

# New Combinations in Cactaceae

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As part of my forthcoming project "Taxonomy of Cactaceae, Description of the Species", Volumes 3 & 4\*, after studying each taxon and its characteristics, and although these modifications may be minimal or crucial, it is sometimes necessary to modify the classification for a better approach of genera and taxa which compose them. The study of the seed structure gave me another clue for completing my project, together with morphology and DNA works.

I am still searching seeds of various species for the project, and you will find the list of those missing at the end of the journal. Maybe, you can help.

*Mammillaria nana* subsp. *leucantha* (Boed.) Lodé COMB. NOV.

**Basionym:** *Mammillaria leucantha* Boed., Kakteenk., 233, illustr. (1933).

**Type:** Mexico, San Luis Potosí, near Soledad Diez Gutierrez, growing in cracks in near-vertical rock wall in the hills, *Viereck*, not pres. Lectotype: the illustr. cited.

**Synonyms:** *Krainzia crinita* subsp. *leucantha*, *Mammillaria crinita* subsp. *leucantha*, *M. leucantha*.

**Notes:** this subspecies is found north of the type species distribution. In the molecular study of Butterworth (2003), *M. crinita* subsp. *leucantha* is attached to *M. nana*; in fact, the seeds of *M. crinita* subsp. *leucantha* are closer to *M. nana* (both seeds without strophiole) than *M. crinita* (seeds with a strophiole), hence the combination I have proposed.

Reppenhagen (1991) considers this taxon synonymous to *Mammillaria knebeliana* (= *Mammillaria bocasana* subsp. *eschauzieri*), but seeds are totally distinct.

*Mammillaria schumannii* subsp. *globosa* (R. Wolf) Lodé STAT. NOV.

**Basionym:** *Mammillaria schumannii* var. *globosa* R. Wolf, Kakteen Sukk. 38(6): 147, illustr. (1987).

**Type:** Mexico, Baja California Sur, on the southern edge of the peninsula near Cabo San Lucas, 3 m, 5 Mar 1983, leg. R. & F. Wolf 47/83 (WU).

**Synonyms:** *Mammillaria schumannii* var. *globosa*.

**Notes:** apart from the morphological differences of the body, and the distribution of this taxon near Cabo San Lucas, seeds are, in my opinion, distinct enough to accept it as a subspecies.

\* see progress at the webpage [cactus-adventures.com](http://cactus-adventures.com)



*Mammillaria nana* ML325



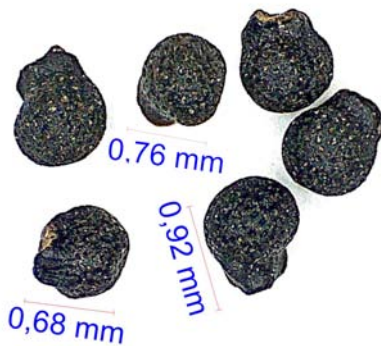
*Mammillaria nana* subsp. *leucantha* FB90 ex AdB



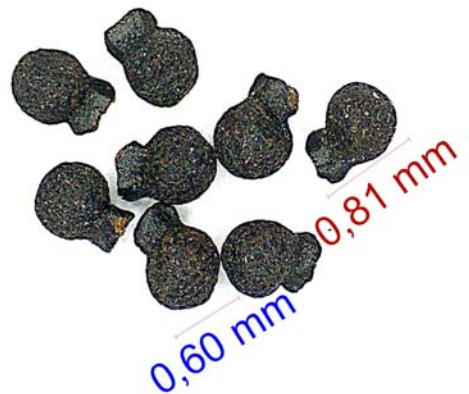
*Mammillaria crinita* JL 2611



*Mammillaria bocasana* subsp. *eschauzieri*  
(= *Mammillaria knebeliana*) SB29



*Mammillaria schumannii* SB1261

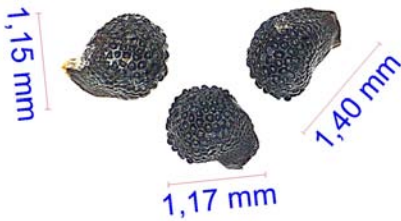


*Mammillaria schumannii* subsp. *globosa* DH626

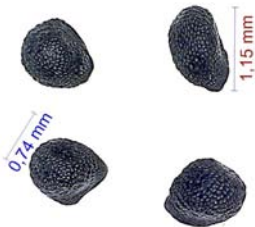


*Mammillaria wrightii* subsp. *viridiflora*, N.E Arizona, USA

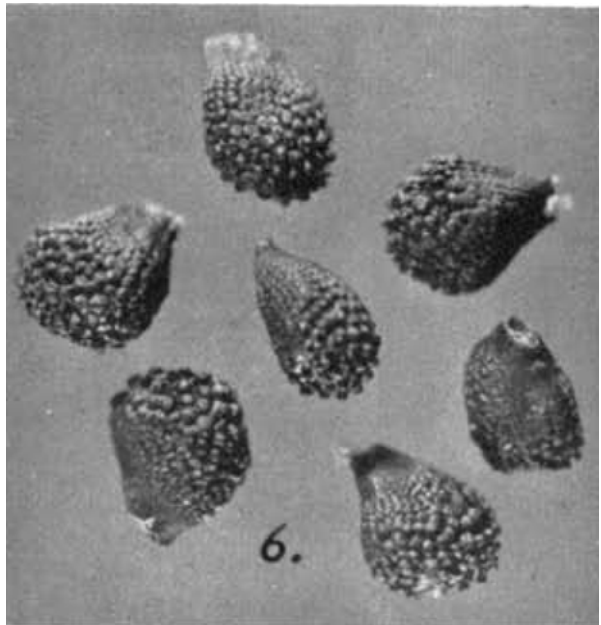
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*Micranthocereus* (ex *Coleocephalocereus*) *goebelianus* MW



*Micranthocereus purpureus* AB



*Micranthocereus* (ex *Coleocephalocereus*) *goebelianus*, identified in 1931 by Kreuzinger as *Coleocephalocereus lehmannianus* (= *Micranthocereus purpureus*).

***Mammillaria wrightii* subsp. *viridiflora*** \* (Britton & Rose) Lodé STAT. NOV.  
**Basionym:** *Neomammillaria viridiflora* Britton & Rose, Cactaceae 4: 153 (1923).

**Type:** USA, Arizona, on Superior- Miami Highway, near Boundary Monument, between Pinal and Gila Counties, 4700 ft, 5 Jul 1922, *Orcutt* 608 (US 1821085).

**Synonyms:** *Cochemiea viridiflora*, *Mammillaria orestera*, *M. viridiflora*, *M. wilcoxii* var. *viridiflora*, *M. wrightii* var. *viridiflora*, *Neomammillaria viridiflora*.

**Etymology:** (Lat.) “**green-flowered flower**”, referring to the flower colour of the subspecies, although prinkish flowers are also found.

**Notes:** *Mammillaria orestera* is a synonym of *M. wrightii* subsp. *viridiflora*, not of *M. barbata* as often found in the literature. The flower, seeds and distribution refer to the *M. wrightii* complex.

However, although distributed south of Arizona, I found in 1984, a northern site of *Mammillaria wrightii* subsp. *viridiflora* (which I named *M. wrightii* var. *rinae* n.n.) with pink flowers, on hills with "coarse decomposed feldspar granite", northeast of Kingman, before Truxton, and just after Valentine, around Mile 86.

***Micranthocereus goebelianus*** \* (Vaupel) Lodé COMB. NOV. & STAT.NOV.

**Basionym:** *Cereus goebelianus* Vaupel, in Zeitschr. Sukkulantenkunde 1: 58 (1923).

**Type:** Brazil, Bahia, Serra das Almas, *Lutzelburg* 32 (B). Neotype: Bahia, Mun. Ituaçu, c. 10 km S. of town towards Tanhaçu, 18 Aug. 1988, *Eggli* 1195 (ZSS).

**Synonyms:** *Cereus goebelianus*, *Coleocephalocereus goebelianus*, *C. pachystele*.

**Notes:** the story of *Micranthocereus* (ex *Coleocephalocereus*) *goebelianus* is that of a confusion of Britton & Rose who received from Dr. L. Zehntner, pictures, flowers and seeds of a species wrongly identified in their book (Cactaceae vol. 2, 1920) as *Cephalocereus purpureus*, that proved to be *Coleocephalocereus goebelianus*. Later, Werdermann assigned it to *Cephalocereus* (= *Micranthocereus*) *purpureus*. In his book (1931), Werdermann published a picture of the seeds of *Cephalocereus lehmannianus* (synonymous to *M. purpureus*) by Kreuzinger, which are, in fact, the typical seeds of *Micranthocereus* (ex *Coleocephalocereus*) *goebelianus*.

The rediscovery of the true *Cephalocereus purpureus* described by Gürke at the type location by Ritter in 1968, then by Buining and Horst (1970), who also found the location of the *Coleocephalocereus goebelianus* proved that Werdermann had confused the latter with the former, unfortunately followed by Backeberg. *Coleocephalocereus goebelianus* (= *Micranthocereus*) is quite different from all other species of the genus *Coleocephalocereus* and for that reason, had been placed in its own subgenus “Simplex” by Nigel Taylor. A morphological and



molecular study (Aona 2003), confirmed in 2008, showed that *C. goebelianus* is inserted in the *Micranthocereus* clade, and confirmed in Fantinati *et al.* (2021). In my opinion, this quite distinct taxon would merit recognition including as a distinct genus.

***Melocactus curvispinus* subsp. *guitarti*** (León) Lodé STAT NOV.

Cact.-Av. Int. 34(121): 2022.

**Sphalmate:** as “*guitartiii*”, a correctable orthographical error under ICN Art. 60.9. The original spelling *guitarti* is always miscorrected to *guitartii*. Brother León has correctly written the latinised name of Guitartus, as *guitarti* is the genitive.

**Basionym:** *Melocactus guitarti* Mem. Soc. Cub. Hist. Nat. Felipe Poey 8: 207, pl. 10, illustr. 4 (1934).

**Type:** Cuba, Santa Clara / Camagüey, *León* 16106 (HAC).

**Synonyms:** *Melocactus guitartii*.

**Notes:** although *M. guitartii* is considered a synonym of *M. curvispinus*, it seemed to me be judicious to give it the status of subspecies for its insular position and its necessity to get a particular protection from the IUCN. On the other hand, its great disjunction from the other “*curvispinus*” advocates also for a distinct treatment, as in the case of subsp. *koolwijkianus* from Aruba Island.



***Melocactus curvispinus* subsp. *guitartii*** Presa de Manaquitas, municipio Cabaiguán, prov. Sancti Spíritus, Cuba. © Jose Miguel Acuña

***Bolivicereus simius-cauda*** (Diers & Krahn) Lodé COMB. NOV.

**Basionym:** *Hildewintera colademononis* Diers & Krahn, Kakteen And. Sukk. 54(8): 221 (illustr. 1-2) (2003).

**Type:** Bolivia, Santa Cruz, Florida, Cerro el Fraile, 2000, *Krahn* 950 (KOELN).

**Synonyms:** *Borzicactus colademononis*, *Cleistocactus colademononis*, *Cleistocactus winteri* subsp. *colademono*, *Hildewintera colademononis*, *Winterocereus colademononis*.

**Etymology:** (Lat.) “**simius-cauda**”, for the local name “**Cola de mono**”, **monkey’s tail**, latinised, referring to the very long hanging stems of the species.

**Shape & habit:** lithophyte, cylindrical, erect at first, rapidly pendent, branching only from the base, stems hanging, to 2.5 m long, 2-7 cm Ø; epidermis light green, completely obscured by the hairy spines.

**Ribs:** 14-20, low.

**Areoles:** oval, 3-6 mm apart, white-felted.

**Spines:** **radials** numerous, 20-50, 4-12 cm long, hair-like, ± twisted, pure glassy-white or pale yellowish and keep growing; **centrals** 0-8, pointing downwards, bristle-like, dirty yellow.

**Flowers:** appearing along the stems, almost horizontal, zygomorphic, wide open, 7-8 cm long, light red with an intense pink-purple margin; hypanthium sharply upcurved above pericarpel; filaments red, anthers lilac-violet, style pinkish, stigma lobes pale pink to pale green.

**Fruits:** somewhat globose, 8-12 mm Ø, reddish, dehiscent longitudinally, drying, perianth remains persistent.

**Seeds:** bag-shaped, slightly curved, 1.0-1.3 x 0.7-0.8 mm, matt black, testa tuberculate-foveolate, tubercles much smaller at the HMR, hilum-micropylar region oblique, basal, funicular remnants creamish-white.

**Habitat:** grows on steep and dry rock cliffs, between 1300-1550 m alt.

**Distribution:** **Bolivia** (Santa Cruz).

**Notes:** brought back from Bolivia to France in the early nineties by J. Saint-Pie who discovered it, but was never described.

My proposition to include this taxon within *Borzicactus* (*Borzicactus colademononis*) in 2013 was certainly wrong, because the genus *sensu stricto* does not exist in Bolivia, and because the species in question is located in the province of Santa Cruz, western Bolivia.

According to Metzinger (2004,2006), the correct taxonomic position of *colademononis* would be *Winterocereus colademononis*.

The authors, Diers & Krahn, compare it to *Bolivicereus aureispinus*. It is also possible that it could be a natural and stabilised hybrid between *Bolivicereus aureispinus* and *Cleistocactus brookeae* (as *wendlandiorum*), but in my opinion is very unlikely, for the distance between these taxa (more than 500 km), and

convergent evolution might occur. Moreover, there is another and better possibility, because *B. simius-cauda* grows together with *Cleistocactus brookeae* and *Bolivocereus samaipatanus* (J. Carr, pers. comm. 2016). Remember that we had an erect, white-spined *Cleistocactus brookeae* named *C. wendlandiorum*, now a synonym of it; the decumbent *C. brookeae*, with rather distinct flowers, could be a hybrid between *Cleistocactus wendlandiorum* and *Bolivocereus simius-cauda*, and the subsp. *vulpis-cauda*, could be another hybrid, with *Bolivocereus samaipatanus* and *Cleistocactus brookeae* or *B. simius-cauda* as the parents.

The much similar seeds seems to give a good evidence of this, also the flower with an abruptly upcurved hypanthium above pericarpel, which is not a characteristic in *Cleistocactus*; thus, the subsp. *vulpis-cauda* is not a true *Cleistocactus*, the seeds being more related to *Bolivocereus*.



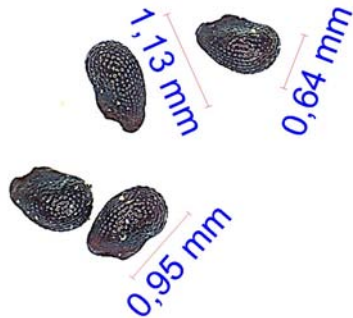
*Bolivocereus simius-cauda* F.C.  
(ex *Cleistocactus colademonis*)



*Bolivocereus samaipatanus*  
MN589, S.E. Mairana, 1444, Bolivia



*Cleistocactus ayopayanus*  
Cd Chiquini, Ayopaya, 2730m Cochabamba



*Cleistocactus brookeae* subsp. *vulpis-cauda*  
JL689