrophyllum Labour., *Monographie de la famille des cactées*: xlvi, 406. 1853.

Etym. From the Greek *athros*, crowded, and *phyllon*, leaf.

Typ. Not cited.

Ref. *Epiphyllum* Haw., *Rhipsalis* Gaertn.

Atrovirentes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 26. 1841

Etym. From the Latin *atratus*, darkened, and *virens*, greenish.

Typ. Not cited.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Attenuati Salm-Dyck (pro infragen. *Cereus* (L.) Mill), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 22. 1834 nom. nud.

Etym. From the Latin *attenuatus*, tapering, referring to the narrowing of the upper part of the stems.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Attenuati Salm-Dyck ex Pfeiff. (pro infragen. *Cereus* (L.) Mill. in § *Cereastri* Pfeiff. nom. inval.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 93. (Feb) 1837 nom. nud.

Etym. From the Latin *attenuatus*, tapering, referring to the narrowing of the upper part of the stems.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Attenuati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cacteeae in horto Dyckensi cultae anno 184-*: 27. 1842.

Etym. From the Latin *attenuatus*, tapering, referring to the narrowing of the upper part of the stems.

Typ. Not cited. Schumann (1897: 51) reduced this taxon to the single species *Cactus repandus* L. Both Salm-Dyck & Schumann applied *Cactus repandus* in the sense of *Harrisia gracilis* (Mill.) Britton.

Ref. *Echinopsis* Zucc., *Pilosocereus* Byles & G.D.Rowley.

Aulacothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 92. (Feb) 1839 nom. rej.

Etym. Based on the name of an included species.

Typ. *Mammillaria aulacothele* Lem. = *Mammillaria octacantha* DC. Autotype (Art. 22.6).

Obs. In the original sense this name excluded the type of *Coryphantha*, but Schumann (1898) included it, so his usage was illegitimate.

Rejection proposed by Mottram, *Taxon* **41**(2): 339-340. 1992, recommended with 11 : 0 vote in *Taxon* **43**(2): 274-275. 1994. Adopted by the 1993 Congress.

Ref. *Coryphantha* (Engelm.) Lem.

Aulacothelae (Lem.) Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, 3rd. Ser. 6: 315. 1841 nom. rej.

Bas. *Aulacothelae* Lem. nom. rej. (1839, pro infragen. *Mammillaria* Haw.)

Ref. *Coryphantha* (Engelm.) Lem.

Aulacothelae (Lem.) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae* **2**: 272. 1843 nom. rej.

Bas. *Aulacothelae* Lem. nom. rej. (1839, pro infragen. *Mammillaria* Haw.).

Ref. *Coryphantha* (Engelm.) Lem.

Aulacothelae (Lem.) H.B.Monv., *Catalogue des plantes exotiques composant la collection de Monville, dont la vente aura lieu, aux enchères publiques, a Monville-lès-Rouen, Le Mercredi 15 Juillet 1846*: 21. 1846 nom. rej.

Bas. Aulacothelae Lem. nom. rej. (1839, pro infragen. *Mammillaria* Haw.).

Obs. Contemporary with this usage at generic rank, also attributed to Monville, is the slightly later usage in the text to the unnumbered plate of *Mammillaria sulcolanata*, in Lemaire, *Iconographie descriptive des cactées* (8): t.[16]. 1847, where the name combination *Aulacothele sulcolanata* was applied and superfluously designated by Lemaire as the type of the genus: “This also provides a very satisfactory type of the genus *Aulacothele*”.

Ref. Coryphantha (Engelm.) Lem.

Aulacothelae (Lem.) Backeb. (pro sect. *Coryphantha* (Engelm.) Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 61. 1942 nom. rej.

Bas. Aulacothelae Lem. nom. rej. (1839, pro infragen. *Mammillaria* Haw.).

Ref. Coryphantha (Engelm.) Lem.

Aurantiacae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 106. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. Opuntia aurantiaca Lindl. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Aurantiacae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 16. (Jun) 1942.

Bas. Aurantiacae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Aurantiacae (Britton & Rose) A.Cast. (pro sect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* 6(2): 276, 277. 1957 nom. inval. (Art. 41.5).

Bas. Aurantiacae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Obs. Lacks full reference to basionym.

Ref. Opuntia (L.) Mill.

Aureilobivia Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 33. 1935 nom. inval. (Art. 39.1).

Etym. From the Latin *aureus*, golden, and the substantive *Lobivia*. A reference to the flower colour.

Typ. Echinopsis aurea Britton & Rose.

Ref. Echinopsis Zucc.

Austrocactus Britton & Rose, *The Cactaceae* 3: 3, 44. (12 Oct) 1922.

Etym. From the Latin *auster*, south, and the substantive *Cactus*.

Typ. Cereus bertinii F.Cels ex Hérincq. Autotype (Art. 10.2). The only included species.

Austrocactus (Britton & Rose) A. Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 216. (Jul-Aug) 1929.

Bas. Austrocactus Britton & Rose (1922, pro gen.).

Ref. Austrocactus Britton & Rose.

Austrocephalocereus Backeb. (pro subgen. *Cephalocereus* Pfeiff.), in Backeberg & Knuth, *Kaktus-ABC*: 73-74, 335. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. From the Latin *auster*, south, and the substantive *Cephalocereus*.

Typ. Not cited.

Ref. Austrocephalocereus Backeb.

Austrocephalocereus Backeb. (pro subgen. *Cephalocereus* Pfeiff.), *Blätter für Kakteenforschung* 5(6): Nachtrag 1936(11): [11]. 1936 nom. inval. (Art. 39.1).

Etym. From the Latin *auster*, south, and the substantive *Cephalocereus*.

Typ. Cereus dybowskii Rol.-Goss.

Obs. Published without a Latin diagnosis. Validated in the same year but with a new type.

Ref. Austrocephalocereus Backeb.

Austrocephalocereus Backeb., *Die Diagnosen neuer Gattungen und Untergattungen, Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [9], [15], [20], [23]. 1938.

Etym. From the Latin *auster*, south, and the substantive *Cephalocereus*.

Typ. Cephalocereus purpureus Gürke.

Obs. *Austrocephalocereus*, *Coleocephalocereus*, and *Micranthocereus* are not really distinct but were validated simultaneously. *Austrocephalocereus* was, however, the earliest name chosen by their author, with the other two names at first identified as unnamed, unranked but typified taxa within it in *Blätter für Kakteenforschung* 5(6): Nachtrag 1936(11): 11. 1936, and later segregated as genera. The author's choice should therefore be followed by recombining them under the earliest though invalidly published name, *Austrocephalocereus*, in the absence of a better reason.

× ***Austrocereus*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. Austrocephalocereus Backeb. × *Pilosocereus* Byles & G.D. Rowley.

Syn. × *Microsocereus* G.D. Rowley (1994).

Obs. Based on reports by Ritter, *Kakteen in Südamerika* 1: 70, 84, 105, fig. 39. 1979, & 4: 1514-1515. 1981, as *Micranthocereus* × *Pilosocereus*.

Austrocyllindropuntia Backeb., *Die Diagnosen neuer Gattungen und Untergattungen, Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [3], [11], [17], [19]. 1938.

Etym. From the Latin *auster*, south, and the substantive *Cyllindropuntia*.

Typ. Opuntia exaltata A. Berger.

Obs. Concept revised by Rowley, in *Opuntia – Fission or fusion? Part II – Resolution*, *Tephrocactus Study Group* 12(3): 37, 42. (29 Sep) 2006.

Ref. Opuntia (L.) Mill.

Austrocyllindropuntia (Backeb.) Moran (pro sect. *Opuntia* (L.) Mill.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 326. (24 Apr) 1953.

Bas. *Austrocyllindropuntia* Backeb. (1938, pro gen.).

Ref. *Opuntia* (L.) Mill.

Austrocyllindropuntia (Backeb.) R.Kiesling (pro subgen. *Maihueniopsis* F.Ritter), Revision and transfer of some *Austrocyllindropuntia*. *Tephrocactus Study Group Newsletter* **4**(1): 238. 1998 [dated Mar, publ. May 12].

Bas. *Austrocyllindropuntia* Backeb. (1938, pro gen.).

Ref. *Opuntia* (L.) Mill.

Austroebnerella Buxb. (pro subgen. *Mammillaria* Haw.), Die Gattungen der Mammillarienstufe, *Sukkulentenkunde* **5**: 28. (May) 1954.

Etym. From the Latin *auster*, southern, and the substantive *Ebnerella*.

Typ. *Neomammillaria solisii* Britton & Rose nom. incorr. = *Ebnerella nunezii* (Britton & Rose) Buxb..

Ref. *Mammillaria* Haw.

Austrospermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* **7**(4): 55. 1982.

Etym. From the Latin *auster*, southern, and *sperma*, seed.

Typ. *Parodia aureicentra* Backeb.

Ref. *Parodia* Speg.

Austro-tuberculatae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (11): 657, 660. (1 Nov). 1898.

Etym. From the Latin *auster*, southern, and *tuberculatus*, beset with small swellings.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Aylostera Speg., Breves notas cactológicas, *Anales de la Sociedad Científica Argentina* **96**: 75. 1923.

Etym. From the Greek *aylos*, tube, and *stereos*, solid. A reference to the solid axis of the floral receptacle tube.

Typ. *Echinopsis pseudominuscula* Speg. Autotype (Art. 10.2). The only included species.

Obs. In the past usually merged with *Rebutia* K.Schum., but molecular data and a preponderance of tetraploids suggests a distinct origin, perhaps initiated by an allopolyploid event involving another genus with *Rebutia*.

Aylostera (Speg.) Backeb. (pro subgen. *Rebutia* K.Schum.), *Rebutia* K. Sch. (1895), *Blätter für Kakteenforschung* **1**(2): [7]. 1934.

Bas. *Aylostera* Speg. (1923, pro gen.).

Ref. *Aylostera* Speg.

Aylostera (Speg.) Buining & Donald (pro sect. *Rebutia* K.Schum.), Die Gattung *Rebutia* K. Schumann, *Sukkulentenkunde* 7-8: 96, 98, 101 (Mar) 1963.

Bas. *Aylostera* Speg. (1923, pro gen.).

Obs. Basionym shown on p.96, and combination on p. 98 & 101.

Ref. *Aylostera* Speg.

Aztekium Boed., *Echinocactus ritterii* Böd., *Monatsschrift der Deutschen Kakteen-Gesellschaft* 1(2-3): 52. (Feb-Mar) 1929.

Etym. From *Aztek*, Germanisation of the substantive Aztec, American Indian people dominant in Mexico prior to the 16thC. Refers to the resemblance of the plant to Aztec sculptures.

Typ. *Echinocactus ritteri* Böd.

Azureocereus Akers & H.Johnson, A new genus and new species from Peru, *Cactus and Succulent Journal* (US) 21(5): 133-134. (Sep-Oct) 1949.

Etym. From the Latin *azureus*, azure, a pure deep blue, and the substantive *Cereus*.

Typ. *Azureocereus nobilis* Akers. = *Clistanthocereus hertlingianus* Backeb. Autotype (Art. 10.2). The only included species.

Ref. *Browningia* Britton & Rose.

Azureocereus (Akers & H.Johnson) Buxb. (pro ser. *Browningia* Britton & Rose), Gattung *Browningia*, in Krainz (ed.), *Die Kakteen* (31-32) CIV: [3], [5]. (1 Nov) 1965.

Bas. *Azureocereus* Akers & H.Johnson (1949, pro gen.).

Ref. *Browningia* Britton & Rose.

Backebergia Bravo, Un nuevo genero de la familia de las cactáceas *Backebergia*, *Anales del Instituto de Biología de la Universidad Nacional de México* 24(2): 230-231. 1953.

Etym. Named for the German businessman and horticulturist Curt BACKEBERG (1894-1966).

Typ. *Pilocereus chrysomallus* Lem.

Ref. *Cephalocereus* Pfeiff.

Backebergia (Bravo) P.V.Heath (pro sect. *Pachycereus* (A.Berger) Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 108. 1992.

Bas. *Backebergia* Bravo (1953, pro gen.)

Ref. *Cephalocereus* Pfeiff.

Baldiana Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 6, 10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus baldianus* Speg. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Banfiopuntia Guiggi, *Cactology* 2 Suppl.: 1. (May) 2011.

Etym. Named for Enrico BANFI, botanist at the Milan Museum of Natural History.

Typ. *Opuntia verschaffeltii* F.A.C.Weber.

Ref. *Opuntia* (L.) Mill.

Barbatae Doweld (pro ser. *Cochemiea* (K.Brandegee) Walton), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* 3(1-2): 39. 2000.

Etym. Based on the name of an included species.

Typ. *Mammillaria barbata* Engelm.

Ref. *Mammillaria* Haw.

Bartschella Britton & Rose, *The Cactaceae* 4: 3, 57-58. (9 Oct) 1923.

Etym. Named for Dr Paul BARTSCH, curator at the US National Museum.

Typ. *Mammillaria schumannii* Engelm.

Ref. *Mammillaria* Haw.

Bartschella (Britton & Rose) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* 8(4): 324. (24 Apr) 1953.

Bas. *Bartschella* Britton & Rose (1923, pro gen.).

Ref. *Mammillaria* Haw.

Bartschella (Britton & Rose) Lüthy (pro ser. *Mammillaria* Haw.), Taxonomische Untersuchung der Gattung *Mammillaria* Haw.: 136. 1995.

Bas. *Bartschella* Britton & Rose (1923, pro gen.).

Ref. *Mammillaria* Haw.

Baumanniani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 637, 638. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus baumannii* Lem. Autotype (Art. 22.6).

Obs. Based on the same type as *Cleistocactus* Lem. (1861).

Ref. *Cleistocactus* Lem.

Basilares Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 118. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia basilaris* Engelm. & J.M.Bigelow. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Basilares (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 588. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Basilares* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Bergerocactus Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the United States National Herbarium* 12(10): 435. (21 Jul) 1909.

Etym. Named for the German botanist Alwin BERGER (1871-1931).

Typ. *Cereus emoryi* Engelm.

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Bergerocactus (Britton & Rose) Parrish (pro subgen. *Cereus* (L.) Mill.), in Jepson, *Manual of the flowering plants of California*: 658. (14 Apr) 1925.

Bas. *Bergerocactus* Britton & Rose (1909, pro gen.).

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Bergerocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 15, 18. 1935 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the substantives *Bergerocactus* and *Cereus*.

Rep. Syn. *Bergerocactus* Britton & Rose (1909).

Typ. *Cereus emoryi* Engelm. Autotype (Art. 10.2). The only included species.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Bergerocactus* Britton & Rose.

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Bicolores Kladiwa & Fittkau (pro sect. *Thelocactus* (K.Schum.) Britton & Rose), Gattung *Thelocactus*, in Krainz, *Die Kakteen* (61) CVIIIb: [3]. (1 Apr) 1975 nom. inval. (Art. 39.1).

Etym. Based on the name of the type species.

Typ. *Echinocactus bicolor* Galeotti.

Ref. *Echinofossulocactus* Lawr.

Bigelovianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 58. (21 Jun) 1919.

Etym. Based on the name of an included species, with an adjectival suffix.

Typ. *Opuntia bigelovii* Engelm. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Bigelovianae (Britton & Rose) Backeb. (pro ser. *Cylindropuntia* (Engelm.) F.M.Knuth), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 14. (Jun) 1942.

Bas. *Bigelovianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Binghamia Britton & Rose, *The Cactaceae* 2: 2, 167. (9 Sep) 1920 nom illeg. (Art.53.1).

Etym. Named for Hiram BINGHAM, Director of the Yale University Expedition to Peru, 1914-1915.

Typ. *Cactus multangularis* Willd. Initially indicated in the protologue as *Binghamia melanostele* Britton & Rose [non *Cephalocereus melanostele* Vaupel] = *Cereus pseudomelanostele* Werderm. & Backeb., but its synonymy was revised in the Appendix to *The Cactaceae* 4: 279. (9 Oct) 1923 to include Willdenow's basionym, with a transfer to *Binghamia multangularis* (Willd.) Britton & Rose.

Obs. An illegitimate later homonym of *Binghamia* Farlow ex Agardh (1899, *Algae*). Britton & Rose misapplied the name *Cephalocereus melanostele* Vaupel to their type plant found by Rose in 1914 near Chosica, Peru. That was replaced with *Cereus pseudomelanostele* Werderm. & Backeb. (1931), but that name would in turn become superfluous if *Cactus*

multangularis Willd. were to be neotypified with the illustration of Haworth's plant dated 1824 reproduced by Britton & Rose in 1923.

Ref. *Haageocereus* Backeb.

Binghamia A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. 1929.

Rep. Syn. *Binghamia* Britton & Rose nom. illeg. (1920, pro gen.).

Typ. *Cactus multangularis* Willd. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Under Art. 58.1, subgen. *Binghamia* is valid and legitimate with authorship attributed solely to Berger.

Ref. *Haageocereus* Backeb.

Binghamia Backeb. [non Britton & Rose nec A. Berger], *Die Cereensippe: Loxanthocerei* Bckbg., *Der Kakteen-Freund* 3(11): 124. (mid-Nov) 1934 nom. illeg. (Art. 53.1).

Etym. Named for Hiram BINGHAM, Director of the Yale University Expedition to Peru, 1914-1915.

Typ. *Cereus aurivillus* K. Schum. = *Cactus humboldtii* Humb., Bonpl. & Kunth.

Syn. *Seticereus* Backeb. (1942).

Obs. This is a reuse of an illegitimate name in a different sense, but it is likewise an illegitimate later homonym of *Binghamia* Farlow ex Agardh (1899, *Algae*). Later replaced with *Seticereus* Backeb.

Ref. *Cleistocactus* Lem.

Bisnaga Orcutt, *Cactography*, ed. 3 (1): 1. 1926.

Etym. A variant spelling of *viznaga*, a Hispanic American local name for any barrel-shaped cactus. Derived from the Náhuatl *huitznahuac*, meaning 'clothed in spines', applied by the native Mexican Indians to any globular cactus.

Typ. *Echinocactus cornigerus* DC. = *Cactus latispinus* Haw.

Obs. Includes the type of *Latispini* Lawr. (1841, pro sect. *Echinofossulocactus* Lawr.).

Ref. *Echinofossulocactus* Lawr.

Bisnaga (Orcutt) G. Unger (pro subgen. *Ferocactus* Britton & Rose), *Die grossen Kugelkakteen Nordamerikas*: 88. 1992.

Bas. *Bisnaga* Orcutt (1926, pro gen.)

Ref. *Echinofossulocactus* Lawr.

Blaawianus Havlíček (pro subser. *Notocactus* (K. Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 76. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Notocactus blaawianus* Vliet. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Blanckiani Vaupel (pro infragen. [Gruppe] *Echinocereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 645. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus blanckii* Poselg. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Bleones Doweld (pro ser. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* **109**(4): 46. 2004.

Typ. *Pereskia bleo* (Kunth) DC.

Ref. *Pereskia* (L.) Mill.

Blossfeldia Werderm., Aus den Sammelergebnissen der Reisen von H. Bloßfeld und O. Marsoner durch Südamerika III, *Kakteenkunde* [**5**](11): 162. (Nov) 1937.

Etym. Named for Harry BLOSSFELD (1913-1986).

Typ. *Blossfeldia liliputana* Werderm. Autotype (Art. 10.2). The only included species.

Bolivicactus Doweld, Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* **3**(1-2): 62. 2000.

Etym. Named for the country *Bolivia*, and the substantive *Cactus*.

Typ. *Parodia maassii* Heese.

Ref. *Parodia* Speg.

Bolivocereus Cárdenas, New Bolivian cacti, II, *Cactus and Succulent Journal* (US) **23**(3): 91. (May-Jun) 1951.

Etym. Named for the country *Bolivia*, and the substantive *Cereus*.

Typ. *Bolivocereus samaipatanus* Cárdenas. Autotype (Art. 10.2). The only included species.

Ref. *Cleistocactus* Lem.

Bolivocereus (Cárdenas) Buxb. (pro subgen. *Borzicactus* Riccob.), Gattung *Borzicactus*, in Krainz, *Die Kakteen* (55-56) CVb: [5]. (3 Dec) 1975.

Bas. *Bolivocereus* Cárdenas (1951, pro gen.).

Ref. *Cleistocactus* Lem.

Bolivienses Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteenengesellschaft e.V. 1941 Zweiter Teil*: 33. (Jun) 1942 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Lobivia boliviensis* Britton & Rose. = *Echinocactus pentlandii* Hook.f.

Syn. *Lobivia* Britton & Rose ser. *Lobivia*.

Ref. *Echinopsis* Zucc.

Bombycinae Lüthy (pro ser. *Mammillaria* Haw.), *Taxonomische Untersuchung der Gattung Mammillaria* Haw.: 154-156. 1995.

Etym. Based on the name of an included species.

Typ. *Mammillaria bombycina* Quehl.

Ref. *Mammillaria* Haw.

Bonifazia Standl. & Steyerl., *Studies of Central American plants – IV, Field Museum of Natural History Botanical Series Publication 549* **23**(2): 66-67. (14 Feb) 1944.

Etym. Named for the family of Guillermo BONIFAZ, Quezaltenango, with whom the senior author stayed for two months at their pension.

Typ. *Bonifazia quezalteca* Standl. & Steyerl. Autotype (Art. 10.2). The only included species.

Ref. *Epiphyllum* Haw.

Bonplandianae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 452, 564. (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of the only included taxon.

Typ. *Cactus* × *bonplandii* Humb., Bonpl. & Kunth. = *Cactus ficus-indica* L. × *Opuntia soederstromiana* Britton & Rose. Autotype (Art. 10.2).

Ref. *Opuntia* (L.) Mill.

Boreocephalocereus Backeb. (pro subgen. *Cephalocereus* Pfeiff.), in Backeberg & Knuth, *Kaktus-ABC*: 74, 336. (12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).

Etym. From the Latin *boreas*, north, and the substantive *Cephalocereus*.

Typ. Not cited, but includes the type of *Cephalocereus* Pfeiff.

Obs. Published without a Latin diagnosis.

Ref. *Cephalocereus* Pfeiff.

Boreocephalocereus Backeb., *Blätter für Kakteenforschung* **5**(6): Nachtrag 1936(11): 11. 1936 nom. inval. (Art. 22.2, 39.1).

Etym. From the Latin *boreas*, north, and the substantive *Cephalocereus*.

Typ. *Cereus senilis* DC.

Ref. *Cephalocereus* Pfeiff.

× **Borkersia** Halda & Panarotto, in Halda, *New descriptions in Cactaceae, Acta Musei Richnoviensis* **10**(2): 150. 2003.

Etym. Condensed formula.

Par. *Akersia* Buining × *Borzicactus* Riccob. [× *Borkersia soniae* Halda, Malina & Panarotto = *Akersia roseiflora* Buining × *Borzicactus madisoniorum* Hutchinson].

Ref. *Cleistocactus* Lem.

Borzicactella H. Johnson ex F. Ritter, *Kakteen in Südamerika* **4**: 1385. (Mar) 1981.

Etym. Diminutive form of the substantive *Borzicactus*.

Typ. *Cleistocactus tenuiserpens* Rauh & Backeb.

Obs. The name was first used in the trade catalogue of Harry Johnson in 1935.

Ref. *Cleistocactus* Lem.

Borzicactus Riccob., *Studi sulle Cattede del R. Orto Botanico di Palermo, Bollettino delle Reale Orto Botanico e Giardino Coloniale di Palermo* **8**: 261. 1909.

Etym. Named for Prof. Antonino BORZI (1852-1921), Director of the Regius Orto Botanico, Palermo.

Typ. *Borzicactus ventimigliae* Riccob. Autotype (Art. 10.2). The only included species.

Ref. *Cleistocactus* Lem.

Borzicactus (Riccob.) A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 142. 1929.

Bas. *Borzicactus* Riccob. (1909, pro gen.).

Ref. *Cleistocactus* Lem.

Borzicereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 15, 39. 1935 nom. illeg. (Art. 52.1).

Etym. From the substantives *Borzicactus* and *Cereus*.

Rep. Syn. *Borzicactus* (Riccob.) A. Berger (1929).

Typ. *Borzicactus ventimigliae* Riccob. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Borzicactus* Riccob.

Ref. *Cleistocactus* Lem.

×**Borzimoza** G.D. Rowley, *Name that succulent*: 116. 1980.

Etym. Condensed formula.

Par. *Borzicactus* Riccob. × *Denmoza* Britton & Rose.

Ref. *Cleistocactus* Lem.

×**Borzinopsis** G.D. Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(2): 47. (Jun) 1982.

Etym. Condensed formula.

Par. *Borzicactus* Riccob. × *Echinopsis* Zucc.

Ref. ×*Cleistopsis* Strigl.

×**Borzipostoa** G.D. Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(2): 47. (Jun) 1982.

Etym. Condensed formula.

Par. *Borzicactus* Riccob. × *Espostoa* Britton & Rose.

Ref. ×*Espostocactus* Mottram.

×**Borziroya** G.D. Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(2): 47. (Jun) 1982.

Etym. Condensed formula.

Par. *Borzicactus* Riccob. × *Oroya* Britton & Rose.

Ref. ×*Cleistocana* G.D. Rowley.

Brachyanthi Backeb. (pro subser. *Echinofossulocactus* Lawr.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 57. (Jun) 1942.

Etym. From the Greek, *brachys*, short, and *anthos*, flower.

Typ. *Echinofossulocactus zacatecasensis* Britton & Rose.

Ref. *Echinofossulocactus* Lawr.

Brachycalycium Backeb. (pro ser. *Cylindropuntia* (Engelm.) F.M. Knuth), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 38, 76. (Jun) 1942.

Etym. From the Greek, *brachys*, short, and *kalyx*, floral cup. A reference to the short flowers.

Typ. *Brachycalycium tilcarensis* Backeb.

Ref. *Gymnocalycium* Mittler.

Brachycereus Britton & Rose, *The Cactaceae* 2: 2, 120. (9 Sep) 1920.

Etym. From the Greek, *brachys*, short, and the substantive *Cereus*. A reference to the low habit of growth.

Typ. *Brachycereus thouarsii* Britton & Rose nom. illeg. [non *Cereus thouarsii* F.A.C.Weber]. = *Cereus nesioticus* K.Schum. ex B.L.Rob. Autotype (Art. 10.2). The only included species.

Obs. Britton & Rose misinterpreted *Cereus thouarsii* F.A.C.Weber, and thereby created a superfluous new name synonymous with *Cereus nesioticus* K.Schum. ex B.L.Rob.

Brachycereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 169. 1929.

Bas. *Brachycereus* Britton & Rose (1920, pro gen.).

Ref. *Stenocereus* (A.Berger) Riccob.

Brachyspermae Buxb. (pro ser. *Parodia* Speg.), *Gattung Parodia*, in Krainz, *Die Kakteen* (34) CVIc: [4], [10], [13]. (1 Sep) 1966.

Etym. From the Greek adjectival prefix *brachy*, short, and *sperma*, seed.

Typ. *Echinocactus schwebsianus* Werderm.

Ref. *Parodia* Speg.

Brachythelae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Homoeacanthae* nom. inval. = § *Mammillaria*), *Enumeratio diagnostica cactearum hucusque cognitarum*: 11. 1837.

Etym. From the Greek adjectival prefix *brachy*, short, and *thelē*, mamilla, or tubercle.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Brachythelae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Heteracanthae*), *Enumeratio diagnostica cactearum hucusque cognitarum*: 33. 1837.

Etym. From the Greek adjectival prefix *brachy*, short, and *thelē*, mamilla, or tubercle.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Bragaia Esteves, Hofacker & P.J.Braun, *Bragaia estevesii* (*Cactaceae*) – eine neue Kakteen-gattung und –art aus Bahia, Brasilien, *Kakteen und andere Sukkulente* 60(12): 328. [1] Dec 2009.

Etym. Named for Alexander BRAGA Nascimento.

Typ. *Bragaia estevesii* Esteves, Hofacker & P.J.Braun.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Brasilianae Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 79. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From *Brasilia*, the latinisation of Brazil.

Typ. *Wigginsia longispina* F.Ritter. = *Cactus langsdorfii* Lehm.

Ref. *Parodia* Speg.

Brasilicactea (Buxb.) F.H.Brandt (pro subgen. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* 7(4): 53, 66. 1982.

Bas. *Brasilicactus* Buxb. (1967, pro subgen. *Notocactus* (K.Schum.) Frič).

Ref. *Parodia* Speg.

Brasilicactus Frič ex Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 36, 76. (Jun) 1942 nom. illeg. (Art. 52.1).

Etym. From *Brasilia*, the latinised form of Brazil, and the substantive *Cactus*.

Typ. *Echinocactus graessneri* K.Schum.

Obs. Published as a substitute name for *Acanthocephala* Backeb., believed at the time to be a later homonym of *Acanthocephalus* in the *Asteraceae*.

A proposal to conserve *Brasilicactus* over *Acanthocephala* was made by Doweld, in *Taxon* 49(3): 564-565. 2000, made necessary by changes to the St. Louis Code (2000) which no longer treated generic names with different genders as homonyms. Doweld's proposal was rejected in *Taxon* 51(4): 795. 2002. It was reconsidered and declared unresolved on a 7:7 vote with 1 abstention in *Taxon* 53(3): 813. 2004. Finally the proposal to conserve *Brasilicactus* was rejected by the Spermatophyta Committee, in *Taxon* 54(4): 1096. 2005, by a unanimous 0-14 vote, but a poor decision since the Code encourages the maintenance of current usage and there is also now a conflict with infrageneric rank nomenclature where *Brasilicactus* has to be maintained because of its priority.

Syn. *Brasilocactus* Frič nom. inval. (1935); *Acanthocephala* Backeb. (1938).

Ref. *Parodia* Speg.

Brasilicactus Buxb. (pro subgen. *Notocactus* (K.Schum.) Frič), Gattung *Notocactus*, in Krainz, *Die Kakteen* (35) CVIc: [4], [17-18]. (1 Jan) 1967.

Rep. Syn. *Brasilicactus* Backeb. nom. illeg. (1942, pro gen.).

Typ. *Echinocactus graessneri* K.Schum. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Parodia* Speg.

Brasilicactus (Buxb.) N.Gerloff, Neduchal & S.Stuchlik (pro sect. *Notocactus* (K.Schum.) Frič), in Gerloff, Neduchal & Stuchlik, *Notokakteen*: 28, 29, 145. 1995.

Bas. *Brasilicactus* Buxb. (1967, pro subgen. *Notocactus* (K.Schum.) Frič).

Obs. Basionym citation on p. 28.

Ref. *Parodia* Speg.

Brasilicereus Backeb., Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [8], [18]. 1938.

Etym. From *Brasilia*, the latinised form of the country name Brazil, and the substantive *Cereus*.

Typ. *Cereus phaeacanthus* Gürke.

Ref. *Cereus* (L.) Mill.

Brasilicereus (Backeb.) P.J.Braun (pro subgen. *Cereus* (L.) Mill.), On the taxonomy of Brazilian *Cereeae* (*Cactaceae*), *Bradleya* 6: 87. 1988.

Bas. Brasilicereus Backeb. (1938, pro gen.)

Ref. Cereus (L.) Mill.

Brasilienses Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 118. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. Cactus brasiliensis Willd. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Brasiliopuntia K.Schum. (pro subgen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (11): 651, 655. (1 Nov) 1898.

Etym. From *Brasilia*, the latinised form of the country name Brazil, and the substantive *Opuntia*.

Typ. Cactus brasiliensis Willd. Autotype (Art. 10.2). The only included species.

Ref. Opuntia (L.) Mill.

Brasiliopuntia (K.Schum.) A.Berger, *Die Entwicklungslinien der Kakteen*: 18, 94. 1926.

Bas. Brasiliopuntia K.Schum. (1898, pro subgen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Brasiliopuntia (K.Schum.) A.Cast. & Lelong (pro sect. *Opuntia* (L.) Mill.), in Castellanos, Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* 6(2): 276, 277. 1957 nom. inval. (Art. 41.5).

Bas. Brasiliopuntia K.Schum. (1898, pro subgen. *Opuntia* (L.) Mill.).

Obs. Lacks full reference to basionym.

Ref. Opuntia (L.) Mill.

Brasiliparodia F.Ritter, *Kakteen in Südamerika* 1: 114. (Nov) 1979.

Etym. From *Brasilia*, the latinised form of the country name Brazil, and the substantive *Parodia*.

Typ. Parodia buenekeri Buining.

Ref. Parodia Speg.

Brasilipereskia Doweld (pro sect. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* 109(4): 46. 2004.

Etym. From *Brasilia*, the latinised form of the country name Brazil, and the substantive *Pereskia*.

Typ. Pereskia bleo (Kunth) DC.

Ref. Pereskia (L.) Mill.

Brasilipereskia Doweld (pro subsect. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* 109(4): 46. 2004.

Etym. From *Brasilia*, the latinised form of the country name Brazil, and the substantive *Pereskia*.

Typ. *Pereskia bleo* (Kunth) DC.

Ref. *Pereskia* (L.) Mill.

Brasilispermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* 7(4): 57. 1982.

Etym. From *Brasilia*, the latinised form of the country name Brazil, and the Greek *sperma*, seed.

Typ. *Parodia buenekeri* Buining.

Obs. The correct name for *Brasiliparodia* F.Ritter at the rank of series.

Ref. *Parodia* Speg.

Brasilocactus Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 19. 1935 nom. inval. (Art. 39.1).

Etym. From the substantives *Brazil* and *Cactus*.

Typ. Not cited, but includes the type of *Acanthocephala* Backeb. (1938) & *Brasilicactus* Backeb. nom. illeg. (1942).

Ref. *Parodia* Speg.

Bravocactus Doweld, *Konspekt filogenetitscheskoy sistemy triby Cacteeae (Cactoideae Cactaceae)*, *Sukkulenty* 1(1): 22. 1998.

Etym. Named in honour of Helia BRAVO-Hollis.

Typ. *Mammillaria horripila* Lem.

Ref. *Turbinicarpus* Buxb. & Backeb.

Bravocactus (Doweld) D.Donati (pro sect. *Turbinicarpus* Buxb. & Backeb.), *Taxonomische Revision der Gattung Turbinicarpus* Backeb. et Buxb.(3), *Turbi-Now* (19): 25. (Apr) 2006.

Bas. *Bravocactus* Doweld (1998, pro gen.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Breviflorae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel*, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941 Zweiter Teil*: 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the name of an included species.

Typ. *Lobivia breviflora* Backeb. = *Lobivia sanguiniflora* Backeb.

Ref. *Echinopsis* Speg.

Breviseti Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelmann, *Kakteen und andere Sukkulente* 36(4): 79. (Apr) 1985.

Etym. From the Latin *brevis*, short, and *seta*, bristle.

Typ. *Echinocereus nivosus* Glass & R.C.Foster.

Ref. *Echinocereus* Engelm.

Brevispini Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelmann, *Kakteen und andere Sukkulente* 36(4): 79. (Apr) 1985.

Etym. From the Latin *brevis*, short, and *spina*, spine.

Typ. *Echinocactus pectinatus* Scheidw.

Obs. The type is also that of *Pectinati* Salm-Dyck (1850, pro infragen. *Cereus* (L.) Mill.).

Ref. *Echinocereus* Engelm.

Brevistylis Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus brevistylus* K.Schum. Autotype (Art. 22.6).

Obs. Based on the same type as *Corryocactus* Britton & Rose (1920, pro gen.).

Ref. *Corryocactus* Britton & Rose.

Bridgesia Backeb., *Zum System, Blätter für Kakteenforschung* **1**(3): [5]. 1934 nom. nud. & illeg. (Art. 53.1).

Etym. Named for Thomas BRIDGES (1807-1865).

Typ. *Lobivia cumingii* Britton & Rose [non *Echinocactus cumingii* Hopffer].

Obs. Later homonym of *Bridgesia* Hook. nom. rej. (1831, *Asteraceae*), *Bridgesia* Hook. & Arn. (1833, *Phytolaccaceae*), *Bridgesia* Bertero ex Cambess. nom. cons. (1834, *Sapindaceae*). The type species is thought to have been an *Eriosyce*, but Backeberg believed it to be *Rebutia neocumingii*.

Syn. *Gymnantha* Y.Itô (1957).

Ref. *Rebutia* K.Schum.

Bridgesia Backeb., *Bridgesia (Chileniopsis* Bckbg., 1935) Bckbg. (1934), *Blätter für Kakteenforschung* **2**(12): [1]. 1935 nom. illeg. (Art. 53.1).

Etym. Named for Thomas BRIDGES (1807-1865).

Typ. *Cactus villosus* H.B.Monv. Autotype (Art. 10.2). The only included species.

Obs. Later homonym of *Bridgesia* Hook. nom. rej. (1831, *Asteraceae*), *Bridgesia* Hook. & Arn. (1833, *Phytolaccaceae*), *Bridgesia* Bertero ex Cambess. nom. cons. (1834, *Sapindaceae*).

Ref. *Eriosyce* Phil.

Brittonia C.A.Armstr., *Brittonia Davisii*, *The Cactus Journal* **2**(4): 64. (Jun) 1934.

Etym. Named for the American botanist Nathaniel Lord BRITTON (1859-1934), first Director of the New York Botanical Garden.

Typ. *Brittonia davisii* C.A.Armstr. = *Echinocactus hamatacanthus* Muehlenpf.

Ref. *Echinofossulocactus* Lawr.

Brittonrosea Speg., *Breves notas cactológicas, Anales de la Sociedad Científica Argentina* **96**: 69. 1923 nom. illeg. (Art. 52.1).

Etym. Named for Britton & Rose, the authors of *The Cactaceae* (1919-1923).

Rep. Syn. *Echinofossulocactus* Lawr. (1841, pro gen.).

Obs. Spegazzini rejected Lawrence’s name because of its length, describing it as “one & a half feet long” and “wholly illegal”, but the length of a name is not an acceptable justification for rejection (Art. 51.1).

Ref. *Echinofossulocactus* Lawr.

Browningia Britton & Rose, *The Cactaceae* 2: 2, 63. (9 Sep) 1920.

Etym. Named for W. E. BROWNING, Chilean educationalist and former Director of the Instituto Ingles, Santiago, Chile.

Typ. *Cereus candelaris* Meyen. Autotype (Art. 10.2). The only included species.

Browningia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. (Jul-Aug) 1929.

Bas. *Browningia* Britton & Rose (1920, pro gen.).

Ref. *Browningia* Britton & Rose.

×**Buchheimara** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 109. 1992.

Etym. Condensed name in honour of B. BUCHHEIM.

Par. *Echinocereus* Engelm. × *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. ×*Echinophyllum* Mottram.

Buiningia Buxb., Gattung *Buiningia* F. Buxbaum genus novum, in Krainz, *Die Kakteen* (46-47) CIV: [1-6]. (1 Jun) 1971.

Etym. Named for Albert Frederik Hendrik BUINING (1901-1980).

Typ. *Buiningia brevicylindrica* Buining = *Coleocephalocereus aureus* F.Ritter.

Ref. *Austrocephalocereus* Backeb.

Buiningia (Buxb.) P.J.Braun (pro subgen. *Coleocephalocereus* Backeb.), On the taxonomy of Brazilian *Cereeae* (*Cactaceae*), *Bradleya* 6: 92. 1988.

Bas. *Buiningia* Buxb. (1971, pro gen.)

Ref. *Austrocephalocereus* Backeb.

Buxbaumiana Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 80. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Named for the Austrian botanist Prof. Franz BUXBAUM (1900-1979).

Typ. *Parodia alacriportana* Backeb. & Voll.

Syn. *Ritterocactoides* Doweld (2000, pro ser. *Brasilicactus* Backeb. nom. illeg.).

Ref. *Parodia* Speg.

×**Cactara** Boom, De benaming van de gekweekte variëteiten van succulenten, *Succulenta* 39(11): 123. (Nov) 1957 nom. inval. (Art. H.6.3, H.9.1).

Etym. Proposed collective name for cactus hybrids involving more than one genus.

Cactodendron J.M.Bigelow, in Whipple, *Reports of Explorations and Surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean* 3: 102; 4(5): 7, 11; Additional notes & corrections: iii. 1856 nom. inval. (Art. 36.1b).

Etym. From the substantive *Cactus*, and the Greek *dendron*, tree or thicket.

Typ. *Opuntia whipplei* Engelm. & J.M.Bigelow. Autotype (Art. 10.2). The only included species.

Obs. A name proposed in anticipation of future acceptance, but eventually abandoned (1856: iii).

Ref. *Opuntia* (L.) Mill.

Cactus L., *Species plantarum* 1: 466. (1 May) 1753, nom. rej. 1905.

Etym. From the Greek and Latin usage for any spiny object.

Typ. Not cited.

Lectotyp. (design. Haworth 1812: 173, 177): *Cactus melocactus* L. Overridden by the 1905 Botanical Congress decision in favour of *Cactus mammillaris* L. *typ. cons.*

Nomenclatural history:

1753: Linnaean circumscription including all cacti.

1754: Miller (*Gard. Dict.* Abr. ed. 4) segregated *Pereskia*, *Cereus* and *Opuntia*, and left *Melocactus* in synonymy with *Cactus* L.

1760: Boehmer (in Ludwig, *Def. Gen. Pl.*: 79) used *Melocactus* specifically for *Cactus* [infragen.] *Echinomelocacti* L.

1788: Gaertner (*Fruct. Sem.* 1: 137, t.28) segregated *Rhipsalis* from *Cactus* L.

1812: Haworth (*Syn. Pl. Succ.*: 173, 177, 197) segregated *Mammillaria* and *Epiphyllum*, leaving *Cactus melocactus* L. as the only remaining original species in *Cactus* L. This is thus a selection that should be followed (Art. 10.5, 48.1).

1894: Coulter (*Contr. U. S. Nat. Herb.* 3: 95) is said by the current edition of the *ICN* (2012: 51 Ex. 5) to have designated *Cactus mammillaris* L. as the type of *Cactus* L. This is false. What Coulter said was: "In 1812 the species [of *Cactus* L.] were separated by Haworth into five genera [actually 7], the original name *Cactus* being discarded [not discarded!]. Among these species *C. mam[m]illaris* seems to have stood as the type [there is no known basis for this statement], not only of the Linnaean genus *Cactus* [untrue] but also of Haworth's *Mam[m]illaria*, and as such should retain the original generic name." This confused statement is based on an incomplete and completely false reading of Haworth and other history as no one had ever designated, nor even hinted, that *Cactus mammillaris* L. was the type of *Cactus* L. up to that point. In view of the errors, Coulter's opinion should have been rejected from consideration.

1904 (Jun 20): Harms (*Vorschlag zur Ergänzung der "Lois de la nomenclature botanique de 1867", dem in Wien 1905 tagenden Nomenclatur-Kongreß zur Annahme empfohlen*) published a list of generic names to be conserved or rejected, which was adopted at the Vienna Botanical Congress 1905. Illogically rejected the name *Cactus* L. and replaced it with *Mammillaria* Haw., presumably based on the erroneous 1894 statement of Coulter. This was nevertheless uncritically proposed and adopted as conserved despite being contrary to current usage and overthrowing the natural *Cactus* L. autotype, *Cactus melocactus*, nominated by a simple application of the rules of nomenclature. This conservation was therefore superfluous and illogical.

1916 (Sep): Lundell (*The American Midland Naturalist* 4(11): 479) made the earliest formal designation of a type since Haworth with the statement "The type of *Cactus* is *Melocactus*."

1920-22: Britton continued to apply the name *Cactus* L. in the sense of *Melocactus* Link & Otto. Britton & Millspaugh (*Bahama flora*: 294. 1920) formally reconfirmed the legitimate autotype, *Cactus melocactus* L. as the type of *Cactus* L., confirmed again in Britton & Rose (*The Cact.* 3: 220. 1922) and by other later authors such as Higgins who followed Britton & Rose.

1993 (May) Mottram published Proposal 1071 (*Taxon* **42**: 457-464) to change the type of *Cactus* L. in the list of conserved names, and the entries of the conserved names *Mammillaria* and *Melocactus*, to correct the destabilising Harms error of 1904.

1995 (Nov) Mottram proposal not recommended in a 0 : 12 vote.

Obs. There remains a serious conflict between the first 150 years and the following 100 years or so of usage of the name *Cactus* L., brought about by a conservation that was founded in error and contrary to the then current usage.

Cactus Lem., *Les Cactées*: 25, 86-88. 1868 [non *Cactus* L.] nom. rej. & illeg. (Art. 53.1).
Etym. From the Greek and Latin usage for a spiny plant. Explicitly stated to differ from *Cactus* L. (1753).

Typ. Not cited.

Obs. Circumscription included a few species of *Opuntia* only.

Ref. *Opuntia* (L.) Mill.

Caesii Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cacteeae in horto dykensi cultae anno 1844*: 30. 1845 nom. nud.

Etym. A Latin adjective, *caesius*, light bluish grey.

Typ. Not cited.

Ref. *Myrtillocactus* Console.

Caespitosae Backeb. (pro ser. *Copiapoa* Britton & Rose), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 41. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin adjective *caespitosus*, growing in tufts or mounds.

Typ. *Echinocactus coquimbanus* Karw. ex Rümpler.

Ref. *Copiapoa* Britton & Rose

Caespitosi Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 625. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Mila* Britton & Rose (1922, pro gen.).

Typ. *Mila caespitosa* Britton & Rose. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Mila* Britton & Rose.

Caespitosi Kreuz. (pro infragen. *Trichocereus* (A.Berger) Riccob.), *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 38. (31 Apr) 1935 (“*Caespitosae*”) nom. inval. (Art. 39.1).

Etym. From the Latin adjective *caespitosus*, growing in tufts or mounds.

Typ. *Cereus lamprochlorus* Lem.

Ref. *Echinopsis* Zucc.

Caineanae Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* **3**: 1377, 1441. (mid-Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of the only included species.

Typ. *Lobivia caineana* Cárdenas. Autotype (Art. 10.2, 22.6).

Ref. *Echinopsis* Zucc.

Calamorhopsis K.Schum. (pro sect. *Rhipsalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 199. (Apr 18) 1894.

Etym. From the Greek *calamus*, reed, & the substantive *Rhipsalis*.

Typ. *Rhipsalis neves-armondii* K.Schum. Autotype (Art. 10.2). The only included species.

Ref. *Rhipsalis* Gaertn.

Calamorhopsis (K.Schum.) K.Schum. (pro subgen. *Rhipsalis* Gaertn.),

Gesamtbeschreibung der Kakteen (Monographia Cactacearum) (10): 615. (1 Oct) 1898.

Bas. *Calamorhopsis* K.Schum. (1894, pro sect. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Calamorhopsis (K.Schum.) Backeb. (pro subgen. *Lepismium* Pfeiff.), *Cactaceae* Lindley

Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae*

Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil: 21. (Jun) 1942.

Bas. *Calamorhopsis* K.Schum. (1894, pro sect. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

×***Callisonara*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 98. 1992.

Etym. Condensed name in honour of Richard CALLISON.

Par. *Arequipa* Britton & Rose × *Helicocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. ×*Cleistepiphyllum* Mottram.

Calochlora Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom.inval. (Art. 37.1, 38.1).

Etym. Named for an included species.

Typ. *Echinocactus calochlorus* Boed. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Calochlora Schütz (pro sect. *Gymnocalycium* Mittler), Rod *Gymnocalycium* Pfeiff., *Friciana* 7(46): 9, 13. 1968 (publ. 1969).

Etym. Based on the name of an included species.

Typ. *Echinocactus calochlorus* Boed. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Calocomocephalus Y.Itô (pro subgen. *Notocactus* (K.Schum.) Frič), A new classification of the Cactinae of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *calos*, beautiful, *come*, hairy, and *kephale*, head.

Typ. Not cited.

Ref. *Parodia* Speg.

Calymmanthium F.Ritter, *Calymmanthium* – Eine neue Cereengattung aus Peru, *Kakteen und andere Sukkulente* 13(2): 24-25-27-28. (Feb) 1962.

Etym. From the Greek *kalymma*, covering, and *anthos*, flower. A reference to the way that the flower bud develops within an abbreviated stem.

Typ. Calymmanthium substerile F.Ritter. Autotype (Art. 10.2).

Obs. First announced in the Winter seed catalogue of 1957, under the provisional name *Diploperianthium*.

Calyptospermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* 7(4): 52. 1982.

Etym. From the Greek *kalyptos*, covered, and *sperma*, seed.

Typ. Parodia ayopayana Cárdenas.

Ref. Parodia Speg.

Campanulatiflorae Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 76. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Latin *campanulata*, bell-shaped, and *flos*, flower.

Typ. Echinocactus mammulosus Lem.

Ref. Parodia Speg.

Campestrae F.H.Brandt (pro ser. *Parodia* Speg.), The genus *Parodia* Spegazzini, subgenus *Parodia* and descriptions of two new taxa, *Cactus and Succulent Journal* (US) 49(3): 117. (May-Jun) 1977.

Etym. A Latin adjective, *campester*, of open fields.

Typ. Parodia formosa F.Ritter.

Ref. Parodia Speg.

Candelares Vaupel (pro infragen. ["Gruppe"] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 636. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Cereus candelaris Meyen. Autotype (Art. 10.2, 22.6). The only included species.

Obs. The type is the same as that of *Browningia* Britton & Rose (1920, pro gen.).

Ref. Browningia Britton & Rose.

Candicantes K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (1): 48 (Feb). 1897.

Etym. Based on the name of an included species.

Typ. Cereus candicans Gillies ex Salm-Dyck. Autotype (Art. 22.6).

Ref. Echinopsis Zucc.

Candidae K.Schum. (pro infragen. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (9): 515, 521. (1 Aug) 1898.

Etym. Based on the name of an included species.

Typ. Mammillaria candida Scheidw. Autotype (Art. 22.6).

Ref. Mammillaria Haw.

Candidae (K.Schum.) Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3099, 3101 (20 May) 1961 nom. inval. (Art. 41.5).

Bas. Candidae K.Schum. (1898, pro infragen. *Mammillaria* Haw.)

Ref. Mammillaria Haw.

Capnochilenia Y.Itô (pro subgen. *Neochilenia* Backeb.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *capnos*, smoke, and the substantive *Chilenia*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Capilliformes Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 220. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Rhipsalis capilliformis* F.A.C.Weber. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

×**Carlrettigara** Mottram **nothogen.nov.**

Etym. Named for Carl RETTIG (1866-1933), cactus grower in Aschersleben, Germany.

Rep. Syn. ×*Retiggara* P.V.Heath (1992).

Par. *Aporocactus* Lem. × *Epiphyllum* Haw. × *Selenicereus* (A.Berger) Britton & Rose.

Carnegiea Britton & Rose, A new genus of *Cactaceae*, *Journal of the New York Botanical Garden* **9**(107): 185-188. (Nov) 1908.

Etym. Named for the Scottish-born American Andrew CARNEGIE (1835-1919), industrialist and patron of science. Founder of the Carnegie Institution, Washington, which financed the publication of Britton & Rose's *The Cactaceae* (1919-1923), and a co-founder of the New York Botanical Garden.

Typ. *Cereus giganteus* Engelm. (1848).

Obs. *Carnegiea* Perkins (1911, *Monimiaceae*) is a later illegitimate homonym.

Ref. *Cephalocereus* Pfeiff.

Carnegiea (Britton & Rose) Parish (pro subgen. *Cereus* (L.) Mill.), in Jepson, *Manual of the flowering plants of California*: 658. (14 Apr) 1925.

Bas. *Carnegiea* Britton & Rose (1908, pro gen.).

Ref. *Cephalocereus* Pfeiff.

Carpophillus Neck., *Elementa botanica* **2**: 84. 1790.

Etym. From the Greek *karpos*, fruit, and *phyllon*, leaf. A reference to the fruits having leaves.

Typ. Not cited.

Ref. *Pereskia* (L.) Mill.

Cassuthae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 220. (9 Oct) 1923 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Rhipsalis cassutha* Gaertn. = *Cassytha baccifera* J.S.Muell. Autotype (Art. 22.6).

Syn. *Rhipsalis* Gaertn. ser. *Rhipsalis*.

Ref. *Rhipsalis* Gaertn.

Cassytha Mill. [non L.], *Cassytha*, in *The Gardeners Dictionary*, ed. 8. (unpaged) (16 Apr) 1768 nom. inval. (Art. 22.2) & illeg. (Art 53.1).

Etym. From the Greek *kassytha*, dodder, from its resemblance.

Typ. *Cassytha filiformis* Mill. [non L.] = *Cassytha baccifera* J.S.Muell.

Syn. *Rhipsalis* Gaertn. ser. *Rhipsalis*.

Obs. Later homonym of *Cassytha* L. (1753, *Lauraceae*).

Ref. *Rhipsalis* Gaertn.

Cassythae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23, 24. (15 May) 1925 nom. inval. (Art. 22.2) & illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Rhipsalis cassutha* Gaertn. = *Cassytha baccifera* J.S.Muell. Autotype (Art. 22.6).

Obs. Description repeated in Vaupel, *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 618, 619. (Dec) 1925.

Ref. *Rhipsalis* Gaertn.

Castanei Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 637-638. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus castaneus* K.Schum. Autotype (Art. 22.6).

Obs. Based on the same type as *Philippicereus* Backeb. (1942, pro gen.).

Ref. *Eulychnia* Phil.

Castellanosia Cárdenas, *New Bolivian cacti*, II, *Cactus and Succulent Journal* (US) 23(3): 90-91. (May-Jun) 1951.

Etym. Named for the Argentinian botanist Alberto CASTELLANOS (1896-1968).

Typ. *Castellanosia caineana* Cárdenas. Autotype (Art. 10.2). The only included species.

Ref. *Browningia* Britton & Rose.

Castellanosia Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 7, 11. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Gymnocalycium castellanosii* Backeb. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Celsiani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 637, 638. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Pilocereus celsianus* Lem. Autotype (Art. 10.2, 22.6).

Obs. Based on the same type as *Cereus* subgen. *Oreocereus* A.Berger (1905).

Ref. *Cleistocactus* Lem.

Centralia Pažout (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycia skupiny Muscosemineae, Fričiana* 4(23): 17. 1964 nom. nud.

Etym. From the Latin adjective *centralis*, central.

Typ. Not cited.

Obs. *Discocephalum* Y.Itô, and *Chacoana* Schütz were included in the synonymy.

Ref. *Gymnocalycium* Mittler.

Centrispinae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cacteae in horto Dyckensi cultae* 1844: 9. 1845; emend Fernere nachtrage zu meinen Cacteae in horto Dyckensi cultae, *Allgemeine Gartenzeitung* **23**(4): 26. 1855 nom. inval. (Art. 22.1).

Etym. Could mean sharp-spined, from the Latin *centrum* (Greek *kentron*), sharp or spurred, and *spina*, spine, but more likely to be intended to indicate the presence of central spines in this case.

Typ. Not cited.

Lectotyp. *Mammillaria simplex* Haw. = *M. mammillaris* L. Designated by Heath, Early infrageneric classifications of the genus *Mammillaria* (part 2), *The Journal of the Mammillaria Society* **28**(3): 27. 1988.

Obs. Superfluous renaming of *Concolores* Salm-Dyck (1841).

Syn. *Mammillaria* Haw. infragen. *Mammillaria*.

Ref. *Mammillaria* Haw.

Centrispinae (Salm-Dyck) Salm-Dyck (pro sect *Mammillaria* Haw.), *Cacteae in horto Dyckensi cultae* 1849: 13, 103. 1850 nom. inval. (Art. 22.1).

Bas. *Centrispinae* Salm-Dyck (pro infragen. *Mammillaria* Haw.).

Syn. *Mammillaria* Haw. sect. *Mammillaria*.

×***Cephalephyllum*** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 26. (5 Feb) 1990.

Etym. Condensed formula.

Par. *Cephalocereus* Pfeiff. × *Epiphyllum* Haw.

Cephalioides Kreuz. (pro infragen. *Trichocereus* (A.Berger) Riccob.), *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 38. (31 Apr) 1935 (“Cephalioideae”) nom. inval. (Art. 39.1).

Etym. From the Greek *kephale*, head, and *-oides*, -like.

Typ. *Trichocereus cephalopasacana* Frič nom. inval. = *Pilocereus pasacana* F.A.C.Weber.

Ref. *Echinopsis* Zucc.

Cephalioides Kreuz. (pro infragen. *Notocactus* (K.Schum.) Frič), *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 21. (31 Apr) 1935 (“Cephalioideae”) nom. inval. (Art. 39.1).

Etym. From the Greek *kephale*, head, and *-oides*, -like.

Typ. Not cited.

Obs. All included species belong to *Eriocephala* Backeb. (1938).

Ref. *Parodia* Speg.

Cephalioides Kreuz. ex Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 77. 1988 (“Cephalioideae”) (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Greek *kephale*, head, and *-oides*, -like.

Typ. Not cited.

Lectotyp. *Echinocactus schumannianus* Nicolai. Designated by Doweld, *Sukkulenty* 3(1-2): 56. 2000.

Ref. *Parodia* Speg.

Cephalocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292, 301. (1 Jan) 1898 nom. inval. (Art. 22.2).

Etym. From the Greek *kephale*, head, and the substantive *Cactus*.

Rep. Syn. *Echinocactus* Link & Otto infragen. *Cephaloidei* Salm-Dyck (1850).

Typ. Not cited, but includes the type of *Echinocactus* Link & Otto.

Ref. *Echinocactus* Link & Otto.

Cephalocereus Pfeiff., Ueber Lemaire's Beschreibung einiger neuen Cacteen, *Allgemeine Gartenzeitung* 6(18): 142. (5 May) 1838.

Etym. From the Greek *kephale*, head, and the substantive *Cereus*.

Rep. Syn. *Cephalophorus* Lem. nom. illeg. (10 Feb 1838).

Typ. Not cited.

Lectotyp. *Cactus senilis* Haw. Designated by Pfeiffer, *Nomenclator botanicus* 1.2(12): 654. (Jan) 1873.

Obs. As originally circumscribed included only two species, *Cereus senilis* and *Cereus columna-trajani*, but this is the oldest name for any of the giant North American columnar cacti.

Cephalocereus (Pfeiff.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Cephalocereus* Pfeiff. (1838, pro gen.).

Ref. *Cephalocereus* Pfeiff.

Cephalocereus (Pfeiff.) A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 59, 61. (31 May) 1905 nom. illeg. (Art. 52.1).

Bas. *Cephalocereus* Pfeiff. (1838, pro gen.).

Syn. *Cereus* (L.) Mill. subgen. *Pilocereus* Engelm. (1856).

Ref. *Cephalocereus* Pfeiff.

Cephalocleistocactus F.Ritter, *Cephalocleistocactus* Ritter gen. nov. Een nieuw geslacht uit Bolivië, *Succulenta* 41(8): 107-108-109-111. (Aug) 1959.

Etym. From the Greek *kephale*, head, and the substantive *Cleistocactus*.

Typ. *Cephalocleistocactus chrysocephalus* F.Ritter. Autotype (Art. 10.2). The only included species.

Ref. *Cleistocactus* Lem.

Cephaloidei Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cacteeae in horto Dyckensi cultae anno 1849*: 26. 1850 nom. inval. (Art. 22.2).

Etym. From the Greek *kephale*, head, and *-oides*, -like. A reference to the woolly crown of the plant.

Typ. Not cited, but includes the type of *Echinocactus* Link & Otto.

Ref. *Echinocactus* Link & Otto, *Ferocactus* Britton & Rose, *Copiapoa* Britton & Rose

Cephalomamillaria Frič, *Cephalomamillaria* Frič n. n., *Kaktusová příloha ŽIVOT V PŘÍRODE vychází v Praze* **29**(9): 29-30. (5 Mar) 1925 nom. illeg. (Art. 52.1).

Etym. From the Greek *kephale*, head, and the substantive *Mam[m]illaria*.

Typ. *Mammillaria micromeris* Engelm.

Obs. The name also appeared among offers of seed in a regularly run advert in the same journal as a nom. nud. from **28**(12): 12. (15 Dec) 1924 onwards.

Syn. *Epithelantha* F.A.C. Weber ex Britton & Rose (1922).

Ref. *Epithelantha* Britton & Rose.

Cephalophori Lem. (pro sect. *Cereus* Mill.), *Cactearum aliquot novarum ac insuetarum in horto Monvilliano cultarum accurata descripto*: xii. (10 Feb) 1838.

Etym. A plural adjective from the Greek *kephale*, head, and *phorus*, bearing.

Typ. Not cited. Includes two species, *Cereus senilis* and *Cereus columna-trajani*.

Obs. The correct name for *Cephalocereus* Pfeiff. (1838) at the rank of section.

Ref. *Cephalocereus* Pfeiff.

Cephalophorus Lem., *Cactearum aliquot novarum ac insuetarum in horto Monvilliano cultarum accurata descripto*: xii, 33-34. (10 Feb) 1838 nom. illeg. (Art. 53.1)

Etym. From the Greek *kephale*, head, and *phorus*, bearing.

Typ. Not cited.

Obs. Includes two species, *Cereus senilis* (type of *Cephalocereus* Pfeiff. (1838)) and *Cereus columna-trajani*. A later homonym of *Cephalophorus* Cav. (1801, *Asteraceae*).

Syn. *Cephalocereus* Pfeiff. (1838).

Ref. *Cephalocereus* Pfeiff.

Cephalophorus (Lem.) Miq. (pro subgen. *Cereus* Mill.), *Genera cactearum. Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach*. **2**: 111. 1839.

Bas. *Cereus* sect. *Cephalophori* Lem. (1838).

Typ. Not cited, but includes the type of *Cephalocereus* Pfeiff. (1838).

Ref. *Cephalocereus* Pfeiff.

×***Cepheliocereus*** G.D.Rowley, *Name that succulent*: 118. 1980.

Etym. Condensed formula.

Par. *Cephalocereus* Pfeiff. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. ×*Cephalepiphyllum* Mottram.

Ceratistes Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 627. (Dec) 1925 (“*Ceratites*”).

Etym. Based on the name of an included species.

Rep. Syn. *Eriosyce* Phil. (1872, pro gen.).

Typ. *Echinocactus auratus* Pfeiff. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Based on *Echinocactus ceratistes* Otto ex Pfeiff., but that is of uncertain identity.

Ref. *Echinocactus* Britton & Rose.

Cereastri Salm-Dyck ex DC. (pro infragen. *Cereus* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 463. (Mar) 1828.

Etym. From the Latin *cereus*, a waxlight or wax taper (candle), and *aster*, star.

Typ. Not cited.

Obs. Despite apparently representing all the columnar species, the type of *Cereus* (L.) Mill. itself is explicitly excluded on p.470.

Ref. *Cereus* (L.) Mill.

Cereastri Pfeiff. [non DC.] (pro infragen. *Cereus* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 69, 75. (Feb) 1837 nom. inval. (Art. 22.2).

Etym. From the Latin *cereus*, a waxlight or wax taper (candle), and *aster*, star.

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Ref. *Cereus* (L.) Mill.

Cerei L. (pro infragen. *Cactus* L. nom. rej.), *Species plantarum* 1: 466-467. (1 May) 1753.

Etym. Adopted from earlier usage. From the Latin *cereus*, a waxlight or wax taper (candle). A reference to the columnar habit of growth, like a candelabra.

Typ. Not cited.

Obs. Split into 2 informal groupings, “*cerei erecti stantes per se*” (8 spp.) & “*cerei repentes radiculis lateralibus*” (3 spp.).

Ref. *Cereus* (L.) Mill.

Cereoidei Lem. (pro infragen. *Cleistocactus* Lem.), *L'illustration horticole* 8: Misc. 35. 1861 nom. inval. (Art. 22.2).

Etym. From the substantive *Cereus*, with the Greek suffix *-oides*, -like.

Typ. Not cited, but includes the type of *Cleistocactus* Lem. (1861).

Ref. *Cleistocactus* Lem.

×***Cereopsis*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. *Cereus* (L.) Mill. × *Echinopsis* Speg.

Cereorhypsalis Doweld (pro subgen. *Rhypsalis* Gaertn.), Re-classification of *Rhypsaliideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 31, 43. (Jan) 2003.

Etym. From the substantives *Cereus* and *Rhypsalis*.

Typ. *Rhypsalis mesembryanthemoides* Haw.

Ref. *Rhypsalis* Gaertn.

×***Cerephyllum*** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 26. (5 Feb) 1990.

Etym. Condensed formula.

Par. *Cereus* (L.) Mill. × *Epiphyllum* Haw.

Cereus L. (pro infragen. *Cactus* L. nom. rej.), *Genera plantarum* ed.5: 210. 1754 [1 May 1753].

Etym. From the Latin *cereus*, a waxlight or wax taper (candle). A reference to the columnar habit of growth, like a candelabra.

Typ. Not cited.

Lectotyp. *Cereus peruvianus* sensu Britton & Rose = *Cactus hexagonus* L. Designated by Britton & Rose, *Contributions from the National Herbarium* 12(10): 414. (21 Jul) 1909.

Obs. A name first used by Tabernaemontanus, *Neuw Kreuterbuch* 2: 1085. 1591. For notes on typification see Mottram, *The Cactician* 3: 21-22, 32-33. 2013.

Ref. *Cereus* (L.) Mill.

Cereus (L.) Mill., *Cereus*, in Miller, *The Gardeners Dictionary*, abr. ed. 4. (unpaged) (28 Jan) 1754.

Bas. *Cereus* L. (1753, pro infragen. *Cactus* L. nom. rej.).

Cereus (L.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Cereus* L. (1753, pro infragen. *Cactus* L. nom. rej.).

Ref. *Cereus* (L.) Mill.

Cereusculae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 220. (9 Oct) 1923.

Etym. Based on the name of the only included species.

Typ. *Rhipsalis cereuscula* Haw. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

×**Cerevillea** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* 37(2): 48. (Jun) 1982.

Etym. Condensed formula.

Par. *Cereus* (L.) Mill. × *Monvillea* Britton & Rose.

Ref. *Cereus* (L.) Mill.

Chacensia Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom. nud.

Etym. Adjectival latinised form of the substantive *Chaco*, a geographical zone in South America.

Typ. *Echinocactus mihanovichii* Frič & Gürke. Autotype (Art. 10.2). The only included species.

Ref. *Gymnocalycium* Mittler.

Chacoani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 636. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus chacoanus* Vaupel = *Cereus coryne* Salm-Dyck. Autotype (Art. 22.6).

Obs. The type is the same as that of *Stetsonia* Britton & Rose (1920, pro gen.).

Ref. *Cereus* (L.) Mill.

Chacoensiana H.Till (pro ser. *Gymnocalycium* Mittler), Neuordnung der Gattung *Gymnocalycium*, *Gymnocalycium* 14(2): 400, 401. (May) 2001.

Etym. Based on the name of an included species.

Typ. *Gymnocalycium chacoense* Amerhauser.

Ref. *Gymnocalycium* Mittler.

Chaetocarpi Backeb., (pro sub-subser. *Echinocereus* Engelm.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 44. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek *chaete*, long, flowing hair, and *karpa*, fruit.

Ref. *Echinocereus* Engelm.

Chaetophorae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 699, 701. (1 Nov) 1898.

Etym. From the Greek *chaete*, long, flowing hair, and *phora*, bearing. A reference to the dense, long, hairlike spines.

Typ. Not cited. Includes only 2 species.

Ref. *Opuntia* (L.) Mill.

Chaetophorae (K.Schum.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* 50(4): 520. (20 Feb) 1908.

Bas. *Opuntia* (L.) Mill. infragen. *Chaetophorae* K.Schum. (1898).

Ref. *Opuntia* (L.) Mill.

Chaffeyanae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 213. (21 Jun) 1919.

Etym. Based on the name of the only included species, with an adjectival suffix.

Typ. *Opuntia chaffeyi* Britton & Rose. Autotype (Art. 22.6).

Syn. *Plutonopuntia* P.V.Heath (1999, pro gen.).

Ref. *Opuntia* (L.) Mill.

Chaffeyanae (Britton & Rose) Backeb., (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942.

Bas. *Opuntia* (L.) Mill. ser. *Chaffeyanae* Britton & Rose (1919).

Ref. *Opuntia* (L.) Mill.

Chaffeyopuntia Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 42. 1935 nom. inval. (Art. 39.1).

Etym. Based on the name of the only included species, and the substantive *Opuntia*.

Typ. *Opuntia chaffeyi* Britton & Rose. Autotype (Art. 10.2). The only included species.

Obs. A name said by Frič to have been in use from 1932, but no literature references earlier than 1935 are known.

Ref. *Opuntia* (L.) Mill.

×***Chamaebivia*** Halda, Malina & Panarotto, in Halda, New descriptions in *Cactaceae, Acta Musei Richnoviensis* **10**(2): 151. 2003 nom. illeg. (Art. 52.1)

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Lobivia* Britton & Rose. × *Chamaebivia francescae* Halda, Malina & Panarotto [= *Chamaecereus silvestrii* Britton & Rose × *Lobivia ferox* Britton & Rose].

Syn. ×*Chamaelobivia* Y.Itô (1957).

Ref. *Echinopsis* Zucc.

×***Chamaebivia*** Timmerm., Twee nieuwe hybriden, *Succulenta* **46**(4): 53-54. (Apr) 1967 nom. illeg. (Art. 52.1).

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Lobivia* Britton & Rose.

Syn. ×*Chamaelobivia* Y.Itô (1957).

Ref. *Echinopsis* Zucc.

×***Chamaeborzicactus*** Halda, Malina & Panarotto, in Halda, New descriptions in *Cactaceae, Acta Musei Richnoviensis* **10**(2): 151. 2003 nom. inval. (Art. 36.2).

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Borzicactus* Riccob. [*Chamaeborzicactus cintiae* Halda, Malina & Panarotto = *Chamaecereus silvestrii* Britton & Rose × *Borzicactus samaipatanus* (Cárdenas) Kimmach].

Obs. Published simultaneously with ×*Chamaezicactus* Halda, Malina & Panarotto nom. inval.

Ref. ×*Cleistopsis* Strigl.

×***Chamaecactus*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 104. 1992.

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Notocactus* (K.Schum.) Frič

Ref. ×*Echinoparodia* Mottram.

×***Chamaecereopsis*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 103. 1992.

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Echinopsis* Zucc.

Ref. *Echinopsis* Zucc.

Chamaecereus Britton & Rose, *The Cactaceae* **3**: 3, 48. (12 Oct) 1922.

Etym. From the Greek *chamai*, ground-hugging, and the substantive *Cereus*.

Par. *Cereus silvestrii* Speg. Autotype (Art. 10.2). The only included species.

Ref. *Echinopsis* Zucc.

Chamaecereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 146. 1929.

Par. *Chamaecereus* Britton & Rose (1922, pro gen.)

Ref. *Echinopsis* Zucc.

×**Chamaecladodia** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 104. 1992.

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Leptocladodia* Buxb.

Ref. ×*Echinomillaria* Mottram.

×**Chamaelobivia** Y.Itô (pro gen.), *Explanatory diagram of the Austroechinocactinae*: 110-111, 289. 1957.

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Lobivia* Britton & Rose [×*Chamaelobivia tanahashi* Y.Itô].

Obs. Also published by the same author in *Bulletin of the Takarazuka Insectarium* 71: 17. (Jul) 1950, & *Cacti*: 64. 1952 without statement of parentage.

Ref. *Echinopsis* Zucc.

×**Chamaelopsis** H.Johnson, *Johnson Cactus Gardens catalogue*: 32. 1960 nom. inval. (Art. 30.6).

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Echinopsis* Zucc. × *Lobivia* Britton & Rose.

Ref. *Echinopsis* Zucc.

×**Chamaelopsis** Y.Itô ex Johnson, *Illustration of flower-cacti*: 6, 9, 59. 1967.

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Echinopsis* Zucc. × *Lobivia* Britton & Rose.

Ref. *Echinopsis* Zucc.

×**Chamaezicactus** Halda, Malina & Panarotto, in Halda, New descriptions in *Cactaceae*, *Acta Musei Richnoviensis* 10(2): 151. 2003 nom. inval. (Art. 36.2).

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Borzicactus* Riccob. [*Chamaeborzicactus cintiae* Halda, Malina & Panarotto = *Chamaecereus silvestrii* Britton & Rose × *Borzicactus samaipatanus* (Cárdenas) Kimmach].

Obs. Published simultaneously with ×*Chamaeborzicactus* Halda, Malina & Panarotto nom. inval. in the text.

Ref. ×*Cleistopsis* Strigl.

×**Chamygmaecereus** Mordhorst, *Hybriden-J.* 2007(3): 4, 11-12. 2007.

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Pygmaecereus* J.Johnson & Backeb.

×*Echinaageocereus* Mordhorst.

Chapadocereus P.J.Braun & Esteves (pro subgen. *Arthrocerus* (A.Berger) Backeb.), Nieuwe combinaties en namen voor cactussen uit Brasilië, Bolivia en Paraguay, *Succulenta* 74(2): 82. 1995.

Etym. Named for the Chapada dos Guimaraes mountains, Mato Grosso.

Typ. *Eriocereus spinosissimus* Buining & Brederoo.

Ref. *Echinopsis* Zucc.

Chasmatothele K.Schum. (pro subgen. *Ariocarpus* Scheidw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 604. (1 Oct) 1898.

Etym. From the Greek *chasma*, yawning hollow, and *thele*, nipple. A reference to the deeply furrowed tubercles.

Typ. *Mammillaria fissurata* Engelm. Autotype (Art. 10.2). The only included species.

Ref. *Ariocarpus* Scheidw.

Chiapasia Britton & Rose, *The Cactaceae* 4: 177, 203. (24 Dec) 1923.

Etym. Named for the Mexican state of Chiapas.

Typ. *Epiphyllum nelsonii* Britton & Rose.

Ref. *Epiphyllum* Haw.

Chiapasia (Britton & Rose) A.Berger (pro subgen. *Phyllocactus* Link nom. illeg.), *Kakteen*: vi, 100. (Jul-Aug) 1929.

Bas. *Chiapasia* Britton & Rose (1923, pro gen.)

Ref. *Epiphyllum* Haw.

Chiapasophyllum Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 32. (Jan) 2003.

Typ. *Epiphyllum chrysocardium* Alexander.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Chilenia Backeb., in Backeberg & Knuth, *Kaktus-ABC*: 15, 70, 299-300. (12 Feb) 1936 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. Substantive indicating the Chilean origin.

Typ. Not cited, but includes the type of *Neoporteria* Britton & Rose (1922).

Ref. *Eriosyce* Phil.

Chilenia Backeb., *Chilenia* Bckbg. n. g. (1935), *Blätter für Kakteenforschung* 3(3): [5]. 1936 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. Substantive indicating the Chilean origin.

Typ. Not cited, but includes the type of *Neoporteria* Britton & Rose (1922).

Ref. *Eriosyce* Phil.

Chilenia Backeb., Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [7], [12], [17], [20]. 1938.

Etym. Substantive indicating the Chilean origin.

Typ. *Echinocactus senilis* Phil. Designated on p.20.

Obs. This name is valid and legitimate here, but its type is too closely related to the type of *Neoporteria* Britton & Rose to be segregated from that at generic rank.

Ref. *Eriosyce* Phil.

Chilenia Backeb. [non Backeb. (1938)], Über das Gattungsproblem “*Neoporteria-Chilenia*”, *Kakteenkunde* 7: 81-82. 1939 nom. illeg. (Art. 52.1).

Etym. Substantive indicating the Chilean origin.

Typ. *Echinocactus jussieui* H.B.Monv.

Chileniopsis Backeb., in Backeberg & Knuth, *Kaktus-ABC*: 69, 283, 416. (12 Feb) 1936.

Etym. From the substantive *Chilenia*, and the Latin *-opsis*, -like.

Rep. Syn. *Bridgesia* Backeb. nom. illeg. (1935).

Typ. *Cactus villosus* H.B.Monv.

Obs. *Chileniopsis* Backeb. was first mentioned, with a reference to *Kaktus-ABC* [presumably ined. at the time], in Backeberg, *Blätter für Kakteenforschung* **2**(12): [1]. 1935.

Ref. *Eriosyce* Phil.

Chileocactus Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 39. 1935 nom. inval. (Art. 39.1).

Etym. From the two substantives *Chile* and *Cactus*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Chileocactus Kreuz. [non Frič] (pro subgen. *Hildmannia* Kreuz. & Buining), *Bemerkungen zu einigen Gattungen der Cactaceae, Repertorium specierum novarum regni vegetabilis* **50**: 207 (20 Nov) 1941.

Etym. From the substantives *Chile* and *Cactus*.

Typ. *Cactus horridus* Colla.

Ref. *Eriosyce* Phil.

Chileonapina Kreuz. (pro subgen. *Hildmannia* Kreuz. & Buining), *Bemerkungen zu einigen Gattungen der Cactaceae, Repertorium specierum novarum regni vegetabilis* **50**: 206-207 (20 Nov) 1941.

Etym. From the substantive *Chile*, and the Latin *napus*, a kind of turnip, with the Latin possessive adjectival suffix *-inus*.

Typ. *Echinocactus napinus* Phil.

Ref. *Eriosyce* Phil.

Chileonapina (Kreuz.) A.E.Hoffm. & H.E.Walter (pro subgen. *Eriosyce* Phil.), *Rearrangements in the systematics of Eriosyce napina* (Philippi) Kattermann, *CactusWorld* **24**(3): 139. (18 Sep) 2006.

Bas. *Chileonapina* Kreuz. (1941, pro subgen. *Hildmannia* Kreuz. & Buining).

Ref. *Eriosyce* Phil.

Chileorebutia Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 27. 1935 nom. inval. (Art. 39.1).

Etym. From the two substantives *Chile* and *Rebutia*.

Typ. *Echinocactus reichei* K.Schum.

Syn. *Neotanahashia* Y.Itô (1957).

Ref. *Eriosyce* Phil.

Chileorebutia Frič ex Buining, *Rebutieae* A. V. Fric en K. Kreuzinger III, *Succulenta* **20**(4): 55. (Apr) 1938 (“Chilorebutia”) nom. inval. (Art. 39.1).

Etym. From the two substantives *Chile* and *Rebutia*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Chileorebutia Frič ex F.Ritter, *Chileorebutia* Ritter gen. nov. ex Fric pro parte, *Cactus* (Paris) **14**(64) Suppl.: [3]. (Aug) 1959. Amplified further in *Cactus* (Paris) **14**(65): 191-194. (Dec) 1959 nom. illeg. (Art. 52.1).

Etym. From the two substantives *Chile* and *Rebutia*.

Typ. *Echinocactus reichei* K.Schum.

Syn. *Neotanahashia* Y.Itô (1957).

Ref. *Eriosyce* Phil.

Chileosyce Katt. (pro subsect. *Eriosyce* Phil.), *Eriosyce*, *Succulent Plant Research* **1**: 25, 97, 117. 1994.

Etym. Formulaic compound name formed from the substantives *Chileorebutia* and *Eriosyce*.

Rep. Syn. *Chileorebutia* F.Ritter nom. illeg. (1959, pro gen.), excluding its type & *Echinocactus napinus* Phil.

Typ. *Chileorebutia krausii* F.Ritter.

Ref. *Eriosyce* Phil.

Chilita Orcutt, *Cactography*, ed.3 (1): 2. 1926.

Etym. From the American Hispanic *chilito*, meaning ‘little pepper’, the native name for the edible fruit.

Typ. *Mammillaria grahamii* Engelm. = *Mammillaria microcarpa* Engelm.

Ref. *Mammillaria* Haw.

Chilita (Orcutt) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 324. (24 Apr) 1953.

Bas. *Chilita* Orcutt (1926, pro gen.).

Ref. *Mammillaria* Haw.

+ **Chimerophora** Y.Itô, *The Cactaceae, Classification & illustration of cacti*: 658. 1981 nom. inval. (Cult.Art. 24)

Etym. Chimaera-bearing, from the Greek *chimaera*, and *phorus*.

Gr.-Chim. *Gymnocalycium* Mittler + *Hylocereus* (A.Berger) Britton & Rose

[+ *Chimerophora cosmophora* Y.Itô.

Syn. + *Hylogymnocalycium* G.D.Rowley.

Ref. + *Epigymnocalycium* Mottram.

Chinorebutia Y.Itô (pro subgen. *Rebutia* K.Schum.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the substantives *China* and *Rebutia*.

Typ. Not cited.

Ref. *Rebutia* K.Schum.

Chiotilla Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 636. (Dec) 1925 (“Chiotillae”).

Etym. Based on the name of an included species.

Typ. Cereus chiotilla F.A.C.Weber. Autotype (Art. 22.6).

Obs. The type is the same as that of *Escontria* Rose (1906, pro gen.).

Ref. Stenocereus (A.Berger) Riccob.

Chiquitana Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 7, 10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. Gymnocalycium chiquitanum Cárdenas. Autotype (Art. 22.6).

Ref. Gymnocalycium Mittler.

Chlorogonae Wessner (pro infragen. ["Formenkreis"] *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1940 Erster Teil*: 13, 16. (May) 1940.

Etym. Based on the name of an included species.

Typ. Lobivia chlorogona Wessner = *Echinopsis densispina* Werderm.

Ref. Echinopsis Zucc.

Chloroticae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 452, 565-566. (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Opuntia chlorotica Engelm. & J.M.Bigelow. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Chlorotini K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 49 (Feb). 1897.

Etym. From the Greek *klorotes*, greenness or paleness.

Typ. Not cited.

Lectotyp. Cereus queretaroensis Mathsson. Designated by Heath, The restoration of *Rathbunia* Britton & Rose, *Calyx* **2**(3): 103. 1992.

Ref. Stenocereus (A.Berger) Riccob.

Chosicenses Backeb. (pro subser. *Haageocereus* Backeb.), *Die Cactaceae* **2**: 1169. (Mar) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Cereus chosicensis Werderm. & Backeb. = *Cereus pseudomelanostele* Werderm. & Backeb. [= ?*Cactus multangularis* Willd.]. Autotype (Art. 22.6).

Ref. Haageocereus Backeb.

Chrochilenia Y.Itô (pro subgen. *Neochilenia* Backeb. nom. illeg.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *chroa*, skin-coloured, and the substantive *Chilenia*.

Typ. Not cited.

Ref. Eriosyce Phil.

Chrysacanthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cacteeae in horto Dyckensi cultae. Anno 1841*: 8. 1841.

Etym. Based on the name of an included species.

Typ. *Mammillaria chrysacantha* Pfeiff. = *Mammillaria rhodantha* Link & Otto. Autotype (Art. 22.6)

Ref. *Mammillaria* Haw.

Chrysacanthae (Salm-Dyck) P.V.Heath (pro subsect. *Mammillaria* Haw.), Early infrageneric classifications of the genus *Mammillaria* (Part 2), *Journal of the Mammillaria Society* **28**(3): 28. 1988.

Typ. *Chrysacanthae* Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Chrysocactus Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *chryseos*, golden, and the substantive *Cactus*.

Typ. Not cited.

Ref. *Parodia* Speg.

Chrysolobivia Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *chryseos*, golden, and the substantive *Lobivia*.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Cinerei Doweld (pro ser. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa* Britton & Rose, *Sukkulenty* **4**(1-2): 48. (Jan) 2003.

Typ. *Echinocactus cinereus* Phil.

Ref. *Copiapoa* Britton & Rose.

Cinnabarinea Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 34. 1935 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus cinnabarinus* Hook.f. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Cinnabarinea Frič ex F.Ritter, *Kakteen in Südamerika* **2**: 633. 1980.

Etym. Based on the name of an included species.

Typ. *Echinocactus cinnabarinus* Hook.f. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Cinnabarinea (F.Ritter) J.Ullmann (pro subgen. *Lobivia* Britton & Rose), Pokus o smír aneb formální rozdělení rodu *Lobivia*, *Kaktusy* **28**(1): 7. 1992.

Bas. *Cinnabarinea* Frič ex F.Ritter (1980, pro gen.).

Ref. *Echinopsis* Zucc.

Cintia Kníze & Říha, Novy kaktus strední Bolívie, *Kaktusy* **31**(2): 35-37-39. 1995.

Etym. Based on Sud Cinti, the name of the province of Bolivia where it is found.

Typ. *Cintia knizei* Říha.

Obs. The name was created by Knize and first published in Říha, J., Co je nového, *Kaktusy* **30**(2): 40, 46(illus.). 1994.

Ref. *Rebutia* K.Schum.

Cipocereus F.Ritter, *Kakteen in Südamerika* **1**: 54. (Nov) 1979.

Etym. Named for the Serra do Cipó, Minas Gerais, Brazil, and the substantive *Cereus*.

Typ. *Cipocereus pleurocarpus* F.Ritter.

Ref. *Cereus* (L.) Mill.

Cirinosum Neck., *Elementa botanica* **2**: 84. 1790.

Etym. From the Greek *cerinos*, waxen.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Cirrhilobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *kirrhos*, tawny yellow, and the substantive *Lobivia*.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Clavarioides Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 72. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Rep. Syn. *Opuntia* (L.) Mill. infragen. *Etuberculatae* Salm-Dyck nom. illeg. (1850).

Typ. *Opuntia clavarioides* Pfeiff. Autotype (Art. 7.4, 10.2, 22.6).

Ref. *Opuntia* (L.) Mill.

Clavarioides (Britton & Rose) Backeb., (pro subser. *Austrocylindropuntia* Backeb.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 13. (Jun) 1942.

Bas. *Clavarioides* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Clavarioides (Britton & Rose) Backeb., (pro ser. *Austrocylindropuntia* Backeb.), *Die Cactaceae* **1**: 138, 157. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Clavarioides* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Clavarioidia Frič & Schelle, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 41. 1935 nom. nud.

Etym. Based on the name of an included species.

Typ. Opuntia clavarioides Pfeiff. Autotype (Art. 22.6).

Obs. Based on the same type as *Opuntia* (L.) Mill. infragen. *Etuberculatae* Salm-Dyck nom. illeg. (1850) & ser. *Clavarioides* Britton & Rose (1919).

Ref. Opuntia (L.) Mill.

Clavatae Engelm. (pro infragen. *Opuntia* (L.) Mill. in subgen. *Cylindropuntia*), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 46. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 302. 1857].

Etym. Based on the name of an included species.

Typ. Opuntia clavata Engelm. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Clavatae (Engelm.) Engelm. (pro sect. *Opuntia* (L.) Mill.), Additions to the cactus flora of the territory of the United States, *Transactions of the Academy of Science of St. Louis* **2**: 201. 1863.

Bas. Clavatae Engelm. (1856, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Clavatae (Engelm.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 504. (20 Feb) 1908.

Bas. Clavatae Engelm. (1856, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Clavatae Dicht & Lüthy (pro ser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 11. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. Mammillaria clavata Scheidw.

Ref. Coryphantha (Engelm.) Lem.

Clavatopuntia Frič & Schelle, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 42. 1935 nom. inval. (Art. 39.1).

Etym. From the Latin adjective *clavatus*, club-shaped, and the substantive *Opuntia*.

Rep. Syn. Clavatae Engelm. (1856, pro infragen. *Opuntia* (L.) Mill.).

Typ. Opuntia clavata Engelm. Autotype (Art. 7.4).

Obs. Lacks reference to basionym and does not otherwise fulfil the conditions for valid publication (no Latin description).

Ref. Opuntia (L.) Mill.

Claviopuntia Frič, *Akklimatisations und Versuchs-Garten. Bestellzettel* [supplement]: [1]. 1933 nom. nud.

Etym. From the Latin adjective *clava*, club, and the substantive *Opuntia*.

Typ. Opuntia invicta K.Brandege. Autotype (Art. 10.2). The only included species.

Ref. Opuntia (L.) Mill.

×**Cleipaticereus** G.D.Rowley, Spontaneous bigeneric hybrids in *Cactaceae, Bradleya* **12**: 5. 1994.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Samaipaticereus* Cárdenas.

Ref. ×*Cleistaageocereus* Mordhorst.

×**Cleistaageocereus** Mordhorst, Intergenerische Kakteenhybriden innerhalb der *Trichocereinae, Kakteen und andere Sukkulanten* **62**(9): 228. 2011.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Haageocereus* Backeb.

×**Cleistoborzicactus** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(2): 48. (Jun) 1982.

Etym. Condensed formula.

Par. *Borzicactus* Riccob. × *Cleistocactus* Lem.

Ref. *Cleistocactus* Lem.

Cleistocactus Lem., *Cleistocactus*. Genre de la famille des cactacées, *L'Illustration horticole* **8**: Misc. 35. 1861.

Etym. From the Greek *cleistos*, closed, and the substantive *Cactus*. A reference to the way that the bunch of stamens closes the throat of the flower. Not referring to a closed perianth as has been assumed by most authors.

Typ. Not cited.

Lectotyp. *Cereus baumannii* Lem. Designated by Britton & Rose, *The Cactaceae* **2**: 173. (9 Sep) 1920.

Cleistocactus (Lem.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 81. (31 May) 1905.

Bas. *Cleistocactus* Lem. (1861, pro gen.).

Ref. *Cleistocactus* Lem.

Cleistocactus (Lem.) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi,144. 1929.

Bas. *Cleistocactus* Lem. (1861, pro gen.).

Ref. *Cleistocactus* Lem.

×**Cleistocana** G.D.Rowley, Spontaneous bigeneric hybrids in *Cactaceae, Bradleya* **12**: 5. 1994.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Matucana* Britton & Rose.

Cleistocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 15, 39. 1935 nom. illeg. (Art. 52.1).

Etym. From the two substantives *Cleistocactus* and *Cereus*.

Rep. Syn. *Cleistocactus* Lem. (1861).

Typ. *Cereus baumannii* Lem. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name

Cleistocactus Lem.

Ref. *Cleistocactus* Lem.

×***Cleistochamaecereus*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3):103. 1992.

Etym. Condensed formula

Par. *Cleistocactus* Lem. × *Chamaecereus* Britton & Rose.

Ref. ×*Cleistopsis* Strigl.

×***Cleistoechinocana*** Licznarski, Dwa nowe notorodzaje w *Cactaceae*/ Two new nothogenera in *Cactaceae*, *Kaktusy i Inne* **6**(3): 101. (Jan) 2010.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Echinopsis* Zucc. × *Matucana* Britton & Rose.

×***Cleistepiphyllum*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Epiphyllum* Haw.

×***Cleistonocereus*** G.D.Rowley, Intergeneric hybrids in *Cactaceae* – 2004 update, *British Cactus and Succulent Journal* **22**(2): 65. (Jul) 2004.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Echinocereus* Engelm.

Obs. Based on *Cleistocactus strausii* (Heese) Backeb. × *Echinocereus poselgeri* Lem.

[×*Cleistonocereus* ‘Quirk’].

×***Cleistopsis*** Strigl, “*Cleistopsis*” – Ein Versuch und was daraus wurde, *Kakteen und andere Sukkulente* **30**(9): 226-227. (Sep) 1979.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Echinopsis* Zucc.

×***Cleistoreocereus*** Mottram, in Rowley, Spontaneous bigeneric hybrids in *Cactaceae*, *Bradleya* **12**: 5. 1994.

Etym. Condensed formula.

Par. *Cleistocactus* Lem.

×***Cleistoza*** G.D.Rowley, Intergeneric hybrids in *Cactaceae* – 2004 update, *British Cactus and Succulent Journal* **22**(2): 64. (Jul) 2004.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Denmoza* Britton & Rose.

Obs. Based on *Cleistocactus winteri* D.R.Hunt × *Denmoza rhodacantha* (Salm-Dyck) Britton & Rose.

Ref. *Borzicactus* Riccob. × *Cleistocactus* Lem.

Clistanthocereus Backeb., Die Gattungen der Sippe *Loxanthocerei*, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1937(1): 24. (May) 1937.

Etym. From the Latin *clistus* (Greek *cleistos*), closed, the Greek *anthos*, flower, and the substantive *Cereus*. A reference to the flower throat being closed with stamens.

Typ. Borzicactus fieldianus Britton & Rose.

Ref. Cleistocactus Lem.

Coactoseminea Pažout (pro sect. *Gymnocalycium* Mittler), K členění rodu *Gymnocalycium*, *Fričiana* 5(29): 22, 24, 26, 27, 32. 1965 (“Coactosemineae”) nom. inval. (Art. 38.1).

Etym. From the Latin *coactus*, felt, and *semen*, seed.

Typ. Not cited.

Obs. Intended as a replacement name for *Muscoseminea* Kreuz. nom. inval. (1935) at a new rank, but that is not possible for an invalid name.

Ref. Gymnocalycium Mittler.

Cochemiea K.Brandegee (pro subgen. *Mammillaria* Haw.), Notes on *Cacteeae* - 1, *Erythrea* 5(11): 113. (24 Nov) 1897.

Etym. From the substantive name *Cochemie*, the name of one of the extinct Indian tribes of Baja California.

Typ. Not cited.

Lectotyp. Mammillaria halei K.Brandegee. Designated by Britton & Rose, *The Cactaceae* 4: 21. (24 Dec) 1923.

Ref. Mammillaria Haw.

Cochemiea (K.Brandegee) Walton, Cacti of Baja California, *The Cactus Journal* 2(16): 50. 1899.

Bas. Cochemiea K.Brandegee (1897, pro subgen. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Cochemiea (K.Brandegee) Lüthy (pro sect. *Mammillaria* Haw.), *Taxonomische Untersuchung der Gattung Mammillaria Haw.*: 132. 1995.

Bas. Cochemiea K.Brandegee (1897, pro subgen. *Mammillaria* Haw.).

Typ. Mammillaria halei K.Brandegee.

Obs. Epithet repeated in accordance with Rec. 22A.1. Citation of the wrong basionym page number (113, not 117) is taken to be a correctable error of bibliographic citation (Art. 41.6).

Ref. Mammillaria Haw.

Cochemiea (K.Brandegee) Lüthy (pro ser. *Mammillaria* Haw.), *Taxonomische Untersuchung der Gattung Mammillaria Haw.*: 136. 1995.

Bas. Cochemiea K.Brandegee (1897, pro subgen. *Mammillaria* Haw.).

Typ. Mammillaria halei K.Brandegee.

Obs. Epithet repeated in accordance with Rec. 22A.1.

Ref. Mammillaria Haw.

Cochemieoidei Doweld (pro ser. *Cochemiea* (K.Brandegee) Walton), Nomenclatural adjustments in *Cacteeae* II, *Sukkulenty* 3(1-2): 39. 2000.

Etym. The substantive *Cochemiea*, with Latin adjectival suffix *-oideus* (Greek *-oides*), -like.

Typ. Neomammillaria capensis H.E.Gates nom. illeg. = *Mammillaria capensis* (H.E.Gates)

R.T.Craig

Ref. Mammillaria Haw.

Cochiseia W.H.Earle, *Cochiseia* Earle, genus novum, *Cochiseia robbinsorum* Earle, species nova, *Saguaroland Bulletin* **30**(6): 65. (Jun-Jul) 1976.

Etym. Named for the Apache chieftain, *Cochise*, whose tribe occupied the locality where it grows.

Typ. *Cochiseia robbinsorum* W.H.Earle.

Ref. *Coryphantha* (Engelm.) Lem.

Coerulescentes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 24-25. 1841.

Etym. From the name of an included species.

Typ. *Cereus coerulescens* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Cereus* (L.) Mill.

Coleocephalocereus Backeb., *Die Diagnosen neuer Gattungen und Untergattungen, Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [9], [15], [20], [23]. 1938.

Etym. From the Greek *koleos*, sheath, and the substantive *Cephalocereus*.

Typ. *Cereus fluminensis* Miq.

Ref. *Austrocephalocereus* Backeb.

×**Coleocereus** P.V.Heath, *The nothogenera of the Cactaceae, Calyx* **1**(3): 106. 1992.

Etym. Condensed formula.

Par. *Coleocephalocereus* Backeb. × *Stephanocereus* A.Berger

Ref. *Austrocephalocereus* Backeb.

Coloradoa Boissev. & C.Davidson, *Colorado cacti*: 54. (Aug) 1940.

Etym. Named for the state of Colorado, USA.

Typ. *Coloradoa mesae-verdae* Boissev. & C.Davidson. Autotype (Art. 10.2). The only included species.

Ref. *Sclerocactus* Britton & Rose.

Coloradoa (Boissev. & C.Davidson) Doweld (pro sect. *Sclerocactus* Britton & Rose), *Nomenclatural adjustments in Cactaeae, Sukkulenty* **2**(1): 27. (25 Jul) 1999.

Bas. *Coloradoa* Boissev. & C.Davidson (1940, pro gen.)

Ref. *Sclerocactus* Britton & Rose.

×**Colosocereus** G.D.Rowley, *Spontaneous bigeneric hybrids in Cactaceae, Bradleya* **12**: 6. 1994.

Etym. Condensed formula.

Par. *Coleocephalocereus* Backeb. × *Pilosocereus* Byles & G.D.Rowley.

Ref. *Austrocephalocereus* Backeb.

Colubrini K.Schum. (pro infragen. *Cereus* (L.) Mill.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* **3**(6a): 178. (Apr 18) 1894.

Etym. Based on the name of an included species.

Typ. *Cereus colubrinus* Otto = *Cereus baumannii* Lem. Autotype (Art. 22.6).

Ref. *Cleistocactus* Lem.

Columnares Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 23. 1841 nom. nud.

Etym. From the Latin adjective *columaris*, columnar.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Pilosocereus* Byles & G.D.Rowley, *Echinopsis* Zucc., *Myrtillocactus* Console.

Columnares Walp. ex Salm-Dyck (pro sect. *Cereus* (L.) Mill.), *Repertorium botanices systematicae* 2: 275. 1843 nom. nud.

Etym. From the Latin adjective *columaris*, columnar.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Pilosocereus* Byles & G.D.Rowley, *Echinopsis* Zucc., *Myrtillocactus* Console.

Columnares Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1844*: 28. 1845 nom. inval. (Art. 22.2).

Etym. From the Latin adjective *columaris*, columnar.

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Ref. *Cereus* (L.) Mill., *Pilosocereus* Byles & G.D.Rowley, *Echinopsis* Zucc., *Myrtillocactus* Console.

Columnares Backeb. (pro ser. *Copiapoa* Britton & Rose), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 41. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin adjective *columaris*, columnar.

Typ. *Echinocactus cinereus* Phil.

Ref. *Copiapoa* Britton & Rose.

Columnari Kreuz. (pro infragen. *Trichocereus* (A.Berger) Riccob.), *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 38. (31 Apr) 1935 (“Columnare”) nom. inval. (Art. 39.1).

Etym. From the Latin adjective *columnaris*, columnar.

Typ. Two names were cited jointly as type: *Pilocereus pasacana* F.A.C.Weber & *Cereus terscheckii* Parm. ex Pfeiff.

Ref. *Echinopsis* Zucc.

Compacti Kunzmann (pro ser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* 36(4): 76. (Apr) 1985.

Etym. A Latin adjective, *compactus*, compressed.

Typ. *Echinocereus triglochidiatus* Engelm.

Ref. *Echinocereus* Engelm.

Compressicostati Lem. (pro sect. *Echinocactus* Link & Otto), *Cactearum aliquot novarum ac insuetarum in horto Monvilliano cultarum accurata descripto*: 27.1838.

Etym. A compound adjective formed from the Latin *compressus*, a participle of *comprimere*, to press together or flatten, *costa*, rib, and the possessive adjectival suffix *-atus*.

Typ. Not cited.

Lectotyp. *Echinocactus obvallatus* DC. Designated by Doweld, *Kakteen und andere Sukkulente* **52**(5): 131. (May) 2001.

Syn. *Echinocactus* Link & Otto sect. *Stenogoni* Lem. nom. illeg. (1839).

Ref. *Echinofossulocactus* Lawr.

Compresso-articulatae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), Borschlag zu einer neuen natürlichen Unordnung der Cacteen, *Allgemeine Gartenzeitung* **3**(40): 315. (3 Oct) 1835 nom. nud.

Etym. From the Latin *compressus*, flattened, & *articulatus*, segmented.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Compresso-articulatae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 149. (Feb) 1837 nom. inval. (Art. 22.1).

Etym. From the Latin *compressus*, flattened, & *articulatus*, segmented.

Typ. Not cited. Includes the type of *Opuntia* (L.) Mill..

Ref. *Opuntia* (L.) Mill.

Compresso-costati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactee in horto Dyckensi cultae. Anno 1841*: 28. 1841.

Etym. Compressed-ribbed Cerei, from the Latin *compressus*, compressed or flattened, and *costatus*, ribbed.

Typ. Not cited.

Obs. Schumann (1897: 52) claimed authorship of this taxon, but his concept included a similar range of species to that of Salm-Dyck.

Ref. *Cereus* (L.) Mill., *Nyctocereus* (A.Berger) Britton & Rose, *Stenocereus* (A.Berger) Riccob.

Conchatoseminea Pažout (pro sect. *Gymnocalycium* Mittler), K členění rodu *Gymnocalycium*, *Fričiana* **5**(29): 22, 24, 26, 27, 33. 1965 (“Conchatosemineae”) nom.inval. (Art. 39.1, 40.1).

Etym. From the Latin *concha*, mollusc shell, and *semen*, seed.

Typ. Not cited.

Obs. Intended as a replacement name for *Trichomosemineum* Kreuz. nom. inval. (1935) but that was not valid in 1965.

Ref. *Gymnocalycium* Mittler.

Concinnus Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 75. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus concinnus* H.B.Monv. Autotype (Art. 22.6).

Obs. This combination was also superfluously & invalidly published, as *Concinni*, by W. Prauser, *Internoto* **22**(1): 9, 12. (Jan) 2001.

Ref. *Parodia* Speg.

Concolores Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae. Anno 1841*: 9. 1841 nom. inval. (Art. 22.2).

Etym. From the Latin *concolor*, one-coloured, referring to the colour of the radial and central spines.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Obs. Renamed *Centrispinae* Salm-Dyck nom. inval. & illeg. (Art. 22.1, 52.1) in *Cactae in horto Dyckensi cultae anno 1844*: 9. 1845.

Ref. *Mammillaria* Haw.

Conoideae Kladiwa & Fittkau (pro sect. *Neolloydia* Britton & Rose), Gattung *Neolloydia*, in Krainz, *Die Kakteen* (46-47) CVIIIb: [3]. (1 Jun) 1971 nom. inval. (Art. 22.2).

Etym. Based on the name of the type species.

Typ. *Mammillaria conoidea* DC.

Syn. *Neolloydia* Britton & Rose sect. *Neolloydia*.

Ref. *Coryphantha* (Engelm.) Lem.

Conoidei Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 623, 628. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Neolloydia* Britton & Rose (1922, pro gen.).

Typ. *Mammillaria conoidea* DC. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Coryphantha* (Engelm.) Lem.

Conoidothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano cultarum*: 96. 1839 nom. inval. (Art. 22.2).

Etym. From the Greek *conoideus*, conical, and *thele*, tubercle.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. *Mammillaria* Haw. infragen. *Mammillaria*.

Ref. *Mammillaria* Haw.

Conothelae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Homoeacanthae* nom. inval. = § *Mammillaria*), *Enumeratio diagnostica cactearum hucusque cognitarum*: 8. 1837 nom. inval. (Art. 22.2)

Etym. Cone-tubercled *Mammillariae*, from the Greek *conos*, cone, and *thele*, mamilla, or tubercle.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. *Mammillaria* Haw. infragen. *Mammillaria*.

Ref. *Mammillaria* Haw.

Conothelae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Heteracanthae* Pfeiff.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 27. 1837.

Etym. From the Greek, *conos*, cone, & *thele*, nipple.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Conothelae Salm-Dyck [non Pfeiff.] (pro sect. *Mammillaria* Haw.), *Cactaceae in horto Dyckensi cultae anno 1849*: 14, 78. 1850 nom. illeg. (Art. 52.1).

Etym. Cone-tubercled, from the Greek *conos*, cone, and *thele*, mamilla, or tubercle.

Rep. Syn. Subsetosae Salm-Dyck nom. illeg. (1845, (pro infragen. *Mammillaria* Haw.) = *Subquadriscopinae* Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Typ. Not cited.

Lectotyp. *Mammillaria polythele* Mart. Designated by Heath, Early infrageneric classifications of the genus *Mammillaria* (part 2), *The Journal of the Mammillaria Society* **28**(3): 27. 1988.

Obs. Rank indicated at the foot of p. 78. Based on *Conothelae* Pfeiff., but with the autotype of the latter, *Cactus mammillaris* L., transferred to *Centropinae* Salm-Dyck. The name replaces *Subsetosae* Salm-Dyck nom. illeg. (1845), which in turn was a replacement for *Subquadriscopinae* Salm-Dyck (1841), the correct name for this taxon.

Syn. *Mammillaria* Haw. sect. *Subquadriscopinae* (Salm-Dyck) Walp.

Ref. *Mammillaria* Haw.

Consolea Lem., Sur les cactées. Découverte d'un nouvel organe et établissement d'un nouveau genre, *Revue Horticole* **38**: 174. 1862.

Etym. Named for Michelangelo CONSOLE (1812-1897), Italian botanist at the Palermo Botanical Garden.

Typ. Not cited.

Lectotyp. *Opuntia rubescens* Salm-Dyck = *O. moniliformis* (L.) Mill. Designated by Britton & Rose, *The Cactaceae* **1**: 43. 1919.

Ref. *Opuntia* (L.) Mill.

Consolea (Lem.) A. Berger (pro subgen. *Opuntia* (L.) Mill.), *Kakteen*: 64. 1929 nom. illeg. (Art. 52.1).

Bas. *Consolea* Lem. (1862, pro gen.).

Syn. *Opuntia* (L.) Mill. subgen. *Sphaeraria* Haw. (1830).

Ref. *Opuntia* (L.) Mill.

Consolea (Lem.) L.D.Benson (pro sect. *Opuntia* (L.) Mill.), New taxa and nomenclatural changes in the *Cactaceae*, *Cactus and Succulent Journal* (US) **46**(2): 80. (Mar-Apr) 1974.

Bas. *Consolea* Lem. (1862, pro gen.).

Ref. *Opuntia* (L.) Mill.

Copiapoa Britton & Rose, *The Cactaceae* **3**: 77, 85. (12 Oct) 1922.

Etym. Named for the province of *Copiapo*, Chile.

Typ. *Echinocactus marginatus* Salm-Dyck.

Copiapoa (Britton & Rose) A. Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 214. (Jul-Aug) 1929.

Bas. *Copiapoa* Britton & Rose (1922, pro gen.).

Ref. *Copiapoa* Britton & Rose.

Coquimbani Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Copiapoa* Britton & Rose (1922, pro gen.).

Typ. *Echinocactus marginatus* Salm-Dyck. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. *Echinocactus coquimbanus* Karw. ex Rümpler should be the autotype under Art. 22.6, but the type of the replaced synonym, *Echinocactus marginatus* Salm-Dyck, is considered to have priority.

Ref. *Copiapoa* Britton & Rose.

Corniferae Dicht & Lüthy (pro subser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 19. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Mammillaria cornifera* DC.

Ref. *Coryphantha* (Engelm.) Lem.

Cornigeri Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae anno 1849*: 28. 1850.

Etym. Based on the name of an included species.

Typ. *Echinocactus cornigerus* DC. = *Cactus latispinus* Haw. Autotype (Art. 22.6).

Obs. Treated by Schumann (1898: 334) as an infrageneric name in *Echinocactus* subgen.

Ancistrocactus K.Schum.

Ref. *Echinofossulocactus* Lawr.

Corryocactus Britton & Rose, *The Cactaceae* **2**: 2, 66. (9 Sep) 1920.

Etym. Named for T. A. CORRY, chief engineer of the Ferrocarril del Sur, Peruvian Corporation.

Typ. *Cereus brevistylus* K.Schum.

Corryocactus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. (Jul-Aug) 1929.

Bas. *Corryocactus* Britton & Rose (1920, pro gen.).

Ref. *Corryocactus* Britton & Rose.

Corryocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 15, 19. (31 Apr) 1935 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the substantives *Corryocactus* and *Cereus*.

Typ. *Cereus brevistylus* K.Schum. Autotype (Art. 10.2). The only included species.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name

Corryocactus Britton & Rose.

Ref. *Corryocactus* Britton & Rose.

Corryoerdisia Backeb. (pro subgen. *Erdisia* Britton & Rose), *Erdisia* Br. & R. (1920), *Blätter für Kakteenforschung* **4**(6): [1]. 1937 nom. inval. (Art. 36.1b, 39.1).

Etym. From the two substantives *Corryocactus* & *Erdisia*.

Rep. Syn. *Eulychnocactus* Backeb. nom. inval. (1931).

Typ. *Cereus melanotrichus* K.Schum. Autotype (Art. 7.4). Same as the replaced synonym, although not validly published.

Obs. Proposed in anticipation of future validation.

Ref. *Corryocactus* Britton & Rose.

Corryoerdisia Backeb. (pro subgen. *Corryocactus* Britton & Rose), *Die Cactaceae* 6: 3661, 3903. (Jun) 1962 nom. inval. (Art. 39.1).

Etym. From the two substantives *Corryocactus* & *Erdisia*.

Rep. Syn. *Eulychnocactus* Backeb. nom. inval. (1931).

Typ. *Cereus melanotrichus* K.Schum. Autotype (Art. 7.4). Same as the replaced synonym, although not validly published.

Ref. *Corryocactus* Britton & Rose.

Corycephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), *Explanatory diagram of the Austroechinocactinae*: 194. 1957 nom. inval. (Art. 39.1).

Etym. From the Greek *korys*, helmet, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Corynodes Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 79. 1988 (“Corynodinae”) (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus corynodes* Otto ex Pfeiff. = *Echinocactus sellowii* Link & Otto.

Ref. *Parodia* Speg.

Corynopuntia F.M.Knuth, in Backeberg & Knuth, *Kaktus-ABC*: 50, 114, 410. (12 Feb) 1936.

Etym. From the Greek *koryne*, club-shaped, and the substantive *Opuntia*.

Typ. *Opuntia clavata* Engelm.

Ref. *Opuntia* (L.) Mill.

Corynopuntia (F.M.Knuth) Bravo (pro subgen. *Opuntia* (L.) Mill.), *Nuevas combinaciones, Cactaceas y Suculentas Mexicanas* 17(4): 118. (Oct-Dec) 1972 nom. illeg. (Art. 52.1).

Bas. *Corynopuntia* F.M.Knuth (1936, pro gen.)

Syn. *Opuntia* (L.) Mill. subgen. *Engelmannia* F.M.Knuth (1936).

Ref. *Opuntia* (L.) Mill.

Corynopuntia (F.M.Knuth) Stuppy (pro subgen. *Grusonia* Britton & Rose), Seed characters and the generic classification of the *Opuntioideae* (*Cactaceae*), in Hunt & Taylor, *Studies in the Opuntioideae (Cactaceae), Succulent Plant Research* 6: 48. 2002 nom. illeg. (Art. 52.1).

Bas. *Corynopuntia* Knuth (1936, pro gen.)

Obs. The epithet of *Engelmannia* F.M.Knuth (1936, pro subgen. *Opuntia* (L.) Mill.) takes priority.

Ref. *Opuntia* (L.) Mill.

+ ***Coryopuntia*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Gr.-Chim. *Coryphantha* (Engelm.) Lem. + *Opuntia* (L.) Mill.

Rep. Syn. + *Ortegopuntia* Tóth (2012).

Bas. *Ortegocactus* Alexander + *Opuntia* (L.) Mill. [+*Ortegopuntia* 'Percy'].

Coryphantha Engelm. (pro subgen. *Mammillaria* Haw.), Synopsis of the *Cactaceae* of the territory of the United States and adjacent regions: 8. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 264. 1857].

Etym. From the Greek *koruphy*, apex, and *anthos*, flower, referring to the habit of flowering from the apex of the stem.

Typ. *Mammillaria sulcata* Engelm. *typ. cons.*

Obs. This type was originally proposed as a lectotype designation by Britton & Brown, *An illustrated flora of the northern United States*, ed.2: 579. 1913. Britton & Millspaugh, *The Bahama flora*: 295. 1920 changed the type to *Mammillaria sulcolanata* Lem., perhaps because Lemaire did not know *Mammillaria sulcata* Engelm. This was followed by Britton & Rose, *The Cactaceae* 4: 23. 1923 who also cited *Mammillaria sulcolanata* Lem.

However, that species was not eligible because it was unknown to Engelmann. Benson, in Lundell, *Flora of Texas* 2(2): 300. 1969 chose *Cactus viviparus* Nutt., overlooking the priority designation of Britton & Brown. This error was later corrected by Hunt & Benson, *Cactus and Succulent Journal (US)* 48(2): 72. 1976.

Ref. *Coryphantha* (Engelm.) Lem. *nom. cons.*

Coryphantha (Engelm.) Lem., *Les Cactées*: 32-38. 1868 *nom. cons.* (1993).

Bas. *Coryphantha* Engelm. (pro subgen. *Mammillaria* Haw.).

Typ. *Mammillaria sulcata* Engelm. *typ. cons.*

Obs. Conserved against *Aulacothele* H.B.Monv. Proposed by Mottram, *Taxon* 41(2): 339-340. 1992, recommended with 11 : 0 vote in *Taxon* 43(2): 274-275. 1994. Adopted by the 1993 Congress.

Coryphantha (Engelm.) J.M.Coult. (pro sect. *Cactus* L. *nom. rej.*), The North American species of *Cactus*, *Anhalonium* & *Lophophora*, *Contributions from the United States National Herbarium* 3(2): 95, 110. 1894.

Bas. *Coryphantha* Engelm. (pro subgen. *Mammillaria* Haw.).

Ref. *Coryphantha* (Engelm.) Lem.

Cosmantha Y.Itô, *Illustration of flower-cacti*: 8, 148. 1967.

Etym. From the Greek *kosmos*, beautiful, and *anthos*, flower.

Typ. *Lobivia grandiflora* Britton & Rose.

Ref. *Echinopsis* Zucc.

Cosmohybocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 *nom. inval.* (Art. 39.1).

Etym. From the Greek *kosmos*, beautiful, *hybos*, humped, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

×**Cosmopsis** Y.Itô, *Cosmopsis* Y.Ito, *Shaboten* (94): 23. 1977.

Etym. Condensed formula.

Par. ×*Cosmantha* Y.Itô × *Echinopsis* Zucc. [×*Cosmopsis* ‘Shitanryu’ Y.Itô]

Ref. *Echinopsis* Zucc.

Costatae Salm-Dyck (pro infragen. *Echinopsis* Zucc.), *Cactae in horto Dyckensi cultae anno 1849*: 38. 1850 nom. inval. (Art. 22.2).

Etym. A Latin adjective, *costatus*, ribbed.

Typ. Not cited, but includes the type of *Echinopsis* Zucc.

Ref. *Echinopsis* Zucc., *Eriogyne* Phil., *Cleistocactus* Lem..

Costati Pfeiff. (pro infragen. *Echinocactus* Link & Otto), *Enumeratio diagnostica cactearum hucusque cognitarum*: 47. 1837 nom. inval. (Art. 22.2).

Etym. From the Latin, *costatus*, ribbed.

Typ. Not cited. Includes the type of *Echinocactus* Link & Otto.

Ref. *Echinocactus* Link & Otto.

Costati Engelm. (pro sect. *Cereus* (L.) Mill.), *Cactaceae*, in Gray (ed.), *Plantae Fendlerianae Novi-Mexicanae, Memoirs of the American Academy of Arts and Sciences N.S.* 4(1): 50. (10 Feb) 1849.

Etym. From the Latin, *costatus*, ribbed.

Typ. Not cited.

Lectotyp. *Cereus enneacanthus* Engelm. Designated by Taylor, *The genus Echinocereus*: 74. 1985.

Ref. *Echinocereus* Engelm.

Costati (Engelm.) N.P.Taylor (pro sect. *Echinocereus* Engelm.), Further notes on *Echinocereus*, *Piante Grasse Speciale*, Supplemento al 13(4): 94. Jan 1994.

Bas. *Costati* Engelm. (1849, pro sect. *Cereus* (L.) Mill.).

Ref. *Echinocereus* Engelm.

×**Courantara** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 116. 1992.

Etym. Named for Lorenzo COURANT, a French hybridist of epiphytic cacti.

Par. *Epiphyllum* Haw. × *Heliocereus* (A.Berger) Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniphylloides* Backeb.

Crassae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 41. 1841.

Etym. Based on the name of an included species.

Typ. *Opuntia crassa* Haw. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Crassiores Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 46. 1841 nom. nud.

Etym. From the comparative adjective of the Latin *crassa*, thick.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Crassiores Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto dykensi cultae anno 1844*: 48. 1845.

Etym. From the comparative adjective of the Latin *crassa*, thick.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Crassocereus Backeb. (pro subgen. *Neobuxbaumia* Backeb.), *Descriptiones Cactacearum novarum*: 6. (Jan) 1957.

Etym. From the Latin *crassa*, thick, and the substantive *Cereus*.

Typ. *Cereus polylophus* DC.

Ref. *Cephalocereus* Pfeiff.

Crateranthi Lem. (pro infragen. *Echinocactus* Link & Otto), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 20, 87. (Feb) 1839.

Etym. From the Greek, *crator*, crater, and *anthos*, flower.

Typ. Not cited.

Ref. *Parodia* Speg.

Crateranthi (Lem.) Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 1(2): 317. (May) 1843.

Bas. *Crateranthi* Lem. (pro infragen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Crenati K.Schum. (pro infragen. *Echinocereus* Engelm.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 185. (Apr 18) 1894.

Etym. A Latin adjective, *crenatus*, crenate.

Typ. Not cited.

Ref. *Echinocereus* Engelm., *Echinopsis* Zucc.

Crenulati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 25. 1841.

Etym. Based on the name of an included species.

Typ. *Cereus crenulatus* Salm-Dyck nom. illeg. = *Cactus royeri* L. Autotype (Art. 22.6).

Ref. *Pilosocereus* Byles & G.D.Rowley.

Cribratae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23, 35. (15 May) 1925.

Etym. Based on the name of an included species.

Typ. *Rhipsalis cribrata* Lem. Autotype (Art. 22.6).

Obs. Description repeated in Vaupel, *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 618, 619. (Dec) 1925.

Ref. *Rhipsalis* Gaertn.

Criniferae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 156. (Feb) 1837.

Bas. Based on the name of an included species.

Typ. *Opuntia crinifera* Salm-Dyck = *Opuntia orbiculata* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Criniferae (Pfeiff.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 519. (20 Feb) 1908.

Bas. *Criniferae* Pfeiff. (1837, pro infragen. *Opuntia* (L.) Mill.).

Obs. Taxon superfluously renamed *Orbiculatae* by Britton & Rose, *The Cactaceae* **1**: 176. 1919.

Ref. *Opuntia* (L.) Mill.

Criniferae (Pfeiff.) Backeb., (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.

Bas. *Criniferae* Pfeiff. (1837, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Crinitae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 45. 1841.

Etym. From the Latin *crinitus*, hairy.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill. infragen. *Criniferae* Pfeiff. (1837).

Ref. *Opuntia* (L.) Mill.

Crinitae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaeae in horto Dyckensi cultae 184-*: 6. 1842.

Etym. Based on the name of an included species.

Typ. *Mammillaria crinita* DC. Autotype (Art. 22.6).

Obs. Includes the types of *Stylotela* Pfeiff. (1837, *T: M. wildii*) & *Cylindrocothele* Lem. (1839, *T: M. glochidiata*).

Ref. *Mammillaria* Haw.

Crinitae (Salm-Dyck) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae* **2**: 270. 1843.

Bas. *Crinitae* Salm-Dyck (1842, pro infragen. *Mammillaria* Haw.)

Ref. *Mammillaria* Haw.

Crispatae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 221. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Epiphyllum crispatum* Haw. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Crispati Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Echinofossulocactus* Lawr. (1841, pro gen.).

Typ. *Echinocactus crispatus* DC. Autotype (Art. 22.6).

Obs. Includes the types of *Compressicostati* Lem. (1838), *Stenogoni* Lem. (1839), & *Stenocactus* K.Schum. (1898), so it is superfluous because one of these should have been the name adopted. However, it was based on a legitimate basionym so it is not illegitimate itself (Art. 52.3). Lemaire (1838, 1840) wrote that he did not accept the name *Echinocactus crispatus* DC., which he considered a source of confusion on the grounds that all species of his sect. *Compressicostati* Lem. were known collectively by the vernacular name *Crispatae* at that time. He therefore replaced *Echinocactus crispatus* DC. with his own name *Echinocactus ensiferus* Lem.

Ref. *Echinofossulocactus* Lawr.

Cristatae Engelm. (pro infragen. *Opuntia* (L.) Mill.), Synopsis of the *Cactaceae* of the territory of the United States and adjacent regions: 51. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 307. 1857].

Etym. From the Latin *cristatus*, crested, a reference to the prominent stem tubercles.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Cruciatae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 166. (Feb) 1837 nom. illeg. (Art. 52.1).

Etym. From the Latin *cruciatus*, cruciform or cross-shaped, referring to the habit of forming branches on opposite sides of the stem.

Rep. Syn. *Opuntia* (L.) Mill. infragen. *Cruciformes* Salm-Dyck (1834).

Typ. Not cited, but the same as *Cruciformes* Salm-Dyck (1834).

Obs. Superfluous renaming of *Cruciformes* Salm-Dyck (1834).

Ref. *Opuntia* (L.) Mill.

Cruciatae Pfeiff. ex Salm-Dyck (pro sect. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 184, 358-359. 1834. See also *Cactae in horto Dyckensi cultae. Anno 1841*: 45. 1841 nom. illeg. (Art. 52.1).

Etym. From the Latin *cruciatus*, cruciform or cross-shaped, referring to the habit of forming branches on opposite sides of the stem.

Rep. Syn. *Opuntia* (L.) Mill. infragen. *Cruciatae* Pfeiff. nom. illeg. (1837).

Typ. Not cited, but the same as *Cruciatae* Pfeiff. nom. illeg. (1837).

Syn. *Opuntia* (L.) Mill. infragen. *Cruciformes* Salm-Dyck (1834).

Obs. Includes three species of *Consolea*. Salm-Dyck erroneously abandoned his own name *Cruciformes* even though it had priority.

Ref. *Opuntia* (L.) Mill.

Cruciformes Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 58. 1834 nom. nud.

Etym. From the Latin *cruciformis*, cross-shaped, referring to the habit of branches forming on opposite sides of the stem.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Cruciformes Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 184, 359. 1834.

Etym. From the Latin *cruciformis*, cross-shaped, referring to the habit of branches forming on opposite sides of the stem.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Cruciformes (Salm-Dyck) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 512. (20 Feb) 1908.

Bas. *Cruciformes* Salm-Dyck (1834, pro infragen. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Cryptocarpa Keizer (pro subgen. *Mammillaria* Haw.), Nieuwbeschrijving, *Succulenta* **69**(5): 102. (May) 1990 nom. illeg. (Art. 52.1).

Etym. From the Greek, *kryptos*, hidden or secret, and *karpos*, fruit.

Typ. *Mammillaria longiflora* (Britton & Rose) A.Berger.

Syn. *Mammillaria* Haw. subgen. *Krainzia* (Backeb.) Buxb. (1951); *Mammillaria* Haw. subgen. *Longiflora* (D.R.Hunt) Bravo (nom. illeg. 1982).

Obs. See also de Boer, ten Hove, Hofstee, Keizer & van Veen, Further comment on *Mammillaria* subgenus *Cryptocarpa*, *Journal of the Mammillaria Society* **41**(2): 26. 2001. This attempts to justify *Cryptocarpa* on grounds of differences in the protologue, but is erroneous.

Ref. *Mammillaria* Haw.

Cryptocereus Alexander, A new cactus genus from Mexico, *Cactus and Succulent Journal* (US) **22**(6): 164. (Nov-Dec) 1950.

Etym. From the Greek, *kryptos*, hidden or secret, and the substantive *Cereus*.

Typ. *Cryptocereus anthonyanus* Alexander. Autotype (Art. 10.2). The only included species.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Cubenses Britton & Rose (pro ser. *Coryphantha* (Engelm.) Lem.), *The Cactaceae* **4**: 25. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Coryphantha cubensis* Britton & Rose. Autotype (Art. 22.6).

Ref. *Coryphantha* (Engelm.) Lem.

Cullmannia Distefano, *Cullmannia* – C Distefano Genus novum, *Kakteen und andere Sukkulente* **7**(1): 8-9. (Feb) 1956.

Etym. Named for the German horticulturist Willy CULLMANN (1905-1992).

Typ. *Cereus viperinus* F.A.C.Weber ex Rol.-Goss.

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Cullmannia (Distefano) Buxb. (pro subgen *Peniocereus* Britton & Rose), Gattung *Peniocereus*, in Krainz (ed.), *Die Kakteen* (62) CIIa: [7]. (1 Apr) 1975.

Bas. *Cullmannia* Distefano (1956, pro gen.)

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Cumarinia F.M.Knuth (pro subgen. *Coryphantha* (Engelm.) Lem.), in Backeberg & Knuth, *Kaktus-ABC*: 77, 379. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. From *cumarin*, Germanisation of the native name *cumaru*, an aromatic chemical obtained from *Coumarouma odorata*, of which the type species is said to smell.

Typ. *Coryphantha odorata* Boed. Autotype (Art. 10.2). The only included species.

Ref. *Coryphantha* (Engelm.) Lem.

Cumarinia F.M.Knuth ex Backeb. (pro subgen. *Neolloydia* Britton & Rose), *Neolloydia* Br. & R. (1923), *Blätter für Kakteenforschung* 4(3): [3]. 1937.

Etym. From *cumarin*, Germanisation of the native name *cumaru*, an aromatic chemical obtained from *Coumarouma odorata*, of which the type species is said to smell.

Typ. *Coryphantha odorata* Boed. Autotype (Art. 10.2). The only included species.

Ref. *Coryphantha* (Engelm.) Lem.

Cumarinia (Backeb.) Buxb., Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichischen Botanische Zeitschrift* 98(1-2): 61. (28 Apr) 1951.

Bas. *Cumarinia* F.M.Knuth ex Backeb. (1937, pro subgen. *Neolloydia* Britton & Rose)

Ref. *Coryphantha* (Engelm.) Lem.

Cumingia F.H.Brandt (pro subgen. *Weingartia* Werderm.), Die Gliederung der Gattung *Weingartia* Werdermann, *Kakteen- und Orchideen-Rundschau* 8(1): 5. 1983.

Etym. Named for Hugh CUMING (1791-1865), English businessman and collector of natural history objects.

Typ. *Weingartia pulquinensis* Cárdenas = *Weingartia neocumingii* Backeb.

Obs. At the rank of genus this taxon would be correctly called *Gymnantha* Y.Itô (1957).

Ref. *Rebutia* K.Schum.

Cumulopuntia F.Ritter, *Kakteen in Südamerika* 2: 399. 1980.

Etym. From the Latin *cumulus*, a heap or pile, and the substantive *Opuntia*.

Typ. *Opuntia ignescens* Vaupel.

Ref. *Opuntia* (L.) Mill.

Cumulopuntia (F.Ritter) G.D.Rowley (pro subgen. *Austrocyllindropuntia* Backeb.), *Opuntia* – Fission or fusion? Part II – Resolution, *Tephrocactus Study Group* 12(3): 42. (29 Sep) 2006.

Bas. *Cumulopuntia* F.Ritter (1980, pro gen.)

Ref. *Opuntia* (L.) Mill.

Curassavicae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 102. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Cactus curassavicus* L. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Curviflori Backeb. (pro subser. *Pilocereus* K.Schum. non Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 51. (Jun) 1942.
Etym. From the Latin *curvus*, curved, and *flos*, flower.
Typ. *Cereus pentaedrophorus* F.Cels.
Ref. *Pilosocereus* Byles & G.D.Rowley.

Curvispinae Backeb. (pro sub-subsect. *Mammillaria* Haw. [of subsect. *Parviflorae* Backeb. nom. inval.]), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 64. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. From the Latin *curvus*, curved, and *spina*, spine.
Typ. Not cited.
Ref. *Mammillaria* Haw.

Curvispinae Backeb. (pro ser. *Mammillaria* Haw. [of subsect. *Parviflorae* Backeb. nom. inval.]), *Die Cactaceae* 5: 3099, 3101 (20 May) 1961 nom. inval. (Art. 39.1, 40.1).
Etym. From the Latin *curvus*, curved, and *spina*, spine.
Typ. Not cited.
Ref. *Mammillaria* Haw.

Curvispinosae Backeb. (pro sub-subsect. *Mammillaria* Haw. [of subsect. *Grandiflorae* Backeb. nom. inval.]), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 64. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. From the Latin *curvus*, curved, and *spinosa*, full of spines.
Typ. Not cited.
Ref. *Mammillaria* Haw.

Curvispinosae Backeb. (pro ser. *Mammillaria* Haw. [of subsect. *Grandiflorae* Backeb. nom. inval.]), *Die Cactaceae* 5: 3100, 3102 (20 May) 1961 nom. inval. (Art. 39.1, 40.1).
Etym. From the Latin *curvus*, curved, and *spinosa*, full of spines.
Typ. Not cited.
Ref. *Mammillaria* Haw.

Cutakia Backeb. (pro subgen. *Arthrocereus* A.Berger), *Nova genera et subgenera, Cactus and Succulent Journal (US)* 22(5): 153. (Sep-Oct) 1950.
Etym. Named for the American horticulturist Ladislaus CUTAK (1908-1973).
Typ. *Arthrocereus mello-barretoii* Backeb. & Voll = *Cereus melanurus* K.Schum.
Ref. *Echinopsis* Zucc.

Cyclolobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), *A new classification of the Cactinae of South America, Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).
Etym. From the Greek *kyklos*, circle, and the substantive *Lobivia*.
Typ. Not cited.
Ref. *Echinopsis* Zucc.

Cylindracei Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 42. 1841 nom. nud.

Etym. A Latin adjective, *cylindraceus*, cylindrical.

Typ. Not cited.

Ref. Mainly *Echinopsis* Zucc.

Cylindracei Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1844*: 27. 1845.

Etym. A Latin adjective, *cylindraceus*, cylindrical.

Typ. Not cited.

Ref. Mainly *Echinopsis* Zucc.

×**Cylindrantha** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 643. 1981.

Etym. Condensed formula.

Typ. *Cylindrolobivia* Y.Itô × *Cosmantha* Y.Itô [×*Cylindrantha* ‘Hishin-Marui’ Y.Itô].

Ref. *Echinopsis* Zucc.

Cylindrica DC (pro sect. *Opuntia* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 471. 1828 (“Cylindraceae”)

Etym. Based on the name of an included species.

Typ. *Cactus cylindricus* Lam. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Cylindricae Engelm. (pro infragen. *Opuntia* (L.) Mill.), Synopsis of the *Cactaceae* of the territory of the United States and adjacent regions: 49. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 305. 1857].

Etym. From the Latin *cylindrus* (Greek *kylindros*), something that rolls.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Cylindricae (Engelm.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* 50(4): 506. (20 Feb) 1908.

Bas. *Cylindricae* Engelm. (1856, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Cylindricae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 33. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia cylindrica* Backeb. = *Echinopsis aurea* Britton & Rose.

Ref. *Echinopsis* Zucc.

Cylindrici Kreuz. (pro infragen. *Trichocereus* (A.Berger) Riccob.), *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 38. (31 Apr) 1935 (“Cylindricae”) nom. inval. (Art. 39.1).

Etym. From the Latin *cylindrus* (Greek *kylindros*), something that rolls.

Typ. *Echinopsis campylacantha* Rud.Mey. = *Echinocactus leucanthus* Gillies ex Salm-Dyck.

Ref. *Echinopsis* Zucc.

×***Cylindrocalycium*** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 643. 1981.

Etym. Condensed formula.

Par. *Cylindrolobivia* Y.Itô × *Acanthocalycium* Backeb. [×*Cylindrocalycium* ‘Bakushoryu’ Y.Itô].

Ref. *Echinopsis* Zucc.

Cylindricothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano cultarum*: 101. (Feb) 1839 nom. inval. (Art. 22.6).

Etym. From the Greek, *cylindrikos*, cylindrical, and *thele*, tubercle.

Typ. Not cited, but includes the type of *Stylothelae* Pfeiff. (1837).

Ref. *Mammillaria* Haw.

Cylindrocothele Lem. ex Lawr. (pro subsect. *Mammillaria* Haw.), *Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, Gardener’s Magazine and Register of Rural Domestic Improvement*, ser.3 **6**: 314. 1841.

Etym. From the Greek, *cylindrikos*, cylindrical, and *thele*, tubercle.

Typ. Not cited, but includes the type of *Stylothelae* Pfeiff. (1837).

Lectotyp. *Mammillaria glochidiata* Mart. Designated by Heath, *Journal of the Mammillaria Society* **28**(3): 26. 1988.

Obs. The correct name for *Stylothelae* Pfeiff. at the rank of subsection.

Ref. *Mammillaria* Haw.

Cylindrolobivia Y.Itô, *Illustration of flower-cacti*: 8, 144-145. 1967.

Etym. From the Greek, *cylindrikos*, cylindrical, and the substantive *Lobivia*.

Typ. *Cereus huascha* F.A.C.Weber.

Obs. The correct name at subgeneric rank based on this type is *Neohelianthocereus* Backeb. (1950).

Ref. *Echinopsis* Zucc.

×***Cylindrolobivia*** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 640. 1981 nom. inval. (Art. H.6.4) & illeg. (Art. 53.1).

Etym. Condensed formula.

Par. *Cylindrolobivia* Y.Itô × ×*Lobiviopsis* H.Johnson nom. inval. [×*Cylindrolobivia* ‘Kyosairyu’ Y.Itô].

Ref. *Echinopsis* Zucc.

×***Cylindropsis*** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 639. 1981.

Etym. Condensed formula.

Par. *Cylindrolobivia* Y.Itô × *Echinopsis* Zucc. [×*Cylindropsis* ‘Biseiryu’ Y.Itô].

Ref. *Echinopsis* Zucc.

Cylindropuntia Engelm. (pro subgen. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 33, 46. (after 13 Mar) 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 289, 302. 1857].

Etym. From the Greek *kylindros*, something that rolls, and the substantive *Opuntia*.

Typ. *Opuntia arborescens* Engelm. = *Cereus imbricatus* Haw. Designated by Benson (1982: 911).

Obs. The name was first proposed by Engelmann, without description, in Engelmann & Bigelow, *Description of the Cactaceae*, in Whipple, *Reports of Explorations and Surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean* 4(5): 48. 1856. Lectotype redesignation by Doweld with *Opuntia acanthocarpa* Engelm. & J.M. Bigelow, in Hunt, *Cactaceae Systematics Initiatives* (12): 22. 2001, was superfluous. The earlier designations by Knuth (1936: *O. imbricata*), and Backeberg (1942: *O. kleiniae*) were not included in the Engelmann protologue.

Ref. *Opuntia* (L.) Mill.

Cylindropuntia Engelm. (pro sect. *Opuntia* (L.) Mill.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 202. (Apr 18) 1894.

Bas. *Cylindropuntia* Engelm. (pro subgen *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Cylindropuntia (Engelm.) F.M. Knuth, *Den nye kaktusbog*: 105. (after Aug) 1930.

Bas. *Cylindropuntia* Engelm. (pro subgen *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Cylindropuntia (Engelm.) G.D. Rowley (pro subgen. *Grusonia* Britton & Rose), *Opuntia – Fission or fusion? Part II – Resolution*, *Tephrocactus Study Group* 12(3): 43. (29 Sep) 2006.

Bas. *Cylindropuntia* Engelm. (pro subgen. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

×***Cylindrosia*** Y. Itô, *Evolution from columnar sp. into globular sp.*, *Shaboten* (91): 25. 1976.

Etym. Condensed formula.

Par. ×*Cylindrolobivia* Y. Itô nom. inval. × *Soehrensia* Backeb. [×*Cylindrosia* ‘Saigenryu’ Y. Itô]

Ref. *Echinopsis* Zucc.

Cylindrorebutia Frič, *Rebotioideae*: 2. 1936 nom. inval. (Art. 39.1).

Etym. From the Greek *kylindros*, something that rolls, and the substantive *Rebutia*.

Typ. Not cited.

Ref. *Rebutia* K. Schum.

Cylindrorebutia Frič ex Buining, *Rebutieae, Succulenta* 20(4): 55. (Apr) 1938 nom. inval. (Art. 39.1). [With name attributed to Frič & Kreuzinger].

Etym. From the Greek *kylindros*, something that rolls, and the substantive *Rebutia*.

Typ. Not cited.

Ref. *Rebutia* K. Schum.

Cylindrorebutia Frič ex Buining, *Succulenta* **22**: 51. 1940 nom. illeg. (Art. 52.1).

Etym. From the Greek *kylindros*, something that rolls, and the substantive *Rebutia*.

Typ. *Rebutia einsteinii* Frič.

Syn. *Rebulobivia* Frič (1935).

Ref. *Rebutia* K.Schum.

Cylindrorebutia Buining ex Buining & Donald (pro sect. *Rebutia* K.Schum.), Die Gattung *Rebutia* K. Schumann, *Sukkulentenkunde* **7/8**: 98. (Mar) 1963.

Etym. From the Greek *kylindros*, something that rolls, and the substantive *Rebutia*.

Typ. *Rebutia einsteinii* Frič.

Ref. *Rebutia* K.Schum.

Dactylanthocactus Y.Itô, Explanatory diagram of the *Austroechinocactinae*: 294. 1957 nom. illeg. (Art. 52.1).

Etym. From the Greek *daktylos*, finger, *anthos*, flower, and the substantive *Cactus*.

Typ. *Echinocactus graessneri* K.Schum.

Syn. *Acanthocephala* Backeb. (1938).

Ref. *Parodia* Speg.

Deamia Britton & Rose, *The Cactaceae* **2**: 212. (9 Sep) 1920.

Etym. Named for Charles C. DEAM, who supplied the type plant.

Typ. *Cereus testudo* Karw. ex Zucc. Autotype (Art. 10.2). The only included species.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Deamia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 117. 1929.

Bas. *Deamia* Britton & Rose (1920, pro gen.).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Decalophi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae anno 1849*: 42. 1850.

Etym. From the Greek *deka*, ten, & *lophia*, crest. A reference to having ten ribs, although the protologue calls for 7-10 ribs.

Typ. Not cited.

Obs. The lectotype designation *Cereus fendleri* Engelm., selected by Backeberg in *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 44. (Jun) 1942, and *Cereus stramineus* Engelm., selected by Kunzmann in *Kakteen und andere Sukkulente* **36**(4): 77. (Apr) 1985, were not elements included by Salm-Dyck and are therefore not eligible. This taxon therefore remains untypified.

Ref. *Echinocereus* Engelm.

Decalophi (Salm-Dyck) Backeb. (pro subser. *Echinocereus* Engelm.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 44. (Jun) 1942.

Bas. *Decalophi* Salm-Dyck (1850, pro infragen. *Cereus* (L.) Mill.).

Ref. *Echinocereus* Engelm.

Decalophi (Salm-Dyck) Kunzmann (pro ser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelmann, *Kakteen und andere Sukkulente* **36**(4): 77. (Apr) 1985.

Bas. *Decalophi* Salm-Dyck (1850, pro infragen. *Cereus* (L.) Mill.).

Ref. *Echinocereus* Engelm.

Decidua Engelm. (pro subsect. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 50, 51. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 306. 1857].

Etym. From the Latin *deciduus*, ready to fall. Perhaps a reference to deciduous branches?
Typ. Not cited.

Obs. The author made reference to this being a subsection on p. 51.

Ref. *Opuntia* (L.) Mill.

Decipientes D.R.Hunt (pro ser. *Mammillaria* Haw.), Recent *Mammillaria* discoveries, *The Cactus and Succulent Journal of Great Britain* **41**(4): 95. (Nov) 1979.

Etym. Based on the name of an included species.

Typ. *Mammillaria decipiens* Scheidw.

Ref. *Mammillaria* Haw.

Decipientes (D.R.Hunt) Doweld (pro sect. *Krainzia* Backeb.), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 43. 2000.

Bas. *Decipientes* D.R.Hunt (1979, pro ser. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Decumbentes Backeb. (pro subser. *Haageocereus* Backeb.), *Die Cactaceae* **2**: 1163, 1174. (Mar) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Cereus decumbens* Vaupel. Autotype (Art. 22.6).

Ref. *Haageocereus* Backeb.

Decumanae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaceae in horto Dyckensi cultae. Anno 1841*: 42. 1841 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Opuntia decumana* Haw. = *Cactus ficus-indica* L. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Delaetianae Dicht & Lüthy (pro subser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 20. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Mammillaria delaetiana* Quehl.

Ref. *Coryphantha* (Engelm.) Lem.

Demnosa Frič, Die letzte Kakteenjagd des Forschers A. V. Frič, *Möllers Deutsche Gärtner-Zeitung* **44**(15): 170, 171 (photo). (21 May) 1929. See also *Kakteenjäger* (1929: 4). Non *Denmoza* Britton & Rose.

Etym. Not explained.

Typ. *Pilocereus strausii* Heese. Autotype (Art. 10.2). The only included species.

Obs. Subsumed in Frič & Kreuzinger's novel but superfluous generic name *Cleistocereus* in Kreuzinger, *Verzeichnis* (1935). This is the correct name for *Cleistocactus* subgen.

Annemarnieria Buxb. at the rank of genus if *Cleistocactus baumannii* Lem. is excluded.

Dendrocereus Britton & Rose, *The Cactaceae* 2: 2, 113. (9 Sep) 1920.

Etym. From the Greek, *dendron*, tree or thicket, and the substantive *Cereus*.

Typ. *Cereus nudiflorus* Engelm.

Ref. *Cereus* (L.) Mill.

Dendrocereus (Britton & Rose) A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 125. 1929.

Bas. *Dendrocereus* Britton & Rose (1920, pro gen.).

Ref. *Cereus* (L.) Mill.

Denmoza Britton & Rose, *The Cactaceae* 3: 77, 78. (12 Oct) 1922.

Etym. Anagram of *Mendoza*, an Argentinian province and main area of distribution.

Typ. *Echinocactus rhodacanthus* Salm-Dyck.

Ref. *Cleistocactus* Lem.

Denmoza (Britton & Rose) A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 144. 1929.

Typ. *Denmoza* Britton & Rose (1922, pro gen.)

Ref. *Cleistocactus* Lem.

Densiflorae Engelm. (pro infragen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 10. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 266. 1857].

Etym. A Latin compound adjective, from *densus*, dense, and *flos*, flower. A reference to the flowers being crowded together at the apex.

Typ. Not cited.

Ref. *Coryphantha* (Engelm.) Lem.

Densispinae Wessner (pro infragen. [Formenkreis] *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1940 Erster Teil*: 13, 18. (May) 1940 nom. inval. (39.1).

Etym. Based on the name of an included species.

Typ. *Echinopsis densispina* Werderm.

Syn. *Lobivia* infragen. *Chlorogonae* Wessner (1940).

Ref. *Echinopsis* Zucc.

Denudata Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium*, *Kaktusar* 5(9): 106. 1934 (“Denudatum”) nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocactus denudatus* Link & Otto. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Denudata Backeb. (pro subser. *Gymnocalycium* Mittler), *Die Cactaceae* 3: 1700, 1701. 1959 nom. inval. (Art. 39.1).

Typ. *Echinocactus denudatus* Link & Otto. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Denudatum Backeb. ex Buxb. (pro subser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 6, 10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus denudatus* Link & Otto. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Denudatum (Buxb.) Schütz (pro sect. *Gymnocalycium* Mittler), *Rod Gymnocalycium Pfeiff., Friciana* 7(46): 8, 12. 1968 (publ. 1969) (“*Denudata*”) nom. inval. (Art. 41.5).

Bas. *Denudata* Backeb. ex Buxb. (1968, pro subser. *Gymnocalycium* Mittler).

Ref. *Gymnocalycium* Mittler.

Diademati Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae Lindley Systematische Übersicht* (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Opuntia diademata* Lem. = *Cereus articulatus* Pfeiff.

Ref. *Opuntia* (L.) Mill.

Dichrorebutia Y.Itô (pro subgen. *Rebutia* K.Schum.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *dichroos*, of two colours, and the substantive *Rebutia*.

Typ. Not cited.

Ref. *Rebutia* K.Schum.

Diffusae Bohata, Myšák & Šnicer (pro sect. *Lophophora* J.M.Coult.), *Rod Lophophora Coulter, Kaktusy Special* 2 (2005): 3. (15 Nov) 2005.

Etym. Based on the name of an included species.

Typ. *Lophophora echinata* var. *diffusa* Croizat. = *Lophophora diffusa* (Croizat) Bravo.

Ref. *Lophophora* J.M.Coult.

Digitorebutia Frič, *Rebotioideae*: 2. 1936 nom. illeg. (Art. 52.1).

Etym. From the Latin *digitus*, finger, and the substantive *Rebutia*.

Rep. Syn. *Rebulobivia* Frič (1935).

Typ. *Rebutia einsteinii* Frič. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Superfluous renaming of *Rebulobivia* Frič.

Ref. *Aylostera* Speg.

Digitorebutia Frič ex Buining, *Succulenta* 22: 51. 1940.

Etym. From the Latin *digitus*, finger, and the substantive *Rebutia*.

Rep. Syn. *Digitorebutia* Frič nom. illeg. (1936) with new type.

Typ. *Rebutia haagei* Frič & Schelle = *Echinopsis pygmaea* R.E.Fr.

Ref. *Aylostera* Speg.

Digitorebutia (Buining) Buining & Donald (pro sect. *Rebutia* K.Schum.), Die Gattung *Rebutia* K. Schumann, *Sukkulentenkunde* 7/8: 98. (Mar) 1963.

Bas: *Digitorebutia* Buining (1940, pro gen.).

Ref. *Aylostera* Speg.

Digitostigma Velazco et Nevárez, Nuevo género de la familia *Cactaceae* en el Estado de Nuevo León, México, *Cactáceas y Suculentas Mexicanas* 47(4): 76-79-86. (Jan) 2003.

Etym. From the Latin *digitus*, finger, and *stigma*, mark or spot. A reference to the flecked epidermis but grammatically incorrect, meaning ‘fingered spot’ instead of the intended ‘spotted finger’.

Typ. *Digitostigma caput-medusae* Velasco & Nevárez.

Obs. A putative allopolyploid, perhaps *Astrophytum capricorne* (A.Dietr.) Britton & Rose Σ *Echinocereus poselgeri* Lem., and therefore its nuclear DNA should place it in a basal position to all other *Cactaceae* but with *Astrophytum* with plastid or mitochondrial DNA.

Dillenianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 159. (21 Jun) 1919.

Etym. Based on the name of the only included species, with adjectival suffix.

Typ. *Cactus dillenii* Ker-Gawl. Autotype (Art. 10.2, 22.6).

Ref. *Opuntia* (L.) Mill.

Dillenianae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942.

Bas. *Dillenianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Diploperianthium F.Ritter, in Winter, *Kakteen Samen*: 5. 1957 nom. inval. (Art. 30.6, 39.1).

Etym. Floral double perianth, from the Greek *diploos*, double, *peri-*, around, and *anthos*, flower.

Typ. *Diploperianthium substerile* F.Ritter nom. inval. = *Calymmanthium substerile* F.Ritter.

Obs. Abandoned provisional name for *Calymmanthium* F.Ritter.

Syn. *Calymmanthium* F.Ritter (1962).

Ref. *Calymmanthium* F.Ritter.

×***Disapora*** H.Johnson, *Succulent Parade* 1958: 15. 1958 nom. inval. (Art. 30.6, H.6.2).

Etym. An incorrectly formed condensed formula.

Par. *Aporocactus* Lem. × *Disocactus* Lindl.

Ref. ×*Aporepiphyllum* G.D.Rowley.

Disciformes Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 622, 624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Strombocactus* Britton & Rose (1922, pro gen.).

Typ. *Mammillaria disciformis* DC. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Strombocactus* Britton & Rose.

Discocactus Pfeiff., *Discocactus insignis*, *Allgemeine Gartenzeitung* 5(31): 241-242. (5 Aug) 1837. Also published as though new in Pfeiffer, *Neuere Erfahrungen über mehrere Cacteen*, *Nova acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum* 19(1): 117-120. (20 Aug) 1839.

Etym. From the Greek *diskos*, quoit, disc or torus, and the substantive *Cactus*. A reference to the disc-like appearance of the stem.

Typ. *Discocactus insignis* Pfeiff. = *Cactus placentiformis* Lehm.

Discocactus (Pfeiff.) Labour. (pro subgen. *Echinocactus* Link & Otto), *Monographie de la famille des cactées*: xlvii, 165. 1853.

Bas. *Discocactus* Pfeiff. (1837, pro gen.).

Obs. Schumann overlooked this combination and credited it to himself.

Ref. *Discocactus* Pfeiff.

Discocactus (Pfeiff.) K.Schum. (pro sect. *Echinocactus* Link & Otto), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 245. (1 Sep) 1890.

Bas. *Discocactus* Pfeiff. (1837, pro gen.).

Ref. *Discocactus* Pfeiff.

Discocactus (Pfeiff.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Discocactus* Pfeiff. (1837, pro gen.).

Ref. *Discocactus* Pfeiff.

Discocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *diskos*, quoit, disc or torus, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Discoideales Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942 nom. inval. (Art. 22.2, 39.1).

Etym. From the Latin adjective *discoidalis*, disciform.

Typ. *Opuntia bergeriana* F.A.C.Weber = *Cactus tuna* L.

Syn. *Opuntia* (L.) Mill. subser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Discoideales (Backeb.) Backeb. (pro ser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 449 (Jan) 1958 nom. inval. (Art. 22.2, 39.1, 41.5).

Etym. From the Latin adjective *discoidalis*, disciform.

Syn. *Opuntia* (L.) Mill. ser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Discoideae Backeb. (pro ser. *Opuntia* (L.) Mill.), in Backeberg & Knuth, *Kaktus-ABC*: 53, 133. (12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).

Etym. A Latin adjective, *discoideus*, discoid.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. ser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Discoides Backeb. (pro ser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 16. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin adjective *discoideus*, discoid.

Typ. *Opuntia arechavaletae* Speg. = *Cactus monacanthus* Willd.

Ref. *Opuntia* (L.) Mill.

Discolores Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 8. 1841.

Etym. From the name of an included species.

Typ. *Mammillaria discolor* Haw. Autotype (Art. 22.6).

Ref. *Mammillaria* Haw.

×***Disheliocereus*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(2): 48. (Jun) 1982.

Etym. Condensed formula.

Par. *Disocactus* Lindl. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. *Epiphyllum* Haw.

Disisocactus Lindl. ex Kunze, *Botanische Zeitung* **3**(32): 533 (8 Aug) 1845 nom. illeg. (Art. 52.1).

Etym. The irregular formation of *Disocactus* Lindl. was noticed by Salm-Dyck (1850: 57), so he corrected the spelling. However, Lindley used the spelling *Disocactus* three times in his protologue, so it was therefore intended and must be accepted. However, Gustav Kunze had also noticed the apparent error earlier in 1845 in his review of *Edward's Botanical Register*, offering the same correction as Salm-Dyck but giving the different reason that he thought it was too confusing versus *Discocactus* Pfeiff.

Typ. *Cereus biformis* Lindl. Autotype (Art. 10.2). The only included species.

Obs. The spelling 'corrected' to *Disisocactus* was also taken up by Labouret (1853) & Schumann (1898, 1903) in new ranks. As they are the earliest names in those ranks, they are legitimate and have priority at those ranks.

Ref. *Epiphyllum* Haw.

Disisocactus Kunze ex Labour. (pro subgen. *Athrophyllum* Labour.), *Monographie de la famille des cactées*: xlvii, 418-419. 1853.

Rep. Syn. *Disisocactus* Kunze nom. illeg. (1845, pro gen.).

Ref. *Epiphyllum* Haw.

Disisocactus (Labour.) K.Schum. (pro sect. *Phyllocactus* Link nom. illeg.),
Gesamtbeschreibung der Kakteen (Monographia Cactacearum) (4): 205. (20 Oct) 1897.
Bas. Disisocactus Kunze ex Labour. (1853, pro subgen. *Athrophyllum* Labour.).
Ref. Epiphyllum Haw.

Disisocactus (Labour.) K.Schum. (pro subgen. *Phyllocactus* Link nom. illeg.),
Gesamtbeschreibung der Kakteen Nachträge 1898 bis 1902: 73. 1903.
Bas. Disisocactus Kunze ex Labour. (1853, pro subgen. *Athrophyllum* Labour.).
Ref. Epiphyllum Haw.

×***Disisocactus*** Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the
Cactaceae Durande, *Sukkulenty* 4(1-2): 40. (Jan) 2003.
Par. Disisorhypsalis Doweld × *Disocactus* Lindl. [*macrantha* × *nelsonii*].
Obs. A later homonym of *Disisocactus* Kunze nom. illeg. (1845), but it is available for reuse
under Art. 58.1.
Ref. Epiphyllum Haw.

Disisorhypsalis Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the
Cactaceae Durande, *Sukkulenty* 4(1-2): 40. (Jan) 2003.
Typ. Disocactus macranthus Alexander.
Ref. Epiphyllum Haw.

Disocactus Lindl., *Edward's Botanical Register* 31 (New Ser. 8): t.9 + 4pp. text. 1845.
Etym. Explained by the author as being from the Greek “*dis*, twice, *isos*, equal, & *kaktos*,
cactus, in allusion to the distinctive character of the genus”, although the middle word has
been abbreviated to the point of being no more than a connecting vowel. It is a cryptic
reference to the stems which are flattened and leaf-like and therefore have two equal sides.
Typ. Cereus biformis Lindl. Autotype (Art. 10.2). The only included species.
Ref. Epiphyllum Haw.

Disocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer*
Sukkulenten mit Revision der Systematik der Kakteen: 15. 1935 nom. illeg. (Art. 52.1).
Etym. From the substantives *Disocactus* and *Cereus*.
Rep. Syn. Disocactus Lindl. (1845).
Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Disocactus*
Lindl.
Ref. Epiphyllum Haw.

×***Disochia*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent*
Journal 37(2): 48. (Jun) 1982.
Etym. Condensed formula.
Par. Disocactus Lindl. × *Nopalxochia* Britton & Rose.
Ref. Epiphyllum Haw.

×***Disolocereus*** E.Meier, Hybriden der Gattung *Hylocereus* Teil 1. Intergenerische Hybriden,
EPIG (64): 26. 2009.

Etym. Condensed formula.

Par. *Disocactus* Lindl. × *Hylocereus* (A.Berger) Britton & Rose.

Ref. *Epiphyllum* Haw.

×***Disonopsis*** G.D.Rowley, Intergeneric hybrids in *Cactaceae* – an update, *Cactaceae Systematics Initiatives* (18): 13. (Jul) 2004.

Etym. Condensed formula.

Par. *Disocactus* Lindl. × *Echinopsis* Zucc.

Ref. ×*Echinophyllum* P.V.Heath.

×***Disophyllum*** H.Johnson, *Johnson Cactus Gardens Catalogue*: 15. 1960 nom. inval. (Art. 30.3, H.9.1).

Par. *Disocactus* Lindl. × *Epiphyllum* Haw.

Ref. *Epiphyllum* Haw.

×***Disophyllum*** Innes, *Epiphytes* 1(3): 43. 1968.

Etym. Condensed formula.

Par. *Disocactus* Lindl. × *Epiphyllum* Haw.

Ref. *Epiphyllum* Haw.

Dissimiles Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 221. (9 Oct) 1923.

Etym. Based on the name of the only included species.

Typ. *Lepismium dissimilis* G.Lindb. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Diurna Haw. (pro infragen. *Epiphyllum* Haw.), A description of the subgenus *Epiphyllum*, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. 6(32): 109. (Aug) 1829.

Etym. A Latin adjective, *diurnus*, something of the day. A reference to the day-flowering habit.

Typ. Not cited.

Ref. *Epiphyllum* Haw.

Divaricatae Haw. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis plantarum succulentarum*: 195. 1812.

Etym. From the Latin *divaricatus*, divergent or straggling.

Typ. Not cited.

Obs. Initially included only two species, *pusilla* and *curassavica*, but the first species was eventually placed elsewhere by Salm-Dyck (1850: 70, 72). The lectotype selection of *Opuntia drummondii* Graham by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942 was not known to Haworth and therefore not eligible.

Ref. *Opuntia* (L.) Mill.

Divaricatae (Haw.) DC. (pro sect. *Opuntia* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 471. 1828.

Bas. Divaricatae Haw. (1812, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Divaricatae (Haw.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 520. (20 Feb) 1908.

Bas. Divaricatae Haw. (1812, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Divaricatae (Haw.) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942.

Bas. Divaricatae Haw. (1812, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Divaricatae (Haw.) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 449, 459 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. Divaricatae Haw. (1812, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Divaricati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 32. 1841.

Etym. Straggling cerei, referring to the habit of growth, from the Latin *divaricatus*, divergent or straggling.

Typ. Not cited.

Ref. Selenicereus (A.Berger) Britton & Rose.

Divaricati K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (1): 56 (Feb). 1897.

Etym. From the Latin *divaricatus*, divergent or straggling., referring to the habit of growth, *Typ. Cereus pterogonus* Lem. = *Cereus testudo* Karw. Autotype (Art. 10.2). The only included species.

Obs. Although stated to be based on *Divaricati* Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), Schumann included only one species that was excluded from *Divaricati* by Salm-Dyck. So this is a new taxon attributable only to Schumann.

Syn. Pterogoni Salm-Dyck (1841, pro infragen. *Cereus* (L.) Mill.).

Ref. Selenicereus (A.Berger) Britton & Rose.

Dolichothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano cultarum*: 101. 1839.

Etym. From the Greek *dolichos*, long, and *thele*, nipple.

Rep. Syn. Mammillaria infragen. *Longimammae* Pfeiff. (1837).

Typ. Mammillaria longimamma DC. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Although *Longimammae* Pfeiff. (1837) has priority at infrageneric rank, the correct name at the rank of genus has to be *Dolichothele* (Lem.) Britton & Rose (1923), in order to avoid the type species becoming an invalid tautonym.

Ref. *Mammillaria* Haw.

Dolichothele (Lem.) K.Schum. (pro subgen. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (8): 474, 506. (20 Jun) 1898.

Bas. *Dolichothele* Lem. (1839, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Dolichothele (Lem.) Britton & Rose, *The Cactaceae* 4: 3, 61. (9 Oct) 1923.

Bas. *Dolichothele* Lem. (1839, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Dracocactus Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *drakon*, dragon, and the substantive *Cactus*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Dracocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), *Explanatory diagram of the Austroechinocactinae*: 191. 1957 nom. inval. (Art. 39.1).

Etym. From the Greek *drakon*, dragon, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Drijveriana Wessner (pro infragen. [Formenkreis] *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1940 Erster Teil*: 13, 19. (May) 1940 nom. inval. (39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia drijveriana* Backeb. = *Echinopsis haematantha* Speg.

Ref. *Echinopsis* Zucc.

×**Dumorakia** P.V.Heath (pro nothosect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 105. 1992.

Etym. Condensed formula.

Par. *Rathbunia* sect. *Horakia* P.V.Heath × *Rathbunia* sect. *Dumortieria* P.V.Heath.

Obs. Based on *Echinocactus pruinosus* Otto ex Pfeiff. × *Cereus dumortieri* Scheidw., reported by Glass & Foster, *Cactus & Succulent Journal (US)* 42(6): 268. 1970.

Ref. *Stenocereus* (A.Berger) Riccob.

Dumortieria P.V.Heath (pro sect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 104. 1992.

Etym. Named for the only included species.

Rep. Syn. *Isolatocereus* Backeb. (1938, pro subgen. *Lemaireocereus* Britton & Rose).

Typ. *Cereus dumortieri* Scheidw.

Ref. *Stenocereus* (A.Berger) Riccob.

×*Dumortilloactus* P.V.Heath (pro nothosect. ×*Rathbunilloactus* Mottram), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 106. 1992.

Etym. Condensed formula.

Par. *Myrtillocactus* sect. *Myrtillocactus* × *Rathbunia* sect. *Dumortieria* P.V.Heath.

Ref. ×*Stenilloactus* P.V.Heath nothosect. *Stenilloactus*.

Earlei A.R.Franck (pro ser. *Harrisia* Britton), in Franck & al., Phylogeny, biogeography, and infrageneric classification of *Harrisia*, *Systematic Botany* 38(1): 218. 2013.

Etym. Based on the name of an included species.

Typ. *Harrisia earlei* Britton & Rose.

Ref. *Echinopsis* Zucc.

Ebnerella Buxb., Die Phylogenie der nordamerikanischen Echinocacteen. Trib.

Euechinocactinae F. Buxb., *Österreichische botanische Zeitschrift* 98(1-2): 88. (28 Apr) 1951.

Etym. Named for Otto EBNER, a cactus importer from Zürich.

Typ. *Mammillaria wildii* A.Dietr.

Ref. *Mammillaria* Haw.

Ebneria Backeb. (pro subgen. *Monvillea* Britton & Rose), Das Genus *Monvillea* Br. & R., *Sukkulantenkunde* 2: 52, 54. 1948.

Etym. Named for Otto EBNER.

Typ. Not cited. *Lectotyp.* *Cereus spegazzinii* F.A.C.Weber. Designated by Backeberg, *Die Cactaceae* 4: 2304. (15 Jul) 1960.

Ref. *Cereus* (L.) Mill.

Ebneria (Backeb.) D.R.Hunt (pro subgen. *Cereus* (L.) Mill.), New and unfamiliar names for use in the European Garden Flora: Addenda and Corrigenda, *Bradleya* 6: 100. 1988.

Typ. *Ebneria* Backeb. (1948, pro subgen. *Monvillea* Britton & Rose)

Ref. *Cereus* (L.) Mill.

Eccremocactus Britton & Rose, The genus *Epiphyllum* and its allies, *Contributions from the U.S. National Herbarium* 16(9): 261. (6 Jun) 1913.

Etym. From the Greek *ekkremes*, hanging, and the substantive *Cactus*.

Typ. *Phyllocactus bradei* Vaupel.

Ref. *Epiphyllum* Haw.

Eccremocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 15, 17. 1935 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the two substantives *Eccremocactus* and *Cereus*.

Rep. Syn. *Eccremocactus* Britton & Rose (1913).

Typ. *Phyllocactus bradei* Vaupel. Autotype (Art. 7.4). Same as replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Eccremocactus* Britton & Rose. Lack of a Latin diagnosis means that the conditions for valid publication are not met and the mitigating Art. 41.4 does not apply.

Ref. *Epiphyllum* Haw.

×***Echinaageocereus*** Mordhorst, Intergenerische Kakteenhybriden innerhalb der *Trichocereinae*, *Kakteen und andere Sukkulente* **62**(9): 228. 2011.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Haageocereus* Backeb.

Echinacanthi Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* **36**(4): 79. (Apr) 1985.

Etym. From the Greek *echinos*, a hedgehog or urchin, and *akantha*, spine.

Typ. *Echinocereus grandis* Britton & Rose.

Ref. *Echinocereus* Engelm.

×***Echinaporus*** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 649. 1981 nom. inval. (H.6.2).

Etym. Incorrectly formed condensed formula.

Par. *Aporocactus* Lem. × *Echinopsis* Zucc. [×*Echinaporus* ‘Shunsen-Maru’ Y.Itô]

Ref. ×*Aporechinopsis* G.D.Rowley.

+ ***Echinastrophytum*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Rep. Syn. + *Astroferocactus* Licznerski (2010).

Gr.-Chim. *Astrophytum* Lem. + *Echinofossulocactus* Lawr.

×***Echinobergia*** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 35. (5 Feb) 1990.

Etym. Condensed formula.

Par. *Echinofossulocactus* Lawr. × *Leuchtenbergia* Hook.f.

×***Echinobivia*** G.D.Rowley, Worthwhile hybrid succulents 5, *National Cactus and Succulent Journal* **21**(3): 82. (Sep) 1966.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Lobivia* Britton & Rose.

Ref. *Echinopsis* Zucc.

×***Echinobutia*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 112. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Rebutia* K.Schum.

Echinocactoidei Lem. (pro infragen. *Cleistocactus* Lem.), *Cleistocactus*. Genre de la famille des cactacées, *L'Illustration horticole* **8**: Misc. 35. 1861.

Etym. From the substantive *Echinocactus*, with the Greek suffix *-oides*, -like.

Typ. *Echinopsis rhodacantha* Salm-Dyck. Autotype (Art. 10.2). The only included species.

Ref. *Cleistocactus* Lem.

Echinocacti Fabricius ex Spreng. (pro infragen. *Cactus* L. nom. rej.), *Caroli Linnaei systema vegetabilium*, ed. 16 **2**: 493. (Jan-May) 1825 nom. illeg. (Art. 52.1).

Rep. Syn. Echinocactus Fabricius nom. illeg. (1759, pro gen.).

Typ. Not cited, but includes the type of *Cactus* L.

Syn. Cactus L. nom. rej. infragen. *Cactus*.

Obs. Circumscribed as “*Echinocacti: oblongi tuberculis compositi*” and includes only species of *Mammillaria*.

Ref. Mammillaria Haw.

Echinocactus Heister ex Fabricius, *Enumeratio methodica plantarum Horti Medici Helmstadiensis*: 188. 1759 nom. illeg. (Art. 52.1).

Etym. From the Latin *echinus* (Greek *echinos*), a hedgehog or urchin, and the substantive *Cactus*.

Rep. Syn. Cactus L. nom. rej. infragen. *Echinomelocacti* L. (1753)

Typ. Not cited, but includes the type of *Cactus* L.

Obs. Circumscribed as “*Melocactus* Clus. *Cactus* Linn. Est minor species, fructus napi-formes rubri.” i.e. all globular species, with the rest of the cacti assigned to *Opuntia* and *Cereus*.

Ref. Mammillaria Haw., *Melocactus* Link & Otto.

Echinocactus Link & Otto [non Fabricius], Ueber die Gattungen *Melocactus* und *Echinocactus*, *Verhandlungen des Vereins zur Beförderung des Gartenbaues in den Königlich Preussischen Staaten* **3**: 420. 1827.

Etym. From the Latin *echinus* (Greek *echinos*), a hedgehog or urchin, and the substantive *Cactus*.

Typ. Not cited.

Lectotyp: Echinocactus platyacanthus Link & Otto. Designated by Britton & Rose, *The Cactaceae* **3**: 166. 1922.

Obs. A later homonym of *Echinocactus* Fabricius nom. illeg. (1759), and thus in need of conservation, as suggested by Heath in *Calyx* **5**(3): 110-111. (25 Jul) 1996 but not formally proposed.

Echinocactus (Link & Otto) Haw. (pro subgen. *Melocactus* Link & Otto), Decas duodecima novarum plantarum succulentarum, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. **7**(38): 115. (Feb) 1830 & **8**(44): 134. (Aug) 1830.

Bas. Echinocactus Link & Otto (1827, pro gen.)

Ref. Echinocactus Link & Otto

Echinocactus (Link & Otto) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. Echinocactus Link & Otto (1827, pro gen.)

Ref. Echinocactus Link & Otto.

+ ***Echinocalycium*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 111. 1992 nom. inval. (Cult.Art. 24.3).

Etym. Condensed formula

Gr-chim. Echinopsis Zucc. + *Gymnocalycium* Mittler [+ *Echinocalycium japonicum* P.V.Heath (*Echinopsis eyriesii* + *Gymnocalycium mihanovichii* var. *friedrichii*)].
Ref. + *Echinogymnocalycium* Mottram.

Echinocarpae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 56. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia echinocarpa* Engelm. & J.M.Bigelow. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Echinocarpae (Britton & Rose) Backeb. (pro ser. *Cylindropuntia* (Engelm.) F.M.Knuth), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 13. (Jun) 1942.

Bas. *Echinocarpae* (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Echinocarpi Backeb. (pro sub-subser. *Echinocereus* Engelm.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 44. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek *echinos*, a hedgehog or urchin, and *karpos*, fruit.

Typ. *Cereus pectinatus* var. *rigidissimus* Engelm. = *Echinocereus rigidissimus* (Engelm.) F.Haage.

Ref. *Echinocereus* Engelm.

×***Echinocereopsis*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 109. 1992.

Etym. Condensed formula.

Par. *Echinocereus* Engelm. × *Echinopsis* Zucc.

Echinocereus Engelm., Botanical Appendix, in Wizlizenus, Memoir of a tour to northern Mexico connected with Colonel Doniphan's Expedition in 1846 and 1847, *Senate of the United States Congress 30(1) [Proceedings] Misc.* 26: 91. 1848.

Etym. From the substantives *Echinocactus* and *Cereus*, "indicating their intermediate position".

Typ. Not cited.

Lectotyp. *Echinocereus viridiflorus* Engelm. Designated by Britton & Rose, *The Cactaceae* 3: 3. (12 Oct) 1922.

Echinocereus (Engelm.) Engelm. (pro sect. *Cereus* (L.) Mill.), *Cactaceae*, in Gray (ed.), *Plantae Fendlerianae Novi-Mexicanae, Memoirs of the American Academy of Arts and Sciences* N.S. 4(1): 50. (10 Feb) 1849.

Bas. *Echinocereus* Engelm. (1848, pro gen.).

Ref. *Echinocereus* Engelm.

Echinocereus (Engelm.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. Echinocereus Engelm. (1848, pro gen.).

Ref. Echinocereus Engelm.

Echinocereus (Engelm.) Engelm. (pro subgen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 22. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 278. 1857].

Bas. Echinocereus Engelm. (1848, pro gen.).

Ref. Echinocereus Engelm.

×***Echinocoxia*** P.V.Heath, *The nothogenera of the Cactaceae*, *Calyx* 1(3): 110. 1992.

Etym. Condensed formula.

Par. Echinocereus Engelm. × *Wilcoxia* Britton & Rose

Ref. Echinocereus Engelm.

×***Echinocylindra*** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 354. 1981.

Etym. Condensed formula.

Par. Echinopsis Zucc. × *Cylindrolobivia* Y.Itô

Ref. Echinopsis Zucc.

×***Echinoferocactus*** P.V.Heath, *The nothogenera of the Cactaceae*, *Calyx* 1(3): 109. 1992.

Etym. Condensed formula.

Par. Echinocactus Link & Otto × *Ferocactus* Britton & Rose

Ref. Echinulocactus Mottram.

Echinofossulocactus Lawr., *Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex*, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 317-318. 1841.

Typ. Not cited.

Lectotyp. *Echinocactus coptogonus* Lem. Designated by Britton & Rose, *The Cactaceae* 3: 109. 1922. The same typification was repeated by Orcutt, *Cactography* 4(1): 5. 1926, and by Higgins, *Study of cacti*: 141. 1933, following Britton & Rose.

Obs. A new lectotype, *Echinocactus helophorus* Lem., was designated by Hunt, Decent re-burial for *Echinofossulocactus*, *Cactus and Succulent Journal of Great Britain* 42(4): 105-107. 1980. A case was presented for the rejection of the lectotypification by Britton & Rose, on the grounds that it was a mechanical selection, and that *E. coptonogonus* is lacking the furrowed groove required by the protologue. However, this species does develop a short groove with age. Also, Britton & Rose typifications are universally accepted if there is otherwise no objection to the selection. Therefore the relectotypification by Hunt is not accepted here. In the vote on *Stenocactus* conservation by the Spermatophyta Committee, Hunt's proposal received mixed acceptance. However, the Committee could not have been aware that the areoles do, in reality, elongate and develop a furrow slowly with age, making this character useless for differentiation. See the conservation proposal by Tjaden under *Stenocactus* (K.Schum.) A.Berger.

+ *Echinogymnocalycium* Mottram nothogen. nov.

Etym. Condensed formula.

Rep. Syn. + *Echinocalycium* P.V.Heath (1992).

Gr-chim. *Echinopsis* Zucc. + *Gymnocalycium* Mittler.

Obs. Replacement necessitated by a change in the ICNCP rules from ed.7 (2004) onwards.

Based on + *Echinogymnocalycium* 'Japan' Mottram **cult. nov.** (= *Echinopsis eyriesii* (Turpin) Pfeiff. & Otto + *Gymnocalycium stenopleurum* F.Ritter.).

Echinoideae Dicht & Lüthy (pro ser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 10. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Mammillaria echinoidea* Quehl.

Ref. *Coryphantha* (Engelm.) Lem.

Echinoidei Doweld (pro ser. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa* Britton & Rose, *Sukkulentny* 4(1-2): 48. (Jan) 2003.

Typ. *Echinocactus echinoides* Salm-Dyck.

Ref. *Copiapoa* Britton & Rose.

Echinolobivia Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 17. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Latin *echinus* (Greek *echinos*), hedgehog or sea-urchin, and the substantive *Lobivia*.

Typ. Not cited.

Obs. Taxon later abandoned, but not before applying the name to one species only, *Lobivia euanthema* Backeb. = *Rebutia oculata* Werderm.

Ref. *Aylosteria* Speg.

Echinomastus Britton & Rose, *The Cactaceae* 3: 78, 147-148. (12 Oct) 1922.

Etym. From the Latin *echinus* (Greek *echinos*), hedgehog or sea-urchin, and *mastos*, breast-like object. A reference to the densely spiny tubercles.

Typ. *Echinocactus erectocentrus* J.M.Coult.

Ref. *Pediocactus* Britton & Rose.

Echinomastus (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen:* viii, 250. (Jul-Aug) 1929.

Bas. *Echinomastus* Britton & Rose (1922, pro gen.).

Ref. *Pediocactus* Britton & Rose.

Echinomastus (Britton & Rose) Soulaire (pro subgen. *Thelocactus* (K.Schum.) Britton & Rose), Famille des Cactacées, Genre 108 *Thelocactus*, *Cactus* (Paris) 10(46-47): 250. 1955 nom. inval. (Art. 41.5).

Bas. *Echinomastus* Britton & Rose (1922, pro gen.).

Ref. *Pediocactus* Britton & Rose.

Echinomelocacti L. (pro infragen. *Cactus* L. nom. rej.), *Species plantarum* 1: 466. (1 May 1753) nom. inval. (Art. 22.2).

Etym. From the Greek *echinos*, hedgehog or sea-urchin, and the pre-Linnaean substantive *Melocactus*.

Typ. Not cited.

Syn. *Cactus* L. nom. rej. infragen. *Cactus*. *Mammillaria* Haw. nom. cons. infragen. *Mammillaria*.

Obs. Includes only 2 species, *Cactus mammillaris* L. & *C. melocactus* L.

Ref. *Mammillaria* Haw. nom. cons.

×***Echinomillaria*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Mammillaria* Haw.

Rep. Syn. ×*Chamaecladodia* P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 104. 1992.

×***Echinomoza*** G.D.Rowley, Intergeneric hybrids in *Cactaceae* – 2004 update, *British Cactus and Succulent Journal* 22(2): 64. (Jul) 2004.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Denmoza* Britton & Rose.

Obs. Based on ×*Trichomoza roseiflora* Font & Picca (2001).

Ref. ×*Cleistopsis* Strigl.

×***Echinonotocactus*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 112. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Notocactus* (K.Schum.) Frič.

Ref. ×*Echinoparodia* Mottram.

Echinonyctanthus Lem., *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 10-11, 55, 84-85. (Feb) 1839 nom. illeg. (Art. 52.1).

Etym. From the Greek *echinos*, hedgehog or sea-urchin, *nox*, night, and the Greek *anthos*, flower.

Rep. Syn. *Cereus* Mill. infragen. *Globosi* Salm-Dyck (1834).

Typ. Not cited.

Obs. Includes the type of *Echinopsis* Zucc. (1837), which Lemaire had been led to believe was ined. at this time (1839). *Echinopsis* appeared in his synonymy, but with a question mark expressing doubt. In the event, *Echinopsis* Zucc. had the priority.

Ref. *Echinopsis* Zucc.

×***Echinoparodia*** Mottram, A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa: 36. (5 Feb) 1990.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Parodia* Speg.

×***Echinopalxochia*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 112. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Nopalxochia* Britton & Rose.

Ref. ×*Echinophyllum* Mottram.

×***Echinophyllum*** Mottram, in Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 110. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Epiphyllum* Haw.

Echinopoa Doweld (pro sect. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa* Britton & Rose, *Sukkulenty* 4(1-2): 48. (Jan) 2003.

Typ. *Echinocactus echinoides* Salm-Dyck.

Ref. *Copiapoa* Britton & Rose.

Echinopsis Zucc. Plantarum novarum vel minus cognitarum, quae in horto botanico herbarioque regio monacensi servantur, fasciculus 3. *Cactaeae*, *Abhandlungen der Mathematisch-Physischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 2: 675, 730, 741. 1837.

Etym. From the Greek *echinos*, hedgehog or sea-urchin, and *-ops*, -like.

Rep. Syn. *Cereus* Mill. infragen. *Globosi* Salm-Dyck (1834).

Typ. Not cited, although the detailed description of the flower is that of *Echinocactus oxygonus* Link. or *Echinocactus eyriesii* Turpin.

Lectotyp. *Echinocactus eyriesii* Turpin. Designated by Britton & Rose, *The Cactaceae* 3: 60. (12 Oct) 1922.

Obs. Although the protologue described the proposed name *Echinopsis* Zucc. as a genus lying between *Echinocactus* and *Cereus*, no combinations in *Echinopsis* were actually made. Indeed, the description is included within the text for the genus *Cereus*, while the only species to be assigned to it retain their combinations in *Cereus*. Nevertheless, the name is clearly stated to be a genus in the protologue and in the index. Use of the name *Echinopsis* by Linnaeus in *Hortus Cliffortianus*: 391. 1738 was an orthographical error for *Echinops*.

Echinopsis (Zucc.) Labour. (pro subgen. *Cereus* (L.) Mill.), *Monographie de la famille des cactées*: xlvii, 287. 1853.

Bas. *Echinopsis* Zucc. (1837, pro gen.).

Ref. *Echinopsis* Zucc.

Echinopsis (Zucc.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Echinopsis* Zucc. (1837, pro gen.).

Ref. *Echinopsis* Zucc.

Echinorebutia Frič (pro subgen. *Rebutia* K.Schum.), *Akklimatisations- und Versuchs-Garten (A. V. Frič) Bestellzettel*: 1. 1933.

Etym. From the Greek *echinos*, hedgehog or sea-urchin, and the substantive *Rebutia*.

Typ. Not cited.

Lectotyp. *Echinocactus fiebrigii* Gürke. Designated by Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 26. 1935.
Ref. *Aylostera* Speg.

Echinorebutia (Frič) Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 26. 1935.

Bas. *Echinorebutia* Frič (1933, pro subgen. *Rebutia* K.Schum.).

Ref. *Aylostera* Speg.

Echinothele Doweld (pro subgen. *Neolloydia* Britton & Rose), Amplification of the genus *Neolloydia* Britton & Rose addenda and corrigenda, in Hunt, *Cactaceae Systematics Initiatives* (9): 21. (Jun) 2000.

Etym. From the Greek *echinos*, hedgehog or sea-urchin, and *thele*, nipple.

Typ. *Neolloydia warnockii* L.D.Benson.

Ref. *Coryphantha* (Engelm.) Lem.

×***Echinulocactus*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. *Echinocactus* Link & Otto × *Echinofossulocactus* Lawr.

Efossus Orcutt, *Cactography* 4(1): 5. 1926 nom. illeg.

Etym. A shortening of *Echinofossulocactus* Lawr.

Rep. Syn. *Echinofossulocactus* Lawr. (1841).

Obs. Orcutt rejected to Lawrence's name because of its length, but that is not an acceptable justification (Art. 51.1). He said: "There is an unwritten law against the use of names of undue length".

Ref. *Echinofossulocactus* Lawr.

Eglandulosae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae anno 1844*: 14. 1845.

Etym. From the Latin *e*, not, and *glandulosus*, full of glands. A reference to the lack of nectariferous glands in the axils.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Ehrenbergiani Vaupel (pro infragen. ["Gruppe"] *Echinocereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 645, 646. (Dec) 1925 nom. inval. (36.2).

Etym. Based on the name of an included species.

Typ. *Cereus ehrenbergii* Pfeiff. = *Cereus cinerascens* DC. Autotype (Art. 22.6).

Obs. Published simultaneously with *Echinocereus* Engelm. infragen. *Glycimorphi* Vaupel, which has the same type (as heterotypic synonyms). Therefore neither is validly published.

Ref. *Echinocereus* Engelm.

Elatae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 156. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia elata* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Elatae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 17. (Jun) 1942.

Bas. *Elatae* (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Elatiores Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 149. (21 Jun) 1919 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Opuntia elatior* Mill. = *Cactus tuna* L. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. ser. *Tunae* (K.Schum.) Britton & Rose (1908).

Ref. *Opuntia* (L.) Mill.

Elatiores (Britton & Rose) A.Cast. (pro subsect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* 6(2): 276, 278. 1957 nom. inval. (Art. 41.5).

Rep. Syn. *Opuntia* (L.) Mill. ser. *Elatiores* Britton & Rose (1919).

Ref. *Opuntia* (L.) Mill.

Elatiores (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 450, 487 (Jan) 1958 nom. inval. (Art. 41.5).

Rep. Syn. *Opuntia* (L.) Mill. ser. *Elatiores* Britton & Rose (1919).

Ref. *Opuntia* (L.) Mill.

Elegantes K.Schum. (pro infragen. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (9): 561, 563. (1 Aug) 1898.

Etym. Based on the name of an included species.

Typ. *Mammillaria elegans* DC. Autotype (Art. 22.6).

Obs. Vaupel repeated this name combination in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632. (Dec) 1925, with his circumscription based on *Neomammillaria* Britton & Rose (1923) species 54-80. Replaced by Hunt with *Mammillaria* Haw. ser.

Supertextae D.R.Hunt (1977) on the speculative grounds that *Mammillaria elegans* does not occur in Hidalgo where Thomas Coulter was thought to have restricted his collecting activities. However, it does occur in the vicinity of Mexico City, which Coulter or one of his plant collectors is unlikely not to have visited.

Ref. *Mammillaria* Haw.

Ellipticae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 41. 1841 nom. inval. (Art. 22.2).

Etym. From the Greek *elliptikos*, elliptic.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Ref. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Ellipticae Salm-Dyck ex Walp. (pro sect. *Opuntia* (L.) Mill.), *Repertorium botanices systematicae* 1(2): 281. (Sep) 1842 nom. inval. (Art. 22.2).

Bas. *Ellipticae* Salm-Dyck (1841, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill. sect. *Opuntia*.

Elongatae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632, 633. (Dec) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Mammillaria elongata* DC. Autotype (Art. 22.6).

Syn. *Mammillaria* Haw. infragen. *Tenues* Pfeiff. (1837); infragen. *Leptocladodae* Lem. nom. illeg. (1839).

Obs. Circumscription based on *Neomammillaria* Britton & Rose (1923) species 82-104.

Includes the type of *Mammilloidia* Buxb. (1951, pro gen.).

Ref. *Mammillaria* Haw.

Elongati Backeb. (pro ser. *Tephrocactus* Lem.), in Backeberg & Knuth, *Kaktus-ABC*: 50, 105. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. A Latin adjective, *elongatus*, lengthened.

Typ. Not cited.

Lectotyp. *Opuntia atroviridis* Werderm. & Backeb. = *Opuntia floccosa* Salm-Dyck ex Winterfeld. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942.

Ref. *Opuntia* (L.) Mill.

Emoryani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 639. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Cereus emoryi* Engelm. Autotype (Art. 10.2, 22.6).

Obs. Based on the same type as *Bergerocactus* Britton & Rose (1909, pro gen.).

Ref. *Nyctocereus* (A. Berger) Britton & Rose.

Emorycactus Doweld, De polyfyilie van het geslacht *Echinocactus*, *Succulenta* 75(6): 268-270-278. 1996.

Etym. Named for William Hemsley EMORY (1811-1887).

Typ. *Echinocactus polycephalus* Engelm. & J.M. Bigelow.

Ref. *Echinocactus* Link & Otto.

Encephalocarpus A. Berger, *Kakteen*: 331-332. (Jul-Aug) 1929.

Etym. From the Greek en, in, *kephale*, head, and *karpos*, fruit. A reference to the fruit being buried in the woolly apex of the plant.

Typ. *Ariocarpus strobiliformis* Werderm. Autotype (Art. 10.2). The only included species.

Ref. *Coryphantha* (Engelm.) Lem.

Encephalocarpus (A.Berger) Halda (pro sect. *Ariocarpus* Scheidw.), New System of the genus *Ariocarpus*, *Acta Musei Richnoviensis, Sect. Natur.* **5**(1): 38. 1998.

Bas. Encephalocarpus A.Berger (1929, pro gen.).

Ref. Coryphantha (Engelm.) Lem.

Engelmannia F.M.Knuth (pro subgen. *Opuntia* (L.) Mill.), in Backeb., Unterfamilie II: *Opuntieae* Br. & R., *Blätter für Kakteenforschung* **3**(2): [3-7]. 1936.

Etym. Named for the German-born American botanist George ENGELMANN (1809-1884).

Rep. Syn. Opuntia (L.) Mill. infragen. *Clavatae* Engelm. (1856).

Typ. Opuntia clavata Engelm. Autotype (Art. 7.4). Same as replaced synonym.

Syn. Corynopuntia F.M.Knuth (1936, pro gen.); (F.M.Knuth) Bravo (1972, pro subgen. *Opuntia* (L.) Mill. nom. illeg.)

Obs. The correct name for *Corynopuntia* F.M.Knuth when used at the rank of subgenus.

Ref. Opuntia (L.) Mill.

Engelmanniani Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* **36**(4): 78. (Apr) 1985 (“Engelmanniana”).

Etym. Based on the name of the type species.

Typ. Cereus engelmannii Parry ex Engelm.

Ref. Echinocereus Engelm.

Eomatucana F.Ritter, Neue Kakteen-Entdeckungen in Peru, *Kakteen und andere Sukkulente* **16**(12): 230. (Dec) 1965.

Etym. From the Greek *eos*, dawn, and the substantive *Matucana*. A reference to its ancient origin.

Typ. Eomatucana oreodoxa F.Ritter.

Ref. Matucana Britton & Rose.

Eonotocactus Doweld (pro subgen. *Notocactus* (K.Schum.) Frič), *Ritterocactus* & *Peronocactus*: New generic segregates from polyphyletic *Notocactus*. 1. Formal taxonomy and classification, *Sukkulenty* **2**(2): 23. (25 Dec) 1999.

Etym. From the Greek *eos*, dawn, and the substantive *Notocactus*. A reference to its ancient origin.

Typ. Eriocactus magnificus F.Ritter nom. incorr. = *Notocactus magnificus* (F.Ritter) Krainz.

Ref. Parodia Speg.

Eonotocactus (Doweld) Doweld (pro subgen. *Eriocactus* Backeb. nom. illeg.), *Turczaninowia* **3**(3): 6. 2000 nom. incorr. (Art. 11.4).

Bas. Eonotocactus Doweld (1999, pro subgen. *Notocactus* (K.Schum.) Frič).

Obs. Combined with an illegitimate generic name.

Ref. Parodia Speg.

Eopuntia R.W.Chaney, A fossil cactus from the Eocene of Utah, *American Journal of Botany* **31**(8): 507. (7 Nov) 1944.

Etym. From the Greek *eos*, dawn, and the substantive *Opuntia*.

Typ. Eopuntia douglassii R.W.Chaney.

Ref. A fossil genus from the Eocene sediments of the Green River Formation, Utah. Later re-evaluation has suggested that it was really the tuberous roots of a sedge of the genus *Cyperus* L. (*Cyperaceae*).

Eowigginsia Doweld (pro sect. *Peronocactus* Doweld), *Ritterocactus* & *Peronocactus*: New generic segregates from polyphyletic *Notocactus*. 1. Formal taxonomy and classification, *Sukkulenty* **2**(2): 24. (25 Dec) 1999 nom. incorr. (Art. 11.4).

Etym. From the Greek *eos*, dawn, and the substantive *Wigginsia*. A reference to its ancient origin.

Typ. Notocactus horstii F.Ritter.

Ref. Parodia Speg.

Eowigginsia (Doweld) Doweld (pro sect. *Wigginsia* D.M.Porter), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* **3**(1-2): 61. 2000.

Rep. Syn. Eowigginsia Doweld nom. incorr. (1999, pro sect. *Peronocactus* Doweld nom. illeg.).

Typ. Notocactus horstii F.Ritter.

Ref. Parodia Speg.

Epallogonium K.Schum. (pro sect. *Rhipsalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* **3**(6a): 198. (Apr 18) 1894.

Etym. From the Greek *epi*, upon, *allos*, another, *gony*, knee-joint & *gonios*, offspring or wing. A reference to the alternately arranged articulated stems.

Typ. Rhipsalis paradoxa Salm-Dyck. Autotype (Art. 10.2). The only included species.

Ref. Rhipsalis Gaertn.

Epallogonium (K.Schum.) K.Schum. (pro subgen. *Rhipsalis* Gaertn.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 615. (1 Oct) 1898.

Bas. Epallogonium K.Schum. (1894, pro sect. *Rhipsalis* Gaertn.).

Ref. Rhipsalis Gaertn.

epicactus G.D.Rowley, in Ginns, *Epiphyllums again (1)*, *National Cactus & Succulent Journal* **15**(3): 56. 1960; Rowley, *Illustrated encyclopaedia of succulents*: 72. 1978; Stafleu et al. (ed.), *International code of botanical nomenclature 1981*: 74. 1983 nom. vulg.

Obs. Collective term for all hybrid epiphytic cacti belonging to the subtribe *Epiphyllinae*.

×***Epicereus*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Rep. Syn. ×*Buchheimara* P.V.Heath, *The nothogenera of the Cactaceae*, *Calyx* **1**(3): 109. 1992.

Par. Echinocereus Engelm. × *Epiphyllum* Haw.

+ ***Epigymnocalycium*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Rep. Syn. + *Hylogymnocalycium* G.D.Rowley (2005).

Gr.-Chim. Gymnocalycium Mittler + *Epiphyllum* Haw.

×***Epinicereus*** H.M.Wegener, 1935 epiphyllum seeds for sale, *Cactus & Succulent Journal* (US) 7(5): 79. 1935 nom. inval. (Art. H.9.1)

Etym. Condensed formula.

Par. Not cited. Presumably *Epiphyllum* Haw. × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniphyllum* Backeb.

×***Epinicereus*** H.M.Wegener ex P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 113. (Jul) 1992 nom. illeg. (Art. 52.1).

Etym. Condensed formula.

Par. *Epiphyllum* Haw. × *Selenicereus* (A.Berger) Britton & Rose.

Syn. ×*Seleniphyllum* Backeb. (1959).

Ref. ×*Seleniphyllum* Backeb.

Epiphyllanthus A.Berger, A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 83-84. 1905.

Typ. *Epiphyllum obtusangulum* G.Lindb.

Obs. Validated as a descriptio generico-specifica (Art. 38.5).

Ref. *Rhipsalis* Gaertn.

Epiphyllanthus (A.Berger) D.R.Hunt (pro subgen. *Schlumbergera* Lem.), NCL updates, etc., *Cactaceae Consensus Initiatives* (26): 18. (Mar) 2012.

Bas. *Epiphyllanthus* A.Berger (1905, pro gen.)

Ref. *Rhipsalis* Gaertn.

Epiphyllopsis A.Berger (pro subgen. *Epiphyllum* Haw.), *Kakteen*: vi, 97. (Jul-Aug) 1929.

Etym. From the substantive *Epiphyllum* and the Latin *-opsis*, -like.

Typ. *Epiphyllum russellianum* var. *gaertneri* Regel = *Epiphyllum gaertneri* (Regel)

W.Watson. Autotype (Art. 22.6). The only included species.

Ref. *Rhipsalis* Gaertn.

Epiphyllopsis A.Berger, *Kakteen*: vi, 97, 341. (Jul-Aug) 1929.

Etym. From the substantive *Epiphyllum* and the Latin *-opsis*, -like.

Typ. *Epiphyllopsis gaertneri* (Regel) A.Berger = *Epiphyllum russellianum* var. *gaertneri*

Regel. Autotype (Art. 22.6). The only included species.

Ref. *Rhipsalis* Gaertn.

Epiphyllum Haw., *Synopsis plantarum succulentarum*: 197. 1812.

Etym. From the Greek prefix *epi-*, upon, and *phyllus*, leaved, referring to the way that the flowers arise from leaf-like stems.

Typ. *Cactus phyllanthus* L. Autotype (Art. 10.2). The only included element.

Epiphyllum Pfeiff. [non Haw.], *Enumeratio diagnostica cactearum hucusque cognitarum*: 127. (Feb) 1837 nom. illeg. (Art. 53.1).

Etym. From the Greek prefix *epi-*, upon, and *phyllus*, leaved, referring to the way that the flowers arise from leaf-like stems.

Typ. *Epiphyllum truncatum* Haw. Autotype (Art. 10.2). The only included species.

Obs. Technically contained two species, but both are referable to *Epiphyllum truncatum* Haw. Taxon later replaced with *Zygocactus* K.Schum. (1890).

Ref. *Rhipsalis* Gaertn.

Epiphyllum Pfeiff. ex Labour. (pro subgen. *Athrophyllum* Labour.), *Monographie de la famille des cactées*: xlvii, 420. 1853.

Rep. Syn. *Epiphyllum* Pfeiff. nom. illeg. (1837).

Typ. *Epiphyllum truncatum* Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. The earliest name for *Zygocactus* K.Schum. at the rank of subgenus when not in combination with *Epiphyllum* Haw.

Ref. *Rhipsalis* Gaertn.

Epiphyllum (Haw.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Epiphyllum* Haw. (1812, pro gen.).

Ref. *Epiphyllum* Haw.

×***Epipilosocereus*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Rep. Syn. ×*Cephalocereus* G.D.Rowley (1980).

Par. *Epiphyllum* Haw. × *Pilosocereus* Byles & G.D.Rowley.

×***Epipuntia*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Par. *Epiphyllum* Haw. × *Opuntia* (L.) Mill.

Syn. ×*Beahmara* P.V.Heath, *Errors in the ESA Directory*, *Calyx* 1(2): 68. 1992.

Epithelantha F.A.C.Weber, *Mammillaria*, in Bois, *Dictionnaire d'horticulture* 2(26): 804. (Jan) 1898 nom. inval. (Art. 36.1a).

Etym. From the Greek *epi-*, upon, *thele*, nipple, and *anthos*, flower. A reference to the position of the flowers from the spiniferous areole rather than the axils.

Typ. *Mammillaria micromeris* Engelm. Autotype (Art. 10.2). The only included species.

Obs. This name was first applied by Weber (1898), along with an invalid combination in *Echinocactus*, briefly distinguishing the genus from *Mammillaria* by the position of its flowers at the tubercle tips. However, he placed his new name in the synonymy of *Mammillaria*, thereby indicating non-acceptance of his own new name. Thus, in accordance with Art. 36.1a, this made *Epithelantha* F.A.C.Weber invalid in its original place of publication.

Ref. *Epithelantha* Britton & Rose.

Epithelantha F.A.C.Weber ex Britton & Rose, *The Cactaceae* 3: 77, 92-93. (12 Oct) 1922.

Etym. From the Greek *epi-*, upon, *thele*, nipple, and *anthos*, flower. A reference to the position of the flowers from the spiniferous areole rather than the axils.

Typ. *Mammillaria micromeris* Engelm.

×**Epixochia** G.D.Rowley, in Backeberg, *Die Cactaceae* 6: 3556. (Jun) 1962.

Etym. Condensed formula.

Par. Epiphyllum Haw. × *Nopalxochia* Britton & Rose (×*Epixochia amaranthina* G.D.Rowley).

Ref. Epiphyllum Haw.

Erdisia Britton & Rose, *The Cactaceae* 2: 2, 104. (9 Sep) 1920.

Etym. Named for Ellwood C. ERDIS, in charge of the topographical work of the Yale University Peruvian Expedition, 1914.

Typ. Cereus squarrosus Vaupel.

Ref. Corryocactus Britton & Rose.

Erdisia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi,123. (Jul-Aug) 1929.

Bas. Erdisia Britton & Rose (1920, pro gen.).

Ref. Corryocactus Britton & Rose.

Erectae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 41. 1841 nom. inval. (Art. 22.2).

Etym. From the Latin *erectus*, erect or upright.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Ref. Opuntia (L.) Mill.

Erecti K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 247. (20 Oct) 1897.

Etym. A Latin adjective, *erectus*, erect.

Typ. Not cited.

Lectotyp. Cereus engelmannii Parry ex Engelm. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 44. (Jun) 1942.

Ref. Echinocereus Engelm.

Erecti (K.Schum.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 80. (31 May) 1905.

Bas. Erecti K.Schum. (1897, pro infragen. *Echinocereus* Engelm.).

Ref. Echinocereus Engelm.

Erecti (K.Schum.) Bravo (pro sect. *Echinocereus* Engelm.), Nuevas combinaciones y taxa VI, *Cactaceas y Suculentas Mexicanas* 27(1): 16. (Jan-Mar) 1982 (“Erecta”).

Bas. Erecti K.Schum. (1897, pro infragen. *Echinocereus* Engelm.).

Obs. Bravo superfluously relectotypified this taxon with *Cereus fendleri* Engelm.

Ref. Echinocereus Engelm.

Erectiflori Backeb. (pro subser. *Pilocereus* Engelm.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 51. (Jun) 1942.

Etym. From the Latin *erectus*, erect, and *flos*, flower.

Typ. *Pilocereus bradei* Backeb. & Voll.

Ref. *Cereus* (L.) Mill.

Erectiores Haw. (pro infragen. *Cereus* (L.) Mill.), Decas duodecima novarum plantarum succulentarum, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. 7(38): 110. (Feb) 1830.

Etym. From the Latin comparative adjective *erectior*, more erect.

Typ. *Cereus setiger* Haw. = *Cactus speciosus* Cav. Autotype (Art. 10.2). The only included species.

Ref. *Cereus* (L.) Mill.

Erianthi A.Berger (pro ser. *Echinocactus* Link & Otto), *Kakteen*: vii, 228. (Jul-Aug) 1929.

Etym. From the Greek *erio*, woolly, and *anthos*, flower.

Typ. Not cited.

Ref. *Echinocactus* Link & Otto.

Erinacei Lawr. (pro sect. *Echinocactus* Link & Otto), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 317. 1841 ("Erinaceae").

Etym. Based on the name of an included species.

Typ. *Cactus erinaceus* Haw. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Erinacei (Lawr.) Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 623, 626. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Stated to be *Malacocarpus* Salm-Dyck nom. illeg. (1850, pro gen.).

Typ. *Cactus erinaceus* Haw. Autotype (Art. 22.6).

Obs. Not based on the type of the replaced synonym, which is *Echinocactus sellowii* Link & Otto, although Vaupel may have thought it was *Cactus erinaceus* Haw. at the time.

Technically a new combination of *Erinacei* Lawr., but inadvertent.

Ref. *Parodia* Speg.

Eriocactea (Buxb.) F.H.Brandt (pro subgen. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* 7(4): 58, 61. 1982.

Bas. *Eriocactus* Buxb. (1967, pro subgen. *Notocactus* (K.Schum.) Frič).

Ref. *Parodia* Speg.

Eriocactus Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 37, 76. (Jun) 1942 nom. illeg. (Art. 52.1).

Etym. From the Greek *erion*, wool, and the substantive *Cactus*.

Typ. *Echinocactus schumannianus* Nicolai.

Syn. *Erioccephala* Backeb. (1938).

Obs. A proposal to conserve *Eriocactus* over *Erioccephala* was made by Doweld, in *Taxon* 49(3): 566-568. 2000, made necessary by changes to the St. Louis Code (2000) which no

longer treats generic names with different genders as homonyms. This proposal was rejected in *Taxon* **51**(4): 795. 2002, surprising since the maintenance of current usage is supposed to be important.

Ref. *Parodia* Speg.

Eriocactus Backeb. ex Buxb. (pro subgen. *Notocactus* (K.Schum.) Frič), Gattung *Notocactus*, in Krainz, *Die Kakteen* (35) CVIc: [4], [15-16]. (1 Jan) 1967.

Rep. Syn. *Eriocactus* Backeb. nom. illeg. (1942, pro gen.).

Typ. *Echinocactus schumannianus* Nicolai. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Parodia* Speg.

Eriocarpi Engelm. (pro infragen. *Echinocactus* Link & Otto), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 20. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 276. 1857] nom. nud.

Etym. From the Greek *erion*, wool, and *karpos*, fruit.

Typ. Not cited.

Ref. *Echinocactus* Link & Otto.

Erioccephala Backeb., Die Diagnosen neuer Gattungen und Untergattungen. *Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [9], [12], [15], [18]. 1938.

Typ. Not cited.

Lectotyp. *Echinocactus schumannianus* Nicolai. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 37. (Jun) 1942.

Syn. *Eriocactus* Backeb. (1942) nom. illeg.

Obs. The St. Louis Code (2000) onwards explicitly treats generic names with different genders as not homonyms. A proposal to conserve *Eriocactus* over *Erioccephala* was made by Doweld, in *Taxon* **49**(3): 566-568. 2000. This proposal was rejected in *Taxon* **51**(4): 795. 2002.

Ref. *Parodia* Speg.

Erioccephala (Backeb.) Havlíček (pro subgen. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 77. 1988 (publ. 1989) nom. incorr. (Art. 11.4).

Bas. *Erioccephala* Backeb. (1942, pro gen.).

Syn. *Notocactus* (K.Schum.) Frič subgen. *Eriocactus* (Backeb.) Buxb. (1967).

Obs. *Eriocactus* is the earliest legitimate name in the rank of subgenus and therefore the name that should have been used.

Ref. *Parodia* Speg.

Eriocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 60, 74, t.7, 9-10. (31 May) 1905.

Etym. From the Greek *erion*, wool, and the substantive *Cereus*.

Typ. *Cereus tortuosus* J.Forbes ex Otto & A.Dietr.

Ref. *Echinopsis* Zucc.

Eriocereus (A.Berger) Riccob., *Studi sulle Cattede del R. Orto Botanico di Palermo, Bollettino delle Reale Orto Botanico e Giardino Coloniale di Palermo* **8**: 238. 1909.
Bas. Eriocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).
Ref. Echinopsis Zucc.

Eriocereus (A.Berger) Britton & Rose (pro infragen. *Harrisia* Britton), *The Cactaceae* **2**: 148. (9 Sep) 1920.
Bas. Eriocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).
Ref. Echinopsis Zucc.

Eriocereus (A.Berger) Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 638. (Dec) 1925.
Etym. Based on the name of an included species.
Bas. Eriocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).
Ref. Echinopsis Zucc.

Eriocereus (A.Berger) A.R.Franck (pro sect. *Harrisia* Britton), in Franck & al., *Phylogeny, biogeography, and infrageneric classification of Harrisia. Systematic Botany* **38**(1): 218. 2013.
Bas. Eriocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).
Ref. Echinopsis Zucc.

×***Eriocereopsis*** Doweld, *Re-classification of Rhipsalideae, a polyphyletic tribe of the Cactaceae Durande, Sukkulenty* **4**(1-2): 32. (Jan) 2003.
Par. Echinopsis Zucc. × *Eriocereus* (A.Berger) Riccob.
Ref. ×Echinophyllum Mottram

Eriophori Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925.
Etym. Based on the name of an included species.
Typ. Cereus eriophorus Pfeiff. Autotype (Art. 22.6).
Obs. Further subdivided into *Cereus* infragen. *Euharrisia* Britton & Rose ex Vaupel, & *Cereus* infragen. *Eriocereus* (A.Berger) Vaupel.
Ref. Echinopsis Zucc.

Eriospermae A.Cast. (pro subsect. *Opuntia* (L.) Mill.), *Revision de las cactaceas Argentinas, Revista de la Facultad de Ciencias Agrarias* **6**(2): 276, 277. 1957.
Etym. From the Greek *erion*, wool, and *sperma*, seed.
Typ. Not cited.
Ref. Opuntia (L.) Mill.

Eriospermae F.H.Brandt (pro ser. *Parodia* Speg.), *Die Gliederung der Gattung Parodia Spegazzini, Kakteen- und Orchideen-Rundschau* **7**(4): 57. 1982.
Etym. From the Greek *erion*, wool, and *sperma*, seed.
Typ. Echinocactus chrysacanthion K.Schum.
Ref. Parodia Speg.

Eriosyce Phil., *Descripción de las nuevas plantas*: 63. 1872.

Etym. From the Greek *erion*, wool, and *syce*, fig. A reference to the wool-covered fruit.

Typ. *Echinocactus sandillon* Gay = *Echinocactus auratus* Pfeiff. Autotype (Art. 10.2).

The only included species.

Eriosyce (Phil.) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 199. (Jul-Aug) 1929.

Bas. *Eriosyce* (1872, pro gen.).

Ref. *Eriosyce* Phil.

Eruca P.V.Heath (pro sect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 102. 1992.

Etym. Based on the name of the type species.

Rep. Syn. *Cereus* (L.) Mill. infragen. *Prostrati* K.Schum. (1897).

Typ. *Cereus eruca* K.Brandege.

Ref. *Stenocereus* (A.Berger) Riccob.

Erythrocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *erythros*, red, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Erythrocerus Houghton, Recapitulation theory, *Cactus and Succulent Journal of the Cactus and Succulent Society of America* 3(10): 169. (Apr) 1932 nom. nud.

Etym. From the Greek *erythros*, red, and the substantive *Cereus*.

Typ. Not cited.

Obs. Proposed in anticipation of future publication.

Erythrorhopsis A.Berger, Einiges über *Rhopsis*, *Monatsschrift für Kakteenkunde* 30(1): 4. (Jan) 1920.

Etym. From the Greek *erythros*, red, and the substantive *Rhopsis*. A reference to the colour of the fruit.

Typ. *Rhopsis pilocarpa* G.A.Loefgr. Autotype (Art. 10.2). The only included species.

Ref. *Rhopsis* Gaertn.

Escobaria Britton & Rose, *The Cactaceae* 4: 3, 53. (9 Oct) 1923.

Etym. Named for the Mexican brothers Rómulo & Numa ESCOBAR, of Mexico City and Juárez.

Typ. *Mammillaria tuberculosa* Engelm.

Ref. *Coryphantha* (Engelm.) Lem.

Escobaria (Britton & Rose) A.Berger (pro subgen. *Coryphantha* (Engelm.) Lem.), *Kakteen*: viii, 280. (Jul-Aug) 1929.

Bas. *Escobaria* Britton & Rose (1923, pro gen.)

Ref. *Coryphantha* (Engelm.) Lem.

Escobaria (Britton & Rose) H.E.Moore (pro sect. *Coryphantha* (Engelm.) Lem.), Additional nomenclatural notes for *Hortus Third: Cactaceae, Baileya* **20**(1): 29. 1976.

Bas. Escobaria Britton & Rose (1923, pro gen.)

Ref. Coryphantha (Engelm.) Lem.

Escobariopsis Doweld, *Konspekt phylogenetiskoy systemy triby Cactee IV, Sukkulenty* **3**(1-2): 23. 2000.

Etym. From the substantive *Escobaria* and the Latin *-opsis*, -like.

Typ. Cactus proliferus Mill.

Ref. Mammillaria Haw.

Escobesseyea Hester (pro subgen. *Neobesseyea* Britton & Rose), *Cacti...By their seeds ye shall know them, Desert Plant Life* **13**(12): 191-192. (Dec) 1941 nom. inval. (Art. 36.1b, 39.1).

Etym. Formula based on *Escobaria* and *Neobesseyea*.

Typ. Mammillaria dasyacantha Engelm. Autotype (Art. 10.2). The only included species.

Obs. Proposed in anticipation of future validation.

Ref. Coryphantha (Engelm.) Lem.

Escobesseyea Hester, *Escobesseyea* gen. nov., *Desert Plant Life* **17**(2): 23-25. (Feb) 1945.

Etym. Formula based on the substantives *Escobaria* and *Neobesseyea*.

Typ. Not cited.

Ref. Coryphantha (Engelm.) Lem.

Escobrittonia Doweld, *Konspekt phylogenetiskoy systemy triby Cactee IV, Sukkulenty* **3**(1-2): 17. 2000.

Etym. Formula based on the substantive *Escobaria*, and in commemoration of Nathaniel Lord BRITTON (1859-1934).

Typ. Coryphantha gracilis L.Bremer & A.B.Lau.

Ref. Coryphantha (Engelm.) Lem.

Escocoryphantha Doweld, *Konspekt phylogenetikoi systemy Cactee II. Systema podtry Pediocactinae-Thelocactinae-Coryphanthinae, Sukkulenty* **2**(1): 10. (25 Jul) 1999. [Repeated in *Conspectus systematis tribus Cactee, Novitates systematicae plantarum vascularium* **32**: 117. 2000].

Typ. Escobaria henricksonii Glass & R.C.Foster.

Rep. Syn. Escobaria subgen. *Protomammillaria* Václav John & Říha (1981).

Obs. Escobaria sect. *Pleurantha* N.P.Taylor (1983) has priority in the rank of section.

Ref. Coryphantha (Engelm.) Lem.

Escontria Rose, *Studies of Mexican and Central American plants 5, Contributions from the U.S. National Herbarium* **10**(3): 125. (5 Dec) 1906.

Etym. Named for Don Blas ESCONTRÍA (-1906), Mexican Ministro de Fomento at the time of his death.

Typ. Cereus chiotilla F.A.C.Weber. Autotype (Art. 10.2). The only included species.

Ref. Stenocereus (A.Berger) Riccob.

Escontria (Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 169. (Jul-Aug) 1929.

Bas. Escontria Rose (1906, pro gen.).

Ref. Stenocereus (A.Berger) Riccob.

Escontria (Rose) P.V.Heath (pro sect. *Myrtillocactus* Console), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 105. 1992.

Bas. Escontria Rose (1906, pro gen.).

Ref. Stenocereus (A.Berger) Riccob.

×***Espocana*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 117. 1992.

Etym. Condensed formula.

Par. Espostoa Britton & Rose × *Matucana* Britton & Rose.

×***Espostingia*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* 37(2): 48. (Jun) 1982.

Etym. Condensed formula.

Par. Espostoa Britton & Rose × *Browningia* Britton & Rose.

Espostoa Britton & Rose, *The Cactaceae* 2: 2, 60. (9 Sep) 1920.

Etym. Named for Nicolas E. ESPOSTO, Peruvian botanist at the Escuela Nacional de Agricultura, Lima.

Typ. Cactus lanatus Humb., Bonpl. & Kunth. Autotype (Art. 10.2). The only included species.

Espostoa (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. (Jul-Aug) 1929.

Bas. Espostoa Britton & Rose (1920, pro gen.).

Ref. Espostoa Britton & Rose.

×***Espostocactus*** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 38. (5 Feb) 1990.

Etym. Condensed formula.

Par. Cleistocactus Lem. × *Espostoa* Britton & Rose.

Espostoopsis Buxb., Gattung *Espostoopsis* F. Buxbaum genus novum, in Krainz, *Die Kakteen* (38-39) CVa: [1-4]. (1 Jul) 1968.

Etym. From the substantive *Espostoa*, and the Latin *-opsis*, -like.

Typ. Cereus dybowski Rol.-Goss.

Ref. Austrocephalocereus Backeb.

Espostoopsis (Buxb.) Buxb. (pro subgen. *Austrocephalocereus* Backeb.), Gattung *Austrocephalocereus*, in Krainz, *Die Kakteen* (44-45) CVa: [4]. (1 Oct) 1970.

Bas. Espostoopsis Buxb. (1968, pro gen.)

Ref. Austrocephalocereus Backeb.

Estevesia Braun, in Braun & Esteves P., *Estevesia alex-bragai* (*Cactaceae*) – eine neue monotypische Gattung aus Goiás, Zentral-Brasilien, *Kakteen und andere Sukkulente* **60**(3): 63-64-65-70. (Mar) 2009.

Etym. Named for Eddi ESTEVES Pereira, a well known Brazilian cactus specialist.

Typ. *Estevesia alex-bragai* Braun & Esteves.

Ref. *Selenicereus* (A. Berger) Britton & Rose.

Etuberculatae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto dykensi cultae anno 1844*: 49. 1845.

Etym. From the Latin *e-*, not, and *tuberculatus*, tuberculate.

Typ. *Opuntia poeppigii* Otto ex Pfeiff. = *Maihuenia poeppigii* (Pfeiff.) K. Schum. The only included species.

Obs. Infrageneric name abandoned and its species re-evaluated as *Pereskia* (L.) Mill. by Salm-Dyck (1850: 76).

Ref. *Maihuenia* (Phil. ex F.A.C. Weber) K. Schum.

Etuberculatae Salm-Dyck [non Salm-Dyck 1845] (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto dykensi cultae anno 1849*: 72. 1850 nom. illeg. (Art. 53.1).

Etym. From the Latin *e-*, not, and *tuberculatus*, tuberculate.

Typ. *Opuntia clavarioides* Pfeiff. Autotype (Art. 10.2). The only included species.

Obs. A later homonym of *Opuntia* (L.) Mill. infragen. *Etuberculatae* Salm-Dyck (1845).

Ref. *Opuntia* (L.) Mill.

Etuberculatae Salm-Dyck ex Backeb. (pro ser. *Austrocyliodropuntia* Backeb.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941 Zweiter Teil*: 13. (Jun) 1942 nom. illeg. (Art. 52.1).

Rep. Syn. *Opuntia* (L.) Mill. infragen. *Etuberculatae* Salm-Dyck (1850) with new type.

Typ. *Opuntia albiflora* K. Schum. = *Opuntia salmiana* Parm. ex Pfeiff.

Obs. Includes the type of *Opuntia* (L.) Mill. ser. *Salmianae* Britton & Rose (1919), so that is the epithet that ought to have been adopted.

Ref. *Opuntia* (L.) Mill.

Euancistracantha Buxb. (pro subgen. *Chilita* Orcutt), Die Gattungen der Mammillarienstufe, *Sukkulente* **5**: 18. (May) 1954.

Etym. From the Greek *eu-*, well, *ankistron*, hooked, and *akantha*, spine.

Typ. *Mammillaria bombycina* Quehl.

Obs. This taxon is not to be confused with *Ancistracanthae* K. Schum. (pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Euariocarpus W.T. Marshall (pro subgen. *Ariocarpus* Scheidw.), Revision of the genus *Ariocarpus*, *Cactus and Succulent Journal* (US) **18**(4): 56. (Apr) 1946 nom. inval. (Art. 21.3, 39.1)

Typ. Not cited. Presumably *Ariocarpus retusus* Scheidw.

Syn. *Ariocarpus* Scheidw. subgen. *Ariocarpus*.

Ref. *Ariocarpus* Scheidw.

Euarthrocerus Backeb. (pro subgen. *Arthrocerus* A.Berger), Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 153. (Sep-Oct) 1950 nom. inval. (Art. 21.3).
Typ. Cereus microsphaericus A.Berger non K.Schum. nom. illeg. = *Cereus glaziovii* K.Schum.

Syn. Arthrocerus A.Berger subgen. *Arthrocerus*.

Ref. Echinopsis Zucc.

Euastrophytum Backeb. (pro subgen. *Astrophytum* Lem.), Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 154. (Sep-Oct) 1950 nom. inval. (Art. 21.3).

Typ. Astrophytum myriostigma Lem.

Syn. Astrophytum Lem. subgen. *Astrophytum*.

Ref. Astrophytum Lem.

Eucarnegiea Backeb. (pro subgen. *Carnegiea* Britton & Rose), Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 154. (Sep-Oct) 1950 nom. inval. (Art. 21.3).

Typ. Cereus giganteus Engelm.

Syn. Carnegiea Britton & Rose subgen. *Carnegiea*.

Ref. Cephalocereus Pfeiff.

Eucephalocereus Backeb. (pro subgen. *Cephalocereus* Pfeiff.), Die Diagnosen neuer Gattungen und Untergattungen. *Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [8], [13], [18], [21]. 1938 nom. inval. (Art. 21.3).

Typ. Cephalocereus senilis Pfeiff.

Syn. Cephalocereus Pfeiff. subgen. *Cephalocereus*.

Ref. Cephalocereus Pfeiff.

Eucereus Miq. (pro subgen. *Cereus* (L.) Mill.), Genera cactearum, *Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach* **2**: 112. 1839 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. Cereus (L.) Mill. subgen. *Cereus*.

Obs. Stated to be based on “*Cereus auctt.*”.

Ref. Cereus (L.) Mill.

Eucereus Griseb. (pro sect. *Cereus* (L.) Mill.), *Flora of the British West Indian Islands* (3): 301. (late) 1860 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. Cereus (L.) Mill. sect. *Cereus*.

Ref. Cereus (L.) Mill.

Eucereus A.Berger [non Miq.] (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 61, 75-78, t.11-12. (31 May) 1905 nom. inval. (Art. 21.3).

Typ. Not cited.

Obs. This mistaken revision in the application of *Cereus* (L.) Mill. seems to have arisen in response to Engelmann’s inclusion of some of these taxa in that genus. However, the type of

Cereus (L.) Mill. fell outside Engelmann's geographical range. Berger compounded his error by transferring the typical *Cereus* to his subgenus *Piptanthocereus* (q.v.).

Ref. *Nyctocereus* (A.Berger) Britton & Rose, *Selenicereus* (A.Berger) Britton & Rose, *Peniocereus* (A.Berger) Britton & Rose, *Heliocereus* (A.Berger) Britton & Rose, *Phyllocereus* Miq.

Eucereus Backeb. (pro subgen. *Cereus* (L.) Mill.), *Nova genera et subgenera, Cactus and Succulent Journal* (US) **22**(5): 154. (Sep-Oct) 1950 nom. inval. (Art. 21.3).

Typ. *Cactus hexagonus* L.

Syn. *Cereus* (L.) Mill. subgen. *Cereus*.

Ref. *Cereus* (L.) Mill.

Eucleistocactus Buxb. (pro subgen. *Cleistocactus* Lem.), *La division du genre Cleistocactus, Cactus* (Paris) **11**(51): 90. (Oct) 1956 nom. inval. (Art. 21.3).

Typ. *Cereus baumannii* Lem.

Syn. *Cleistocactus* Lem. subgen. *Cleistocactus*.

Ref. *Cleistocactus* Lem.

Eucoryphantha A.Berger (pro subgen. *Coryphantha* (Engelm.) Lem.), *Kakteen*: viii, 266, 267. (Jul-Aug) 1929 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Coryphantha* (Engelm.) Lem. subgen. *Coryphantha*.

Ref. *Coryphantha* (Engelm.) Lem.

Euebnerella Buxb. (pro subgen. *Chilita* Orcutt), *Die Gattungen der Mammillarienstufe, Sukkulantenkunde* **5**: 20. (May) 1954.

Etym. From the Greek prefix *eu-*, good or true, and the substantive *Ebnerella*.

Typ. *Mammillaria wildii* A.Dietr.

Ref. *Mammillaria* Haw.

Euebnerella (Buxb.) Buxb. (pro ser. *Mammillaria* Haw.), *Vorschläge zur Wiedervereinigung von Gattungen mit der Gattung Mammillaria, Kakteen und andere Sukkulanten* **7**(1): 7 (Feb) 1956 nom. inval. (Art. 41.5).

Bas. *Euebnerella* Buxb. (1954, pro subgen. *Chilita* Orcutt).

Ref. *Mammillaria* Haw.

Euechinocactus K.Schum. (pro sect. *Echinocactus* Link & Otto), *Cactaceae*, in Martius, *Flora Brasiliensis* **4**(2): 245. (1 Sep) 1890 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Echinocactus* Link & Otto sect. *Echinocactus*, but only species of *Parodia* included.

Ref. *Parodia* Speg.

Euechinocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292. (20 Oct) 1897 nom. inval. (Art. 21.3).

Rep. Syn. *Echinocactus* Link & Otto. infragen. *Macrogoni* Salm-Dyck non Lem. (1850).

Typ. Not cited.

Obs. Replaced synonym cited as *Macrogoni* Lem., but that was invalid.

Ref. *Ferocactus* Britton & Rose.

Euechinopsis Werderm. (pro infragen. *Echinopsis* Zucc.), in Backeberg, *Neue Kakteen*: 83. 1931 nom. inval. (Art. 21.3.).

Etym. From the Greek prefix *eu-*, good or true, and the substantive *Echinopsis*.

Typ. *Echinocactus leucanthus* Gillies ex Salm-Dyck. Autotype (Art. 10.2). The only included species.

Ref. *Echinopsis* Zucc.

Euerdisia Backeb. (pro subgen. *Erdisia* Britton & Rose), *Erdisia* Br. & R., *Blätter für Kakteenforschung* 4(6): [1]. 1937 nom. inval. (Art. 21.3, 36.1b, 39.1).

Typ. Not cited.

Obs. Proposed in anticipation of future validation that never took place.

Ref. *Corryocactus* Britton & Rose.

Euescobaria Buxb. (pro subgen. *Escobaria* Britton & Rose), Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichische botanische Zeitschrift* 98(1-2): 78. (28 Apr) 1951 nom. inval. (Art. 21.3).

Typ. *Mammillaria tuberculosa* Engelm.

Syn. *Escobaria* Britton & Rose subgen. *Escobaria*.

Ref. *Coryphantha* Lem.

Euescobaria Buxb. ex Moran (pro sect. *Coryphantha* Lem.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* 8(4): 318. (24 Apr) 1953 nom. inval. (Art. 21.3).

Typ. *Mammillaria tuberculosa* Engelm.

Syn. *Escobaria* Britton & Rose sect. *Escobaria*.

Ref. *Coryphantha* Lem.

Euharrisia Britton & Rose (pro infragen. *Harrisia* Britton), *The Cactaceae* 2: 148. (9 Sep) 1920 nom. inval. (Art. 21.3).

Typ. Not cited. Presumably *Cereus gracilis* Mill.

Syn. *Harrisia* Britton infragen. *Harrisia*.

Ref. *Echinopsis* Zucc.

Euhelanthocereus Backeb. (pro subgen. *Helianthocereus* Backeb.), Nova genera et subgenera, *Cactus and Succulent Journal* (US) 22(5): 153. (Sep-Oct) 1950 nom. inval. (Art. 21.3).

Typ. *Trichocereus poco* Backeb. = *Cereus tarijensis* Vaupel.

Syn. *Helianthocereus* Backeb. subgen. *Helianthocereus*.

Ref. *Echinopsis* Zucc.

Euhildmannia Kreuz. (pro subgen. *Hildmannia* Kreuz. & Buining), Bemerkungen zu einigen Gattungen der *Cactaceae*, *Repertorium specierum novarum regni vegetabilis* 50: 206 (20 Nov) 1941 nom. inval. (Art. 21.3).

Typ. Echinocactus ebenacanthus H.B.Monv. ex Labour. = *Echinocactus fuscus* Muehlenpf.
Syn. Hildmannia Kreuz. & Buining nom. illeg. subgen. *Hildmannia*.
Ref. Eriosyce Phil.

Euhymenorebutia Buining (pro subgen. *Hymenorebutia* Buining), *Studies over Rebutia, Lobivia en Echinopsis, Succulenta* **21**(9): 103. (Sep) 1939 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. Hymenorebutia Buining subgen. *Hymenorebutia*.

Ref. Echinopsis Zucc.

Eulemaireocereus Backeb. (pro subgen. *Lemaireocereus* Britton & Rose), *Systematische Uebersicht, Blätter für Kakteenforschung* **5**(6): [8], [12], [17], [20]. 1938 nom. inval. (Art. 21.3).

Typ. Cereus hollianus F.A.C.Weber.

Syn. Lemaireocereus Britton & Rose subgen. *Lemaireocereus*.

Ref. Cephalocereus Pfeiff.

Eulepismium F.M.Knuth (pro subgen. *Lepismium* Pfeiff.), in Backeberg & Knuth, *Kaktus-ABC*: 57, 156. (12 Feb) 1936 nom. inval. (Art. 21.3, 39.1).

Typ. Not cited.

Syn. Lepismium Pfeiff. subgen. *Lepismium*.

Ref. Rhipsalis Gaertn.

Eulepismium F.M.Knuth ex Backeb. (pro subgen. *Lepismium* Pfeiff.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 75. (Jun) 1942 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. Lepismium Pfeiff. subgen. *Lepismium*.

Ref. Rhipsalis Gaertn.

Eulobivia Backeb. (pro subgen. *Lobivia* Britton & Rose), in Backeberg & Knuth, *Kaktus-ABC*: 66, 227. (12 Feb) 1936 nom. inval. (Art. 21.3, 39.1).

Typ. Not cited.

Syn. Lobivia Britton & Rose subgen. *Lobivia*.

Ref. Echinopsis Zucc.

Eulobivia Backeb. (pro subgen. *Lobivia* Britton & Rose), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 33, 76. (Jun) 1942 nom. inval. (Art. 21.3).

Typ. Echinocactus pentlandii Hook.f.

Syn. Lobivia Britton & Rose subgen. *Lobivia*.

Ref. Echinopsis Zucc.

Eulychnia Phil., Reise durch die Wüste Atacama auf Befehl der chilenischen Regierung im Sommer 1853-1854, *Florula Atacamensis*: 23-24, t.2. 1860.

Etym. From the Greek prefix *eu-*, good or true, and *lychnia*, lampstand. A reference to its columnar, branched habit of growth.

Typ. *Eulychnia breviflora* Phil. Autotype (Art. 10.2). The only included species.

Eulychnia (Phil.) A. Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 60, 67, t.4. (31 May) 1905.

Bas. *Eulychnia* Phil. (1860, pro gen.).

Ref. *Eulychnia* Phil.

Eulychnocactus Backeb., Kakteen-Seltenheiten. Meine Peru-Expedition 1930-1931, Teil 2, *Möllers Deutsche Gärtner-Zeitung* **46**(18): 207. (21 Jun) 1931 nom. inval. (Art. 38.3).

Etym. Formula formed from the substantives *Eulychnia* & *Cactus*.

Typ. *Eulychnocactus bolivianus* Backeb. = *Cereus melanotrichus* K. Schum. Autotype (Art. 10.2) The only included species.

Obs. Insufficiently described. Rank later changed and renamed subgen. *Corryoerdisia* Backeb. (1937).

Ref. *Corryocactus* Britton & Rose.

Eumammillaria Engelm. (pro subgen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 4. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 260. 1857] nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Mammillaria* Haw. subgen. *Mammillaria*.

Ref. *Mammillaria* Haw.

Eumediolobivia Backeb. (pro subgen. *Mediolobivia* Backeb.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 35. (Jun) 1942 nom. inval. (Art. 21.3).

Typ. *Mediolobivia aureiflora* Backeb.

Syn. *Mediolobivia* Backeb. subgen. *Mediolobivia*.

Ref. *Aylosteria* Speg.

Eumonvillea Backeb. (pro subgen. *Monvillea* Britton & Rose), Das Genus *Monvillea* Br. & R., *Sukkulentenkunde* **2**: 52-54. (Aug) 1948 nom. inval. (Art. 21.3).

Typ. *Cereus cavendishii* H.B. Monv.

Syn. *Monvillea* Britton & Rose subgen. *Monvillea*.

Ref. *Cereus* (L.) Mill.

Eu-neolloydia Backeb. (pro subgen. *Neolloydia* Britton & Rose), *Neolloydia* Br. & R. (1923), *Blätter für Kakteenforschung* **4**(3): [3]. 1937 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Neolloydia* Britton & Rose subgen. *Neolloydia*.

Ref. *Coryphantha* (Engelm.) Lem.

Eunotocactus Backeb. (pro subgen. *Notocactus* (K.Schum.) Frič), Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 153. (Sep-Oct) 1950 nom. inval. (Art. 21.3).

Typ. *Cactus ottonis* Lehm.

Syn. *Notocactus* (K.Schum.) Frič subgen. *Notocactus*.

Ref. *Parodia* Speg.

Eupereskia F.A.C.Weber (pro subgen. *Pereskia* (L.) Mill.), *Pereskia*, in Bois, *Dictionnaire d'horticulture* **2**(30): 938. (Jul) 1898 nom. inval. (Art. 21.3).

Typ. Not cited. Presumably *Cactus pereskia* L.

Syn. *Pereskia* (L.) Mill. subgen. *Pereskia*.

Ref. *Pereskia* (L.) Mill.

Euphellosperma Buxb. (pro subgen. *Phellosperma* Britton & Rose), Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichischen Botanische Zeitschrift* **98**(1-2): 92. (28 Apr) 1951 nom. inval. (Art. 21.3).

Typ. *Mammillaria tetrancistra* Engelm.

Syn. *Phellosperma* Britton & Rose subgen. *Phellosperma*.

Ref. *Mammillaria* Haw.

Euphyllocactus K.Schum. (pro sect. *Phyllocactus* Link), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 204. (20 Oct) 1897 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Phyllocactus* Link sect. *Phyllocactus*.

Ref. *Epiphyllum* Haw.

Euphyllocactus K.Schum. (pro subgen. *Phyllocactus* Link), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum) Nachträge 1898-1902*: 67. 1903 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Phyllocactus* Link subgen. *Phyllocactus*.

Ref. *Epiphyllum* Haw.

Eupilocereus Backeb. (pro subgen. *Pilocereus* K.Schum. nom. illeg.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 51. (Jun) 1942 nom. inval. (Art. 21.3).

Typ. *Pilocereus leucocephalus* Pos.

Syn. *Pilosocereus* Byles & G.D.Rowley.

Euplatyopuntia A.Cast. (pro sect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* **6**(2): 276, 277. 1957.

Etym. From the Greek prefix *eu-*, good or true, and the substantive *Platyopuntia*.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Eupolyedrothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 93. (Feb) 1839.

Etym. From the Greek prefix *eu-*, good or true, and the substantive *Polyedrothelae* Lem. (pro infragen. *Mammillaria* Haw.).

Typ. Not cited.

Ref. *Mammillaria* Haw.

Euporteria Kreuz. & Buining, *Bemerkungen zu einigen Gattungen der Cactaceae, Repertorium specierum novarum regni vegetabilis* **50**: 199-201 (20 Nov) 1941 nom. illeg. (Art. 52.1).

Typ. *Echinocactus subgibbosus* Haw. This is also the type of *Neoporteria* Britton & Rose.

Syn. *Neoporteria* Britton & Rose (1922).

Ref. *Eriosyce* Phil.

Eurebutia Backeb. (pro subgen. *Rebutia* K.Schum.), *Rebutia* K. Sch. (1895), *Blätter für Kakteenforschung* **1**(2): [7]. 1934 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Rebutia* K.Schum. subgen. *Rebutia*.

Ref. *Rebutia* K.Schum.

Eurhipsalis K.Schum. (pro sect. *Rhipsalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* **3**(6a): 197. (Apr 18) 1894 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Rhipsalis* Gaertn. sect. *Rhipsalis*.

Ref. *Rhipsalis* Gaertn.

Eurhipsalis K.Schum. (pro subgen. *Rhipsalis* Gaertn.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 614-616. (1 Oct) 1898 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Rhipsalis* Gaertn. subgen. *Rhipsalis*.

Ref. *Rhipsalis* Gaertn.

Euschickendantziana Backeb. (pro subser. *Gymnocalycium* Mittler), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941*(2): 39. (Jun) 1942 nom. inval. (Art. 38.1).

Etym. From the Greek prefix *eu-*, good or true, and the substantive *Schickendantziana*.

Typ. *Echinocactus schickendantzii* F.A.C.Weber.

Ref. *Gymnocalycium* Mittler.

Euthelocactus Soulaire (pro subgen. *Thelocactus* (K.Schum.) Britton & Rose), *Famille des Cactacées, Genre 108 Thelocactus, Cactus (Paris) 10*(46-47): 250. 1955 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Thelocactus* (K.Schum.) Britton & Rose subgen. *Thelocactus*.

Ref. *Echinofossulocactus* Lawr.

Eutrichocereus Backeb. (pro subgen. *Trichocereus* (A.Berger) Riccob.), Systematische Uebersicht, *Blätter für Kakteenforschung* 5(6): [6], [17]. 1938 nom. inval. (Art. 21.3).

Typ. Not cited.

Syn. *Trichocereus* (A.Berger) Riccob. subgen. *Trichocereus*.

Ref. *Echinopsis* Zucc.

×***Eversonara*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 120. 1992.

Etym. Condensed name in honour of Charles EVERSON, Rainbow Gardens, U. S. A.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose × *Pfeiffera* Salm-Dyck.

Ref. ×*Rhipsaliphyllum* Mottram.

Exsertae K.Schum. (pro infragen. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (8): 510. (20 Jun) 1898 nom. nud.

Etym. From the Latin adjective *exsertus*, projecting. A reference to the exerted stamens.

Typ. Not cited.

Obs. Includes the type of *Cochemiea* K.Brandegee (1897).

Ref. *Mammillaria* Haw.

Extensi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 24. 1834 nom. nud.

Etym. Based on the name of an included species.

Typ. *Cereus extensus* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Extensi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Hortus Dyckensis*: 65, 339. 1834.

Etym. Based on the name of an included species.

Typ. *Cereus extensus* Salm-Dyck ex DC. Autotype (Art. 22.6).

Obs. The type species has been treated as a *Hylocereus* (A.Berger) Britton & Rose or as a *Selenicereus* (A.Berger) Britton & Rose.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Extensi Pfeiff. (pro infragen. *Cereus* Mill. in § *Protacti* Pfeiff.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 107. (Feb) 1837 nom. illeg. (Art. 53.1)

Etym. From the Latin *extensus*, extended or spreading, referring to the long, procumbent stems.

Typ. Not cited, but excludes the type of *Extensi* Salm-Dyck (1834).

Obs. *Cereus extensus* Salm-Dyck was moved to *Tripteres* Salm-Dyck (1834), and then to *Pterogoni* Salm-Dyck (1841), thus making *Extensi* Pfeiff. (1837) a new taxon but a later homonym of *Extensi* Salm-Dyck (1834).

Ref. *Acanthocereus* (A.Berger) Britton & Rose, *Echinopsis* Zucc.

Extremispermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* 7(4): 55. 1982 (“*Extremuspermae*”).

Etym. From the Latin *extremus*, outermost, and *sperma*, seed.

Typ. *Parodia tilcarensis* Backeb.

Ref. *Parodia* Speg.

Facheiroa Britton & Rose, *The Cactaceae* 2: 2, 173. (9 Sep) 1920.

Etym. Named for its local name *Facheiro*.

Typ. *Facheiroa publiflora* Britton & Rose. Autotype (Art. 10.2). The only included species.

Facheiroa (Britton & Rose) Buxb. (pro subgen. *Espostoa* Britton & Rose), Die behaartblütige Cephalienträger Südamerikas, *Österreichische Botanische Zeitschrift* 106 (1-2): 155. 1959.

Bas. *Facheiroa* Britton & Rose (1920, pro gen.).

Ref. *Facheiroa* Britton & Rose.

Famatimenses Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus famatimensis* Speg.

Ref. *Echinopsis* Zucc.

Fasciculati Bravo (pro ser. *Echinocereus* Engelm.), Nuevas combinaciones y taxa VI, *Cactaceas y Suculentas Mexicanas* 27(1): 16. (Jan-Mar) 1982 (“*Fasciculatae*”).

Etym. Based on the name of the only included species.

Typ. *Echinocereus fasciculatus* L.D.Benson [non Engelm.]. Cited in error as “*Echinocactus fasciculatus* (Engelm.) L.D.Benson”.

Obs. Said by the author to correspond approximately with the untypified *Echinocereus* ser. *Decalophi* sensu K.Schum. That excluded *Echinocereus fasciculatus* L.D.Benson because it was unknown to Schumann but it did include related species.

Ref. *Echinocereus* Engelm.

Faustocereus F.Ritter (pro subgen. *Haageocereus* Backeb.), Die von Curt Backeberg in “*Descriptiones Cactacearum novarum*” veröffentlichten Diagnosen “neuer” peruanischer Kakteen nebst grundsätzlichen Erörterungen über taxonomische und nomenklatorische Fragen: 11-12, 14, 15. 1958.

Etym. Based on the name of the type species.

Typ. *Borzicactus faustianus* Backeb. = *Cereus acanthurus* Vaupel., the type of *Loxanthocereus* Backeb. (1937, pro gen.).

Ref. *Cleistocactus* Lem.

Fendleriani Vaupel (pro infragen. [“Gruppe”] *Echinocereus* Engelm.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 645. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus fendleri* Engelm. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Fendleriani (Vaupel) Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelmann, *Kakteen und andere Sukkulenten* 36(4): 77. (Apr) 1985.

Bas. *Fendleriani* Vaupel (1925, pro infragen. *Echinocereus* Engelm.).

Typ. *Cereus fendleri* Engelm.

Obs. Published as though new, with no reference to the Vaupel basionym. Treated as an error to be corrected under Art. 41.8d.

Ref. *Echinocereus* Engelm.

×**Ferobergia** Glass, An incredible new bigeneric cultivar, *Cactus and Succulent Journal* (US) **38**(5): 149, 177-178. (Sep-Oct) 1966.

Etym. Condensed formula.

Par. *Ferocactus* Britton & Rose × *Leuchtenbergia* Hook.f.

Ref. ×*Echinobergia* Mottram.

Ferocactus Britton & Rose, *The Cactaceae* **3**: 78, 123. (12 Oct) 1922.

Etym. From the Greek *fer*, wild or fierce, and the substantive *Cactus*.

Typ. *Echinocactus wislizeni* Engelm.

Ref. *Echinofossulocactus* Lawr.

Ferocactus (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 235. (Jul-Aug) 1929.

Bas. *Ferocactus* Britton & Rose (1922, pro gen.).

Ref. *Echinofossulocactus* Lawr.

Feroce Doweld (pro ser. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa* Britton & Rose, *Sukkulentny* **4**(1-2): 48. (Jan) 2003.

Typ. *Pilocopiapoa solaris* F.Ritter.

Ref. *Copiapoa* Britton & Rose.

×**Ferofossulocactus** G.D.Rowley, *Name that succulent*: 124. 1980.

Etym. Condensed formula.

Par. *Echinofossulocactus* Lawr. × *Ferocactus* Britton & Rose.

Ref. *Echinofossulocactus* Lawr.

Ficindica St.-Lag., Réforme de la nomenclature botanique, *Annales de la Société botanique de Lyon* **7**: 70. 1880 nom. illeg. (Art. 52.1).

Etym. A shortening of the Latin *ficus indica*, indian fig. Also the name of an included species.

Rep. Syn. *Cactus* L. nom. rej. infragen. *Opuntia* (1753).

Typ. *Cactus ficus-indica* L. Autotype (Art. 7.4, 22.6). Same as the replaced synonym.

Obs. Dr. Saint-Lager (1825-1912) gained notoriety for randomly altering the spellings of numerous botanical names contrary to Art. 60.1.

Ref. *Opuntia* (L.) Mill.

Ficus-indicae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 177. (21 Jun) 1919 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Cactus ficus-indica* L. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. ser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Ficus-indicae Britton & Rose ex Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 451, 526 (Jan) 1958 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Cactus ficus-indica* L. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. subser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Flagriformes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 31. 1841.

Etym. From the name of an included species.

Typ. *Cereus flagriformis* Zucc. Autotype (Art. 22.6) = *Cactus flagelliformis* L.

Obs. Includes the type of *Aporocactus* Lem. (1860).

Ref. *Aporocactus* Lem.

Flavicapita Lawr. (pro subsect. *Mammillaria* Haw.), *Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 314. 1841 ("Flavicipites").

Etym. From the Latin *flavus*, yellow, and *caput*, head (pl. *capita*). A reference to the yellowish tops.

Typ. Not cited.

Obs. Includes the type of *Chrysacanthae* Salm-Dyck (1841).

Ref. *Mammillaria* Haw.

Flaviflorae Engelm. (pro infragen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 8. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 264. 1857] nom. nud.

Etym. A Latin compound adjective, from *flavus*, yellow, and *flos*, flower.

Typ. Not cited.

Ref. *Coryphantha* Engelm.

Flaviflorae Engelm. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 42. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 298. 1857] nom. nud.

Etym. A Latin compound adjective, from *flavus*, yellow, and *flos*, flower.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Flaviflori Engelm. (pro infragen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 23. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 298. 1857] nom. nud.

Etym. A Latin compound adjective, from *flavus*, yellow, and *flos*, flower.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Flavispiniae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 161. (Feb) 1837 nom. nud.

Etym. From the Latin *flavus*, yellow, and *spina*, spine or thorn.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Flavispiniae Pfeiff. ex Salm-Dyck (pro sect. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 185-186 (“*Flavispinosae*”), 358-359. 1834. See also *Cactae in horto Dyckensi cultae. Anno 1841*: 44. 1841.

Etym. From the Latin *flavus*, yellow, and *spina*, spine or thorn.

Typ. Not cited.

Obs. Salm-Dyck (1850: 66) added the type of *Opuntia* (L.) Mill., moved from *Setaceae*, which would render this taxon invalid (Art. 22.2). Also appeared as *Flavispinosae* in *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 60. 1834 without description.

Ref. *Opuntia* (L.) Mill.

Floccosae F.A.C.Weber (pro sect. *Rhipsalis* Gaertn.), *Rhipsalis*, in Bois, *Dictionaire d’horticulture* 2(33): 1047. (Oct) 1898.

Etym. Based on the name of an included species.

Typ. *Rhipsalis floccosa* Salm-Dyck ex Pfeiff. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Floccosae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 86. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia floccosa* Salm-Dyck ex Winterfeld. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Floccosae (F.A.C.Weber) Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 221. (9 Oct) 1923.

Bas. *Floccosae* F.A.C.Weber (1898, pro sect. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Floresia Krainz & F.Ritter, in Winter, *Kakteen Samen*: 8. 1956 nom. inval. (Art. 30.6, 39.1), & in Backeberg, *Die Cactaceae* 2: 1269-1273. (Mar) 1959 nom. inval. (Art. 39.1, 40.1)

Etym. Named for the American horticulturist Robert FLORES.

Typ. *Floresia winterae* Krainz & F.Ritter nom. inval. (“*winteriae*”) = *Weberbauerocereus winterianus* F.Ritter.

Obs. Provisional name subsequently abandoned.

Ref. *Haageocereus* Backeb.

Floribunda F.Ritter, *Kakteen in Südamerika* 1: 58. (Nov) 1979.

Etym. From the Latin *floribundus*, profusely flowering.

Typ. *Floribunda pusilliflora* F.Ritter.

Ref. *Austrocephalocereus* Backeb.

Floribunda (F.Ritter) P.J.Braun (pro subgen. *Pilosocereus* Byles & G.D.Rowley), On the taxonomy of Brazilian *Cereeae* (*Cactaceae*), *Bradleya* **6**: 90. 1988.

Bas. Floribunda F.Ritter (1979, pro gen.)

Ref. Austrocephalocereus Backeb.

Floricomus Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 76. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Echinocactus floricomus Arechav. = *Echinocactus mammulosus* Lem. Autotype (Art. 22.6).

Ref. Parodia Speg.

Fobea Frič, *Fobea* Frič, gen. n. *viridiflora* Frič, sp. n., *Kaktusová příloha ŽIVOT V PŘÍRODE vychází v Praze* **29**(38-39): 73(illus.), 75-76. (15 Oct) 1925.

Etym. Named for Friedrich FOBE (1864-1941), Director of the Hempelschen Gutsgartnerei, Chorn, Saxony.

Typ. Fobea viridiflora Frič. = *Mammillaria dasyacantha* Engelm. Autotype (Art. 10.2). The only included species.

Ref. Coryphantha (Engelm.) Lem.

Foliosi K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen Nachträge 1898 bis 1902*: 50. 1903 nom. nud.

Etym. From the Latin *foliosus*, leafy.

Typ. Cereus wittii K.Schum. Autotype (Art. 10.2). The only included species.

Ref. Selenicereus (A.Berger) Britton & Rose.

Formosi K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 53 (Feb). 1897.

Etym. A Latin adjective, *formosus*, finely formed or handsome. Might be based on *Cereus formosus* Salm-Dyck, listed by Schumann (1897: 117) as a synonym of *C. pitahaya* DC.

Typ. Not cited.

Ref. Cereus (L.) Mill.

Fragiles Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941*(2): 18. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of the type species.

Typ. Cactus fragilis Nutt.

Ref. Opuntia (L.) Mill.

Fragiles Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 588, 591 (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Cactus fragilis Nutt. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Frailea Britton & Rose, *The Cactaceae* 3: 78, 208. (12 Oct) 1922.

Etym. Named for Manuel FRAILE (fl. 1922), an American horticulturist who maintained the cactus collection at the US Dept. of Agriculture, Washington.

Typ. *Echinocactus cataphractus* Dams.

Obs. When combined with the later name *Parodia* Speg., the latter is conserved over *Frailea*. Proposed by Egli & Nyffeler, *Taxon* 47: 475-476. (May) 1998; Approved in 49: 271. 2000).

Frailea (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 217. (Jul-Aug) 1929.

Bas. *Frailea* Britton & Rose (1922, pro gen.).

Ref. *Frailea* Britton & Rose.

×***Fricara*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 103. 1992.

Etym. Named for the Czech horticulturist Alberto Vojtech FRIČ (1882-1944).

Par. *Chamaecereus* Britton & Rose × *Echinocereus* Engelm. × *Trichocereus* (A.Berger) Riccob.

Ref. ×*Echinocereopsis* P.V.Heath.

Friciani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 75. 1988 (“Fricianae”) (publ. 1989) nom. inval. (Art. 39.1).

Etym. Named for the Czech horticulturist Alberto Vojtech FRIČ (1882-1944).

Typ. *Notocactus minimus* Frič & Kreuz. nom. inval. = *Notocactus tenuicylindricus* F.Ritter.

Ref. *Parodia* Speg.

Friesia Frič, *Kakteen als Bepflanzung der Felsenpartien. II. Über die Akklimatisations-Möglichkeit der kugel- und säulenförmigen Kakteen. (Mit Prämiierung)*, *Möllers Deutsche Gärtner-Zeitung* 45(1): 42-44. (1 Jan) 1930 nom. illeg. (Art. 53.1).

Etym. Named for the Swedish botanist K. R. E. FRIES (1872-1966).

Typ. *Friesia umadeave* Frič.

Obs. 1. Also introduced as a provisional name in the seed price list of Haage, *Neue Kakteen aus südamerikanischen Hochgebirgen. Samenernte der botanischen Expedition 1928/1929*: [2]. 1929, & in Frič, *Aus der Kakteen-Schatzkammer. Kakteen-Schau im Botanischen Garten der Prager Karls-Universität*, *Möllers Deutsche Gärtner-Zeitung* 44(2): 253, 254. (1 Aug) 1929.

Obs. 2. The type species was validated (1930: 43) by reference to the description and type of Fries (as *Echinocactus* sp.II), *Zur Kenntnis der alpinen Flora im nördlichen Argentinien*, *Nova Acta Regle Societatis Scientiarum Upsaliensis*, Ser. 4 1(1): 121-122. 1905.

Obs. 3. Later homonym of *Friesia* Spreng. (1818, *Euphorbiaceae*).

Ref. *Eriosyce* Phil.

Frutescentes Salm-Dyck (pro infragen. *Pereskia* (L.) Mill.), *Cactae in horto dykensi cultae anno 1844*: 50. 1845 nom. inval. (Art. 22.2).

Etym. From the active present participle of the Latin *frutescere*, to become shrubby.

Typ. Not cited, but includes the type of *Pereskia* (L.) Mill.

Ref. *Pereskia* (L.) Mill.

Frutescentes K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 657, 660. (1 Nov). 1898.

Etym. From the active present participle of the Latin *frutescere*, to become shrubby.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Fulgidae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 67. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia fulgida* Engelm. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Fulvispinae Salm-Dyck (pro sect. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 186, 358-359. 1834. See also *Cactaeae in horto Dyckensi cultae. Anno 1841*: 44. 1841.

Etym. From the Latin *fulvus*, yellowish brown, and *spina*, spine or thorn.

Typ. Not cited.

Obs. Spelt as *Fulvispinosae* on p. 186 & in *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 60. 1834. Protologue includes only *O. monacantha* & *O. nigricans* (= *O. tuna*).

Ref. *Opuntia* (L.) Mill.

Fulvispini Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae anno 184-*: 28. 1842.

Etym. Named for an included species.

Typ. *Cereus fulvispinus* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Pilosocereus* Byles & G.D.Rowley.

Furiocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), *Explanatory diagram of the Austroechinocactinae*: 181. 1957 nom. inval. (Art. 39.1).

Etym. From the Latin *furia*, frenzy, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Furiolobivia Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 77, 286. 1957.

Etym. From the Latin *furia*, frenzy, and the substantive *Lobivia*.

Typ. *Echinopsis nigra* Backeb. = *Lobivia ferox* Britton & Rose.

Ref. *Echinopsis* Zucc.

Gaertnerianae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23. (15 May) 1925.

Etym. Based on the name of an included species.

Typ. *Epiphyllum russellianum* var. *gaertneri* Regel = *Epiphyllum gaertneri* (Regel) W.Watson. Autotype (Art. 22.6).

Obs. Repeated in Vaupel, *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 619. (Dec) 1925, but in *Die Kakteen* (2): 54. (1 Mar) 1926 *Gaertnerianae* was abandoned by its author in favour of the new taxon *Roseae* Vaupel

nom. illeg. Has the same type as *Epiphyllopsis* A. Berger (1929, pro gen.).

Ref. *Rhipsalis* Gaertn.

Galactochylus K. Schum. (pro sect. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (8): 474 (20 Jun); (9): 560 (1 Aug). 1898 nom. inval. (Art. 22.2)

Etym. From the Greek *galacto-*, milky, and *chylos*, juice.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Lectotyp. *Mammillaria simplex* Haw. = *Cactus mammillaris* L. Designated by Fosberg, *Bulletin of the Southern California Academy of Sciences* **30**(2): [i], 55. 1931.

Obs. Said by Schumann to be based on *Lactescentes* Zucc., but that appears not to exist. He was perhaps thinking of “*Mammillaria* B. Succo lactescente” in *Plantarum novarum vel minus cognitarum* **3**: 715. 1837, not intended as a name and lacking any description.

Ref. *Mammillaria* Haw.

Galactochylus K. Schum. ex Fosberg (pro subgen. *Neomammillaria* Britton & Rose nom. illeg.), Remarks on the taxonomy of the *Cactaceae* and some new combinations and names in that family. *Bulletin of the Southern California Academy of Sciences* **30**(2): 55. 1931 nom. inval. (Art. 22.2).

Etym. From the Greek *galacto-*, milky, and *chylos*, juice.

Typ. *Mammillaria simplex* Haw. = *Cactus mammillaris* L.

Ref. *Mammillaria* Haw.

Galapagenses Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus galapagensis* F.A.C. Weber. Autotype (Art. 22.6).

Obs. Has the same type as *Jasminocereus* Britton & Rose (1920, pro gen.).

Ref. *Jasminocereus* Britton & Rose.

Gemmati Pfeiff. (pro infragen. *Cereus* (L.) Mill. in § *Cereastri* Pfeiff. nom. inval.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 96. (Feb) 1837.

Etym. Based on the name of an included species.

Typ. *Cereus gemmatus* Zucc. Autotype (Art. 22.6). = *Cereus marginatus* DC.

Ref. *Cephalocereus* Pfeiff.

Geohintonia Glass & W.A. Fitz Maurice, Nuevos taxa de cactaceas de Nuevo Leon, Mexico, *Cactaceas y Suculentas Mexicanas* **37**(1): [1], 14-16-19. (Jan-Mar) 1992.

Etym. Named for George Sebastián HINTON (1949-).

Typ. *Geohintonia mexicana* Glass & W.A. Fitz Maurice. Autotype (Art. 10.2). The only included species.

Geometrizzantes Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 639. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus geometrizzans* Mart. ex Pfeiff. Autotype (Art. 22.6).

Obs. Has the same type as *Myrtillocactus* Console (1897).

Ref. *Myrtillocactus* Console.

Gerocephalus F.Ritter, Die Cephalienträger unter den Kakteen Brasiliens (Schluß), *Kakteen und andere Sukkulente* **19**(8): 156-157. (Aug) 1968 nom. illeg. (Art. 52.1).

Etym. From the Greek *geron*, old man, and *kephale*, head. A reference to the bearing of white hairs.

Typ. *Cereus dybowskii* Rol.-Goss.

Syn. *Espostopsis* Buxb. (Jul 1968).

Ref. *Austrocephalocereus* Backeb.

Gibbosa Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium*, *Kaktusar* **5**(9): 105. 1934 (“Gibbosum”) nom. nud. & inval. (Art. 22.2).

Etym. Based on the name of an included species.

Rep. Syn. *Echinocactus* Link & Otto sect. *Gibbosi* Lawr. (1841).

Typ. *Cactus gibbosus* Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Syn. *Gymnocalycium* Mittler infragen. *Gymnocalycium*.

Ref. *Gymnocalycium* Mittler.

Gibbosa Backeb. (pro subser. *Gymnocalycium* Mittler), *Die Cactaceae* **3**: 1701, 1740. 1959 nom. inval. (Art. 22.2, 33.2) (“Gibbosae”).

Etym. Based on the name of an included species.

Rep. Syn. *Echinocactus* Link & Otto sect. *Gibbosi* Lawr. (1841).

Typ. *Cactus gibbosus* Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Syn. *Gymnocalycium* Mittler subser. *Gymnocalycium*.

Ref. *Gymnocalycium* Mittler.

Gibbosa Backeb. ex Schütz (pro sect. *Gymnocalycium* Mittler), *Rod Gymnocalycium* Pfeiff., *Friciana* **7**(46): 8, 12. 1968 (publ. 1969) nom. inval. (Art. 22.2, 41.5).

Rep. Syn. *Echinocactus* Link & Otto sect. *Gibbosi* Lawr. (1841).

Typ. *Cactus gibbosus* Haw.

Syn. *Gymnocalycium* Mittler sect. *Gymnocalycium*.

Ref. *Gymnocalycium* Mittler.

Gibbosae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Heteracanthae* Pfeiff.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 38. 1837.

Etym. Named for the only included species.

Typ. *Mammillaria gibbosa* Salm-Dyck ex Pfeiff. = *Echinocactus subgibbosus* Haw.

Autotype (Art. 22.6).

Obs. Published with a question mark expressing doubt.

Ref. *Eriosyce* Phil.

Gibbosi Lawr. (pro sect. *Echinocactus* Link & Otto), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener’s Magazine and Register of Rural Domestic Improvement*, ser. 3, **6**: 316. 1841 (“Gibbosae”).

Etym. Based on the name of an included species.

Typ. *Cactus gibbosus* Haw. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

×**Gibsobunia** P.V.Heath (pro nothosect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 105. 1992.

Etym. Condensed formula.

Par. *Rathbunia* sect. *Gibsonia* P.V.Heath nom. inval. × *Rathbunia* sect. *Rathbunia*.

Obs. Based on *Rathbunia montana* × *Rathbunia thurberi*, reported by Lindsay, in *Cactus & Succulent Journal* (US) 15(4): 1943.

Ref. *Stenocereus* (A.Berger) Riccob.

Gibsonia P.V.Heath (pro sect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 103. 1992.

Etym. Named for Arthur Charles GIBSON (1947-).

Rep. Syn. *Cereus* (L.) Mill. infragen. *Chlorotini* K.Schum. (1897).

Typ. *Cereus queretaroensis* Mathsson.

Ref. *Stenocereus* (A.Berger) Riccob.

Gigantei K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (1): 49 (Feb). 1897.

Etym. Based on the name of an included species.

Typ. *Cereus giganteus* Engelm. Autotype (Art. 22.6).

Obs. Taken up by Vaupel, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 636. (Dec) 1925, but restricted to just the type species only.

Ref. *Cephalocereus* Pfeiff.

Glabratae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 149. (Feb) 1837 nom. inval. (Art. 22.2).

Etym. From the Latin *glabratus*, hairless or smooth.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Glabri Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 21. 1834 nom. nud.

Etym. A Latin adjective, *glaber*, smooth or hairless.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Echinopsis* Zucc., *Stenocereus* (A.Berger) Ricc.

Glabri Salm-Dyck ex Pfeiff. (pro infragen. *Cereus* Mill. in § *Cereastri* Pfeiff. nom. inval.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 86. (Feb) 1837 nom. inval. (Art. 22.2)

Etym. A Latin adjective, *glaber*, smooth or hairless.

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Ref. *Cereus* (L.) Mill.

Gladiatores Lawr. (pro sect. *Echinofossulocactus* Lawr.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 317. 1841 nom. inval. (Art. 22.2).

Etym. From the Latin *gladiator*, gladiator, for the sword-like spines.

Typ. Not cited, but includes the type of *Echinofossulocactus* Lawr.

Syn. *Echinofossulocactus* Lawr. sect. *Echinofossulocactus*.

Ref. *Echinofossulocactus* Lawr.

Gladiachinopsis Y.Itô (pro subgen. *Echinopsis* Zucc.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Latin *gladius*, sword, and the substantive *Echinopsis*.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Glandulicactus Backeb., Systematische Uebersicht, *Blätter für Kakteenforschung* 5(6): [10], [13-14], [18], [21]. 1938.

Etym. From the Latin *glandula*, small, acorn-shaped object (gland), and the substantive *Cactus*.

Rep. Syn. *Uncinati* Salm-Dyck (1850, pro infragen. *Echinocactus* Link & Otto).

Typ. *Echinocactus uncinatus* Galeotti.

Ref. *Sclerocactus* Britton & Rose.

Glandulicactus (Backeb.) Buxb. (pro subgen. *Hamatocactus* Britton & Rose), Gattung *Hamatocactus*, in Krainz, *Die Kakteen* (25) CVIIIb: [4-5]. (1 Nov) 1963 nom. illeg. (Art. 52.1).

Bas. *Glandulicactus* Backeb. (1938, pro gen.).

Obs. At the rank of subgenus *Ancistrocactus* K.Schum. (1898) has priority.

Ref. *Sclerocactus* Britton & Rose.

Glandulicereus Guiggi, New genera and combinations in the family of *Cactaceae* Jussieu (*Magnoliopsida* - *Cactales*), *Cactology* 3: 6. (17 Aug) 2012.

Etym. From the Latin adjective *glandula*, a small acorn-shaped object, and the substantive *Cereus*.

Typ. *Cereus thurberi* Engelm.

Ref. *Stenocereus* (A.Berger) Riccob.

Glandulifera Salm-Dyck ex Frič, Údolí senilních starců, *Život v přírode* 28(23): 12.

(15 Dec) 1924 nom. nud. & in Seidl, J. (ed.), Výsledek devítiměsíční cesty do Mexika - Kaktusy, sukkulenty a jejich pěstění, *Knihovna Československých Zahradnických listů* 4: 122. 1924 nom. illeg. (Art. 53.1)

Rep. Syn. *Mammillaria* Haw. infragen. *Glanduliferae* Salm-Dyck (1841).

Typ. *Mammillaria erecta* Lem. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Replaced synonym not cited. Later homonym of *Glandulifera* Dalla Torre & Harms (1901, *Rutaceae*).

Ref. *Coryphantha* (Engelm.) Lem.

Glanduliferae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae. Anno 1841*: 13. 1841.

Etym. Gland-bearing *Mammillaria*, from *glandulae*, diminutive of the Latin *glans*, acorn, or acorn-shaped fruit or object, and *ferre*, to bear, referring to the glandular spines.

Typ. Not cited.

Lectotyp. *Mammillaria erecta* Lem. Designated by Backeberg, in *Cactaceae, Jahrbuch der Deutsche Kakteen-Gesellschaft 1941(2)*: 61. 1942.

Obs. The lectotype designation by Heath (1988) of *Mammillaria brevimamma* Pfeiff. was superfluous.

Ref. *Coryphantha* (Engelm.) Lem.

Glanduliferae (Salm-Dyck) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae 2*: 272. 1843.

Bas. *Glanduliferae* Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Obs. Salm-Dyck himself also raised this taxon to section rank in 1850.

Ref. *Coryphantha* (Engelm.) Lem.

Glanduliferae (Salm-Dyck) Backeb. (pro sect. *Coryphantha* (Engelm.) Lem.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 61. (Jun) 1942.

Bas. *Glanduliferae* Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Ref. *Coryphantha* (Engelm.) Lem.

Glassella Doweld (pro ser. *Bartschella* Britton & Rose), *Nomenclatural adjustments in Cactae II, Sukkulenty 3(1-2)*: 38. 2000.

Etym. Named for the American horticulturist Charles GLASS (1934-1998).

Typ. *Mammillaria glassii* R.C.Foster.

Ref. *Mammillaria* Haw.

Glaucescentes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 27. 1841.

Etym. From the Latin *glaucescens*, becoming pruinose or greyish blue.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Stenocereus* (A.Berger) Riccob., *Stetsonia* Britton & Rose, and *Myrtillocactus* Console.

Glaucescentes Unger (pro sect. *Ferocactus* Britton & Rose), *Die grossen Kugelkakteen Nordamerikas*: 89. 1992 (“Glaucescenti”) nom. inval. (Art. 39.1)

Etym. Based on the name of an included species.

Typ. *Echinocactus glaucescens* DC.

Obs. Erroneously published as a new combination from a Britton & Rose basionym that does not exist.

Ref. *Echinofossulocactus* Lawr.

Glaucinus Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria,

Kaktus Világ **18**(4): 74. 1988 (publ. 1989) nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Notocactus glaucinus* F.Ritter = *Notocactus oxycostatus* Buining & Brederoo. Autotype (Art. 22.6).

Syn. *Notocactus* (K.Schum.) Frič subser. *Oxycostatus* Havlíček (1989).

Ref. *Parodia* Speg.

Globicarpi Backeb. (pro infragen. [række] *Pilocereus* K.Schum.), in Backeberg & Knuth, *Kaktus-ABC*: 73, 327. (12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).

Etym. From the Latin *globus*, sphere, and *carpus*, fruit.

Typ. Not cited, but includes the type of *Pilocereus* K.Schum.

Ref. *Cereus* (L.) Mill., *Pilosocereus* Byles & G.D.Rowley.

Globicarpi Backeb. ex Croizat (pro sect. *Pilocereus* K.Schum.), Notes on *Pilocereus*, *Monvillea*, and *Malacocarpus* with special reference to Colombian and Venezuelan species, *Caldasia* **2**(8): 255. (20 Sep) 1943.

Etym. From the Latin *globus*, sphere, and *carpus*, fruit.

Typ. *Cereus moritzianus* Otto ex Pfeiff. = *Cactus lanuginosus* L.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Globicarpus (Croizat) Croizat (pro subgen. *Pilocereus* K.Schum.), Cactaceas nuevas de Venezuela, *Novedades Científicas: Contribuciones Occasionales del Museo de Historia Natural La Salle. Serie Botánica* **1**: 4. 1950 (“*Globicarpi*”).

Bas. *Globicarpi* Croizat (1943, pro sect. *Pilocereus* K.Schum.)

Ref. *Pilosocereus* Byles & G.D.Rowley.

Globosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Hortus Dyckensis*: 62, 334. 1834.

Etym. A Latin adjective, *globosus*, spherical.

Typ. Not cited.

Obs. Includes the type of *Echinopsis* Zucc. (1837).

Ref. *Echinopsis* Zucc.

Globosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill. in § *Serpentini* DC.), *Hortus Dyckensis*: 64, 338. 1834.

Etym. A Latin adjective, *globosus*, spherical.

Typ. *Cactus moniliformis* L. Autotype, the only included species.

Ref. *Opuntia* (L.) Mill.

Globosi (Salm-Dyck) Lem. (pro sect. *Echinonyctanthus* Lem.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 10-11. (Feb) 1839.

Bas. *Globosi* Salm-Dyck (1834, pro infragen. *Cereus* (L.) Mill.).

Ref. *Echinopsis* Zucc.

Globulares Backeb. (pro ser. *Tephrocactus* Lem.), in Backeberg & Knuth, *Kaktus-ABC*: 51, 106. (12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).

Etym. A Latin adjective, *globularis*, globular.

Typ. Not cited, but includes the type of *Tephrocactus* Lem.

Lectotyp. *Tephrocactus turpinii* Lem. = *Cereus articulatus* Pfeiff. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942.

Syn. *Tephrocactus* Lem. ser. *Tephrocactus*.

Ref. *Opuntia* (L.) Mill.

Glochidiatae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae. Anno 1841*: 6-7. 1841 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Mammillaria glochidiata* Mart. Autotype (Art. 22.6).

Syn. *Stylothelae* Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Glochoparodia Y.Itô (pro subgen. *Parodia* Speg.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *glochis*, projecting point, and the substantive *Parodia*.

Typ. Not cited.

Ref. *Parodia* Speg.

Glomeratae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 144. (Feb) 1837.

Etym. Based on the name of an included species.

Typ. *Opuntia glomerata* Haw. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Glomeratae (Pfeiff.) Walp. (pro sect. *Opuntia* (L.) Mill.), *Repertorium botanices systematicae* **1**(2): 280. (Sep) 1842.

Bas. *Glomeratae* Pfeiff. (1837, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Glomeratae Salm-Dyck [non Pfeiff.] (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1844*: 43. 1845 nom. illeg. (Art. 53.1).

Etym. A Latin adjective, *glomeratus*, heaped.

Typ. Not cited, but explicitly excluding *Opuntia glomerata* Haw.

Ref. *Opuntia* (L.) Mill.

Glomeratae (Pfeiff.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 87. 1919.

Bas. *Glomeratae* Pfeiff. (1837, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Glycimorphi Vaupel (pro infragen. [“Gruppe”] *Echinocereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 645, 646. (Dec) 1925 nom. inval. (Art. 36.2).

Etym. Based on the name of an included species.

Typ. *Echinocereus glycimorphus* C.F.Först. ex Rümpler = *Cereus cinerascens* DC. Autotype (Art. 22.6).

Obs. Published simultaneously with *Echinocereus* Engelm. infragen. *Ehrenbergiani* Vaupel, which has the same type (as heterotypic synonym). Therefore neither is validly published.

Ref. *Echinocereus* Engelm.

Goniocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *gonios*, offspring or wing, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Goniophori Y.Itô (pro subgen. *Acanthocalycium* Backeb.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 17. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *gonios*, offspring or wing, and *phora*, carrying.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Goniodothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 94. (Feb) 1839.

Etym. From the Greek *gonioides*, winged, & *thele*, nipple, for the angular tubercles.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Goniorhpsalis K.Schum. (pro sect. *Rhpsalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 197. (Apr 18) 1894.

Etym. From the Greek *gonios*, offspring or wing, and the substantive *Rhpsalis*. A reference to the angular stems.

Typ. Not cited.

Lectotyp. *Rhpsalis pentaptera* Pfeiff. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 21. (Jun) 1942.

Ref. *Rhpsalis* Gaertn.

Goniorhpsalis (K.Schum.) K.Schum. (pro subgen. *Rhpsalis* Gaertn.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 615. (1 Oct) 1898.

Bas. *Goniorhpsalis* K.Schum. (1894, pro sect. *Rhpsalis* Gaertn.).

Ref. *Rhpsalis* Gaertn.

Gounellea Zappi (pro subgen. *Pilosocereus* Byles & G.D.Rowley), *Pilosocereus* (*Cactaceae*). The genus in Brazil, *Succulent Plant Research* 3: 36. 1994.

Etym. Based on the name of an included species.

Typ. *Pilocereus gounellei* F.A.C.Weber.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Graciles Engelm. (pro infragen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 30. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 286. 1857] nom. nud.

Etym. A Latin adjective, *gracilis*, slender.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Graciles K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 51 (Feb). 1897.

Etym. A Latin adjective, *gracilis*, slender.

Typ. Not cited.

Ref. *Cleistocactus* Lem.

Graciles Engelm. ex K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 246. (20 Oct) 1897.

Etym. A Latin adjective, *gracilis*, slender.

Typ. *Cereus tuberosus* Rümpler = *Echinocereus poselgeri* Lem. Autotype (Art. 10.2). The only included species.

Ref. *Echinocereus* Engelm.

Graciles (K.Schum.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 79. (31 May) 1905.

Bas. *Graciles* Engelm. ex K.Schum. (1897, pro infragen. *Echinocereus* Engelm.).

Ref. *Echinocereus* Engelm.

Gracilicoryphantha Dicht & Lüthy (pro sect. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 21. (Apr) 2001.

Etym. From the Latin adjective, *gracilis*, slender, and the substantive *Coryphantha*.

Typ. *Coryphantha gracilis* L.Bremer & A.B.Lau.

Ref. *Coryphantha* (Engelm.) Lem.

Graciliores Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 47. 1841 nom. nud.

Etym. From the superlative of the Latin *gracilis*, thin.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Graciliores Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1844*: 49. 1845.

Etym. From the superlative of the Latin *gracilis*, thin.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Graciliores Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 48. 1850.

Etym. From the superlative of the Latin *gracilis*, thin.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Echinopsis* Zucc.

Gracilis D.Donati (pro ser. *Turbincarpus* Buxb. & Backeb.), *Taxonomische Revision der Gattung Turbincarpus* Backeb. et Buxb. (3), *Turbi-Now* (19): 21. (Apr) 2006.

Etym. Based on the name of an included species.

Typ. *Turbincarpus gracilis* Glass & R.C.Foster.

Ref. *Turbincarpus* Buxb. & Backeb.

×***Graeserara*** Mordhorst, *Intergenerische Kakteenhybriden innerhalb der Trichocereinae, Kakteen und andere Sukkulente* **62**(9): 228. (Sep) 2011.

Etym. Named for the nurseryman and plant breeder Robert GRÄSER.

Par. ×*Cleistocactus* Lem. × *Echinopsis* Zucc. × *Haageocereus* Backeb.

Graessneriani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), *A new conspectus generis of the genus Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 78. 1988 (“*Graessneriana*”) (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus graessneri* K.Schum.

Ref. *Parodia* Speg.

Grandangulares Haw. (pro infragen. *Cereus* (L.) Mill.), *Synopsis plantarum succulentarum*: 178-179. 1812 nom. inval. (Art. 22.2).

Etym. From the Latin adjective *grandis*, great, and *angularis*, angled.

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Ref. *Cereus* (L.) Mill.

Grandangulares Haw. (pro sect. *Cereus* (L.) Mill.), *Decas duodecima novarum plantarum succulentarum, Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. **7**(38): 109, 116. (Feb) 1830 nom. inval. (Art. 22.2).

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Ref. *Cereus* (L.) Mill.

Grandes Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 33, 34. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 289, 290. 1857].

Etym. From the Latin adjective *grandis*, large.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Grandiflorae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 221. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Rhipsalis grandiflora* Haw. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Grandiflorae Backeb. (pro subsect. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 64. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. From the Latin adjective *grandis*, large, and *flos*, flower.

Typ. Not cited, but the reference “[131:3]” refers to *Mammillaria blossfeldiana* Boed. in *Blätter für Kakteenforschung* 1(4): Mamillaria 3. 1934, which could be construed as a type designation.

Ref. *Mammillaria* Haw.

Grandiflori Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 640, 642. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cactus grandiflorus* L. Autotype (Art. 22.6).

Obs. Has the same type as *Cereus* (L.) Mill. subsect. *Selenicereus* A.Berger (1905).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Grandifoliae Britton & Rose (pro ser. *Pereskia* (L.) Mill.), *The Cactaceae* 1: 11. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Pereskia grandifolia* Haw. Autotype (Art. 22.6).

Obs. The correct name at the rank of series, but superseded by *Ahoplocarpus* K.Schum. (1898) at the rank of subgenus.

Ref. *Pereskia* (L.) Mill.

Grandispinosae Haw. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis plantarum succulentarum*: 187. 1812.

Etym. From the Latin adjective *grandis*, large, and *spinosa*, spine-bearing.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Grandispinosae (Haw.) DC. (pro sect. *Opuntia* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 472. 1828.

Bas. *Grandispinosae* Haw. (1812, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Greggiani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 640, 642. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus greggii* Engelm. Autotype (Art. 22.6).

Obs. Has the same type as *Cereus* (L.) Mill. subsect. *Peniocereus* A.Berger (1905).

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Griseocactus Guiggi, Addenda et corrigenda, Supplementum to *Cactology* 3: 1. (17 Dec) 2012 nom. illeg. (Art. 52.1).

Etym. From the Latin adjective *griseus*, grey, and the substantive *Cactus*.

Typ. *Cereus fimbriatus* Lam.

Obs. A superfluous name created in the mistaken belief that *Griseocereus* P.V.Heath (1999) was not valid.

Ref. Stenocereus (A.Berger) Riccob.

Griseocereus P.V.Heath (pro subgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 101. 1996.

Etym. From the Latin adjective *griseus*, grey.

Rep. Syn. *Cereus* infragen. *Pruinosi* K.Schum.

Typ. *Echinocactus pruinosus* Otto ex Pfeiff. Autotype (Art. 7.4). Same as that of the replaced synonym.

Ref. Stenocereus (A.Berger) Riccob.

Griseocereus (P.V.Heath) P.V.Heath, Commentary on the proposal to conserve *Parodia* Spegazzini, *Calyx* **6**(1): 1. 1999.

Bas. *Griseocereus* P.V.Heath (1996, pro subgen. *Stenocereus* (A.Berger) Riccob.).

Ref. Stenocereus (A.Berger) Riccob.

Griseocereus Guiggi, New genera and combinations in the family of *Cactaceae* Jussieu (*Magnoliopsida* - *Cactales*), *Cactology* **3**: 7. (17 Aug) 2012 nom. illeg. (Art. 53.1).

Etym. From the Latin adjective *griseus*, grey, and the substantive *Cereus*.

Typ. *Cereus fimbriatus* Lam.

Obs. Later homonym of *Griseocereus* (P.V.Heath) P.V.Heath (1999).

Ref. Stenocereus (A.Berger) Riccob.

×***Grisulatocereus*** P.V.Heath (pro nothosubgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 101. 1996.

Etym. Condensed formula.

Par. *Stenocereus* sect. *Griseocereus* P.V.Heath × *Stenocereus* sect. *Insulatocereus* P.V.Heath.

Ref. Stenocereus (A.Berger) Riccob.

Grusonia F.Rchb. ex Britton & Rose, *The Cactaceae* **1**: 215. (21 Jun) 1919.

Etym. Named for Herman GRUSON (1821-1895), a German businessman and owner of a succulent plant collection in Magdeburg.

Typ. *Cereus bradtianus* J.M.Coult. Autotype (Art. 10.2). The only included species.

Ref. Opuntia (L.) Mill.

Grusonia (Britton & Rose) Bravo (pro subgen. *Opuntia* (L.) Mill.), Nuevas combinaciones, *Cactaceas y Suculentas Mexicanas* **17**(4): 118. (Oct-Dec) 1972.

Bas. *Grusonia* F.Rchb. ex Britton & Rose (1919, pro gen.)

Ref. Opuntia (L.) Mill.

Guelzowianae Keizer (pro ser. *Mammillaria* Haw.), Twee nieuwe series in het *Mammillaria* – ondergeslacht *Cryptocarpa*, *Succulenta* **70**(6): 125. (Jun) 1991.

Etym. Named for an included species.

Typ. *Mammillaria guelzowiana* Werderm.

Ref. Mammillaria Haw.

Guerreron Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 64. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. From the name of an included species.

Typ. *Neomammillaria guerreronis* Bravo nom. incorr. = *Mammillaria guerreronis* (Bravo) Backeb.

Ref. *Mammillaria* Haw.

×**Guillauminara** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 111. 1992.
Etym. Condensed name in honour of A. GUILLAUMIN.

Par. *Echinopsis* Zucc. × *Harrisia* Britton × *Trichocereus* (A.Berger) Riccob.

Ref. *Echinopsis* Zucc.

Guitarti Mészáros (pro ser. *Melocactus* (L.) Mill.), Additional contributions to the knowledge of the *Melocactus* species of Cuba, *Acta Botanica Academiae Scientiarum Hungaricae* 24(3-4): 304. 1978 (“Guitartii”).

Etym. From the name of an included species.

Typ. *Melocactus guitartii* León.

Ref. *Melocactus* (L.) Mill.

Gummosi Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 639, 640. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus gummosus* Engelm. ex K.Brandege. Autotype (Art. 22.6).

Ref. *Stenocereus* (A.Berger) Riccob.

Gymnantha Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 52, 284. 1957.

Etym. From the Greek *gymnos*, naked or smooth, and *anthos*, flower.

Typ. *Lobivia cumingii* Britton & Rose [non *Echinocactus cumingii* Hopffer] = *Weingartia neocumingii* Backeb.

Obs. This taxon has in the past been treated as a later homonym of *Gymnanthus* Jungh. (1840). However, from 2000, the ICN was revised so that generic names differing in spelling because of their genders are not to be treated as though homonyms. Thus, *Gymnantha* Y.Itô is valid & legitimate and has priority over the superfluous replacement names *Neogymnantha* Y.Itô (1981) & *Gymnorebutia* Doweld (2003).

Ref. *Rebutia* K.Schum.

Gymnanthi A.Berger (pro ser. *Echinocactus* Link & Otto), *Kakteen*: viii, 249. (Jul-Aug) 1929.

Etym. From the Greek *gymnos*, naked or smooth, and *anthos*, flower.

Typ. Not cited.

Ref. *Echinofossulocactus* Lawr., *Pediocactus* Britton & Rose, *Sclerocactus* Britton & Rose.

Gymnanthocereus Backeb., Zwei wichtige Gattungen des Huancabamba-Distriktes, *Blätter für Kakteenforschung* 4(7): [2]. 1937.

Etym. From the Greek *gymnos*, naked or smooth, and *anthos*, flower, and the substantive *Cereus*.

Typ. *Cactus chlorocarpus* Humb., Bonpl. & Kunth.

Obs. Perhaps believing that *Cactus chlorocarpus* Humb., Bonpl. & Kunth had been misapplied to *Cereus roezlii* K.Schum., Backeberg changed the type to *Cereus microspermus* Werderm. & Backeb. in *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 27. (Jun) 1942, but this was actually not necessary.

Ref. *Browningia* Britton & Rose.

×***Gymnobotia*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 118. 1992.

Etym. Condensed formula.

Par. *Gymnocalycium* Mittler × *Rebutia* K.Schum.

Gymnocactus Backeb., Systematische Uebersicht, *Blätter für Kakteenforschung* 5(6): [10], [13], [22], [21]. 1938.

Etym. From the Greek *gymnos*, naked or smooth, and the substantive *Cactus*.

Typ. *Echinocactus saueri* Boed.

Ref. *Turbinicarpus* Buxb. & Backeb.

Gymnocactus (Backeb.) Halda (pro sect. *Pediocactus* Britton & Rose), A new system of the genus *Pediocactus* Britton & Rose, *Acta Musei Richnoviensis, Sect. Natur.* 5(1): 17. 1998.

Bas. *Gymnocactus* Backeb. (1938, pro gen.).

Syn. *Thelocactus* sect. *Nudiflori* Kladiwa & Fittkau nom. inval. (1975).

Ref. *Turbinicarpus* Buxb. & Backeb.

Gymnocactus (Backeb.) Lüthy (pro sect. *Turbinicarpus* Buxb. & Backeb.), Further comments on *Turbinicarpus* and a key to species, in Hunt, *Cactaceae Systematics Initiatives* (14): 21. (Oct) 2002.

Bas. *Gymnocactus* Backeb. (1938, pro gen.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Gymnocalycium Pfeiff. ex Mittler, *Taschenbuch für Cactusliebhaber* ed.2: 124. 1844 (“*Gymnocalycium*”).

Etym. Naked calyx, from the Greek *gymnos*, naked or smooth, and *kalyx*, chalice, husk, or calyx, referring to the lack of any hairs or spines on the receptacle tube.

Typ. Not cited.

Lectotyp. *Cactus gibbosus* Haw. Designated by Pfeiffer, *Nomenclator botanicus* 1.2(25): 1522. (Nov) 1874.

Gymnocalycium (Pfeiff.) K.Schum. (pro sect. *Echinocactus* Link & Otto), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 245. (1 Sep) 1890.

Bas. *Gymnocalycium* Mittler (1844, pro gen.)

Ref. *Gymnocalycium* Mittler.

Gymnocalycium (Mittler) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 219. 1929.

Bas. Gymnocalycium Mittler (1844, pro gen.)

Ref. Gymnocalycium Mittler.

Gymnocarpi Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 15. 1841.

Etym. From the Greek *gymnos*, naked, and *karpos*, fruit.

Typ. Not cited.

Obs. Includes only species of *Wigginsia*.

Ref. Parodia Speg.

Gymnocarpi (Salm-Dyck) Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 2: 275. 1843.

Bas. Gymnocarpi Salm-Dyck (1841, pro infragen. *Echinocactus* Link & Otto).

Ref. Parodia Speg.

Gymnocephala Backeb. ex Vliet (pro subgen. *Wigginsia* D.M.Porter), Hoezo consensus? Herstel van drie geslachten: *Notocactus* Frič 1928, *Brasilicactus* Backbg. 1942 en *Wigginsia* Porter 1964, *Succulenta* 88(4): 156. 2009 nom. inval. (Art. 39.1) .

Etym. From the Greek *gymnos*, naked or smooth, and *kephale*, head.

Typ. Cactus ottonis Lehm.

Syn. Notocactus (K.Schum.) Frič subgen. *Notocactus*.

Ref. Parodia Speg.

Gymnocephalus Backeb. (pro subgen. *Notocactus* (K.Schum.) Frič), in Backeberg & Knuth, *Kaktus-ABC*: 68, 253. (12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).

Etym. From the Greek *gymnos*, naked or smooth, and *kephale*, head.

Typ. Not cited.

Lectotyp. Cactus ottonis Lehm. Designated by Sida, *Minimus* 1991 (1-3): 30. 1991.

Syn. Notocactus (K.Schum.) Frič subgen. *Notocactus*.

Ref. Parodia Speg.

Gymnocephalus Backeb. ex Sida (pro subgen. *Notocactus* (K.Schum.) Frič), *Minimus* 1991 (1-3): 30. 1991 nom. inval. (Art. 22.2).

Etym. From the Greek *gymnos*, naked or smooth, and *kephale*, head.

Typ. Cactus ottonis Lehm.

Syn. Notocactus (K.Schum.) Frič subgen. *Notocactus*.

Ref. Parodia Speg.

Gymnocereus Backeb., *Die Cactaceae* 2: 920. (Mar) 1959 nom. illeg (Art. 52.1).

Etym. From the Greek *gymnos*, naked or smooth, and the substantive *Cereus*.

Rep. Syn. Gymnanthocereus Backeb. (1937) excl. type.

Typ. Cereus microspermus Werderm. & Backeb.

Syn. Gymnanthocereus Backeb. (1937)

Obs. Created to replace *Gymnanthocereus* Backeb. (1937) because the type of that was erroneously believed by Backeberg to be a *Seticereus*.

Ref. Browningia Britton & Rose.

×**Gymnochinopsis** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 111. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Gymnocalycium* Mittler.

×**Gymnophora** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 118. 1992.

Etym. Condensed formula.

Par. *Gymnocalycium* Mittler × *Lophophora* J.M.Coult.

Gymnorebutia Doweld, A new re-circumscribed generic name in *Cactaceae* Durande, *Sukkulenty* 4(1-2): 24-25. (Jan) 2003 nom. illeg. (Art. 52.1).

Etym. From the Greek *gymnos*, naked, and the substantive *Rebutia*.

Rep. Syn. *Gymnantha* Y.Itô (1957).

Typ. *Weingartia pulquinensis* Cárdenas = *Weingartia neocumingii* Backeb.

Syn. *Gymnantha* Y.Itô (1957); *Weingartia* subgen. *Cumingia* F.H.Brandt (1983).

Obs. A superfluous replacement for *Gymnantha* Y.Itô, thought to have been illegitimate before 2003.

Ref. *Rebutia* K.Schum.

Haagea Frič, *Haagea* Frič, gen. n. *Schwarzii*, Frič, sp. n., *Kaktusová příloha ŽIVOT V PŘÍRODE vychází v Praze* 29(36-37): 69-70. (1 Oct) 1925 nom. illeg. (Art. 53.1).

Etym. Named for the German horticulturist Walther HAAGE (1899-1992), third generation owner of the Kakteen Haage nursery at Erfurt.

Typ. *Haagea schwarzii* Rose ex Frič. = *Porfiria coahuilensis* Boed. Autotype (Art. 10.2).

The only included species.

Obs. Later homonym of *Haagea* Klotzsch (1854, *Begoniaceae*).

Ref. *Mammillaria* Haw.

Haageanae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the name of an included species.

Typ. *Lobivia haageana* Backeb. = *Echinopsis marsoneri* Werderm.

Ref. *Echinopsis* Zucc.

Haageocactus Backeb., *Kakteen-Seltenheiten. Meine Peru-Expedition 1930-1931, Teil 1, Möllers Deutsche Gärtner-Zeitung* 46(16): 187. (1 Jun) 1931 nom. inval. (Art. 38.3).

Etym. Named for Walther HAAGE (1899-1992), third generation owner of the Kakteen Haage nursery at Erfurt, and the substantive *Cactus*.

Typ. Not cited.

Descr. Densely spiny cerei of incomparably beautiful colours, colourfully banded like [*Echinocereus*] *pectinatus*, these are representatives of the new genus: *Haageocactus*.

Golden yellow [*Cleistocactus*] *straussii*-like forms as found under the binghamias, which sometimes occur in pale yellow. [“*Dicht bestachelte Cereen von unvergleichlich schönen Farben, bunt abgestuft wie ein pectinatus, das sind die Vertreter der neuen Gattung: Haageocactus. Goldgelbe straussii gleiche Formen findet man unter den Binghamias, zuweilen gehen sie in Zartrosagelb über.*”]

Obs. A provisional name for what was eventually validated as *Haageocereus* Backeb. (1934).
Ref. *Haageocereus* Backeb.

Haageocereus Backeb., Systematische Übersicht, & *Haageocereus* Bckbg. n. g., *Blätter für Kakteenforschung* 1(3): [2]; 1(6): [1]. 1934.

Etym. Named for Walther HAAGE (1899-1992), third generation owner of the Kakteen Haage nursery at Erfurt, and the substantive *Cereus*.

Typ. *Binghamia melanostele* Britton & Rose nom. incorr. = *Cereus pseudomelanostele* Werderm. & Backeb. [= ?*Cactus multangularis* Willd.]. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. The name was first mentioned with a brief but insufficient characterisation in *Cactus and Succulent Journal* (US) 3(8): 130. (Feb) 1932, invalid under Art. 38.3. Also mentioned in *Desert Plant Life* 5(1): 3-4. (May) 1933, as a nom. nud. An in-depth history of the name is given by Croizat, in *Cactus and Succulent Journal* (US) 14(10-11): 145-148. (Oct-Nov) 1942.

×***Haagespostoa*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* 37(3): 76. (Jun) 1982.

Etym. Condensed formula.

Par. *Espostoa* Britton & Rose × *Haageocereus* Backeb.

Syn. ×*Neobinghamia* Backeb. nom. inval. (1950, pro gen.).

Haleanae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632, 633. (Dec) 1925.

Etym. Based on the name of the only included species.

Rep. Syn. *Cochemia* K.Brandegee (1897, pro gen.)

Typ. *Mammillaria halei* K.Brandegee.

Obs. All other species included in *Cochemia* are transferred by Vaupel to *Mammillaria* infragen. *Poselgerianae* Vaupel.

Ref. *Mammillaria* Haw.

Hamatacanthae F.H.Brandt (pro ser. *Parodia* Speg.), The genus *Parodia* Spegazzini, subgenus *Parodia* and descriptions of two new taxa, *Cactus and Succulent Journal* (US) 49(3): 117. (May-Jun) 1977 nom. inval. (Art. 22.2).

Etym. From the Latin *hamatus*, hooked, and *acantha*, spine.

Rep. Syn. *Hickenia* Britton & Rose nom. illeg. (1922, pro gen.).

Typ. *Echinocactus microspermus* F.A.C.Weber. Autotype (Art. 7.4). Same as the replaced synonym.

Syn. *Parodia* Speg. ser. *Parodia*.

Ref. *Parodia* Speg.

Hamati Salm-Dyck (pro subsect. *Echinocactus* Link & Otto), *Cactae in horto Dyckensi cultae anno 1849*: 28, 151, 152. 1850.

Etym. A Latin adjective, *hamatus*, hooked.

Typ. Not cited.

Obs. Rank specified on p.151 under note 28 para. 2, and again on p.152 under note 29 para 2. Includes the types of *Echinocactus* infragen. *Uncinati* Salm-Dyck (1850), *Echinocactus* subgen. *Ancistrocactus* K.Schum. (1898), *Ferocactus* Britton & Rose (1922), *Hamatocactus* Britton & Rose (1922) & *Glandulicactus* Backeb. (1938).
Ref. *Echinofossulocactus* Lawr., *Sclerocactus* Britton & Rose.

Hamatispinae Backeb. (pro ser. *Parodia* Speg.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 36. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *hamatus*, hooked, and *spina*, spine.

Typ. *Parodia aureispina* Backeb. = *Parodia mutabilis* Backeb.

Ref. *Parodia* Speg.

Hamatispinae Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 64. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *hamatus*, hooked, and *spina*, spine.

Typ. *Mammillaria bocasana* Poselg.

Ref. *Mammillaria* Haw.

Hamatispinae Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3099, 3101 (20 May) 1961 nom. inval. (Art. 39.1).

Etym. From the Latin *hamatus*, hooked, and *spina*, spine.

Typ. *Mammillaria bocasana* Poselg.

Ref. *Mammillaria* Haw.

Hamatispini Backeb. (pro ser. *Ferocactus* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 56. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *hamatus*, hooked, and *spina*, spine.

Typ. *Echinocactus stainesii* Audot ex Salm-Dyck = *Echinocactus pilosus* Galeotti ex Salm-Dyck.

Ref. *Echinofossulocactus* Lawr.

×***Hamatobergia*** Y.Itô, My pleasant visit to Tegelberg Cactus Gardens, *Shaboten* (86): 18. 1972 nom. inval. (Art. H.9.1).

Etym. Condensed formula.

Par. Evidently *Hamatocactus* Britton & Rose × *Leuchtenbergia* Hook.f., but without statement of parentage.

Ref. ×***Echinobergia*** Mottram.

Hamatocactus Britton & Rose, *The Cactaceae* 3: 78, 104. (12 Oct) 1922.

Etym. From the Latin *hamatus*, hooked, and the substantive *Cactus*.

Typ. *Echinocactus setispinus* Engelm.

Ref. *Sclerocactus* Britton & Rose.

Hamatocactus (Britton & Rose) A. Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 242. (Jul-Aug) 1929.

Typ. *Hamatocactus* Britton & Rose (1922, pro gen.)

Ref. *Sclerocactus* Britton & Rose.

Hariota Adans., *Familles des plantes* 2: 243, 520. 1763 nom. rej. (1912).

Etym. Named for the English mathematician, astronomer, natural historian and explorer Thomas HARIOT (1560-1621), who accompanied Sir Walter RALEIGH to America.

Typ. Not cited, but based on the description and plate of Plumier, *Botanicon Americanum* 3: t.76 (Burman, *Plantarum Americanum* fasc. 8, 1758: t.197, f.2) = *Cassytha baccifera* J.S. Muell.

Ref. *Rhipsalis* Gaertn. nom. cons.

Hariota DC., *Mémoire* 8: *Sur quelques nouvelles espèces de cactées nouvelles ou peu connues*: 23. 1834 nom. illeg. (Art. 53.1)

Etym. Named for the English mathematician, astronomer, natural historian and explorer Thomas HARIOT (1560-1621), who accompanied Sir Walter RALEIGH to America.

Typ. *Rhipsalis salicornioides* Haw. Autotype (Art. 22.6). The only included species.

Obs. A later illegitimate homonym of *Hariota* Adans. nom. rej. (1763).

Syn. *Hatiora* Rose.

Ref. *Rhipsalis* Gaertn. nom. cons.

Hariota DC. ex F.A.C. Weber (pro sect. *Rhipsalis* Gaertn.), *Rhipsalis*, in Bois, *Dictionnaire d'horticulture* 2(33): 1048. (Oct) 1898.

Rep. Syn. *Hariota* DC. non Adans. (1834, pro gen.).

Ref. *Rhipsalis* Gaertn.

Hariota (F.A.C. Weber) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 87. (Nov) 1903.

Bas. *Hariota* DC. ex F.A.C. Weber (1898, pro gen.).

Ref. *Rhipsalis* Gaertn.

Harlowi Mészáros (pro ser. *Melocactus* (L.) Mill.), Additional contributions to the knowledge of the *Melocactus* species of Cuba. *Acta Botanica Academiae Scientiarum Hungaricae* 24(3-4): 304. 1978 ("Harlowii").

Etym. Based on the name of an included species.

Typ. *Cactus harlowii* Britton & Rose.

Ref. *Melocactus* (L.) Mill.

×***Harricereus*** G.D. Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* 37(3): 76. (Sep) 1982.

Etym. Condensed formula.

Par. *Cereus* (L.) Mill. × *Harrisia* Britton.

Ref. ×*Cereopsis* Mottram.

Harrisia Britton, *Studies of West Indian plants – II: 7. Harrisia, a new genus of Cactaceae, Bulletin of the Torrey Botanical Club* **35**(12): 561-566. (31 Dec) 1908.

Etym. Named for William HARRIS, Superintendent of Public Gardens and Plantations of Jamaica.

Typ. Not cited.

Lectotyp. *Cereus gracilis* Mill. Designated by Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 422. (21 Jul) 1909.

Ref. Echinopsis Zucc.

Harrisia (Britton) A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 127. (Jul-Aug) 1929.

Bas. Harrisia Britton (1908, pro gen.).

Ref. Echinopsis Zucc.

×**Harrisinopsis** G.D. Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(3): 77. (Sep) 1982.

Etym. Condensed formula.

Par. Echinopsis Zucc. × *Harrisia* Britton.

Ref. Echinopsis Zucc.

Haseltonia Backeb., *Haseltonia* Bckbg. n. g. (1949), *Blätter für Sukkulantenkunde* **1**(1): 3. (1 Jan) 1949.

Etym. Named for the American horticulturist Scott E. HASELTON (1895-1991), founding publisher and editor of the *Cactus and Succulent Journal* (US) from 1929 to 1965.

Typ. Pilocereus hoppenstedtii F.A.C. Weber = *Cereus columna-trajani* Karw. ex Pfeiff.

Ref. Cephalocereus Pfeiff.

×**Hatbergera** Süplie, *Schlumbergera Directory of Species and Hybrids*: [4]. 2004.

Etym. Condensed formula.

Par. Hatiora Rose × *Schlumbergera* Lem.

Ref. Rhipsalis Gaertn.

Hatiora Rose, in Bailey, *The standard cyclopedia of horticulture*, ed.2 **3**: 1432-1433. (25 Mar) 1914.

Etym. Anagram of the substantive *Hariota*.

Rep. Syn. Hariota DC. non Adans. (1834).

Typ. Rhipsalis salicornioides Haw. Autotype (Art. 7.4, 10.2). The only included species and same as the replaced synonym.

Ref. Rhipsalis Gaertn.

Hayneani Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Matucana Britton & Rose (1922, pro gen.).

Typ. Echinocactus haynii Otto ex Salm-Dyck. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. Matucana Britton & Rose.

×**Heathara** G.D.Rowley, When the name game gets rough, in Schmid, Reviews and notices of publications, *Taxon* **42**(1): 287. (Feb) 1993 nom. fict.

Etym. Named for Paul V. HEATH, editor and publisher of the journal *Calyx* (1992-1999).

Par. Rafflesia R.Br. ex Gray × *Dionaea* Sol. ex Ellis × *Lithops* N.E.Br. × *Welwitschia* Hook.f.

Obs. Authorship attributed to the G.D.Rowley pseudonym Errol Goodwyn.

Heliabravo Backeb., *Heliabravo* N.G., *The Cactus and Succulent Journal of Great Britain* **18**(1): 10, 23. (Jan) 1956.

Etym. Named for the Mexican biologist Helia BRAVO-Hollis (1901-2001).

Typ. Cereus chende Rol.-Goss.

Ref. Myrtillocactus Console.

Helianthocereus Backeb., The natio *Lobiviae*, *The Cactus and Succulent Journal of Great Britain* **11**(3): 53. (Jul) 1949.

Etym. From the Greek *helios*, sun, *anthos*, flower, and the substantive *Cereus*. Refers to the day-flowering habit.

Typ. Trichocereus poco Backeb. = *Cereus tarijensis* Vaupel.

Ref. Echinopsis Zucc.

×**Heliaporus** G.D.Rowley, The scientific approach to succulents, *The Cactus and Succulent Journal of Great Britain* **13**(3): 54. (Jul) 1951.

Etym. Condensed formula.

Par. Aporocactus Lem. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. Aporepiphyllum G.D.Rowley.

×**Helioaporocryptus** E.Meier, *Cryptocereus anthonyanus* Alexander und seine Hybriden, *Kakteen und andere Sukkulente* **32**(7): 152. (Jul) 1981 nom. inval. (Art. H.6.4, H.9.1).

Etym. Incorrectly formed condensed formula.

Par. Not cited, but evidently *Aporocactus* Lem. × *Cryptocereus* Alexander × *Heliocereus* (A.Berger) Britton & Rose.

Syn. Meierara P.V.Heath (1983).

Ref. Aporepiphyllum G.D.Rowley.

×**Heliocactus** Janse, *Naschrift, Cactussen en Vetplanten* **4**(2): 28. (Feb) 1938 nom. inval. (Art. H.8.1).

Etym. Condensed formula.

Par. Heliocereus (A.Berger) Britton & Rose × *Phyllocactus* Link nom. illeg. (= *Epiphyllum* Haw.)

Syn. Heliphyllum G.D.Rowley (1962).

Ref. Epiphyllum Haw.

×***Heliocereopsis*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 111. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Heliocereus* (A.Berger) Britton & Rose

Ref. ×*Echinophyllum* Mottram.

Heliocereus A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 78. (31 May) 1905.

Etym. From the Greek *helios*, sun, and the substantive *Cereus*. A reference to the diurnal flowering.

Typ. Not cited.

Lectotyp. *Cactus speciosus* Cav. Designated by Britton & Rose, *Contributions from the U.S. National Herbarium* 12(10): 433. (21 Jul) 1909.

Ref. *Epiphyllum* Haw.

Heliocereus (A.Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* 12(10): 433. (21 Jul) 1909.

Bas. *Heliocereus* A.Berger (1905, pro subsect. *Cereus* (L.) Mill.).

Ref. *Epiphyllum* Haw.

Heliocereus (A.Berger) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 130. (Jul-Aug) 1929.

Bas. *Heliocereus* A.Berger (pro subsect. *Cereus* (L.) Mill.).

Ref. *Epiphyllum* Haw.

×***Heliochia*** G.D.Rowley, Zur Genealogie der “Phyllohybriden” (Epicacti), in Backeberg, *Die Cactaceae* 6: 3551. (Jun) 1962.

Etym. Condensed formula.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. *Epiphyllum* Haw.

×***Heliochia*** (G.D.Rowley) Doweld (pro nothosect. *Heliocereus* (A.Berger) Britton & Rose), Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 42. (Jan) 2003.

Bas. ×*Heliochia* G.D.Rowley (1962, pro nothogen.).

Ref. *Epiphyllum* Haw.

×***Heliocryptus*** E.Meier, *Cryptocereus anthonyanus* Alexander und seine Hybriden, *Kakteen und andere Sukkulente* 32(7): 152. (Jul) 1981 nom. inval. (Art. H.6.4, H.9.1).

Etym. Incorrectly formed condensed formula.

Par. Not cited, but evidently *Cryptocereus* Alexander × *Heliocereus* (A.Berger) Britton & Rose.

Syn. ×*Heptocereus* P.V.Heath (1983).

Ref. ×*Seleniphyllum* Backeb.

×***Helioepicactus*** Kohlschreiber, Those Names - Notes from America, *Epiphytes* 14(56): 108. 1990 nom. inval. (Art. H.8.1)

Etym. Incorrectly formed condensed formula.

Par. *Epicactus* nom. vernac. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. *Epiphyllum* Haw.

×***Heliorhpsalis*** Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 40. (Jan) 2003.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Rhipsalis* Gaertn.

Ref. ×*Rhipsaliphyllum* Mottram.

×***Helioselenius*** G.D.Rowley, The scientific approach to succulents, *The Cactus and Succulent Journal of Great Britain* 13(3): 54. (Jul) 1951 nom. inval. (Art. H.6.2).

Etym. Incorrectly formed condensed formula.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose.

Syn. ×*Seleliocereus* Guillaumin (1937).

Ref. ×*Seleniphyllum* Backeb.

×***Helioseleniphyllum*** Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 41. (Jan) 2003.

Par. ×*Seleniphyllum* Backeb. × *Heliocereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniphyllum* Backeb.

×***Heliosocereus*** Glass & R.C.Foster, *Heliocereus speciosus* × *Pilosocereus palmeri*, an impossible hybrid from the Tegelberg Cactus Gardens, *Cactus & Succulent Journal (US)* 43(1): 22. 1971 nom. inval. (Art. 36.1b)

Etym. Condensed formula.

Par. *Cactus speciosus* Cav. × *Cephalocereus palmeri* Rose, as *Heliocereus speciosus* (Cav.) Britton & Rose × *Pilosocereus palmeri* (Rose) F.M.Knuth.

Obs. This name was proposed in anticipation of future acceptance with the following statement: “If this new hybrid is ever propagated in commercial quantities it might well have a name like ×*Heliosocereus*”.

Syn. ×*Pilodisocactus* G.D.Rowley (2014).

Ref. ×*Epipilosocereus* Mottram.

×***Heliphyllum*** G.D.Rowley, Zur Genealogie der “Phyllohybriden” (Epicacti), in Backeberg, *Die Cactaceae* 6: 3555. (Jun) 1962.

Etym. Condensed formula.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Epiphyllum* Haw.

Obs. Replaces ×*Heliocactus* Janse nom. inval. (1938), which was incorrectly formed .

Ref. *Epiphyllum* Haw.

×***Heptocereus*** P.V.Heath, Six short notes: 2. A bad example, *Epiphytes* 7(28): 91. 1983.

Etym. Condensed formula.

Par. *Cryptocereus* Alexander × *Heliocereus* (A.Berger) Britton & Rose.

Obs. Heath (pers. comm. 8 May 1993) stated: “I am now certain that ×*Heptocereus* P.V.Heath does not exist.” Confirmed again in *Calyx* 5(2): 49. 1995.

Ref. ×*Seleniphyllum* Backeb.

Herrerae Lüthy (pro ser. *Mammillaria* Haw.), *Taxonomische Untersuchung der Gattung Mammillaria Haw.*: 141. 1995.

Etym. Based on the name of the type species.

Typ. *Mammillaria herrerae* Werderm.

Ref. *Mammillaria* Haw.

Herrerae (Lüthy) Doweld (pro ser. *Escobariopsis* Doweld), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* 3(1-2): 42. 2000.

Bas. *Herrerae* Lüthy (pro ser. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Herteriani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 75. 1988 (“Herterianae”) (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species, with an adjectival suffix.

Typ. *Echinocactus herteri* Werderm.

Ref. *Parodia* Speg.

Herteria Havlíček ex Doweld (pro sect. *Ritterocactus* Doweld), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* 3(1-2): 59. 2000.

Etym. Based on the name of an included species.

Typ. *Echinocactus herteri* Werderm.

Ref. *Parodia* Speg.

Hertrichia P.V.Heath (pro sect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 103. 1992.

Etym. Named for the American horticulturist William HERTRICH (1878-1966), curator of the Huntington Botanical Gardens.

Rep. Syn. *Hertrichocereus* Backeb. (1950, pro gen.).

Typ. *Cereus beneckeii* C.Ehrenb.

Ref. *Stenocereus* (A.Berger) Riccob.

Hertrichianae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 33. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia hertrichiana* Backeb.

Ref. *Echinopsis* Zucc.

Hertrichocereus Backeb., Nova genera et subgenera, *Cactus and Succulent Journal* (US) 22(5): 153. (Sep-Oct) 1950.

Etym. Named for the American horticulturist William HERTRICH (1878-1966), curator of the Huntington Botanical Gardens, and the substantive *Cereus*.

Typ. *Cereus beneckeii* C.Ehrenb.

Ref. *Stenocereus* (A.Berger) Riccob.

Hertrichocereus (Backeb.) P.V.Heath (pro subgen. ***Stenocereus*** (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 100. 1996.

Bas. Hertrichocereus Backeb. (1950, pro gen.).

Ref. Stenocereus (A.Berger) Riccob.

Heteracanthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 38. 1834 nom. nud.

Etym. From the Greek *heteros*, diversely or variously, and *akantha*, spine.

Typ. Not cited.

Ref. Mammillaria Haw.

Heteracanthae Salm-Dyck ex Pfeiff. (pro infragen. *Mammillaria* Haw.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 24. 1837; emend Salm-Dyck, *Cactae in horto Dyckensi cultae. Anno 1841*: 7. 1841.

Etym. From the Greek *heteros*, diversely or variously, and *akantha*, spine.

Typ. Not cited.

Ref. Mammillaria Haw.

Heteracanthae (Pfeiff.) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae* **2**: 270. 1843.

Bas. Heteracanthae Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Obs. Also given the rank of section by Salm-Dyck himself in *Cactae in horto Dyckensi cultae 1849*: 103. 1850.

Ref. Mammillaria Haw.

Heteracanthi Engelm. (pro infragen. *Echinocactus* Link & Otto), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 18. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 274. 1857] nom. nud.

Etym. From the Greek *heteros*, diversely or variously, and *akantha*, spine.

Typ. Not cited.

Ref. Echinofossulocactus Lawr.

Heteranthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Hortus Dyckensis*: 155. 1834 nom. nud.

Etym. Perhaps a typographical error for *Heteracanthae*.

Ref. Mammillaria Haw.

Heterochlorae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae 1849*: 9-10. 1850 nom. illeg. (Art. 52.1).

Etym. From the Greek *heteros*, diversely or variously, and *chloros*, grass green.

Rep. Syn. Mammillaria Haw. infragen. *Discolores* Salm-Dyck (1841).

Typ. Mammillaria discolor Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Superfluous replacement of *Mammillaria* Haw. infragen. *Discolores* Salm-Dyck (1841).

Syn. Mammillaria Haw. infragen. *Heteracanthae* Pfeiff. (1837).

Ref. Mammillaria Haw.

Heterochlorae Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 64. (Jun) 1942.

Etym. From the Greek *heteros*, diversely or variously, and *chloros*, grass green.

Rep. Syn. Heterochlorae Salm-Dyck nom. illeg. (1850, pro infragen. *Mammillaria* Haw.) excl. typ.

Typ. Mammillaria hidalgensis J.A.Purpus = *Mammillaria polythele* Mart.

Ref. Mammillaria Haw.

Heterochlorae (Backeb.) Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3099, 3101. 1961 nom. inval. (Art. 41.5).

Bas. Heterochlorae Backeb. (1942, pro ser. *Mammillaria* Haw.).

Obs. Lacked a full and direct reference to the place of publication of the basionym.

Ref. Mammillaria Haw.

Heterolobivia Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *heteros*, diversely or variously, and the substantive *Lobivia*.

Typ. Not cited.

Ref. Echinopsis Zucc.

Heteropodium Backeb. (pro subgen. *Lepismium* Pfeiff.), *Descriptiones Cactacearum novarum (et combinationes novae) III*: 7. (Dec) 1963.

Etym. From the Greek *heteros*, diversely or variously, and *podeion*, base. Probably a reference to the diversity of the sunken ovaries.

Typ. Lepismium marnierianum Backeb. nom. inval. = *Lepismium dissimile* G.Lindb.

Ref. Rhipsalis Gaertn.

Hexaedrophori Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 623, 628. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Thelocactus K.Schum. (1898, pro subgen.).

Typ. Echinocactus hexaedrophorus Lem. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. Echinofossulocactus Lawr.

Hexaedrophori Kladiwa & Fittkau (pro sect. *Thelocactus* (K.Schum.) Britton & Rose), Gattung *Thelocactus*, in Krainz, *Die Kakteen* (61): CVIIIb: [3]. 1975 nom. inval. (Art. 22.2, 39.1)

Etym. Based on the name of the type species.

Typ. Echinocactus hexaedrophorus Lem.

Syn. Thelocactus Britton & Rose sect. *Thelocactus*.

Ref. Echinofossulocactus Lawr.

Hickenia Britton & Rose, *The Cactaceae* 3: 78, 207. (12 Oct) 1922 nom. illeg. (Art. 53.1).

Etym. Named for Prof. Cristóbal María HICKEN (1875-1933) of the University of Buenos Aires.

Aires.

Typ. *Echinocactus microspermus* F.A.C.Weber. Autotype (Art. 10.2). The only included species.

Obs. Later homonym of *Hickenia* Lillo (1919, *Apocynaceae: Asclepiadoideae*). Replaced by *Parodia* Speg. (1923).

Ref. *Parodia* Speg.

Hildewintera F.Ritter, *Hildewintera* Ritter nom. nov., *Kakteen und andere Sukkulente* 17(1): 11. 1966 nom. inval. (Art. 41.5).

Etym. Named for Ritter's sister, Hildegard WINTER.

Rep. Syn. *Winteria* F.Ritter nom. illeg. (1962).

Syn. *Winterocereus* Backeb. (1966).

Obs. Lacked citation of the basionym page reference.

Ref. *Cleistocactus* Lem.

Hildewintera F.Ritter ex Buxb. (pro subgen. *Loxanthocereus* Backeb.), Gattung *Loxanthocereus*, in Krainz (ed.), *Die Kakteen* (58) CVB: [7]. (1 Jul) 1974.

Etym. Named for Ritter's sister, Hildegard WINTER.

Typ. *Winteria aureispina* F.Ritter nom. illeg. = *Winterocereus aureispinus* Backeb.

Ref. *Cleistocactus* Lem.

×***Hildewintopsis*** W.Hans, Kellner & Axel Neumann, *Hybridenbuch*: 230. 2012 nom. inval. (Art. H.9.1).

Etym. Condensed formula.

Par. Not cited. Presumably *Hildewintera* F.Ritter × *Echinopsis* Zucc.

Ref. ×*Cleistopsis* Strigl.

Hildmannia Kreuz. & Buining, *Bemerkungen zu einigen Gattungen der Cactaceae, Repertorium specierum novarum regni vegetabilis* 50: 204-205 (20 Nov) 1941 nom. illeg. (Art. 52.1).

Typ. *Echinocactus ebenacanthus* H.B.Monv. ex Labour. = *Echinocactus fuscus* Muehlenpf.

Obs. Includes the type of *Horridocactus* Backeb. (1938), the name that should have been adopted.

Ref. *Eriosyce* Phil.

Homalocephala Britton & Rose, *The Cactaceae* 3: 181. 1922.

Etym. From the Greek *homalos*, equal or level, and *kephale*, cap, referring to the flattened habit of growth.

Typ. *Echinocactus texensis* Hopffer.

Ref. *Echinocactus* Link & Otto.

Homalocephala (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 231. (Jul-Aug) 1929.

Typ. *Homalocephala* Britton & Rose (1922, pro gen.).

Obs. This rank was adopted and revised by Ferguson, The genus *Echinocactus* Link & Otto, subgenus *Homalocephala* (Britton & Rose) stat. nov., *Cactus & Succulent Journal* (US)

64(4): 169-172. 1992, with an illegitimate superfluous transfer and revised circumscription.
Ref. Echinocactus Link & Otto.

Homeacanthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 38. 1834 nom. nud.

Etym. From the Greek, *homoe*, similar, and *akantha*, spine.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. Mammillaria Haw. infragen. *Mammillaria*.

Ref. Mammillaria Haw.

Homeacanthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Hortus Dyckensis*: 155. 1834 nom. nud.

Etym. From the Greek, *homoe*, similar, and *akantha*, spine.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. Mammillaria Haw. infragen. *Mammillaria*.

Ref. Mammillaria Haw.

Homoecanthae Salm-Dyck ex Pfeiff. (pro infragen. *Mammillaria* Haw.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 5. 1837 nom. inval. (Art. 22.2).

Etym. From the Greek, *homoe*, similar, and *akantha*, spine.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. Mammillaria Haw. infragen. *Mammillaria*.

Ref. Mammillaria Haw.

Homoecanthae Pfeiff. ex Spach (pro sect. *Mammillaria* Haw.), *Histoire naturelle des végétaux* **13**: 336. 1846 nom. inval. (Art. 22.2).

Etym. From the Greek, *homoe*, similar, and *akantha*, spine.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. Mammillaria Haw. sect. *Mammillaria*.

Ref. Mammillaria Haw.

Homoaeacanthi Engelm. (pro infragen. *Echinocactus* Link & Otto), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 19. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 275. 1857] nom. nud..

Etym. From the Greek *homoe*, similar, and *akantha*, spine.

Typ. Not cited.

Ref. Echinofossulocactus Lawr.

Hoploparodia Y.Itô (pro subgen. *Parodia* Speg.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *hoplon*, armed, and the substantive *Parodia*.

Typ. Not cited.

Ref. Parodia Speg.

Horakia P.V.Heath (pro sect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* **2**(3): 104. 1992.

Etym. Named for Karl E. HORAK.

Rep. Syn. *Pruinosi* Salm-Dyck (1850, pro infragen. *Cereus* (L.) Mill.).

Typ. *Echinocactus pruinosus* Otto ex Pfeiff. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Basionym cited as Schumann (1897) which is to be treated as a correctable error of citation under Art. 41.8a.

Ref. *Stenocereus* (A.Berger) Riccob.

Horridispina Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 8, 11. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Gymnocalycium horridispinum* G.Frank ex H.Till. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Horridocactus Backeb., Systematische Uebersicht, *Blätter für Kakteenforschung* **5**(6): [7], [12], [17], [19-20]. 1938.

Etym. From the Latin *horridus*, prickly, and the substantive *Cactus*.

Typ. *Cactus horridus* Colla nom. illeg. = *Echinocactus tubersulcatus* Jacobi.

Ref. *Eriosyce* Phil.

Horridocactus (Backeb.) Katt. (pro subsect. *Eriosyce* Phil.), *Eriosyce*, *Succulent Plant Research* **1**: 25, 47, 117. 1994.

Bas. *Horridocactus* Backeb. (1938, pro gen.).

Ref. *Eriosyce* Phil.

Hossei Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium*, *Kaktusar* **5**(9): 106. 1934 nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocactus hossei* F.A.Haage. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Houletia Barthlott & N.P.Taylor (pro subgen. *Lepismium* Pfeiff.), Notes towards a monograph of *Rhipsalideae* (*Cactaceae*), *Bradleya* **13**: 46. 1995.

Etym. Based on the name of an included species.

Rep. Syn. *Rhipsalis* subgen. *Phyllorhipsalis* Buxb. nom. illeg. (1970).

Typ. *Rhipsalis regnellii* G.Lindb. = *Rhipsalis houletiana* Lem.

Obs. Refers to the Latin description of Buxbaum in Krainz, *Die Kakteen* (44-45) CIVE: [7]. 1970.

Ref. *Rhipsalis* Gaertn.

Houletianae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 221. (9 Oct) 1923.

Etym. Based on the name of the only included species.

Typ. *Rhipsalis houletiana* Lem. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Humiles Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 450, 472 (Jan) 1958 nom. inval. (Art. 39.1, 40.1).

Etym. From the Latin adjective, *humilis*, low-growing.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Humiles Doweld (pro ser. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa* Britton & Rose, *Sukkulenty* 4(1-2): 49. (Jan) 2003.

Etym. From the Latin adjective, *humilis*, low-growing. Could be based on the name of an included species, but not explicitly stated and the nominated type species suggests otherwise.

Typ. *Copiapoa hypogaea* F.Ritter.

Ref. *Copiapoa* Britton & Rose.

Humiliores Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dykensi cultae anno 1849*: 69. 1850.

Etym. From the comparative adjective of the Latin *humilis*, lower.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Humiliores Engelm. [non Salm-Dyck] (pro infragen. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 49. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 305. 1857].

Etym. From the comparative adjective of the Latin *humilis*, lower.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Hummelia Backeb. (pro subgen. *Monvillea* Britton & Rose), *Das Genus Monvillea Br. & R., Sukkulentenkunde* 2: 53, 54. 1948.

Etym. Named for the American horticulturist Ed. HUMMEL.

Typ. Not cited.

Lectotyp. *Monvillea maritima* Britton & Rose. Designated by Backeberg, *Die Cactaceae* 4: 2308. (15 Jul) 1960.

Ref. *Cereus* (L.) Mill.

Hummelia (Backeb.) D.R.Hunt (pro subgen. *Cereus* (L.) Mill.), *New and unfamiliar names for use in the European Garden Flora: Addenda and Corrigenda, Bradleya* 6: 100. 1988 nom. inval. (Art. 36b).

Typ. *Hummelia* Backeb. (1948, pro subgen. *Monvillea* Britton & Rose).

Obs. Only proposed in anticipation of future acceptance.

Ref. *Cereus* (L.) Mill.

Hybocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292 (1 Jan); (7): 400 (15 Apr). 1898.

Etym. From the Greek *hybos*, hump, and the substantive *Cactus*. A reference to the ribs being divided into podaria.

Rep. Syn. *Echinocactus* Link & Otto infragen. *Hybogoni* Salm-Dyck (1841).

Typ. Cactus gibbosus Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. Gymnocalycium Mittler.

Hybocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *hybos*, hump, and *kephale*, head.

Typ. Not cited.

Ref. Gymnocalycium Mittler.

Hybogona (Salm-Dyck) Backeb. (pro ser. *Gymnocalycium* Mittler), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 38. (Jun) 1942 nom. inval. (Art. 22.2).

Etym. Humped-ribbed echinocactus, referring to the ribs being broken into podaria, from the Greek *hybos*, hump, and *gonios*, angle.

Typ. Cactus gibbosus Haw.

Syn. Gymnocalycium Mittler ser. *Gymnocalycium*.

Ref. Gymnocalycium Mittler.

Hybogoni Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 19. 1841 nom. inval. (Art. 22.2).

Etym. Humped-ribbed echinocactus, referring to the ribs being broken into podaria, from the Greek *hybos*, hump, and *gonios*, angle.

Typ. Not cited, but includes the type of *Gymnocalycium* Mittler.

Lectotyp. Cactus gibbosus Haw. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 38. (Jun) 1942.

Syn. Gymnocalycium Mittler infragen. *Gymnocalycium*.

Ref. Gymnocalycium Mittler.

Hybogoni Salm-Dyck ex Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* **2**: 273. 1843 nom. inval. (Art. 22.2).

Etym. From the Greek *hybos*, hump, and *gonios*, angle.

Typ. Not cited, but includes the type of *Gymnocalycium* Mittler.

Lectotyp. Cactus gibbosus Haw. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 38. (Jun) 1942.

Syn. Gymnocalycium Mittler sect. *Gymnocalycium*.

Ref. Gymnocalycium Mittler.

Hybogoni Salm-Dyck ex Backeb. (pro ser. *Gymnocalycium* Mittler), *Cactaceae, Jahrb. der Deutschen Kakteen-Gesellschaft 1941(2)*: 38-39. 1942 nom. inval. (Art. 22.2).

Etym. From the Greek *hybos*, hump, and *gonios*, angle.

Typ. Not cited, but includes the type of *Gymnocalycium* Mittler.

Lectotyp. Cactus gibbosus Haw.

Syn. Gymnocalycium Mittler ser. *Gymnocalycium*.

Ref. Gymnocalycium Mittler.

Hybopleura Schütz (pro infragen. ["skupina"] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom.inval. (Art. 37.1, 39.1).

Etym. Named for an included species.

Typ. *Echinocactus multiflorus* var. *hybopleurus* K.Schum. = *Gymnocalycium hybopleurum* (K.Schum.) Backeb. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Hybopleura Schütz (pro sect. *Gymnocalycium* Mittler), Rod *Gymnocalycium* Pfeiff., *Friciana* 7(46): 9, 13. 1968 (publ. 1969).

Etym. Based on the name of an included species.

Typ. *Echinocactus multiflorus* var. *hybopleurus* K.Schum. = *Gymnocalycium hybopleurum* (K.Schum.) Backeb. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

×***Hybridacantholobivia*** Y.Itô (pro subgen. *Acantholobivia* Y.Itô), *Illustration of flower-cacti*: 7, 138-139. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothogenus.

Rep. Syn. *Acantholobivia* Y.Itô nom. illeg. [non Backeb.] (1957).

Typ. *Acantholobivia* 'Tisio-Marú' Y.Itô (1963).

Syn. *Acantholobivia* Y.Itô nom. illeg. (1942).

Ref. *Echinopsis* Zucc.

×***Hybridechinopsis*** Y.Itô, *Illustration of flower-cacti*: 6, 46. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothogenus.

Par. *Echinopsis* Zucc. × *Echinopsis* Zucc.

Ref. *Echinopsis* Zucc.

×***Hybridofuriolobivia*** Y.Itô (pro subgen. *Furiolobivia* Y.Itô), *Illustration of flower-cacti*: 7, 68. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothosubgenus.

Par. *Furiolobivia* Y.Itô × *Furiolobivia* Y.Itô.

Ref. *Echinopsis* Zucc.

×***Hybridomesechinopsis*** Y.Itô (pro subgen. *Soehrensia* Backeb.), *Illustration of flower-cacti*: 6, 61. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothosubgenus.

Par. *Mesechinopsis* Y.Itô × *Mesechinopsis* Y.Itô.

Ref. *Echinopsis* Zucc.

×***Hybridorebutia*** Y.Itô (pro subgen. *Rebutia* K.Schum.), *Illustration of flower-cacti*: 6, 14. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothosubgenus.

Par. *Rebutia* K.Schum. × *Rebutia* K.Schum.

Ref. *Rebutia* K.Schum.

×**Hybridosalpingolobivia** Y.Itô (pro subgen. *Salpingolobivia* Y.Itô), *Illustration of flower-cacti*: 6, 51. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothosubgenus.

Par. *Salpingolobivia* Y.Itô × *Salpingolobivia* Y.Itô.

Ref. *Echinopsis* Zucc.

×**Hybridosoehrensia** Y.Itô (pro subgen. *Soehrensia* Backeb.), *Illustration of flower-cacti*: 8, 9, 144. 1967 nom. inval. (Art. H.5.1).

Etym. Incorrectly named and superfluous nothogenus.

Typ. *Soehrensia* 'Kyoyo-Maru' Y.Itô (1967).

Ref. *Echinopsis* Zucc.

Hydrochylus K.Schum. (pro sect. *Mammillaria* Haw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (8): 474 (20 Jun); (9): 514-515 (1 Aug). 1898.

Etym. From the Greek *hydor*, water, and *chylos*, juice.

Typ. Not cited.

Lectotyp. *Mammillaria microcarpa* Engelm. Designated by Fosberg, *Bulletin of the Southern California Academy of Science* **30**(2): 56. 1931.

Ref. *Mammillaria* Haw.

Hydrochylus (K.Schum.) Fosberg (pro subgen. *Neomammillaria* Britton & Rose nom. illeg.), Remarks on the taxonomy of the *Cactaceae* and some new combinations and names in that family, *Bulletin of the Southern California Academy of Sciences* **30**(2): 56. 1931 nom. incorr. (Art. 11.4).

Bas. *Hydrochylus* K.Schum. (1898, pro sect. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

+ **Hylocalycium** P.V.Heath, *Gymnocalycium friedrichii*, *The Sussex Cactus and Succulent Yearbook* **8**: 46. 1987 unest. (Cult.Art. 24.3).

Etym. Condensed formula.

Gr-chim. *Gymnocalycium* Mittler + *Hylocereus* (A.Berger) Britton & Rose [+ *Hylocalycium singulare* P.V.Heath]

Obs. Based on *Gymnocalycium stenopleurum* 'Hibotanishiki' E.Watanabe + *Hylocereus* aff. *undatus* (Haw.) Britton & Rose.

Ref. + *Epigymnocalycium* Mottram.

Hylocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 60, 72. (31 May) 1905.

Etym. From the Greek *hyle*, forest, and the substantive *Cereus*.

Typ. Not cited.

Lectotyp. *Cactus triangularis* L. Designated by Britton & Rose, *Contributions from the U.S. National Herbarium* **12**(10): 428. (21 Jul) 1909.

Ref. *Epiphyllum* Haw.

Hylocereus (A.Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 428. (21 Jul) 1909.

Bas. Hylocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Ref. Epiphyllum Haw.

Hylocereus (A.Berger) A.Berger (pro sect. *Cereus* (L.) Mill.), *Kakteen*: vi, 108, 109. (Jul-Aug) 1929 (“*Hylocerei*”).

Bas. Hylocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Obs. Also simultaneously treated at generic level in the same work.

Ref. Epiphyllum Haw.

+ ***Hylogymnocalycium*** G.D.Rowley, + *Hylogymnocalycium* replaces + *Hylocalycium* (cactus chimera), *British Cactus and Succulent Journal* **23**(1): 12. 2005.

Etym. Condensed formula.

Rep. Syn. +*Hylocalycium* P.V.Heath (1987).

Gr-chim. *Gymnocalycium* Mittler + *Hylocereus* (A.Berger) Britton & Rose [+ *Hylogymnocalycium* ‘Singular’ G.D.Rowley].

Obs. New name necessitated by a change in the *ICNCP* rules in ed.7 (2004) onwards (Cult.Art. 24.3) requiring the second name of the formula to be in full.

Ref. + *Epigymnocalycium* Mottram.

Hylorhypsalis Doweld, Re-classification of *Rhypsaliidae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulentny* **4**(1-2): 37. (Jan) 2003.

Typ. *Rhypsalis pentaptera* Dietr.

Ref. *Rhypsalis* Gaertn.

Hymeniferae Wessner (pro ser. *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1940 *Erster Teil*: 12. (May) 1940.

Etym. From the Greek *hymen*, membrane, and the Latin *-fer*, -bearing.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Hymenolobivia Kreuz. ex Buining, *Rebutieae* V., *Succulenta* **20**(5): 75. (May) 1938 nom. nud.

Etym. Membraneous *Lobivia*, from the Greek *hymen*, membrane, referring to the raised annulus at the mouth of the flowers, on which the uppermost stamens are inserted.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Hymenolobivia Buining ex F.Ritter (pro subgen. *Lobivia* Britton & Rose), *Kakteen in Südamerika* **2**: 460. 1980.

Etym. Membraneous *Lobivia*, from the Greek *hymen*, membrane, referring to the raised annulus at the mouth of the flowers, on which the uppermost stamens are inserted.

Typ. *Lobivia buiningiana* F.Ritter.

Ref. *Echinopsis* Zucc.

Hymenorebulobivia Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 29. 1935 nom. inval. (Art. 39.1).
Etym. From the Greek *hymen*, membrane, and the substantive *Rebulobivia*.
Typ. *Echinocactus famatimensis* Speg. Autotype (Art. 10.2). The only valid species included.
Ref. *Echinopsis* Speg.

Hymenorebutia Kreuz. ex Buining, *Rebutieae* III., *Succulenta* **20**(4): 54-55. (Apr) 1938 nom. inval. (Art. 39.1).
Etym. From the Greek *hymen*, membrane, and the substantive *Rebutia*.
Typ. Not cited.
Ref. *Echinopsis* Zucc.

Hymenorebutia Fric ex Buining, *Studies over Rebutia, Lobivia en Echinopsis, Succulenta* **21**(9): 101-107. 1939.
Etym. From the Greek *hymen*, membrane, and the substantive *Rebutia*.
Typ. *Hymenorebutia kreuzingeri* Frič ex Buining.
Ref. *Echinopsis* Zucc.

Hymenorebutia (Buining) J.Ullmann (pro subgen. *Lobivia* Britton & Rose), *Pokus o smír aneb formální rozdělení rodu Lobivia, Kaktusy* **28**(1): 5. 1992.
Bas. *Hymenorebutia* Buining (1939, pro gen.)
Ref. *Echinopsis* Zucc.

Ianthothelae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23. (15 May) 1925 (“Janthothele”) nom. illeg. (Art. 52.1).
Etym. Based on the name of an included species.
Typ. *Cereus ianthothele* H.B.Monv. Autotype (Art. 22.6).
Obs. Repeated in Vaupel, *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 619, 620. (Dec) 1925 & *Die Kakteen* (2): 80. (1 Mar) 1926. Based on the same type as *Pfeiffera* Salm-Dyck (1845).
Ref. *Rhipsalis* Gaertn.

Imbricatae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 60. (21 Jun) 1919.
Etym. Based on the name of an included species.
Typ. *Cereus imbricatus* Haw. Autotype (Art. 22.6).
Ref. *Opuntia* (L.) Mill.

Imbricatae (Britton & Rose) Backeb. (pro ser. *Cylindropuntia* (Engelm.) F.M.Knuth), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941*(2): 14. (Jun) 1942.
Bas. *Imbricatae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Ref. *Opuntia* (L.) Mill.

Inamoenae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 125. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. *Opuntia inamoena* K.Schum. Autotype (Art. 10.2, 22.6).

Ref. *Opuntia* (L.) Mill.

Inamoenae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 19. (Jun) 1942.

Bas. *Inamoenae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Inamoenae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 612, 621 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Inamoenae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Inarmatae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 700, 704. (1 Nov) 1898.

Etym. From the Latin *in-*, not, and *armatus*, armed. Refers to the lack of spination.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Incaica F.Ritter (pro subgen. *Matucana* Britton & Rose), *Neue Kakteen-Entdeckungen in Peru, Kakteen und andere Sukkulente* 16(12): 229. (Dec) 1965.

Etym. From Los Baños del *Inca* District, Dept. Cajamarca, Peru, with the Greek adjectival suffix *-ica*.

Typ. *Matucana aureiflora* F.Ritter.

Ref. *Matucana* Britton & Rose.

Indicae A.Berger (pro ser. *Opuntia* (L.) Mill.), *Kakteen*: 71. (Jul-Aug) 1929 nom. inval. (Art. 22.2).

Etym. From the Greek *indicos*, indian.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Lectotyp. *Cactus ficus-indica* L. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 18. (Jun) 1942.

Syn. *Opuntia* (L.) Mill. ser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Inermes Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 154. (Feb) 1837 nom. nud.

Etym. From the Latin *inermis*, unarmed.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Inermes Pfeiff. ex Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 42. 1841.

Etym. From the Latin adjective *inermis*, unarmed.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Infundibuliflorales Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 73. 1988 (publ. 1989) nom. inval. (Art. 22.2).

Etym. From the Latin *infundibulum*, funnel, and *floralia*, floral.

Typ. *Cactus ottonis* Lehm.

Syn. *Notocactus* (K.Schum.) Frič sect. *Notocactus*.

Ref. *Parodia* Speg.

Ingentes Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 625. (Dec) 1925 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Rep. Syn. *Echinocactus* Link & Otto sensu Britton & Rose. (1922).

Typ. *Echinocactus ingens* Zucc. ex Pfeiff. = *Echinocactus platyacanthus* Link & Otto.

Autotype (Art. 22.6).

Syn. *Echinocactus* Link & Otto infragen. *Echinocactus*.

Ref. *Echinocactus* Link & Otto.

×**Insillocactus** P.V.Heath (pro nothosect. ×*Stenillocactus* P.V.Heath), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 102. 1996.

Etym. Condensed formula.

Par. *Myrtillocactus* Console sect. *Myrtillocactus* × *Stenocereus* (A.Berger) Riccob. subgen. *Insulatocereus* (Backeb.) P.V.Heath.

Ref. ×*Stenillocactus* P.V.Heath.

Insulatocereus P.V.Heath (pro subgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 101. 1996 nom. illeg. (Art. 52.1).

Etym. From the Latin *insulatus*, isolated, and the substantive *Cereus*.

Typ. *Cereus dumortieri* Scheidw. Autotype (Art. 10.2). The only included species.

Obs. Superfluous correction to the spelling of *Isolatocereus* Backeb. q.v.

Ref. *Stenocereus* (A.Berger) Riccob.

Intectispermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* **7**(4): 52. 1982.

Etym. From the Latin *intectus*, uncovered, and *sperma* (Greek sperma), seed.

Typ. *Parodia miguilensis* Cárdenas.

Ref. *Parodia* Speg.

Interflorales Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 77. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Latin prefix *inter-*, between, *floralia*, floral.

Typ. *Notocactus rauschii* Vliet.

Ref. *Parodia* Speg.

Intertexti Engelm. (pro infragen. *Echinocactus* Link & Otto), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 21. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 277. 1857] nom. nud..
Etym. Based on the name of an included species.
Typ. *Echinocactus intertextus* Engelm. Autotype (Art. 22.6).
Ref. *Echinomastus* Britton & Rose.

Ionolobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).
Etym. From the Greek *ion*, violet, and the substantive *Lobivia*.
Typ. Not cited.
Ref. *Echinopsis* Zucc.

Islaya Backeb., *Islaya* Bckbg. n. g., *Blätter für Kakteenforschung* **1**(10): [1]. 1934.
Etym. Named for *Islay*, a coastal province of Dept. Arequipa, Peru.
Typ. Not cited.
Lectotyp. *Islaya minor* Backeb. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 40. (Jun) 1942.
Ref. *Eriosyce* Phil.

Islaya (Backeb.) Katt. (pro subsect. *Eriosyce* Phil.), *Eriosyce, Succulent Plant Research* **1**: 25, 42, 117. 1994.
Bas. *Islaya* Backeb. (1934, pro gen.).
Ref. *Eriosyce* Phil.

Isolatocereus Backeb. (pro subgen. *Lemaireocereus* Britton & Rose), Systematische Uebersicht, *Blätter für Kakteenforschung* **5**(6): [8], [12], [17], [20]. 1938.
Etym. From the Italian *isolato* (Latin *insulatus*), isolated, and the substantive *Cereus*. A reference to its solitary habit of growth.
Typ. *Cereus dumortieri* Scheidw.
Obs. The correct name for this taxon at the rank of section is *Dumortieria* P.V.Heath (1992).
Ref. *Stenocereus* (A.Berger) Riccob.

Isolatocereus (Backeb.) Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 47, 76. (Jun) 1942.
Bas. *Isolatocereus* Backeb. (1938, pro subgen. *Lemaireocereus* Britton & Rose).
Ref. *Stenocereus* (A.Berger) Riccob.

Isolatocereus (Backeb.) P.V.Heath (pro subgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 101. 1996 (“*Insulatocereus*”).
Bas. *Isolatocereus* Backeb. (1938, pro subgen. *Lemaireocereus* Britton & Rose).
Ref. *Stenocereus* (A.Berger) Riccob.

Jajoiana Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* 3: 1378, 1462. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia jajoiana* Backeb. = *Echinopsis marsoneri* Werderm. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Jasminocereus Britton & Rose, *The Cactaceae* 2: 2, 146. (9 Sep) 1920.

Etym. From the Latin adjective *jasmineus*, jasmine-like, and the substantive *Cereus*. A reference to the flower perfume.

Typ. *Cereus galapagensis* F.A.C.Weber. Autotype (Art. 10.2). The only included species.

Jasminocereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii,148. 1929.

Bas. *Jasminocereus* Britton & Rose (1920, pro gen.).

Ref. *Jasminocereus* Britton & Rose.

Joosensianum Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), in Backeberg & Knuth, *Kaktus-ABC*: 297. (12 Feb) 1936 nom. nud. & inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus joosensianum* Boed. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Kadenicarpus Doweld, *Konspekt filogenetitscheskoy sistemy triby Cacteeae (Cactoideae Cactaceae)*, *Sukkulenty* 1(1): 22. 1998.

Etym. Named to honour of Prof. H. H. KADENA, a Russian specialist in the botany of fruits, and the Greek *karpos*, fruit.

Typ. *Strombocactus pseudomacrochele* Backeb.

Ref. *Turbinicarpus* Buxb. & Backeb.

Kadenicarpus (Doweld) Donati (pro subgen. *Turbinicarpus* Buxb. & Backeb.), *Taxonomische Revision der Gattung Turbinicarpus* Backeb. et Buxb.(3), *Turbi-Now* (19): 25. (Apr) 2006.

Bas. *Kadenicarpus* Doweld (1998, pro gen.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Kadenicarpus (Doweld) Donati (pro sect. *Turbinicarpus* Buxb. & Backeb.), *Taxonomische Revision der Gattung Turbinicarpus* Backeb. et Buxb.(3), *Turbi-Now* (19): 25. (Apr) 2006.

Bas. *Kadenicarpus* Doweld (1998, pro gen.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Krainzia Backeb., *Krainzia* Bkbg. n. g. (1938), *Blätter für Kakteenforschung* 5(6): [1]. 1938.

Etym. Named for the Swiss horticulturnist Hans KRAINZ (1906-1980), founder Director of the Sukkulentensammlung Zürich, and editor of the serial publication *Die Kakteen* (1954-1975).

Typ. *Neomammillaria longiflora* Britton & Rose nom. incorr. = *Mammillaria longiflora* (Britton & Rose) A.Berger.

Ref. *Mammillaria* Haw.

Krainzia (Backeb.) Buxb. (pro subgen. *Mammillaria* Haw.), Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichischen Botanische Zeitschrift* **98**(1-2): 92. (28 Apr) 1951.

Bas. *Krainzia* Backeb. (1938, pro gen.)

Ref. *Mammillaria* Haw.

Krainziani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 78. 1988 (“Krainziana”) (publ. 1989) nom. inval. (Art. 39.1).

Etym. Named for the Swiss horticulturnist Hans KRAINZ (1906-1980).

Typ. *Eriocactus magnificus* F.Ritter nom. incorr. = *Notocactus magnificus* (F.Ritter) Krainz.

Ref. *Parodia* Speg.

Lactescentes Orcutt (pro subgen. *Mammillaria* Haw.), *Catalog of cacti*: 18. 1903.

Etym. From the active present participle of the Latin *lactescere*, to become milky.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Lactomamillaria Frič, in Seidl, *Kaktusy, Sukkulenty a jejich pestení* (5): 133-136. 1924.

Etym. From the Latin adjective *lacteus*, milky, and the substantive *Mamillaria*.

Typ. *Lactomamillaria aselliformoides* Frič = *Mammillaria pectinifera* F.A.C.Weber.

Syn. *Solisia* Britton & Rose (1923).

Ref. *Mammillaria* Haw.

Laetivirentes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 25. 1841.

Etym. From the Latin *laetus*, bright, or light, and *virens*, greenish.

Typ. Not cited.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Lafaldensia Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium, Kaktusar* **5**(9): 105. 1934 (“lafaldense”) nom. nud.

Etym. Based on the name of an included species.

Typ. *Gymnocalycium lafaldense* Vaupel = *Frailea bruchii* Speg. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Lafaldensia Backeb. (pro ser. *Gymnocalycium* Mittler), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941*(2): 38. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Gymnocalycium lafaldense* Vaupel = *Frailea bruchii* Speg. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Lafaldensia Backeb. ex Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 6, 10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. Gymnocalycium lafaldense Vaupel = *Frailea bruchii* Speg. Autotype (Art. 22.6).

Ref. Gymnocalycium Mittler.

Lafaldensia (Buxb.) Schütz (pro sect. *Gymnocalycium* Mittler), *Rod Gymnocalycium Pfeiff., Friciana* 7(46): 8, 12. 1968 (publ. 1969).

Bas. Lafaldensia Backeb. ex Buxb. (1968, pro ser. *Gymnocalycium* Mittler).

Obs. A new rank for Buxbaum's name, but no reference to that basionym or any other was cited. However, it was published as though a new name, with all conditions for valid publication otherwise fulfilled, so it is accepted here in accordance with Art. 41.8d.

Ref. Gymnocalycium Mittler.

Lagenopsis Buxb. (pro subgen. *Coleocephalocereus* Backeb.), *Coleocephalocereus luetzelburgii* (Vaupel) F. Buxbaum comb. nov., in Krainz, *Die Kakteen* (48-49) CIVb: [4]. (15 Jan) 1972.

Etym. From the Latin *lagena*, flask or bottle, and *-opsis*, -like. Alludes to the bottle shaped stem.

Typ. Cereus luetzelburgii Vaupel.

Ref. Austrocephalocereus Backeb.

Lagenopsis (Buxb.) P.J.Braun (pro subgen. *Pilosocereus* Byles & G.D.Rowley), On the taxonomy of Brazilian *Cereeae* (*Cactaceae*), *Bradleya* 6: 89. 1988.

Bas. Lagenopsis Buxb. (1972, pro subgen. *Coleocephalocereus* Backeb.).

Ref. Austrocephalocereus Backeb.

Lagenosocereus Doweld, A new genus of Brazilian cerei (*Cereeae-Cactaceae*), *Turczaninowia* 1(5): 5-8-10. 2002.

Etym. From the Latin *lagena*, flask or bottle. Alludes to the bottle shaped stem.

Typ. Cereus luetzelburgii Vaupel

Ref. Austrocephalocereus Backeb.

Lamprechinopsis Y.Itô (pro subgen. *Echinopsis* Zucc.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *lampros*, bright or splendid, and the substantive *Echinopsis*.

Typ. Not cited.

Ref. Echinopsis Zucc.

Lanati Vaupel (pro infragen. ["Gruppe"] *Cereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 637. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Cactus lanatus Humb., Bonpl. & Kunth. Autotype (Art. 22.6).

Obs. Based on the same type as *Espostoa* Britton & Rose (1920).

Ref. Espostoa Britton & Rose.

Lanuginosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 21. 1834 nom. nud.

Etym. From the name of an included species.

Typ. *Cactus lanuginosus* L. Autotype (Art. 22.6).

Ref. *Pilosocereus* Byles & G.D.Rowley.

Lanuginosi Salm-Dyck ex Pfeiff. (pro infragen. *Cereus* (L.) Mill. in § *Cereastri* Pfeiff. nom. inval.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 80. (Feb) 1837.

Etym. From the name of an included species.

Typ. *Cactus lanuginosus* L. Autotype (Art. 22.6).

Ref. *Pilosocereus* Byles & G.D.Rowley.

Lasiacanthae D.R.Hunt (pro ser. *Mammillaria* Haw.), Schumann and Buxbaum reconciled, *Cactus & Succulent Journal of Great Britain* **33**(3): 63. (Aug) 1977.

Etym. From the name of an included species.

Typ. *Mammillaria lasiacantha* Engelm.

Ref. *Mammillaria* Haw.

Lasiacanthae (D.R.Hunt) Doweld (pro ser. *Escobariopsis* Doweld), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 42. 2000.

Bas. *Lasiacanthae* D.R.Hunt (1977, pro ser. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Lasiocereus F.Ritter, Nieuwe vondsten van cactussen in Peru, *Succulenta* **48**(8): 119. (Aug) 1966.

Etym. From the Greek *lasios*, shaggy-haired, and the substantive *Cereus*.

Typ. *Lasiocereus rupicola* F.Ritter.

Ref. *Haageocereus* Backeb.

Lateritiae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinopsis lateritia* Gürke. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Laticostati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaceae in horto Dyckensi cultae. Anno 1841*: 23. 1841 (“*Laticostatae*”).

Etym. From the Latin *latus*, broad or wide, and *costa*, rib.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Latimammae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaceae in horto Dyckensi cultae. Anno 1841*: 11. 1841.

Etym. Based on the name of an included species.

Typ. *Mammillaria latimamma* DC. = *Mammillaria pycnacantha* Mart. Autotype (Art. 22.6).

Ref. *Coryphantha* (Engelm.) Lem.

Latispini Lawr. (pro sect. *Echinofossulocactus* Lawr.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 318. 1841. ("Latispineae").
Etym. From the Latin *latus*, broad, and *spina*, spine.

Typ. Not cited.

Ref. *Echinofossulocactus* Lawr.

Lauiani Doweld (pro ser. *Turbinicarpus* Buxb. & Backeb.), *De genere Turbinicarpus, Sukkulenty* 3(1-2): 69. 2000.

Etym. Based on the name of an included species.

Typ. *Turbinicarpus laui* Glass & R.C.Foster.

Ref. *Turbinicarpus* Buxb. & Backeb.

Lauiani (Doweld) D.Donati (pro subser. *Turbinicarpus* Buxb. & Backeb.), *Taxonomische Revision der Gattung Turbinicarpus Backeb. et Buxb.(3), Turbi-Now* (19): 21. (Apr) 2006.
Bas. *Lauiani* Doweld (2000, pro ser. *Turbinicarpus* Buxb. & Backeb.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Laxiflorae Engelm. (pro infragen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 8. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 264. 1857].

Etym. A Latin compound adjective, from *laxus*, arched, and *flos*, flower.

Typ. Not cited.

Ref. *Coryphantha* Engelm.

Leeanum Backeb. (pro infragen. ["skupina"] *Gymnocalycium* Mittler), *Gymnocalycium, Kaktusar* 5(9): 105. 1934 nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocactus leeanus* Hook. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Leiothele K.Schum. (pro subgen. *Ariocarpus* Scheidw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 604. (1 Oct) 1898 nom. inval. (Art. 22.2).

Etym. From the Greek *leios*, smooth, and *thele*, nipple.

Typ. Not cited, but includes the type of *Ariocarpus* Scheidw.

Ref. *Ariocarpus* Scheidw.

Lemaireocereus Britton & Rose, *The genus Cereus and its allies in North America, Contributions from the U.S. National Herbarium* 12(10): 424. (21 Jul) 1909.

Etym. Named for Charles LEMAIRE (1801-1871), and the substantive *Cereus*.

Typ. *Cereus hollianus* F.A.C.Weber.

Obs. A name seldom used because the type species is usually considered to be a *Pachycereus*, although the two genera were published simultaneously and therefore have equal priority. However, *Lemaireocereus* may need to be reinstated if the allopolyploid nature of *Pachycereus pringlei*, the type species of *Pachycereus*, is accepted. Alternatively, when all are considered to be a single genus then *Carnegiea* Britton & Rose has priority.

Ref. *Cephalocereus* Pfeiff.

Lemaireocereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 161. (Jul-Aug) 1929.

Bas. Lemaireocereus Britton & Rose (1909, pro gen.)

Ref. Cephalocereus Pfeiff.

Lemaireocereus (Britton & Rose) Bravo (pro subgen. *Pachycereus* (A.Berger) Britton & Rose), Nuevas combinaciones, *Cactaceas y Suculentas Mexicanas* 17(4): 119. (Oct-Dec) 1972.

Bas. Lemaireocereus Britton & Rose (1909, pro gen.)

Ref. Cephalocereus Pfeiff.

Lemaireocereus (Britton & Rose) P.V.Heath (pro sect. *Pachycereus* (A.Berger) Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 106. 1992.

Bas. Lemaireocereus Britton & Rose (1909, pro gen.)

Ref. Cephalocereus Pfeiff.

Leocereus Britton & Rose, *The Cactaceae* 2: 2, 108. (9 Sep) 1920.

Etym. Named for A. Pacheco LEÃO, Director, Jardim Botânico, Rio de Janeiro.

Typ. Leocereus bahiensis Britton & Rose.

Ref. Facheiroa Britton & Rose.

Leocereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. 1929.

Bas. Leocereus Britton & Rose (1920, pro gen.).

Ref. Facheiroa Britton & Rose.

Leopoldohorstia P.J.Braun & Esteves (pro subgen. *Uebelmannia* Buining), Nieuwe combinaties en namen voor cactussen uit Brasilië, Bolivia en Paraguay, *Succulenta* 74(3): 134. 1995.

Etym. Named for Leopoldo HORST. (1918-1987), Brazilian plant collector.

Typ. Uebelmannia pectinifera Buining.

Ref. Uebelmannia Buining.

Lepidanthi A.Berger (pro ser. *Echinocactus* Link & Otto), *Kakteen*: vii, 235. (Jul-Aug) 1929.

Etym. From the Greek *lepis*, scale, and *anthos*, flower.

Typ. Not cited.

Ref. Echinofossulocactus Lawr., *Pediocactus* Britton & Rose, *Sclerocactus* Britton & Rose.

Lepidocarpi Engelm. (pro infragen. *Echinocactus* Link & Otto), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 19. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 275. 1857] nom. nud.

Etym. From the Greek *lepis*, scale, and *karpos*, fruit.

Typ. Not cited.

Ref. Echinofossulocactus Lawr.

Lepidocereus Engelm. (pro subgen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 31. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 287. 1857].

Etym. From the Greek *lepis*, scale, and the substantive *Cereus*.

Typ. Not cited.

Lectotyp. *Cereus giganteus* Engelm. Designated by Berger, A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 65. (31 May) 1905.

Syn. *Carnegiea* Britton & Rose (1908, pro gen.).

Obs. Includes only 2 species, *Cereus giganteus* Engelm. & *C. thurberi* Engelm.

Ref. *Cephalocereus* Pfeiff.

Lepido-coryphantha Backeb. (pro subgen. *Coryphantha* (Engelm.) Lem., *Coryphantha* Lem. (1868), *Blätter für Kakteenforschung* **4**(3): [1]. 1937 nom. inval. (Art. 39.1).

Etym. From the Greek *lepis*, scale, and the substantive *Coryphantha*.

Typ. *Mammillaria macromeris* Engelm. Autotype (Art. 10.2). The only included species.

Coryphantha runyonii Britton & Rose was also cited, but it is generally treated as being the same species.

Ref. *Coryphantha* (Engelm.) Lem.

Lepidocoryphantha Backeb., Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [10], [14], [18], [22]. 1938.

Etym. From the Greek *lepis*, scale, and the substantive *Coryphantha*.

Typ. *Mammillaria macromeris* Engelm.

Ref. *Coryphantha* (Engelm.) Lem.

Lepidocoryphantha (Backeb.) Moran (pro sect. *Coryphantha* Lem.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 318. (24 Apr) 1953.

Bas. *Lepidocoryphantha* Backeb. (1938, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

Lepismium Pfeiff., Borschlag zu einer neuen natürlichen Unordnung der Cacteen, *Allgemeine Gartenzeitung* **3**(40): 315. (3 Oct) 1835 nom. nud.

Etym. From the Greek *lepisma*, skin, husk or scale. A reference to the way that the flowers burst through the epidermis.

Typ. Not cited.

Ref. *Rhipsalis* Gaertn.

Lepismium Pfeiff., Beschreibung neuer Cacteen, *Allgemeine Gartenzeitung* **3**(48): 380. (28 Nov) 1835; Ueber Gattungen *Lepismium* und *Rhipsalis*, *Allgemeine Gartenzeitung* **4**(24): 186. (11 Jun) 1836.

Etym. From the Greek *lepisma*, skin, husk or scale. A reference to the way that the flowers burst through the epidermis.

Typ. Not cited.

Lectotyp. *Lepismium commune* Pfeiff. nom. illeg. = *Cactus cruciformis* Vell. nom. cons.

Designated by Britton & Rose, *The Cactaceae* 4: 215. (24 Dec) 1923.

Obs. *Cactus cruciformis* Vell. was proposed for conservation by Taylor, *Taxon* 43(3): 469-470. (Aug) 1994, against four other names, recommended by a 10 : 2 vote, and adopted by the 1999 Botanical Congress.

Ref. *Rhipsalis* Gaertn.

Lepismium (Pfeiff.) Miq. (pro subgen. *Hariota* Adans. nom. rej.), *Genera cactearum, Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach*. 2: 116. 1839.

Bas. *Lepismium* Pfeiff. (1835, pro gen.).

Ref. *Rhipsalis* Gaertn.

Lepismium (Pfeiff.) Labour. (pro subgen. *Rhipsalis* Gaertn.), *Monographie de la famille des cactées*: xlvii, 444. 1853.

Bas. *Lepismium* Pfeiff. (1835, pro gen.).

Ref. *Rhipsalis* Gaertn.

Lepismium (Pfeiff.) K.Schum. (pro sect. *Rhipsalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 199. (Apr 18) 1894.

Bas. *Lepismium* Pfeiff. (1835, pro gen.).

Ref. *Rhipsalis* Gaertn.

×***Lepisocactus*** Süpplie, *Epiphyllum*: 54. 2005.

Etym. Condensed formula.

Par. *Lepismium* Pfeiff. × *Disocactus* Lindl.

Ref. ×*Rhipsaliphyllum* Mottram.

Leptoarticulatae Loefgr. (pro sect. *Zygocactus* K.Schum.), *Sobre os generos Schlumbergera and Zygocactus, Novas contribuições para as Cactaceas Brasilieras, Archivos do Jardim Botânico do Rio de Janeiro* 2(1): 23. 1917 nom. inval. (Art. 22.2).

Etym. From the Latin *leptus*, thin, and *articulatus*, jointed. Refers to the flat, leaf-like joints.

Typ. Not cited, but includes the type of *Zygocactus* K.Schum.

Ref. *Rhipsalis* Gaertn.

Leptocaulis Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 46. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia leptocaulis* DC. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Leptocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 79. (31 May) 1905.

Etym. From the Greek *leptos*, thin, and the substantive *Cereus*.

Typ. *Cereus assurgens* Griseb.

Ref. *Leptocereus* (A.Berger) Britton & Rose.

Leptocereus (A. Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 433. (21 Jul) 1909.

Bas. Leptocereus A. Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Leptocladia Buxb., Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichische botanische Zeitschrift* **98**(1-2): 81-82. (28 Apr) 1951 nom. illeg. (Art. 53.1)

Rep. Syn. Leptocladodae Lem. nom. illeg. (1839, pro infragen. *Mammillaria* Haw.).

Typ. Mammillaria elongata DC.

Obs. A later homonym of *Leptocladia* Agardh (1892, *Algae*).

Syn. Leptocladodia Buxb. (1954).

Ref. Mammillaria Haw.

Leptocladodae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano cultarum*: 100. 1839 nom. illeg. (Art. 52.1).

Etym. From the Greek *leptos*, slender, and *kladodes*, branch.

Typ. Not cited, but includes the type of *Tenues* Pfeiff.

Lectotyp. Mammillaria elongata DC. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 63. (Jun) 1942.

Syn. Mammillaria Haw. infragen. *Tenues* Pfeiff. (1837).

Ref. Mammillaria Haw.

Leptocladodae Lem. ex Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 63. (Jun) 1942.

Rep. Syn. Leptocladodae Lem. nom. illeg. (1839, pro infragen. *Mammillaria* Haw.).

Typ. Mammillaria elongata DC.

Ref. Mammillaria Haw.

Leptocladodae (Backeb.) Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* **5**: 3099, 3101. 1961 nom. inval. (Art. 41.5).

Bas. Leptocladodae Backeb. (1942, pro ser. *Mammillaria* Haw.).

Obs. Lacked reference to basionym bibliographic reference.

Ref. Mammillaria Haw.

Leptocladodae Doweld (pro sect. *Krainzia* Backeb.), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 43. 2000 nom. illeg. (Art. 52.1)

Rep. Syn. Mammillaria Haw. infragen. *Leptocladodae* Lem. nom. illeg. (1839).

Typ. Mammillaria elongata DC.

Syn. Stelligerae (Salm-Dyck) Walp. (1843, pro sect. *Mammillaria* Haw.). The earliest legitimate name in this rank that should have been adopted.

Obs. Published as a combination with an illegitimate name, so really a replacement.

Ref. Mammillaria Haw.

Leptocladodia Buxb., *Leptocladodia* F. Buxb. nomen novum, *Österreichische botanische Zeitschrift* **101**(5): 601. 1954.

Rep. Syn. *Leptocladia* Buxb. nom. illeg. (1951).

Typ. *Mammillaria elongata* DC.

Ref. *Mammillaria* Haw.

Leptocladodia (Buxb.) Bravo (pro subgen. *Mammillaria* Haw.), *Nuevas combinaciones, Cactaceas y Suculentas Mexicanas* 17(4): 120. (Oct-Dec) 1973.

Bas. *Leptocladodia* Buxb. (1954, pro gen.).

Ref. *Mammillaria* Haw.

Leucacanthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaeae in horto Dyckensi cultae anno 1849*: 8. 1850 nom. illeg. (Art. 52.1).

Etym. From the Greek *leukos*, white or grey, & *akantha*, spine.

Typ. Not cited.

Lectotyp. *Mammillaria bicolor* Lehm. Designated by Heath, *Journal of the Mammillaria Society* 28(3): 27.1988.

Syn. *Mammillaria* infragen. *Leucocephalae* Lem. (1839).

Ref. *Mammillaria* Haw.

Leucacanthae Salm-Dyck ex P.V.Heath (pro subsect. *Mammillaria* Haw.), *Journal of the Mammillaria Society* 28(3): 27.1988 nom. illeg. (Art. 52.1).

Rep. Syn. *Leucacanthae* Salm-Dyck nom. illeg. (1850, pro infragen. *Mammillaria* Haw.).

Typ. *Mammillaria bicolor* Lehm.

Syn. *Leucocephalae* (Lem.) Lawr. (1841, pro subsect. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Leucacanthi K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 247. (20 Oct) 1897.

Etym. From the Greek *leukos*, white or grey, & *akantha*, spine.

Typ. Not cited.

Lectotyp. *Cereus cinerascens* DC. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 43. (Jun) 1942.

Ref. *Echinocereus* Engelm.

Leuchtenbergia Fisch. ex Hook.f., *Curtis's Botanical Magazine* 74: t.4393. (1 Sep) 1848.

Etym. Named for Maximilian J. A. N. LEUCHTENBERG (1817-1852), St. Petersburg.

Typ. *Leuchtenbergia principis* Fisch. ex Hook.f. Autotype (Art. 10.2). The only included species.

Obs. Salm-Dyck (*AGZ* 1854: 188) proposed the idea that *Leuchtenbergia* might justify family status, but did not formally create a new name in that rank. Kuntze (*Post & Kuntze* 1903: 672), however, interpreted Salm-Dyck's account as having been a valid publication of the family name *Leuchtenbergiaceae*. A possible allopolyploid of a *Ferocactus* and an *Ariocarpus*.

Leuchtenbergia (Hook.f.) Kuntze (pro sect. *Cactus* L. nom. rej.), in *Post & Kuntze, Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Leuchtenbergia* Hook.f. (1848, pro gen.).

Ref. *Leuchtenbergia* Hook.f.

×*Leuchtenfera* Arakawa & Y.Itô, in Itô, *The Cactaceae, classification & illustration of cacti*: 653. 1981 nom. illeg. (Art. 52.1).

Etym. Condensed formula.

Par. *Ferocactus* Britton & Rose × *Leuchtenbergia* Hook.f. [×*Leuchtenfera* ‘Kosyu-Gyoku’]

Syn. ×*Ferobergia* Glass (1966).

Ref. ×*Echinobergia* Mottram.

Leucocephalae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano*: 100. 1839.

Etym. From the Greek, *leukos*, white, and *kephale*, head. Refers to the white woolly apex of the plant.

Typ. Not cited.

Lectotyp. *Mammillaria bicolor* Lehm. = *Mammillaria geminispina* Haw. Designated by Heath, *Journal of the Mammillaria Society* **28**(3): 26. 1988.

Obs. Probably the same as the untypified *Microthelae* Pfeiff. (pro infragen. *Mammillaria* Haw. 1837). The earlier lectotypifications by Backberg, namely *Mammillaria pseudoperbella* Quehl (in *Cactaceae, Jahrbucher der DKG* 1941(2): 63. 1942), and *Mammillaria parkinsonii* C.Ehrenb. (in *Die Cactaceae* **5**: 3098. 1961) were not elements listed by Lemaire, and therefore not eligible (Art. 10.2).

Ref. *Mammillaria* Haw.

Leucocephalae (Lem.) Lawr. (pro subsect. *Mammillaria* Haw.), in Loudon, *Gardeners Magazine and Register of Rural Domestic Improvement*, Ser. 3 **6**: 313. 1841.

Bas. *Leucocephalae* Lem. (1839, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Leucocephalae (Lem.) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae* **2**: 270. 1843.

Bas. *Leucocephalae* Lem. (1839, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Leucocephalae (Lem.) Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 63. (Jun) 1942.

Bas. *Leucocephalae* Lem. (1839, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Leucolobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek, *leukos*, white, and the substantive *Lobivia*.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Leucorhaphes Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 221. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Rhipsalis leucorhaphis* K.Schum. = *Cereus lumbricoides* Lem. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Leucostele Backeb., *Leucostele* Backbg. n. g., *Kakteen und andere Sukkulente* 4(3): 36-40-41. (Dec) 1953.

Etym. From the Greek, *leukos*, white, and *stele*, block of stone or pillar.

Typ. *Leucostele rivierei* Backeb. = *Pilocereus pasacana* F.A.C.Weber.

Ref. *Echinopsis* Zucc.

Leucotrichae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 174. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. *Opuntia leucotricha* DC. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Leucotrichae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 451, 537 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Leucotrichae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Leuenbergeria J.Lodé, A new genus in *Cactaceae*, *Cactus-Aventures International* (97): 25-26-27. (Jan) 2013.

Etym. Named for the German botanist Beat Ernst LEUENBERGER (1946-2010).

Typ. *Pereskia quisqueyana* Liogier (1980).

Ref. *Pereskia* (L.) Mill.

Lindheimeriae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 452, 550 (Jan) 1958 nom. inval. (Art. 41.5).

Etym. Based on the name of an included species.

Typ. *Opuntia lindheimeri* Engelm. = *Opuntia engelmannii* Salm-Dyck ex Engelm. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Linkianae Doweld (pro ser. *Notocactus* (K.Schum.) Frič), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* 3(1-2): 55. 2000.

Etym. Based on the name of an included species.

Typ. *Cactus linkii* Lehm.

Ref. *Parodia* Speg.

Linkii Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 74. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Cactus linkii* Lehm. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Lobeira Alexander, A new genus in *Cactaceae*, *Cactus and Succulent Journal* (US) **16**(12): 175-177-178. (Dec) 1944.

Etym. Named for Señora Viuda de don Cristino LOBEIRA, hotelier and horticulturist of San Cristobal Las Casas, Chiapas, Mexico.

Typ. *Lobeira macdougallii* Alexander.

Ref. *Epiphyllum* Haw.

Lobirebutia Frič (pro subgen. *Rebutia* K.Schum.), *Akklimatisations- und Versuchs-Garten* (A. V. Frič) *Bestellzettel*: 1. 1933 (“Lobirebutie”).

Etym. Arbitrarily formed from the substantive ‘Lob’ of *Lobivia*, and the substantive *Rebutia*.

Typ. Not cited.

Ref. *Rebutia* K.Schum.

×**Lobivara** Boom, De benaming van de gekweekte variëteiten van succulenten, *Succulenta* **39**(11): 123. (Nov) 1957 nom. inval. (Art. H.6.1, H.9.1).

Collective name for any cactus hybrid with *Lobivia* in the parentage. There are no rules for the formation of this kind of name.

Lobivia Britton & Rose, *The Cactaceae* **3**: 3, 49. (12 Oct) 1922.

Etym. Anagram of *Bolivia*, the main country of origin.

Typ. *Echinocactus pentlandii* Hook.f.

Ref. *Echinopsis* Zucc.

Lobivia (Britton & Rose) Werderm. (pro infragen. *Echinopsis* Zucc.), in Backeberg, *Neue Kakteen*: 83-84. 1931.

Bas. *Lobivia* Britton & Rose (1922, pro gen.).

Ref. *Echinopsis* Zucc.

Lobiviopsis Frič, in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 34. 1935 nom. inval. (Art. 39.1).

Etym. From the substantive *Lobivia*, and the Latin *-opsis*, -like.

Typ. *Echinocactus obrepandus* Salm-Dyck.

Ref. *Echinopsis* Zucc.

×**Lobivopsis** H.Johnson, *Johnson Cactus Gardens catalogue*: 17, 29. 1961 nom. inval. (Art. 30.6).

Etym. Condensed formula.

Par. *Chamaecereus* Britton & Rose × *Lobivia* Britton & Rose.

Ref. *Echinopsis* Zucc.

Lodia Mosco & Zanovello, The mandrake cactus: A mystery plant, *Bradleya* **18**: 41-44. (25 Jul) 2000.

Etym. Named for Prof. Giuseppe LODI, one time curator of the succulent plant collection at the Orto Botanico, University of Bologna.

Typ. *Echinocactus mandragora* Frič ex A.Berger.

Ref. *Turbincarpus* Buxb. & Backeb.

Lodia (Mosco & Zanovello) D. Donati (pro subgen. *Rapicactus* Buxb. & Oehme), Revisiione tassonomica del genere *Turbinicarpus*: 7. 2003.

Bas. *Lodia* Mosco & Zanovello (2000, pro gen.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Longiflora (D.R.Hunt) Bravo (pro subgen. *Mammillaria* Haw.), Nuevas combinaciones y taxa VI, *Cactaceas y Suculentas Mexicanas* 27(1): 17. 1982 nom. illeg.

Bas. *Longiflorae* D.R.Hunt (pro ser. *Mammillaria* Haw.).

Syn. *Mammillaria* Haw. subgen. *Krainzia* (Backeb.) Buxb. (1951).

Ref. *Mammillaria* Haw.

Longiflorae D.R.Hunt (pro ser. *Mammillaria* Haw.), Schumann and Buxbaum reconciled, *Cactus & Succulent Journal of Great Britain* 33(3): 59. 1971.

Etym. Based on the name of an included species.

Typ. *Neomammillaria longiflora* Britton & Rose nom. incorr. = *Mammillaria longiflora* (Britton & Rose) A. Berger.

Ref. *Mammillaria* Haw.

Longimammae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Homoeacanthae* nom. inval. = § *Mammillaria*), *Enumeratio diagnostica cactearum hucusque cognitarum*: 22. 1837.

Etym. Based on the name of an included species.

Typ. *Mammillaria longimamma* DC. Autotype (Art. 22.6).

Ref. *Mammillaria* Haw.

Longimammae (Pfeiff.) Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, 3rd. Ser. 6: 315. 1841.

Bas. *Longimammae* Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Longimammae (Pfeiff.) Walp. (pro sect. *Mammillaria* Haw.), *Repertorium botanices systematicae* 2: 269. 1843.

Bas. *Longimammae* Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Obs. Also later treated at the rank of section by Salm-Dyck (1850: 78).

Ref. *Mammillaria* Haw.

Longiseti A. Berger (pro subser. *Echinocereus* Engelm.), *Kakteen*: 175. (Jul-Aug) 1929.

Etym. Based on the name of an included species.

Typ. *Cereus longisetus* Engelm. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Longispermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* 7(4): 52. 1982.

Etym. From the Latin *longus*, long, and *sperma*, seed.

Typ. *Parodia taratensis* Cárdenas.

Ref. *Parodia* Speg.

Longispini Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 44. 1850.

Etym. Based on the name of an included species.

Typ. *Cereus longispinus* Salm-Dyck [possibly the correct name for *Eulychnia breviflora* Phil., but exact identity uncertain]. Autotype (Art. 22.6).

Obs. The second included species was probably a *Myrtillocactus*.

Ref. *Eulychnia* Phil.

Lophocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 59, 62-63. (31 May) 1905.

Etym. From the Greek *lophia*, crest, and the substantive *Cereus*.

Typ. *Cereus schottii* Engelm.

Ref. *Cephalocereus* Pfeiff.

Lophocereus (A.Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 426. (21 Jul) 1909.

Bas. *Lophocereus* A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Ref. *Cephalocereus* Pfeiff.

Lophocereus (A.Berger) P.V.Heath (pro sect. *Pachycereus* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* **2**(3): 106. 1992.

Bas. *Lophocereus* A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Ref. *Cephalocereus* Pfeiff.

Lophogoni Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 41. 1850.

Etym. From the Greek *lophia*, crest, and *gonios*, offspring or angle.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Lophophora J.M.Coult., Preliminary revision of the North American species of *Cactus*, *Anhalonium*, and *Lophophora*, *Contributions from the US National Herbarium* **3**(2): 131. (Jun 10) 1894.

Etym. From the Greek *lophia*, crest, and *phoros*, bearing. A reference to the tufted wool of the areoles and apex.

Typ. *Echinocactus williamsii* Lem. Autotype (Art. 10.2). The only included species.

Lophophora (J.M.Coult.) K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292, 318. (1 Jan) 1898.

Bas. *Lophophora* J.M.Coult. (1894, pro gen.).

Ref. *Lophophora* J.M.Coult.

Lophophora (J.M.Coult.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Lophophora* J.M.Coult. (1894, pro gen.).

Ref. *Lophophora* J.M.Coult.

Lophophoroides Lüthy (pro ser. *Turbinicarpus* Buxb. & Backeb.), Further comments on *Turbinicarpus* and a key to species, in Hunt, *Cactaceae Systematics Initiatives* (14): 22. (Oct) 2002.

Etym. Based on the name of an included species.

Typ. *Thelocactus lophophoroides* Werderm.

Ref. *Turbinicarpus* Buxb. & Backeb.

Lophophoroides (Lüthy) D. Donati (pro subser. *Turbinicarpus* Backeb. & Buxb.), Taxonomische Revision der Gattung *Turbinicarpus* Backeb. et Buxb. (3), *Turbi-Now* (19): 20. (Apr) 2006.

Bas. *Lophophoroides* Lüthy (pro ser. *Turbinicarpus* Backeb. & Buxb.).

Ref. *Turbinicarpus* Buxb. & Backeb.

Lorentzianae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 221. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Rhipsalis lorentziana* Griseb. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Loricata Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom. inval. (Art. 37.1, 38.1).

Etym. Named for an included species.

Typ. *Echinocactus loricatus* Speg. nom. illeg. = *Gymnocalycium spegazzinii* Britton & Rose. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Loricata Schütz (pro sect. *Gymnocalycium* Mittler), Rod *Gymnocalycium* Pfeiff., *Friciana* 7(46): 9-10, 13. 1968 (publ. 1969).

Etym. Based on the name of an included species.

Typ. *Echinocactus loricatus* Speg. nom. illeg. = *Gymnocalycium spegazzinii* Britton & Rose. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Loxanthocereus Backeb., Die Gattungen der Sippe *Loxanthocerei*, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1937(1): 24. (May) 1937.

Etym. From the Greek *loxos*, oblique, *anthos*, flower, and the substantive *Cereus*.

Typ. *Cereus acanthurus* Vaupel.

Ref. *Cleistocactus* Lem.

Lubricae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 453, 584 (Jan) 1958 nom. inval. (Art. 41.5).

Etym. Based on the name of an included species.

Typ. *Opuntia lubrica* Griffiths. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Lutei-faucinati Backeb. (pro ser. *Astrophytum* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 55. (Jun) 1942 nom. inval. (Art. 22.2, 39.1).
Etym. From the Latin *luteus*, gold or saffron yellow, *fauces*, upper throat, and the possessive adjectival suffix *-atus*.

Typ. *Echinocactus myriostigma* ssp. *quadricostatus* Heinr.Möller = *Astrophytum myriostigma* Lem.

Ref. *Astrophytum* Lem.

×**Lutterlohara** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 111. 1992.
Etym. Condensed name in honour of LUTTERLOH, a German schoolmaster mentioned several times in *Monatsschrift für Kakteenkunde*, raiser of the first hybrids from this parentage (Heath, pers. comm. 25 Aug 1992).

Typ. *Echinopsis* Zucc. × *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. ×*Echinophyllum* Mottram.

Lymanbensonia Kimnach, *Lymanbensonia* (*Cactaceae*), a new genus for *Acanthorhipsalis micrantha*, *Cactus and Succulent Journal* (US) 56(3): 100-101. (May-Jun) 1984.

Etym. Named for the American botanist Lyman D. BENSON (1909-1993).

Typ. *Cereus micranthus* Vaupel.

Ref. *Rhipsalis* Gaertn.

Lymanbensonia (Kinnach) Barthlott (pro subgen. *Lepismium* Pfeiff.), New names in *Rhipsalidinae*, *Bradleya* 5: 99. 1987.

Bas. *Lymanbensonia* Kimnach (1984, pro gen.).

Ref. *Rhipsalis* Gaertn.

Macbrideanae Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 19. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia macbridei* Britton & Rose = *Opuntia quitensis* F.A.C.Weber. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Macbrideanae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 612, 615 (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia macbridei* Britton & Rose = *Opuntia quitensis* F.A.C.Weber. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Macdougalianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 169. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia macdougaliana* Rose = *Opuntia tomentosa* Salm-Dyck. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. ser. *Tomentosae* Britton & Rose (1919).

Ref. *Opuntia* (L.) Mill.

Macdougalianae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 452, 544 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Macdougalianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

×***Macdougallara*** P.V.Heath, Errors in the ESA Directory, *Calyx* 1(2): 43. 1992.

Etym. Named for the Scottish-born American plant collector Thomas Baillie MACDOUGALL (1895-1973).

Par. *Disocactus* Lindl. × *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. *Epiphyllum* Haw.

Macea P.V.Heath (pro sect. *Carnegiea* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 108. 1992.

Etym. Not explained, but possibly for Anthony MACE.

Rep. Syn. *Pseudomitrocereus* Buxb. (1961, pro gen.).

Typ. *Pilocereus fulviceps* F.A.C.Weber ex K.Schum. Autotype (Art. 7.4, 10.2). The only included species and same as the replaced synonym.

Ref. *Cephalocereus* Pfeiff.

Machaerocereus Britton & Rose, *The Cactaceae* 2: 2, 114. (9 Sep) 1920.

Etym. From the Greek, *machaera*, sword, and the substantive *Cereus*. A reference to the dagger-like spines.

Typ. *Cereus eruca* K.Brandege.

Ref. *Stenocereus* (A.Berger) Riccob.

Machaerocereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 132. 1929.

Bas. *Machaerocereus* Britton & Rose (1920, pro gen.).

Ref. *Stenocereus* (A.Berger) Riccob.

Machaerocereus (Britton & Rose) P.V.Heath (pro subgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* 5(3): 100. 1996.

Bas. *Machaerocereus* Britton & Rose (1920, pro gen.).

Ref. *Stenocereus* (A.Berger) Riccob.

Macracanthae (Lem.) K.Schum. (pro ser. *Echinopsis* Zucc.), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 227. (1 Sep) 1890.

Bas. *Macracanthi* Lem. nom. incorr. (1839, pro infragen. *Echinonyctanthus* Lem.).

Ref. *Echinopsis* Zucc.

Macracanthi Lem. (pro infragen. *Echinonyctanthus* Lem. nom. illeg.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 85. (Feb) 1839 (“Macracanthae”) nom. incorr. (Art. 11.4).

Etym. From the Greek *makros*, large, and *akantha*, spine or thorn.

Typ. Not cited, but excludes the type of *Echinopsis* Zucc. (1837).

Ref. *Echinopsis* Zucc.

Macracanthi (Lem.) Lawr. (pro sect. *Echinonyctanthus* Lem. nom. illeg.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener’s Magazine and Register of Rural Domestic Improvement*, ser.3 6: 319. 1841 (“Macracanthae”) nom. incorr. (Art. 11.4).

Bas. *Macracanthi* Lem. nom. incorr. (1839, pro infragen. *Echinonyctanthus* Lem.).

Ref. *Echinopsis* Zucc.

Macranthae Backeb. (pro ser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 17. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek *makros*, large, and *anthos*, flower.

Typ. *Opuntia megacantha* Salm-Dyck.

Ref. *Opuntia* (L.) Mill.

Macranthae (Backeb.) Backeb. (pro sect. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 448, 449 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Macranthae* Backeb. (, 1942, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Macranthae Buxb. (pro ser. *Parodia* Speg.), Gattung *Parodia*, in Krainz, *Die Kakteen* (34) CVIc: [4], [9]. (1 Sep) 1966.

Etym. From the Greek *makros*, large, and *anthos*, flower.

Typ. *Echinocactus maassii* Heese.

Ref. *Parodia* Speg.

Macranthi Kimnach (pro sect. *Disocactus* Lindl.), The genus *Disocactus*, *Haseltonia* 1: 106. 1993.

Etym. Based on the name of an included species.

Typ. *Pseudorhipsalis macrantha* Alexander.

Ref. *Epiphyllum* Haw.

Macrochele D.Donati (pro ser. *Turbiniarpus* Buxb. & Backeb.), Taxonomische Revision der Gattung *Turbiniarpus* Backeb. et Buxb.(3), *Turbi-Now* (19): 21. (Apr) 2006.

Etym. Based on the name of an included species.

Typ. *Echinocactus macrochele* Werderm.

Ref. *Turbiniarpus* Buxb. & Backeb.

Macrofloridae Tiegel (pro infragen. *Dolichothele* (K.Schum.) Britton & Rose), Revision und Erweiterung der Gattung *Dolichothele* K. Sch., *Jahrbücher der Deutschen Kakteen-Gesellschaft in der Deutschen Gesellschaft für Gartenkultur* 1: 103. (Jul) 1935-(Dec) 1936 nom. inval. (Art 22.2, 39.1).

Etym. From the Latin *macrus*, large, and *floridus*, flowered.

Typ. Not cited.

Lectotyp. *Mammillaria longimamma* DC. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 65. (Jun) 1942.

Syn. *Dolichothele* (K.Schum.) Britton & Rose infragen. *Dolichothele*.

Ref. *Mammillaria* Haw.

Macrogoni Lem. (pro infragen. *Echinocactus* Link & Otto), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 12, 85. (Feb) 1839 nom. inval. (Art. 22.2).

Etym. From the Greek *makros*, large, and *gonios*, angle.

Typ. Not cited, but includes the type of *Echinocactus* Link & Otto.

Obs. Rank of section in Salm-Dyck (1841: 16) was assumed by Doweld & Greuter (*Taxon* 50(3): 880), but the evidence is indirect and ambiguous. In this case, "Sectio dividenda" was probably referring to the two unnamed divisions within §2. *Macrogoni*.

Ref. *Echinocactus* Link & Otto.

Macrogoni Lem. ex Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 2: 274. (May) 1843 nom. inval. (Art. 22.2).

Etym. From the Greek *makros*, large, and *gonios*, angle.

Typ. Not cited, but includes the type of *Echinocactus* Link & Otto.

Syn. *Echinocactus* Link & Otto sect. *Echinocactus*.

Ref. *Echinocactus* Link & Otto.

Macrogoni Salm-Dyck [non Lem.] (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae anno 1849*: 27. 1850.

Etym. From the Greek *makros*, large, and *gonios*, angle.

Typ. Not cited.

Obs. The type of *Echinocactus* Link & Otto was excluded and placed in *Cephaloidei* Salm-Dyck nom. inval..

Ref. *Echinofossulocactus* Lawr., *Astrophytum* Lem.

Macrogoni K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactearum)* (1): 53 (Feb). 1897.

Etym. Based on the name of an included species.

Typ. *Cereus macrogonus* Salm-Dyck. Autotype (Art. 10.2, 22.6). The only included species.

Ref. *Echinopsis* Zucc.

Macrohybocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *makros*, long or large, *hybos*, hump, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Macromeres Britton & Rose (pro ser. *Coryphantha* (Engelm.) Lem.), *The Cactaceae* 4: 24. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. *Mammillaria macromeris* Engelm. Autotype (Art. 22.6).

Ref. *Coryphantha* (Engelm.) Lem.

Macrorhizi Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 15. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek *makros*, large, and *rhiza*, root.

Typ. *Opuntia hypogaea* Werderm. = *Opuntia glomerata* Haw.

Ref. *Opuntia* (L.) Mill.

Macrosemineum Kreuz. (pro infragen. *Gymnocalycium* Mittler), *Verzeichnis amerikanischer und anderer Sukkulenten mit Revision der Systematik der Kakteen*: 13. (31 Apr) 1935 (“Macrosemineae”) nom.inval. (Art. 39.1).

Etym. From the Latin *macrus*, long or large, and *semen*, seed.

Typ. *Echinocactus denudatus* Link & Otto.

Ref. *Gymnocalycium* Mittler.

Macrosemineum Frič ex Schütz (pro infragen. *Gymnocalycium* Mittler, as “rozdělen” = divisions), K systematicke rodu *Gymnocalycium*, *Fričiana* 1(1): 4, 6. 1962 (“Macrosemineae”) nom.inval. (Art. 39.1).

Etym. From the Latin *macrus*, long or large, and *semen*, seed.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Macrosemineum Metzging (pro subgen. *Gymnocalycium* Mittler), Zur Benennung einiger *Gymnocalycium*-Untergattungen und -Sektionen, *Gymnos* 9(17): 4. 1992.

Etym. From the Latin *macrus*, long or large, and *semen*, seed.

Typ. *Echinocactus denudatus* Link & Otto.

Obs. A new name validated by reference to the Latin diagnosis of *Gymnocalycium* Mittler subgen. *Gymnocalycium* in Schütz, *Friciana* 7(48): 12. 1969.

Ref. *Gymnocalycium* Mittler.

Macrosemineum (Metzging) H.Till (pro subsect. *Gymnocalycium* Mittler), Neuordnung der Gattung *Gymnocalycium*, *Gymnocalycium* 14(2): 400, 401. (May) 2001.

Bas. *Macrosemineum* Metzging (1992, pro subgen. *Gymnocalycium* Mittler).

Ref. *Gymnocalycium* Mittler.

Macrostibas Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 637, 639. (Dec) 1925 (“Macrostibae”).

Etym. Based on the name of the only included species.

Typ. Pilocereus macrostibas K.Schum. Autotype (Art. 10.2, 22.6).

Obs. Has the same type as *Neoraimondia* Britton & Rose (1920).

Ref. Neoraimondia Britton & Rose.

Macrothelae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaceae in horto Dyckensi cultae* 1844: 12. 1845.

Etym. From the Greek *makros*, long or large, & *thele*, nipple. A reference to the large tubercles.

Typ. Not cited.

Lectotyp. Mammillaria trohartii Hildm. = *Mammillaria magnimamma* Haw. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 63. (Jun) 1942.

Obs. Mammillaria magnimamma Haw., designated by Heath, *Journal of the Mammillaria Society* 28(3): 27. 1988 is superfluous. *Cactus mammillaris* L., designated by Hunt, *Cactus and Succulent Journal of Great Britain* 33(3): 67. 1971 was also superfluous and ineligible because it was not a species included by Salm-Dyck. Salm-Dyck (1845, 1850) did not include the type of *Mammillaria* Haw., but Schumann (1898) did so and therefore applied the name illegitimately.

Ref. Mammillaria Haw.

Macrothelae (Salm-Dyck) P.V.Heath (pro subsect. *Mammillaria* Haw.), Early infrageneric classifications of the genus *Mammillaria* (Part 2), *Journal of the Mammillaria Society* 28(3): 28. 1988.

Bas. Macrothelae Salm-Dyck (1845, pro infragen. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Macrothelocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *makros*, long or large, *thele*, nipple, and *kephale*, head.

Typ. Not cited.

Ref. Gymnocalycium Mittler.

Maierocactus E.C.Rost, *Maierocactus* gen. nov., *Zeitschrift für Sukkulantenkunde* 2(8): 138-142. (31 Dec) 1925.

Etym. Named for the German horticulturist Eckhard MAIER, and the substantive *Cactus*.

Typ. Echinocactus capricornis A.Dietr.

Ref. Astrophytum Lem.

Maihuenia Phil., Originalabhandlungen B. *Opuntia Poepigii* Otto und *O. Segethi* Philippi, *Gartenflora* 32(9): 260. (Sep) 1883 nom. inval. (Art. 36.1b).

Obs. A provisional name. Philippi (1883: 260) wrote “Should this belong to this cactus genus [*Opuntia*]? Because of the perennial leaves etc. this plant cannot remain in *Opuntia*, but I would prefer not to make it a *Pereskia* either, if only because, as far as I remember, all pereskias have a smooth bare pericarpel. Perhaps it needs a genus of its own, which could be called *Maihuenia*, after the local name for the plant.”

Maihuenia Phil. ex F.A.C.Weber (pro subgen. *Pereskia* (L.) Mill.), *Pereskia*, in Bois, *Dictionnaire d'horticulture* 2(30): 938-939. (Jul) 1898.

Etym. From the Mapuche *maihuén*, the vernacular name for this plant, said to mean a woman. The name was first proposed by Philippi (1883: 260).

Typ. Not cited. Two species included.

Lectotyp. *Opuntia poeppigii* Pfeiff. Designated by Britton & Rose, *The Cactaceae* 1: 40. 1919.

Ref. *Maihuenia* (F.A.C.Weber) K.Schum.

Maihuenia (F.A.C.Weber) K.Schum., *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (12): 754-755. (25 Nov) 1898.

Bas. *Maihuenia* F.A.C.Weber (1898, pro subgen. *Pereskia* (L.) Mill.).

Maihuenia (F.A.C.Weber) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 87. (Nov) 1903.

Bas. *Maihuenia* F.A.C.Weber (1898, pro subgen. *Pereskia* (L.) Mill.).

Ref. *Maihuenia* (F.A.C.Weber) K.Schum.

Maihueniopsis Speg., Nuevas notas cactológicas, *Anales de la Sociedad Científica Argentina* 99: 86. 1925.

Etym. From the substantive *Maihuenia*, and the Latin suffix *-opsis*, -like. *Maihuenia*-like.

Typ. *Maihueniopsis molfinoi* Speg. = *Opuntia glomerata* Haw.

Ref. *Opuntia* (L.) Mill.

Maihueniopsis (Speg.) G.D.Rowley (pro subgen. *Grusonia* Britton & Rose), *Opuntia – Fission or fusion? Part II – Resolution*, *Tephrocactus Study Group* 12(3): 46. (29 Sep) 2006.

Bas. *Maihueniopsis* Speg. (1925, pro gen.).

Ref. *Opuntia* (L.) Mill.

Malacocarpofornia Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 78. 1988 (publ. 1989) nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the Greek *malakos*, soft, and *karpos*, fruit, and *forma*, form.

Typ. *Echinocactus corynodes* Otto ex Pfeiff. = *Echinocactus sellowii* Link & Otto.

Obs. Has the same type as *Cactus* L. sect. *Malacocarpus* (Salm-Dyck) Kuntze (1903), whose epithet should have been adopted.

Ref. *Parodia* Speg.

Malacocarpus Salm-Dyck, *Cactaeae in horto Dyckensi cultae anno 1849*: 24, 141. 1850 nom. illeg. (Art. 53.1).

Etym. From the Greek *malakos*, soft, and *karpos*, fruit.

Typ. Not cited.

Lectotyp. *Echinocactus sellowii* Link & Otto. Designated by Pfeiffer, *Nomenclator botanicus* 2.1(6): 209. (Jan) 1873.

Obs. Lectotype designations made by Britton & Rose (*The Cact.* 3: 187. 1922), and by Havlíček (*Internoto* 15: 88. 1994) are superfluous. Later homonym of *Malacocarpus*

F.E.Fisch. & C.A.Mey. (1843, *Zygophyllaceae*). A proposal by Byles (*Taxon* 4: 47. 1955) to conserve *Malacocarpus* Salm-Dyck over *Malacocarpus* F.E.Fisch. & C.A.Mey. was rejected (*Taxon* 7: 190. 1958). Renamed *Wigginsia* D.M.Porter (1964) q.v.
Ref. *Parodia* Speg.

Malacocarpus Salm-Dyck ex K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 291-292, 295-296. (1 Jan) 1898.

Rep. Syn. *Malacocarpus* Salm-Dyck nom. illeg. (1850, pro gen.).

Typ. *Echinocactus sellowii* Link & Otto. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Parodia* Speg.

Malacocarpus (K.Schum.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Malacocarpus* K.Schum. (1898, pro subgen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Malacocarpus (K.Schum.) Buxb. (pro subgen. *Notocactus* (K.Schum.) Frič), Gattung *Notocactus*, in Krainz, *Die Kakteen* (35) CVIc: [4], [11-12]. (1 Jan) 1967.

Bas. *Malacocarpus* K.Schum. (1898, pro subgen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Mallocephalus Y.Itô (pro subgen. *Notocactus* (K.Schum.) Frič), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *mallos*, lock of wool, and *kephale*, head.

Typ. Not cited.

Ref. *Parodia* Speg.

Mamillariastrum K.Schum. (pro sect. *Echinocactus* Link & Otto), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 245. (1 Sep) 1890.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler, *Parodia* Speg., *Eriosyce* Phil.

Mamillati K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen Nachträge 1898 bis 1902*: 61. 1903 nom. inval. (Art. 36.1b).

Etym. Named for an included species.

Typ. *Cereus mamillatus* Engelm. ex J.M.Coult. = *Cereus brandegeei* J.M.Coult. Autotype (Art. 10.2). The only included species.

Obs. Name proposed in anticipation of future acceptance.

Ref. *Echinocereus* Engelm.

Mamillopsis E.Morren (pro sect. *Mammillaria* Haw.), Notice sur le *Mammillaria senilis* Salm-Dyck. Famille de cactées, *La Belgique Horticole* 24: 33-38, t.3. 1874.

Etym. From the substantive *Mammillaria*, and the Latin suffix *-opsis*, -like.

Typ. *Mammillaria senilis* Hartweg. Autotype (Art. 10.2). The only included species.

Obs. The rank is specified on p.37: “Nous avons donc cru devoir constituer pour elle sinon un genre nouveau au moins une section particulière sous le nom de *Mamillopsis*.” [We therefore thought it to be a new genus or at least a section under the name *Mamillopsis*]. Britton & Rose (1923: 19) believed that it had been proposed as a subgenus.

Ref. Mammillaria Haw.

Mamillopsis (E.Morren) F.A.C.Weber, *Mamillaria*, in Bois, *Dictionnaire d'Horticulture* 2(26): 805. (Jan) 1898 nom. inval. (Art. 36.1b).

Bas. Mamillopsis E.Morren (1874, pro sect.).

Obs. The rank of genus was proposed in anticipation of future acceptance. Weber wrote: “Il vaudrait mieux l'élever au rang de genre et désigner cette plante sous le nom de *Mamillopsis senilis*.” [It would be better to elevate it to the rank of genus and give this plant the name of *Mamillopsis senilis*].

Ref. Mammillaria Haw.

Mamillopsis (E.Morren) Britton & Rose, *The Cactaceae* 4: 3, 19. (9 Oct) 1923.

Bas. Mamillopsis E.Morren (1874, pro sect. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Mamillopsis (E.Morren) D.R.Hunt (pro subgen. *Mammillaria* Haw.), Schumann and Buxbaum reconciled, *Cactus and Succulent Journal of Great Britain* 33(3): 56, 58. (Aug) 1971.

Bas. Mamillopsis E.Morren (1874, pro sect. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Mamillopsis (E.Morren) Doweld (pro sect. *Cochemiea* K.Brandegee), Nomenclatural adjustments in *Cactaceae* II, *Sukkulentny* 3(1-2): 39. 2000.

Bas. Mamillopsis E.Morren (1874, pro sect. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Mammariella Shafer, Botanical exploration in Pinar del Rio, Cuba, *Journal of the New York Botanical Garden* 13: 139. 1913. Orthographic error for *Mammillaria*.

Ref. Mammillaria Haw.

Mammillares Salm-Dyck (pro infragen. *Cactus* L. nom. rej.), *Plantae succulentae horti Dyckensis*: 9. 1816 nom. inval. (Art. 22.2).

Bas. Mammillaria Haw. (1812, pro gen.).

Syn. Cactus L. nom. rej. infragen. *Cactus*; *Mammillaria* Haw. infragen. *Mammillaria*.

Ref. Mammillaria Haw.

Mammillaria Haw., *Synopsis plantarum succulentarum*: 177. 1812 nom. cons.

Etym. Based on the name of an included species.

Typ. Cactus mammillaris L. Autotype (Art. 22.6). This type is unnecessarily conserved as it is the autotype by simple application of the rules.

Obs. The generic name is conserved over the homonym *Mammillaria* Stackh. (1809), and over *Cactus* L. nom. rej., adopted at the Vienna Botanical Congress 1905. Haworth called the

type species *Mammillaria simplex* W.T.Aiton ex Haw. nom. illeg. (Art. 52.1) a replacement for *Cactus mammillaris* var. *simplex* W.T.Aiton (1811), perhaps welcoming the opportunity to avoid the name *Mammillaria mammillaris*, which he considered to be a tautonym.

Mammillaria (Haw.) Miq. (pro subgen. *Cactus* L. nom. rej.), *Genera cactearum, Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach* 2: 103. 1839.

Bas. *Mammillaria* Haw. (1812, pro gen.).

Ref. *Mammillaria* Haw.

Mammillaria (Haw.) Labour. (pro subgen. *Echinocactus* Link & Otto), *Monographie de la famille des cactées*: xlvii, 444. 1853.

Bas. *Mammillaria* Haw. (1812, pro gen.).

Ref. *Mammillaria* Haw.

Mammillaria (Haw.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Mammillaria* Haw. (1812, pro gen.).

Ref. *Mammillaria* Haw.

Mammilloidia Buxb., Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichische botanische Zeitschrift* 98(1-2): 64. (28 Apr) 1951.

Etym. Based on the substantives *Mammillaria* & *Neolloydia*.

Typ. *Mammillaria candida* Scheidw.

Ref. *Mammillaria* Haw.

Mammilloidia (Buxb.) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the Cactaceae 1 – Problems in classification and nomenclature, *Gentes Herbarum* 8(4): 324. (24 Apr) 1953.

Bas. *Mammilloidia* Buxb. (1951, pro gen.).

Ref. *Mammillaria* Haw.

Mammulosi Lem. (pro infragen. *Echinocactus* Link & Otto), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 20, 88. (Feb) 1839.

Etym. From the name of an included species.

Typ. *Echinocactus mammulosus* Lem. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Mammulosi (Lem.) Lawr. (pro subsect. *Echinocactus* Link & Otto), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 316. 1841 (“*Mammulosae*”).

Bas. *Mammulosi* Lem. (1839, pro infragen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Mammulosi (Lem.) Kreuz. (pro infragen. *Notocactus* (K.Schum.) Frič), *Verzeichnis Amerikanischer und anderer Sukkulenter mit Revision der Systematik der Kakteen*: 21. (31 Apr) 1935.

Bas. *Mammulosi* Lem. (1839, pro infragen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Mammulosi (Lem.) Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 76. 1988 (publ. 1989) nom. inval. (Art. 41.5).

Bas. *Mammulosi* Lem. (1839, pro infragen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Mammulosi (Lem.) Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 76. 1988 (publ. 1989) nom. inval. (Art. 41.5).

Bas. *Mammulosi* Lem. (1839, pro infragen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Marenopuntia Backeb., *Marenopuntia* gen. nov., a northern counterpart of *Pterocactus*, the southernmost cactus, *Desert Plant Life* **22**(3): 27-28. (Mar) 1950.

Etym. Named for Maren B. PARSONS, who discovered the type species.

Typ. *Opuntia mareniae* S.H.Parsons.

Ref. *Opuntia* (L.) Mill.

Marenopuntia (Backeb.) Stuppy (pro subgen. *Grusonia* Britton & Rose), Seed characters and the generic classification of the *Opuntioideae* (*Cactaceae*), in Hunt & Taylor, *Studies in the Opuntioideae (Cactaceae), Succulent Plant Research* **6**: 48. 2002.

Bas. *Marenopuntia* Backeb. (1950, pro gen.)

Ref. *Opuntia* (L.) Mill.

Marenopuntia (Backeb.) Bravo (pro ser. *Opuntia* (L.) Mill.), Nuevas combinaciones, *Cactaceas y Suculentas Mexicanas* **17**(4): 118. (Oct-Dec) 1972 (“*Marenopuntiae*”).

Bas. *Marenopuntia* Backeb. (1919, pro gen.).

Ref. *Opuntia* (L.) Mill.

Marginatocereus Backeb. (pro subgen. *Lemaireocereus* Britton & Rose), Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [8], [12], [17], [20]. 1938.

Etym. From the Latin *marginatus*, edged, and the substantive *Cereus*. Refers to the line of areoles along the ribs connected by woolly extensions.

Typ. *Cereus marginatus* DC.

Ref. *Cephalocereus* Pfeiff.

Marginatocereus (Backeb.) Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 49, 77. (Jun) 1942.

Bas. Marginatocereus Backeb. (1938, pro subgen. *Lemaireocereus* Britton & Rose).

Ref. Cephalocereus Pfeiff.

Maritinocereus Akers & Buining, *Maritinocereus* Akers et Buining gen. nov., *Succulenta* **32**(4): 49-52. (Jul-Aug) 1950.

Etym. From the Latin *maritimus*, maritime, and the substantive *Cereus*, for its coastal habitat. The authors mistakenly believed that the correct spelling was *maritinus*.

Typ. Maritinocereus gracilis Akers & Buining.

Obs. Byles (*Saguaroland Bulletin* **8**(8): 91. 1954) attempted to correct the spelling to *Maritimocereus*, but as the original spelling was intended and never corrected by its own authors, that spelling must stand.

Ref. Cleistocactus Lem.

Marniera Backeb., Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 153. (Sep-Oct) 1950.

Etym. Named for the French horticulturist Julien MARNIER-Lapostolle (1902-1976).

Typ. Phyllocactus macropterus Lem. = *Phyllocactus thomasianus* K.Schum.

Ref. Epiphyllum Haw.

Marshallocereus Backeb., Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 154. (Sep-Oct) 1950.

Etym. Named for the American horticulturist William Taylor MARSHALL (1886-1947), Curator of the Desert Botanical Garden, Phoenix.

Typ. Cereus aragonii F.A.C. Weber.

Ref. Stenocereus (A.Berger) Riccob.

Marshallocereus (Backeb.) P.V.Heath (pro sect. *Pachycereus* (A.Berger) Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* **2**(3): 106. 1992.

Bas. Marshallocereus Backeb. (1950, pro gen.)

Ref. Stenocereus (A.Berger) Riccob.

Marsoneriae Backeb. (pro ser. *Rebutia* K.Schum.), *Die Cactaceae* **3**: 1534, 1548. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Rebutia marsoneri Werderm. Autotype (Art. 22.6).

Ref. Rebutia K.Schum.

Martiani Vaupel (pro infragen. ["Gruppe"] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 639. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Cereus martianus Zucc. Autotype (Art. 22.6).

Ref. Aporocactus Lem.

Matanzanus Mészáros (pro ser. *Melocactus* (L.) Mill.), Additional contributions to the knowledge of the *Melocactus* species of Cuba, *Acta Botanica Academiae Scientiarum Hungaricae* **24**(3-4): 303. 1978.

Etym. From the name of an included species.

Typ. *Melocactus matanzanus* León.

Ref. *Melocactus* (L.) Mill.

Matthesiani Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulenten* **36**(4): 75. (Apr) 1985.

Etym. Based on the name of the type species.

Typ. *Echinocereus matthesianus* Backeb.

Ref. *Echinocereus* Engelm.

Matucana Britton & Rose, *The Cactaceae* **3**: 78, 102. (12 Oct) 1922.

Etym. Named for the town of *Matucana*, Prov. Huarochirí, Dept. Lima., Peru.

Typ. *Echinocactus haynii* Otto ex Salm-Dyck.

Matucana (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 202. (Jul-Aug) 1929.

Typ. *Oroya* Britton & Rose (1922, pro gen.)

Ref. *Matucana* Britton & Rose.

×***Maturoya*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 123. 1992.

Etym. Condensed formula.

Typ. *Matucana* Britton & Rose × *Oroya* Britton & Rose.

Ref. *Matucana* Britton & Rose.

Mazanensia Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* **1**(1): 7. 1962 nom.inval. (Art. 37.1, 39.1).

Etym. Named for an included species.

Typ. *Echinocactus mazanensis* Backeb. = *Echinocactus hossei* F.A.Haage. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Mazanensia Schütz (pro sect. *Gymnocalycium* Mittler), Rod *Gymnocalycium* Pfeiff., *Friciana* **7**(46): 10, 13. 1968 (publ. 1969).

Etym. Based on the name of an included species.

Typ. *Echinocactus mazanensis* Backeb. = *Echinocactus hossei* F.A.Haage. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

×***Medeliocereus*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 120. 1992.

Etym. Condensed formula.

Typ. *Heliocereus* (A.Berger) Britton & Rose × *Mediocactus* Britton & Rose.

Ref. *Epiphyllum* Haw.

Mediocactus Britton & Rose, *The Cactaceae* **2**: 210. (9 Sep) 1920.

Etym. From the Latin *medius*, middle, and the substantive *Cactus*. Reflects the intermediate nature between *Hylocereus* and *Selenicereus*.

Typ. *Cereus coccineus* Salm-Dyck. = *Cereus setaceus* Salm-Dyck ex DC.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Mediocactus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 118. 1929.

Bas. *Mediocactus* Britton & Rose (1920, pro gen.).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Mediocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 15, 19. 1935 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the Latin *medius*, middle, and the substantive *Cereus*.

Rep. Syn. *Mediocactus* Britton & Rose (1920, pro gen.).

Typ. *Cereus setaceus* Salm-Dyck. Autotype (Art. 7.4, 10.2). The only included species and same as the replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Mediocactus*. As there is no Latin description or reference to one, this name cannot be treated as valid under Art. 41.4.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Medioeulychnia Backeb. (pro subgen. *Trichocereus* (A.Berger) Riccob.), *Systematische Uebersicht, Blätter für Kakteenforschung* 5(6): [6], [11], [17], [19]. 1938.

Etym. From the Latin *medius*, middle, and the substantive *Eulychnia*.

Typ. *Cereus litoralis* Johow.

Ref. *Echinopsis* Zucc.

Mediolobivia Backeb., *Mediolobivia* Bckbg. n. g., *Blätter für Kakteenforschung* 1(2): [1]. 1934.

Etym. From the Latin *medius*, middle, and the substantive *Lobivia*, for its intermediate character between *Lobivia* and *Rebutia*.

Typ. Not cited.

Lectotyp. *Mediolobivia aureiflora* Backeb. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 34-35. (Jun) 1942.

Obs. At the rank of section, *Setirebutia* Buining & Donald has priority over *Mediolobivia*.

Ref. *Aylosteria* Speg.

Mediolobivia (Backeb.) G.D.Rowley (pro subgen. *Aylosteria* Speg.), *Rebutia* reappraised, *CactusWorld* 27(2): 89. 2009.

Bas. *Mediolobivia* Backeb. (1934, pro gen.).

Ref. *Aylosteria* Speg.

Mediopilocereus Backeb. (pro subgen. *Pilocereus* K.Schum.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteenengesellschaft e.V. 1941 Zweiter Teil*: 51, 77. (Jun) 1942.

Typ. *Cereus minensis* Werderm.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Mediorebutia Buining & Donald (pro sect. *Rebutia* K.Schum.), Die Gattung *Rebutia* K. Schumann, *Sukkulentenkunde* 7/8: 98, 103. (Mar) 1963.

Etym. From the Latin *medius*, middle, and the substantive *Rebutia*.

Typ. *Rebutia calliantha* Bewer.

Obs. At the rank of genus, this taxon has been frequently attributed to Frič (1938), but he is not known to have published the name.

Ref. *Rebutia* K.Schum.

Megalobivia Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *mega*, large, and the substantive *Lobivia*.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Megarhizi Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 623, 628. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Ancistrocactus* Britton & Rose (1923, pro gen.).

Typ. *Echinocactus megarhizus* Rose. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Sclerocactus* Britton & Rose.

Megastigmatae Neutel. (pro ser. *Mammillaria* Haw.), *Mammillaria* series *Megastigmatae* Neutlings ser. nov., *Succulenta* 65(1): 3. (Jan) 1986.

Etym. From the Greek *mega*, large, and *stigmatē*, stigmas.

Typ. *Mammillaria microcarpa* Engelm.

Ref. *Mammillaria* Haw.

×**Meierara** P.V.Heath, Six short notes: 2. A bad example, *Epiphytes* 7(28): 91. 1983.

Etym. Named for Eckhart MEIER.

Par. *Aporocactus* Lem. × *Cryptocereus* Alexander × *Heliocereus* (A.Berger) Britton & Rose.

Obs. A replacement for the invalid ×*Heliaporocryptus* E.Meier (1981). Heath (pers. comm. 8 May 1993) stated: “I am now certain that ×*Meierara* P.V.Heath does not exist.” Confirmed again in *Calyx* 5(2): 49. 1995.

Ref. ×*Aporepiphyllum* G.D.Rowley.

Melanochilenia Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *melas*, black, and the substantive *Chilenia*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Melanochlori K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 246. (20 Oct) 1897.

Etym. From the Greek *melas*, black, and *chloros*, grass green. A reference to the dark green epidermis.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Melanuri Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 640, 642. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus melanurus* K.Schum. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Melchersiani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 77. 1988 (publ. 1989) (“Melchersianae”) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Notocactus mueller-melchersii* Frič ex Backeb.

Ref. *Parodia* Speg.

Melocactus L. (pro infragen. *Cactus* L. nom. rej.), *Genera plantarum* ed.5: 210. 1754 [1 May 1753].

Etym. From the Greek *melon*, apple or melon, and *kaktos*, something prickly. Adopted from earlier usage by Tournefort and Hermann.

Typ. *Cactus melocactus* L. = *Cactus intortus* Mill. Autotype (Art. 22.6) & typ. cons.

Obs. For notes on typification see Mottram, *The Cactician* **3**: 21, 24-26. 2013.

Ref. *Melocactus* (L.) Link & Otto.

Melocactus Boehm. [non L.], in Ludwig & Boehmer, *Definitiones generum plantarum* [ed.3]: 79. 1760 nom. rej.

Etym. From the Greek *melon*, apple or melon, and *kaktos*, something prickly.

Typ. Not cited. No included species.

Obs. The protologue calls for flowers arising from the axils of tubercles, which is a character of *Mammillaria* Haw. rather than *Melocactus* L. However, the cited references to Tournefort and Hermann on which the taxon was based contained elements of both, with illustrations of *Melocactus* and *Mammillaria*. Moreover, there was no explicit exclusion of the type of *Melocactus* L. So to avoid confusion, Boehmer’s usage of the name was proposed for rejection by Rothmaler in 1944 and adopted by the 1969 Botanical Congress.

Ref. *Mammillaria* Haw.

Melocactus (L.) Link & Otto, Ueber die Gattungen *Melocactus* und *Echinocactus*, *Verhandlungen des Vereins zur Beförderung des Gartenbaues in den Königlich Preussischen Staaten* **3**: 417. 1827 nom. cons. [non *Melocactus* Boehmer nom. rej. = *Mammillaria* Haw. nec *Cactus* L.]

Etym. From the Greek *melon*, apple or melon, and *kaktos*, something prickly.

Typ. *Melocactus communis* Link & Otto [subst. for *Cactus melocactus* L.] typ. cons. = *Cactus intortus* Mill.

Obs. Restores the name *Melocactus* to its original sense. Proposed for conservation by Rothmaler (Fedde, *Repertorium* **53**: 18. 1944). Recommended by Dandy (*Taxon* **18**(4): 472. (Aug) 1969) and adopted by the International Botanical Congress of 1969.

Melocactus (Link & Otto) Miq. (pro subgen. *Cactus* L. nom. rej.), *Genera cactearum, Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach* 2: 104. 1839.

Bas. Melocactus (L.) Link & Otto (1827, pro gen.).

Ref. Melocactus (L.) Link & Otto.

Melocactus (Link & Otto) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. Melocactus (L.) Link & Otto (1827, pro gen.).

Ref. Melocactus (L.) Link & Otto.

Mesa-verdes Hochstätter (pro sect. *Sclerocactus* Britton & Rose), *Articolazione del genere Sclerocactus, Piante Grasse* 19(1): 18. (Sep) 1999 (“Mesae-verdae”).

Etym. Based on the name of the type species.

Typ. Sclerocactus mesae-verdae Boissevain & Davidson.

Ref. Sclerocactus Britton & Rose.

Mesechinopsis Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 73, 286. 1957.

Etym. From the Greek *mesos*, middle, and the substantive *Echinopsis*.

Typ. Echinopsis hamatacantha Backeb. = *Echinopsis ancistrophora* Speg.

Ref. Echinopsis Zucc.

Mesembryanthemoides Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 220. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. Rhipsalis mesembryanthemoides Haw. Autotype (Art. 22.6).

Obs. Also taken up by Vaupel in 1925 as an unranked taxon [“Gruppe”], with spelling changed to *Mesembrianthemoides*.

Ref. Rhipsalis Gaertn.

Mesospermae F.H.Brandt (pro ser. *Parodia* Speg.), *Die Gliederung der Gattung Parodia Spegazzini, Kakteen- und Orchideen-Rundschau* 7(4): 54. 1982.

Etym. From the Greek *mesos*, middle, and *sperma*, seed.

Typ. Parodia andreaeoides F.H.Brandt. = *Parodia procera* F.Ritter.

Ref. Parodia Speg.

Meyenia Backeb., *Kakteen-Seltenheiten. Meine Peru-Expedition 1930-1931, Teil 1, Möllers Deutsche Gärtner-Zeitung* 46(16): 187. (1 Jun) 1931 nom. inval. (Art. 38.3) & illeg. (Art. 53.1).

Etym. Named for the Prussian physician & botanist Franz Julius Ferdinand MEYEN (1804-1840), Professor of Botany, University of Berlin.

Typ. Meyenia weberbaueri Backeb. = *Cereus fascicularis* Meyen. Autotype (Art. 10.2) The only included species.

Obs. Insufficiently described. Later homonym of *Meyenia* Nees (1832, *Thunbergiaceae*).

Ref. Haageocereus Backeb.

Meyerocactus Doweld, De Polyfylye van het geslacht *Echinocactus*, *Succulenta* 75(6): 268-271-278. 1996.

Etym. Named for Rudolf MEYER.

Typ. *Echinocactus horizonthalonius* Lem.

Ref. *Echinocactus* Link & Otto.

Michaëlopuntia P.V.Heath, Three new generic names in the *Cactaceae*, *Calyx* 6(2): 41-42. 1999 nom. illeg. (Art. 52.1).

Rep. Syn. *Miqueliopuntia* Frič ex F.Ritter (1980).

Typ. *Opuntia miquelii* H.B.Monv. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Published as a superfluous spelling correction, in conflict with Art. 60.1.

Micracanthae Lem. ex K.Schum. (pro ser. *Echinopsis* Zucc.), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 227. (1 Sep) 1890 nom. inval. (Art. 22.2).

Rep. Syn. *Micracanthi* Lem. nom. illeg. (1839, pro infragen. *Echinonyctanthus* Lem. nom. illeg.).

Typ. Not cited, but includes the type of *Echinopsis* Zucc.

Syn. *Echinopsis* Zucc. ser. *Echinopsis*.

Ref. *Echinopsis* Zucc.

Micracanthi Lem. (pro infragen. *Echinonyctanthus* Lem. nom. illeg.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 85. (Feb) 1839 (“*Micracanthae*”) nom. incorr. (Art. 11.4) & illeg. (Art. 52.1).

Etym. From the Greek *mikros*, small, and *akantha*, spine or thorn.

Typ. Not cited, but includes the type of *Echinopsis* Zucc.

Ref. *Echinopsis* Zucc.

Micracanthi Lem. ex Lawr. (pro sect. *Echinonyctanthus* Lem. nom. illeg.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser. 3 6: 319. 1841 (“*Micracanthae*”) nom. incorr. (Art. 11.4) & illeg. (Art. 52.1).

Rep. Syn. *Micracanthi* Lem. nom. illeg. (1839, pro infragen. *Echinonyctanthus* Lem. nom. illeg.).

Typ. Not cited, but includes the type of *Echinopsis* Zucc.

Ref. *Echinopsis* Zucc.

Micranthae Backeb. (pro ser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 19. (Jun) 1942.

Etym. From the Greek *mikros*, small, and *anthos*, flower.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Micranthae (Backeb.) Backeb. (pro sect. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 448, 611. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. Micranthae Backeb. (1942, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Micranthae Doweld (pro ser. *Rhipsalis* Gaertn.), Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 31, 43. (Jan) 2003.

Etym. Based on the name of an included species.

Typ. Cereus micranthus Kunth.

Ref. Rhipsalis Gaertn.

Micranthocereus Backeb., Die Diagnosen neuer Gattungen und Untergattungen. *Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht 1938(6): [9], [15], [20], [23]. 1938.

Etym. From the Greek *mikros*, small, and the substantive *Cereus*.

Typ. Cephalocereus polyanthus Werderm.

Ref. Austrocephalocereus Backeb.

Microcarpae Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 34. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 290. 1857] (“Microcarpae”).

Etym. From the Greek *mikros*, small, and *karpos*, fruit.

Typ. Opuntia strigil Engelm. Autotype (Art. 10.2). The only included species.

Ref. Opuntia (L.) Mill.

Microcarpae (Engelm.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* 50(4): 522. (20 Feb) 1908.

Bas. Microcarpae Engelm. (1856, pro infragen. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Microcephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *mikros*, small, and *kephale*, head.

Typ. Not cited.

Ref. Gymnocalycium Mittler.

Microcereus K.Schum. (pro sect. *Cereus* (L.) Mill.), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 196. (1 Sep) 1890.

Etym. From the Greek *mikros*, small, and the substantive *Cereus*.

Typ. Not cited.

Ref. Echinopsis Speg.

Microfloridae Tiegel (pro infragen. *Dolichothele* (K.Schum.) Britton & Rose), Revision und Erweiterung der Gattung *Dolichothele* K. Sch., *Jahrbücher der Deutschen Kakteen-Gesellschaft in der Deutschen Gesellschaft für Gartenkultur* 1: 103. (Jul) 1935-(Dec) 1936 nom. inval. (Art 39.1).

Etym. From the Latin *micrus*, small, and *floridus*, flowered.

Typ. Not cited.

Lectotyp. *Mammillaria camptotricha* Dams. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 65. (Jun) 1942.

Syn. *Pseudomammillaria* Buxb. infragen. *Pseudomammillaria* (1951).

Ref. *Mammillaria* Haw.

Microgoni Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 18. 1841 nom. illeg. (Art. 52.1).

Etym. Small-angled echinocacti, referring to the low, narrow ribs, from the Greek *mikros*, small, and *gonios*, angle.

Typ. Not cited, but includes *Cereus ottonis* Lehm., the type of *Ottonidei* Lem., and *Echinocactus mammulosus* Lem., the type of *Mammulosi* Lem.

Obs. Rank of section was assumed by Doweld & Greuter (*Taxon* 50(3): 880), but the evidence is indirect and ambiguous. “*Sectio dividenda*” in Salm-Dyck (1841: 16) was perhaps referring to the two divisions within §2. *Macrogoni*.

Ref. *Parodia* Zucc., *Frailea* Britton & Rose.

Microgoni Salm-Dyck ex Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 2: 273. 1843 nom. illeg. (Art. 52.1).

Rep. Syn. *Microgoni* Salm-Dyck nom. illeg. (1841, pro infragen. *Echinocactus* Link & Otto).

Typ. Not cited, but same as the replaced synonym (Art. 7.4).

Obs. Includes *Cereus ottonis* Lehm., the type of *Ottonidei* Lem., and *Echinocactus mammulosus* Lem., the type of *Mammulosi* Lem.

Ref. *Parodia* Zucc., *Frailea* Britton & Rose.

Microphyllae Lem. (pro sect. *Opuntia* (L.) Mill.), *Cactearum aliquot novarum ac insuetarum in horto Monvilliano cultarum accurata descripto*: 37. (10 Feb) 1838.

Etym. From the Greek *mikros*, small, and *phyllon*, leaf.

Typ. Not cited.

Obs. All species belong to *Opuntia* (L.) Mill. sect. *Tephrocactus* (Lem.) F.A.C.Weber.

Ref. *Opuntia* (L.) Mill. sect. *Tephrocactus* (Lem.) F.A.C.Weber.

×***Micropilocereus*** P.V.Heath, *The nothogenera of the Cactaceae, Calyx* 1(3): 123. 1992.

Etym. Condensed formula.

Par. *Micranthocereus* Backeb. × *Pseudopilocereus* Buxb.

Ref. ×*Austrocereus* Mottram.

Micropuntia Daston, *Three noteworthy cacti of southwestern Utah, The American Midland Naturalist* 36(3): 661. (Nov) 1946.

Etym. From the Greek *mikros*, small, and the substantive *Opuntia*.

Typ. *Micropuntia brachyrhopalica* Daston = *Opuntia pulchella* Engelm.

Ref. *Opuntia* (L.) Mill.

Micropuntia (Daston) Stuppy (pro subgen. *Grusonia* Britton & Rose), *Seed characters and the generic classification of the Opuntioideae (Cactaceae)*, in Hunt & Taylor, *Studies in the Opuntioideae (Cactaceae), Succulent Plant Research* 6: 48. 2002.

Bas. *Micropuntia* Daston (1946, pro gen.)

Ref. *Opuntia* (L.) Mill.

Microsemineum Frič ex Kreuz. (pro infragen. *Gymnocalycium* Mittler), *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 14. (31 Apr) 1935 (“Microsemineae”) nom.inval. (Art. 38.1).

Etym. From the Greek *mikros*, small, and the Latin *semen*, seed.

Typ. *Echinocactus saglionis* J.-F.Cels.

Ref. *Gymnocalycium* Mittler.

Microsemineum Frič ex Schütz (pro infragen. *Gymnocalycium* Mittler, as “rozdělen” = division), *K systematice rodu Gymnocalycium, Fričiana* 1(1): 4, 6. 1962 (“Microsemineae”) nom.inval. (Art. 39.1).

Etym. From the Greek *mikros*, small, and the Latin *semen*, seed.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Microsemineum Frič ex Schütz (pro subgen. *Gymnocalycium* Mittler), *Rod Gymnocalycium, Friciana* 7(46): 8-10, 12-13. 1968 (publ. 1969).

Etym. From the Greek *mikros*, small, and the Latin *semen*, seed.

Typ. *Echinocactus saglionis* J.-F.Cels.

Ref. *Gymnocalycium* Mittler.

Microseminiformia Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), *A new conspectus generis of the genus Notocactus Frič 1928 and its classification into subgenera and seria, Kaktus Világ* 18(4): 77. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Latin *micrus*, small, *semen*, seed, and *forma*, form.

Typ. *Echinocactus schumannianus* Nicolai.

Ref. *Parodia* Speg.

×**Microsocereus** G.D.Rowley, *Spontaneous bigeneric hybrids in Cactaceae, Bradleya* 12: 6. 1994.

Etym. Condensed formula.

Par. *Micranthocereus* Backeb. × *Pilosocereus* Byles & G.D.Rowley.

Ref. ×*Austrocereus* Mottram.

Microspermi Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 622, 626. (Dec) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Rep. Syn. *Hickenia* Britton & Rose nom. illeg. (1922, pro gen.).

Typ. *Echinocactus microspermus* F.A.C.Weber. Autotype (Art. 7.4). Same as the replaced synonym.

Syn. *Parodia* Speg. infragen. *Parodia*.

Ref. *Parodia* Speg.

Microspermia Frič, Die letzte Kakteenjagd des Forschers A. V. Frič, *Möllers Deutsche Gärtner-Zeitung* **44**(15): 170. (May) 1929 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus microspermus* F.A.C.Weber. Autotype (Art. 22.6).

Syn. *Parodia* Speg. (1923); *Neohickenia* Frič nom. illeg. (1928).

Ref. *Parodia* Speg.

Microsphaerici Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek *mikros*, small, and *sphaera*, sphere.

Typ. *Tephrocactus minusculus* Backeb.

Ref. *Opuntia* (L.) Mill.

Microthelae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Heteracanthae* Pfeiff.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 24. 1837.

Etym. From the Greek, *mikros*, small, & *thele*, nipple.

Typ. Not cited.

Obs. Includes the type of *Leucocephalae* Lem. (1839).

Ref. *Mammillaria* Haw.

Mihanovichiana Backeb. (pro subser. *Gymnocalycium* Mittler), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 39. (Jun) 1942 nom. inval. (Art. 39.1).

Typ. *Echinocactus mihanovichii* Frič & Gürke. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Mihanovichiana Backeb. ex Buxb. (pro subser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 9, 12. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus mihanovichii* Frič & Gürke. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Mila Britton & Rose, *The Cactaceae* **3**: 78, 211. (12 Oct) 1922.

Etym. An anagram of Lima, capital city of Peru, near which it was first found.

Typ. *Mila caespitosa* Britton & Rose.

Minusculae Backeb. (pro ser. *Rebutia* K.Schum.), *Die Cactaceae* **3**: 1534. (Oct) 1959 nom. inval. (Art. 22.2, 39.1).

Etym. Based on the name of an included species.

Typ. *Echinopsis minuscula* F.A.C.Weber. Autotype (Art. 22.6).

Syn. *Rebutia* K.Schum. ser. *Rebutia*.

Ref. *Rebutia* K.Schum.

Minusculi Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 628. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Rebutia* K.Schum. (1895, pro gen.).

Typ. *Echinopsis minuscula* F.A.C.Weber. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Rebutia* K.Schum.

Minutiflorae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen.*

Monographie der Cactaceae **1**: 23, 42. (15 May) 1925 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Rhipsalis minutiflora* K.Schum. = *Cassytha baccifera* J.S.Muell. Autotype (Art. 22.6).

Syn. *Rhipsalis* Gaertn. infragen. *Rhipsalis*.

Obs. Description repeated in Vaupel, Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 618, 619. (Dec) 1925.

Ref. *Rhipsalis* Gaertn.

Minutiflori Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 639. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Cereus minutiflorus* Vaupel. Autotype (Art. 10.2, 22.6).

Obs. Includes the type of *Wilmattea* Britton & Rose (1920).

Ref. *Epiphyllum* Haw.

Miquelianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 78. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. *Opuntia miquelii* H.B.Monv. Autotype (Art. 10.2, 22.6).

Ref. *Opuntia* (L.) Mill.

Miquelianae (Britton & Rose) Backeb. (pro subser. *Austrocyllindropuntia* Backeb.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 13. (Jun) 1942.

Bas. *Miquelianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Miquelianae (Britton & Rose) Backeb. (pro ser. *Austrocyllindropuntia* Backeb.), *Die Cactaceae* **1**: 138. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Miquelianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Miqueliopuntia Frič ex Kreuz., *Verzeichnis amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 41. (31 Apr) 1935 nom. nud.

Etym. Based on the name of the only included species, and the substantive *Opuntia*.

Typ. *Opuntia miquelii* H.B.Monv. Autotype (Art. 10.2, 22.6).

Obs. Really a replacement for *Miqueliana* Britton & Rose (1919), but the conditions for valid publication were not met (Art. 41.4).

Ref. *Opuntia* (L.) Mill.

Miqueliopuntia Frič ex F.Ritter, *Kakteen in Südamerika* **3**: 1046. (Oct) 1980.

Etym. Based on the name of the only included species, and the substantive *Opuntia*.

Rep. Syn. *Opuntia* (L.) Mill. ser. *Miqueliana* Britton & Rose (1919).

Typ. *Opuntia miquelii* H.B.Monv. Autotype (Art. 10.2, 22.6).

Obs. The cited basionym was only a name. The true replaced synonym was not cited, but as the taxon is published as though new, the conditions for valid publication are met and the omission is taken to be a correctable error in accordance with Art. 41.8d.

Ref. *Opuntia* (L.) Mill.

Mirabella F.Ritter, *Kakteen in Südamerika* **1**: 108-110. (Nov) 1979.

Etym. According to the author, named for the village of *Mirabela*, but with the orthography changed to comply with the usual Italian spelling of the name, where it is commonly a personal first name.

Typ. *Acanthocereus albicaulis* Britton & Rose.

Ref. *Cereus* (L.) Mill.

Mirabella (F.Ritter) N.P.Taylor (pro subgen. *Cereus* (L.) Mill.), Notes on miscellaneous genera of *Cactaceae* (2), *Bradleya* **10**: 25. 1992.

Typ. *Mirabella* F.Ritter (1979, pro gen.)

Ref. *Cereus* (L.) Mill.

Mistienses Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* **3**: 1376, 1386. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinopsis mistiensis* Werderm. & Backeb. = *Lobivia pampana* Britton & Rose. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Missourienses Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 628. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Neobesseya* Britton & Rose (1923, pro gen.).

Typ. *Mammillaria missouriensis* Sweet. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Coryphantha* (Engelm.) Lem.

Mitrocereus Backeb. (pro subgen. *Cephalocereus* Pfeiff.), Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [8], [13], [18], [20-21]. 1938.

Etym. From the Greek *mitra*, cap or belt, and the substantive *Cereus*.

Typ. *Pilocereus chrysomallus* Lem. = *Cereus militaris* Audot.

Ref. *Cephalocereus* Pfeiff.

Mitrocereus (Backeb.) Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 12. (Jun) 1942.
Bas. *Mitrocereus* Backeb. (1938, pro subgen. *Cephalocereus* Pfeiff.)
Ref. *Cephalocereus* Pfeiff.

Molli-Lobivia Wessner (pro subgen. *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1940 *Erster Teil*: 12. (May) 1940.
Etym. From the Latin *mollis*, soft or flaccid, and the substantive *Lobivia*.
Typ. Not cited.
Ref. *Echinopsis* Zucc.

Monacanthae Engelm. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 52. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 308. 1857].
Etym. From the Greek *monos*, one, & *akantha*, spine.
Typ. Not cited.
Ref. *Opuntia* (L.) Mill.

Monacanthae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23. (15 May) 1925
Etym. Based on the name of an included species.
Typ. *Rhipsalis monacantha* Griseb. Autotype (Art. 22.6).
Obs. Repeated in Vaupel, *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 619. (Dec) 1925 & *Die Kakteen* (2): 54. (1 Mar) 1926. Did not include the type of *Acanthorhipsalis*, but is otherwise similarly circumscribed.
Ref. *Rhipsalis* Gaertn.

Monacanthae A.Berger [non Engelm.] (pro ser. *Opuntia* (L.) Mill.), *Kakteen*: 74. (Jul-Aug) 1929.
Etym. Based on the name of an included species.
Typ. *Opuntia monacantha* Haw. Autotype (Art. 22.6).
Ref. *Opuntia* (L.) Mill.

Monacanthae (A.Berger) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 17. (Jun) 1942.
Bas. *Monacanthae* A.Berger (1929, pro ser. *Opuntia* (L.) Mill.).
Ref. *Opuntia* (L.) Mill.

Monvillea Britton & Rose, *The Cactaceae* 2: 1, 21. (9 Sep) 1920.
Etym. Named to honour Hippolyte BOISSEL, Baron de Monville (1794-1863).
Typ. *Cereus cavendishii* H.B.Monv.
Obs. Hunt (*Bradleya* 6: 100.1988) argued that the type species was not the plant under the name *M. cavendishii* in cultivation, but was in reality probably an *Acanthocereus*. Kiesling

(*Haseltonia* **16**: 3-8. 2011) rejected this, reinstating *Cereus cavendishii* with the type designated by Heath (*Taxon* **41**: 85-87), the plate from *Curtis's Bot. Mag.* **125**: t.7648. 1599. Ref. *Cereus* (L.) Mill.

Monvillea (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii,153. 1929.

Bas. *Monvillea* Britton & Rose (1920, pro gen.).

Ref. *Cereus* (L.) Mill.

Morangaya G.D.Rowley, The unhappy medium: *Morangaya* – a new genus of *Cactaceae*, *Ashingtonia* **1**(4): 43, 44-45. (Jan) 1974.

Etym. Compound name commemorating Dr. Reid MORAN and Ed & Betty GAY, for jointly making plants and information available about the only included species.

Typ. *Cereus pensilis* K.Brandege.

Obs. Validated as a descriptio generico-specifica (Art. 38.5).

Ref. *Echinocereus* Engelm.

Morangaya (G.D.Rowley) Lange (pro subgen. *Echinocereus* Engelm.), in Blum, Lange, Rischer & Rutow, *Echinocereus Monographie, Neue Namen*: [5]. (14 Mar) 1998. [Preprinted from *Echinocereus Monographie*: 45, 49]. (26 Oct) 1998].

Bas. *Morangaya* G.D.Rowley (1974, pro gen.).

Ref. *Echinocereus* Engelm.

×**Moraquipa** Baumgärtner, *Hybriden-J.* 2012(2): 18. 2012.

Etym. Condensed formula.

Par. *Morawetzia* Backeb. × *Arequipa* Britton & Rose.

Ref. *Cleistocactus* Lem.

Morawetzia Backeb., Eine neue südamerikanische Cereengattung: *Morawetzia* Bckbg. n. g. (*Morawetzia Doelziana* Bckbg. n. sp.), *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1936 **1**(10): 73-77. 1936.

Etym. Named for the American philanthropist Victor MORAWETZ, of New York, who financed a Backeberg expedition to South America.

Typ. *Morawetzia doelziana* Backeb.

Obs. Validated as a descriptio generico-specifica (Art. 38.5).

Ref. *Cleistocactus* Lem.

Mostiana Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 6, 10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus mostii* Gürke. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

×**Mottramara** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 103. 1992.

Etym. Named for the English mathematician and horticulturist Roy MOTTRAM (1940-).

Par. Chamaecereus Britton & Rose × *Echinopsis* Zucc. × *Lobivia* Britton & Rose × *Trichocereus* (A.Berger) Riccob.

Ref. Echinopsis Zucc.

Multangulares Pfeiff. (pro infragen. *Cereus* Mill. in § *Cereastri* DC.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 75. (Feb) 1837.

Etym. Based on the name of an included species.

Typ. Cereus multangularis Haw. [= ?*Cactus multangularis* Willd.]. Autotype (Art. 22.6).

Obs. It is unlikely that Pfeiffer intended this to be treated as a name, because the other two categories of similar rank in the pages that followed were only descriptive, based on the number of ribs. Nevertheless, Schumann treated it as though validly published, attributing the name to Salm-Dyck, who in fact never used it but instead called it *Multicostati* Salm-Dyck.

Ref. Cephalocereus Pfeiff.

Multangulares Pfeiff. (pro infragen. *Cereus* Mill. in § *Protracti* Pfeiff.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 104. (Feb) 1837 nom. nud.

Etym. From the Latin *multus*, many, & *angulus*, angle.

Typ. Not cited.

Ref. Includes three disparate species belonging to *Nyctocereus* (A.Berger) Britton & Rose, *Haageocereus* Backeb., & *Pilosocereus* Byles & G.D.Rowley.

Multicostati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 23. 1841.

Etym. From the Latin *multus*, many, and *costata*, ribbed.

Typ. Not cited.

Ref. Haageocereus Backeb., *Echinopsis* Zucc.

Multicostati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 43. 1850 nom. illeg. (Art. 53.1).

Etym. From the Latin *multus*, many, and *costata*, ribbed.

Typ. Not cited.

Ref. Echinocereus Engelm.

Multiflora Backeb. (pro infragen. ["skupina"] *Gymnocalycium* Mittler), *Gymnocalycium, Kaktusar* 5(9): 106. 1934 ("Multiflorum") nom. nud.

Etym. Based on the name of an included species.

Typ. Echinocactus multiflorus Hook. = *Echinocactus monvillei* Lem. Autotype (Art. 22.6).

Ref. Gymnocalycium Mittler.

Multiflora Backeb. ex Schütz (pro infragen. ["skupina"] *Gymnocalycium* Mittler), *K systematice rodu Gymnocalycium, Fričiana* 1(1): 7. 1962 nom.inval. (Art. 37.1, 39.1).

Etym. Named for an included species.

Typ. Echinocactus multiflorus Hook. = *Echinocactus monvillei* Lem. Autotype (Art. 22.6).

Ref. Gymnocalycium Mittler.

Multiflora Backeb. ex H.Till (pro subsect. *Gymnocalycium* Mittler), Neuordnung der Gattung *Gymnocalycium*, *Gymnocalycium* **14**(2): 400, 401. (May) 2001.

Etym. Named for an included species.

Typ. *Echinocactus multiflorus* Hook. = *Echinocactus monvillei* Lem. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Multispineae Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 314. 1841 nom. inval. (Art. 22.2).

Etym. From the Latin *multus*, many, & *spina*, spine.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Lectotyp. *Mammillaria simplex* Haw. = *Cactus mammillaris* L. Designated by Heath, *Journal of the Mammillaria Society* **28**(3): 26. 1988.

Syn. *Mammillaria* Haw. subsect. *Mammillaria*.

Ref. *Mammillaria* Haw.

Muricatus Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 74. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus muricatus* Otto ex Pfeiff. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Muscosemineum Kreuz. (pro infragen. *Gymnocalycium* Mittler), Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen: 14. (31 Apr) 1935 ("Muscosemineae") nom. nud.

Etym. From the Latin *muscus*, moss, and *semen*, seed.

Typ. *Echinocactus schickendantzii* F.A.C.Weber.

Ref. *Gymnocalycium* Mittler.

Muscosemineum Frič ex Schütz (pro infragen. *Gymnocalycium* Mittler, as "rozdělen" = division), K systematice rodu *Gymnocalycium*, *Fričiana* **1**(1): 4, 6. 1962 ("Muscosemineae") nom.inval. (Art. 39.1).

Etym. From the Latin *muscus*, moss, and *semen*, seed.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Muscosemineum Frič ex Schütz (pro subgen. *Gymnocalycium* Mittler), Rod *Gymnocalycium*, *Fričiana* **7**(46): 10-11, 13-14. 1968 (publ. 1969).

Etym. From the Latin *muscus*, moss, and *semen*, seed.

Typ. *Echinocactus mihanovichii* Frič & Gürke.

Ref. *Gymnocalycium* Mittler.

Myosurae Vaupel (pro infragen. ["Gruppe"] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23. (15 May) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Cereus myosurus* Salm-Dyck. = *Cactus cruciformis* Vell. Autotype (Art. 22.6).

Obs. Repeated in Vaupel, Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 619. (Dec) 1925 & *Die Kakteen* (2): 75. (1 Mar) 1926. Includes the type of *Lepismium* Pfeiff. (1836), the name that should have been adopted.

Ref. *Rhipsalis* Gaertn.

Myriacanthae A.Berger (pro ser. *Opuntia* (L.) Mill.), *Kakteen*: 71. (Jul-Aug) 1929.

Etym. Based on the name of an included species.

Typ. *Opuntia myriacantha* F.A.C.Weber. Autotype (Art. 22.6).

Obs. The lectotype designation of *Opuntia galapageia* Hensl. by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 17. (Jun) 1942 was superfluous.

Ref. *Opuntia* (L.) Mill.

Myriacanthae (A.Berger) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 17. (Jun) 1942.

Bas. *Myriacanthae* A.Berger (1929, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Myriacanthi Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 626. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Arequipa* Britton & Rose (1922, pro gen.).

Typ. *Arequipa leucotricha* Britton & Rose = *Echinopsis hempeliana* Gürke. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Cleistocactus* Lem.

Myriostigmati Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 625. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Astrophytum* Lem. (1922, pro gen.).

Typ. *Echinocactus myriostigma* Salm-Dyck. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Astrophytum* Lem.

×**Myrtgerocactus** Moran, The unique cereus, *Cactus and Succulent Journal* (US) **34**(6): 184-186-188. (Nov-Dec) 1962.

Etym. Condensed formula.

Par. *Bergerocactus* Britton & Rose × *Myrtillocactus* Console [×*Myrtgerocactus lindsayi* Moran].

Ref. ×*Myrtocereus* Mottram.

+ **Myrtigymnocalycium** Mottram **nothogen. nov.**

Etym. Condensed formula.

Rep. Syn. + *Myrtillocalycium* Meutter (2014).

Gr.-Chim. *Gymnocalycium* Mittler + *Myrtillocactus* Console.

× ***Myrtillocereus*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(3): 78. (Jun) 1982.

Etym. Condensed formula.

Par. *Myrtillocactus* Console × *Stenocereus* (A.Berger) Ricc.

Myrtillocactus Console, Nuovo genere di *Cactaceae*. *Bolletino del Reale Orto Botanico di Palermo* **1**: 8-10. 1897.

Etym. Diminutive latinised form of the Greek *myrtos*, myrtle or blueberry, and the substantive *Cactus*.

Typ. *Cereus geometrizzans* Mart. ex Pfeiff.

Myrtillocactus (Console) A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 59, 63. (31 May) 1905.

Bas. *Myrtillocactus* Console (1897, pro gen.)

Ref. *Myrtillocactus* Console.

+ ***Myrtillocalycium*** Meutter, Entchimaera's bij cactussen, *Succulenta* **93**(1): 35. (Feb) 2014 unest. (Cult.Art. 24.3, 27.1d).

Etym. Incorrectly formed condensed formula.

Gr.-Chim. *Gymnocalycium* Mittler + *Myrtillocactus* Console.

Ref. + *Myrtigymnocalycium* Mottram.

Myrtillocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 11, 15. 1935 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. Diminutive latinised form of the Greek *myrtos*, myrtle or blueberry, and the substantive *Cereus*.

Typ. *Cereus geometrizzans* Mart. ex Pfeiff. Same as the replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Myrtillocactus* K.Schum. As there is no Latin description or reference to one, this name cannot be treated as valid under Art. 41.4.

Ref. *Myrtillocactus* Console.

× ***Myrtocereus*** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 59. (5 Feb) 1990.

Etym. Condensed formula.

Par. *Myrtillocactus* Console × *Nyctocereus* (A.Berger) Britton & Rose.

Napina Frič, *Coryphantha* (*Neolloydia*?) Stützlei, Frič, sp. n., *Kaktusová příloha ŽIVOT V PŘÍRODE vychází v Praze* **29**(32-33): 66. (3 Sep) 1925 nom. nud.

Etym. From the Latin *napinus*, turnip-shaped.

Typ. Napina mandragorana Frič nom. nud. = *Echinocactus mandragora* Frič ex A.Berger.
Autotype (Art. 10.2). The only included species.

Ref. Turbinicarpus Buxb. & Backeb.

Napinae Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 64. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Named for an included species.

Typ. Mammillaria napina J.A.Purpus.

Ref. Mammillaria Haw.

Napinae Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3100, 3102. 1961 nom. inval. (Art. 39.1).

Etym. Named for an included species.

Typ. Mammillaria napina J.A.Purpus.

Ref. Mammillaria Haw.

Napinae Backeb. ex Keizer (pro ser. *Mammillaria* Haw.), Twee nieuwe series in het *Mammillaria* – ondergeslacht *Cryptocarpa*, *Succulenta* 70(6): 125. (Jun) 1991.

Etym. Named for an included species.

Typ. Mammillaria napina J.A.Purpus.

Ref. Mammillaria Haw.

Napinae (Keizer) Doweld (pro ser. *Bartschella* Britton & Rose), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* 3(1-2): 38. 2000.

Bas. Napinae Keizer (pro ser. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Navajoa Croizat, *Navajoa*, a new genus in *Cactaceae*, *Cactus and Succulent Journal* (US) 15(6): 88-89. (Jun) 1943 nom. illeg. (Art. 52.1).

Etym. Named for the county *Navajo* in which the type species occurs.

Typ. Navajoa peeblesiana Croizat.

Obs. Considered to be a later homonym of *Navajoia* Wieland (1928), a fossil name for a genus of *Cycadophyta*.

Syn. Neonavajoa Doweld (1999).

Ref. Pediocactus Britton & Rose.

Navajoa (Croizat) L.D.Benson (pro sect. *Pediocactus* Britton & Rose), A revision and amplification of *Pediocactus* III, *Cactus and Succulent Journal* (US) 34(2): 57. (Mar-Apr) 1962 nom. incorr. (Art. 11.4).

Bas. Navajoa Croizat nom. illeg. (1943, pro gen.).

Ref. Pediocactus Britton & Rose.

Neglectae Dicht & Lüthy (pro subser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 20. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. Coryphantha neglecta Bremer.

Ref. Coryphantha (Engelm.) Lem.

Neoabbottia Britton & Rose, *Neoabbottia*, a new cactus genus from Hispaniola, Smithsonian Institution publication 2651, *Smithsonian Miscellaneous Collections* 72(9): 1-6, t.1-4. (15 Jun) 1921.

Etym. From the Greek *neos*, new, and commemorates Dr. W. L. ABBOTT.

Typ. Cactus paniculatus Lam.

Ref. Leptocereus (A.Berger) Britton & Rose.

Neoabbottia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 125. (Jul-Aug) 1929.

Bas. Neoabbottia Britton & Rose (1921, pro gen.).

Ref. Leptocereus (A.Berger) Britton & Rose.

Neoastrophytum Backeb. (pro subgen. *Astrophytum* Lem.), Nova genera et subgenera, *Cactus and Succulent Journal* (US) 22(5): 154. (Sep-Oct) 1950.

Etym. From the Greek adjective *neos*, new, and the substantive *Astrophytum*.

Typ. Echinocactus asterias Zucc.

Ref. Astrophytum Lem.

Neobesseya Britton & Rose, *The Cactaceae* 4: 3, 51. (9 Oct) 1923.

Etym. Named for Prof. Charles Edwin BESSEY (1845-1915), University of Nebraska.

Typ. Mammillaria missouriensis Sweet.

Ref. Coryphantha (Engelm.) Lem.

Neobesseya (Britton & Rose) A.Berger (pro subgen. *Coryphantha* (Engelm.) Lem.), *Kakteen*: viii, 278. (Jul-Aug) 1929.

Bas. Neobesseya Britton & Rose (1923, pro gen.)

Ref. Coryphantha (Engelm.) Lem.

Neobesseya (Britton & Rose) Václav.John & Říha (pro subgen. *Escobaria* Britton & Rose), Rozčlenění rodu *Escobaria* Britt. et Rose – dokončení, *Kaktusy* 17(3): 63. 1981.

Bas. Neobesseya Britton & Rose (1923, pro gen.)

Ref. Coryphantha (Engelm.) Lem.

Neobesseya (Britton & Rose) N.P.Taylor (pro sect. *Escobaria* Britton & Rose), Die Arten der Gattung *Escobaria*, *Kakteen und andere Sukkulente* 34(7): 155. (Jul) 1983.

Bas. Neobesseya Britton & Rose (1923, pro gen.)

Ref. Coryphantha (Engelm.) Lem.

×***Neobinghamia*** Backeb. (pro gen.), Nova genera et subgenera, *Cactus and Succulent Journal* (US) 22(5): 154. (Sep-Oct) 1950 nom. inval. (Art. H.6.1).

Etym. From the Greek adjective *neos*, new, and the substantive *Binghamia*.

Par. ×*Binghamia climaxantha* Werderm. = ×*Haagespostoa climaxantha* (Werderm.)

G.D.Rowley.

Ref. ×*Haagespostoa* G.D.Rowley.

Neobuxbaumia Backeb., Systematische Uebersicht, *Blätter für Kakteenforschung* 5(6): [8], [12-13], [17-18], [20]. 1938.

Etym. Named for Prof. Franz BUXBAUM (1900-1979), Fürstenfeld, Austria, with the Greek adjective *neos*, new.

Typ. *Cereus tetetzo* F.A.C.Weber ex J.M.Coult.

Ref. *Cephalocereus* Pfeiff.

Neocardenasia Backeb., *Neocardenasia* Bckbg. n. g. (1949), *Blätter für Sukkulantenkunde* 1(1): 2. (1 Jan) 1949.

Etym. Named for the Bolivian botanist Martin CÁRDENAS (1899-1973), with the Greek prefix *neos*, new.

Typ. *Neocardenasia herzogiana* Backeb.

Ref. *Neoraimondia* Britton & Rose.

Neocereus Backeb. (pro subgen. *Cereus* (L.) Mill.), *Nova genera et subgenera, Cactus and Succulent Journal* (US) 22(5): 154. (Sep-Oct) 1950.

Etym. From the Greek adjective *neos*, new, and the substantive *Cereus*.

Typ. *Cereus huntingtonianus* Weing.

Ref. *Cereus* (L.) Mill.

Neochilenia Backeb. ex Dölz, *Repertorium specierum novarum regni vegetabilis* 51: 60. (30 Apr) 1942 nom. illeg. (Art. 52.1).

Etym. From the Greek *neos*, new, and the substantive *Chilenia*.

Rep. Syn. *Chilenia* Backeb. nom. illeg. (1939)

Typ. *Echinocactus jussieui* H.B.Monv.

Obs. Intended to be a replacement for the illegitimate *Chilenia* Backeb. (1939), but beaten to it by *Nichelia* Bullock (1938).

Ref. *Eriosyce* Phil.

Neocoryphantha Backeb. (pro subgen. *Coryphantha* (Engelm.) Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 61, 78. (Jun) 1942.

Etym. From the Greek *neos*, new, and the substantive *Coryphantha*.

Typ. *Mammillaria clavata* Scheidw.

Ref. *Coryphantha* (Engelm.) Lem.

Neocoryphantha (Backeb.) Dicht & Lüthy (pro sect. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 10. (Apr) 2001.

Bas. *Neocoryphantha* Backeb. (1942, pro subgen. *Coryphantha* (Engelm.) Lem.)

Ref. *Coryphantha* (Engelm.) Lem.

Neodawsonia Backeb., *Neodawsonia* Bckbg. n. g. (1949), *Blätter für Sukkulantenkunde* 1(1): 4-5. (1 Jan) 1949.

Etym. Named for the American botanist E. Yale DAWSON (1918-1966), with the Greek prefix *neos*, new.

Typ. Cephalocereus apicicephalum Dawson.

Ref. Cephalocereus Pfeiff.

Neodawsonia (Backeb.) Bravo (pro subgen. *Cephalocereus* Pfeiff.), *Nuevas combinaciones II, Cactaceas y Suculentas Mexicanas* **19**(2): 47. (Apr-Jun) 1974.

Bas. Neodawsonia Backeb. (1949, pro gen.).

Ref. Cephalocereus Pfeiff.

Neodiscocactus Y.Itô, *The Cactaceae, classification & illustration of cacti*: 531. 1981 nom. inval. (Art. 39.1, 40.1).

Etym. From the Greek *neos*, new, and the substantive *Discocactus*.

Typ. Not cited.

Ref. Discocactus Pfeiff.

Neoevansia W.T.Marshall, in Marshall & Bock, *Cactaceae, with illustrated keys of all tribes, sub-tribes and genera*: 84. 1941.

Etym. Named for J. Whitman EVANS, Phoenix, with the Greek *neos*, new.

Typ. Cereus diguetii F.A.C.Weber.

Ref. Acanthocereus (A.Berger) Britton & Rose.

Neogomesia Castañeda, *A new cactus, Cactus and Succulent Journal (US)* **13**(6): 98-99. (Jun) 1941.

Etym. Named for Marte GOMEZ, Governor of the state of Tamaulipas, Mexico.

Typ. Neogomesia agavioides Castañeda.

Ref. Ariocarpus Scheidw.

Neogymnantha Y.Itô, *The Cactaceae, classification & illustration of cacti*: 253. 1981 nom. illeg. (Art. 52.1).

Etym. From the Greek *neos*, new, and the substantive *Gymnantha*.

Rep. Syn. Gymnantha Y.Itô (1957). Thought to have been illegitimate in 1981.

Typ. Lobivia cumingii Britton & Rose [non *Echinocactus cumingii* Hopffer] = *Weingartia neocumingii* Backeb.

Obs. A replacement name for *Gymnantha* Y.Itô (1957) that became superfluous after a rule change on homonyms in 2000.

Syn. Gymnantha Y.Itô (1957), *Gymnobrebutia* Doweld (2003)

Ref. Rebutia K.Schum.

Neohelianthocereus Backeb. (pro subgen. *Helianthocereus* Backeb.), *Nova genera et subgenera, Cactus and Succulent Journal (US)* **22**(5): 153. (Sep-Oct) 1950.

Etym. From the Greek *neos*, new, and the substantive *Helianthocereus*.

Typ. Cereus huascha F.A.C.Weber.

Ref. Echinopsis Zucc.

Neohickenia Frič, *Cacti the coming fashion*: [3]. 1928 nom. illeg. (Art. 52.1).

Etym. From the Greek adjective *neos*, new, and the substantive *Hickenia*.

Rep. Syn. Hickenia Britton & Rose nom. illeg. (1922, pro gen.)

Typ. Echinocactus microspermus F.A.C.Weber. Autotype (Art. 7.4). Same as replaced synonym.

Syn. Parodia Speg. (1923); *Microspermia* Frič nom. illeg. (1929).

Obs. A late attempt to rename the illegitimate *Hickenia* Britton & Rose, already done by Spegazzini in 1923.

Ref. Parodia Speg.

Neolemaireocereus Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 46, 76. (Jun) 1942.

Etym. From the Greek *neos*, new, and the substantive *Lemaireocereus*.

Typ. Cereus stellatus Pfeiff.

Syn. Stenocereus (A.Berger) Riccob. (1909).

Ref. Stenocereus (A.Berger) Riccob.

Neolloydia Britton & Rose, Two new genera of the *Cactaceae*, *Bulletin of the Torrey Botanical Club* **49**(8): 251. (31 Aug) 1922.

Etym. Named for the American botanist Prof. Francis E. LLOYD (1868-1947), with the Greek adjective *neos*, new.

Typ. Mammillaria conoidea DC.

Obs. Benson (*Cacti of Arizona*, ed.3: 189-193. 1969) expanded the circumscription to include *Echinomastus* Britton & Rose, while Anderson (*Bradleya* **4**: 1-28) chose to include *Turbinicarpus* Buxb. & Backeb., *Gymnocactus* Backeb., *Rapicactus* Buxb. & Oehme, and *Normanbokea* Kladiwa & Buxb. instead.

Ref. Coryphantha (Engelm.) Lem.

Neolloydia (Britton & Rose) A.Berger (pro subgen. *Coryphantha* (Engelm.) Lem.), *Kakteen*: viii, 266. (Jul-Aug)1929.

Bas. Neolloydia Britton & Rose (1922, pro gen.)

Ref. Coryphantha (Engelm.) Lem.

Neolloydia (Britton & Rose) Halda (pro subgen. *Pediocactus* Britton & Rose), A new system of the genus *Pediocactus* Britton & Rose, *Acta Musei Richnoviensis, Sect. Natur.* **5**(1): 23. 2000.

Bas. Neolloydia Britton & Rose (1922, pro gen.).

Ref. Coryphantha (Engelm.) Lem.

Neolloydia (Britton & Rose) Halda (pro sect. *Pediocactus* Britton & Rose), A new system of the genus *Pediocactus* Britton & Rose, *Acta Musei Richnoviensis, Sect. Natur.* **5**(1): 23. 2000.

Bas. Neolloydia Britton & Rose (1922, pro gen.).

Ref. Coryphantha (Engelm.) Lem.

Neolobivia Backeb. (pro subgen. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 33, 76. (Jun) 1942 nom. illeg. (Art. 52.1).

Etym. From the Greek *neos*, new, and the substantive *Lobivia*.

Typ. *Lobivia leucorhodon* Backeb. = *Echinocactus pentlandii* Hook.f.

Syn. *Lobivia* Britton & Rose subgen. *Lobivia*.

Ref. *Echinopsis* Zucc.

Neolobivia Y.Itô [non Backeb.], *Explanatory diagram of the Austroechinocactinae*: 54, 284. 1957.

Etym. New *Lobivia*, from the Greek *neos*, new, and the substantive *Lobivia*.

Typ. *Lobivia wrightiana* Backeb.

Ref. *Echinopsis* Zucc.

Neolobivia (Y.Itô) J.Ullmann (pro subgen. *Lobivia* Britton & Rose), Pokus o smír aneb formální rozdělení rodu *Lobivia*, *Kaktusy* **28**(1): 9. 1992. nom. illeg. (Art. 53.1).

Bas. *Neolobivia* Y.Itô (1957, pro gen.).

Obs. A later homonym of *Neolobivia* Backeb. (1942).

Ref. *Echinopsis* Zucc.

Neomammillaria Britton & Rose, *The Cactaceae* **4**: 3, 65. (9 Oct) 1923 nom. illeg. (Art. 52.1).

Etym. From the Greek *neos*, new, and the substantive *Mammillaria*.

Rep. Syn. *Mammillaria* Haw. (1812).

Typ. *Mammillaria simplex* Haw. nom. illeg. = *Cactus mammillaris* L.

Obs. Unnecessary replacement name for *Mammillaria* Haw. nom. cons. The authors did not recognise the conservations built into the Vienna International rules (1905), and without that conservation, *Mammillaria* Haw. would have been illegitimate.

Syn. *Mammillaria* Haw.

Neonajava Doweld, Nomenclatural changes of some subjective homonyms in *Cactaceae*, *Sukkulenty* **2**(2)[titled "No.2(3)]: 43. (25 Dec) 1999.

Rep. Syn. *Navajoa* Croizat nom. illeg. (1943, pro gen.).

Typ. *Navajoa peeblesiana* Croizat.

Obs. *Navajoa* Croizat (1943) is considered to be a later homonym of *Navajoia* Wieland (1928), a fossil name for a genus of *Cycadophyta*.

Ref. *Pediocactus* Britton & Rose.

Neonotocactus Backeb. (pro subgen. *Notocactus* (K.Schum.) Frič), Nova genera et subgenera, *Cactus and Succulent Journal* (US) **22**(5): 153. 1950.

Etym. From the Greek *neos*, new, and the substantive *Notocactus*.

Typ. *Echinocactus mammulosus* Lem.

Ref. *Parodia* Speg.

Neonotocactus (Backeb.) N.Gerloff, Neduchal & S.Stuchlik (pro sect. *Notocactus* (K.Schum.) Frič), in Gerloff, Neduchal & Stuchlik, *Notokakteen*: 29, 32. 1995 nom. inval. (Art. 41.5).

Bas. *Neonotocactus* Backeb. (pro subgen. *Notocactus* (K.Schum.) Frič).

Ref. *Parodia* Speg.

Neonotocactus (Backeb.) Vliet (pro subgen. *Wigginsia* D.M.Porter), Hoeszo consensus?
Herstel van drie geslachten: *Notocactus* Frič 1928, *Brasilicactus* Backbg. 1942 en *Wigginsia* Porter 1964, *Succulenta* **88**(4): 156. 2009 nom. inval. (Art. 41.5).
Bas. Neonotocactus Backeb. (pro subgen. *Notocactus* (K.Schum.) Frič).
Ref. Parodia Speg.

Neoporteria Britton & Rose, *The Cactaceae* 3: 77, 94. (12 Oct) 1922.

Etym. Named for Carlos Emilio PORTER, Chilean entomologist at the Museo de Santiago, with the Greek adjective *neos*, new, to distinguish it from *Porteria* W.J.Hook. (1851, *Valerianaceae*).

Typ. Echinocactus subgibbosus Haw.

Ref. Eriosyce Phil.

Neoporteria (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 199. (Jul-Aug) 1929.

Typ. Neoporteria Britton & Rose (1922, pro gen.)

Ref. Eriosyce Phil.

Neoporteria Backeb. [non Britton & Rose], Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* **5**(6): Zur Systematischen Uebersicht 1938(6): [7], [17]. 1938 nom. illeg. (Art. 53.1).

Etym. Adopted from Britton & Rose's substantive with a new type.

Typ. Echinocactus jussieui H.B.Monv. = *Horridocactus paucicostatus* F.Ritter sensu Backeb.

Syn. Nichelia Bullock (1938).

Obs. It was not stated in the protologue if the type of *Neoporteria* Britton & Rose was still included in this taxon. However, in *Kakteenkunde* 1939: 81 its inclusion was indeed confirmed. Meanwhile, in 1938, Bullock had published the new name *Nichelia* to replace the illegitimate *Neoporteria* Backeb. non Britton & Rose.

Ref. Eriosyce Phil.

Neoporteria (Britton & Rose) Katt. (pro sect. *Eriosyce* Phil.), *Eriosyce, Succulent Plant Research* **1**: 25, 47, 117. 1994.

Bas. Neoporteria Britton & Rose (1922, pro gen.).

Ref. Eriosyce Phil.

Neoporteria (Britton & Rose) Katt. (pro subsect. *Eriosyce* Phil.), *Eriosyce, Succulent Plant Research* **1**: 25, 102, 117. 1994.

Bas. Neoporteria Britton & Rose (1922, pro gen.).

Ref. Eriosyce Phil.

Neoporteria (Britton & Rose) H.E.Walter (pro subgen. *Eriosyce* Phil.), Floral biology, phytogeography and systematics of *Eriosyce* subgenus *Neoporteria* (*Cactaceae*), *Bradleya* **26**: 91. 2008.

Bas. Neoporteria Britton & Rose (1922, pro gen.).

Ref. Eriosyce Phil.

Neoraimondia Britton & Rose, *The Cactaceae* 2: 3, 181. (9 Sep) 1920.

Etym. Named for Antonio RAIMONDI (1825-1890), Peruvian geographer and naturalist and the Greek adjective *neos*, new.

Typ. *Pilocereus macrostibas* K.Schum. Autotype (Art. 10.2). The only included species.

Neoraimondia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. 1929.

Bas. *Neoraimondia* Britton & Rose (1920, pro gen.).

Ref. *Neoraimondia* Britton & Rose.

Neorebutia Bewer. (pro subgen. *Rebutia* K.Schum.), Nachtrag zu *Rebutia Wessneriana* Bew. und *Rebutia calliantha* Bew., *Sukkulentenkunde* 3: 54. (Oct) 1949.

Etym. From the Greek *neos*, new, and the substantive *Rebutia*.

Typ. *Rebutia wessneriana* Bew.

Ref. *Rebutia* K.Schum.

Neotanahashia Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 113, 290. 1957 (“Netanahashia”).

Etym. From the Greek *neos*, new, and the substantive *Tanahashia*.

Typ. *Echinocactus reichei* K.Schum.

Ref. *Echinopsis* Zucc.

Neotrichocereus Backeb. (pro subgen. *Trichocereus* (A.Berger) Riccob.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 30, 75. (Jun) 1942.

Etym. From the Greek *neos*, new, and the substantive *Trichocereus*.

Typ. *Trichocereus bertramianus* Backeb.

Ref. *Echinopsis* Zucc.

Neowerdermannia Frič, *Neowerdermannia*, Frič gen. n. *vorwerkii* Frič sp. n., *Kaktusář* 1(11): 85-87. 1930.

Etym. Named for the German botanist Erich WERDERMANN (1892-1959), with the Greek *neos*, new.

Typ. *Neowerdermannia vorwerkii* Frič.

Nichelia Bullock, *Neoporteria* and *Chilenia*, *Bulletin of Miscellaneous Information* 7: 297. (Oct) 1938.

Etym. An anagram of the substantive *Chilenia*.

Rep. Syn. *Neoporteria* Backeb. [non Britton & Rose] (1938).

Typ. *Echinocactus jussieui* H.B.Monv. = *Horridocactus paucicostatus* F.Ritter sensu Backeb. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Eriosyce* Phil.

Nigellocereus P.V.Heath (pro subgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* 5(3): 100. 1996.

Etym. Named for the British botanist Nigel P. TAYLOR. Nigel has been latinised to *Nigellus*.

Rep. Syn. Cereus ser. *Chlorotini* K.Schum. (1897, pro infragen. *Cereus* (L.) Mill.).

Typ. Cereus queretaroensis Mathsson.

Ref. Stenocereus (A.Berger) Riccob.

Nigellocereus (P.V.Heath) P.V.Heath, Commentary on the proposal to conserve *Parodia* Spegazzini, *Calyx* 6(1): 1. 1999.

Bas. Nigellocereus P.V.Heath (1996, pro subgen. *Stenocereus* (A.Berger) Riccob.).

Ref. Stenocereus (A.Berger) Riccob.

Nigrescentes Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. The active present participle of the Latin *nigrescere*, to become black.

Typ. Opuntia nigrispina K.Schum.

Ref. Opuntia (L.) Mill.

Nigricantes K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 246. (20 Oct) 1897.

Etym. The active present participle of the Latin *nigricare*, to be black. A reference to the dark green epidermis.

Typ. Not cited.

Lectotyp. Cereus berlandieri K.Schum. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 43. (Jun) 1942.

Ref. Echinocereus Engelm.

Nigricantes (K.Schum.) Backeb. (pro subser. *Echinocereus* Engelm.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 43. (Jun) 1942.

Bas. Nigricantes K.Schum. (1897, pro infragen. *Echinocereus* Engelm.).

Ref. Echinocereus Engelm.

Nigrispini Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* 36(4): 79-80. (Apr) 1985.

Etym. From the Latin *niger*, black, and *spina*, spine.

Typ. Echinocereus palmeri Britton & Rose.

Ref. Echinocereus Engelm.

Nigroantheralium Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 (“Nigroantheralia”) nom. nud.

Etym. From the Latin *niger*, black, *anthera*, anther, and the Latin adjectival possessive suffix *-alium*.

Typ. Not cited.

Ref. Gymnocalycium Mittler.

Nivosae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 632. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Mammillaria nivosae* Link ex Pfeiff. Autotype (Art. 22.6).

Obs. Circumscription based on *Neomammillaria* Britton & Rose (1923) species 1-33.

Ref. *Mammillaria* Haw.

Nocturna Haw. (pro infragen. *Epiphyllum* Haw.), A description of the subgenus *Epiphyllum*, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. **6**(32): 109. (Aug) 1829 nom. inval. (Art. 22.2).

Etym. A Latin adjective, *nocturnus*, something of the night. A reference to the night-flowering habit.

Typ. Not cited, but includes the type of *Epiphyllum* Haw.

Ref. *Epiphyllum* Haw.

Nopalea Salm-Dyck, *Cactaeae in horto Dyckensi cultae anno 1849*: 63, 233. 1850.

Etym. From the Nahuatl *nopalli*, an Aztec name for all opuntias.

Typ. Not cited.

Lectotyp. *Cactus cochenillifer* L. Designated by Pfeiffer, *Nomenclator botanicus* **2.1**(11): 453. (Jun) 1873.

Ref. *Opuntia* (L.) Mill.

Nopalea (Salm-Dyck) Labour. (pro subgen. *Opuntia* (L.) Mill.), *Monographie de la famille des cactées*: xlvii, 448. 1853.

Bas. *Nopalea* Salm-Dyck (1850, pro gen.).

Ref. *Opuntia* (L.) Mill.

Nopalea (Salm-Dyck) Griseb. (pro sect. *Opuntia* (L.) Mill.), *Flora of the British West Indian Islands* (3): 302. (late) 1860.

Bas. *Nopalea* Salm-Dyck (1850, pro gen.).

Ref. *Opuntia* (L.) Mill.

Nopalea (Salm-Dyck) Kuntze (pro sect. *Cactus* L., nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 87. (Nov) 1903.

Bas. *Nopalea* Salm-Dyck (1850, pro gen.).

Ref. *Opuntia* (L.) Mill.

Nopalea (Salm-Dyck) G.D.Rowley (pro ser. *Opuntia* (L.) Mill.), in Rowley (ed.), *Repertorium plantarum succulentarum XXII-1971*: 10. (May) 1973 (“Nopaleae”).

Bas. *Nopalea* Salm-Dyck (1850, pro gen.).

Ref. *Opuntia* (L.) Mill.

Nopalxochia Britton & Rose, *The Cactaceae* **4**: 177, 204. (24 Dec) 1923.

Etym. From the Nahuatl *nopalxoxhitl*, nopal with flowers.

Typ. *Cactus phyllanthoides* DC.

Obs. Includes the type of *Ackermannia* (1897, pro sect.).

Ref. *Epiphyllum* Haw.

Nopalxochia (Britton & Rose) Barthlott (pro subgen. *Disocactus* Lindl.), *Disocactus*, in Hunt & Taylor (ed.), Notes on miscellaneous genera of *Cactaceae*, *Bradleya* **9**: 88. 1991.
Bas. *Nopalxochia* Britton & Rose (1923, pro gen.).
Obs. Excludes the type of *Ackermannia* K.Schum. (1897, pro sect.).
Ref. *Epiphyllum* Haw.

Nopalxochia (Britton & Rose) Doweld (pro sect. *Heliocereus* (A.Berger) Britton & Rose), Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* **4**(1-2): 39, 42. (Jan) 2003 nom. illeg. (Art. 52.1).
Bas. *Nopalxochia* Britton & Rose (1923, pro gen.).
Obs. Includes the type of *Ackermannia* K.Schum. (1897), whose name should have been adopted at this rank.
Ref. *Epiphyllum* Haw.

Normanbokea Kladiwa & Buxb., Gattung *Normanbokea* Kladiwa et F. Buxbaum genus novum, in Krainz (ed.), *Die Kakteen* (40-41) CVIIIb: [1-4]. (1 Mar) 1969.
Etym. Named for the American botanist Norman Hill BOKE (1913-1996).
Typ. *Pelecyphora valdeziana* H.Möller.
Ref. *Turbinicarpus* Buxb. & Backeb.

Normanbokea (Kladiwa & Buxb.) Doweld (pro sect. *Turbinicarpus* Buxb. & Backeb.), Nomenclatural adjustments in *Cactaceae*, *Sukkulenty* **2**(1): 27. (25 Jul) 1999.
Bas. *Normanbokea* Kladiwa & Buxb. (1969, pro gen.).
Obs. *Pectinati* Halda (1998, pro subsect. *Pediocactus* Britton & Rose) would have priority in the rank of subsection.
Ref. *Turbinicarpus* Buxb. & Backeb.

Notati K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (1): 47 (Feb). 1897.
Etym. The passive perfect participle of the Latin *notare*, to mark. A reference to the v-shaped or horizontal lines just above each areole.
Typ. Not cited.
Ref. *Echinopsis* Zucc., *Eulychnia* Phil., *Cleistocactus* Lem.

Nothorhipsalis Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* **4**(1-2): 29. (Jan) 2003.
Etym. From the Greek *nothos*, false, and the substantive *Rhipsalis*.
Rep. Syn. *Houlletianae* Britton & Rose (1923, pro ser. *Rhipsalis* Gaertn.).
Typ. *Rhipsalis houlletiana* Lem.
Ref. *Rhipsalis* Gaertn.

Notobrasilia Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 79-80. 1988 (publ. 1989) nom. inval. (Art. 39.1).
Etym. From the Greek *notos*, southern, and *Brasilia*, a latinisation of Brazil.
Typ. *Parodia alacriportana* Backeb. & Voll.
Ref. *Parodia* Speg.

Notobrasilia Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), in Gerloff, Neduchal & Stuchlik, *Notokakteen*: 130-131. 1995.

Etym. From the Greek *notos*, southern, and *Brasilia*, a latinisation of Brazil.

Typ. *Parodia rechensis* Buining.

Ref. *Parodia* Speg.

Notobrasilia (Havlíček) Vliet (pro subgen. *Wigginsia* D.M.Porter), Hoezo consensus?

Herstel van drie geslachten: *Notocactus* Frič 1928, *Brasilicactus* Backbg. 1942 en *Wigginsia* Porter 1964, *Succulenta* **88**(4): 156. 2009 nom. inval. (Art. 41.5).

Bas. *Notobrasilia* Havlíček (1995, pro sect. *Notocactus* (K.Schum.) Frič).

Ref. *Parodia* Speg.

Notocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292 (1 Jan); (6): 379-380 (25 Feb). 1898.

Etym. From the Greek *notos*, southern, and the substantive *Cactus*.

Rep. Syn. *Microgoni* Salm-Dyck nom. illeg. (1841, pro infragen. *Echinocactus* Link & Otto).

Typ. Not cited.

Lectotyp. *Cactus ottonis* Lehm. Designated by Backeberg, *Blätter für Kakteenforschung* **5**(6): [8, 21]. 1938.

Obs. The relectotypification by Engl, *Internoto* **7**(2): 40. 1986, is superfluous. Includes the types of *Rebutia* K.Schum. (1895) & *Parodia* Speg. (1929).

Ref. *Parodia* Speg.

Notocactus (K.Schum.) Frič, *Cacti the coming fashion* (pricelist): [3]. 1928.

Bas. *Notocactus* K.Schum. (1898, pro subgen. *Echinocactus* Link & Otto).

Obs. Amendments to the circumscription appeared in Backeberg, *Blätter für Kakteenforschung* **5**(6): [8, 21]. 1938, and by Buxbaum, in Krainz, *Die Kakteen* (35): 2. 1967.

Ref. *Parodia* Speg.

×**Notolobivia** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 122. 1992.

Etym. Condensed formula.

Par. *Lobivia* Britton & Rose × *Notocactus* (K.Schum.) Frič.

Ref. ×*Echinonotocactus* P.V.Heath.

Nudati Backeb. (pro ser. *Pilocereus* K.Schum. nom. illeg.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 51. (Jun) 1942 nom. inval. (Art.39.1).

Etym. From the Latin *nudus*, bare, and the possessive adjectival suffix *-atus*.

Typ. *Pilocereus bradei* Backeb. & Voll.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Nudiflori Vaupel (pro infragen. ["Gruppe"] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Cereus nudiflorus* Engelm. ex Sauvalle. Autotype (Art. 10.2, 22.6).

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Nudiflori Kladiwa & Fittkau (pro sect. *Thelocactus* (K.Schum.) Britton & Rose), Gattung *Thelocactus*, in Krainz, *Die Kakteen* (61) CVIIIb: [3]. (1 Apr) 1975 (“Nudiflorae”) nom. inval. (Art. 39.1).

Etym. From the Latin *nudus*, naked, and *flos*, flower.

Typ. *Echinocactus saueri* Boed.

Syn. *Pediocactus* Britton & Rose sect. *Gymnocactus* (Backeb.) Halda (1998).

Ref. *Turbinicarpus* Buxb. & Backeb.

Nudispermae F.H.Brandt (pro ser. *Weingartia* Werderm.), Die Gliederung der Gattung *Weingartia* Werdermann, *Kakteen- und Orchideen-Rundschau* 8(1): 6. 1983 (“Nudospermae”).

Etym. From the Latin *nudus*, naked, and *sperma*, seed.

Typ. *Weingartia pulquinensis* Cárdenas = *Weingartia neocumingii* Backeb.

Ref. *Rebutia* K.Schum.

×**Nyctocephalocereus** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 62. (5 Feb) 1990.

Etym. Condensed formula.

Typ. *Cephalocereus* Pfeiff. × *Nyctocereus* (A.Berger) Britton & Rose.

Nyctocereus A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 75-76. (31 May) 1905.

Etym. From the Greek *nyx*, night, and the substantive *Cereus*.

Typ. Not cited.

Lectotyp. *Cactus serpentinus* DC. Designated by Britton & Rose, *Contributions from the U.S. National Herbarium* 12(10): 423. (21 Jul) 1909.

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Nyctocereus (A.Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* 12(10): 423. (21 Jul) 1909.

Bas. *Nyctocereus* A.Berger (1905, pro subsect. *Cereus* (L.) Mill.).

Nyctocereus (A.Berger) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 126. (Jul-Aug) 1929.

Bas. *Nyctocereus* A.Berger (pro subsect. *Cereus* (L.) Mill.).

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Oblongicarpus Backeb. (pro infragen. [række] *Pilocereus* K.Schum.), in Backeberg & Knuth, *Kaktus-ABC*: 73, 326. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. From the Latin *oblongus*, oblong, and *carpus*, fruit.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Pilosocereus* Byles & G.D.Rowley.

Oblongicarpus Backeb. ex Croizat (pro sect. *Pilocereus* K.Schum.), Notes on *Pilocereus*, *Monvillea*, and *Malacocarpus* with special reference to Colombian and Venezuelan species, *Caldasia* 2(8): 255. (20 Sep) 1943.

Etym. From the Latin *oblongus*, oblong, and *carpus*, fruit.

Typ. *Cereus russelianus* Otto ex Salm-Dyck.

Ref. *Cereus* (L.) Mill.

Oblongicarpi (Croizat) Croizat (pro subgen. *Pilocereus* K.Schum. nom. illeg.), *Cactaceas nuevas de Venezuela, Novedades Científicas: Contribuciones Occasionales del Museo de Historia Natural La Salle. Serie Botánica* 1: 4. 1950.

Bas. *Oblongicarpi* Croizat (1943, pro sect. *Pilocereus* K.Schum. nom. illeg.)

Ref. *Cereus* (L.) Mill.

Oblongicarpi (Croizat) D.R.Hunt & N.P.Taylor (pro subgen. *Cereus* (L.) Mill.), *Notes on miscellaneous genera of Cactaceae* (2), *Bradleya* 10: 18.1992.

Bas. *Oblongicarpi* Croizat (1943, pro sect. *Pilocereus* Byles & G.D.Rowley)

Ref. *Cereus* (L.) Mill.

Oblongispermae Buxb. (pro ser. *Parodia* Speg.), *Gattung Parodia*, in Krainz, *Die Kakteen* (34) CVIc: [4], [9]. (1 Sep) 1966.

Etym. From the Latin *oblongus*, oblong, and *sperma*, seed.

Typ. *Parodia comarapana* Cárdenas.

Ref. *Parodia* Speg.

Obregonia Frič, Úvodení, Kaktusová příloha ŽIVOT V PŘÍRODE vychází v Praze 29(2): 3. (15 Jan) 1925.

Etym. Named for General Alvaro OBREGÓN (1880-1928), dictator of Mexico 1920-1928.

Typ. *Obregonia denegrii* Frič. Autotype (Art. 10.2). The only included species.

Ref. *Ariocarpus* Scheidw.

Obregonia (Frič) Halda (pro subgen. *Ariocarpus* Scheidw.), *New system of the genus Ariocarpus* Scheidweiler, *Acta Musei Richnoviensis, Sect. Natur.* 5(1): 36. 1998.

Bas. *Obregonia* Frič (1925, pro gen.).

Ref. *Ariocarpus* Scheidw.

Obtextosperma Buxb. (pro subgen. *Parodia* Speg.), *Gattung Parodia*, in Krainz, *Die Kakteen* (34) CVIc: [5], [11]. (1 Sep) 1966.

Etym. From the Latin *obtextus*, overwoven, and *sperma*, seed.

Typ. *Parodia ayopayana* Cárdenas.

Ref. *Parodia* Speg.

Occidentalia Pažout (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycia skupiny Muscosemineae, Fričiana* 4(23): 17. 1964 nom. nud.

Etym. From the Latin adjective *occidentalis*, western.

Typ. Not cited.

Obs. *Ophiocephalia* Y.Itô nom. inval. (1957), and *Schickendantziana* Backeb. nom. nud. (1942) = *Schickendantziana* Buxb. (1968) included in the synonymy.

Ref. *Gymnocalycium* Mittler.

Occulti Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 628. (Dec) 1925.

Etym. Based on the name *Echinocactus occultus* Phil., an included species.

Rep. Syn. *Neoporteria* Britton & Rose. (1922, pro gen.).

Typ. *Echinocactus subgibbosus* Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Art. 7.4 is taken to override Art. 22.6 in the choice of autotype.

Ref. *Eriosyce* Phil.

Oehmea Buxb., Die Gattungen der "Mammillaria-Stufe" II, *Sukkulentenkunde* **4**: 15-17-22. (Dec) 1951.

Etym. Named for Hanns OEHME (1899-1944) of Obervogelgesang, Pirna, Saxony, a German painter & decorator and cactus connoisseur.

Typ. *Neomammillaria nelsonii* Britton & Rose = *Mammillaria beneckeii* C.Ehrenb.

Ref. *Mammillaria* Haw.

Oehmea (Buxb.) D.R.Hunt (pro subgen. *Mammillaria* Haw.), Schumann & Buxbaum recompiled (1), *The Cactus and Succulent Journal of Great Britain* **39**(2): 38. (May) 1977.

Bas. *Oehmea* Buxb. (1951, pro gen.).

Ref. *Mammillaria* Haw.

Oleosi K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 247. (20 Oct) 1897.

Etym. From the Latin *oleosus*, oily. A reference to the olive green epidermis.

Typ. *Echinocereus glycimorphus* C.F.Först. ex Rümpler = *Cereus cinerascens* DC.

Ref. *Echinocereus* Engelm.

Oligacanthae Backeb. (pro ser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 390, 391. (Jan) 1958 nom. inval. (Art. 39.1, 40.1).

Etym. From the Greek, *oligos*, few, and *akantha*, spine.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Oligacanthi K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 51 (Feb). 1897.

Etym. From the Greek, *oligos*, few, and *akantha*, spine.

Typ. Not cited.

Ref. *Cephalocereus* Pfeiff., *Cleistocactus* Lem.

Oligogoni K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 50 (Feb). 1897.

Etym. From the Greek, *oligos*, few, and *gonios*, wing or angle.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Acanthocereus* (A.Berger) Britton & Rose, *Leptocereus* (A.Berger) Britton & Rose, *Stenocereus* (A.Berger) Riccob.

Oligolophi K.Schum. (pro infragen. *Pilocereus* K.Schum. nom. illeg.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 180. (Apr 18) 1894.

Etym. From the Greek, *oligos*, few, and *lophos*, tuft.

Typ. Not cited.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Ophiocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), *Explanatory diagram of the Austroechinocactinae*: 173. 1957 nom. inval. (Art. 39.1).

Etym. From the Greek *ophis*, snake, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Ophiorhipsis K.Schum. (pro sect. *Rhipsis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 199. (Apr 18) 1894.

Etym. From the Greek *ophis*, snake, & the substantive *Rhipsis*.

Typ. *Rhipsis sarmentacea* Otto & A.Dietr. = *Cereus lumbricoides* Lem. Autotype (Art. 10.2). The only included species.

Ref. *Rhipsis* Gaertn.

Ophiorhipsis (K.Schum.) K.Schum. (pro subgen. *Rhipsis* Gaertn.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 615. (1 Oct) 1898.

Bas. *Ophiorhipsis* K.Schum. (1894, pro sect. *Rhipsis* Gaertn.).

Ref. *Rhipsis* Gaertn.

Ophiorhipsis (K.Schum.) Barthlott (pro subgen. *Lepismium* Pfeiff.), *New names in Rhipsalidinae, Bradleya* 5: 99. 1987.

Bas. *Ophiorhipsis* K.Schum. (1894, pro sect. *Rhipsis* Gaertn.).

Ref. *Rhipsis* Gaertn.

Ophiorhipsis (K.Schum.) Doweld, *Re-classification of Rhipsalideae, a polyphyletic tribe of the Cactaceae Durande, Sukkulenty* 4(1-2): 39. (Jan) 2003.

Bas. *Ophiorhipsis* K.Schum. (1894, pro sect. *Rhipsis* Gaertn.).

Ref. *Rhipsis* Gaertn.

Opuntia L. (pro infragen. *Cactus* L. nom. rej.), *Species plantarum* 1: 468. (1 May) 1753.

Etym. Ancient usage. Originally from *Opuntis*, the genitive of *Opuns*, the name of a town in Greece around which the plant was cultivated according to THEOPHRASTUS (c. 372-287 B.C.) and PLINY (23-79 A.D.).

Typ. *Cactus opuntia* L. = *O. ficus-indica* L. Autotype (Art. 22.6).

Obs. Linnaeus included nine species in the circumscription of this taxon. For notes on the lectotypification of *Cactus opuntia*, see Leuenberger, *Taxon* 42(2): 419-429. 1993, & Mottram, *The Cactician* 3: 22, 57-58. 2013.

Ref. *Opuntia* (L.) Mill.

Opuntia (L.) Hill, *Opuntia*, in Scott (ed.), *A supplement to Mr. Chambers's Cyclopaedia: Or, A universal dictionary of the arts* 2(50): unpagged, t. 2 (Class 6). 18 Oct 1753 nom. inval. (Art. 34.1).

Bas. *Opuntia* L. (1753, pro infragen. *Cactus* L. nom. rej.).

Obs. The publication in which this combination was published is listed under App. VI of the *ICN* as an *opera utique oppressa* and therefore invalid. The illustration and only included element appearing here was reproduced from Tournefort, *Inst. Rei Herb.* (1700), and is not identifiable with certainty [but probably *Opuntia humifusa*].

Ref. *Opuntia* (L.) Mill.

Opuntia (L.) Mill., *Opuntia*, *The Gardeners Dictionary*, abr. ed. 4. (unpagged) (28 Jan) 1754.

Bas. *Opuntia* L. (1753, pro infragen. *Cactus* L. nom. rej.).

Opuntia (L.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 87. (Nov) 1903.

Bas. *Opuntia* L. (1753, pro infragen. *Cactus* L. nom. rej.).

Obs. Kuntze included four infrageneric names without rank, namely “*Platopuntia* Engelm., *Cylindropuntia* Engelm. (incl. *Tephrocactus* Lem.), *Brasiliopuntia* K.Schum., *Peireskiopsis* Britton & Rose.”

Ref. *Opuntia* (L.) Mill.

Opuntiacei Salm-Dyck ex DC. (pro infragen. *Cereus* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 470. (Mar) 1828.

Etym. From the substantive *Opuntia*, and the Latin adjectival suffix *-aceus*, -like.

Typ. Not cited.

Lectotyp. *Cactus moniliformis* L. Designated by Salm-Dyck, *Cactae in horto Dyckensi cultae anno 1849*: 213. 1850.

Obs. Circumscription comprised disparate elements of two opuntiods and a borzicactus. Salm-Dyck (1845: 32) reduced it to the single species *Cactus moniliformis* L.

Opuntiacei Salm-Dyck (pro sect. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 50, 213. 1850.

Bas. *Opuntiacei* DC. (1828, pro infragen. *Cereus* (L.) Mill.).

Obs. Salm-Dyck wrote: “Huic Sectioni, cuius typus est *C. moniliformis*”, one of the earliest known examples of the usage of the word ‘type’ in a botanical sense.

Ref. *Opuntia* (L.) Mill.

Orbiculatae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 176. (21 Jun) 1919 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Rep. Syn. *Opuntia* (L.) Mill. ser. *Criniferae* (Pfeiff.) Britton & Rose.

Typ. *Opuntia orbiculata* Salm-Dyck ex Pfeiff. Autotype (Art. 22.6).

Obs. Superfluous renaming of *Criniferae*.

Ref. *Opuntia* (L.) Mill.

Orbiculatae Britton & Rose ex Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 452, 549. (Jan) 1958 nom. inval. (Art. 41.5).

Rep. Syn. Opuntia (L.) Mill. ser. *Orbiculatae* Britton & Rose nom. illeg. (1919, pro ser. *Opuntia* (L.) Mill.).

Typ. Opuntia orbiculata Salm-Dyck ex Pfeiff. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. Opuntia (L.) Mill.

×***Oreobivia*** M.Lowry, A remarkable find at Yavi, *British Cactus & Succulent Journal* **18**(4): 212-216. (Dec) 2000.

Etym. Condensed formula.

Par. Oreocereus (A.Berger) Riccob. × *Lobivia* Britton & Rose.

Ref. ×*Cleistopsis* Strigl.

×***Oreocana*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 123. 1992.

Etym. Condensed formula.

Par. Matucana Britton & Rose × *Oreocereus* (A.Berger) Riccob.

Ref. ×*Cleistocana* G.D.Rowley.

Oreocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 60, 64-65, t.2. (31 May) 1905.

Etym. From the Greek *oros*, mountain, and the substantive *Cereus*.

Typ. Pilocereus celsianus Salm-Dyck.

Obs. Berger's circumscription of *Oreocereus* was based on *Cleistocactus strausii* and he misapplied the name *Pilocereus celsianus* to that species. However, under Art. 7.3, as there was no explicit exclusion of the type of *Pilocereus celsianus*, the taxon *Oreocereus* was validly published.

Ref. Cleistocactus Lem.

Oreocereus (A.Berger) Riccob., *Studi sulle Cattede del R. Orto Botanico di Palermo, Bollettino delle Reale Orto Botanico e Giardino Coloniale di Palermo* **8**: 258. 1909.

Bas. Oreocereus A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Ref. Cleistocactus Lem.

×***Oreokersia*** W.Hans, Kellner & Axel Neumann, *Hybridenbuch*: 65. 2012.

Etym. Condensed formula.

Par. Oreocereus (A.Berger) Riccob. × *Akersia* Buining.

Ref. Cleistocactus Lem.

×***Oreonopsis*** G.D.Rowley, Spontaneous bigeneric hybrids in *Cactaceae*, *Bradleya* **12**: 6. 1994.

Etym. Condensed formula.

Par. Oreocereus (A.Berger) Riccob. × *Echinopsis* Zucc.

Ref. ×*Cleistopsis* Strigl.

×**Oreotrichocereus** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 125. 1992.

Etym. Condensed formula.

Par. *Oreocereus* (A.Berger) Riccob. × *Trichocereus* (A.Berger) Riccob.

Ref. ×*Cleistopsis* Strigl.

Orientalia Pažout (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycia* skupiny *Muscosemineae*, *Fričiana* 4(23): 17. 1964 nom. nud.

Etym. From the Latin adjective *orientalis*, eastern.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Oroya Britton & Rose, *The Cactaceae* 3: 77, 102. (12 Oct) 1922.

Etym. Named for the Peruvian village of *Oroya*.

Typ. *Echinocactus peruvianus* K.Schum.

Ref. *Matucana* Britton & Rose.

Oroya (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 202. (Jul-Aug) 1929.

Typ. *Oroya* Britton & Rose (1922, pro gen.)

Ref. *Matucana* Britton & Rose.

Ortegocactus Alexander, *Ortegocactus*, a unique new genus, *Cactus and Succulent Journal* (US) 33(2): 39-40. (Mar-Apr) 1961.

Etym. Named for the ORTEGA family at San José Lachiguirí, who provided assistance to the author.

Typ. *Ortegocactus macdougallii* Alexander.

Ref. *Coryphantha* (Engelm.) Lem.

Ortegocactus (Alexander) Kladiwa (pro subgen. *Neobesseya* Britton & Rose), *Neobesseya macdougallii* (Alexander) Kladiwa emend et comb. nov., in Krainz, *Die Kakteen* (57) CVIIIe: [6]. (1 Apr) 1974.

Bas. *Ortegocactus* Alexander (1961, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

Ortegocactus (Alexander) Kladiwa (pro subgen. *Escobaria* Britton & Rose), Rozčlenění rodu *Escobaria* Britt. et Rose, *Kaktusy* 17(2): 42-43. (Apr) 1981.

Bas. *Ortegocactus* Alexander (1961, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

+ **Ortegopuntia** Tóth, *Ortegocactus macdougallii* - tények és tévhitek, *Debreceni Pozsgás-Tár* 2012 (1): 50. Mar 2012.

Etym. Condensed formula.

Gr.-chim. *Ortegocactus* Alexander + *Opuntia* (L.) Mill. [+*Ortegopuntia* ‘Percy’]

Ref. + *Coryopuntia* Mottram.

Otoniani Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 626. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cactus otonis* Lehm. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Otonidei Lem. (pro infragen. *Echinocactus* Link & Otto), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 88. (Feb) 1839.

Etym. Based on the name of an included species.

Typ. *Cactus otonis* Lehm. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Otonidei (Lem.) Lawr. (pro subsect. *Echinocactus* Link & Otto), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 **6**: 317. 1841 (“Otonideae”).
Bas. *Otonidei* Lem. (1839, pro infragen. *Echinocactus* Link & Otto).

Ref. *Parodia* Speg.

Otonis Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 73. 1988 (publ. 1989) nom. inval. (Art. 22.2, 39.1).

Etym. Based on the name of an included species.

Typ. *Cactus otonis* Lehm. Autotype (Art. 22.6).

Syn. *Notocactus* (K.Schum.) Frič subser. *Notocactus*.

Ref. *Parodia* Speg.

Otonis Dicht & Lüthy (pro sect. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 13. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Mammillaria otonis* Pfeiff.

Ref. *Coryphantha* (Engelm.) Lem.

Ovati Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *ovatus*, egg-shaped.

Typ. *Opuntia andicola* Pfeiff. = *Opuntia glomerata* Haw.

Ref. *Opuntia* (L.) Mill.

Ovatisemineum Frič ex Kreuz. (pro infragen. *Gymnocalycium* Mittler), *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 13. (31 Apr) 1935 (“Ovatisemineae”) nom.inval. (Art. 22.2, 39.1).

Etym. From the Latin *ovatus*, egg-shaped, and *semen* seed.

Typ. *Cactus gibbosus* Haw.

Syn. *Gymnocalycium* Mittler subgen. *Gymnocalycium*.

Ref. *Gymnocalycium* Mittler.

Ovatisemineum Frič ex Schütz (pro infragen. *Gymnocalycium* Mittler, as “rozdělen” = divisions), K systematicke rodu *Gymnocalycium*, *Fričiana* **1**(1): 4, 6. 1962 (“Ovatisemineae”) nom.inval. (Art. 22.2, 39.1).

Etym. From the Latin *ovatus*, egg-shaped, and *semen*, seed.

Typ. Not cited, but includes the type of *Gymnocalycium* Mittler.

Ref. *Gymnocalycium* Mittler.

Ovatisemineum Frič ex Schütz (pro subgen. *Gymnocalycium* Mittler), Rod *Gymnocalycium*, *Friciana* **7**(46): 8, 12. 1968 (publ. 1969) nom. illeg. (Art. 22.2).

Etym. From the Latin *ovatus*, egg-shaped, and *semen*, seed.

Typ. *Cactus gibbosus* Haw.

Syn. *Gymnocalycium* Mittler subgen. *Gymnocalycium*.

Ref. *Gymnocalycium* Mittler.

Ovispermae F.H.Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* **7**(4): 54. 1982.

Etym. From the Latin *ovum*, egg, and *sperma*, seed.

Typ. *Parodia ocampoii* Cárdenas.

Ref. *Parodia* Speg.

Oxycostatus Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 73. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Notocactus oxycostatus* Buining & Brederoo. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

×**Pachebergia** S.Arias & Terrazas, ×*Pachebergia* (*Cactaceae*), a nothogenus from western Mexico, *Revista Mexicana de Biodiversita* **79**(1): 23-26-28. (Jun) 2008.

Etym. Condensed formula.

Par. *Pachycereus* (A.Berger) Britton & Rose × *Backebergia* Bravo. [×*Pachebergia apicicostata* S.Arias & Terrazas].

Ref. *Cephalocereus* Pfeiff.

×**Pacherocactus** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(3): 78. (Sep) 1982.

Etym. Condensed formula.

Par. *Pachycereus* (A.Berger) Britton & Rose × *Bergerocactus* Britton & Rose.

[×*Pacherocactus orcuttii* (K.Brandegee) G.D.Rowley].

Ref. ×*Nyctocephalocereus* Mottram.

×**Pachgerocereus** Moran, *Pachycereus orcuttii* - a puzzle solved, *Cactus and Succulent Journal* **34**(3): 93. (May-Jun) 1962 nom. inval. (Art. 32.1c, H.6.2).

Etym. Condensed formula.

Par. *Pachycereus* (A.Berger) Britton & Rose × *Bergerocactus* Britton & Rose.

[×*Pachgerocereus orcuttii* (K.Brandegee) Moran].

Syn. ×*Pacherocactus* G.D.Rowley.

Ref. ×*Nyctocephalocereus* Mottram.

Pachyarticulatae Loefgr. (pro sect. *Zygocactus* K.Schum.), Sobre os generos *Schlumbergera* and *Zygocactus*, Novas contribuições para as Cactaceas Brasileiras. *Archivos do Jardim Botânico do Rio de Janeiro* 2(1): 23. 1917.

Etym. From the Latin *pachy*, thick, and *articulatus*, jointed. Refers to the terete joints.

Typ. Not cited.

Ref. *Zygocactus* K.Schum.

Pachycereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 59-60, 63-64. (31 May) 1905.

Etym. From the Greek *pachys*, thick, and the substantive *Cereus*.

Typ. *Cereus pringlei* S.Watson. Designated by Britton & Rose, *The Cactaceae* 2: 68. (9 Sep) 1920.

Obs. The type species is the putative allopolyploid *Carnegiea gigantea* (Engelm.) Britton & Rose Σ *Pachycereus pecten-aboriginum* (Engelm.) Britton & Rose, both *Cephalocereus* Pfeiff. in the sense used in the present paper.

Ref. *Cephalocereus* Pfeiff.

Pachycereus Britton & Rose, *The Cactaceae* 2: 2, 68-69. (9 Sep) 1920.

Bas. *Pachycereus* A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Ref. *Cephalocereus* Pfeiff.

Pachycladi Backeb. (pro subser. *Haageocereus* Backeb.), *Die Cactaceae* 2: 1169, 1173. (Mar) 1959 nom. inval. (Art. 39.1).

Etym. From the Greek *pachys*, thick, and *klados*, branch.

Typ. Not cited.

Ref. *Haageocereus* Backeb.

Pachypodae Backeb. (pro subser. *Austrocyliodropuntia* Backeb.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 12. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species, from the Greek *pachys*, thick, and *-podus*, -footed.

Typ. *Opuntia pachypus* K.Schum.

Ref. *Opuntia* (L.) Mill.

×***Paetzara*** P.V.Heath, Supplementary note on *Aporocactus* × *Disocactus* × *Heliocereus* × *Nopalxochia*, *Calyx* 5(2): 78. 1995.

Etym. Condensed formula named for Klara PAETZ.

Par. *Aporocactus* Lem. × *Disocactus* Lindl. × *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley

Pailanae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 451, 512. (Jan) 1958 nom. inval. (Art. 36.2, 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia pailana* Weing. = *Opuntia pilifera* F.A.C. Weber.

Obs. Also published simultaneously with the synonym *Piliferae* Backeb., so both names would be invalid even if they were not already invalidated by the lack of Latin descriptions.

Ref. *Opuntia* (L.) Mill.

Palmadorae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 201. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. *Opuntia palmadora* Britton & Rose. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Palmadorae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae* *Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 19. (Jun) 1942.

Bas. *Palmadorae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Palmadorae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 612. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Palmadorae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Pampocactus Doweld (pro ser. *Notocactus* (K.Schum.) Frič), *Ritterocactus & Peronocactus*: New generic segregates from polyphyletic *Notocactus*. 1. Formal taxonomy and classification, *Sukkulenty* 2(2): 23. (25 Dec) 1999.

Etym. From the Spanish *pampa*, a grassy plain of South America, and the substantive *Cactus*.

Typ. *Eriocactus warasii* F.Ritter.

Ref. *Parodia* Speg.

Pampocactus (Doweld) Doweld (pro ser. *Eriocactus* Backeb. nom. illeg.), *Turczaninowia* 3(3): 7. 2000 nom. incorr. (Art. 11.4).

Bas. *Pampocactus* Doweld (1999, pro ser. *Notocactus* (K.Schum.) Frič).

Obs. The combination should have been with *Erioccephala* Backeb.

Ref. *Parodia* Speg.

Paniculati Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 636, 637. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cactus paniculatus* Lam. Autotype (Art. 22.6).

Obs. At the rank of genus this taxon becomes *Neoabbottia* Britton & Rose (1921).

Ref. *Leptocereus* (A.Berger) Britton & Rose.

Papyracanthi Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 623. (Dec) 1925.
Etym. Based on the name of an included species.
Rep. Syn. *Toumeya* Britton & Rose (1922, pro gen.).
Typ. *Echinocactus papyracanthus* Engelm. Autotype (Art. 22.6).
Ref. *Pediocactus* Britton & Rose.

Papyracanthi Backeb. [non Vaupel] (pro ser. *Pterocactus* K.Schum.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 20. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. From the Greek *papyros*, paper-reed, and *akantha*, spine.
Typ. *Pterocactus valentini* Speg.
Ref. *Pterocactus* K.Schum.

Paradoxae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), Borschlag zu einer neuen natürlichen Unordnung der Cacteen, *Allgemeine Gartenzeitung* **3**(40): 315. (3 Oct) 1835 nom. nud.
Etym. Probably based on the name of *Cactus paradoxus* Horn., which is a synonym of *Opuntia brasiliensis* (Willd.) Haw.
Typ. *Cactus brasiliensis* Willd. Autotype (Art. 22.6). The only included species.
Ref. *Opuntia* (L.) Mill.

Paradoxae Salm-Dyck ex Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 168. (Feb) 1837.
Etym. Probably based on the name of *Cactus paradoxus* Horn., which is a synonym of *Opuntia brasiliensis* (Willd.) Haw.
Typ. *Cactus brasiliensis* Willd. Autotype (Art. 22.6). The only included species.
Ref. *Opuntia* (L.) Mill.

Paradoxae (Pfeiff.) Salm-Dyck (pro sect. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 184, 358-359. 1834. See also *Cacteeae in horto Dyckensi cultae. Anno 1841*: 46. 1841 nom. illeg. (Art. 52.1).
Bas. *Paradoxae* Pfeiff. (1837, pro infragen. *Opuntia* (L.) Mill.).
Syn. *Tenuilobae* DC. (1828, pro sect. *Opuntia* (L.) Mill.).
Ref. *Opuntia* (L.) Mill.

Paradoxae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 221. (9 Oct) 1923.
Etym. Based on the name of the only included species.
Typ. *Lepismium paradoxum* Salm-Dyck. Autotype (Art. 22.6).
Ref. *Rhipsalis* Gaertn.

Paraguayensia Schütz (pro sect. *Gymnocalycium* Mittler), *Rod Gymnocalycium, Friciana* **7**(46): 8, 12, 15, 21. 1968 (publ. 1969).
Etym. Based on the name of an included species.
Typ. *Gymnocalycium fleischerianum* Backeb. = *Echinocactus paraguayensis* K.Schum.
Ref. *Gymnocalycium* Mittler.

Parasitiei Salm-Dyck (pro infragen. *Cactus* L. nom. rej.), *Plantae succulentae horti Dyckensis*: 11. 1816 nom. nud.

Etym. Based on the name of an included species.

Typ. *Cactus parasiticus* DC. = *Cassytha baccifera* J.S.Muell. Autotype (Art. 22.6).

Ref. *Rhipsalis* Haw.

Parodia Speg., Breves notas cactológicas, *Anales de la Sociedad Científica Argentinas* **96**: 70. 1923.

Etym. Dedicated to the memory of Dr. Domingo PARODI (1823-1890).

Rep. Syn. *Hickenia* Britton & Rose nom. illeg. (1922, pro gen.).

Typ. *Echinocactus microspermus* F.A.C.Weber.

Parodia (Speg.) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 202. (Jul-Aug) 1929.

Typ. *Parodia* Speg. (1923, pro gen.)

Ref. *Parodia* Speg.

Parrycactus Doweld, Conspectus systematis tribus *Cacteeae*, *Novitates systematicae plantarum vascularium* **32**: 117. 2000.

Typ. *Echinocactus glaucescens* DC.

Obs. Name first used without description in *Sukkulentny* **2**(2): 30. 1999.

Ref. *Echinofossulocactus* Lawr.

Parvangulares Haw. (pro infragen. *Cereus* (L.) Mill.), *Synopsis plantarum succulentarum*: 182. 1812.

Etym. From the Latin adjective *parvus*, small or weak, and *angularis*, angled.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Parvangulares (Haw.) Haw. (pro sect. *Cereus* (L.) Mill.), Decas duodecima novarum plantarum succulentarum, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. **7**(38): 109. (Feb) 1830.

Bas. *Parvangulares* Haw. (pro infragen. *Cereus* (L.) Mill.)

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Parviflorae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 700, (12): 705. (1 Nov, 25 Nov) 1898.

Etym. From the Latin adjective *parvus*, small, and *flos*, flower.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Parviflorae (K.Schum.) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 19. (Jun) 1942.

Bas. *Parviflorae* K.Schum. (1898, pro infragen. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Parviflorae Backeb. (pro subsect. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 63. (Jun) 1942 nom. inval. (Art. 39.1).
Etym. From the Latin adjective *parvus*, small, and *flos*, flower.

Typ. Not cited.

Obs. Name also used in Backeberg, *Die Cactaceae* 5: 3099, 3101. 1961, without validation.
Ref. *Mammillaria* Haw.

Parviflori Hochstätter (pro sect. *Sclerocactus* Britton & Rose), *Articolazione del genere Sclerocactus, Piante Grasse* 19(1): 17-18. (Sep) 1999.

Etym. Based on the name of the type species.

Typ. *Sclerocactus parviflorus* Clover & Jotter.

Ref. *Sclerocactus* Britton & Rose.

Parviopuntia Soulaire, in Marnier-Lapostolle & Soulaire, *Monographie du genre Parviopuntia, Cactus* (Paris) 10(46-47): 225-226. 1955; 11(48): 9-12, 24. 1956 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the Latin adjective *parvus*, small, and the substantive *Opuntia*.

Typ. Not cited, but includes the types of *Tephrocactus* Lem. (1868) & *Maihueniopsis* Speg. (1925).

Ref. *Opuntia* (L.) Mill.

Parvispinosae Haw. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis plantarum succulentarum*: 190. 1812 nom. inval. (Art. 22.2).

Etym. From the Latin adjective *parvus*, small or weak, and *spinosus*, spination.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Parvispinosae (Haw.) DC (pro sect. *Opuntia* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 473. 1828 nom. inval. (Art. 22.2).

Bas. *Parvispinosae* Haw. (1812, pro infragen. *Opuntia* (L.) Mill.).

Syn. *Opuntia* (L.) Mill. sect. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Pauciangulares Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto dykensi cultae anno 1844*: 31. 1845.

Etym. From the Latin *paucus*, few, and *angularis*, angular.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Stenocereus* (A. Berger) Ricc.

Paucisetosae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto dykensi cultae anno 1844*: 31. 1845.

Etym. From the Latin *paucus*, few, and *setosa*, hairy.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Paucispini Kreuz. (pro infragen. *Notocactus* (K.Schum.) Frič), *Verzeichnis Amerikanischer und anderer Sukkulenter mit Revision der Systematik der Kakteen*: 22. (31 Apr) 1935 nom. inval. (Art. 22.2, 39.1).

Etym. From the Latin *paucus*, few, and *spina*, spine.

Typ. *Cactus ottonis* Lehm. Autotyp. (Art. 10.2). The only included species.

Syn. *Notocactus* (K.Schum.) Frič infragen. *Notocactus*.

Ref. *Parodia* Speg.

Paucispini (?Kreuz. ex) Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 73. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Latin *paucus*, few, and *spina*, spine.

Typ. Not cited.

Ref. *Parodia* Speg.

Pectinatae Kreuz. (pro infragen. *Hymenorebulobivia* Frič ex Kreuz. nom. inval.), *Verzeichnis amerikanischer und anderer Sukkulenter mit Revision der Systematik der Kakteen*: 29. 1935 nom. inval. (Art. 39.1).

Etym. A Latin adjective, *pectinatus*, pectinate or comb-like.

Typ. *Hymenorebulobivia kreuzingeri* Frič nom. inval. = *Echinopsis densispina* Werderm.

Ref. *Echinopsis* Zucc.

Pectinati Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 42. 1850 nom. illeg. (52.1).

Etym. Based on the name of an included species.

Typ. *Echinocereus pectinatus* Engelm. Autotype (Art. 22.6).

Obs. Includes the type of *Echinocereus* Engelm. (1848).

Ref. *Echinocereus* Engelm.

Pectinati Salm-Dyck ex K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 247. (20 Oct) 1897 nom. inval. (Art. 22.2).

Rep. Syn. *Pectinati* Salm-Dyck (1850, pro infragen. *Cereus* (L.) Mill.).

Syn. *Echinocereus* Engelm. infragen. *Echinocereus*.

Obs. Includes the type of *Echinocereus* Engelm.

Ref. *Echinocereus* Engelm.

Pectinati Halda (pro subsect. *Pediocactus* Britton & Rose), A new system of the genus *Pediocactus* Britton & Rose, *Acta Musei Richnoviensis, Sect. Natur.* **5**(1): 22. 1998 (“*Pectinatae*”).

Etym. From the Latin *pecten* (gen. *pectinis*), comb, rake, or scallop, with the possessive adjectival suffix *-atus*. A reference to the pectinate disposition of the spines.

Typ. *Pelecyphora valdeziana* Heinr.Möller.

Obs. The priority name for *Normanbokea* Kladiwa & Buxb. (1969) at the rank of subsection.

Ref. *Turbinocarpus* Buxb. & Backeb.

Pectiniferae Wessner (pro infragen. [Formenkreis] *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1940 Erster Teil*: 12, 13-14. (May) 1940.

Etym. Based on the name of an included species.

Typ. *Lobivia pectinifera* Wessner = *Echinocactus famatimensis* Speg.

Ref. *Echinopsis* Zucc.

Pectiniferae Kuhn & B.Hofm. (pro ser. *Mammillaria* Haw.), Zur Kenntnis der Gattung *Mammillaria*: *Mammillaria pectinifera* Web. und Verwandte, *Informationsbrief der Zentralen Arbeitsgemeinschaft Mammillarien* 5(4): 59-60-66. 1979.

Etym. Based on the name of the type species.

Typ. *Pelecyphora aselliformis* var. *pectinifera* Rümpler = *Mammillaria pectinifera* (Rümpler) F.A.C.Weber.

Ref. *Mammillaria* Haw.

Pectinispini Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* 36(4): 80. (Apr) 1985 nom. inval. (Art. 22.2).

Etym. From the Latin *pecten* (gen. *pectinis*), comb, rake, or scallop, and *spina*, spine.

Typ. *Echinocereus viridiflorus* Engelm.

Syn. *Echinocereus* Engelm. subser. *Echinocereus*.

Ref. *Echinocereus* Engelm.

Pediocactus Britton & Rose, in Britton & Brown, *An illustrated flora of the northern United States*, ed.2 2: 569-570. 1913.

Etym. From the Greek *pedion*, plain, and the substantive *Cactus*.

Typ. *Echinocactus simpsonii* Engelm.

Obs. Stated to comprise 3 species, but only *Echinocactus simpsonii* Engelm. was described and indicated as being “typical”.

Pediocactus (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: viii, 257. 1929.

Typ. *Pediocactus* Britton & Rose (1913, pro gen.)

Ref. *Echinocactus* Link & Otto.

Peirescia Zucc. (1837), Pfeiff. (1837), Salm-Dyck (1850).

Orthographic variant of *Pereskia* L.

Pereskia Steud. (1841), F.A.C.Weber (1898), K.Schum. (1890, 1898), Vaupel (1925), A.Berger (1929), Backeb. (1934-1966), Janch. (1943-1944).

Obs. Orthographic variant of *Pereskia* L. A conservation proposal to retain this spelling over *Pereskia* was made by Janchen in Fedde, *Repert. Spec. Nov. Regni Veg.* 52: 147, 155. 1943, but was not approved by a unanimous vote (11:0). This was in any case superfluous, because *Pereskia* was an intentional latinised form, which must therefore be retained (Art. 60.7).

Peireskiopsis A.Berger (1929), Backeb. (1934-1966).
Orthographic variant of *Pereskiopsis* Britton & Rose.

Peireskiopuntia K.Schum. (1898).
Orthographic variant of *Pereskopuntia* F.A.C.Weber.

Pelecyphora C.Ehrenb., Eine neue Cacteen-Gattung: *Pelecyphora aselliformis*; *Mammillaria Wegenerii*, eine neue Species, *Botanische Zeitung* 1(43): 737. (27 Oct) 1843.

Etym. From the Greek *peleces*, axe, & *-phoros*, bearing. A reference to the hatchet-shaped tubercles.

Typ. *Pelecyphora aselliformis* C.Ehrenb. Autotype (Art. 10.2). The only included species.
Obs. Possibly an *Ariocarpus* Scheidw. Σ *Coryphantha* (Engelm.) Lem. allopolyploid with chromosome reduction.

Ref. *Coryphantha* (Engelm.) Lem.

Pelecyphora (C.Ehrenb.) Labour. (pro subgen. *Melocactus* (L.) Mill.), *Monographie de la famille des cactées*: xlvii, 148. 1853.

Bas. *Pelecyphora* C.Ehrenb. (1843, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

Pelecyphora (C.Ehrenb.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Pelecyphora* C.Ehrenb. (1843, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

Pelecyphora (C.Ehrenb.) Halda (pro subgen. *Ariocarpus* Scheidw.), New system of the genus *Ariocarpus* Scheidweiler, *Acta Musei Richnoviensis, Sect. Natur.* 5(1): 37. 1998.

Bas. *Pelecyphora* C.Ehrenb. (1843, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

Pelecyphora (C.Ehrenb.) Halda (pro sect. *Ariocarpus* Scheidw.), New system of the genus *Ariocarpus* Scheidweiler, *Acta Musei Richnoviensis, Sect. Natur.* 5(1): 37. 1998.

Bas. *Pelecyphora* C.Ehrenb. (1843, pro gen.).

Ref. *Coryphantha* (Engelm.) Lem.

Penicillati Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 635, 636. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus penicillatus* Gürke. Autotype (Art. 22.6).

Ref. *Arrojadoa* Britton & Rose.

Penicillati Kunzmann (pro ser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* 36(4): 78. (Apr) 1985.

Etym. From the Latin *penicillus*, small brush or pencil.

Typ. *Cereus longisetus* Engelm.

Ref. *Echinocereus* Engelm.

Peniculispini Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* **36**(4): 80. (Apr) 1985.

Etym. From the Latin *penicillus*, small tail, and *spina*, spine.

Typ. *Echinocereus rusanthus* Weniger.

Ref. *Echinocereus* Engelm.

Peniocereus A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 77. (31 May) 1905.

Etym. From the Greek *penion*, spindle or pupa, and the substantive *Cereus*. A reference to the shape of the fusiform tuberous root, thick but tapered at the top and bottom.

Typ. Not cited.

Lectotyp. *Cereus greggii* Engelm. Designated by Britton & Rose, *Contributions from the U.S. National Herbarium* **12**(10): 428. (21 Jul) 1909.

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Peniocereus (A.Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 428. (21 Jul) 1909.

Bas. *Peniocereus* A.Berger (1905, pro subsect. *Cereus* (L.) Mill.)

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Peniocereus (A.Berger) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 126. (Jul-Aug) 1929.

Bas. *Peniocereus* A.Berger (1905, pro subsect. *Cereus* (L.) Mill.)

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Pennisquama Buxb. (pro subgen. *Ferocactus* Britton & Rose), Die systematische Stellung des *Echinocactus flavovirens* Scheidweiler, *Beitrage zur Biologie der Pflanzen* **41**: 143-156. 1965.

Etym. From the Latin *penna*, feather, and *squama*, scale. A reference to the feathered margins of the floral pericarpel and receptacle scales.

Typ. *Echinocactus flavovirens* Scheidw.

Ref. *Echinofossulocactus* Lawr.

Pennispinosae Doweld (pro ser. *Escobariopsis* Doweld), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* 3(1-2): 42. 2000.

Etym. Named for an included species.

Typ. *Mammillaria pennispinosa* Krainz.

Ref. *Mammillaria* Haw.

Pentalophi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae anno 1849*: 41. 1850.

Etym. Based on the name of an included species.

Typ. *Cereus pentalophus* DC. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Pentapterae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 221. (9 Oct) 1923.

Etym. Based on the name of the only included species.

Typ. *Rhipsalis pentaptera* Pfeiff. Autotype (Art. 10.2, 22.6).

Ref. *Rhipsalis* Gaertn.

Pentlandianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 90. (21 Jun) 1919.

Etym. Based on the name of an included species, with adjectival suffix.

Typ. *Opuntia pentlandii* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Pentlandianae Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* 3: 1376, 1378. (Oct) 1959 nom. inval. (Art. 22.2, 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus pentlandii* Hook.f.

Syn. *Lobivia* Britton & Rose ser. *Lobivia*.

Ref. *Echinopsis* Zucc.

Pentlandiani (Britton & Rose) Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 15. (Jun) 1942.

Bas. *Pentlandianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Perescia Lem. (1838).

Orthographic variant of *Pereskia* L.

×***Pereskechinopsis*** Reischütz, Stichwort “Hybridgattungen”, *Kakteen und andere sukkulenten* 41(12): 269. 1990 (“Pereskechopsis”) nom. fict.

Obs. Reischütz created this fictional name to make the serious point that nothogenera should be abandoned in favour of a formula. This hypothetical nothogenus would thus be written as “*Pereskia* × *Echinopsis*” and a cultivar name, obviating the need to create

×*Pereskechinopsis*. He argued that if only 10% of cacti are sufficiently compatible to interact with each other, then it can be calculated that up to 50,000 nothospecies and 700 nothogenera would be needed to cover all the possible name combinations.

Pereskia L. (pro infragen. *Cactus* L. nom. rej.), *Genera plantarum* ed.5: 210. 1754 [1 May 1753].

Etym. Based on the name of an included species. First created as a generic name by Plumier (1703) to commemorate Nicolas Claude Fabry de PEIRESC, latinised to *Pereskius*. Peiresc was a French parliamentarian from Aix-en-Provence. Plumier’s substantive was then adopted by Linnaeus.

Typ. *Cactus pereskia* L. = *Pereskia aculeata* Mill. Autotype (Art. 22.6).

Obs. For notes on typification see Mottram, *The Cactician* 3: 22, 76-77. 2013.

Ref. *Pereskia* (L.) Mill.

Pereskia (L.) Mill., *The gardeners dictionary*, abr. ed. 4: unpag. 1754.

Bas. *Pereskia* L. (1753, pro infragen. *Cactus* L. nom. rej.).

Pereskiopsis Britton & Rose, *Pereskiopsis*, a new genus of *Cactaceae*, *Smithsonian Miscellaneous Collections* **50**: 331-333. (28 Oct) 1907.

Etym. From the substantive *Pereskia*, and the Latin suffix *-opsis*, -like.

Typ. *Opuntia brandegeei* K.Schum. = *Opuntia porteri* K.Brandege ex F.A.C.Weber.

Pereskiopsis (Britton & Rose) G.D.Rowley (pro subgen. *Grusonia* Britton & Rose), *Opuntia* – Fission or fusion? Part II – Resolution, *Tephrocactus Study Group* **12**(3): 42. (29 Sep) 2006.

Bas. *Pereskiopsis* Britton & Rose (1907, pro gen.)

Ref. *Opuntia* (L.) Mill.

Pereskopuntia F.A.C.Weber (pro sect. *Opuntia* (L.) Mill.), *Opuntia*, in Bois, *Dictionnaire d'horticulture* **2**(28-29): 893, 898. (Apr-May) 1898.

Etym. From the substantives *Pereskia* and *Opuntia*.

Typ. Not cited.

Ref. *Pereskiopsis* Britton & Rose.

Pereskopuntia (F.A.C.Weber) K.Schum. (pro subgen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 651. (1 Nov) 1898 (“Peireskiopuntia”).

Bas. *Pereskopuntia* F.A.C.Weber (1898, pro sect. *Opuntia* (L.) Mill.)

Ref. *Pereskiopsis* Britton & Rose.

Periferialia Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* **1**(1): 7. 1962 nom. nud.

Etym. An alternate spelling of the Latin adjective *peripheralis*, peripheral. A reference to the position of the flowers on the shoulders of the stem.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Periferialia Schütz (pro sect. *Gymnocalycium* Mittler), *Rod Gymnocalycium* Pfeiff., *Fričiana* **7**(46): 11, 14. 1968 (publ. 1969).

Etym. An alternate spelling of the Latin adjective *peripheralis*, peripheral. A reference to the position of the flowers on the shoulders of the stem.

Typ. *Gymnocalycium megatae* Y.Itô.

Ref. *Gymnocalycium* Mittler.

Periferialia (Schütz) H.Till (pro ser. *Gymnocalycium* Mittler), *Neuordnung der Gattung Gymnocalycium*, *Gymnocalycium* **14**(2): 400, 401. (May) 2001.

Bas. *Periferialia* (1968, pro sect. *Gymnocalycium* Mittler).

Ref. *Gymnocalycium* Mittler.

Peronocactus Doweld, *Ritterocactus & Peronocactus*: New generic segregates from polyphyletic *Notocactus*. 1. Formal taxonomy and classification, *Sukkulenty* **2**(2): 20. (25 Dec) 1999 nom. illeg. (Art. 52.1)

Typ. *Cactus ottonis* Lehm.

Syn. *Notocactus* (K.Schum.) Frič.

Ref. *Parodia* Speg.

Perpetuae G.A.Lindb. (pro infragen. [“Untersippe”] *Rhipsalis* Gaertn.), *Rhipsalis Regnellii* G. A. Lindberg n. sp., *Gartenflora* **39**(5): 121. (1 Mar) 1890.

Etym. A Latin adjective, *perpetuus*, uninterrupted.

Typ. *Rhipsalis houlettiana* Lem. Autotype (Art. 10.2).

Obs. Only *R. regnellii* & *R. houlettiana* included, both referable to the same species.

Ref. *Rhipsalis* Gaertn.

Peruviani Britton & Rose (pro ser. *Cereus* (L.) Mill.), *The Cactaceae* **1**: 4. (21 Jun) 1919 (“Peruviana”).

Etym. Based on the name of the only included species.

Typ. *Cereus peruvianus* hort. ex Britton & Rose [non *Cactus peruvianus* L.] = *Cereus jamacaru* DC. Autotype (Art. 10.2, 22.6).

Ref. *Cereus* (L.) Mill.

Peruviani Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 625. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Oroya* Britton & Rose (1922, pro gen.).

Typ. *Echinocactus peruvianus* K.Schum. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Matucana* Britton & Rose.

Peruviopuntia Guiggi, *Cactology* **2** Suppl.: 1. 2011.

Etym. Named for the country of origin, *Peru*, and the substantive *Opuntia*.

Typ. *Opuntia pachypus* K.Schum.

Ref. *Opuntia* (L.) Mill.

Peruvocereus Akers, New genus and new species from Peru, *Cactus and Succulent Journal of the Cactus and Succulent Society of America* **19**(5): 65, 67-68-70. (May) 1947 nom. illeg. (Art. 52.1).

Etym. Named for the country of origin, Peru, and the substantive *Cereus*.

Typ. *Peruvocereus setosus* Akers = *Cereus pseudomelanostele* Werderm. & Backeb. [? = *Cactus multangularis* Willd.]. Autotype (Art. 10.2). The only included species.

Syn. *Haageocereus* Backeb. (1934).

Obs. *Peruvocereus salmonoideus* Akers nom. nud. was cited as the type, but that was not described until Jul 1947.

Ref. *Haageocereus* Backeb.

Peyotl Sotomayor, Arredondo & M.Martínez, *Peyotl zacatensis* Hernández. Riabilitazione di un genere e un binomio dimenticati, *Cactus & Co.* **5**(4): 219-221-226-228. (Nov) 2001 nom. illeg. (Art. 52.1).

Etym. From a variant of the Nahuatl vernacular name *Puyotl*.

Typ. *Peyotl zacatensis* Sotomayor, Arredondo & M.Martínez nom. incorr. = *Echinocactus williamsii* Lem.

Syn. *Lophophora* J.M.Coult. (1894).

Obs. Based on the phrase used by Hernández (1517-1597) from a manuscript not published until 1790: “De PEYOTL Zacatensi, seu radice molli, et lanuginosa,” mistranslated by Sotomayor & al. as “Of Peyotl Zacatensis or soft and woolly root.” The Hernández text was of course written well before the starting point of botanical nomenclature and was thus only a descriptive phrase, with correct translation “Concerning the Zacatec Peyotl with a soft root and abundant wool.” The Zacatecs were an indigenous people of northern Mexico, whose name was derived from the Nahuatl *zacatl*, the name given to an abundant type of grass of the region.

Ref. *Lophophora* J.M.Coult.

Pfeiffera Salm-Dyck, *Cactaeae in horto dykensi cultae anno 1844*: 40-41. 1845.

Etym. Named for Louis (Ludwig) Karl George PFEIFFER (1805-1877).

Typ. *Cereus ianthothele* H.B.Monv. Autotype (Art. 10.2). The only included species.

Ref. *Rhipsalis* Gaertn.

Pfeiffera (Salm-Dyck) Labour. (pro subgen. *Rhipsalis* Gaertn.), *Monographie de la famille des cactées*: xlvii, 443. 1853.

Bas. *Pfeiffera* Salm-Dyck (1845, pro gen.).

Ref. *Rhipsalis* Gaertn.

Pfeiffera (Salm-Dyck) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903.

Bas. *Pfeiffera* Salm-Dyck (1845, pro gen.).

Ref. *Rhipsalis* Gaertn.

Pfeiffera (Salm-Dyck) Barthlott (pro subgen. *Lepismium* Pfeiff.), *New names in Rhipsalidinae (Cactaceae)*, *Bradleya* 5: 99. 1987.

Bas. *Pfeiffera* Salm-Dyck (1845, pro gen.).

Ref. *Rhipsalis* Gaertn.

Pflanziana Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 8, 9, 11-12. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus pflanzii* Vaupel. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Phaeacanthae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 139. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia phaeacantha* Engelm. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Phaeacanthae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.
Bas. Phaeacanthae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Ref. Opuntia (L.) Mill.

Phaeacanthae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 451, 493. (Jan) 1958 nom. inval. (Art. 41.5).
Bas. Phaeacanthae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Ref. Opuntia (L.) Mill.

Phellosperma Britton & Rose, *The Cactaceae* 4: 3, 60. (9 Oct) 1923.
Etym. From the Greek *phellos*, cork, and *sperma*, seed. A reference to the large corky strophiole attached to the seed hilum.
Typ. Mammillaria tetrancistra Engelm.
Ref. Mammillaria Haw.

Phellosperma (Britton & Rose) Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632, 633. (Dec) 1925 (“*Phellospermae*”).
Bas. Phellosperma Britton & Rose. (1923, pro gen.).
Ref. Mammillaria Haw.

Phellosperma (Britton & Rose) Fosberg (pro subgen. *Neomammillaria* Britton & Rose nom. illeg.), Remarks on the taxonomy of the *Cactaceae* and some new combinations and names in that family, *Bulletin of the Southern California Academy of Sciences* 30(2): 54, 57. 1931 nom. incorr. (Art. 11.4).
Bas. Phellosperma Britton & Rose (1923, pro gen.).
Ref. Mammillaria Haw.

Phellosperma (Britton & Rose) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* 8(4): 324. (24 Apr) 1953.
Bas. Phellosperma Britton & Rose (1923, pro gen.).
Ref. Mammillaria Haw.

Phellosperma (Britton & Rose) Moran (pro sect. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae*, *Gentes Herbarum* 8(4): 324. (24 Apr) 1953.
Bas. Phellosperma Britton & Rose (1923, pro gen.).
Ref. Mammillaria Haw.

Phellosperma (Britton & Rose) Lüthy (pro ser. *Mammillaria* Haw.), Taxonomische Untersuchung der Gattung *Mammillaria* Haw.: 128. 1995.
Bas. Phellosperma Britton & Rose (1923, pro gen.).
Ref. Mammillaria Haw.

Phellosperma (Britton & Rose) Doweld (pro ser. *Bartschella* Britton & Rose),
Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 38. 2000.
Bas. Phellosperma Britton & Rose (1923, pro gen.)
Ref. Mammillaria Haw.

Philippia Backeb. (pro subgen. *Eriosyce* Phil.), in Backeberg & Knuth, *Kaktus-ABC*: 273.
(12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).
Etym. Named for the Prussian-born Chilean botanist Rudolf Amandus PHILIPPI (1808-1904).
Typ. Echinocactus auratus Pfeiff.
Syn. Eriosyce Phil. subgen. *Eriosyce*.
Ref. Eriosyce Phil.

Philippicereus Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit
Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941*
Zweiter Teil: 29, 75. (Jun) 1942.
Etym. Named for the Prussian-born Chilean botanist Rudolf Amandus PHILIPPI (1808-1904).
Typ. Eulychnia castanea Phil.
Ref. Eulychnia Phil.

Phyllanthi Salm-Dyck (pro infragen. *Cactus* L. nom. rej.), *Plantae succulentae horti*
Dyckensis: 10. 1816 nom. nud.
Etym. Based on the name of an included species.
Typ. Epiphyllum phyllanthus Haw. Autotype (Art. 22.6).
Ref. Epiphyllum Haw.

Phyllanthi Salm-Dyck ex Spreng. (pro infragen. *Cactus* L. nom. rej.), *Caroli Linnaei*
systema vegetabilium, ed. 16 **2**: 498. (Jan-May) 1825 nom. nud.
Etym. Based on the name of an included species.
Typ. Epiphyllum phyllanthus Haw. Autotype (Art. 22.6).
Ref. Epiphyllum Haw.

Phyllanthus Berge, *Die Fackeldisteln, Das Buch der Welt*: 91. 1842 nom. illeg. (Art. 53.1).
Etym. From the Greek *phyllon*, leaf, and *anthos*, flower. A reference to the leaf-like stem
from which the flowers arise.
Typ. Not stated.
Obs. A later homonym of *Phyllanthus* L. (1753, *Euphorbiaceae*).
Ref. Rhipsalis Gaertn.

Phyllarthrorhipsalis Buxb. (pro subgen. *Rhipsalis* Gaertn.), Gattung *Rhipsalis*, in Krainz
(ed.), *Die Kakteen* (44-45) CIVE: [7]. (1 Oct) 1970.
Etym. From the Greek *phyllon*, leaf, *arthron*, joint, and the substantive *Rhipsalis*.
Typ. Rhipsalis pachyptera Pfeiff.
Ref. Rhipsalis Gaertn.

Phyllarthus Neck., *Elementa botanica* **2**: 85. 1790.
Etym. From the Greek *phyllon*, leaf, and *arthron* (abbreviated to *arth*), joint.

Typ. Not cited.

Obs. Vernacular name cited as ‘phyllarthe’. Said to comprise 4 species of Linnaeus’s cacti with compressed, jointed leaves. None are named, but only *Cactus opuntia*, *C. ficus-indica*, *C. tuna*, & *C. cochinillifer* in the Linnaean protologue fit this description. An illustration of the flower of *C. cochinillifer* in t.18 fig. 4 is an example of a flower of with imbricate perianth leaves as called for in the protologue.

Ref. *Opuntia* (L.) Mill.

×***Phyllelocereus*** Guillaumin, *Plantes utiles II, Plantes grasses*: 49. 1937 nom. inval. (Art. H.9.1).

Etym. Condensed formula.

Par. Not cited. Presumably *Phyllocactus* Link × *Heliocereus* (A.Berger) Britton & Rose.

Syn. ×*Heliphyllum* G.D.Rowley (1962).

Ref. *Epiphyllum* Haw.

×***Phyllenicereus*** Guillaumin, *Plantes utiles II, Plantes grasses*: 49. 1937 nom. inval. (Art. H.9.1).

Etym. Condensed formula.

Par. Not cited. Presumably *Phyllocactus* Link × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniphyllum* Backeb.

Phyllocactus Link, *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse* 2: 10. 1831 nom. illeg. (Art. 52.1).

Etym. From the Greek *phyllon*, leaf, and the substantive *Cactus*.

Typ. Not cited, but includes the type of *Epiphyllum* Haw. (1812).

Ref. *Epiphyllum* Haw.

Phyllocactus (Link) Labour. (pro subgen. *Arthrophyllum* Labour.), *Monographie de la famille des cactées*: xlvii, 407. 1853.

Bas. *Phyllocactus* Link (1831, pro gen.).

Ref. *Discocactus* Pfeiff.

Phyllocereus Miq., *Genera cactearum, Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach* 2: 112. 1839.

Etym. From the Greek *phyllon*, leaf, and the substantive *Cereus*.

Typ. Not cited.

Obs. There are no included species and the protologue refers only to *Epiphyllum* Haw. as a synonym.

Ref. *Epiphyllum* Haw.

Phyllocereus A.Berger [non Miq.] (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 78. (31 May) 1905.

Etym. From the Greek *phyllon*, leaf, and the substantive *Cereus*.

Typ. *Cereus wittii* K.Schum. Autotype (Art. 10.2). The only included species.

Obs. Replaced at generic rank by *Strophocactus* Britton & Rose (1913).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

×**Phyllocereus** C.Knebel [non Miq. nec A.Berger], *Phyllocereus cinnabarinus* (Knebel) F/I., *Cactussen en Vetplanten* 4(2): 26-28. (Feb) 1938 nom. inval. (Art. H.9.1) & illeg. (Art. 53.1).
Etym. Condensed formula.
Par. Not cited. Presumably *Phyllocactus* Link nom. illeg. × *Heliocereus* (A.Berger) Britton & Rose.
Syn. ×*Heliocactus* Janse (1938); ×*Heliphyllum* G.D.Rowley (1962).
Obs. Published without statement of parentage, and a later homonym of *Phyllocereus* Miq.
Ref. *Epiphyllum* Haw.

×**Phyllocereus** A.Worsley [non Miq. nec A.Berger], Floral Committee Award of Merit to *Phyllocereus roseo-purpureus*, Extracts from the Proceedings of the Royal Horticultural Society, *The Journal of the Royal Horticultural Society* 56(1): xxxiii. (Jan) 1931 nom. inval. (Art. H.9.1) & illeg. (Art. 53.1).
Etym. Condensed formula.
Typ. *Phyllocactus* Link nom. illeg. × *Heliocereus* (A.Berger) Britton & Rose [*Epiphyllum* ‘Cooperi’ × *Cereus amecaensis* Heese].
Syn. ×*Heliocactus* Janse (1938); ×*Heliphyllum* G.D.Rowley (1962).
Ref. *Epiphyllum* Haw.

Phyllorhipsisalis K.Schum. (pro sect. *Rhipsisalis* Gaertn.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 198. (Apr 18) 1894.
Etym. From the Greek *phyllon*, leaf, & the substantive *Rhipsisalis*. A reference to the leaf-like stems.
Typ. Not cited.
Lectotyp. *Cereus ramulosus* Salm-Dyck. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 21. (Jun) 1942.
Ref. *Rhipsisalis* Gaertn.

Phyllorhipsisalis (K.Schum.) K.Schum. (pro subgen. *Rhipsisalis* Gaertn.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 615. (1 Oct) 1898.
Bas. *Phyllorhipsisalis* K.Schum. (1894, pro sect. *Rhipsisalis* Gaertn.).
Ref. *Rhipsisalis* Gaertn.

Phyllorhipsisalis Buxb. [non K.Schum.] (pro subgen. *Rhipsisalis* Gaertn.), Gattung *Rhipsisalis*, in Krainz (ed.), *Die Kakteen* (44-45) CIVE: [7]. (1 Oct) 1970 nom. illeg. (Art. 53.1).
Etym. From the Greek *phyllon*, leaf, & the substantive *Rhipsisalis*. A reference to the leaf-like stems.
Typ. *Rhipsisalis regnellii* G.Lindb. = *Rhipsisalis houlettiana* Lem.
Syn. *Lepismium* subgen. *Houlettia* Barthlott & N.P.Taylor (1995).
Ref. *Rhipsisalis* Gaertn.

×**Phylloselenicereus** C.Knebel, *Phyllocactus*: 18. 1949; *Phyllokakteen*: 38. 1951.
Etym. Condensed formula.
Par. *Phyllocactus* Link × *Selenicereus* (A.Berger) Britton & Rose [*Epiphyllum* ‘Cooperi’ × *Cactus grandiflorus* L.].
Ref. ×*Seleniphyllum* Backeb.

Phymatogoni Lem. (pro infragen. *Echinocactus* Link & Otto), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 21, 90. (Feb) 1839.

Etym. From the Greek, *phyma*, tubercle, and *gonios*, angle.

Typ. Not cited.

Ref. Mixed taxon.

Phymatogoni (Lem.) Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 1(2): 321. (May) 1843.

Bas. *Phymatogoni* Lem. (pro infragen. *Echinocactus* Link & Otto).

Ref. Mixed taxon.

Phymatothelae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cacteeae in horto Dyckensi cultae anno 184-*: 12. 1842.

Etym. Based on the name of an included species.

Typ. *Mammillaria phymatothele* A.Berg. = *Mammillaria compressa* DC. Autotype (Art. 22.6).

Syn. *Mammillaria* Haw. infragen. *Angulares* Salm-Dyck (1841).

Ref. *Mammillaria* Haw.

Phymatothelae (Salm-Dyck) Salm-Dyck (pro sect. *Mammillaria* Haw.), *Cacteeae in horto Dyckensi cultae anno 1849*: 18. 1850.

Bas. *Phymatothelae* Salm-Dyck (1842, pro infragen. *Mammillaria* Haw.).

Obs. The rank was indicated at the foot of p. 78. This combination was repeated by Heath, *Journal of the Mammillaria Society* 28(3): 28. 1988.

Ref. *Mammillaria* Haw.

Pileisperma Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 7, 10. (1 Jul) 1968 nom. inval. (Art. 40.1).

Etym. From the Latin *pileus*, close-fitting felt cap, and *sperma*, seed.

Typ. Based on an unnamed new species in the collection of G. FRANK.

Ref. *Gymnocalycium* Mittler.

Pileisperma Buxb. ex H.Till (pro subsect. *Gymnocalycium* Mittler), *Neuordnung der Gattung Gymnocalycium*, *Gymnocalycium* 14(2): 400, 401. (May) 2001.

Etym. From the Latin *pileus*, close-fitting felt cap, and *sperma*, seed.

Typ. *Echinocactus stellatus* Speg.

Ref. *Gymnocalycium* Mittler.

Piliferae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 451, 513. (Jan) 1958 nom. inval. (Art. 36.2, 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia pilifera* F.A.C.Weber. Autotype (Art. 22.6).

Obs. Also published simultaneously with the synonym *Pailanae* Backeb., so both names would be invalid even if they were not already invalidated by the lack of Latin descriptions.

Ref. *Opuntia* (L.) Mill.

Pilocarpae Vaupel (pro infragen. ["Gruppe"] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23. (15 May) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Rhipsalis pilocarpa* Loefgr. Autotype (Art. 22.6).

Obs. Repeated in Vaupel, Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 619, 620. (Dec) 1925 & *Die Kakteen* (2): 79. (1 Mar) 1926. Includes the type of *Erythrorhipsalis* A.Berger (1920).

Ref. *Rhipsalis* Gaertn.

Pilocereus Lem., *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 6-7, 104-105. (Feb) 1839 nom. illeg. (Art. 52.1)

Etym. From the Greek *pilos*, hair, and the substantive, *Cereus*.

Typ. Not cited.

Lectotyp. *Cactus senilis* Haw. Designated by Pfeiffer, *Nomenclator botanicus* **2.1**(15): 716. (Oct) 1873.

Obs. Circumscription included *Cactus senilis* Haw. & *Pilocereus columna* Lem. nom. incorr. (= *Cereus columna-trajani* Karw. ex Pfeiff.).

Syn. *Cephalocereus* Pfeiff. (1838).

Ref. *Cephalocereus* Pfeiff.

Pilocereus Lem. ex Engelm. (pro subgen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 32. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 288. 1857].

Rep. Syn. *Pilocereus* Lem. nom. illeg. (1839, pro gen.).

Obs. The same rank was also claimed by Berger (1905: 60, 69). This is the correct name for *Cephalocereus* Pfeiff. at the rank of subgenus.

Ref. *Cephalocereus* Pfeiff.

Pilocereus (Engelm.) Griseb. (pro sect. *Cereus* (L.) Mill.), *Flora of the British West Indian islands* (3): 301. (late) 1860.

Bas. *Pilocereus* Engelm. (1856, pro subgen. *Cereus* (L.) Mill.).

Obs. Only *Cereus swartzii* Griseb. & *C. curtisii* Link & Otto were included in Grisebach's regional flora, both referable to *Cactus royeri* L.

Ref. *Cephalocereus* Pfeiff.

Pilocereus K.Schum. [non Lem. nec Engelm.] in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* **3**(6a): 179-181. (Apr 18) 1894 nom. illeg. (Art. 53.1).

Etym. From the Greek *pilos*, hair, and the substantive *Cereus*.

Typ. Not cited. Explicitly excludes the types of *Pilocereus* Lem. (1839) & Engelm. (1856).

Lectotyp. *Pilocereus leucocephalus* Poselg. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 51. (Jun) 1942.

Obs. A proposal to conserve *Pilocereus* K.Schum. over *Pilocereus* Lem. & Engelm. made to the Paris Congress of 1954 was rejected. *Pilosocereus* Byles & Rowley (1957) was created as a replacement name for *Pilocereus* K.Schum.

Syn. *Pilosocereus* Byles & G.D.Rowley (1957).

Ref. *Pilosocereus* Byles & G.D.Rowley.

Pilocereus (Engelm.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 86. (Nov) 1903 (“*Philocereus*”).

Bas. Pilocereus Engelm. (1856, pro subgen. *Cereus* (L.) Mill.).

Ref. Cephalocereus Pfeiff.

Pilocopiapoa F.Ritter, Ein neues Kakteen-Genus aus Chile, *Kakteen und andere Sukkulente* **12**(2): 20-22. 1961.

Typ. Pilocopiapoa solaris F.Ritter.

Ref. Copiapoa Britton & Rose.

Pilocopiapoa (F.Ritter) F.Ritter (pro subgen. *Copiapoa* Britton & Rose), *Kakteen in Südamerika* **3**: 1046. 1980.

Bas. Pilocopiapoa F.Ritter (1961, pro gen.).

Ref. Copiapoa Britton & Rose.

Pilocopiapoa (F.Ritter) Doweld (pro sect. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa*, *Sukkulenty* **4**(1-2): 48. (Jan) 2003.

Bas. Pilocopiapoa F.Ritter (1961, pro gen.).

Ref. Copiapoa Britton & Rose.

×***Pilocopiosocereus*** D.R.Hunt, Noddy’s new periwinkle, *The Cactus and Succulent Journal of Great Britain* **40**(3): 63. (Aug) 1978 nom. fict.

Etym. Condensed formula.

Par. Pilocopiapoa F.Ritter × *Pilosocereus* Byles & G.D.Rowley.

×***Pilodisocactus*** G.D.Rowley, Intercladal hybrids, *CactusWorld* **32**(1): 26. (Mar) 2014.

Etym. Condensed formula.

Par. Pilosocereus Byles & G.D.Rowley × *Disocactus* Lindl.

Syn. ×*Heliosocereus* Glass & R.C.Foster nom. inval. (1971).

Ref. ×*Epipilosocereus* Mottram.

Pilopsis Y.Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 17. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *pilos*, hair, and the Latin *-opsis*, -like.

Typ. Not cited.

Ref. Echinopsis Zucc.

Pilosi Backeb. (pro ser. *Pilocereus* K.Schum.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 51. (Jun) 1942.

Etym. From the Latin adjective *pilosus*, hairy. A reference to the hairy areoles, longer and stronger in the flowering zone.

Typ. Cactus lanuginosus L.

Ref. Pilosocereus Byles & G.D.Rowley.

Pilosocarpae F.H.Brandt (pro ser. *Weingartia* Werderm.), Die Gliederung der Gattung *Weingartia* Werdermann, *Kakteen- und Orchideen-Rundschau* **8**(1): 7. 1983.

Etym. From the Latin *nudus*, naked, and *carpus*, fruit.

Typ. *Rebutia haseltonii* Cárdenas.

Ref. *Rebutia* K.Schum.

Pilosocereus Byles & G.D.Rowley, *Pilosocereus* Byl. & Rowl. nom. gen. nov., *The Cactus and Succulent Journal of Great Britain* **19**(3): 66--67, 69. (Jul) 1957.

Rep. Syn. *Pilocereus* K.Schum. nom. illeg. (1894).

Typ. *Pilocereus leucocephalus* Poselg.

Obs. The same type had previously also been designated for the replaced synonym

Pilocereus K.Schum. by Backeberg, *Cactaceae Jahrbücher der Deutschen*

Kakteengesellschaft e.V. 1941 Zweiter Teil: 51. (Jun) 1942, but without replacing its name.

Pilosocereus (Byles & G.D.Rowley) Bravo (pro subgen. *Cephalocereus* Pfeiff.), Nuevas combinaciones II, *Cactaceas y Suculentas Mexicanas* **19**(2): 47. (Apr-Jun) 1974.

Bas. *Pilosocereus* Byles & G.D.Rowley. (1957, pro gen.).

Ref. *Pilosocereus* Byles & G.D.Rowley.

Piptanthocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 60, 70-72, t.5-7. (31 May) 1905.

Etym. From the Greek *pipto*, to fall, and *anthos*, flower. A reference to the habit of shedding the perianth post anthesis.

Typ. Not cited.

Lectotyp. *Cereus azureus* C. de Parm. Designated by Buxbaum in Krainz (ed.), *Die Kakteen* (42)-(43) CIV: 1. (1 Dec) 1969.

Obs. Berger never ever mentioned the type species of *Cereus* (L.) Mill., *Cactus hexagonus* L. in any of his works. So technically this name is not illegitimate, even though it has often been applied illegitimately in an identical sense to *Cereus* (L.) Mill. Riccobono (1909), Buxbaum (1969) & Ritter (1979) adopted *Piptanthocereus* explicitly excluding the type of *Cereus* (L.) Mill. At the rank of series it is correctly called *Azurei* Britton & Rose (1919).

Ref. *Cereus* (L.) Mill.

Piptanthocereus (A.Berger) Riccob., *Studii sulle Cattede del R. Orto Botanico di Palermo, Bollettino delle Reale Orto Botanico e Giardino Coloniale di Palermo* **8**: 222, 225. 1909.

Bas. *Piptanthocereus* A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Ref. *Cereus* (L.) Mill.

Pirisemineum H.Till & M.Hesse (pro subgen. *Gymnocalycium* Mittler), Ein neue Untergattung von *Gymnocalycium* (*Cactaceae*): subgenus *Pirisemineum*, *Plant Systematics and Evolution* **149**(1-2): 151. 1985.

Etym. From the Latin *pirum*, pear, and *semen*, seed.

Typ. *Gymnocalycium zegarrae* Cárdenas.

Ref. *Gymnocalycium* Mittler.

Pirisemineum (H.Till & M.Hesse) H.Till (pro sect. *Gymnocalycium* Mittler), Neuordnung der Gattung *Gymnocalycium*, *Gymnocalycium* **14**(2): 400, 401. (May) 2001 nom. inval. (Art. 41.5).

Bas. *Pirisemineum* H.Till & M.Hesse (1985, pro subgen. *Gymnocalycium* Mittler).

Obs. Not validly published because the basionym refers to the pages of the entire article.

Ref. *Gymnocalycium* Mittler.

Pisciformes Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **4**: 258. (24 Dec) 1923.

Etym. Based on the name of the only included species.

Typ. *Opuntia pisciformis* Small.

Ref. *Opuntia* (L.) Mill.

Pisciformes (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 449, 462. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Pisciformes* Britton & Rose (1923, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Pittierianae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 451, 535. (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of the only included species.

Typ. *Opuntia pittieri* Britton & Rose. Autotype (Art. 10.2).

Ref. *Opuntia* (L.) Mill.

Pitahaya Pfeiff. (pro infragen. *Cereus* Mill. in § *Protracti* Pfeiff.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 105. (Feb) 1837 (“Pitahayae”).

Etym. From the local word *pitahaya* given to the edible fruits.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Placentiformes Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 623-624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Discocactus* Pfeiff. (1839, pro gen.).

Typ. *Cactus placentiformis* Engelm. Autotype (Art. 22.6).

Ref. *Discocactus* Pfeiff.

Platense Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium, Kaktusar* **5**(9): 105. 1934 nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocactus platensis* Speg. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Platensia Backeb. (pro subser. *Gymnocalycium* Mittler), *Die Cactaceae* **3**: 1701, 1706. 1959 nom. inval. (Art. 39.1).

Typ. *Echinocactus platensis* Speg. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Platopuntia Engelm. (pro subgen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 33, 34. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 289, 290. 1857] nom. inval. (Art. 22.2) & illeg. (Art. 52.1).

Etym. From the Greek *platy*, broad or flat, referring to the flattened cladodes, and the substantive *Opuntia*.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Lectotyp. *Cactus tuna* L. Designated by Benson, *The cacti of the United States and Canada*: 911. 1982.

Syn. *Opuntia* (L.) Mill. subgen. *Opuntia*.

Obs. The name also appears without description in Engelmann & Bigelow, Description of the *Cactaceae*, in Whipple, *Reports of Explorations and Surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean* 4(5): 37. 1856. This name can only become valid & legitimate if and only if it is used in a sense that excludes *Opuntia ficus-indica* L., the type of *Opuntia* (L.) Mill. (Art. 22.1). The designation by Benson did not alter the situation because he also did not exclude the type of *Opuntia* (L.) Mill.

Ref. *Opuntia* (L.) Mill.

Platopuntia Engelm. ex K.Schum. (pro sect. *Opuntia* (L.) Mill.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 200. (Apr 18) 1894 nom. inval. (Art. 22.2) & illeg. (Art. 52.1).

Etym. From the Greek *platy*, broad or flat, referring to the flattened cladodes, and the substantive *Opuntia*.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. sect. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Platyacanthae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto dykensi cultae anno 1844*: 43. 1845.

Etym. From the name of an included species.

Typ. *Opuntia platyacantha* Pfeiff. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Platygoni Backeb. (pro ser. *Echinofossulocactus* Lawr.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 57. (Jun) 1942 nom. inval. (Art. 22.2).

Etym. From the Greek *platy*, broad or flat, and *gonios*, angle.

Typ. *Echinocactus coptonogonus* Lem.

Syn. *Echinofossulocactus* Lawr. ser. *Echinofossulocactus*.

Ref. *Echinofossulocactus* Lawr.

Platyopuntia Griseb. (pro sect. *Opuntia* (L.) Mill.), *Flora of the British West Indian Islands* (3): 302. (late) 1860 nom. inval. (Art. 22.2) & illeg. (Art. 52.1).

Etym. From the Greek *platy*, broad or flat, referring to the flattened cladodes, and the substantive *Opuntia*.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. sect. *Opuntia*.

Obs. Grisebach did not credit his name to any other author, although it was applied in the same sense as Engelmann.

Ref. *Opuntia* (L.) Mill.

Platyopuntia K.Schum. (pro sect. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (10): 652, 699. (1 Nov) 1898 nom. inval. (Art. 22.2) & illeg. (Art. 52.1).

Etym. From the Greek *platy*, broad or flat, referring to the flattened cladodes, and the substantive *Opuntia*.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. sect. *Opuntia*.

Obs. Name attributed to Engelmann but with changed spelling.

Ref. *Opuntia* (L.) Mill.

Platyopuntia Frič & Schelle, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulenten mit Revision der Systematik der Kakteen*: 42. 1935 nom. illeg. (Art. 52.1).

Etym. From the Greek *platy*, broad or flat, referring to the flattened cladodes, and the substantive *Opuntia*.

Typ. Not cited but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill.

Obs. Published as a new combination, but Engelmann's name was not valid. Technically a replacement but nevertheless illegitimate because its circumscription still includes the type of *Opuntia* (L.) Mill.

Ritter's adoption of this generic name (*Kakteen in Südamerika* 1: 31. 1979; 4: 1621, 1623, 1678. 1981) is also illegitimate because he should have used *Opuntia* (L.) Mill., and also invalid because the type of *Opuntia* (L.) Mill. was still included.

Ref. *Opuntia* (L.) Mill.

Pleurantha N.P.Taylor (pro sect. *Escobaria* Britton & Rose), *Die Arten der Gattung Escobaria Britton & Rose, Kakteen und andere Sukkulenten* 34(5): 123. (May) 1983.

Etym. From the Greek *pleura*, lateral, and *anthos*, flower.

Rep. Syn. *Escobaria* subgen. *Protomammillaria* Václav John & Říha (1981) with new type.

Typ. *Escobaria chihuahuensis* Britton & Rose.

Ref. *Coryphantha* (Engelm.) Lem.

Pleuranthi Y.Itô (pro ser. in subtribus *Austroleptochonanthi*), *Illustration of flower-cacti*: 5-6, 15. 1967 nom. inval. (Art. 33.7).

A misplaced rank.

Pleuranthi Y.Itô (pro ser. in subtribus *Austrosalpinganthinae*), *Illustration of flower-cacti*: 6, 38. 1967 nom. inval. (Art. 33.7).

A misplaced rank.

Pleuranthi Y.Itô (pro ser. in subtribus *Austrochionanthe*), *Illustration of flower-cacti*: 7, 71-72. 1967 nom. inval. (Art. 33.7).

A misplaced rank.

Pliohyocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *plion*, more, *hybos*, hump, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Plumosae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Mammillaria plumosa* F.A.C.Weber. Autotype (Art. 10.2, 22.6).

Ref. *Mammillaria* Haw.

Plutonopuntia P.V.Heath, Three new generic names in the *Cactaceae*, *Calyx* 6(2): 41-42. 1999.

Etym. From the Latin *Pluto*, in Roman mythology the Lord of Hades, brother of Jupiter and Neptune, and the substantive *Opuntia*.

Rep. Syn. *Chaffeyanae* Britton & Rose (1919, pro subser. *Opuntia* (L.) Mill.).

Syn. *Chaffeyopuntia* Frič (1935) nom. inval.

Ref. *Opuntia* (L.) Mill.

Pogocephalus Y.Itô (pro subgen. *Notocactus* (K.Schum.) Frič), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *pogon*, beard, and *kephale*, head.

Typ. Not cited.

Ref. *Parodia* Speg.

Polaskia Backeb., *Haseltonia* Bckbg. n. g. (1949), *Blätter für Sukkulantenkunde* 1(1): 4. (1 Jan) 1949.

Etym. Named for the American horticulturist Charles POLASKI (1895-1991).

Typ. *Cereus chichipe* Rol.-Goss.

Ref. *Myrtillocactus* Console.

Polaskia (Backeb.) P.V.Heath (pro sect. *Myrtillocactus* Console), The restoration of *Rathbunia* Britton & Rose, *Calyx* 2(3): 105. 1992.

Bas. *Polaskia* Backeb. (1949, pro gen.).

Ref. *Myrtillocactus* Console.

Polyacanthae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae* 1844: 5. 1845.

Etym. From the Greek *polyos*, many, and *akantha*, spine.

Typ. Not cited.

Lectotyp. *Mammillaria spinosissima* Lem. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V.* 1941(2): 64. (Jun) 1942.

Ref. *Mammillaria* Haw.

Polyacanthae (Salm-Dyck) Salm-Dyck (pro sect. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae* 1849: 7-8, 78. 1850.

Bas. *Polyacanthae* Salm-Dyck (1845, pro infragen. *Mammillaria* Haw.).

Obs. Rank indicated at the foot of p. 78.

Ref. *Mammillaria* Haw.

Polyacanthae (Salm-Dyck) Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3099, 3101. 1961 nom. inval. (Art. 41.5).

Bas. *Polyacanthae* Salm-Dyck (1845, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Polyacanthae Engelm. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 49. 1856. [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 305. 1857].

Etym. From the Greek *polyos*, many, and *akantha*, spine.

Typ. Not cited.

Obs. A division of *Cylindropuntia* Engelm.

Ref. *Opuntia* (L.) Mill.

Polyacanthae Britton & Rose [non Engelm.] (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 193. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia polyacantha* Haw. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Polyacanthae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel*, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V.* 1941 *Zweiter Teil*: 18. (Jun) 1942.

Bas. *Polyacanthae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Polyacanthae (Salm-Dyck) Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel*, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V.* 1941 *Zweiter Teil*: 64. (Jun) 1942.

Bas. *Polyacanthae* Salm-Dyck (1845, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Polyacanthae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 588, 604. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. Polyacanthae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Polyancistri Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 625. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Sclerocactus Britton & Rose (1922, pro gen.).

Typ. Echinocactus polyancistrus Engelm. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. Sclerocactus Britton & Rose.

Polycentracantha Doweld (pro sect. *Escobariopsis* Doweld), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 42. 2000.

Etym. From the Greek *poly*, many, *kentron*, centre, and *akantha*, spine.

Typ. Mammillaria pennispinosa Krainz.

Ref. Mammillaria Haw.

Polycephalae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano cultarum*: 98. 1839.

Etym. From the Greek *poly*, many, and *kephale*, head.

Typ. Not cited.

Ref. Mammillaria Haw.

Polyedrae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Homoeacanthae* nom. inval. = § *Mammillaria*), *Enumeratio diagnostica cactearum hucusque cognitarum*: 17. 1837.

Etym. Based on the name of an included species.

Typ. Mammillaria polyedra Mart. Autotype (Art. 22.6).

Obs. The lectotype designation of *Mammillaria voburnensis* Scheer, in Backeberg, *Die Cactaceae* **5**: 3098. 1961 was superfluous.

Ref. Mammillaria Haw.

Polyedrae (Pfeiff.) Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 **6**: 314. 1841 (“Polyedreae”).

Bas. Polyedrae Pfeiff. (1837, pro infragen. *Mammillaria* Haw.)

Ref. Mammillaria Haw.

Polyedrae (Pfeiff) Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 632. (Dec) 1925.

Etym. Based on the name of an included species.

Bas. Polyedrae Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Obs. Circumscription based on *Neomammillaria* Britton & Rose (1923) species 34-53.

Ref. Mammillaria Haw.

Polyedrae (Pfeiff.) Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 63. (Jun) 1942.
Bas. Polyedrae Pfeiff. (1837, pro infragen. *Mammillaria* Haw.)
Ref. Mammillaria Haw.

Polyedrothelae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 93. (Feb) 1839 nom. illeg. (Art. 52.1).

Etym. From the Greek, *polyedros*, many-sided, and *thele*, nipple.

Typ. Not cited.

Lectotyp. Mammillaria polyedra Mart. Designated by Doweld, *Sukkulenty* 3(1-2): 32 [in adnot.]. 2000.

Syn. Polyedrae Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Polyedrothelae Doweld (pro sect. *Mammillaria* Haw.), *Sukkulenty* 3(1-2): 32. 2000.

Rep. Syn. Polyedrothelae Lem. nom. illeg. (1839, pro infragen. *Mammillaria* Haw.) = *Mammillaria* infragen. *Polyedrae* Pfeiff. (1837).

Typ. Mammillaria polyedra Mart. Autotype (Art. 7.4). Same as replaced synonym.

Obs. The correct name for *Polyedrae* Pfeiff. at the rank of section.

Ref. Mammillaria Haw.

Polygonorhypsalis Doweld (pro sect. *Hylorhypsalis* Doweld), Re-classification of *Rhypsaliidae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* 4(1-2): 37. (Jan) 2003.

Etym. From the Greek *polygonos*, polygonal, and the substantive *Rhypsalis*.

Typ. Rhypsalis floccosa Pfeiff.

Ref. Rhypsalis Gaertn.

Polylophi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183 : 23*. 1834 nom. nud.

Etym. From the Greek, *polus*, much or many, and *lophos*, tufted. A reference to the sprouting habit of growth.

Typ. Not cited.

Ref. Echinocereus Engelm.

Polylophi Salm-Dyck ex Pfeiff. (pro infragen. *Cereus* (L.) Mill.), Borschlag zu einer neuen natürlichen Unordnung der Cacteen, *Allgemeine Gartenzeitung* 3(40): 315. (3 Oct) 1835 nom. nud.

Etym. From the Greek, *polus*, much or many, and *lophos*, tufted.

Typ. Not cited.

Ref. Echinocereus Engelm.

Polylophi Salm-Dyck ex Pfeiff. (pro infragen. *Cereus* Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 101. (Feb) 1837.

Etym. From the Greek, *polus*, much or many, and *lophos*, tufted.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Polylophi (Pfeiff.) Walp. (pro sect. *Cereus* (L.) Mill.), *Repertorium botanices systematicae* 2: 275. 1843.

Bas. *Polylophi* Pfeiff. (1837, pro infragen. *Cereus* (L.) Mill.).

Ref. *Echinocereus* Engelm.

Polylophi K.Schum. [non Pfeiff.] (pro infragen. *Pilocereus* K.Schum. nom. illeg.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 180. (Apr 18) 1894.

Etym. Based on the name of an included species.

Typ. *Cereus polylophus* DC. Autotype (Art. 22.6).

Ref. *Cephalocereus* Pfeiff.

Porfiria Boed., *Porfiria coahuilensis* Böd., gen. et spec. nova, *Zeitschrift für Sukkulantenkunde* 2(13): 210-213. (31 Jul) 1926.

Etym. Named for General PORFIRIO Díaz (1830-1915), dictator of Mexico 1877-1911.

Typ. *Porfiria coahuilensis* Boed.

Ref. *Mammillaria* Haw.

Porfiria (Boed.) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* 8(4): 324. (24 Apr) 1953.

Bas. *Porfiria* Boed. (1926, pro gen.).

Ref. *Mammillaria* Haw.

Portulacifoliae Doweld (pro ser. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* 109(4): 46. 2004.

Typ. *Pereskia portulacifolia* (L.) DC.

Ref. *Pereskia* (L.) Mill.

Poselgerianae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632, 633. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Cochemiea* K.Brandege (1897, pro gen.) excl. typ.

Typ. *Mammillaria poselgeri* Hildm.

Ref. *Mammillaria* Haw.

Pottsia G.Unger (pro sect. *Ferocactus* Britton & Rose), *Die grossen Kugelkakteen Nordamerikas*: 88. 1992 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus pottsii* Salm-Dyck.

Ref. *Echinofossulocactus* Lawr.

Praearthrocereus Buxb. (pro subgen. *Arthrocereus* (A. Berger) Backeb.), Gattung *Arthrocereus*, in Krainz, *Die Kakteen* (48-49) CVa: [6-7]. (15 Jan) 1972.

Etym. From the Latin prefix *prae-*, *pre-*, and the substantive *Arthrocereus*.

Typ. *Arthrocereus rondonianus* Backeb.

Ref. *Echinopsis* Zucc.

Praecereus Buxb., Die Entwicklungslinien der Tribus *Cereeae* Britt. et Rose emend F. Buxbaum (*Cactaceae - Cactoideae*) I. Teil: Die "Brasilianischen Pilocereen", *Beiträge zur Biologie der Pflanzen* 44(2): 266. (26 Feb) 1968.

Etym. From the Latin prefix *prae-*, *pre-*, and the substantive *Cereus*.

Typ. *Cereus smithianus* Britton & Rose.

Ref. *Cereus* (L.) Mill.

Praeparodia Doweld (pro ser. *Notocactus* (K. Schum.) Frič), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* 3(1-2): 55. 2000.

Etym. From the Latin prefix *prae-*, *pre-*, and the substantive *Parodia*.

Typ. *Notocactus minimus* Frič & Kreuz.

Ref. *Parodia* Speg.

Prago-Aureilobivia Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 32. (31 Apr) 1935.

Etym. From *Prag*, the German name for Frič's home city of Prague, and the substantive *Aureilobivia*.

Typ. *Aureilobivia* Frič × "other *Trichopericarpeae* Frič & Schelle" nom. inval.

Obs. These are hybrids that involve *Aureilobivia aureiflora* Frič = *Echinopsis aurea* Britton & Rose crossed with other species of tribe *Trichocereae*. Although published as though a genus, *Prago-Aureilobivia* is correctly established as a cultivar Group name for all progeny of this parentage.

Ref. *Echinopsis* Zucc.

Prago-Chamaecereus Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 32. (31 Apr) 1935.

Etym. From *Prag*, the German name for Frič's home city of Prague, and the substantive *Chamaecereus*.

Typ. *Chamaecereus silvestrii* Britton & Rose × *Lobivia grandiflora* Britton & Rose.

Obs. Although published as though a genus, *Prago-Chamaecereus* is correctly established as a cultivar Group name for all progeny of this parentage.

Ref. *Echinopsis* Zucc.

Prago-Lobivia Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 32. (31 Apr) 1935.

Etym. From *Prag*, the German name for Frič's home city of Prague, and the substantive *Lobivia*.

Typ. *Cinnabarinea graulichii* Frič nom. inval. [= *Echinopsis saltensis* Speg.] × "other *Trichopericarpeae* Frič & Schelle" nom. inval.

Obs. Although published as though a genus, Prago-Lobivia is correctly established as a cultivar Group name for all progeny of this parentage. Frič described and illustrated some of his Prago-Lobivia cultivars in *Succulenta* **19**(6): 81-89. (Jun) 1937.

Ref. *Echinopsis* Zucc.

Prago-Notocactus Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulenten mit Revision der Systematik der Kakteen*: 32. (31 Apr) 1935.

Etym. From *Prag*, the German name for Frič's home city of Prague, and the substantive *Notocactus*.

Typ. *Echinocactus mammulosus* Lem. × *Chamaecereus silvestrii* Britton & Rose & *Cinnabarinea graulichii* Frič nom. inval. [= *Echinopsis saltensis* Speg.].

Obs. Although published as though a genus, Prago-Notocactus is correctly established as a cultivar Group name for all progeny of this parentage.

Ref. ×*Echinoparodia* Mottram.

Premammillaria Szutorisz (pro subgen. *Mammillaria* Haw.), *A Cactaceae család Mammillaria nemzetségének evolúciós modellje. 5. Az evolúciós modell irányelvei és felépítése*, *Alba Flora* (23): 24. 2000 & (25): 27. 2000 nom. inval. (Art. 39.1).

Etym. A variant of the Latin prefix *prae-*, *pre-*, and the substantive *Mammillaria*.

Typ. *Mammillaria dioica* K.Brandege. Designated in *Alba Flora* (25): 27. 2000.

Ref. *Mammillaria* Haw.

Primibaria Václav.John & Říha (pro subgen *Escobaria* Britton & Rose), *Rozčlenění rodu Escobaria* Britt. et Rose, *Kaktusy* **17**(2): 41. (Apr) 1981.

Etym. From the Latin *primus*, first, and *baria*, heavy weight. Meant to be a reference to its earliest place in the evolution of the genus.

Typ. *Echinocactus roseanus* Boed.

Obs. This is the basionym for *Escobaria* Britton & Rose sect. *Acharagma* N.P.Taylor.

Ref. *Pediocactus* Britton & Rose.

Principales K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 55 (Feb). 1897.

Etym. Prince of cerei, from the Latin *princeps*, prince.

Typ. Not cited.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Pringleani Vaupel (pro infragen. ["Gruppe"] *Cereus* (L.) Mill.), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 640-641. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus pringlei* S.Watson. Autotype (Art. 22.6).

Syn. *Pachycereus* Britton & Rose infragen. *Pachycereus*.

Ref. *Cephalocereus* Pfeiff.

Prismaticae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 220. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. Hariota prismatica Lem. nom. incorr. = *Rhipsalis prismatica* Rümpler. Autotype (Art. 22.6).

Ref. Rhipsalis Gaertn.

Probartschella Doweld (pro ser. *Bartschella* Britton & Rose), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 38. 2000.

Etym. From the Greek prefix *pro-*, *pre-*, and the substantive *Bartschella*.

Typ. Mammillaria armillata K.Brandegee.

Ref. Mammillaria Haw.

Procochemiea Buxb. (pro subgen. *Chilita* Orcutt), Die Gattungen der Mammillarienstufe, *Sukkulentenkunde* **5**: 15. (May) 1954.

Etym. From the Greek prefix *pro-*, *pre-*, and the substantive *Cochemiea*.

Typ. Neomammillaria sheldonii Britton & Rose nom. incorr. = *Neomammillaria swinglei* Britton & Rose nom. incorr. = *Chilita swinglei* (Britton & Rose) Orcutt. [Note that *N. swinglei* has priority over *N. sheldonii*, established by Hunt, Review of *Mammillaria* names in current usage, Part 37, *Journal of the Mammillaria Society* **14**(4): 51. (Aug) 1974, the earliest author to make this choice when they are considered conspecific (Art. 11.5)].

Ref. Mammillaria Haw.

Procumbentes Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 36. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 292. 1857] nom. nud.

Etym. Based on the name of an included species.

Typ. Opuntia procumbens Engelm. & J.M.Bigelow. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Procumbentes Engelm. ex Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections* no. 1786 **50**(4): 529. (20 Feb) 1908.

Etym. Based on the name of an included species.

Typ. Opuntia procumbens Engelm. & J.M.Bigelow. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Procumbentes Vaupel (pro infragen. [“Gruppe”] *Echinocereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 645. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Cereus procumbens Lem. Autotype (Art. 22.6).

Ref. Echinocereus Engelm.

Proliferae D.R.Hunt (pro ser. *Mammillaria* Haw.), Schumann and Buxbaum recompiled (2), *Cactus & Succulent Journal of Great Britain* **39**(3): 73. (Aug) 1977.

Etym. From the name of an included species.

Typ. Cactus proliferus Mill.

Ref. Mammillaria Haw.

Proliferi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae anno 1849*: 42. 1850.

Etym. A Latin adjective, *proliferus*, proliferous or freely offsetting.

Typ. Not cited.

Obs. Includes the type of *Echinocereus* Engelm. (1848).

Ref. *Echinocereus* Engelm.

Prostratae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 41. 1841.

Etym. Based on the name of an included species.

Typ. *Opuntia prostrata* Lem. = *Cactus humifusus* Raf. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Prostratae (Salm-Dyck) Backeb. (pro ser. *Opuntia* (L.) Mill.), in Backeberg & Knuth, *Kaktus-ABC*: 53, 130. (12 Feb) 1936.

Bas. *Prostratae* Salm-Dyck (1841, pro infragen. *Opuntia* (L.) Mill.).

Obs. The lectotype *Opuntia tortispina* Engelm. designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942 is superfluous.

Ref. *Opuntia* (L.) Mill.

Prostratae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.

Bas. *Prostratae* Salm-Dyck (1841, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Prostrati K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 53 (Feb). 1897.

Etym. Prostrate, referring to the stems lying on the ground, from the Latin adjective *prostratus*.

Typ. Not cited.

Lectotyp. *Cereus eruca* K.Brandegee. Designated by Heath, *Calyx* 2(3): 102. 1992.

Obs. This taxon is replaced at the rank of section by *Eruca* P.V.Heath (1992, pro sect. *Rathbunia* Britton & Rose).

Ref. *Stenocereus* (A.Berger) Riccob.

Prostrati K.Schum. (pro infragen. *Echinocereus* Engelm.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 246. (20 Oct) 1897.

Etym. A Latin adjective, *prostratus*, prostrate.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Prostrati (K.Schum.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 80. (31 May) 1905.

Bas. *Prostrati* K.Schum. (1897, pro infragen. *Echinocereus* Engelm.).

Ref. *Echinocereus* Engelm.

Prostratiores Haw. (pro infragen. *Cereus* (L.) Mill.), Decas duodecima novarum plantarum succulentarum, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. 7(38): 110. (Feb) 1830.

Typ. *Cereus undatus* Haw. Autotype (Art. 10.2). The only included species.

Ref. *Cereus* (L.) Mill.

Protochemiea Doweld (pro sect. *Cochemiea* (K.Brandege) Walton), Nomenclatural adjustments in *Cactaeae* II, *Sukkulenty* 3(1-2): 39. 2000.

Etym. From the Greek *protos*, first or foremost, and the substantive *Cochemiea*.

Typ. *Neomammillaria capensis* H.E.Gates nom. incorr. = *Mammillaria capensis* (H.E.Gates) R.T.Craig.

Ref. *Mammillaria* Haw.

Protomammillaria Václav.John & Říha (pro subgen. *Escobaria* Britton & Rose), Rozčlenění rodu *Escobaria* Britt. et Rose – dokončení, *Kaktusy* 17(3): 65-66. 1981.

Etym. From the Greek *protos*, first or foremost, and the substantive *Mammillaria*.

Typ. *Escobaria henriksonii* Glass & R.C.Foster.

Obs. Replaced by *Escobaria* Britton & Rose sect. *Pleurantha* N.P.Taylor (1983) & the genus *Escocoryphantha* Doweld (1999).

Ref. *Coryphantha* (Engelm.) Lem.

Protoparodia Buxb. (pro subgen. *Parodia* Speg.), Gattung *Parodia*, in Krainz, *Die Kakteen* (34) CVIc: [4], [6]. (1 Sep) 1966.

Etym. From the Greek *protos*, prototype, and the substantive *Parodia*.

Typ. *Echinocactus maassii* Heese.

Ref. *Parodia* Speg.

Protoseminiformia Havlíček (pro sect. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 78. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Greek *protos*, prototype, the Latin *semen*, seed, and forma, shape.

Typ. *Echinocactus graessneri* K.Schum.

Ref. *Parodia* Speg.

Protracti Pfeiff. (pro infragen. *Cereus* Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 104. (Feb) 1837.

Etym. From the Latin passive perfect participle of *protrahere*, to draw out.

Typ. Not cited.

Ref. Includes nine disparate unrelated species.

Pruinosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae anno 1849*: 48. 1850.

Etym. A Latin adjective, *pruinus*, with a hoar-frost-like bloom.

Typ. *Echinocactus pruinosus* Otto ex Pfeiff. Autotype (Art. 22.6).

Obs. Schumann (1897: 52) also claimed authorship of this taxon, but he included a similar range of species to those of Salm-Dyck.

Ref. *Stenocereus* (A.Berger) Riccob.

Pseudepiphyllum K.Schum. (pro sect. *Phyllocactus* Link nom. illeg.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 205. (20 Oct) 1897 nom. incorr.
Etym. From the Greek prefix *pseudo-*, false, and the substantive *Epiphyllum*.
Typ. Not cited.
Ref. *Rhipsalis* Gaertn.

Pseudepiphyllum (K.Schum.) K.Schum. (pro subgen. *Phyllocactus* Link nom. illeg.), *Gesamtbeschreibung der Kakteen Nachträge 1898 bis 1902*: 73. 1903 nom. incorr.
Bas. *Pseudepiphyllum* K.Schum. (1897, pro gen.).
Ref. *Rhipsalis* Gaertn.

Pseudoacanthocereus Sanchez-Mej. (pro subgen. *Peniocereus* (A.Berger) Britton & Rose), *El género Peniocereus, enmienda y división, Cactaceas y Suculentas Mexicanas* **19**(2): 38-39. (Apr-Jun) 1974.
Etym. From the Greek prefix *pseudo-*, false, and the substantive *Acanthocereus*.
Typ. *Cereus maculatus* Weing.
Ref. *Acanthocereus* (Engelm.) Britton & Rose.

Pseudoacanthocereus F.Ritter, *Kakteen in Südamerika* **1**: 47. (Nov) 1979.
Etym. From the Greek prefix *pseudo-*, false, and the substantive *Acanthocereus*.
Typ. *Acanthocereus brasiliensis* Britton & Rose.
Ref. *Acanthocereus* (Engelm.) Britton & Rose.

Pseudobrachycereus Backeb., *Kakteenlexikon*: 76. 1966 nom. fict.
Fictional name invented to demonstrate a principle: “Buxbaum’s procedure with *Mitrocereus* is shown to be inappropriate because if it was adopted, he would have to rename *Jasminocereus* as *Brachycereus*, and replace *Brachycereus* with a new name [such as] “*Pseudobrachycereus*”.”

Pseudocachenses Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* **3**: 1377, 1428. (Oct) 1959 nom. inval. (Art. 39.1).
Etym. Based on the name of an included species.
Typ. *Lobivia pseudocachensis* Backeb. = *Echinopsis saltensis* Speg. Autotype (Art. 22.6).
Ref. *Echinopsis* Zucc.

×***Pseudocereus*** P.V.Heath, *The nothogenera of the Cactaceae, Calyx* **1**(3): 106. 1992.
Etym. Condensed formula.
Par. *Coleocephalocereus* Backeb. × *Pseudopilocereus* Buxb.
Ref. ×*Austrocereus* Mottram.

×***Pseudocladodia*** P.V.Heath, *The nothogenera of the Cactaceae, Calyx* **1**(3): 121. 1992.
Etym. Condensed formula.
Par. *Leptocladodia* Buxb. × *Pseudomammillaria* Buxb.
Ref. *Mammillaria* Haw.

Pseudocoryphantha Buxb. (pro subgen. *Escobaria* Britton & Rose), Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichischen Botanischen Zeitschrift* **98**(1-2): 78. (28 Apr) 1951.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Coryphantha*.

Typ. *Mammillaria chlorantha* Engelm. = *Mammillaria deserti* Engelm.

Ref. *Mammillaria* Haw.

Pseudocoryphantha (Buxb.) Moran (pro sect. *Coryphantha* Lem.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 318. (24 Apr) 1953.

Bas. *Pseudocoryphantha* Buxb. (1951, pro gen.).

Ref. *Coryphantha* Lem.

Pseudoechinocereus Akers ex H. Johnson, *Johnson Cactus Gardens Diamond Jubilee Cactus Handbook 1876-1951*: 28. 1951 nom. inval. (Art. 30.6, 39.1).

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Echinocereus*.

Typ. *Pseudoechinocereus splendens* Akers nom. nud. = *Loxanthocereus splendens* Akers ex Backeb. (validated *Die Cactaceae* **2**: 969. 1959) = *Erdisia sextoniana* Backeb.

Obs. Also briefly mentioned in Buining, Kakteen in Peru, *Sukkulentenkunde* **4**: 45. (Dec) 1951 without description.

Ref. *Cleistocactus* Lem.

×***Pseudoechinomediolobiviocereus*** Boom, De benaming van de gekweekte variëteiten van succulenten, *Succulenta* **39**(11): 123. (Nov) 1957 nom. fict.

A fictitious example of a name that might be created if cactus nothogenera were to follow the string formulae for intergeneric hybrids adopted by orchid systemists.

Pseudoechinopsis Backeb. (pro subgen. *Echinopsis* Zucc.), Systematische Übersicht, *Blätter für Kakteenforschung* **1**(3): [2]. 1934 nom. nud.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Echinopsis*.

Typ. *Echinopsis aurea* Britton & Rose.

Ref. *Echinopsis* Zucc.

Pseudoechinopsis Backeb., (pro subgen. *Echinopsis* Zucc.), in Backeberg & Knuth, *Kaktus-ABC*: 66, 244. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Echinopsis*.

Typ. *Echinopsis aurea* Britton & Rose.

Ref. *Echinopsis* Zucc.

Pseudoespostoa Backeb., Systematische Übersicht, *Blätter für Kakteenforschung* **1**(3): [4]. 1934 nom. nud.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Espostoa*.

Typ. *Cephalocereus melanostele* Vaupel.

Ref. *Espostoa* Britton & Rose.

Pseudoespostoa Backeb., *Pseudoespostoa* Backbg. n. g., *Blätter für Kakteenforschung* 1(10): [1]. 1934.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Espostoa*.

Typ. *Cephalocereus melanostele* Vaupel.

Ref. *Espostoa* Britton & Rose.

Pseudogrusionia Bravo (pro ser. *Opuntia* (L.) Mill.), *Nuevas combinaciones, Cactaceas y Suculentas Mexicanas* 17(4): 119. (Oct-Dec) 1972.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Grusionia*.

Typ. *Grusionia santamaria* E.M.Baxter.

Ref. *Opuntia* (L.) Mill.

Pseudoharrisia Backeb., (pro subgen. *Eriocereus* (A.Berger) Riccob.), in Backeberg & Knuth, *Kaktus-ABC*: 63, 178. (12 Feb) 1936 nom. inval. (Art. 22.2, 39.1).

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Harrisia*.

Typ. Not cited, but includes the type of *Eriocereus* (A.Berger) Riccob.

Ref. *Echinopsis* Zucc.

Pseudolobivia Backeb. (pro subgen. *Echinopsis* Zucc.), *Die Echinopsis-Untergattung Pseudolobivia und die pentlandii-Gruppe der Lobivien, Der Kakteen-freund* 3(6): 61-63 (mid-Jun) 1934.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Lobivia*.

Typ. Not cited.

Lectotyp. *Echinopsis ancistrophora* Speg. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 31. (Jun) 1942.

Ref. *Echinopsis* Zucc.

Pseudolobivia (Backeb.) Backeb., *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 31. (Jun) 1942.

Bas. *Pseudolobivia* Backeb. (1934, pro subgen. *Echinopsis* Zucc.).

Ref. *Echinopsis* Zucc.

Pseudomacrochela Lüthy (pro ser. *Turbinicarpus* Buxb. & Backeb.), *Further comments on Turbinicarpus and a key to species, in Hunt, Cactaceae Systematics Initiatives* 14: 22. (Oct) 2002.

Etym. Based on the name of an included species.

Typ. *Strombocactus pseudomacrochele* Backeb.

Ref. *Turbinicarpus* Buxb. & Backeb.

Pseudomaihueniopsis Guiggi, *Genera nova et combinationes novae in cactaceis austroamericis ad subfamiliam Opuntioideae K.Schumann spectantibus III, Cactology* 3 Supplementum V: 1-4. (4 Dec) 2013.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Maihueniopsis*.

Typ. *Opuntia nigrispina* K.Schum.

Ref. *Opuntia* (L.) Mill.

Pseudomammillaria Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer sukkulenten mit Revision der Systematik der Kakteen*: 8. (31 Apr) 1935.

Although in the form of a genus, this name is applied as an unranked name for a group of 8 genera segregated from *Mammillaria*.

Pseudomammillaria Buxb., Die Phylogenie der nordamerikanischen Echinocacteen. Trib. *Euechinocactinae* F. Buxb., *Österreichische botanische Zeitschrift* **98**(1-2): 84. (28 Apr) 1951.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Mammillaria*.

Typ. *Mammillaria camptotricha* Dams.

Ref. *Mammillaria* Haw.

Pseudomammillaria (Buxb.) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 324. (24 Apr) 1953.

Bas. *Pseudomammillaria* Buxb. (1951, pro gen.).

Ref. *Mammillaria* Haw.

Pseudomelanosteles Backeb. (pro subser. *Haageocereus* Backeb.), *Die Cactaceae* **2**: 1169, 1172. (Mar) 1959 nom. inval. (Art. 22.2, 39.1).

Etym. Based on the name of an included species.

Typ. *Cereus pseudomelanostele* Werderm. & Backeb. [= ?*Cactus multangularis* Willd.].

Autotype (Art. 22.6).

Syn. *Haageocereus* Backeb. subser. *Haageocereus*.

Ref. *Haageocereus* Backeb.

Pseudomitrocereus Bravo & Buxb., in Buxbaum, Die Entwicklungslinien der Tribus *Pachycereae* - F. Buxb. (*Cactaceae* - *Cereoideae*), *Botanische Studien* **12**: 53-54. 1961.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Mitrocereus*.

Typ. *Pilocereus fulviceps* F.A.C. Weber ex K. Schum.

Ref. *Cephalocereus* Pfeiff.

Pseudonotospermae F.H. Brandt (pro ser. *Parodia* Speg.), Die Gliederung der Gattung *Parodia* Spegazzini, *Kakteen- und Orchideen-Rundschau* **7**(4): 56. 1982.

Etym. From the Greek prefix *pseudo-*, false, *notos*, southern, and *sperma*, seed.

Typ. *Parodia mairanana* Cárdenas.

Ref. *Parodia* Speg.

Pseudonopalxochia Backeb., *Die Cactaceae* **1**: 52, 69 (Jan) 1958.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Nopalxochia*.

Typ. *Nopalxochia conzattiana* T.M. MacDoug. = *Nopalxochia ackermannii* var. *conzattiana* (T.M. MacDoug.) Kimmach.

Ref. *Epiphyllum* Haw.

Pseudoparodia Doweld (pro sect. *Ritterocactus* Doweld), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* **3**(1-2): 61. 2000.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Parodia*.

Typ. *Parodia ayopayana* Cárdenas.

Ref. *Parodia* Speg.

Pseudopilocereus Buxb., Die Entwicklungslinien der Tribus *Cereeae* Brit. et Rose emend. F. Buxbaum (*Cactaceae - Cactoideae*). I Teil: Die "brasilianischen Pilocereen", *Beiträge zur Biologie der Pflanzen* 44(2): 249. 1968.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Pilocereus*.

Typ. *Pilocereus arrabidae* Lem.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Pseudorhipsalis Britton & Rose, *The Cactaceae* 4: 208, 213. (24 Dec) 1923.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Rhipsalis*.

Typ. *Cactus alatus* Sw.

Ref. *Epiphyllum* Haw.

Pseudorhipsalis (Britton & Rose) Kimnach (pro sect. *Disocactus* Lindl.), The genus *Disocactus*, *Haseltonia* 1: 106. 1993.

Bas. *Pseudorhipsalis* Britton & Rose (pro gen.).

Ref. *Epiphyllum* Haw.

×***Pseudo-selenicereus*** Innes (pro gen.), *Complete handbook of cacti and succulents*: 31, 34. 1978 nom. inval. (Art. 39.1).

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Selenicereus*.

Typ. *Selenicereus* ×*innesii* Kimnach.

Ref. ×*Aporepiphyllum* G.D.Rowley.

Pseudosolisia Y.Itô, *The Cactaceae, classification & illustration of cacti*: 477. 1981 nom. illeg. (Art. 52.1).

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Solisia*.

Typ. *Pelecyphora valdeziana* H.Möller.

Syn. *Normanbokea* Kladiwa & Buxb. (1969).

Ref. *Turbinicarpus* Buxb. & Backeb.

Pseudotephrocactus Frič & Schelle, in Frič, *Akklimatisations- und Versuchs-Garten. Bestellzettel* [supplement]: [1]. 1933.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Tephrocactus*.

Typ. Not stated.

Lectotyp. *Opuntia ovata* Pfeiff. Designated by Taylor & Iliff, Nomenclatural notes on Andean *Opuntioideae* (*Cactaceae*), *Bradleya* 14: 17-18-19. 1996.

Ref. *Opuntia* (L.) Mill.

Pseudozygocactus Backeb., Die Diagnosen neuer Gattungen und Untergattungen, *Blätter für Kakteenforschung* 5(6): Zur Systematischen Uebersicht: [5], [17], [19]. 1938.

Etym. From the Greek prefix *pseudo-*, false, and the substantive *Zygocactus*.

Typ. *Rhipsalis epiphyllodes* Campos-Porto & Werderm.

Ref. *Rhipsalis* Gaertn.

Pseudozygocactus (Backeb.) D.R.Hunt (pro subgen. *Schlumbergera* Lem.), NCL updates, etc., *Cactaceae Consensus Initiatives* (26): 18. (Mar) 2012.

Bas. *Pseudozygocactus* Backeb. (1938, pro gen.)

Ref. *Rhipsalis* Gaertn.

Pterocactus K.Schum., Neue Kakteen aus dem Andengebiet, *Monatsschrift für Kakteenkunde* 7(1): 6-9. (Jan) 1897.

Etym. From the Greek *pteron*, wing or feather, and the substantive *Cactus*. A reference to the winged seeds.

Typ. *Pterocactus kuntzei* K.Schum. Autotype (Art. 10.2). The only included species.

Pterocereus T.M.MacDoug. & F.Miranda, Género *Pterocereus* MacDougall y Miranda, *Ceiba* 4(2): 135. 1954.

Etym. From the Greek *pteron*, wing, and the substantive *Cereus*. A reference to the winged stems.

Typ. *Pterocereus foetidus* T.M.MacDoug. & F.Miranda.

Ref. *Cephalocereus* Pfeiff.

Pterogoni Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 32. 1841.

Etym. Based on the name of an included species.

Typ. *Cereus pterogonus* Lem. Autotype (Art. 22.6)

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Pubescentes Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1841*: 42. 1841.

Etym. From the Latin *pubescens*, pubescent, downy, or slightly hairy.

Typ. Not cited.

Lectotyp. *Cactus microdasys* Lehm. Designated by Backeberg, *Cactaceae, Jahrbuch der D.K.G. 1941*(2): 18. 1942.

Ref. *Opuntia* (L.) Mill.

Pubescentes (Salm-Dyck) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* 50(4): 515. (20 Feb) 1908.

Bas. *Pubescentes* Salm-Dyck (1841, pro infragen. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Pubescentes (Salm-Dyck) Backeb., (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.

Bas. *Pubescentes* Salm-Dyck (1841, pro infragen. *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Pubescentes (Salm-Dyck) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 453, 574 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. Pubescentes Salm-Dyck (1841, pro infragen. *Opuntia* (L.) Mill.)

Ref. Opuntia (L.) Mill.

Pubiflora Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. Facheiroa publiflora Britton & Rose = *Cephalocereus ulei* Gürke. Autotype (Art. 10.2, 22.6).

Obs. The type is also that of *Facheiroa* Britton & Rose (1920), the correct name of this taxon at the rank of genus.

Ref. Facheiroa Britton & Rose.

Puebloa Doweld, *Puebloa*, a new genus of *Cactaceae* Juss., *Sukkulenty* **2**(1)[numbered as **1**(2)]: 17, 19-20-23. (25 Jul) 1999.

Typ. Pediocactus bradyi L.D.Benson.

Ref. Echinofossulocactus Lawr.

Pugionacanthae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Echinopsis pugionacantha Boed. Autotype (Art. 22.6).

Ref. Echinopsis Zucc.

Pulchellus N.P.Taylor (pro sect. *Echinocereus* Engelm.), *The genus Echinocereus*: 140. 1985.

Etym. Based on the name of an included species.

Typ. Echinocactus pulchellus Mart.

Ref. Echinocereus Engelm.

Pulvinatae Pfeiff. (pro infragen. *Opuntia* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 154. (Feb) 1837.

Etym. From the Latin *pulvinus*, cushion or pillow.

Typ. Not cited.

Ref. Opuntia (L.) Mill.

Pumilae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 100. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. Opuntia pumila Rose. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Pumili Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 626. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Frailea Britton & Rose (1922, pro gen.).

Typ. Echinocactus cataphractus Dams. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. The epithet *Pumili* could have been from the name of an included species, but it is also appropriately descriptive of all species of this taxon.

Ref. Frailea Britton & Rose.

Puna R.Kiesling, *Puna*, un genero nuevo de *Opuntioideae* (*Cactaceae*), *Hickenia* **1**(55): 289-290. (Jul) 1982.

Rep. Syn. Punae A.Cast. (1943, pro sect. *Opuntia* (L.) Mill.).

Typ. Opuntia clavarioides Pfeiff.

Obs. Published as though a new taxon, but the replaced synonym is fully cited.

Ref. Opuntia (L.) Mill.

Puna (R.Kiesling) Stuppy (pro subgen. *Maihueniopsis* Speg.), Seed characters and the generic classification of the *Opuntioideae* (*Cactaceae*), in Hunt & Taylor, *Studies in the Opuntioideae (Cactaceae)*, *Succulent Plant Research* **6**: 48. 2002.

Bas. Puna R.Kiesling (1982, pro gen.).

Ref. Opuntia (L.) Mill.

Punae A.Cast. (pro sect. *Opuntia* (L.) Mill.), “*Opuntia ruiz-lealii*” Castell. nov. sp., *Lilloa* **9**: 212. 1943.

Etym. From the Quechua *puna*, a name given to the high grassland plateau at the base of the Andes known as the altiplano.

Typ. Not cited.

Lectotyp. Opuntia ruiz-lealii A.Cast. = *Opuntia clavarioides* Pfeiff. Designated by Kiesling, *Hickenia* **1**(55): 289. 1982.

Ref. Opuntia (L.) Mill.

Punotia D.R.Hunt, NCL updates etc, *Cactaceae Systematics Initiatives* (25): 26. (Oct, publ. Nov) 2011.

Etym. Anagram of the substantive *Opuntia*. Also alludes to *Puno*, the name of the department of Peru where it occurs.

Typ. Opuntia lagopus K.Schum.

Ref. Opuntia (L.) Mill.

Pycnacanthae Dicht & Lüthy (pro ser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 15. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. Mammillaria pycnacantha Mart.

Ref. Coryphantha (Engelm.)Lem.

Pycnanthae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 453, 580 (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Opuntia pycnantha Engelm. ex J.M.Coult. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Pygmaeae Backeb. ex Wessner (pro ser. *Lobivia* Britton & Rose), *Lobivia* subgenus *Molli-Lobivia* Wessner subg. nova, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1940 Erster Teil*: 12. (May) 1940.

Etym. From the Greek *pygmaeos*, dwarfish.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Pygmaeocereus H.Johnson, *Cactus news*, in: *Succulent Parade for the indoor gardener*: 14. 1955 nom. inval. (Art. 30.6, 39.1).

Etym. From the Greek *pygmaeos*, dwarfish, and the substantive *Cereus*.

Typ. *Pygmaeocereus akersii* H.Johnson nom. nud. = *Pygmaeocereus bylesianus* Andreae & Backeb.

Ref. *Haageocereus* Backeb.

Pygmaeocereus H.Johnson ex H.Johnson & Backeb., in Backeberg, *Pygmaeocereus* Johnson & Backeb. gen. nov. (*Cactaceae*), *The National Cactus and Succulent Journal* 12(4): 86-87. (Dec) 1957.

Etym. From the Greek *pygmaeos*, dwarfish, and the substantive *Cereus*.

Typ. *Pygmaeocereus bylesianus* Andreae & Backeb.

Ref. *Haageocereus* Backeb.

Pygmaeocereus (H.Johnson & Backeb.) Buxb. (pro subgen. *Arthrocereus* (A.Berger) Backeb.), Gattung *Arthrocereus*, in Krainz, *Die Kakteen* (48-49) CVa: [7]. (15 Jan) 1972.

Bas. *Pygmaeocereus* H.Johnson & Backeb.

Ref. *Haageocereus* Backeb.

Pygmaeocereus (H.Johnson & Backeb.) J.Lodé (pro subgen. *Haageocereus* Backeb.), New combinations, *Cactus-Aventures International* (97): 2. (Jan) 2013.

Bas. *Pygmaeocereus* H.Johnson & Backeb.

Obs. The place of publication of the basionym was only indirectly cited in the form of the place of publication of the type species. This combination is therefore treated as valid here, although rejection is optional on the grounds that the basionym has not been clearly indicated with a full and direct reference as required by Art. 41.5.

Ref. *Haageocereus* Backeb.

Pygmaeolobivia Backeb. (pro subgen. *Lobivia* Britton & Rose), in Backeberg & Knuth, *Kaktus-ABC*: 66, 239-240. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. From the Greek *pygmaeos*, dwarfish, and the substantive *Lobivia*.

Typ. Not cited.

Ref. *Aylosteria* Speg.

Pygmaeolobivia Backeb. (pro subgen. *Mediolobivia* Backeb.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel*, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941 Zweiter Teil*: 35, 76. (Jun) 1942 nom. illeg. (Art. 52.1).

Etym. From the Greek *pygmaeos*, dwarfish, and the substantive *Lobivia*.

Typ. Rebutia haagei Frič & Schelle. = *Echinopsis pygmaea* R.E.Fr.

Syn. Digitorebutia Frič ex Buining (1940).

Ref. Aylosteria Speg.

Pygmaeolobivia (Backeb.) Sída (pro subgen. *Rebutia* K.Schum.), *Rod Rebutia*: 22. 1997.

Bas. Pygmaeolobivia Backeb. (pro subgen. *Lobivia* Britton & Rose).

Ref. Aylosteria Speg.

Pyriformes Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 452, 565 (Jan) 1958
nom. inval. (Art. 39.1).

Etym. Based on the name of the only included species.

Typ. Opuntia pyriformis Rose. Autotype (Art. 10.2, 22.6).

Ref. Opuntia (L.) Mill.

Pyrrhocactus A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: vii, 215.
(Jul-Aug) 1929.

Etym. From the Greek *pyrrhos*, fiery red, and the substantive *Cactus*.

Typ. Not cited.

Lectotyp. Echinocactus strausianus K.Schum. Designated by Backeberg, *Cactaceae
Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 36. (Jun) 1942.

Ref. Eriosyce Phil.

Pyrrhocactus (A.Berger) A.Berger, *Kakteen*: 215, 345. (Jul-Aug) 1929.

Bas. Pyrrhocactus A.Berger (1929, pro subgen. *Echinocactus* Link & Otto).

Obs. Description at subgeneric rank on p.215, then transferred to generic rank on p.345.

Ref. Eriosyce Phil.

Pyrrhocactus (A.Berger) Katt. (pro subsect. *Eriosyce* Phil.), *Eriosyce, Succulent Plant
Research* 1: 25, 34, 117. 1994.

Bas. Pyrrhocactus A.Berger (1929, pro subgen. *Echinocactus* Link & Otto).

Ref. Eriosyce Phil.

Quasitephrocactus Popov, *Tephrocactus weberi* – Svezhy vuzgayd, *Kaktus-Klub* 15(1-2): 13.
(Mar) 2012 nom. illeg. (Art. 52.1).

Typ. Opuntia weberi Speg.

Rep. Syn. Opuntia ser. *Weberianae* Britton & Rose (1919).

Syn. Ursopuntia P.V.Heath (1999).

Obs. Intended as a replacement for *Weberianae* Britton & Rose, in the mistaken belief that
the replacement *Ursopuntia* P.V.Heath was invalidly published.

Ref. Opuntia (L.) Mill.

Quehliana Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39)
CVIf: 5, 7, 11. (1 Jul) 1968.

Etym. Named for an included species.

Typ. Echinocactus quehlianus F.Haage ex Quehl. Autotype (Art. 22.6).

Ref. Gymnocalycium Mittler.

Quiabentia Britton & Rose, *The Cactaceae* 4: 252. (24 Dec) 1923.

Etym. From *quiabento*, the vernacular Brazilian Portuguese name for the plant.

Typ. *Pereskia zehntneri* Britton & Rose.

Ref. *Pereskiopsis* Britton & Rose.

Radicantes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 31. 1841.

Etym. From the Latin *radicans*, rooting, referring to the adventitious stem-roots.

Rep. Syn. *Repentes* Pfeiff. (1837, pro infragen. *Cereus* (L.) Mill.).

Typ. Not cited.

Obs. Presumably introduced to avoid clashing with *Repentes* Haw. (1830, pro sect. *Cereus* (L.) Mill.). However, neither of these homonyms are typified, so their precise applications are unknown.

Ref. *Aporocactus* Lem., *Epiphyllum* Haw., *Selenicereus* (A.Berger) Britton & Rose.

Radicantes (Salm-Dyck) Walp. (pro sect. *Cereus* (L.) Mill.), *Repertorium botanices systematicae* 2: 278. 1843.

Bas. *Radicantes* Salm-Dyck (pro infragen. *Cereus* (L.) Mill.).

Ref. *Aporocactus* Lem., *Epiphyllum* Haw., *Selenicereus* (A.Berger) Britton & Rose.

Radiosae K.Schum. (pro infragen. *Mammillaria* Haw.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 195. (Apr 18) 1894.

Etym. Based on the name of an included species.

Typ. *Mammillaria radiosa* Engelm. = *Cactus viviparus* Nutt.

Ref. *Coryphantha* (Engelm.) Lem.

Ramosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 30. 1841.

Etym. From the Latin *ramosus*, branched.

Typ. Not cited.

Ref. *Acanthocereus* (A.Berger) Britton & Rose, *Cereus* (L.) Mill., *Echinopsis* Zucc.

Ramosissimae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 46. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. *Opuntia ramosissima* Engelm. Autotype (Art. 10.2, 22.6).

Ref. *Opuntia* (L.) Mill.

Ramosissimae (Britton & Rose) Backeb. (pro ser. *Cylindropuntia* (Engelm.) F.M.Knuth), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 14. (Jun) 1942.

Bas. *Ramosissimae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Ramulosae Vaupel (pro infragen. ["Gruppe"] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23. (15 May) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Cereus ramulosus* Salm-Dyck. Autotype (Art. 22.6).

Obs. Repeated in Vaupel, *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 619. (Dec) 1925 & *Die Kakteen* (2): 69. (1 Mar) 1926. Includes the type of *Pseudorhipsalis* Britton & Rose (1923).

Ref. *Rhipsalis* Gaertn.

Raphidocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), *Explanatory diagram of the Austroechinocactinae*: 188. 1957 nom. inval. (Art. 39.1).

Etym. From the Greek *raphis*, needle, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Raphidoparodia Y.Itô (pro subgen. *Parodia* Speg.), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *raphis*, needle, and the substantive *Parodia*.

Typ. Not cited.

Ref. *Parodia* Speg.

Rapicactus Buxb. & Oehme, in Buxbaum, *Rapicactus* Buxb. et Oehme, gen. nov., *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1942 Erster Teil*: 18-24. (Aug) 1942.

Etym. From the Greek *rapum*, turnip, and the substantive *Cactus*.

Typ. *Thelocactus subterraneus* Backeb.

Ref. *Turbinicarpus* Buxb. & Backeb.

Rapicactus (Buxb. & Oehme) Doweld (pro subgen. *Neolloydia*), Amplification of the genus *Neolloydia* Britton & Rose addenda and corrigenda, in Hunt, *Cactaceae Systematics Initiatives* (9): 21. (Jun) 2000.

Bas. *Rapicactus* Buxb. & Oehme.

Ref. *Turbinicarpus* Buxb. & Backeb.

Rathbunia Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 414. (21 Jul) 1909 nom. rej.

Etym. Named for Dr. Richard RATHBUN, Assistant Secretary of the Smithsonian Institution in charge of the U. S. National Museum.

Typ. *Cereus sonorensis* Runge ex K.Schum. = *Cereus alamosensis* J.M.Coult.

Obs. Despite Heath (1992) publishing a full restoration of *Rathbunia* because of its priority by some months, with all appropriate name combinations, this name was rejected against *Stenocereus* (A.Berger) Riccob. in a weakly argued proposal by Taylor & Gibson in 1994. The proposal was recommended in 1995, and adopted by the 16th Botanical Congress of 1999.

Ref. *Stenocereus* (A.Berger) Riccob. nom. cons.

Rathbunia (Britton & Rose) A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 133. (Jul-Aug) 1929 nom. rej.

Bas. *Rathbunia* Britton & Rose (1909, pro gen.)

Ref. *Stenocereus* (A. Berger) Riccob.

×**Rathbunilloca** Mottram, *A contribution to a new classification of the cactus family and index to suprageneric and supraspecific taxa*: 73. (5 Feb) 1990 nom. rej.

Etym. Condensed formula.

Par. *Myrtillocactus* Console × *Rathbunia* Britton & Rose nom. rej.

Ref. ×*Stenilloca* P.V. Heath.

Rauhocereus Backeb., *Descriptiones Cactacearum novarum*: 5. 1956 (early Jan) 1957.

Etym. Named for the German botanist Prof. Werner Hermann Heinrich RAUH (1913-2000), and the substantive *Cereus*.

Typ. *Rauhocereus riosaniensis* Backeb.

Obs. Published as a descriptio generico-specifica (Art. 38.5).

Ref. *Browningia* Britton & Rose.

Rauschiani Kreuz. ex Havlíček (pro ser. *Notocactus* (K. Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 77. 1988 (publ. 1989) (“Rauschianae”) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Notocactus rauschii* Vliet. Autotype (Art. 22.6).

Ref. *Parodia* Speg.

Reblobivia Y. Itô, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. Formula based on the substantives *Rebutia* and *Lobivia*.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Rebulobivia Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 27-28. 1935, and in *Gartenzeitung der Österreichischen Gartenbau-Gesellschaft in Wien* 11: 46. 1935.

Etym. Formula based on the substantives *Rebutia* and *Lobivia*.

Rep. Syn. *Lobirebutia* Frič (1933, pro subgen. *Rebutia* K. Schum.)

Typ. *Rebutia einsteinii* Frič.

Obs. Divided into two divisions without name or rank, typified by *Rebutia haagei* Frič & Schelle and *Rebutia einsteinii* Frič.

Ref. *Aylosteria* Speg.

Rebutia K. Schum., *Rebutia minuscula* K. Sch. Eine neue Gattung der Kakteen, *Monatsschrift für Kakteenkunde* **5**(7): 102-105. (Jul) 1895.

Etym. Named for Pierre REBUT (1830-1898), French vineyard owner and succulent plant nurseryman in Chazay d’Azergues, near Lyon.

Typ. *Rebutia minuscula* K. Schum.

Obs. *Rebutia* was completely abandoned by Schumann himself (*Gesamtbeschreibung* 1898: 290, 380, 395-396) and the type species placed in *Echinocactus* subgen. *Notocactus* K.Schum. Apart from this, no other author has ever questioned its status as a genus.

Rectispinae Backeb. (pro ser. *Parodia* Speg.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 36. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *rectus*, straight, and *spina*, spine.

Typ. *Echinocactus stuemeri* var. *tilcarensis* Werderm. & Backeb. = *Parodia tilcarensis* (Werderm. & Backeb.) Backeb.

Ref. *Parodia* Speg.

Rectispinae Backeb. (pro sub-subsect. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 63. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *rectus*, straight, and *spina*, spine.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Rectispini Backeb. (pro ser. *Ferocactus* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 56. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *rectus*, straight, and *spina*, spine.

Typ. *Echinocactus melocactiformis* DC. = *Echinocactus histrix* DC.

Ref. *Echinofossulocactus* Lawr.

Rectispinosae Backeb. (pro sub-subsect. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 64. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *rectus*, straight, and *spinosa*, spinous.

Typ. Not cited, but includes only the single series *Napinae*, whose type is *Mammillaria napina* J.A.Purpus.

Ref. *Mammillaria* Haw.

Rectispinosae Backeb. (pro ser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3100, 3101. 1961 nom. inval. (Art. 39.1).

Etym. From the Latin *rectus*, straight, and *spinosa*, spinous.

Typ. Not cited, but includes only the single series *Napinae*, whose type is *Mammillaria napina* J.A.Purpus.

Ref. *Mammillaria* Haw.

Rectochilita Buxb. (pro subgen. *Chilita* Orcutt), *Die Gattungen der Mammillarienstufe, Sukkulantenkunde* 5: 23. (May) 1954.

Etym. From the Latin *rectus*, straight, and the substantive *Chilita*.

Typ. Mammillaria multiceps Salm-Dyck = *Cactus proliferus* Mill.

Ref. Mammillaria Haw.

Rectochilita (Buxb.) Buxb. (pro subgen. *Mammillaria* Haw.), Vorschläge zur Wiedervereinigung von Gattungen mit der Gattung *Mammillaria*, *Kakteen und andere Sukkulente* 7(1): 7 (Feb) 1956 nom. inval. (Art. 41.5).

Bas. Rectochilita Buxb. (1954, pro subgen. *Chilita* Orcutt)

Ref. Mammillaria Haw.

Recurvatae Britton & Rose (pro ser. *Coryphantha* (Engelm.) Lem.), *The Cactaceae* 4: 24. (9 Oct) 1923.

Etym. Based on the name of an included species.

Typ. Mammillaria recurvata Engelm. Autotype (Art. 22.6).

Ref. Coryphantha (Engelm.) Lem.

Reductae Backeb. (pro ser. *Opuntia* (L.) Mill.), in Backeberg & Knuth, *Kaktus-ABC*: 52, 127. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. A Latin adjective, *reductus*, reduced.

Typ. Not cited.

Ref. Opuntia (L.) Mill.

Reichenbachia N.P.Taylor (pro sect. *Echinocereus* Engelm.), *The genus Echinocereus*: 105. 1985 (“Reichenbachii”).

Etym. Based on the name of an included species.

Typ. Echinocactus reichenbachii Terscheck ex Walp.

Ref. Echinocereus Engelm.

Reicheocactus Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V.* 1941 *Zweiter Teil*: 39-40, 76. (Jun) 1942.

Etym. Based on the name of the only included species, and the substantive *Cactus*.

Typ. Reicheocactus pseudoreichianus Backeb. = *Echinocactus famatimensis* Speg.

Ref. Echinopsis Zucc.

Reicheocactus (Backeb.) Sida (pro subgen. *Rebutia* K.Schum.), *Rod Rebutia*: 29. 1997.

Bas. Reicheocactus Backeb. (1942, pro gen.).

Ref. Echinopsis Zucc.

Reicheocactus (Backeb.) Sida (pro sect. *Rebutia* K.Schum.), *Rod Rebutia*: 29. 1997.

Bas. Reicheocactus Backeb. (1942, pro gen.).

Ref. Echinopsis Zucc.

Repandi Britton & Rose (pro ser. *Cereus* (L.) Mill.), *The Cactaceae* 1: 4. (21 Jun) 1919 (“Repandae”).

Etym. Based on the name of an included species.

Typ. Cactus repandus L. Autotype (Art. 22.6).

Ref. Cereus (L.) Mill.

Repentes Haw. (pro sect. *Cereus* (L.) Mill.), Decas duodecima novarum plantarum succulentarum, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. 7(38): 110, 117. (Feb) 1830.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Repentes Pfeiff. (pro infragen. *Cereus* (L.) Mill.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 110. (Feb) 1837.

Etym. From the Latin *repens*, crawl.

Typ. Not cited.

Ref. Includes species from several epiphytic genera.

Repentes Backeb. (pro ser. *Haageocereus* Backeb.), *Die Cactaceae* 2: 1164, 1174. (Mar) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Haageocereus repens* Rauh & Backeb. Autotype (Art. 22.6).

Ref. *Haageocereus* Backeb.

×**Rettigara** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 96. 1992.

Etym. Named for Carl RETTIG (1866-1933), cactus grower in Aschersleben, Germany.

Par. *Aporocactus* Lem. × *Epiphyllum* Haw. × *Heliocereus* (A.Berger) Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Carlrettigara* Mottram.

Retusae Dicht & Lüthy (pro ser. *Coryphantha* (Engelm.) Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 14. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Mammillaria retusa* Pfeiff. non Britton & Rose = *Mammillaria elephantidens* Lem.

Obs. *Mammillaria retusa* Pfeiff. was proposed for rejection in Dicht & Lüthy, *Cactaceae Systematics Initiatives* (11): 19. (Apr) 2001. However, proposals need to be made to the General Committee via a paper in the journal *Taxon*, so this proposal has never been ratified.

Ref. *Coryphantha* (Engelm.)Lem.

Rhaphidocephalus Y.Itô (pro subgen. *Notocactus* (K.Schum.) Frič, A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *rhaphis*, needle, and *kephale*, head.

Typ. Not cited.

Ref. *Parodia* Speg.

Rhipsalidopsis Britton & Rose, *The Cactaceae* 4: 208, 209. (24 Dec) 1923.

Etym. From the substantive *Rhipsalis*, and the Latin *-opsis*, -like.

Typ. *Rhipsalis rosea* Lagerh.

Ref. *Rhipsalis* Gaertn.

Rhipsalidopsis (Britton & Rose) Barthlott (pro subgen. *Hattiora* Rose), New names in *Rhipsalidinae*, *Bradleya* **5**: 100. 1987.

Bas. *Rhipsalidopsis* Britton & Rose (1923, pro gen.)

Ref. *Rhipsalis* Gaertn.

Rhipsalidopsis (Britton & Rose) D.R.Hunt (pro subgen. *Schlumbergera* Lem.), NCL updates, etc., *Cactaceae Consensus Initiatives* (26): 18. (Mar) 2012 nom. inval. (Art. 41.5)

Bas. *Rhipsalidopsis* Britton & Rose (1923, pro gen.).

Obs. Page number of basionym omitted.

Ref. *Rhipsalis* Gaertn.

×***Rhipsaliphyllum*** Mottram **nothogen. nov.**

Etym. Condensed formula.

Typ. *Epiphyllum* Haw. × *Rhipsalis* Gaertn.

Rhipsalis Gaertn., *De fructibus et seminibus plantarum* **1**: 137, t.28. 1788 nom. cons.

Etym. From the Greek *rhips*, wicker-work. A reference to the pliant interlacing branches.

Typ. *Rhipsalis cassutha* Gaertn. = *Cassytha baccifera* J.S.Muell.

Obs. One of the list of names presented by Harms to the June 1905 Botanical Congress for conservation over *Hattiora* Adans. (1763) & *Cassytha* Mill. non L. (1768), in a motion of the Congress signed by 15 members and opposed by only 3 delegates.

Rhipsalis (Gaertn.) Spreng. (pro infragen. *Cactus* L. nom. rej.), *Caroli Linnaei systema vegetabilium*, ed. 16 **2**: 496. (Jan-May) 1825 (“*Rhipsalides*”).

Bas. *Rhipsalis* Gaertn. (1788, pro gen.).

Ref. *Rhipsalis* Gaertn.

Rhipsalis (Gaertn.) Miq. (pro subgen. *Hattiora* Adans. nom. rej.), *Genera cactearum*, *Bulletin des Sciences Physiques et Naturelles en Néerlande, rédigé par F. A. W. Miquel, G. J. Mulder et W. Wenckebach* **2**: 116. 1839.

Bas. *Rhipsalis* Gaertn. (1788, pro gen., nom. cons.).

Ref. *Rhipsalis* Gaertn.

Rhipsalis (Gaertn.) Kuntze (pro sect. *Cactus* L. nom. rej.), in Post & Kuntze, *Lexicon generum phanerogamarum*: 87. (Nov) 1903 (“*Ripsalis*”).

Bas. *Rhipsalis* Gaertn. (1788, pro gen., nom. cons.).

Ref. *Rhipsalis* Gaertn.

×***Rhipsaphyllopsis*** Werderm., *Zur Neuheit-Prüfung vorgelegte Züchtungen*, *Kakteenkunde* 1939(1): 11. 1939 (“*Rhipsapyllopsis*”).

Etym. Condensed formula.

Par. *Rhipsalidopsis* Britton & Rose × *Epiphyllopsis* A.Berger.

×***Rhipsophyllum*** The Plant Shop’s Botanical Gardens, *Catalogue* 1982 nom. inval. (H.9.1).

Par. Parentage not stated, but presumably *Rhipsalis* Gaertn. × *Epiphyllum* Haw.

[×*Rhipsophyllum* ‘Peach Elegans’].

Ref. ×*Rhipsaliphyllum* Mottram.

Rhizomatosi K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen Nachträge 1898 bis 1902*: 38. 1903 nom. nud.

Etym. From the Greek *rhizoma*, tree roots, but in botanical Latin refers specifically to underground, more or less horizontal stems.

Typ. *Cereus hypogaeus* F.A.C.Weber. Autotype (Art. 10.2) The only included species.

Ref. *Austrocactus* (A.Berger) Britton & Rose.

Rhodanthae Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 588, 600 (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia rhodantha* K.Schum. = *Opuntia polyacantha* Haw. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Rhodanthae Lüthy (pro ser. *Mammillaria* Haw.), *Taxonomische Untersuchung der Gattung Mammillaria* Haw.: 176. 1995.

Etym. Based on the name of the type species.

Typ. *Mammillaria rhodantha* Link & Otto.

Ref. *Mammillaria* Haw.

Rhodocactus A.Berger (pro subgen. *Pereskia* (L.) Mill.), *Kakteen*: v, 43. 1929 nom. illeg. (Art. 52.1)

Etym. From the Greek *rhode*, rose, and the substantive *Cactus*, for its superficial resemblance to a rose.

Typ. Not cited, but includes the type of *Ahoplocarpus* K.Schum. (1898).

Neotyp. *Pereskia grandifolia* Haw. Designated by Backeberg, *Cactaceae, Jahrbücher der DKG*: 11. 1942.

Syn. *Pereskia* subgen. *Ahoplocarpus* K.Schum. (1898).

Ref. *Pereskia* (L.) Mill.

Rhodocactus A.Berger ex F.M.Knuth, *Den nye kaktusbog*: 102, 105. 1930.

Rep. Syn. *Rhodocactus* A.Berger nom. illeg. (1929, pro subgen. *Pereskia* (L.) Mill.)

Typ. *Pereskia grandifolia* Haw. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Pereskia* (L.) Mill.

Rhombogybocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *rhombos*, spinning-top or wheel, *hybos*, hump, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Rhytidospermae Hochstätter (pro sect. *Pediocactus* Britton & Rose), *Cactaceae-Review* 2(2): 14. (Dec) 1999.

Etym. From the Greek *rhytis*, wrinkle, and *sperma*, seed.

Typ. *Echinocactus sileri* Engelm.

Ref. *Sclerocactus* Britton & Rose.

Rimacactus Mottram, A new genus of *Cactaceae*. *Bradleya* **19**: 75-82. (3 Oct) 2001.

Etym. From the Latin *rima*, crevice, crack or fissure, and the substantive *Cactus*. Refers to the crevicular habit of the type species.

Typ. *Eriosyce laui* Lüthy.

Riojensia Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematicke rodu *Gymnocalycium*, *Fričiana* **1**(1): 7. 1962 nom. nud.

Etym. Based on the name of an included species.

Typ. *Gymnocalycium riojense* Frič ex H.Till & W.Till. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

×***Rittellicereus*** P.V.Heath (pro nothosubgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (A.Berger) Riccob., *Calyx* **5**(3): 101. 1996.

Etym. Condensed formula.

Par. *Stenocereus* subgen. *Nigellicereus* P.V.Heath × *Stenocereus* subgen. *Ritterocereus* (Backeb.) P.V.Heath.

Ref. *Stenocereus* (A.Berger) Riccob.

Ritterocactus Doweld, *Ritterocactus & Peronocactus*: New generic segregates from polyphyletic *Notocactus*. 1. Formal taxonomy and classification, *Sukkulenty* **2**(2): 20. (25 Dec) 1999.

Etym. Named for the German botanical explorer Friedrich RITTER (1898-1989), and the substantive *Cactus*.

Typ. *Echinocactus mammulosus* Lem.

Ref. *Parodia* Speg.

Ritterocactoides Doweld (pro ser. *Brasilicactus* Backeb. nom. illeg.), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* **3**(1-2): 59. 2000 nom. incorr. (Art. 11.4).

Etym. Based on the substantive generic name *Ritterocactus*, with the Greek adjectival suffix *-oides*, -like.

Typ. *Parodia alacriportana* Backeb. & Voll.

Ref. *Parodia* Speg.

Ritterocereus Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V.* **1941 Zweiter Teil**: 47, 76. (Jun) 1942.

Etym. Named for the German botanical explorer Friedrich RITTER (1898-1989), and the substantive *Cereus*.

Typ. *Lemaireocereus standleyi* J.G.Ortega.

Ref. *Stenocereus* (A.Berger) Riccob.

Ritterocereus (Backeb.) P.V.Heath (pro subgen. *Stenocereus* (A.Berger) Riccob.), The reinstatement of *Stenocereus* (Berger) Riccobono, *Calyx* **5**(3): 100. 1996.

Bas. *Ritterocereus* Backeb. (1942, pro gen.).

Ref. *Stenocereus* (A.Berger) Riccob.

Robustae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 191. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia robusta* J.C.Wendl. ex Pfeiff. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Robustae (Britton & Rose) Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 18. (Jun) 1942.

Bas. *Robustae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Robustae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 451, 532 (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Robustae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Robusti Pfeiff. (pro infragen. *Cereus* Mill. in § *Cereastri* infragen. *Glabri* Pfeiff. nom. inval.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 86. (Feb) 1837 nom. nud.

Etym. A Latin adjective, *robustus*, robust.

Typ. Not cited, but includes the type of *Cereus* Mill.

Ref. *Cereus* (L.) Mill.

Robustispina Dicht & Lüthy (pro sect. *Coryphantha* (Engelm.)Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 9. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Mammillaria robustispina* A.Schott ex Engelm.

Ref. *Coryphantha* (Engelm.)Lem.

Rodentiophila F.Ritter, in Backeberg, *Die Cactaceae* 1: 56, 78. (Dec) 1958; & *Die Cactaceae* 3: 1799. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. From the active present participle of the Latin *rodere*, to gnaw, and *-phila*, -loving. A reference to the rodent dispersed fruits.

Typ. *Rodentiophila atacamensis* F.Ritter nom. nud. = *Eriosyce rodentiophila* F.Ritter.

Obs. Name first published in Winter, *Kakteen Samen*: 16. 1957 nom. inval. (Art. 30.6, 39.1).

Ref. *Eriosyce* Phil.

Rooksbya Backeb. (pro subgen. *Carnegiea* Britton & Rose), *Nova genera et subgenera, Cactus and Succulent Journal* (US) 22(5): 154. (Sep-Oct) 1950.

Etym. Named for the American journalist Ellen Maria ROOKSBY (1873-1952), editor of *Desert Plant Life*.

Typ. *Cereus euphorbioides* Haw.

Ref. *Cephalocereus* Pfeiff.

Rooksbya (Backeb.) Backeb., *Die Cactaceae* 1: 58, 83. (Dec) 1958 nom. inval. (Art. 41.5).

Bas. *Rooksbya* Backeb. (1950, pro subgen. *Carnegiea* Britton & Rose).

Ref. *Cephalocereus* Pfeiff.

Rooksbya (Backeb.) Backeb., *Die Cactaceae* 4: 2165. (15 Jul) 1960.

Bas. *Rooksbya* Backeb. (1950, pro subgen. *Carnegiea* Britton & Rose).

Ref. *Cephalocereus* Pfeiff.

Roseae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (2): 66. (1 Mar) 1926 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Rhipsalis rosea* Lagerh. Autotype (Art. 22.6).

Obs. Includes the type of *Gaertnerianae* Vaupel (1925), and has the same type as *Rhipsalidopsis* Britton & Rose (1923, pro gen.).

Ref. *Rhipsalis* Gaertn.

Roseia Frič, *Zivot v Prirode* 29(1): 15 (fig), & 29(7): 9. 1925.

Etym. Named for the American botanist Joseph Nelson ROSE (1862-1928).

Typ. *Roseia castaneda* Frič = *Echinocactus brevihamatus* Engelm.

Obs. Zázvorka & Sedivy (1993: 70) considered this taxon invalid, but presumably they meant illegitimate, because they refer to it as being a later homonym of *Rosea* Fabricius (1759), *Rosea* Martius (1826) and *Rosea* Klotzsch (1853). Frič himself abandoned the name in Kreuzinger, *Verzeichnis* (1935: 9) in favour of *Ancistrocactus* Britton & Rose.

Ref. *Sclerocactus* Britton & Rose.

Roseiani Kunzmann (pro subser. *Echinocereus* Engelm.), *Erweiterung der Einteilung der Gattung Echinocereus Engelm., Kakteen und andere Sukkulente* 36(4): 76. (Apr) 1985.

Etym. Based on the name of an included species.

Typ. *Echinocereus rosei* Wooton & Standl. = *Echinocereus triglochidiatus* Engelm.

Ref. *Echinocereus* Engelm.

Roseocactus A.Berger, *Roseocactus – A new genus of Cactaceae, Journal of the Washington Academy of Sciences* 15(3): 43-45-46-48. (4 Feb) 1925.

Etym. Named for the American botanist Joseph Nelson ROSE (1862-1928), and the substantive *Cactus*.

Typ. *Mammillaria fissurata* Engelm.

Ref. *Ariocarpus* Scheidw.

Roseocactus (A.Berger) W.T.Marshall (pro subgen. *Ariocarpus* Scheidw.), *Revision of the genus Ariocarpus, Cactus and Succulent Journal of the Cactus and Succulent Society of America* 18(4): 55-56. (Apr) 1946.

Bas. *Roseocactus* A.Berger (1925, pro gen.).

Ref. *Ariocarpus* Scheidw.

Roseocereus Backeb. (pro subgen. *Eriocereus* (A.Berger) Backeb.), *Systematische Übersicht, Blätter für Kakteenforschung* 1(3): [2]. 1934 nom. nud.

Etym. Named for the American botanist Joseph Nelson ROSE (1862-1928), and the substantive *Cereus*.

Typ. *Cereus tephracanthus* Labour.

Ref. *Echinopsis* Zucc.

Roseocereus Backeb., Systematische Übersicht, *Blätter für Kakteenforschung* 5(6): [6], [17], [19]. 1938.

Etym. Named for the American botanist Joseph Nelson ROSE (1862-1928), and the substantive *Cereus*.

Typ. *Cereus tephraacanthus* Labour.

Ref. *Echinopsis* Zucc.

Roseocereus (Backeb.) A.R.Franck (pro sect. *Harrisia* Britton), in Franck & al., Phylogeny, biogeography, and infrageneric classification of *Harrisia*, *Systematic Botany* 38(1): 218. 2013.

Bas. *Roseocereus* Backeb. (1938, pro gen.)

Ref. *Echinopsis* Zucc.

Rossianae Backeb. (pro ser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3098, 3100. 1961 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Mammillaria rossiana* Heinrich. Autotype (Art. 22.6).

Obs. Includes only two species, the type and *Mammillaria pilcayensis* Bravo.

Ref. *Mammillaria* Haw.

Rostrati K.Schum. (pro infragen. *Cereus* (L.) Mill.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 179. (Apr 18) 1894.

Etym. Based on the name of an included species.

Typ. *Cereus rostratus* Lem. = *Cereus hamatus* Scheidw. ex Pfeiff. Autotype (Art. 22.6).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Rotundisquamae Buxb. (pro ser. *Browningia* Britton & Rose), Gattung *Browningia*, in Krainz (ed.), *Die Kakteen* (31-32) CIV: 3, 7. (1 Nov) 1965.

Etym. From the Latin *rotundus*, rounded, and *squama*, scale. A reference to the broad, rounded receptacle and pericarpel scales.

Typ. *Gymnanthocereus altissimus* F.Ritter.

Ref. *Browningia* Britton & Rose.

×**Rowleyara** P.V.Heath, Errors in the ESA Directory, *Calyx* 1(2): 36. 1992.

Etym. Named for British botanist Gordon D. ROWLEY (1921-).

Par. *Epiphyllum* Haw. × *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose. [×*Rowleyara* ‘Coopermannii’ unest. (Cult. Art. 21.11)].

Ref. ×*Seleniphyllum* Backeb.

Royeniani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 635, 636. (Dec) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of the only included species.

Typ. *Cactus royeri* L. Autotype (Art. 22.6).

Syn. *Cereus* infragen. *Crenulati* Salm-Dyck (1841).

Ref. *Cereus* (L.) Mill.

Rubicapita Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 314. 1841 ("Rubicapites").

Etym. From the Latin *rubus*, red, and *caput*, head (pl. *capita*). A reference to the reddish tops.
Typ. Not cited.

Ref. *Mammillaria* Haw.

Rubriflorae Engelm. (pro infragen. *Mammillaria* Haw.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 12. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 268. 1857] nom. nud..

Etym. A Latin compound adjective, from *ruber*, red, and *flos*, flower.

Typ. Not cited.

Ref. *Coryphantha* Engelm.

Rubriflorae Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 42. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 298. 1857] nom. nud.

Etym. A Latin compound adjective, from *ruber*, red, and *flos*, flower.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Rubriflori Engelm. (pro infragen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 23. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 279. 1857] nom. nud.

Etym. A Latin compound adjective, from *ruber*, red, and *flos*, flower.

Typ. Not cited.

Ref. *Echinocereus* Engelm.

Rubro-faucinati Backeb. (pro ser. *Astrophytum* Lem.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 55. (Jun) 1942 nom. inval. (Art. 22.2).

Etym. From the Latin *ruber*, red, *fauces*, upper throat, and the possessive adjectival suffix *-atus*.

Typ. *Echinocactus asterias* Karw. ex Zucc.

Ref. *Astrophytum* Lem.

Saboeae Doweld (pro ser. *Cochemiea* (K.Brandege) Walton), *Nomenclatural adjustments in Cactaceae II, Sukkulenty* 3(1-2): 39. 2000.

Etym. Based on the name of an included species.

Typ. *Mammillaria saboeae* Glass.

Ref. *Mammillaria* Haw.

Sacharosa Doweld (pro subsect. *Pereskia* (L.) Mill.), A system of classification of the genus *Pereskia* Mill., *Byulleten' Moskovskogo Obshchestva Ispytatelej Prirody, Otdel Biologicheskij* 109(4): 46. 2004.

Etym. Based on the name of an included species.

Typ. *Pereskia sacharosa* Griseb.

Ref. *Pereskia* (L.) Mill.

Sagliones Backeb. ex Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 7, 11. (1 Jul) 1968.

Etym. Based on the name of an included species.

Typ. *Echinocactus saglionis* J.-F.Cels. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Sagliones Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium*, *Kaktusar* 5(9): 106. 1934 (“saglione”) nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocactus saglionis* J.-F.Cels. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Saglionia Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom.inval. (Art. 37.1, 39.1).

Etym. Named for an included species.

Typ. *Echinocactus saglionis* J.-F.Cels. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Saglionia Schütz ex Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 8, 11. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus saglionis* J.-F.Cels.

Obs. Spelling unnecessarily corrected to *Saglioni*ana in Krainz (ed.), *Die Kakteen* (55-56) Korrekturen und Ergänzungen (5): 1. (3 Dec) 1973.

Ref. *Gymnocalycium* Mittler.

Saglionia (Buxb.) Schütz (pro sect. *Gymnocalycium* Mittler), Rod *Gymnocalycium* Pfeiff., *Friciana* 7(46): 8-9, 12-13. 1968 (publ. 1969).

Bas. *Saglioni*a Buxb. (1968, pro ser. *Gymnocalycium* Mittler).

Obs. Lacking a basionym citation as it was published as a new taxon, but treated as an error to be corrected since all other conditions for valid publication were otherwise fulfilled (Art. 41.8).

Ref. *Gymnocalycium* Mittler.

Salicornioides Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), *Die Kakteen. Monographie der Cactaceae* (1): 23, 39. (15 May) 1925.

Etym. Based on the name of an included species.

Typ. *Rhipsalis salicornioides* Haw. Autotype (Art. 22.6).

Obs. Description repeated in Vaupel, Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 618, 619. (Dec) 1925. Based on the same type as the taxa *Hariota* DC. nom. illeg. & *Hati*ora Rose.

Ref. *Rhipsalis* Gaertn.

Salinenses Dicht & Lüthy (pro ser. *Coryphantha* (Engelm.)Lem.), A new conspectus of the genus *Coryphantha*, *Cactaceae Systematics Initiatives* (11): 15. (Apr) 2001.

Etym. Based on the name of an included species.

Typ. *Echinocactus salinensis* Poselg.

Ref. *Coryphantha* (Engelm.)Lem.

Salm-Dyckiani Vaupel (pro infragen. [“Gruppe”] *Echinocereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 645. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus salm-dyckianus* Scheer. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Salmianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 73. (21 Jun) 1919.

Etym. Based on the name of an included species.

Rep. Syn. *Frutescentes* K.Schum. (1898, pro infragen. *Opuntia* (L.) Mill.).

Typ. *Opuntia salmiana* C. de Parm. ex Pfeiff. Autotype (Art. 22.6).

Obs. Excluded one of Schumann’s three species included in *Frutescentes*.

Ref. *Opuntia* (L.) Mill.

Salmianae (Britton & Rose) Backeb. (pro subser. *Austrocyliandropuntia* Backeb.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 13. (Jun) 1942.

Bas. *Salmianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Salmianae (Britton & Rose) Backeb. (pro ser. *Austrocyliandropuntia* Backeb.), *Die Cactaceae* **1**: 138. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Salmianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Salmiopuntia Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 41. 1935 nom. inval. (Art. 39.1).

Etym. Based on the name of the type species, *salmiana*, and the substantive *Opuntia*.

Rep. Syn. *Salmianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.) without citation.

Typ. *Opuntia salmiana* Pfeiff. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Salmiopuntia Frič ex Guiggi, *Cactology* **2** Suppl.: 2. (May) 2011 nom. illeg. (Art. 52.1).

Etym. Based on the name of the type species, *salmiana*, and the substantive *Opuntia*.

Rep. Syn. *Salmianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Typ. *Opuntia salmiana* Pfeiff.

Syn. *Salmonopuntia* P.V.Heath (1999).

Obs. An attempted validation of Frič’s name, published as new taxon, but effectively a replacement for *Salmianae* Britton & Rose. Intended as a replacement for *Salmonopuntia* P.V.Heath in the mistaken belief that that had been invalidly published.

Ref. *Opuntia* (L.) Mill.

Salmonopuntia P.V.Heath, Three new generic names in the *Cactaceae*, *Calyx* **6**(2): 41-42. (Dec) 1999.

Etym. From the root of the genitive *Salmonis* of the noun *Salmo*, presumed to be the origin of the 'Salm' in 'Salm-Dyck', and the substantive name *Opuntia*.

Rep. Syn. Salmianae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Salpingolobivia Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 188. 1957.

Etym. From the Greek *salpinx*, war-trumpet, and the substantive *Lobivia*.

Typ. Echinopsis aurea Britton & Rose.

Ref. Echinopsis Zucc.

×***Salpingolobiviopsis*** Y.Itô, *Illustration of flower-cacti*: 6, 9, 48. 1967.

Etym. Condensed formula.

Par. Salpingolobivia Y.Itô × *Echinopsis* Zucc.

Ref. Echinopsis Zucc.

Samaipaticereus Cárdenas, New Bolivian cacti, III, *Cactus and Succulent Journal of the Cactus and Succulent Society of America* **24**(5): 141-143. (Sep-Oct) 1952.

Etym. Named for the town of *Samaipata*, Dept. Santa Cruz, Bolivia.

Typ. Samaipaticereus corroanus Cárdenas. Autotype (Art. 10.2). The only included species.

Ref. Haageocereus Backeb.

Sanguiniflorae Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* **3**: 1378, 1467. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Lobivia sanguiniflora Backeb. Autotype (Art. 22.6).

Ref. Echinopsis Zucc.

Sarmentosae Salm-Dyck (pro infragen. *Rhipsalis* Gaertn.), *Cactaeae in horto dykensi cultae anno 1844*: 40. 1845.

Etym. Based on the name of an included species.

Typ. Rhipsalis sarmentacea Otto & A.Dietr. = *Cereus lumbricoides* Lem. Autotype (Art. 10.2). The only included species.

Ref. Rhipsalis Gaertn.

Sarmentosae (Salm-Dyck) K.Schum. (pro ser. *Rhipsalis* Gaertn.), *Cactaceae*, in Martius, *Flora Brasiliensis* **4**(2): 269. (1 Sep) 1890.

Typ. Sarmentosae Salm-Dyck (1845, pro infragen. *Rhipsalis* Gaertn.).

Ref. Rhipsalis Gaertn.

Scabrosemineum Demaio, Barfuss, R.Kiesling, & Chiapella (pro subgen. *Gymnocalycium* Mittler), Molecular phylogeny of *Gymnocalycium* (*Cactaceae*): Assessment of alternative infrageneric systems, a new subgenus, and trends in the evolution of the genus, *American Journal of Botany* **98**(11): 1849. (Oct) 2011.

Etym. From the Latin *scaber*, rough, and *semen*, seed.

Typ. *Echinocactus monvillei* Lem.

Ref. *Gymnocalycium* Mittler.

Scheerianae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 159. (21 Jun) 1919.

Etym. Based on the name of the only included species, with an adjectival suffix.

Typ. *Opuntia scheeri* F.A.C.Weber. Autotype (Art. 10.2, 22.6).

Ref. *Opuntia* (L.) Mill.

Scheerianae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 452, 548. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Scheerianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Scheeriani Backeb. (pro ser. *Echinocereus* Engelm.), *Die Cactaceae* 3: 1972, 1990. (15 Jul) 1960 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Cereus scheeri* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

×***Schickara*** Mordhorst, Intergenerische Kakteenhybriden innerhalb der *Trichocereinae*. *Kakteen und andere Sukkulente* 62(9): 228. 2011.

Etym. Named for the hybridist and *Echinopsis* specialist Bob SCHICK.

Par. *Cleistocactus* Lem. × *Echinopsis* Zucc. × *Matucana* Britton & Rose.

Schickendantziana Backeb. (pro ser. *Gymnocalycium* Mittler), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 39. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus schickendantzii* F.A.C.Weber.

Ref. *Gymnocalycium* Mittler.

Schickendantziana Backeb. (pro ser. *Gymnocalycium* Mittler), *Die Cactaceae* 3: 1698, 1776. (mid-Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Echinocactus schickendantzii* F.A.C.Weber. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Schickendantziana Backeb. ex Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: [8-9], [12]. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus schickendantzii* F.A.C.Weber.

Obs. Spelling unnecessarily corrected to *Schickendantzianae* in Krainz (ed.), *Die Kakteen* (55-56) Korrekturen und Ergänzungen (5): 1. (3 Dec) 1973.

Ref. *Gymnocalycium* Mittler.

Schickendantziana Backeb. ex Buxb. (pro subser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: [9], [12]. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus schickendantzii* F.A.C.Weber.

Ref. *Gymnocalycium* Mittler.

Schickendantziana (Buxb.) H.Till (pro subsect. *Gymnocalycium* Mittler), Neuordnung der Gattung *Gymnocalycium*, *Gymnocalycium* **14**(2): 400, 401. (May) 2001.

Bas. *Schickendantziana* Buxb. (1968, pro ser. *Gymnocalycium* Mittler).

Ref. *Gymnocalycium* Mittler.

Schickendantzii Backeb. (pro infragen. [“skupina”] *Gymnocalycium* Mittler), *Gymnocalycium*, *Kaktusar* **5**(9): 105. 1934 nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocactus schickendantzii* F.A.C.Weber. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

×***Schlumbephyllum*** Süplie, *Schlumbergera: the directory of species and hybrids*: [3]. (Jan) 2000.

Etym. Condensed formula.

Par. *Epiphyllum* Haw. × *Schlumbergera* Lem.

Ref. ×*Rhipsaliphyllum* Mottram.

Schlumbergera Lem., *Miscellanées*, *L'illustration horticole* **5**: 24-25. Apr 1858.

Etym. Named for Frédéric SCHLUMBERGER (1823-1893), a Belgian horticulturist.

Typ. *Schlumbergera epiphyllodes* Lem. = *Epiphyllum russellianum* W.Hook. Autotype (Art. 10.2). The only included species.

Ref. *Rhipsalis* Gaertn.

Schlumbergera (Lem.) A.Berger (pro subgen. *Epiphyllum* Haw.), *Kakteen*: vi, 97. (Jul-Aug) 1929.

Bas. *Schlumbergera* Lem. (1858, pro gen.).

Ref. *Rhipsalis* Gaertn.

×***Schlumbergeranthus*** Doweld, Re-classification of *Rhipsalideae*, a polyphyletic tribe of the *Cactaceae* Durande, *Sukkulenty* **4**(1-2): 37. (Jan) 2003.

Par. *Epiphyllanthus* A.Berger × *Schlumbergera* Lem.

Ref. *Rhipsalis* Gaertn.

×***Schlumbergolychnia*** D.R.Hunt, Noddy's new periwinkle, *The Cactus and Succulent Journal of Great Britain* **40**(3): 63. (Aug) 1978 nom. fict.

Etym. Condensed formula.

Par. *Schlumbergera* Lem. × *Eulychnia* Phil.

×***Schlumbergopsis*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1**(3): 127. 1992.

Etym. Condensed formula.

Par. Rhipsalidopsis Britton & Rose × *Schlumbergera* Lem.

Ref. Rhipsalis Gaertn.

×***Schlumisocactus*** Süpplie, *Schlumbergera: the directory of species and hybrids*: [3]. (Jan) 2000.

Etym. Condensed formula.

Par. Disocactus Lindl. × *Schlumbergera* Lem.

Ref. ×Rhipsaliphyllum Mottram.

Schottiani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 636, 637. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Cereus schottii Engelm. Autotype (Art. 22.6).

Obs. Has the same type as *Cereus* subgen. *Lophocereus* A.Berger (1905).

Ref. Cephalocereus Pfeiff.

Schumanniana Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 631, 632. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Bartschella Britton & Rose (1923, pro gen.).

Typ. Mammillaria schumannii Hildm. Autotype (Art. 7.4, 22.6). Same as the replaced synonym.

Ref. Mammillaria Haw.

×***Sclerinoereus*** G.D.Rowley, *Teratopia*: 105, 124-125, 280. 2006.

Etym. Condensed formula.

Par. Echinocereus Engelm. × *Sclerocactus* Britton & Rose.

Sclerocactus Britton & Rose, *The Cactaceae* **3**: 78, 212. (12 Oct) 1922.

Etym. From the Greek *skleros*, hard or cruel, and the substantive *Cactus*. Refers to the fierce spination.

Typ. Echinocactus polyancistrus Engelm. & J.M.Bigelow.

Sclerocactus (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: viii, 249. (Jul-Aug) 1929.

Bas. Sclerocactus Britton & Rose (1922, pro gen.).

Ref. Sclerocactus Britton & Rose.

Sclerocactus (Britton & Rose) N.P.Taylor (pro subgen. *Ferocactus* Britton & Rose), Notes on *Ferocactus* B. & R., *The Cactus and Succulent Journal of Great Britain* **41**(4): 90. (Nov) 1979.

Bas. Sclerocactus Britton & Rose (1922, pro gen.).

Ref. Sclerocactus Britton & Rose.

Sclerocactus (Britton & Rose) Halda (pro sect. *Pediocactus* Britton & Rose), A new system of the genus *Pediocactus* Britton & Rose, *Acta Musei Richnoviensis, Sect. Natur.* **5**(1): 14. 1998.

Bas. Sclerocactus Britton & Rose (1922, pro gen.).

Ref. Sclerocactus Britton & Rose.

Scopaei Lawr. (pro sect. *Echinocactus* Link & Otto), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 **6**: 316. 1841 ("Scopaeae")

Etym. Named for an included species.

Typ. Cactus scopa Sprengel. Autotype (Art. 22.6).

Ref. Parodia Speg.

Scopaei (Lawr.) Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 74. 1988 (publ. 1989) ("Scopanae") nom. inval. (Art. 41.5).

Bas. Scopaei Lawr. (1841, pro sect. *Echinocactus* Link & Otto).

Ref. Parodia Speg.

Scopaei (Lawr.) W.Prauser (pro subser. *Notocactus* (K.Schum.) Frič), Die Pflanzengruppe der *Setacei* Teil II: Taxonomische Neubestimmungen, *Internoto* **22**(1): 13-14. (Jan) 2001 ("Scopae") nom. inval. (Art. 41.5).

Bas. Scopaei Lawr. (1841, pro sect. *Echinocactus* Link & Otto).

Ref. Parodia Speg.

Scopacactus Doweld (pro subgen. *Notocactus* (K.Schum.) Frič), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulentny* **3**(1-2): 55. 2000.

Etym. Based on the name of the type species, and the substantive *Cactus*.

Rep. Syn. Scopaei Lawr. (1841, pro sect. *Echinocactus* Link & Otto).

Typ. Cactus scopa Sprengel. Autotype (Art. 22.6). Same as the replaced synonym.

Ref. Parodia Speg.

Scoparebutia Frič, *Rebotioideae*: [3]. 1936 nom. inval. (Art. 39.1).

Etym. From the Latin *scopa*, twig, but here referring to the irregular brush-like spination, and the substantive *Rebutia*.

Typ. Not cited.

Ref. Echinopsis Zucc.

Scoparebutia Frič ex Buining, *Rebutieae* A. V. Fric en K. Kreuzinger III, *Succulenta* **20**(4): 55. (Apr) 1938 nom. inval. (Art. 39.1).

Etym. From the Latin *scopa*, twig, but here referring to the irregular brush-like spination, and the substantive *Rebutia*.

Typ. Not cited.

Ref. Echinopsis Zucc.

Scoparebutia Frič ex Buining (pro subgen. *Hymenorebutia* Buining), Studies over *Rebutia*, *Lobivia* en *Echinopsis* I, *Succulenta* **21**(9): 103. (Sep) 1939 nom. inval.

Etym. From the Latin *scopa*, twig, but here referring to the irregular brush-like spination, and the substantive *Rebutia*.

Typ. *Echinopsis densispina* Werderm.

Ref. *Echinopsis* Zucc.

×***Seleliocereus*** Guillaumin, *Plantes utiles II, Plantes grasses*: 51. 1937.

Etym. Condensed formula.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniphyllum* Backeb.

×***Seleniaporus*** G.D.Rowley, Genealogy of the large-flowered cactus hybrids, *Epiphytes* 4(1): 13. (Jul) 1972 nom. inval. (Art. H.6.2).

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniporocactus* G.D.Rowley.

Selenicereus A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 76. (31 May) 1905.

Etym. From the Greek *selene*, moon, and the substantive *Cereus*.

Typ. Not cited.

Lectotyp. *Cactus grandiflorus* L. Designated by Britton & Rose, *Contributions from the U.S. National Herbarium* 12(10): 429. (21 Jul) 1909.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Selenicereus (A.Berger) Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* 12(10): 429. (21 Jul) 1909.

Bas. *Selenicereus* A.Berger (pro subsect. *Cereus* (L.) Mill.).

Selenicereus (A.Berger) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 110. (Jul-Aug) 1929.

Bas. *Selenicereus* A.Berger (pro subsect. *Cereus* (L.) Mill.).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

×***Seleniopsis*** G.D.Rowley, Intergeneric hybrids in *Cactaceae* – an update, *Cactaceae Systematics Initiatives* (18): 13. (Jul) 2004.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Selenicereus* (A.Berger) Britton & Rose.

×***Seleniphyllum*** G.D.Rowley ex Backeb., *Die Cactaceae* 2: 737. (Mar) 1959.

Etym. Condensed formula.

Par. *Epiphyllum* Haw. × *Selenicereus* (A.Berger) Britton & Rose.

×***Seleniporocactus*** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* 37(3): 79. (Sep) 1982.

Etym. Condensed formula.

Par. *Aporocactus* Lem. × *Selenicereus* (A.Berger) Britton & Rose.

×**Selenirisia** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(3): 79. (Sep) 1982.

Etym. Condensed formula.

Par. *Harrisia* Britton × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniopsis* G.D.Rowley

×**Selenochia** G.D.Rowley, Intergeneric hybrids in succulents, *National Cactus and Succulent Journal* **37**(3): 79. (Sep) 1982 (“×Selenocha”).

Etym. Condensed formula.

Par. *Nopalxochia* Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose.

Obs. Spelling corrected in *National Cactus and Succulent Journal* **37**(4): 119. (Dec) 1982.

Ref. ×*Seleniphyllum* Backeb.

Seniles Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 631, 632. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Mamillopsis* E.Morren (1874, pro sect. *Mammillaria* Haw.)

Typ. *Mammillaria senilis* Hartw. Autotype (Art. 7.4, 22.6). Same as the replaced synonym.

Ref. *Mammillaria* Haw.

Seniles Backeb. (pro ser. *Rebutia* K.Schum.), *Die Cactaceae* **3**: 1534, 1535-1536. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Rebutia senilis* Backeb. Autotype (Art. 22.6).

Ref. *Rebutia* K.Schum.

Seniles (Vaupel) Doweld (pro ser. *Cochemiea* (K.Brandegee) Walton), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 39. 2000.

Bas. *Seniles* Vaupel (1925, pro infragen. *Mammillaria* Haw.).

Typ. *Mammillaria senilis* Hartw.

Obs. This was published as a new taxon with no basionym cited. As all the conditions for valid publication of the name of a new taxon are in place, it is treated as a correctable error under Art. 41.8d.

Ref. *Mammillaria* Haw.

Sericocactus Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 223, 293-294. 1957.

Etym. From the Greek *serikos*, silky, and the substantive *Cactus*.

Typ. *Echinocactus haselbergii* F.Haage ex Rümpler.

Ref. *Parodia* Speg.

Serpentes Pfeiff. (pro infragen. *Cereus* (L.) Mill.), Borschlag zu einer neuen natürlichen Unordnung der Cacteen, *Allgemeine Gartenzeitung* **3**(40): 315. (3 Oct) 1835 nom. nud.

Etym. From the active present participle of the Latin *serpere*, to creep.

Typ. Not cited.

Obs. An empty name with no cited species but believed to include species from several epiphytic genera. The name was subsequently abandoned by Pfeiffer (1837: 110) in favour of *Repentes* Haw. (1830).

Serpentes Pfeiff. ex Lem. (pro infragen. *Cereus* (L.) Mill.), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 59, 77. (Feb) 1839.

Etym. From the active present participle of the Latin *serpere*, to creep.

Typ. Not cited.

Ref. *Hylocereus* (A.Berger) Britton & Rose, *Selenicereus* (A.Berger) Britton & Rose.

Serpentini Salm-Dyck ex DC. (pro infragen. *Cereus* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* 3: 467. (Mar) 1828.

Etym. Based on the name of an included species.

Typ. *Cactus serpentinus* Lag. & Rodr. Autotype (Art. 22.6).

Obs. Repeated by Vaupel, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 640, 642. (Dec) 1925.

Ref. *Nyctocereus* (A.Berger) Britton & Rose.

Setaceae Salm-Dyck (pro sect. *Opuntia* (L.) Mill.), *Hortus Dyckensis*: 186, 358-359. 1834.

See also *Index plantarum succulentarum in horto Dyckensi cultarum anno 183*: 60. 1834 nom. nud. & *Cactaeae in horto Dyckensi cultae. Anno 1841*: 44. 1841 nom. inval. (Art. 22.1).

Etym. From the Latin *setaceus*, bristly.

Typ. Not cited. Includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. sect. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Setaceae Lawr. (pro sect. *Mammillaria* Haw.), in Loudon, *Gardeners Magazine and Register of Rural Domestic Improvement*, Ser. 3 6: 313. 1841.

Etym. From the Latin adjective *setaceus*, bristly.

Typ. Not cited.

Lectotyp. *Mammillaria bicolor* Lehm. = *Mammillaria geminispina* Haw. Designated by Heath, *Journal of the Mammillaria Society* 28(3): 26. 1988.

Ref. *Mammillaria* Haw.

Setacei Kreuz. (pro infragen. *Notocactus* (K.Schum.) Frič), *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 22. (31 Apr) 1935 nom. inval. (Art. 39.1).

Etym. From the Latin adjective *setaceus*, bristly.

Typ. Not cited.

Ref. *Parodia* Speg.

Setacei Kreuz. ex Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 74. 1988 (publ. 1989) nom. inval. (Art. 39.1).

Etym. From the Latin adjective *setaceus*, bristly.

Typ. Not cited.

Lectotyp. *Echinocactus concinnus* H.B.Monv. Designated by Prauser, *Internoto* 22(1): 6-7. 2001.

Ref. *Parodia* Speg.

Seticereus Backeb., *Seticereus* Bckbg. (1937), *Blätter für Kakteenforschung* 4(11): [1]. 1937.
Etym. From the Latin *seta*, bristle, and the substantive *Cereus*.

Rep. Syn. *Binghamia* Backeb. nom. illeg. [non Britton & Rose nec A. Berger] (1934, pro gen.).

Typ. *Cactus humboldtii* Humb., Bonpl. & Kunth. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. A Latin diagnosis appeared later in *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 75. (Jun) 1942, although not required for validation.

The type was cited in 1942 as *Cactus icosagonus* Humb., Bonpl. & Kunth, a name misapplied by Backeberg for the plant he had first correctly called *Cactus humboldtii* Humb., Bonpl. & Kunth.

Ref. *Cleistocactus* Lem.

Seticleistocactus Backeb., *Descriptiones Cactacearum novarum (et combinationes novae)* III: 13. 1963.

Etym. From the Latin *seta*, bristle, and the substantive *Cleistocactus*.

Typ. *Cleistocactus piraymirensis* Cárdenas.

Ref. *Cleistocactus* Lem.

×**Setidenmoza** Backeb., *Die Cactaceae* 2: 991. (Mar) 1959.

Etym. Condensed formula.

Par. *Denmoza* Britton & Rose × *Seticereus* Backeb. [×*Setidenmoza icosagonoides* Backeb. nom. nud.].

Ref. *Cleistocactus* Lem.

Setiechinopsis Backeb. (pro subgen. *Echinopsis* Zucc.), Systematische Übersicht, *Blätter für Kakteenforschung* 5(6): [6], [11], [19]. 1938 nom. inval. (Art. 39.1).

Etym. From the Latin *seta*, bristle, and the substantive *Echinopsis*.

Typ. *Echinopsis mirabilis* Speg.

Ref. *Echinopsis* Zucc.

Setiechinopsis Backeb., (pro subgen. *Echinopsis* Zucc.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 31, 75. (Jun) 1942.

Etym. From the Latin *seta*, bristle, and the substantive *Echinopsis*.

Typ. *Echinopsis mirabilis* Speg.

Obs. Another Latin diagnosis appeared later in Backeberg, *Nova genera et subgenera*, *Cactus and Succulent Journal* (US) 22(5): 153. (Sep-Oct) 1950, but it is superfluous for validation.

Ref. *Echinopsis* Zucc.

Setiechinopsis (Backeb.) de Haas, *Succulenta* 22(1): 9. 1940.

Bas. *Setiechinopsis* Backeb. (1942, pro subgen. *Echinopsis* Zucc.).

Ref. *Echinopsis* Zucc.

Setirebutia Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 26. 1935 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. From the Latin *seta*, bristle, and the substantive *Rebutia*.

Typ. *Mediolobivia aureiflora* Backeb.

Syn. *Mediolobivia* Backeb. (1934).

Ref. *Aylosteria* Speg.

Setirebutia Frič ex Buining, *Rebutieae, Succulenta* **20**(4): 53. (Apr) 1938 nom. inval. (Art. 39.1).

Etym. From the Latin *seta*, bristle, and the substantive *Rebutia*.

Typ. Not cited.

Ref. *Aylosteria* Speg.

Setirebutia Frič ex Buining & Donald (pro sect. *Rebutia* K.Schum.), Die Gattung *Rebutia* K. Schumann, *Sukkulentenkunde* **7/8**: 98. (Mar) 1963.

Etym. From the Latin *seta*, bristle, and the substantive *Rebutia*.

Typ. *Mediolobivia aureiflora* Backeb.

Obs. This name is correct at the rank of section, but at the ranks of genus or subgenus, *Mediolobivia* Backeb. takes priority.

Ref. *Aylosteria* Speg.

Setispinae Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 38. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 294. 1857].

Etym. Based on the name of an included species.

Typ. *Opuntia setispina* Engelm. ex Salm-Dyck = *Opuntia macrorhiza* Engelm. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Setispinae (Engelm.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 136. (21 Jun) 1919.

Bas. *Setispinae* Engelm. (1856, pro infragen *Opuntia* (L.) Mill.)

Ref. *Opuntia* (L.) Mill.

Setispini Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 625. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Hamatocactus* Britton & Rose (1922, pro gen.).

Typ. *Echinocactus setispinus* Engelm. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Sclerocactus* Britton & Rose.

Setosae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactae in horto Dyckensi cultae anno 1849*: 8. 1850 nom. illeg. (Art. 52.1).

Etym. From the Latin *setosus*, bristly or setose.

Rep. Syn. *Mammillaria* Haw. infragen. *Heteracanthae* Pfeiff. (1837).

Typ. Not cited.

Lectotyp. *Mammillaria discolor* Haw. Designated by Heath, Early infrageneric classifications of the genus *Mammillaria* (Part 2), *The Journal of the Mammillaria Society* **28**(3): 27. 1988.

Obs. The replaced synonym, *Mammillaria* Haw. infragen. *Heteracanthae* Pfeiff. (1837) was valid and legitimate, so takes priority.

Ref. *Mammillaria* Haw.

Setosae Bravo [non Salm-Dyck] (pro ser. *Mammillaria* Haw.), Una nueva especie de *Mammillaria*, *Anales del Instituto de Biología* **28**(1-2): 38. 1957 nom. inval. (Art. 36.1b, 38.1a).

Etym. From the Latin *setosus*, bristly or setose.

Typ. *Mammillaria pilcayensis* Bravo. Autotype (Art. 10.2). The only included species.

Obs. Published in anticipation of future description, which never happened. The proposed type of this taxon is included in ser. *Rossianae* Backeb. nom. inval.

Ref. *Mammillaria* Haw.

Setosi Backeb., (pro ser. *Pterocactus* K.Schum.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 20. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *setosus*, bristly or setose.

Typ. *Pterocactus pumilus* Britton & Rose = *Pterocactus valentinii* Speg.

Ref. *Pterocactus* K.Schum.

Setosi Backeb. (pro ser. *Haageocereus* Backeb.), *Die Cactaceae* **2**: 1163, 1169. (Mar) 1959 nom. inval. (Art. 22.2, 39.1).

Etym. From the Latin *setosus*, bristly or setose.

Typ. *Peruvocereus setosus* Akers = *Cereus pseudomelanostele* Werderm. & Backeb. [= ?*Cactus multangularis* Willd.].

Syn. *Haageocereus* Backeb. ser. *Haageocereus*.

Ref. *Haageocereus* Backeb.

Shaferae Backeb. (pro ser. *Lobivia* Britton & Rose), *Die Cactaceae* **3**: 1377, 1425. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia shaferi* Britton & Rose. = *Echinopsis aurea* Britton & Rose. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

×**Siblara** P.V.Heath, Supplementary note on *Aporocactus* × *Disocactus* × *Nopalxochia*, *Calyx* **5**(2): 77. 1995.

Etym. Named for Frank SIBL.

Par. *Aporocactus* Lem. × *Disocactus* Lindl. × *Nopalxochia* Britton & Rose.

Ref. ×*Aporepiphyllum* G.D.Rowley

Simpsoniani Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 623. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Pediocactus* Britton & Rose (1913, pro gen.).

Typ. *Echinocactus simpsonii* Engelm. Autotype (Art. 7.4, 22.6).

Ref. *Pediocactus* Britton & Rose.

Siphonanthi Backeb., (pro subser. *Echinofossulocactus* Lawr.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 57. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek *siphon*, tube, and *anthos*, flower.

Typ. *Echinofossulocactus ochoterenanus* Tiegel.

Ref. *Echinofossulocactus* Lawr.

Smithianae Kladiwa & Fittkau (pro sect. *Neolloydia* Britton & Rose), Gattung *Neolloydia*, in Krainz, *Die Kakteen* (46-47) CVIIIb: [2]. (1 Jun) 1971.

Etym. Based on the name of an included species.

Typ. *Echinocactus smithii* Muehlenpf. nom. rej. = *Echinocactus conothelos* Regel & Klein.

Ref. *Echinofossulocactus* Lawr.

×**Soehrenantha** Y.Itô, To prove natural hybrid, *Shaboten* (92): 25. 1976.

Etym. Condensed formula.

Par. ×*Cosmantha* Y.Itô × *Soehrensia* Backeb. [×*Soehrenantha* ‘Enyo-Gyoku’ Y.Itô]

Ref. *Echinopsis* Zucc.

×**Soehrenfuria** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 649. 1981.

Etym. Condensed formula.

Par. *Furiolobivia* Y.Itô × *Soehrensia* Backeb. [×*Soehrenfuria* ‘Shoyoryu’ Y.Itô]

Ref. *Echinopsis* Zucc.

×**Soehrenlobivia** Y.Itô, *The Cactaceae, classification & illustration of cacti*: 650. 1981.

Etym. Condensed formula.

Par. *Salpingolobivia* Y.Itô × *Soehrensia* Backeb. [×*Soehrenlobivia* ‘Kyosho-Maru’ Y.Itô]

Ref. *Echinopsis* Zucc.

Soehrensia Backeb. (pro subgen. *Eriosyce* Phil.), in Backeberg & Knuth, *Kaktus-ABC*: 69, 273. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. Named for the German horticulturist Johannes SOEHRENS (-1934), Director of the Botanical Garden, Santiago, Chile.

Typ. Not cited.

Ref. *Echinopsis* Zucc.

Soehrensia Backeb., Systematische Übersicht, *Blätter für Kakteenforschung* 5(6): [7], [11], [17]. 1938.

Etym. Named for the German horticulturist Johannes SOEHRENS (-1934), Director of the Botanical Garden, Santiago, Chile.

Typ. *Lobivia bruchii* Britton & Rose.

Ref. *Echinopsis* Zucc.

Solisia Britton & Rose, *The Cactaceae* 4: 3, 64. (9 Oct) 1923.

Etym. Named for Octavio SOLIS, a student of cacti from Mexico City.

Typ. *Pelecyphora pectinata* B.Stein. Autotype (Art. 10.2). The only included species.

Ref. *Mammillaria* Haw.

Solisia (Britton & Rose) Fosberg (pro subgen. *Neomammillaria* Britton & Rose nom. illeg.), Remarks on the taxonomy of the *Cactaceae* and some new combinations and names in that family, *Bulletin of the Southern California Academy of Sciences* **30**(2): 58. 1931 nom. incorr. (Art. 11.4).

Bas. Solisia Britton & Rose (1923, pro gen.).

Ref. Mammillaria Haw.

Solisia (Britton & Rose) Moran (pro subgen. *Mammillaria* Haw.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 324. (24 Apr) 1953.

Bas. Solisia Britton & Rose (1923, pro gen.).

Ref. Mammillaria Haw.

Solisianae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 632, 633. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. Neomammillaria solisii Britton & Rose nom. incorr. = *Mammillaria nunezii* (Britton & Rose) Orcutt. Autotype (Art. 22.6).

Obs. Circumscription based on *Neomammillaria* Britton & Rose (1923) species 107-108.

Ref. Mammillaria Haw.

Spachiani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. Cereus spachianus Lem. Autotype (Art. 22.6).

Obs. Included the types of *Chamaecereus* Britton & Rose (1922, pro gen.) & *Leucostele* Backeb. (1953, pro gen.).

Ref. Echinopsis Zucc.

Speciosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 24. 1834 nom. nud.

Etym. Based on the name of an included species.

Typ. Cactus speciosus Cav.

Ref. Heliocereus (A.Berger) A.Berger.

Speciosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Hortus Dyckensis*: 338. 1834.

See also *Cactae in horto Dyckensi cultae. Anno 1841*: 33. 1841.

Etym. Based on the name of an included species.

Typ. Cactus speciosus Cav. Autotype (Art. 22.6).

Obs. Also repeated by Vaupel, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Ref. Heliocereus (A.Berger) Britton & Rose.

Spegazzinia Backeb., *Echinocactus* (*Spegazzinia* Bckbg. n. g.) *Fidaianus* n. sp., *Der Kakteen-Freund* **2**(10): 117. (mid-Oct) 1933 nom. illeg. (Art. 53.1).

Etym. Named for the Italian-born Argentinian botanist Carlos SPEGAZZINI (1858-1926).

Typ. *Echinocactus fidanus* Backeb.

Syn. *Weingartia* Werderm. (1937).

Obs. Illegitimate later homonym of *Spegazzinia* Sacc. (1886, fungus). Replaced with *Weingartia* Werderm.

Ref. *Rebutia* K.Schum.

Spegazzinia (Backeb.) F.H.Brandt (pro subgen. *Weingartia* Werderm.), *Weingartia* oder *Sulcorebutia!*, *Kakteen- und Orchideen-Rundschau* **2**(5): 69. (15 Nov) 1977 nom inval. (Art. 22.2).

Bas. *Spegazzinia* Backeb. nom. illeg. (1933, pro gen.).

Syn. *Weingartia* Werderm. subgen. *Weingartia*.

Ref. *Rebutia* K.Schum.

Spegazziniani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 635, 636. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Cereus spegazzinii* F.A.C.Weber. Autotype (Art. 22.6).

Obs. Based on the same type as *Cereus* (L.) Mill. subgen. *Ebneria* (Backeb.) D.R.Hunt (1988).

Ref. *Cereus* (L.) Mill.

Sphacelatae D.R.Hunt (pro ser. *Mammillaria* Haw.), Schumann and Buxbaum recompiled (2), *Cactus & Succulent Journal of Great Britain* **39**(3): 73. (Aug) 1977.

Etym. From the name of an included species.

Typ. *Mammillaria sphacelata* Mart.

Ref. *Mammillaria* Haw.

Sphacelatae (D.R.Hunt) Doweld (pro ser. *Escobariopsis* Doweld), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 42. 2000.

Bas. *Sphacelatae* D.R.Hunt (1977, pro ser. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Sphaeraria Haw. (pro subgen. *Opuntia* (L.) Mill.), Decas duodecima novarum plantarum succulentarum, *Philosophical Magazine, or Annals of Chemistry, Mathematics, Astronomy, Natural History, and General Science* N.S. **7**(38): 118. (Feb) 1830.

Etym. From the Latin *sphaera*, globe, and the possessive adjectival suffix *-arius*.

Typ. *Cactus moniliformis* L. Autotype (Art. 10.2). The only included species.

Obs. The correct name for *Consolea* Lem. (1862) at the rank of subgenus.

Ref. *Opuntia* (L.) Mill.

Sphaerici Backeb., (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 15. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Greek adjective *sphaerikos*, globular.

Typ. *Opuntia bruchii* Speg. = *Opuntia alexandri* Britton & Rose.

Ref. *Opuntia* (L.) Mill.

Sphaeropuntia Borg (pro subgen. *Opuntia* (L.) Mill.), *Cacti*: 65. 1937 nom. illeg. (Art. 52.1).

Etym. From the Greek *sphaera*, globe, and the substantive *Opuntia*.

Rep. Syn. *Tephrocactus* Lem. (1868, pro gen.).

Syn. *Opuntia* (L.) Mill. subgen. *Tephrocactus* (Lem.) Vaupel (1925).

Ref. *Opuntia* (L.) Mill.

Sphaeropuntia Guiggi, *Genera nova et combinationes novae in cactaceis austroamericanis ad subfamiliam Opuntioideae K.Schumann spectantibus II*, *Cactology* **3**(Suppl.2): 1. (14 Nov) 2012.

Etym. From the Greek *sphaera*, globe, and the substantive *Opuntia*.

Typ. *Opuntia sphaerica* C.F.Förster.

Ref. *Opuntia* (L.) Mill.

Spineae Lawr. (pro sect. *Mammillaria* Haw.), *Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 **6**: 314. 1841 nom. inval. (Art. 22.2).

Etym. From the Latin *spina*, spine. A reference to its species having spines but no bristles.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Lectotyp. *Mammillaria simplex* Haw. = *Cactus mammillaris* L. Designated by Heath, *Early infrageneric classifications of the genus Mammillaria (part 2)*, *Journal of the Mammillaria Society* **28**(3): 26. 1988.

Syn. *Mammillaria* Haw. sect. *Mammillaria*.

Ref. *Mammillaria* Haw.

Spinicalycium Frič, in Weingart, *Fričovo rozdělení kaktusů dle příbuznosti*, *Kaktusar* **2**(3): 21. (Mar) 1931 nom. nud.

Etym. From the Latin *spina*, spine, and *kalix*, cup. A reference to the spiny-tipped outer floral segments.

Typ. Not cited. Includes only two species, *Echinocactus spiniflorus* K.Schum. & *Echinopsis klimpeliana* Weidlich & Werderm.

Ref. *Echinopsis* Zucc.

Spinicalycium Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 36. (31 Apr) 1935 nom.inval. (Art. 39.1).

Etym. From the Latin *spina*, spine, and *kalix*, cup.

Typ. *Echinocactus spiniflorus* K.Schum.

Syn. *Acanthocalycium* Backeb. (1936).

Ref. *Echinopsis* Zucc.

Spiniflora (Werderm.) A.Cast. & Lelong (pro subgen. *Echinopsis* Zucc.), *Los géneros de las cactaceas Argentinas, Anales de Museo Argentino de Ciencias Naturales* **39**: 400. 1938 (“*Spiniflorae*”).

Bas. *Spiniflorae* Werderm. (1931, pro infragen. *Echinopsis* Zucc.).

Obs. The correct name for *Acanthocalycium* Backeb. at the rank of subgenus.

Ref. *Echinopsis* Zucc.

Spiniflorae Werderm. (pro infragen. *Echinopsis* Zucc.), *Echinopsis violacea* Werd., *Monatsschrift der Deutschen Kakteen-Gesellschaft* **3**(11): 259. (Nov) 1931.

Etym. Based on the name of an included species.

Typ. *Echinocactus spiniflorus* K.Schum. Autotype (Art. 22.6).

Obs. Also described by Werdermann in Backeberg, *Neue Kakteen*: 85. (Dec) 1931.

Ref. *Echinopsis* Zucc.

Spinosissimae Haw. (pro infragen. *Opuntia* (L.) Mill.), *Synopsis plantarum succulentarum*: 193. 1812.

Etym. Based on the name of an included species.

Typ. *Opuntia spinosissima* Mill. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill. [subgen. *Sphaeraria* Haw.].

Spinosissimae (Haw.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 202. (21 Jun) 1919.

Bas. *Spinosissimae* Haw. (1812, pro infragen. *Opuntia* (L.) Mill.)

Obs. The correct name for *Consolea* Lem. at the rank of series.

Ref. *Opuntia* (L.) Mill. [subgen. *Sphaeraria* Haw.].

Spinosissimae Kreuz. (pro infragen. *Hymenorebulobivia* Frič ex Kreuz. nom. inval.), *Verzeichnis amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 29. 1935 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Hymenorebulobivia spinosissima* Kreuz. nom. inval.

Ref. *Echinopsis* Zucc.

Squamulosi Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Hortus Dyckensis*: 65, 339. 1834.

Etym. Based on the name of an included species.

Typ. *Cereus squamulosus* Salm-Dyck = *Cactus cruciformis* Vell. Autotype (Art. 22.6).

Obs. Also in Salm-Dyck, *Index plantarum succulentarum in horto Dyckensi cultarum anno 183-*: 24. 1834, without description.

Ref. *Rhipsalis* Gaertn.

Squamulosi Vaupel [non Salm-Dyck] (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 638. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Zehntnerella squamulosa* Britton & Rose. Autotype (Art. 10.2, 22.6).

Obs. Based on the same type as *Zehntnerella* Britton & Rose (1920).

Ref. *Facheiroa* Britton & Rose.

Squarrosi Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus squarrosus* Vaupel. Autotype (Art. 22.6).

Ref. *Corryocactus* Britton & Rose.

Stellata Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom. nud.

Etym. Based on the name of an included species.

Typ. *Gymnocalycium stellatum* Speg. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Stellati K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (1): 49 (Feb). 1897.

Etym. Based on the name of an included species.

Typ. *Cereus stellatus* Pfeiff. Autotype (Art. 22.6).

Ref. *Stenocereus* (A.Berger) Riccob.

Stelligerae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cacteeae in horto Dyckensi cultae. Anno 1841*: 4-5. 1841 nom. inval. (Art. 22.2) & illeg. (Art. 52.1).

Etym. From the Latin *stella*, star, and *gero*, carrier.

Typ. Not cited.

Lectotyp. *Mammillaria elongata* DC. Heath, Early infrageneric classifications of the genus *Mammillaria* (part 2), *Journal of the Mammillaria Society* 28(3): 27. 1988.

Syn. *Mammillaria* Haw. infragen. *Tenues* Pfeiff. (1837).

Obs. Includes the types of *Tenues* Pfeiff. (1837) & *Leptocladodae* Lem. (1839).

Ref. *Mammillaria* Haw.

×***Stenillocaustus*** P.V.Heath, The reinstatement of *Stenocereus* (A.Berger) Riccob., *Calyx* 5(3): 102. 1996.

Etym. Condensed formula.

Par. *Myrtillocactus* Console × *Stenocereus* (A.Berger) Riccob.

Stenocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (5): 292 (1 Jan); (6) 359-360 (25 Feb). 1898.

Etym. From the Greek *stenos*, narrow. A reference to the thin ribs of most species.

Rep. Syn. *Echinocactus* Link & Otto sect. *Compressicostati* Lem. (1838).

Typ. *Echinocactus obvallatus* DC. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Type designations by Byles (*Echinocactus coptonogonus* Lem., 1956), Taylor (*Echinocactus crispatus* DC., 1980), & Bravo (*Echinocactus obvallatus* DC., 1991) are superseded because these authors overlooked the replaced synonym.

Ref. *Echinofossulocactus* Lawr.

Stenocactus (K.Schum.) A.Berger, *Kakteen*: 244, 346. (Jul-Aug) 1929 nom. illeg. (Art. 52.1).

Bas. *Stenocactus* K.Schum. (1898, pro subgen *Echinocactus* Link & Otto).

Obs. Berger published this rank alongside Schumann’s subgeneric rank in the same work. However, simultaneous usage at two different ranks is accepted prior to 1953 (Art. 36.2).

Nomenclatural history at generic rank:

1929: First published at generic and subgeneric rank simultaneously by Berger.

1980: Hunt (*Cact. Succ. J. GB* 42(4): 105-107) rejected Britton & Rose’s lectotypification of *Echinofossulocactus* Lawr. (1841) on grounds of mechanical selection and that the chosen type did not have the furrows called for by the protologue. The latter contention is, however,

not true of mature plants, and none of the other many Britton & Rose selections have ever been rejected for mechanical selection.

1982: A proposal was made by Tjaden (*Taxon* **31**(3): 570-573. (Aug) 1982) to conserve *Stenocactus* (K.Schum.) A.Berger over *Echinofossulocactus* Lawr.

1983: Tjaden's proposal was opposed by Taylor (*Taxon* **32**(4): 641-643. (Nov) 1983), pointing out that conservation is not required if Hunt's relectotypification were to be followed.

1987: The Spermatophyta Committee (*Taxon* **36**(4): 734-762. (Nov) 1987) rejected the Tjaden proposal with a 2-9 vote on the grounds outlined by Taylor. However, there never was a problem with the typification of *Echinofossulocactus* Lawr. by Britton & Rose in the first place.

Ref. *Echinofossulocactus* Lawr.

Stenocactus (K.Schum.) N.P.Taylor (pro subgen. *Ferocactus* Britton & Rose), *Ferocactus* and *Stenocactus* united, *Cactus and Succulent Journal of Great Britain* **42**(4): 108. (Nov) 1980.

Bas. *Stenocactus* K.Schum. (1898, pro subgen *Echinocactus* Link & Otto).

Ref. *Echinofossulocactus* Lawr.

Stenocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 60, 66-67, t.3. (31 May) 1905.
Etym. From the Greek *stenos*, narrow, and the substantive *Cereus*.

Typ. *Cereus stellatus* Pfeiff.

Ref. *Stenocereus* (A.Berger) Riccob.

Stenocereus (A.Berger) Riccob., *Studii sulle Cattede del R. Orto Botanico di Palermo, Bollettino delle Reale Orto Botanico e Giardino Coloniale di Palermo* **8**: 253. 1909 nom. cons.

Bas. *Stenocereus* A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Obs. A proposal to conserve this genus over *Rathbunia* Britton & Rose (1909) was made by Taylor & Gibson, *Taxon* **43**(1): 129-131. (Feb) 1994. Recommended for acceptance by the Spermatophyta Committee in *Taxon* **44**: 611 (Nov). 1995 with a unanimous 12 : 0 vote. Adopted by the 16th. Botanical Congress (1999). Under the rules, *Rathbunia* was the priority name by a few months, but this was not known to Gibson & Horak who mistakenly chose to adopt *Stenocereus* when combining the two genera in 1978 and in subsequent papers. The detailed commentary by Heath in opposition to the conservation proposal in *Calyx* **5**(1): 1-6. (Jul) 1994 was either unknown to or ignored by the Committee. The proposal was really quite unnecessary, especially as Heath had already provided all the necessary name combinations in *Rathbunia* in his restoration of that genus in 1992. This unfortunate decision cannot now be corrected, despite there never having been any problem with *Rathbunia* Britton & Rose.

Stenocladia P.V.Heath (pro sect. *Rathbunia* Britton & Rose), The restoration of *Rathbunia* Britton & Rose, *Calyx* **2**(3): 102. 1992 nom. illeg. (Art. 52.1).

Etym. Thin-stemmed, from the Greek *stenos*, narrow, and *klados*, branched.

Rep. *Syn. Stellati* K.Schum. (1897, pro infragen. *Cereus* (L.) Mill.).

Typ. Cereus stellatus Pfeiff.

Syn. Stenocereus (A.Berger) Riccob. sect. *Stenocereus*.

Ref. Stenocereus (A.Berger) Riccob.

Stenogoni Lem. (pro sect. *Echinocactus* Link & Otto), *Cactearum genera nova speciesque novae et omnium in horto monvilliano cultarum ex affinitatibus naturalibus ordinato nova indexque methodicus*: 28, 32, 89. (Feb) 1839 nom. illeg. (Art. 52.1).

Etym. Narrow-angled echinocacti, referring to the low, narrow ribs, from the Greek *stenos*, narrow, and *gonios*, angle.

Rep. Syn. Echinocactus Link & Otto sect. *Compressicostati* Lem. (1838).

Typ. Not cited.

Lectotyp. Echinocactus obvallatus DC. Designated by Doweld, *Kakteen und andere Sukkulenten* 52(5): 131. (May) 2001.

Obs. Illegitimate because there was no problem with the earlier *Compressicostati* Lem. (1838) in the same rank. The rank of this taxon was specified on p.32. Rank also confirmed in the text to t.6 *Echinocactus pentacanthus* in Lemaire, *Iconographie des cactées* (1841). The circumscription was broadened by Salm-Dyck (1841: 17-18) to include *Echinocactus coptonogonus* Lem., then broken into five unnamed subdivisions in 1850.

Ref. Echinofossulocactus Lawr.

Stenogoni Lem. ex Backeb. (pro ser. *Echinofossulocactus* Lawr.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 57. (Jun) 1942.

Rep. Syn. Echinocactus Link & Otto sect. *Stenogoni* Lem. (1839).

Typ. Echinocactus obvallatus DC. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Backeberg cited *Echinocactus multicostatus* Hildm. as the type, but that was not known to Lemaire and therefore not eligible.

Ref. Echinofossulocactus Lawr.

Stenolobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *stenos*, narrow, and the substantive *Lobivia*.

Typ. Not cited.

Ref. Echinopsis Zucc.

×**Stenomyrtillus** G.D.Rowley, *Name that succulent*: 137. 1980 nom. inval. (Art. H.6.2).

Etym. Incorrectly formed condensed formula.

Par. Myrtillocactus Console × *Stenocereus* (A.Berger) Riccob.

Ref. ×*Myrtillocereus* G.D.Rowley.

Stenopetalae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* 50(4): 537. (20 Feb) 1908.

Etym. Based on the name of an included species.

Typ. Opuntia stenopetala Engelm. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Stenopetalae (Britton & Rose) Backeb., (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 19. (Jun) 1942.
Bas. Stenopetalae Britton & Rose (1908, pro ser. *Opuntia* (L.) Mill.).
Ref. Opuntia (L.) Mill.

Stenopuntia Engelm. (pro subgen. *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 33. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 289. 1857].
Etym. From the Greek *stenos*, narrow, and the substantive *Opuntia*.
Typ. Opuntia stenopetala Engelm. Autotype (Art. 10.2). The only included species.
Ref. Opuntia (L.) Mill.

Stenopuntia (Engelm.) K.Schum. (pro sect. *Opuntia* (L.) Mill.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* 3(6a): 200. (Apr 18) 1894.
Bas. Stenopuntia Engelm. (1856, pro subgen. *Opuntia* (L.) Mill.)
Ref. Opuntia (L.) Mill.

Stephanocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 20. (Jul) 1950 nom. inval. (Art. 39.1).
Etym. From the Greek *stephanos*, garland, and *kephale*, head.
Typ. Not cited.
Ref. Gymnocalycium Mittler.

Stephanocereus A.Berger, *Die Entwicklungslinien der Kakteen*: 59, 97. 1926.
Etym. From the Greek *stephanos*, crown, and the substantive *Cereus*.
Typ. Cereus leucostele Gürke. Autotype (Art. 10.2). The only included species.
Ref. Austrocephalocereus Backeb.

Stetsonia Britton & Rose, *The Cactaceae* 2: 2, 64. (9 Sep) 1920.
Etym. Named for Francis Lynde STETSON (1846-1920), American lawyer and businessman of New York.
Typ. Cereus coryne Salm-Dyck. Autotype (Art. 10.2). The only included species.
Ref. Cereus (L.) Mill.

Stetsonia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. (Jul-Aug) 1929.
Bas. Stetsonia Britton & Rose (1920, pro gen.).
Ref. Cereus (L.) Mill.

Stigmatodactylus D.R.Hunt (pro subgen. *Astrophytum* Lem.), in Hunt & Taylor, *Notulae systematicae Lexicon Cactacearum spectantes III, Cactaceae Systematics Initiatives* (15): 6. (Apr) 2003.
Etym. From the Greek *stigmata*, spotted, and *dactylos*, finger.
Rep. Syn. Digitostigma Velazco et Nevárez (2003, pro gen.).

Typ. Digitostigma caput-medusae Velazco et Nevárez.

Ref. Digitostigma Velazco et Nevárez.

Stilidieae Lem. (pro infragen. *Mammillaria* Haw.), *Cactearum genera nova speciesque novae et omnium in horto Monvilliano cultarum*: 96. 1839 nom. inval. (Art. 22.2)

Etym. From the Greek *stilidion*, short columnar.

Typ. Not cited, but includes the type of *Mammillaria* Haw.

Syn. Mammillaria Haw. infragen. *Mammillaria*.

Ref. Mammillaria Haw.

Straminei Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelmann, *Kakteen und andere Sukkulente* **36**(4): 77. (Apr) 1985.

Etym. Based on the name of an included species.

Typ. Cereus stramineus Engelm.

Ref. Echinocereus Engelm.

Streptacanthae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 181. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. Opuntia streptacantha Lem. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Streptacanthae (Britton & Rose) Backeb., (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941*(2): 18. (Jun) 1942.

Bas. Streptacanthae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Streptacanthae (Britton & Rose) A.Cast. (pro subsect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* **6**(2): 277, 278. 1957 nom. inval. (Art. 41.5).

Bas. Streptacanthae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Streptacanthae (Britton & Rose) Backeb. (pro ser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 451, 515. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. Streptacanthae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Strigiles Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 136. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. Opuntia strigil Engelm. Autotype (Art. 10.2, 22.6).

Ref. Opuntia (L.) Mill.

Strobiliformes Backeb., (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 15. (Jun) 1942 nom. inval. (Art. 22.2, 39.1).
Etym. Based on the name of an included species.

Typ. *Opuntia strobiliformis* A.Berger = *Cereus articulatus* Pfeiff.

Syn. *Tephrocactus* Lem. subser. *Tephrocactus*.

Ref. *Opuntia* (L.) Mill.

Stromatocactus Karw. ex Rümpler, *Carl Friedrich Förster's Handbuch der Cacteenkunde*: 229, 232. 1886 nom. nud.

Etym. From the Greek *stromata*, bed cover, and the substantive *Cactus*.

Typ. *Anhalonium kotschoubeyanum* Lem. Autotype (Art. 10.2). The only included species.

Ref. *Ariocarpus* Scheidw.

Strombocactus Britton & Rose, *The Cactaceae* 3: 78, 106. (12 Oct) 1922.

Etym. From the Greek *strombos*, curled up like a snail shell, and the substantive *Cactus*.

A reference to the snailshell-like spiral ribs.

Typ. *Mammillaria disciformis* DC.

Strombocactus (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: viii, 249. (Jul-Aug) 1929.

Typ. *Strombocactus* Britton & Rose (1922, pro gen.)

Ref. *Strombocactus* Britton & Rose.

Strombocactus (Britton & Rose) Halda (pro subgen. *Ariocarpus* Scheidw.). Synopsis rodu *Ariocarpus* Scheidweiler, *Acta Musei Richnoviensis, Ser. Natur.* 5(1): 37. 1998.

Bas. *Strombocactus* Britton & Rose (1922, pro gen.).

Ref. *Strombocactus* Britton & Rose.

Strophocactus Britton & Rose, The genus *Epiphyllum* and its allies, *Contributions from the U.S. National Herbarium* 16(9): 262. (6 Jun) 1913.

Etym. From the Greek *strophos*, twisted rope, and the substantive *Cactus*. Refers to the twisting and turning of the flat stems around the branches of trees.

Rep. Syn. *Phyllocereus* A.Berger (1905, pro subgen. *Cereus* (L.) Mill.).

Typ. *Cereus wittii* K.Schum. Autotype (Art. 10.2). The only included species.

Obs. Based on Berger's *Phyllocereus* which could not be raised to generic rank because of an earlier usage of the name in a different sense by Miquel. However, at any rank other than genus, *Phyllocereus* A.Berger has priority.

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Strophocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulanten mit Revision der Systematik der Kakteen*: 15, 21. 1935 nom. illeg. (Art. 52.1).

Etym. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Strophocactus* Britton & Rose.

Typ. *Cereus wittii* K.Schum. Autotype (Art. 10.2). The only included species.

Ref. *Rhipsalis* Gaertn.

Stylothelae Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Heteracanthae* Pfeiff.), *Enumeratio Diagnostica cactearum hucusque cognitarum*: 36. 1837.

Etym. Long-tubercled, from the Greek *stylos*, a pole, and *thele*, a nipple).

Typ. Not cited.

Lectotyp. *Mammillaria wildii* A.Dietr. Designated by Reppenhagen, *Sonderheft 1988 des Arbeitskreises für Mammillarienfrende e.V.*: 27. 1988.

Ref. *Mammillaria* Haw.

Stylothelae (Pfeiff.) Doweld (pro sect. *Krainzia* Backeb.), *Nomenclatural adjustments in Cactaceae II, Sukkulenty* 3(1-2): 43. 2000.

Bas. *Stylothelae* Pfeiff. (1837, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Subaphyllae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaceae in horto Dyckensi cultae. Anno 1841*: 39. 1841.

Etym. Almost leafless opuntias, from the Latin *sub*, almost, slightly or under, & the Greek *a-*, -less, or without, and *phyllon*, leaf.

Typ. Not cited.

Obs. Includes the type of *Tephrocactus* Lem. (1868).

Ref. *Opuntia* (L.) Mill.

Subaphyllae (Salm-Dyck) Walp. (pro sect. *Opuntia* (L.) Mill.), *Repertorium botanices systematicae* 2: 280. 1843.

Bas. *Subaphyllae* Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.).

Obs. The correct name for *Tephrocactus* Lem. at the rank of section.

Ref. *Opuntia* (L.) Mill.

Subcarnosae Salm-Dyck (pro infragen. *Pereskia* (L.) Mill.), *Cactaceae in horto Dyckensi cultae anno 1844*: 50. 1845.

Etym. From the Latin *sub*, almost, and *carnosus*, fleshy.

Typ. Not cited.

Obs. Included 2 *Pereskia* and 1 *Pereskiopsis* species.

Ref. *Pereskia* (L.) Mill.

Subcurvispinae Backeb., (pro sub-subsect. *Mammillaria* Haw.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 64. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *sub*, almost, *curvus*, curved, and *spina*, spine.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Subcurvispinae Backeb. (pro ser. *Parodia* Speg.), *Die Cactaceae* 3: 1582, 1601. (Oct) 1959 nom. inval. (Art. 39.1).

Etym. From the Latin, *sub*, almost, *curvus*, curved, and *spina*, spine.

Typ. Not cited.

Ref. *Parodia* Speg.

Subcurvispinae Backeb. (pro ser. *Mammillaria* Haw.), *Die Cactaceae* 5: 3099, 3101, 3443. 1961 nom. inval. (Art. 39.1).

Etym. From the Latin *sub*, almost, *curvus*, curved, and *spina*, spine.

Typ. Not cited.

Obs. Comprises only two species in subser. *Wuthenauiana* Backeb. nom. inval.

Ref. *Mammillaria* Haw.

Subcylindrica Backeb., (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 17. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *sub*, almost, and *cylindricus*, cylindrical.

Typ. *Cactus curassavicus* L.

Ref. *Opuntia* (L.) Mill.

Subcylindrica Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* 1: 449, 453. (Jan) 1958 nom. inval. (Art. 39.1, 40.1).

Etym. From the Latin *sub*, almost, and *cylindricus*, cylindrical.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Subhydrochylus Backeb. (pro sect. *Mammillaria* Haw.), *Blätter für Kakteenforschung* 5(6): [10 (clavi)], [16, 24]. 1938 nom. inval. (Art. 39.1).

Etym. From the Latin *sub*, almost, and the substantive *Hydrochylus*.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Subhydrochylus Backeb. ex D.R.Hunt (pro sect. *Mammillaria* Haw.), Schumann and Buxbaum recompiled (2), *Cactus & Succulent Journal of Great Britain* 39(3): 74. (Aug) 1977.

Etym. From the Latin *sub*, almost, and the substantive *Hydrochylus*.

Typ. *Neomammillaria guerreronis* Bravo nom. incorr. = *Mammillaria guerreronis* (Bravo) Backeb.

Ref. *Mammillaria* Haw.

Subinermes Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto Dykensi cultae anno 1849*: 68. 1850 nom. inval. (Art. 22.2).

Etym. From the Latin *sub*, almost, and *inermis*, unarmed.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Subinermes Salm-Dyck ex Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 34. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 290. 1857] nom. nud. & inval. (Art. 22.2).

Etym. From the Latin *sub*, almost, and *inermis*, unarmed.

Typ. *Cactus ficus-indica* L. Autotype (Art. 10.2). The only included species.

Syn. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Subinermes K.Schum. (pro infragen. *Echinocereus* Engelm.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* **3**(6a): 185. (Apr 18) 1894.

Etym. Based on the name of an included species.

Typ. *Echinocereus subinermis* Salm-Dyck ex Scheer. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Subinermes (K.Schum.) A.Berger (pro subsect. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* **16**: 79. (31 May) 1905.

Bas. *Subinermes* K.Schum. (1894, pro infragen. *Echinocereus* Engelm.).

Ref. *Echinocereus* Engelm.

Subinermes Salm-Dyck ex Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 525. (20 Feb) 1908 nom. inval. (Art. 22.2).

Etym. From the Latin *sub*, almost, and *inermis*, unarmed.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. ser. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Subinermes Salm-Dyck. ex A.Cast. (pro subsect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* **6**(2): 276, 278. 1957 nom. inval. (Art. 22.2).

Etym. From the Latin *sub*, almost, and *inermis*, unarmed.

Typ. Not cited, but includes the type of *Opuntia* (L.) Mill.

Syn. *Opuntia* (L.) Mill. subsect. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Subinermes Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 450, 469-470. (Jan) 1958 nom. inval. (Art. 39.1, 40.1).

Etym. From the Latin *sub*, almost, and *inermis*, unarmed.

Typ. Not cited, but excludes the type of *Opuntia* (L.) Mill.

Obs. The altered circumscription makes this a new name based on *Subinermes* Salm-Dyck nom. inval. but excluding the type of *Opuntia* (L.) Mill. Invalidated by the lack of a Latin description & type.

Ref. *Opuntia* (L.) Mill.

Subinermes (K.Schum.) Lange (pro sect. *Echinocereus* Engelm.), Ein Beitrag über die Stellung der Art *E. spinigemmatum* Lau oder wie man zu einer neuen Sektion kommt, *Echinocereenfreund* **8**(1): 16. 1995.

Bas. *Subinermes* K.Schum. (1894, pro ser. *Echinocereus* Engelm.).

Ref. *Echinocereus* Engelm.

Sublanuginosi Salm-Dyck (pro infragen. *Cereus*), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 21. 1834 nom. nud.

Etym. From the Latin *sub*, almost, and the substantive *Lanuginosi*.

Typ. Not cited.

Ref. *Pilosocereus* Byles & G.D.Rowley.

Submatucana Backeb., *Die Cactaceae* 2: 1059. (Mar) 1959.

Etym. From the Latin *sub*, almost, and the substantive *Matucana*.

Typ. *Echinocactus aurantiacus* Vaupel.

Obs. Name first mentioned in Rauh, *Beitrag zur Kenntnis der peruanischen Kakteenvegetation*: 357. 1958.

Ref. *Matucana* Britton & Rose.

Subnudi Backeb., (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941*(2): 15. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. From the Latin *sub*, almost, *nudus*, bare.

Typ. *Tephrocactus mistiense* Backeb.

Ref. *Opuntia* (L.) Mill.

Subpilocereus Backeb., Zur Systematischen Uebersicht, *Blätter für Kakteenforschung* 5(6): [8], [18], [21]. 1938.

Etym. From the Latin *sub*, almost, and *pileus*, hairy.

Typ. *Cereus russelianus* Otto ex Salm-Dyck.

Ref. *Cereus* (L.) Mill.

Subquadrspinæ Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactee in horto Dyckensi cultae. Anno 1841*: 9-10. 1841.

Etym. Mostly 4-spined mammillarias. From the Latin *sub*, nearly or somewhat, *quatuor*, four, and *spina*, spine.

Typ. Not cited.

Obs. Superfluously renamed *Subsetosae* Salm-Dyck nom. illeg. (Art. 52.1) in *Cactee in horto Dyckensi cultae anno 1844*: 8. 1845 and eventually abandoned (1850: 14) in favour of the earlier name *Conothelae* Pfeiff. (1837). *Subquadrspinæ* Salm-Dyck (1841) is however the correct name of this taxon.

Ref. *Mammillaria* Haw.

Subquadrspinæ (Salm-Dyck) Walp. (pro sect. *Mammillaria*), *Repertorium botanices systematicae* 2: 271. 1843.

Bas. *Subquadrspinæ* Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Subsetosae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactee in horto Dyckensi cultae anno 1844*: 8. 1845 nom. illeg. (Art. 52.1).

Etym. From the Latin *sub*, nearly or somewhat, and *setosus*, bristly.

Rep. Syn. *Subquadrspinæ* Salm-Dyck (1841, pro infragen. *Mammillaria* Haw.).

Typ. Not cited.

Obs. An illegitimate renaming of *Subquadriscopinae* Salm-Dyck, but abandoned again in favour of the new section name *Conothelae* Salm-Dyck non Pfeiff. (1850: 14).

Subquadriscopinae Salm-Dyck (1841, pro infragen.) & *Subquadriscopinae* (Salm-Dyck) Walp. (1843, pro sect.) are the correct names for this taxon.

Ref. *Mammillaria* Haw.

Subtetragonae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 10. 1841.

Etym. From the Latin *sub*, almost or nearly, & the Greek *tetrares*, four, and *gonios*, angle, referring to the 4-angled tubercles.

Typ. Not cited.

Ref. *Mammillaria* Haw.

Subulatae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 75. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Pereskia subulata* Muehlenpf. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Subulatae (Britton & Rose) Backeb., (pro subser. *Austrocyliodropuntia* Backeb.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 12. (Jun) 1942.

Bas. *Subulatae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Subulatae (Britton & Rose) Backeb. (pro ser. *Austrocyliodropuntia* Backeb.), *Die Cactaceae* 1: 138. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Subulatae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Subulatopuntia Frič & Schelle, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 40. 1935 nom. inval. (Art. 39.1, 41.3).

Etym. Based on the name of the type species, *subulata*, and the substantive *Opuntia*.

Rep. Syn. *Opuntia* (L.) Mill. ser. *Subulatae* Britton & Rose (1919).

Typ. *Pereskia subulata* Muehlenpf. Autotype (Art. 7.4, 22.6).

Obs. Replaced synonym not cited and conditions for valid publication not otherwise fulfilled because of the lack of a Latin description.

Ref. *Opuntia* (L.) Mill.

Suffrutescentes Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactaeae in horto dyckensi cultae anno 1849*: 73. 1850.

Etym. From the Latin *sub*, almost, & *frutescens*, becoming shrubby.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Sulcatae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* 4: 221. (9 Oct) 1923.
Etym. Based on the name of the only included species.
Typ. *Rhipsalis sulcata* F.A.C.Weber. Autotype (Art. 10.2, 22.6).
Ref. *Rhipsalis* Gaertn.

Sulcatae Weskamp (pro sect. *Parodia* Speg.), *Die Gattung Parodia*: 33. 1987.
Etym. From the Latin *sulcatus*, grooved.
Rep. Syn. *Campestrae* F.H.Brandt (1977, pro ser. *Parodia* Speg.).
Typ. *Parodia formosa* F.Ritter.
Ref. *Parodia* Speg.

Sulcati Salm-Dyck (pro infragen. *Cereus* (L.) Haw.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 23. 1841.
Etym. From the Latin *sulcatus*, grooved. A reference to the transverse folds along the ribs.
Typ. Not cited.
Ref. *Cereus* (L.) Mill., *Echinocereus* Engelm., *Haageocereus* Backeb., *Echinopsis* Zucc.

Sulcati (Salm-Dyck) Engelm. (pro sect. *Cereus* (L.) Mill.), *Cactaceae*, in Gray (ed.), *Plantae Fendlerianae Novi-Mexicanae, Memoirs of the American Academy of Arts and Sciences* N.S. 4(1): 50. (10 Feb) 1849.
Bas. *Sulcati* Salm-Dyck (1841, pro infragen. *Cereus* (L.) Haw.)
Typ. Not cited.
Obs. Includes the type of *Echinocereus* Engelm. (1848).
Ref. *Echinocereus* Engelm.

×***Sulcocalycium*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* 1(3): 118. 1992.
Etym. Condensed formula.
Par. *Gymnocalycium* Mittler × *Sulcorebutia* Backeb.
Ref. ×*Gymnobotia* P.V.Heath.

Sulcolanatae Britton & Rose (pro ser. *Coryphantha* (Engelm.) Lem.), *The Cactaceae* 4: 24. (9 Oct) 1923.
Etym. Based on the name of an included species.
Typ. *Mammillaria sulcolanata* Lem. Autotype (Art. 22.6).
Ref. *Coryphantha* (Engelm.) Lem.

Sulcolanati (Britton & Rose) Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 623, 628. (Dec) 1925.
Bas. *Sulcolanatae* Britton & Rose (1923, pro ser. *Coryphantha* (Engelm.) Lem.)
Ref. *Coryphantha* (Engelm.) Lem.

Sulcorebutia Backeb., *Sulcorebutia* novum genus Backbg., *The Cactus and Succulent Journal of Great Britain* 13(4): 96, 103. (Oct) 1951.
Etym. From the Latin *sulcus*, groove, and the substantive *Rebutia*.
Typ. *Rebutia steinbachii* Werderm.
Ref. *Rebutia* K.Schum.

Sulcorebutia (Backeb.) F.H.Brandt (pro subgen. *Weingartia* Werderm.), *Weingartia* oder *Sulcorebutia!*, *Kakteen- und Orchideen-Rundschau* 2(5): 69. (15 Nov) 1977.

Bas. Sulcorebutia Backeb. (1951, pro gen.).

Ref. Rebutia K.Schum.

Sulphureae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 45, 133. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. Opuntia sulphurea Gillies ex Salm-Dyck. Autotype (Art. 22.6).

Ref. Opuntia (L.) Mill.

Sulphureae (Britton & Rose) Backeb., (pro subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 17. (Jun) 1942.

Bas. Sulphureae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Sulphureae (Britton & Rose) A.Cast. (pro subsect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* 6(2): 276, 277. 1957 nom. inval. (Art. 41.5).

Bas. Sulphureae Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. Opuntia (L.) Mill.

Supertextae D.R.Hunt (pro ser. *Mammillaria* Haw.), Schumann and Buxbaum recompiled (3), *Cactus & Succulent Journal of Great Britain* 39(4): 98. (Nov) 1977.

Etym. Based on the name of an included species.

Rep. Syn. Elegantes K.Schum. (1898, pro infragen. *Mammillaria* Haw.) with new type.

Typ. Mammillaria supertexta Pfeiff.

Obs. No reference to the place of publication of the replaced synonym was cited, but the conditions for publication are otherwise fulfilled, so this taxon is validly published in accordance with Art. 41.8.

Ref. Mammillaria Haw.

Tabulares Havlíček (pro subser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 76. 1988 (publ. 1989) (“Tabularis”) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. Echinocactus concinnus var. *tabularis* J.-F.Cels. ex Rümpler = *Notocactus tabularis* (Rümpler) A.Berger. Autotype (Art. 22.6).

Obs. This taxon was also superfluously & invalidly published by W. Prauser, *Internoto* 22(1): 12-13. (Jan) 2001.

Ref. Parodia Speg.

Tacinga Britton & Rose, *The Cactaceae* 1: 39. (21 Jun) 1919.

Etym. Anagram of *catinga*, a thorn-bush desert region of Bahia, Brazil, to which it is native.

Typ. Tacinga funalis Britton & Rose. Autotype (Art. 10.2). The only included species.

Ref. Opuntia (L.) Mill.

Tectospermae F.H.Brandt (pro ser. *Weingartia* Werderm.), Die Gliederung der Gattung *Weingartia* Werdermann, *Kakteen- und Orchideen-Rundschau* **8**(1): 6. 1983.

Etym. From the Latin *tectus*, covered, and *sperma*, seed.

Typ. *Weingartia aglaia* F.H.Brandt.

Ref. *Rebutia* K.Schum.

Tenues Pfeiff. (pro infragen. *Mammillaria* Haw. in § *Homoeacanthae* nom. inval. = § *Mammillaria*), *Enumeratio diagnostica cactearum hucusque cognitarum*: 5. 1837.

Etym. Based on the name of an included species.

Typ. *Mammillaria tenuis* DC. = *Mammillaria elongata* DC. Autotype (Art. 22.6).

Obs. The lectotype designation of *Mammillaria tenuis* DC. by Heath, *Journal of the Mammillaria Society* **28**(3): 26. 1988, was superfluous.

Ref. *Mammillaria* Haw.

Tenues (Pfeiff.) Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 **6**: 315. 1841 ("Tenuae")
Bas. *Tenues* Pfeiff. (1837, pro infragen. *Mammillaria* Haw.)

Ref. *Mammillaria* Haw.

Tenues Pfeiff. (pro infragen. *Cereus* (L.) Mill. in § *Cereastri* Pfeiff. nom. inval.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 69, 79. (Feb) 1837 nom. nud.

Etym. A Latin adjective, *tenuis*, slender.

Typ. Not cited.

Ref. *Cereus* (L.) Mill.

Tenuilobae DC. (pro sect. *Opuntia* (L.) Mill.), *Prodromus systematis naturalis regni vegetabilis* **3**: 474. 1828.

Etym. From the Latin *tenuis*, thin, and *lobus*, lobe.

Typ. *Cactus brasiliensis* Willd. Autotype (Art. 10.2). The only included species.

Ref. *Opuntia* (L.) Mill.

Tenuiores K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 54 (Feb). 1897.

Etym. From the comparative adjective of the Latin *tenuis*, thin or slender. A reference to the slenderness of the stems.

Typ. Not cited.

Ref. *Cereus* (L.) Mill., *Echinocereus* Engelm.

Tenuispinae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto Dyckensi cultae. Anno 1841*: 43. 1841.

Etym. From the Latin *tenuis*, thin, slender, or fine, and *spina*, spine.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Tephrocactus Lem., *Les cactées*: 88. 1868.

Etym. From the Greek *tephros*, ash-coloured, and the substantive *Cactus*.

Typ. Not cited.

Lectotyp. *Opuntia diademata* Lem. = *Cereus articulatus* Pfeiff. Designated by Britton & Rose, *The Cactaceae* 1: 43. 1919.

Ref. *Opuntia* (L.) Mill.

Tephrocactus (Lem.) F.A.C.Weber (pro sect. *Opuntia* (L.) Mill.), *Opuntia*, in Bois, *Dictionnaire d'horticulture* 2(28): 893, 896. (Apr) 1898 nom. illeg. (Art. 52.1).

Bas. *Tephrocactus* Lem. (1868, pro gen.).

Syn. *Opuntia* (L.) Mill. sect. *Subaphyllae* (Salm-Dyck) Walp. (1843).

Ref. *Opuntia* (L.) Mill.

Tephrocactus (Lem.) K.Schum. (pro subgen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 652, 690. (1 Nov). 1898.

Bas. *Tephrocactus* Lem. (1868, pro gen.).

Ref. *Opuntia* (L.) Mill.

Terecaulis E.Berge, *Das Buch der Welt*: 91. 1842.

Etym. From the Latin, *teres*, rounded, and *caulis*, the stem of a plant.

Typ. Not cited.

Lectotyp. *Cactus curassavicus* L. Designated by Mottram, in Crook & Mottram, *Opuntia* index Part 3: Nomenclatural note and F, *Bradleya* 15: 98. 1997.

Ref. *Opuntia* (L.) Mill.

Teretes Pfeiff. (pro infragen. *Rhipsalis* Gaertn.), *Enumeratio diagnostica cactearum hucusque cognitarum*: 133. (Feb) 1837.

Etym. From the Latin adjective *teres*, terete, round, or cylindric.

Typ. Not cited.

Ref. *Rhipsalis* Gaertn.

Teretes (Pfeiff.) Walp. (pro sect. *Rhipsalis* Gaertn.), *Repertorium botanices systematicae* 2: 279. 1843.

Bas. *Teretes* Pfeiff. (1837, pro infragen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Teretes (Pfeiff.) K.Schum. (pro ser. *Rhipsalis* Gaertn.), *Cactaceae*, in Martius, *Flora Brasiliensis* 4(2): 267. (1 Sep) 1890.

Bas. *Teretes* Pfeiff. (1837, pro infragen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Teretes K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (11): 657, 659-660. (1 Nov). 1898.

Etym. Based on the name of an included species.

Typ. *Opuntia teres* J.-F.Cels ex F.A.C.Weber = *Opuntia vestita* Salm-Dyck.

Ref. *Opuntia* (L.) Mill.

Terminalia Schütz (pro infragen. [“skupina”] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* 1(1): 7. 1962 nom. nud.

Etym. A Latin adjective, *terminalis*, terminated. From the flower position at the apex.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Terminalia Schütz (pro sect. *Gymnocalycium* Mittler), Rod *Gymnocalycium* Pfeiff., *Friciana* 7(46): 11, 14. 1968 (publ. 1969).

Etym. A Latin adjective, *terminalis*, terminated. From the flower position at the apex.

Typ. *Echinocactus mihanovichii* Frič & Gürke.

Ref. *Gymnocalycium* Mittler.

Terminatae G.A.Lindb. (pro infragen. [“Untersippe”] *Rhipsalis* Gaertn.), *Rhipsalis Regnellii* G. A. Lindberg n. sp., *Gartenflora* 39(5): 121. (1 Mar) 1890.

Etym. A Latin adjective, *terminatus*, terminal.

Typ. Not cited. *R. regnellii* & *R. houlettiana* explicitly excluded, but includes all other members of *Alatae* Pfeiff.

Syn. *Phyllarthrorhipsalis* Buxb. (1970, pro subgen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Testudines Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 637, 639. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Cereus testudo* Karw. ex Zucc. Autotype (Art. 22.6).

Obs. Based on the same type as *Deamia* Britton & Rose (1920).

Ref. *Selenicereus* (A.Berger) Britton & Rose.

Tetragonae Salm-Dyck (pro infragen. *Mammillaria* Haw.), *Cactaeae in horto Dyckensi cultae* 1844: 9. 1845.

Etym. From the Greek *tetras*, four, & *gonios*, offspring, wing or angle. A reference to having 4-angled tubercles.

Typ. Not cited.

Lectotyp. *Mammillaria caput-medusae* Otto ex Pfeiff. = *Mammillaria sempervivi* DC.

Designated by Heath, *Journal of the Mammillaria Society* 28(3): 28. 1988.

Ref. *Mammillaria* Haw.

Tetragonae (Salm-Dyck) P.V.Heath (pro subsect. *Mammillaria* Haw.), Early infrageneric classifications of the genus *Mammillaria* (part 2), *Journal of the Mammillaria Society* 28(3): 28. 1988.

Bas. *Tetragonae* Salm-Dyck (1845, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Tetraspineae Lawr. (pro subsect. *Mammillaria* Haw.), Catalogue of the cacti in the collection of the Rev. Theodore Williams, at Hendon Vicarage, Middlesex, *Gardener's Magazine and Register of Rural Domestic Improvement*, ser.3 6: 314. 1841.

Etym. From the Greek *tetras*, four, & the Latin *spina*, spine.

Lectotyp. Mammillaria polythele Mart. Designated by Heath, *Journal of the Mammillaria Society* **28**(3): 26. 1988.

Ref. Mammillaria Haw.

Texenses Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 626. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. Homalocephala Britton & Rose (1922, pro gen.).

Typ. Echinocactus texensis Hopffer. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. Echinocactus Britton & Rose.

Thelegoni K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (1): 49 (Feb). 1897.

Etym. Based on the name of an included species.

Typ. Cereus thelegonus F.A.C.Weber. Autotype (Art. 10.2, 22.6). The only included species.

Ref. Echinopsis Zucc.

×**Thelobergia** Hirao, *Color Encyclopaedia of cacti*: 30. 1979.

Etym. Condensed formula.

Par. Leuchtenbergia Hook.f. × *Thelocactus* Britton & Rose.

Ref. ×Echinobergia Mottram.

Thelocactus K.Schum. (pro subgen. *Echinocactus* Link & Otto), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (5): 292 (1 Jan); (7): 429 (15 Apr). 1898.

Etym. From the Greek *thele*, nipple, and the substantive *Cactus*. A reference to the ribs being divided into podaria.

Rep. Syn. Theloidei Salm-Dyck (1841, pro infragen. *Echinocactus* Link & Otto), but excluding *Lophophora* J.M.Coult.

Typ. Not cited.

Lectotyp. Echinocactus hexaedrophorus Lem. Designated by Britton & Rose, *The Cactaceae* **4**: 6. (24 Dec) 1923.

Ref. Echinofossulocactus Lawr.

Thelocactus (K.Schum.) Britton & Rose, Two new genera of the *Cactaceae*, *Bulletin of the Torrey Botanical Club* **49**(8): 251. (9 Oct) 1922.

Bas. Thelocactus K.Schum. (1898, pro subgen. *Echinocactus* Link & Otto)

Ref. Echinofossulocactus Lawr.

Thelocephala Y.Itô, *Explanatory diagram of the Austroechinocactinae*: 148, 292. 1957.

Etym. From the Greek *thele*, nipple, and *kephale*, head.

Typ. Echinocactus napinus Phil.

Ref. Eriosyce Phil.

Theloidei Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 20. 1841.

Etym. From the Greek *thelos*, nipple, and *-oides*, -like, referring to the tuberculate ribs.

Rep. Syn. Phymatogoni Lem. pro parte (1839, pro infragen. *Echinocactus* Link & Otto).

Typ. Not cited.

Ref. *Echinofossulocactus* Lawr., *Lophophora* J.M.Coult.

Theloidei (Salm-Dyck) Walp. (pro sect. *Echinocactus* Link & Otto), *Repertorium botanices systematicae* 2: 273. 1843.

Bas. *Theloidei* Salm-Dyck (1841, pro infragen. *Echinocactus* Link & Otto).

Obs. Circumscription broadened in 1850.

Ref. *Echinofossulocactus* Lawr., *Lophophora* J.M.Coult.

Theloidei Doweld (pro ser. *Copiapoa* Britton & Rose), On the phylogeny and systematics of the genus *Copiapoa* Britton & Rose, *Sukkulenty* 4(1-2): 49. (Jan) 2003.

Etym. From the Greek *thelos*, nipple, and *-oides*, -like, referring to the tuberculate ribs.

Typ. *Echinocactus cinerascens* Salm-Dyck.

Ref. *Copiapoa* Britton & Rose.

Thelomastus Frič, in Kreuzinger, *Verzeichnis amerikanischer und anderer Sukkulenten mit Revision der Systematik der Kakteen*: 10. 1935 nom. illeg. (Art. 52.1).

Etym. Formula based on the substantives *Thelocactus* and *Echinomastus*.

Rep. Syn. *Echinocactus* Link & Otto subgen. *Thelocactus* K.Schum. (1898).

Typ. *Echinocactus hexaedrophorus* Lem. Autotype (Art. 7.4). Same as the replaced synonym.

Syn. *Thelocactus* (K.Schum.) Britton & Rose (1922).

Obs. Meant to be a genus combining *Thelocactus* (K.Schum.) Britton & Rose (1922) and *Echinomastus* Britton & Rose (1922), both of which had been published simultaneously at the rank of genus. However, the oldest basionym is *Thelocactus* K.Schum. (1898), so the new name amounts to a superfluous replacement for that.

Ref. *Echinofossulocactus* Lawr.

Theloneoporteria Y.Itô (pro subgen. *Neoporteria* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *thele*, nipple, and the substantive *Neoporteria*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Thiolobivia Y.Itô (pro subgen. *Lobivia* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* 71: 18. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *thion*, sulphur, and the substantive *Lobivia*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Thrixanthocereus Backeb., Zwei wichtige Gattungen des Huancabamba-Distriktes, *Blätter für Kakteenforschung* 4(7): [1-2]. 1937.

Etym. From the Greek *thrix*, hair, *anthos*, flower, and the substantive *Cereus*.

Typ. *Cephalocereus blossfeldiorum* Werderm.

Ref. *Espostoa* Britton & Rose.

Thouarsiani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Etym. Based on the name of the only included species.

Typ. *Cereus thouarsii* F.A.C.Weber. Autotype (Art. 22.6).

Obs. Based on the same type as *Jasminocereus* Britton & Rose (1920, pro gen.).

Ref. *Jasminocereus* Britton & Rose.

Thurberiana Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 52. (21 Jun) 1919.

Etym. Based on the name of an included species, with an adjectival suffix.

Typ. *Opuntia thurberi* Engelm. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Thurberiana (Britton & Rose) Backeb., (pro ser. *Cylindropuntia* (Engelm.) F.M.Knuth), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 14. (Jun) 1942.

Bas. *Thurberiana* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tiegeliana Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia tiegeliana* Wessner. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

× ***Timmermansara*** P.V.Heath, The nothogenera of the *Cactaceae*, *Calyx* **1(3)**: 104. 1992.

Etym. Named for A. J. TIMMERMANS, thought to be the earliest person to raise a hybrid with this formula.

Par. *Chamaecereus* Britton & Rose × *Echinopsis* Zucc. × *Rebutia* K.Schum.

Ref. × *Echinobutia* P.V.Heath.

Tomentosae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 172. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia tomentosa* Salm-Dyck. Autotype (Art. 22.6).

Obs. Published simultaneously with ser. *Macdougalianae* Britton & Rose (1919) which has the same type. *Tomentosae* Britton & Rose is selected here as having priority.

Ref. *Opuntia* (L.) Mill.

Tomentosae (Britton & Rose) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 451, 539. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Tomentosae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tonduzianae Vaupel (pro infragen. [“Gruppe”] *Rhipsalis* Gaertn.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 618, 619. (Dec) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Rhipsalis tonduzii* F.A.C.Weber. Autotype (Art. 22.6).

Obs. Name abandoned by its author in Vaupel, *Die Kakteen* (2): 54. (1 Mar) 1926 in favour of *Pentapterae* Britton & Rose (1923), whose type was included in the circumscription of *Tonduzianae*.

Ref. *Rhipsalis* Gaertn.

Tonduziani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus tonduzii* F.A.C.Weber. Autotype (Art. 22.6).

Obs. Based on the same type as *Werckleocereus* Britton & Rose (1909, pro gen.).

Ref. *Epiphyllum* Haw.

Torreycactus Doweld, Konspekt filogenetitscheskoy sistemy triby *Cacteeae* (*Cactoideae* *Cactaceae*), *Sukkulenty* **1**(1): 19. 1998.

Etym. Named in honour of John TORREY (1796-1873).

Typ. *Echinocactus conothelos* Regel & Klein.

Ref. *Thelocactus* (K.Schum.) Britton & Rose.

Tortispinae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 45, 126. (21 Jun) 1919 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Opuntia tortispina* Engelm. = *Opuntia macrorhiza* Engelm. Autotype (Art. 22.6).

Syn. *Setispinae* (Engelm.) Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tortispinae Britton & Rose ex Backeb. (pro sub-subser. *Opuntia* (L.) Mill.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 19. (Jun) 1942.

Rep. Syn. *Tortispinae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Typ. *Opuntia tortispina* Engelm. = *Opuntia macrorhiza* Engelm. Autotype (Art. 7.4).

Ref. *Opuntia* (L.) Mill.

Tortispinae (Backeb.) Backeb. (pro subser. *Opuntia* (L.) Mill.), *Die Cactaceae* **1**: 450, 477. (Jan) 1958 nom. inval. (Art. 41.5).

Bas. *Tortispinae* Backeb. (1942, pro sub-subser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tortuosi K.Schum. (pro infragen. *Cereus* (L.) Mill.), in Engler & Prantl (ed.), *Die natürlichen Pflanzenfamilien* **3**(6a): 178. (Apr 18) 1894.

Etym. Based on the name of an included species.

Typ. *Cereus tortuosus* J.Forbes ex Otto & A.Dietr. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Toumeyia Britton & Rose, *The Cactaceae* 3: 91. 1922 nom. illeg. (Art. 53.1).

Etym. Named for Dean James William TOUMEY (1864-1932).

Typ. *Mammillaria papyracantha* Engelm.

Obs. Considered to be a later homonym of *Tuomeya* Harv. (1858) a genus of *Algae* (*Rhodophyceae*). The Spermatophyta Committee voted 11 - 3 to treat these two names as homonyms (*Taxon* 53(3): 824. 2004).

Ref. *Pediocactus* Britton & Rose.

Toumeyia (Britton & Rose) L.D.Benson (pro sect. *Pediocactus* Britton & Rose), A revision and amplification of *Pediocactus* III, *Cactus and Succulent Journal* (US) 34(2): 61. (Mar-Apr) 1962.

Rep. Syn. *Toumeyia* Britton & Rose (1922, pro gen.).

Typ. *Mammillaria papyracantha* Engelm.

Ref. *Pediocactus* Britton & Rose.

Triangulares K.Schum. (pro infragen. *Cereus* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (1): 56. (Feb) 1897.

Etym. Based on the name of an included species.

Typ. *Cactus triangularis* L. Autotype (Art. 22.6).

Obs. Taken up by Vaupel, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 636, 637. (Dec) 1925. Includes the type of *Cereus* (L.) Mill. subgen. *Hylocereus* A.Berger (1905).

Ref. *Epiphyllum* Haw.

Trichocereus A.Berger (pro subgen. *Cereus* (L.) Mill.), A systematic revision of the genus *Cereus* Mill., *Missouri Botanical Garden Annual Report* 16: 60, 73, t.8. (31 May) 1905.

Etym. From the Greek *trichos*, hair, and the substantive *Cereus*.

Typ. Not cited.

Lectotyp. *Cereus macrogonus* Otto. Designated by Britton & Rose, *The Cactaceae* 2: 130. (9 Sep) 1920.

Ref. *Echinopsis* Zucc.

Trichocereus (A.Berger) Riccob., *Studii sulle Cattede del R. Orto Botanico di Palermo, Bollettino delle Reale Orto Botanico e Giardino Coloniale di Palermo* 8: 236. 1909.

Bas. *Trichocereus* A.Berger (pro subgen. *Cereus* (L.) Mill.).

Ref. *Echinopsis* Zucc.

× **Trichoechinopsis** Backeb., *Die Cactaceae* 2: 1283. (Mar) 1959.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Trichocereus* (A.Berger) Riccob.

Ref. *Echinopsis* Zucc.

× **Tricholobiviopsis** B.Fearn, *Abbey Brook Catalogue 1982-83*: 21. 1982 nom. inval. (Art. 30.6).

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Lobivia* Britton & Rose × *Trichocereus* (A.Berger) Riccob.

Ref. *Echinopsis* Zucc.

× **Tricholobiviopsis** B.Fearn ex P.V.Heath, *The nothogenera of the Cactaceae, Calyx* **1**(3): 111. 1992.

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Lobivia* Britton & Rose × *Trichocereus* (A.Berger) Riccob.

Syn. × *Tricholobiviopsis* B.Fearn nom. inval. (1982).

Ref. *Echinopsis* Zucc.

Trichomosemineum Frič ex Kreuzinger (pro infragen. *Gymnocalycium* Mittler), *Verzeichnis amerikanischer und anderer Sukkulenten mit Revision der Systematik der Kakteen*: 14. (31 Apr) 1935 (“Trichomosemineae”) nom.inval. (Art. 39.1).

Etym. From the Greek *trichoma*, growth of hair, and the Latin *semen*, seed.

Typ. *Echinocactus quehlianus* F.Haage ex Quehl.

Ref. *Gymnocalycium* Mittler.

Trichomosemineum Frič ex Schütz (pro infragen. *Gymnocalycium* Mittler, as “rozdělen” = division), *K systematicke rodu Gymnocalycium, Fričiana* **1**(1): 4, 6. 1962 (“Trichomosemineae”) nom.inval. (Art. 39.1, 40.1).

Etym. From the Greek *trichoma*, growth of hair, and the Latin *semen*, seed.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Trichomosemineum Frič ex Schütz (pro subgen. *Gymnocalycium* Mittler), *Rod Gymnocalycium, Friciana* **7**(46): 10, 13. 1968 (publ. 1969).

Etym. From the Greek *mikron*, small, and the Latin *semen*, seed.

Typ. *Echinocactus quehlianus* F.Haage ex Quehl.

Ref. *Gymnocalycium* Mittler.

× **Trichomoza** Font & Picca, *Natural hybridization between Trichocereus atacamensis (Philippi) Marshall and Denmoza rhodacantha (Salm-Dyck) Britton & Rose, Bradleya* **19**: 59-66. (3 Oct) 2001.

Etym. Condensed formula.

Par. *Trichocereus* (A.Berger) Riccob. × *Denmoza* Britton & Rose.

Ref. × *Cleistopsis* Strigl.

× **Trichopsis** Y.Itô, *The Cactaceae, Classification & illustration of cacti*: 638. 1981 nom. illeg. (Art. 53.1, H.3.3).

Etym. Condensed formula.

Par. *Echinopsis* Zucc. × *Trichocereus* (A.Berger) Riccob. [× *Trichopsis* ‘Iyo-Marū’ Y.Itô]

Obs. A later homonym of × *Trichopsis* Kirsch (1970, *Orchidaceae*).

Syn. × *Trichoechinopsis* Backeb. (1959).

Ref. *Echinopsis* Zucc.

Trichopuntia Guiggi, *Cactology* **2** Supplement: 2. 2011.

Etym. From the Greek *trichos*, hair, and the substantive name *Opuntia*.

Typ. *Opuntia vestita* Salm-Dyck.

Ref. *Opuntia* (L.) Mill.

Triglochidiata Bravo (pro sect. *Echinocereus* Engelm.), *Triglochidiata*, una nueva sección del género *Echinocereus*, *Cactaceas y Suculentas Mexicanas* **18**(4): 108-109 (Oct-Dec) 1973.

Etym. Based on the name of an included species.

Typ. *Echinocereus triglochidiatus* Engelm.

Ref. *Echinocereus* Engelm.

Triglochidiata (Bravo) Kunzmann (pro subser. *Echinocereus* Engelm.), Erweiterung der Einteilung der Gattung *Echinocereus* Engelm., *Kakteen und andere Sukkulente* **36**(4): 76. (Apr) 1985 (“Triglochidiati”).

Bas. *Triglochidiata* Bravo (1973, pro sect. *Echinocereus* Engelm).

Ref. *Echinocereus* Engelm.

Triglochidiata (Bravo) Blum, Lange & Rutow, in Blum, Lange, Rischer, & Rutow (pro subgen. *Echinocereus* Engelm.), *Echinocereus monographie, Neue Namen*: [5]. Mar 1998. [Preprinted from *Echinocereus monographie*: 357, 491. Oct 1998] (“Triglochidiati”).

Bas. *Triglochidiata* Bravo (1973, pro sect. *Echinocereus* Engelm).

Ref. *Echinocereus* Engelm.

Trigonae Britton & Rose (pro ser. *Rhipsalis* Gaertn.), *The Cactaceae* **4**: 221. (9 Oct) 1923.

Etym. Based on the name of the only included species.

Typ. *Rhipsalis trigona* Pfeiff. Autotype (Art. 22.6).

Ref. *Rhipsalis* Gaertn.

Trigonorhipsalis A.Berger (pro subgen. *Rhipsalis* Gaertn.), *Kakteen*: v, 96. (Jul-Aug) 1929.

Etym. Based on the name of the only included species, and the substantive *Rhipsalis*.

Typ. *Rhipsalis trigona* Pfeiff. Autotype (Art. 22.6).

Obs. With identical type and circumscription, this could be considered as replacement for *Trigonae* Britton & Rose.

Ref. *Rhipsalis* Gaertn.

Trigonorhipsalis (A.Berger) Backeb. (pro subgen. *Lepismium* Pfeiff.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 21. (Jun) 1942.

Bas. *Trigonorhipsalis* A.Berger (1929, pro subgen. *Rhipsalis* Gaertn.).

Ref. *Rhipsalis* Gaertn.

Tripteres Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Index plantarum succulentarum in horto Dyckensi cultarum anno 183* : 24. 1834 nom. nud.

Etym. Based on the name of an included species.

Typ. *Cereus tripteris* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Epiphyllum* Haw.

Tripteres Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Hortus Dyckensis*: 65, 338. 1834.

Etym. Based on the name of an included species.

Typ. *Cereus tripteris* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Epiphyllum* Haw.

Trochilocactus Lindling., *Beihefte zum Botanischen Centralblatt* **61** Abteilung A: 383. 1942
nom. inval. (Art. 39.1).

Etym. From the Greek *trochilos*, small bird, and the substantive *Cactus*.

Typ. *Phyllocactus eichlamii* Weing.

Ref. *Epiphyllum* Haw.

Tropidoneoporteria Y.Itô (pro subgen. *Neoporteria* Britton & Rose), A new classification of the *Cactinae* of South America, *Bulletin of the Takarazuka Insectarium* **71**: 19. (Jul) 1950
nom. inval. (Art. 39.1).

Etym. From the Greek *trophidos*, bloated, and the substantive *Neoporteria*.

Typ. Not cited.

Ref. *Eriosyce* Phil.

Tuberculatae Salm-Dyck (pro infragen. *Echinopsis* Zucc.), *Cactae in horto Dyckensi cultae anno 1849*: 37. 1850.

Etym. A Latin adjective, *tuberculatus*, tuberculate.

Typ. Not cited.

Ref. *Echinopsis* Zucc., *Echinocereus* Engelm.

Tuberculatae Salm-Dyck (pro infragen. *Opuntia* (L.) Mill.), *Cactae in horto dyckensi cultae anno 1849*: 72. 1850.

Etym. From the Latin *tuberculatus*, tuberculate.

Typ. Not cited.

Lectotyp. *Cactus cylindricus* Lam. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 12. (Jun) 1942.

Ref. *Opuntia* (L.) Mill.

Tuberculatae (Salm-Dyck) Backeb. (pro subgen. *Austrocyliotropuntia* Backeb.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 12. (Jun) 1942.

Bas. *Tuberculatae* Salm-Dyck (1850, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tuberculati Pfeiff. (pro infragen. *Echinocactus* Link & Otto), *Enumeratio diagnostica cactearum hucusque cognitarum*: 64. (Feb) 1837.

Etym. From *tuberculatus*, diminutive of the Latin *tuber*, a swelling.

Typ. Not cited.

Ref. Several unrelated genera.

Tuberculosisi Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), *Reihe Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 623, 628. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Escobaria* Britton & Rose (1923, pro gen.).

Typ. *Mammillaria tuberculosa* Engelm. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Coryphantha* (Engelm.) Lem.

Tuberosi Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 640, 641-642. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus tuberosus* Poselg. = *Echinocereus poselgeri* Lem. Autotype (Art. 22.6).

Ref. *Echinocereus* Engelm.

Tumidae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (11): 700, 704. (1 Nov) 1898.

Etym. A Latin adjective *tumidus*, swollen.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Tumidae (K.Schum.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 535. (20 Feb) 1908.

Bas. *Tumidae* K.Schum. (1898, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tuna A pre-Linnean name used most notably by Dillenius which he adopted for all cacti, after the name *Tunas* of Dodonaeus (1644) q.v. Dillenius rebuked Linnaeus in private correspondence for using the name *Cactus*, on the grounds that its ancient usage might one day be revealed as being applicable to a different group of plants.

Tunae K.Schum. (pro infragen. *Opuntia* (L.) Mill.), *Gesamtbeschreibung der Kakteen* (*Monographia Cactacearum*) (11): 700, 702. (1 Nov) 1898.

Etym. Based on the name of an included species.

Typ. *Cactus tuna* L. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Tunae (K.Schum.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 527. (20 Feb) 1908.

Bas. *Tunae* K.Schum. (1898, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Tunas Dodoens ex Nieuwl. & Lundell, in Lundell, *Enumerantur plantae Dakotae septentrionalis vasculares. – VIII.*, *American Midland Naturalist* **4**(11): 479. (Sep) 1916 nom. illeg. (Art. 52.1).

Rep. Syn. *Opuntia* (L.) Mill. (1754).

Typ. *Cactus ficus-indica* L. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. The lectotype *Opuntia polyacantha* Haw., designated by Benson, *Cacti of the United States and Canada*: 911. 1982 is superfluous.

Tunilla Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 637, 639. (Dec) 1925 (“Tunillae”).

Etym. Based on the name of an included species.

Typ. Cereus tunilla F.A.C.Weber. Autotype (Art. 22.6).

Obs. Based on the same type as *Weberocereus* Britton & Rose (1909).

Ref. Epiphyllum Haw.

Tunilla D.R.Hunt & Iliff [non Vaupel], A new generic name for the “Airampo group.” *Cactaceae Systematics Initiatives* (9): 8-10-12. (Jun) 2000 nom. illeg. (Art. 52.1).

Etym. The Spanish diminutive of *tuna*. A local vernacular name, first mentioned by Azara (1809), applied to these and other unrelated plants.

Typ. Opuntia soehrensii Britton & Rose = *Opuntia corrugata* Salm-Dyck.

Obs. *Tunilla* D.R.Hunt & Iliff was published to replace *Airampo* Frič, because its type was thought to be unidentifiable. However, both type species can be referred to the same wide-spread taxon, which makes the two generic names synonymous. Even when the types are treated as different species, both names apply to the same taxonomic group, so *Tunilla* includes the type of *Airampo* and is therefore illegitimate for that reason.

Ref. Opuntia (L.) Mill.

Turbinicactus Backeb. (pro subgen. *Strombocactus* Britton & Rose), in Backeberg & Knuth, *Kaktus-ABC*: 75. (12 Feb) 1936 nom. inval. (Art. 39.1).

Etym. From the Latin *turbo*, that which spins, and the substantive *Cactus*. A reference to the top-shaped fruits.

Typ. Not cited.

Ref. Strombocactus Britton & Rose.

Turbinicarpus Buxb. & Backeb., *Strombocacti*, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1937 Erster Teil*: 26-27. (May) 1937.

Etym. From the Latin *turbo*, that which spins, and *carpus*, fruit. A reference to the top-shaped fruits.

Typ. Not cited.

Lectotyp. Echinocactus schmiedickeanus Boed. Designated by Backeberg, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V. 1941(2)*: 58. (Jun) 1942.

Turbinicarpus (Backeb.) Halda (pro sect. *Pediocactus* Britton & Rose), A new system of the genus *Pediocactus* Britton & Rose, *Acta Musei Richnoviensis, Sect. Natur.* 5(1): 19. 1998.

Bas. Turbinicarpus Buxb. & Backeb. (1937, pro gen.).

Ref. Turbinicarpus Buxb. & Backeb.

×***Turbiniphora*** Halda & Malina, New descriptions and combinations in *Cactaceae* II, *Acta Musei Richnoviensis, Sect. natur.* 12(1): 7-8. 2005.

Etym. Condensed formula.

Par. Lophophora Lem. × *Turbinicarpus* Buxb. & Backeb. [×*Turbiniphora panarottoi* Halda & Malina].

Typicae Britton & Rose (pro ser. *Pereskia* (L.) Mill.), *The Cactaceae* 1: 10. (21 Jun) 1919 nom. inval. (Art. 22.2).

Typ. Pereskia aculeata Mill. Autotype (Art. 10.2). The only included species.

Syn. Pereskia (L.) Mill. ser. *Pereskia*.

Ref. Pereskia (L.) Mill.

+ ***Uebelechinopsis*** G.D.Rowley, *Teratopia*: 100-101, 280. 2006.

Etym. Condensed formula

Gr.-Chim. *Uebelmannia* Buining + *Echinopsis* Zucc. [+ *Uebelechinopsis* ‘Treetopper’].

Obs. Based on *Uebelmannia pectinifera* + *Echinopsis* sp.

Uebelmannia Buining, Een nieuw geslacht der Cactaceae uit Minas Gerais, *Succulenta* 46(11): [157], 159-160-163. (Nov) 1967.

Etym. Named for the Swiss horticulturist Werner UEBELMANN (1921-2014).

Typ. *Parodia gummifera* Backeb. & Voll.

Uebelmannia Doweld (pro sect. *Ritterocactus* Doweld), Phylogenetic relationships within *Notocactus-Parodia* puzzle, *Sukkulenty* 3(1-2): 60. 2000.

Etym. Named for the Swiss horticulturist Werner UEBELMANN (1921-2014).

Typ. *Notocactus uebelmannianus* Buining.

Ref. *Parodia* Speg.

Uebelmanniani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* 18(4): 75. 1988 (publ. 1989) (“Uebelmanniana”) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Notocactus uebelmannianus* Buining.

Ref. *Parodia* Speg.

Uncinatae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 632, 633. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Mammillaria uncinatus* Zucc. Autotype (Art. 22.6).

Obs. Circumscription based on *Neomammillaria* Britton & Rose (1923) species 105-106.

Ref. *Mammillaria* Haw.

Uncinatae (Vaupel) Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 63. (Jun) 1942.

Etym. Based on the name of an included species.

Bas. *Uncinatae* Vaupel. (1925, pro infragen. *Mammillaria* Haw.).

Ref. *Mammillaria* Haw.

Uncinati Salm-Dyck (pro infragen. *Echinocactus* Link & Otto), *Cactaeae in horto Dyckensi cultae anno 1849*: 28. 1850.

Etym. Based on the name of an included species.

Typ. *Echinocactus uncinatus* Galeotti. Autotype (Art. 22.6).

Obs. The rank of section was assumed by Doweld & Greuter (*Taxon* 50(3): 876), but the evidence in Salm-Dyck (1850: 161) is indirect, perhaps instead referring to § *Stenogoni* or a division within that. Includes the type of *Ferocactus* Britton & Rose (1922).

Ref. *Echinofossulocactus* Lawr.

Unguispini Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Echinomastus* Britton & Rose (1922, pro gen.).

Typ. *Echinocactus erectocentrus* J.M.Coult. Autotype (Art. 7.4).

Obs. *Echinocactus unguispinus* Engelm. should be the autotype under Art. 22.6, but the type of the replaced synonym, *Echinocactus erectocentrus* J.M.Coult., is taken to have priority.

Ref. *Pediocactus* Britton & Rose.

Ursopuntia P.V.Heath, Three new generic names in the *Cactaceae*, *Calyx* **6**(2): 41-42. 1999.

Etym. From the Latin *ursus*, bear, and the substantive *Opuntia*.

Rep. Syn. *Weberianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Typ. *Opuntia weberi* Speg.

Ref. *Opuntia* (L.) Mill.

Uruguayenses Schütz ex Buxb. (pro ser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 6, 9-10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus uruguayensis* Arechav. = *Gymnocalycium hyptiacanthum* ssp. *uruguayense* (Arechav.) Meregalli. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Uruguayenses Schütz ex Buxb. (pro subser. *Gymnocalycium* Mittler), in Krainz (ed.), *Die Kakteen* (38-39) CVIf: 5, 6, 9-10. (1 Jul) 1968.

Etym. Named for an included species.

Typ. *Echinocactus uruguayensis* Arechav. = *Gymnocalycium hyptiacanthum* ssp. *uruguayense* (Arechav.) Meregalli. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Uruguayensia Schütz (pro infragen. ["skupina"] *Gymnocalycium* Mittler), K systematice rodu *Gymnocalycium*, *Fričiana* **1**(1): 6. 1962 nom.inval. (Art. 37.1, 38.1).

Etym. Named for an included species.

Typ. *Echinocactus uruguayensis* Arechav. = *Gymnocalycium hyptiacanthum* ssp. *uruguayense* (Arechav.) Meregalli. Autotype (Art. 22.6).

Ref. *Gymnocalycium* Mittler.

Utahia Britton & Rose, *The Cactaceae* **3**: 78, 215. (12 Oct) 1922.

Etym. Named for its type locality in the state of Utah.

Typ. *Echinocactus sileri* Engelm. ex J.M.Coult.

Ref. *Pediocactus* Britton & Rose.

Utahia (Britton & Rose) A.Berger (pro subgen. *Echinocactus* Link & Otto), *Kakteen*: viii, 249. (Jul-Aug) 1929.

Bas. *Utahia* Britton & Rose (1922, pro gen.).

Ref. *Pediocactus* Britton & Rose.

Valdeziani Doweld (pro ser. *Turbinicarpus* Buxb. & Backeb.), De genere *Turbinicarpus*, *Sukkulenty* 3(1-2): 69. 2000.

Etym. Based on the name of an included species.

Typ. *Pelecyphora valdeziana* H.Möller.

Ref. *Turbinicarpus* Buxb. & Backeb.

Variabiles Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 49. 1850.

Etym. Based on the name of an included species.

Typ. *Cereus variabilis* Pfeiff. = *Acanthocereus tetragonus* (L.) Hummelinck.

Ref. *Acanthocereus* (A.Berger) Britton & Rose.

Vatricania Backeb., Nova genera et subgenera, *Cactus and Succulent Journal* (US) 22(5): 154. (Sep-Oct) 1950.

Etym. Named for the French horticulturist Louis F. VATRICAN (1904-2007), Director of the Jardin Exotique, Monaco.

Typ. *Cephalocereus guentheri* Kupper.

Ref. *Haageocereus* Backeb.

Velutini Salm-Dyck (pro subsect. *Cereus* (L.) Mill.), *Cactae in horto Dyckensi cultae anno 1849*: 44, 196. 1850.

Etym. A Latin adjective, *velutinus*, velvety. Probably a reference to the large felty areoles.

Typ. Not cited.

Ref. *Echinopsis* Zucc., *Eulychnia* Phil.

Verschaffeltianae Backeb. (pro subser. *Austrocylindropuntia* Backeb.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 13. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia verschaffeltii* Backeb. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Verschaffeltianae Backeb. (pro ser. *Austrocylindropuntia* Backeb.), *Die Cactaceae* 1: 138, 146. (Jan) 1958 nom. inval. (Art. 39.1) & illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Opuntia verschaffeltii* Backeb. Autotype (Art. 22.6).

Obs. Includes the type of *Vestitae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.), whose epithet should have been adopted.

Ref. *Opuntia* (L.) Mill.

Versicolores Backeb. (pro ser. *Haageocereus* Backeb.), *Die Cactaceae* 2: 1163, 1166. (Mar) 1959 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Cereus versicolor* Werderm. & Backeb. Autotype (Art. 22.6).

Ref. *Haageocereus* Backeb.

Vestitae Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* 1: 44, 71. (21 Jun) 1919.

Etym. Based on the name of an included species.

Typ. *Opuntia vestita* Salm-Dyck. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Vestitae (Britton & Rose) Backeb. (pro subser. *Austrocyllindropuntia* Backeb.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 13. (Jun) 1942 nom. inval. (Art. 39.1).

Bas. *Vestitae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Virescentes Salm-Dyck (pro infragen. *Cereus* (L.) Mill.), *Cactaeae in horto Dyckensi cultae. Anno 1841*: 26. 1841 nom. inval. (Art. 22.2)

Etym. From the Latin *virescens*, becoming green, referring to the loss of blue wax on the youngest growth.

Typ. Not cited, but includes the type of *Cereus* (L.) Mill.

Ref. *Cereus* (L.) Mill., *Stenocereus* (A. Berger) Riccob., and *Echinopsis* Zucc.

Viridiflori Engelm. (pro infragen. *Cereus* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 22. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 278. 1857] nom. nud.

Etym. Based on the name of an included species.

Typ. *Echinocereus viridiflorus* Engelm.

Ref. *Echinocereus* Engelm.

Viridiflori Engelm. ex Bravo (pro ser. *Echinocereus* Engelm.), *Nuevas combinaciones y taxa VI, Cactaceas y Suculentas Mexicanas* 27(1): 16. (Jan-Mar) 1982 (“*Viridiflorae*”) nom. inval. (Art. 22.2).

Etym. Based on the name of the only included species.

Typ. *Echinocereus viridiflorus* Engelm.

Syn. *Echinocereus* Engelm. ser. *Echinocereus*.

Ref. *Echinocereus* Engelm.

Vulgares Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 39. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* 3: 295. 1857] nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Opuntia vulgaris* Mill. = *Cactus ficus-indica* L. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Obs. Includes the type of the genus *Opuntia* (L.) Mill., although *O. vulgaris* Mill. was wrongly applied here in the sense of *O. monacantha* Haw.

Ref. *Opuntia* (L.) Mill.

Vulgares Engelm. ex Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 522. (20 Feb) 1908 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Opuntia vulgaris* Mill. = *Cactus ficus-indica* L. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. infragen. *Opuntia*.

Obs. Includes the type of the genus *Opuntia* (L.) Mill., although *O. vulgaris* Mill. used here in the sense of *O. monacantha* Haw.

Ref. *Opuntia* (L.) Mill.

Vulgares Engelm. ex A.Cast. (pro subsect. *Opuntia* (L.) Mill.), Revision de las cactaceas Argentinas, *Revista de la Facultad de Ciencias Agrarias* **6**(2): 277, 278. 1957 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Opuntia vulgaris* Mill. = *Cactus ficus-indica* L. Autotype (Art. 22.6).

Syn. *Opuntia* (L.) Mill. subsect. *Opuntia*.

Ref. *Opuntia* (L.) Mill.

Weberbauerocereus Backeb., *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* **1941**(2): 31, 75. (Jun) 1942.

Etym. Named for the Polish (Silesian) botanist and explorer Prof. August WEBERBAUER (1871-1948).

Typ. *Cereus fascicularis* Meyen.

Ref. *Haageocereus* Backeb.

×**Weberbostoa** G.D.Rowley, Spontaneous bigeneric hybrids in *Cactaceae*, *Bradleya* **12**: 6. 1994.

Etym. Condensed formula.

Par. *Espostoa* Britton & Rose × *Weberbauerocereus* Backeb.

Ref. ×*Haagespostoa* G.D.Rowley.

Weberiana Britton & Rose (pro ser. *Opuntia* (L.) Mill.), *The Cactaceae* **1**: 44, 84. (21 Jun) 1919.

Etym. Based on the name of the only included species.

Typ. *Opuntia weberi* Speg. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

Weberiani Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 639, 640. (Dec) 1925.

Etym. Based on the name of an included species.

Typ. *Cereus weberi* J.M.Coult. Autotype (Art. 22.6).

Ref. *Cephalocereus* Pfeiff.

Weberiani (Britton & Rose) Backeb. (pro subser. *Tephrocactus* Lem.), *Cactaceae* Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel, *Cactaceae Jahrbücher der Deutschen Kakteen-Gesellschaft e.V.* 1941(2): 15. (Jun) 1942.
Bas. *Weberianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Ref. *Opuntia* (L.) Mill.

Weberiopuntia Frič, *Verzeichnis amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 41. (31 Apr) 1935 nom. inval. (Art. 39.1,
Etym. Based on the name of an included species, and the substantive *Opuntia*.
Rep. Syn. *Weberianae* Britton & Rose (1919, pro ser. *Opuntia* (L.) Mill.).
Typ. *Opuntia weberi* Speg.
Syn. *Ursopuntia* P.V.Heath (1999).
Obs. Replaced synonym not cited and conditions for valid publication have not otherwise been met (no Latin description).
Ref. *Opuntia* (L.) Mill.

Weberocereus Britton & Rose, *The genus Cereus and its allies in North America, Contributions from the U.S. National Herbarium* 12(10): 431. (21 Jul) 1909.
Etym. Named for the French botanist Frédéric Albert Constantin WEBER (1830-1903).
Typ. *Cereus tunilla* F.A.C.Weber.
Ref. *Epiphyllum* Haw.

Weberocereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 119. (Jul-Aug) 1929.
Bas. *Weberocereus* Britton & Rose (1909, pro gen.)
Ref. *Epiphyllum* Haw.

×**Weinganopsis** G.D.Rowley, *Spontaneous bigeneric hybrids in Cactaceae, Bradleya* 12: 6. 1994.
Etym. Condensed formula.
Par. *Echinopsis* Zucc. × *Weingartia* Werderm.
Ref. ×*Echinobutia* P.V.Heath.

Weingartia Werderm., *Beiträge zur Nomenklatur, Kakteenkunde* 1937(2): 20-21. (Feb) 1937.
Etym. Named for the German businessman Wilhelm WEINGART (1856-1936).
Rep. Syn. *Spegazzinia* Backeb. nom. illeg. (1934, pro gen.).
Typ. *Echinocactus fidanus* Backeb. Autotype (Art. 7.4). Same as the replaced synonym.
Ref. *Rebutia* K.Schum.

Weingartia (Werderm.) G.D.Rowley (pro subgen. *Rebutia* K.Schum.), *Rebutia* reappraised, *CactusWorld* 27(2): 89. 2009.
Bas. *Weingartia* Werderm. (1937, pro gen.).
Ref. *Rebutia* K.Schum.

Weingartianae Backeb. (pro ser. *Austrocylindropuntia* Backeb.), *Die Cactaceae* 1: 138, 143. (Jan) 1958 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Opuntia weingartiana* Backeb. Autotype (Art. 22.6).

Ref. *Opuntia* (L.) Mill.

× **Weinocalycium** P.V.Heath, *The nothogenera of the Cactaceae*, *Calyx* **1**(3): 119. 1992.

Etym. Condensed formula.

Par. *Gymnocalycium* Mittler × *Weingartia* Werderm.

Ref. × *Gymnobotia* P.V.Heath

Werdermanniani Havlíček (pro ser. *Notocactus* (K.Schum.) Frič), A new conspectus generis of the genus *Notocactus* Frič 1928 and its classification into subgenera and seria, *Kaktus Világ* **18**(4): 75. 1988 (publ. 1989) (“Werdermannianae”) nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Notocactus werdermannianus* Herter.

Obs. This combination was also superfluously and invalidly published by W. Prauser, *Internoto* **22**(1): 14-15. (Jan) 2001.

Ref. *Parodia* Speg.

Werkleocereus Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 432. (21 Jul) 1909.

Etym. Named for Carl WERCKLÉ (1860-1924).

Typ. *Cereus tonduzii* F.A.C.Weber.

Ref. *Epiphyllum* Haw.

Werkleocereus (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 118. (Jul-Aug) 1929.

Bas. *Werkleocereus* Britton & Rose (1909, pro gen.)

Ref. *Epiphyllum* Haw.

× **Werkleopora** T.Hewitt, *Holly Gate International Ltd. Catalogue*: 11. 1991 nom. inval. (Art. 30.6, H.6.2, H.9.1).

Etym. Incorrectly formed condensed formula.

Par. Not cited, but presumably *Aporocactus* Lem. × *Werkleocereus* Britton & Rose.

Ref. × *Aporepiphyllum* G.D.Rowley.

Wigginsia D.M.Porter, A new name for *Malacocarpus*, *Taxon* **13**(6): 210-211. (Jul) 1964.

Etym. Named for Dr. Ira Loren WIGGINS (1899-1987), Scientific Director of the Belvedere Scientific Fund of San Francisco, California.

Rep. Syn. *Malacocarpus* Salm-Dyck (1850, pro gen.).

Typ. *Echinocactus sellowii* Link & Otto. Autotype (Art. 7.4). Same as the replaced synonym.

Ref. *Parodia* Speg.

Wigginsia (D.M.Porter) N.Gerloff, Neduchal & S.Stuchlik (pro sect. *Notocactus* (K.Schum.) Frič), in Gerloff, Neduchal & Stuchlik, *Notokakteen*: 28, 29, 149. 1995.

Bas. *Wigginsia* D.M.Porter (1964, pro gen.).

Obs. Basionym citation on p. 28.

Ref. *Parodia* Speg.

Wilcoxia Britton & Rose, The genus *Cereus* and its allies in North America, *Contributions from the U.S. National Herbarium* **12**(10): 434. (21 Jul) 1909.

Etym. Named for the American Brigadier General Timothy E. WILCOX.

Typ. *Echinocereus poselgeri* Lem.

Ref. *Echinocereus* Engelm.

Wilcoxia (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 134. (Jul-Aug) 1929.

Bas. *Wilcoxia* Britton & Rose (1909, pro gen.)

Ref. *Echinocereus* Engelm.

Wilcoxia (Britton & Rose) N.P.Taylor (pro sect. *Echinocereus* Engelm.), *The genus Echinocereus*: 134. 1985.

Bas. *Wilcoxia* Britton & Rose (1909, pro gen.)

Ref. *Echinocereus* Engelm.

Wildianae Vaupel (pro infragen. [“Gruppe”] *Mammillaria* Haw.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 632, 633. (Dec) 1925 nom. illeg. (Art. 52.1).

Etym. Based on the name of an included species.

Typ. *Mammillaria wildii* A.Dietr. Autotype (Art. 22.6).

Syn. *Mammillaria* infragen. *Stylothelae* Pfeiff. (1837).

Obs. Circumscription based on *Neomammillaria* Britton & Rose (1923) species 109-146. Includes the type of *Ebnerella* Buxb. (1951).

Ref. *Mammillaria* Haw.

Williamsiani Vaupel (pro infragen. [“Gruppe”] *Echinocactus* Link & Otto), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 623. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Lophophora* J.M.Coult. (1894, pro gen.).

Typ. *Echinocactus williamsii* Lem. Autotype (Art. 22.6).

Ref. *Lophophora* J.M.Coult.

Wilmattea Britton & Rose, *The Cactaceae* **2**: 195. (9 Sep) 1920.

Etym. Named for Mrs. Wilmatte P. COCKERELL.

Typ. *Hylocereus minutiflorus* Britton & Rose. Autotype (Art. 10.2). The only included species.

Ref. *Epiphyllum* Haw.

Wilmattea (Britton & Rose) A.Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vi, 119. 1929.

Bas. *Wilmattea* Britton & Rose (1920, pro gen.).

Ref. *Epiphyllum* Haw.

Winteria F.Ritter, Eine neue Cereengattung aus Bolivien, *Kakteen und andere Sukkulenten* **13**(1): 4-5-8. (Jan) 1962 nom. illeg. (Art. 53.1).

Etym. Named for the author's sister, Frau Hildegard WINTER.

Typ. *Winteria aureispina* F.Ritter nom. incorr. = *Winterocereus aureispinus* (F.Ritter) Backeb. [NB: *Winterocereus aureispinus* (F.Ritter) Backeb. is taken to be validly published under Art. 41.8c despite the lack of a direct page reference, because it is indicated to be a replacement].

Syn. *Winterocereus* Backeb. (1966).

Obs. Later homonym of *Wintera* Murray (1784) and *Winteria* Saccardo (1878).

Ref. *Cleistocactus* Lem.

Winterocereus Backeb., *Das Kakteenlexikon*: 455. 1966.

Etym. Named for Ritter's sister, Frau Hildegard WINTER, and the substantive *Cereus*.

Rep. Syn. *Winteria* F.Ritter nom. illeg. (1962, pro gen.).

Typ. *Winterocereus aureispinus* (F.Ritter) Backeb.

Obs. See Metzging & Kiesling, *Winterocereus* is the correct name for *Hildewintera*, *Taxon* **56**(1): 226-228. (Feb) 2007.

Ref. *Cleistocactus* Lem.

Wislizeni Vaupel (pro infragen. ["Gruppe"] *Echinocactus* Link & Otto), Reihe

Opuntiales, in Engler (ed.), *Die natürlichen Pflanzenfamilien* **21**: 622, 624. (Dec) 1925.

Etym. Based on the name of an included species.

Rep. Syn. *Ferocactus* Britton & Rose (1922, pro gen.).

Typ. *Echinocactus wislizeni* Engelm. Autotype (Art. 22.6).

Ref. *Echinofossulocactus* Lawr.

Wittia K.Schum., *Wittia amazonica* K. Sch. n. gen. et spec., *Monatsschrift für Kakteenkunde* **13**(8): 117-119. (Aug) 1903 nom. illeg. (Art. 53.1).

Etym. Named for the businessman N. H. WITT, of Manaus, Brazil.

Typ. *Wittia amazonica* K.Schum. nom. incorr. = *Wittiocactus amazonicus* R.Rauschert. Autotype (Art. 10.2). The only included species.

Obs. Later homonym of *Wittia* Pant. (1889, *Bacillariophyta*).

Syn. *Wittiocactus* R.Rauschert.

Ref. *Epiphyllum* Haw.

Wittia Barthlott (pro subgen. *Disocactus* Lindl.), *Disocactus*, in Hunt & Taylor (ed.),

Notes on miscellaneous genera of *Cactaceae*, *Bradleya* **9**: 88. 1991.

Rep. Syn. *Wittia* K.Schum. nom. illeg. (1903, pro gen.).

Typ. *Wittiocactus amazonicus* R.Rauschert.

Ref. *Epiphyllum* Haw.

Wittia Kimmach (pro sect. *Disocactus* Lindl.), The genus *Disocactus*, *Haseltonia* **1**: 106. 1993.

Rep. Syn. *Wittia* K.Schum. nom. illeg. (1903, pro gen.).

Typ. *Wittiocactus amazonicus* R.Rauschert.

Obs. Published by Kimmach as a new combination, but since *Wittia* K.Schum. is illegitimate, this is actually a replacement name (Art. 58.1) attributable solely to him.

Ref. *Epiphyllum* Haw.

Wittiocactus R.Rauschert, *Nomina nova generica et combinationes novae Spermatophytorum et Pteridophytorum*, *Taxon* **31**(3): 558. 1982.

Etym. Formed from the substantives *Wittia* and *Cactus*.

Rep. Syn. *Wittia* K.Schum. nom. illeg. (1903, pro gen.).

Typ. *Wittiocactus amazonicus* R.Rauschert.

Ref. *Epiphyllum* Haw.

Wittiocactus (R.Rauschert) Kimmach (pro sect. *Disocactus* Lindl.), *Errata in Haseltonia* **1**, *Haseltonia* **2**: 46. 1994 nom. illeg. (Art. 52.1).

Bas. *Wittiocactus* R.Rauschert (1982, pro gen.).

Syn. *Disocactus* Lindl. sect. *Wittia* Kimmach (1993).

Ref. *Epiphyllum* Haw.

×**Worsleyara** P.V.Heath, *The nothogenera of the Cactaceae*, *Calyx* **1**(3): 120. 1992.

Etym. Named for A. WORSLEY.

Par. *Heliocereus* (A.Berger) Britton & Rose × *Nopalxochia* Britton & Rose × *Selenicereus* (A.Berger) Britton & Rose.

Ref. ×*Seleniphyllum* Backeb.

Wrightianae Backeb. (pro ser. *Lobivia* Britton & Rose), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel*, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 34. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Lobivia wrightiana* Backeb. Autotype (Art. 22.6).

Ref. *Echinopsis* Zucc.

Wuthenauiana Backeb. (pro ser. *Mammillaria* Haw.), *Cactaceae Lindley Systematische Übersicht (Neubearbeitung) mit Beschreibungsschlüssel*, *Cactaceae Jahrbücher der Deutschen Kakteengesellschaft e.V. 1941 Zweiter Teil*: 64. (Jun) 1942 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Mammillaria wuthenauiana* Backeb. Autotype (Art. 22.6).

Ref. *Mammillaria* Haw.

Wuthenauiana Backeb. (pro subser. *Mammillaria* Haw.), *Die Cactaceae* **5**: 3099, 3101. 1961 nom. inval. (Art. 39.1).

Etym. Based on the name of an included species.

Typ. *Mammillaria wuthenauiana* Backeb. Autotype (Art. 22.6).

Obs. Comprised only two species.

Ref. *Mammillaria* Haw.

Xanthocephalum Y.Itô (pro subgen. *Gymnocalycium* Mittler), *A new classification of the Cactinae of South America*, *Bulletin of the Takarazuka Insectarium* **71**: 20. (Jul) 1950 nom. inval. (Art. 39.1).

Etym. From the Greek *xanthos*, brownish yellow, and *kephale*, head.

Typ. Not cited.

Ref. *Gymnocalycium* Mittler.

Xerocarpaceae Engelm. (pro infragen *Opuntia* (L.) Mill.), *Synopsis of the Cactaceae of the territory of the United States and adjacent regions*: 43. 1856 [Preprinted from *Proceedings of the American Academy of Arts and Sciences* **3**: 299. 1857] (“Xerocarpeae”).

Etym. A Latin compound adjective, from *xeros*, dry, and *karpos*, fruit.

Typ. Not cited.

Ref. *Opuntia* (L.) Mill.

Xerocarpaceae (Engelm.) Britton & Rose (pro ser. *Opuntia* (L.) Mill.), A preliminary treatment of the *Opuntioideae* of North America, *Smithsonian Miscellaneous Collections no. 1786* **50**(4): 533. (20 Feb) 1908 (“Xerocarpeae”).

Bas. *Xerocarpaceae* Engelm. (1856, pro infragen. *Opuntia* (L.) Mill.).

Ref. *Opuntia* (L.) Mill.

Yavia R.Kiesling & Piltz, Eine neue Kakteengattung aus Argentinien. *Kakteen und andere Sukkulente* **52**(3): 57-63. (1 Mar) 2001.

Etym. Named for Dept. Yavi, Prov. Jujuy, where the monotypic species was first discovered.

Typ. *Yavia cryptocarpa* R.Kiesling & Piltz.

Obs. First description slightly modified and expanded in Kiesling & Ferrari, *British Cactus & Succulent Journal* **21**(1): 20-25. 2003.

Yavia (Kiesling & Piltz) Halda (pro subgen *Blossfeldia* Werderm.), *O blosfeldiich, Cactaceae, etc.* **13**(1): 23. 2003.

Bas. *Yavia* Kiesling & Piltz (2001, pro gen.)

Ref. *Yavia* Kiesling & Piltz.

Yungasocereus F.Ritter, *Kakteen in Südamerika* **2**: 460. 1980.

Etym. Named for the Bolivian *Yungas*, a region of Dept. La Paz, comprising wet rain-forest and hot, steep valleys, and the substantive *Cereus*.

Typ. *Yungasocereus inquisivensis* F.Ritter.

Ref. *Haageocereus* Backeb.

×**Yungastocereus** G.D.Rowley, Intergeneric hybrids in *Cactaceae – 2004 update, British Cactus and Succulent Journal* **22**(2): 64. (Jul) 2004.

Etym. Condensed formula.

Par. *Cleistocactus* Lem. × *Yungasocereus* F.Ritter. [*Cleistocactus laniceps* Rol.-Goss. × *Yungasocereus inquisivensis* F.Ritter].

Ref. ×*Cleistaageocereus* Mordhorst.

Zehntnerella Britton & Rose, *The Cactaceae* **2**: 2, 176. (9 Sep) 1920.

Etym. Named for Dr. Leo ZEHNTNER, of the Horto Forestal, Joazeiro, Brazil, with a diminutive suffix.

Typ. *Zehntnerella squamulosa* Britton & Rose. Autotype (Art. 10.2). The only included species.

Ref. *Facheiroa* Britton & Rose.

Zehntnerella (Britton & Rose) A. Berger (pro subgen. *Cereus* (L.) Mill.), *Kakteen*: vii, 147. 1929.

Bas. Zehntnerella Britton & Rose (1920, pro gen.).

Ref. Facheiroa Britton & Rose.

Zehntnerella (Britton & Rose) P.J. Braun & Esteves (pro subgen. *Facheiroa* Britton & Rose), Umkombination zur "Revision der Gattung *Facheiroa* Britton et Rose", *Kakteen und andere Sukkulente* **37**(3): 56. (Mar) 1986.

Bas. Zehntnerella Britton & Rose (1920, pro gen.).

Ref. Facheiroa Britton & Rose.

Zephyranthoides E. Kuhn & B. Hofm. (pro ser. *Mammillaria* Haw.), Erstbeschreibung der Untergattung *Mammillaria*, *Informationsbrief Zentrale Arbeitsgemeinschaft Mammillarien* **5**(3): 41. 1979.

Etym. Based on the name of an included species.

Typ. Mammillaria zephyranthoides Scheidw.

Ref. Mammillaria Haw.

Zephyranthoides (E. Kuhn & B. Hofm.) Doweld (pro ser. *Bartschella* Britton & Rose), Nomenclatural adjustments in *Cactaceae* II, *Sukkulenty* **3**(1-2): 38. 2000.

Bas. Zephyranthoides E. Kuhn & B. Hofm. (1979, pro ser. *Mammillaria* Haw.).

Ref. Mammillaria Haw.

Zygocactus K. Schum., *Cactaceae*, in Martius, *Flora Brasiliensis* **4**(2): 223. (1 Sep) 1890.

Etym. From the Greek *zygos*, yolk, and the substantive *Cactus*. A reference to the zygomorphic flowers (divisible into equal halves in one plane only).

Rep. Syn. Epiphyllum Pfeiff. [non Haw.] nom. illeg. (1837).

Typ. Cactus truncatus Link. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Not cited as a replacement name but it has the identical two included names of *Epiphyllum* Pfeiff. Both these names are referable to the same species, as later acknowledged by Schumann himself (1898: 223).

Ref. Rhipsalis Gaertn.

Zygocactus (K. Schum.) K. Schum. (pro subgen. *Epiphyllum* Haw.), *Gesamtbeschreibung der Kakteen (Monographia Cactacearum)* (4): 221. (20 Oct) 1897.

Bas. Zygocactus K. Schum. (1890, pro gen.).

Obs. The taxon *Epiphyllum* Pfeiff. ex Labour. (1853) has priority at this rank, but it cannot be used in combination with *Epiphyllum* Haw.

Ref. Rhipsalis Gaertn.

Zygocactus (K. Schum.) Moran (pro subgen. *Schlumbergera* Lem.), Taxonomic studies in the *Cactaceae* 1 – Problems in classification and nomenclature, *Gentes Herbarum* **8**(4): 329. (24 Apr) 1953 nom. illeg. (Art. 52.1).

Bas. Zygocactus K. Schum. (1890, pro gen.).

Obs. The taxon *Epiphyllum* Pfeiff. ex Labour. (1853) has priority at this rank.

Ref. Rhipsalis Gaertn.

Zygocereus Frič & Kreuz., in Kreuzinger, *Verzeichnis Amerikanischer und anderer Sukkulente mit Revision der Systematik der Kakteen*: 15, 17. 1935 nom. illeg. (Art. 52.1).

Etym. Based on the two substantives *Zygocactus* and *Cereus*.

Rep. Syn. *Zygocactus* K.Schum. (1890).

Typ. *Cactus truncatus* Link. Autotype (Art. 7.4). Same as the replaced synonym.

Obs. Superfluous replacement of the substantive *Cactus* with *Cereus* in the name *Zygocactus* K.Schum.

Ref. *Rhipsalis* Gaertn.

×**Zygoschlumbergera** Tjaden, *The names of Crab, Christmas and Easter Cacti, Epiphytes* 9(33): 16. 1985 nom. inval. (Art. 36.1a)

Par. *Schlumbergera* Lem. × *Zygocactus* K.Schum.

Ref. *Rhipsalis* Gaertn.

×**Zygohyllanthus** H.Johnson, *Johnson Cactus Gardens catalogue*: 8. 1968 nom. inval. (Art. 30.6).

Etym. Condensed formula.

Par. *Epiphyllanthus* A.Berger × *Zygocactus* K.Schum.

Ref. *Echinopsis* Zucc.

Appendix 1: Addenda.

Azurei Britton & Rose (pro ser. *Cereus* (L.) Mill.), *The Cactaceae* 1: 4. (21 Jun) 1919 (“Azureae”).

Etym. Based on the name of an included species.

Typ. *Cereus azureus* Parm. ex Pfeiff. = *Cereus aethiops* Haw. Autotype (Art. 22.6).

Ref. *Cereus* (L.) Mill.

Hexagonae Britton & Rose (pro ser. *Cereus* (L.) Mill.), *The Cactaceae* 1: 4. (21 Jun) 1919 nom. inval. (Art. 22.2).

Etym. Based on the name of an included species.

Typ. *Cactus hexagonus* L. Autotype (Art. 22.6).

Syn. *Cereus* (L.) Mill. ser. *Cereus*.

Ref. *Cereus* (L.) Mill.

Leuenbergeria G.D.Rowley (pro subgen. *Pereskia* (L.) Mill.), *Pereskia – one genus or two? Cactaceae Systematics Initiatives* (32): 6-7. (Mar) 2014 nom. inval.

Etym. Named for the German botanist Beat Ernst LEUENBERGER (1946-2010).

Typ. *Pereskia lychnidiflora* DC.

Obs. Published as though a replacement for *Leuenbergeria* J.Lodé with new type & spelling, but no replaced synonym was cited. Therefore it is a new taxon which has priority at the rank of subgenus. At the rank of section, it is correctly called *Archipereskia* Doweld (2004), but it is not the same taxon as *Leuenbergeria* J.Lodé (2013, pro gen.), which was based on a different type.

Ref. *Pereskia* (L.) Mill.

Obtusi Britton & Rose (pro ser. *Cereus* (L.) Mill.), *The Cactaceae* 1: 4. (21 Jun) 1919 (“Obtusae”).

Etym. Based on the name of an included species.

Typ. *Cereus obtusus* Haw. Autotype (Art. 22.6).

Ref. *Cereus* (L.) Mill.

Peruviani (Britton & Rose) Vaupel (pro infragen. [“Gruppe”] *Cereus* (L.) Mill.), Reihe *Opuntiales*, in Engler (ed.), *Die natürlichen Pflanzenfamilien* 21: 636. (Dec) 1925.

Bas. *Peruviani* Britton & Rose (1919, pro ser. *Cereus* (L.) Mill.)

Typ. *Cereus peruvianus* hort. ex Britton & Rose [non *Cactus peruvianus* L.] = *Cereus jamacaru* DC.

Ref. *Cereus* (L.) Mill.

Appendix 2:

Summary of the genera accepted in this list, with their current classifications.

The first three subfamilies below probably evolved from interfamilial allopolyploid interactions with species of *Portulacaceae*, but remain with the *Cactaceae* for the moment pending further cytological and molecular studies.

Subfam. **Maihuenieae**

Maihuenia (F.A.C. Weber) K. Schum.

Subfam. **Blossfeldieae**

Blossfeldia Werderm.

Subfam. **Pereskioideae**

Pereskia (L.) Mill.

Subfam. **Opuntioideae**

Opuntia (L.) Mill.

Pereskia Britton & Rose

Pterocactus K. Schum.

Subfam: **Cactoideae**. Trib: **Cereeae**. Subtrib: **Hylocereinae**

Acanthocereus (A. Berger) Britton & Rose

Aporocactus Lem.

Calymmanthium F. Ritter

Epiphyllum Haw.

Leptocereus (A. Berger) Britton & Rose

Selenicereus (A. Berger) Britton & Rose

Subfam: **Cactoideae**. Trib: **Cereeae**. Subtrib: **Cereinae**

Arrojadoa Britton & Rose

Austrocephalocereus Backeb.

Cereus (L.) Mill.

Discocactus Pfeiff.

Facheiroa Britton & Rose

Melocactus (L.) Mill.

Pilosocereus Byles & G.D. Rowley

Uebelmannia Buining

Subfam: **Cactoideae**. Trib: **Cereeae**. Subtrib: **Nyctocereinae**.

Cephalocereus Pfeiff.

Echinocereus Engelm.

Jasminocereus Britton & Rose

Myrtillocactus Console

Nyctocereus (A. Berger) Britton & Rose

Subfam: **Cactoideae**. Trib: **Cacteae**
Ariocarpus Scheidw.
Astrophytum Lem.
Aztekium Boed.
Coryphantha Lem.
Digitostigma Velasco & Nevárez
Echinocactus Link & Otto
Echinofossulocactus Lawr.
Epithelantha F.A.C.Weber ex Britton & Rose
Geohintonia Glass & W.A.Fitz Maurice
Leuchtenbergia Hook.f.
Lophophora J.M.Coult.
Mammillaria Haw.
Pediocactus Britton & Rose
Sclerocactus Britton & Rose
Strombocactus Britton & Rose
Turbincarpus Buxb. & Backeb.

Subfam: **Cactoideae**. Trib. **Browningeae**
Browningia Britton & Rose
Copiapoa Britton & Rose
Neoraimondia Britton & Rose

Subfam: **Cactoideae**. Trib. **Browningeae**.
Subtrib: **Rebutiinae**
Aylostera Speg.
Gymnocalycium Mittler
Neowerdermannia Frič
Rebutia K.Schum.
Yavia R.Kiesling & Piltz

Subfam: **Cactoideae**. Trib: **Trichocereae**.
Subtrib: **Trichocereinae**
Echinopsis Zucc.
Espostoa Britton & Rose
Haageocereus Backeb.
Mila Britton & Rose

Subfam: **Cactoideae**. Trib. **Trichocereae**.
Subtrib: **Borzicactinae**
Cleistocactus Lem.
Matucana Britton & Rose
Rimacactus Mottram

Subfam: **Cactoideae**. Trib: **Notocactae**
Austrocactus Britton & Rose
Corryocactus Britton & Rose
Eriogyne Phil.
Eulychnia Phil.
Frailea Britton & Rose
Parodia Speg.

Subfam. **Cactoideae**. Trib. **Rhipsalideae**
Rhipsalis Gaertn.

Appendix 3:

Nothogenera adopted in this system.

×*Aporechinopsis* G.D.Rowley
×*Aporepiphyllum* G.D.Rowley
×*Aporicereus* Mottram
×*Austrocereus* Mottram
×*Carlrettigara* Mottram
×*Cephalepiphyllum* Mottram
×*Cereopsis* Mottram
×*Cerephyllum* Mottram
×*Cleistaageocereus* Mordhorst
×*Cleistocana* G.D.Rowley
×*Cleistoechinocana* Licznarski
×*Cleistepiphyllum* Mottram

×*Cleistonocereus* G.D.Rowley
×*Cleistopsis* Strigl
×*Echinaageocereus* Mordhorst
×*Echinobergia* Mottram
×*Echinobutia* P.V.Heath
×*Echinocereopsis* P.V.Heath
×*Echinomillaria* Mottram
×*Echinoparodia* Mottram
×*Echinophyllum* Mottram
×*Echinulocactus* Mottram
×*Epicereus* Mottram
×*Epipilosocereus* Mottram

- | | |
|------------------------------------|--------------------------------------|
| × <i>Epipuntia</i> Mottram | × <i>Myrtocereus</i> Mottram |
| × <i>Esocana</i> P.V.Heath | × <i>Nyctocephalocereus</i> Mottram |
| × <i>Espostingia</i> G.D.Rowley | × <i>Rhipsaliphyllum</i> Mottram |
| × <i>Espostocactus</i> Mottram | × <i>Schickara</i> Mordhorst |
| × <i>Graeserara</i> Mordhorst | × <i>Sclerinoocereus</i> G.D.Rowley |
| × <i>Gymnobotia</i> P.V.Heath | × <i>Seleniopsis</i> G.D.Rowley |
| × <i>Gymnochinopsis</i> P.V.Heath | × <i>Seleniphyllum</i> Backeb. |
| × <i>Gymnophora</i> P.V.Heath | × <i>Seleniporocactus</i> G.D.Rowley |
| × <i>Haagespostoa</i> G.D.Rowley | × <i>Stenillocactus</i> P.V.Heath |
| × <i>Myrtillocereus</i> G.D.Rowley | × <i>Turbiniphora</i> Halda & Malina |

Appendix 4:

Graft-chimaera adopted in this list.

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|--------------------------------------|-------------------------------------|
| + <i>Arioechinopsis</i> Mottram | + <i>Epigymnocalycium</i> Mottram |
| + <i>Coryopuntia</i> Mottram | + <i>Myrtigymnocalycium</i> Mottram |
| + <i>Echinastrophytum</i> Mottram | + <i>Uebelechinopsis</i> G.D.Rowley |
| + <i>Echinogymnocalycium</i> Mottram | |

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