

South Coast Cactus and Succulent Society

Cacti of the Month January 2010 - *Mammillaria*

In lieu of writing an article that lacks depth and completeness, we are substituting the following link for information on *Mammillarias*. The article was last modified September 2009 and is as up to date as is possible considering the current fluidity of taxonomy.

<http://en.wikipedia.org/wiki/Mammillaria>

If other web-based articles in Wikipedia are appropriate they too will be used.
If you have comments on using this method, please contact Dale La Forest

Mammillaria From Wikipedia, the free encyclopedia

Contents

[1 Description](#)

[2 Systematics](#)

[3 Selected species](#)

[4 References](#)

[5 External links](#)

Scientific classification

Kingdom: [Plantae](#)
Division: [Magnoliophyta](#)
Class: [Magnoliopsida](#)
(unranked): [Core eudicots](#)
Order: [Caryophyllales](#)
Family: [Cactaceae](#)
Subfamily: [Cactoideae](#)
Tribe: [Cacteeae](#)
Subtribe: [Cactinae](#)
Genus: ***Mammillaria*** [Haw.](#)

References

ANDERSON, EDWARD F. (1991):
The Cactus Family
BUTTERWORTH, CHARLES A. &
WALLACE, ROBERT S. (2004): Phy-
logenetic studies of Mammillaria
(Cactaceae) - insights from chloro-
plast sequence variation and hy-
pothesis testing using the paramet-
ric bootstrap. *Am. J. Bot.* **91**(7):
1086-1098.

The [genus](#) *Mammillaria* is one of the largest in the cactus [family](#) ([Cactaceae](#)), with currently 171 known [species](#) and [varieties](#) recognized^[*citation needed*]. Most of the mammillarias are native to [Mexico](#), but some come from the southwest [USA](#), the [Carib-
bean](#), [Colombia](#), [Venezuela](#), [Guatemala](#) and [Hondu-
ras](#).

The first was described by [Carolus Linnaeus](#) as *Cactus mammillaris* in 1753, deriving name from [Latin](#) *mammilla*, "[nipple](#)", referring to the [tubercles](#) that are one of the plant's specific features. In 1812, the cactus specialist [Adrian Haworth](#) described the genus *Mammillaria* to contain this and related species. Numerous species are commonly known as [nipple cactus](#), [fishhook cactus](#) or [pincushion](#) though such terms may also be used for related [taxa](#), namely [Escobaria](#)

Mammillarias have extremely variable spination from species to species, and attractive flowers, mak-

ing them specifically attractive for cactus hobbyists. Most mammillarias plants are considered easy to cultivate, though some species are among the hardest cacti to grow. Several [taxa](#) are threatened with [extinction](#) at least in the wild, due to [habitat de-
struction](#) and especially overcollecting for the pot plant trade. Cactus fanciers can assist [conservation](#) of these rare plants by choosing [nursery](#)-bred specimens (wild-collected ones are illegal to possess for the rarest species anyways). Besides helping to preserve rare plants, one can gain experience in growing and breeding cacti in general with nursery-bred rare mammillarias: several mammillarias are quite easy (for cacti) to grow from seeds. One such species, popular and widely available from nursery stock but [Endangered](#) in the wild, is [Mam-
millaria zeilmanniana](#).

Description

Diversity of mammillarias. *Mammillaria celsiana* in the middle.

The distinctive feature of the genus is the specific development of an [areole](#), that is split into two clearly separated parts, one occurring at the tubercle's [apex](#), the other at its base. The apex part is spine bearing, and the base part is always spineless, but usually bearing some bristles or wool. The base part of the areole bears the [flowers](#) and [fruits](#), and is a branching point. The apex part of the areole does not carry flowers, but in certain condi-

tions can function as a branching point as well.

The plants are usually small, globose to elongated, the stems from 1 cm to 20 cm in diameter and from 1 cm to 40 cm tall, clearly tuberculate, solitary to clumping forming mounds of up to 100 heads and possess [radial symmetry](#). Tubercles can be conical, cylindrical, pyramidal or round. The [roots](#) are fibrous, fleshy or tuberous. The [flowers](#) are [funnel-shaped](#) and range from 7 mm to 40 mm and more in length and in diameter, from white and greenish to yellow, pink and red in color, often with a darker mid-stripe; the reddish hues are due to [betalain](#) pigments as usual for [Caryophyllales](#). The [fruit](#) is berry-like, club-shaped or elongated, usually red but sometimes white, yellow or green. Some species have the fruit embedded into the plant body. The [seeds](#) are black or brown, from 1 to 3 mm in size.

Systematics

The large and diverse genus *Mammillaria* has seen multiple attempts to subdivide the species in it into smaller groups within the genus or attempts to split it to multiple genera for better understanding of the plants' relationship. Early classifications were performed by Pfeiffer (1837), Salm-Dick (1845)¹ and Engelmann (1856)¹. The genus *Mammillaria* included members of some modern genera like *Coryphantha* and *Ariocarpus* at that time. Classifications by Schumann (1898), Britton and Rose (1923), Berger (1929) Buxbaum (1951-56) and Moran (1953) followed, splitting the genus in parts and combining it back together again.

Later classification was performed by the cactus specialists Hunt, Reppenhagen and Luthy, with a lot of work focusing on searching the meanings and value of the original plant descriptions, synchronizing them with modern [taxonomic](#) requirements and studying the morphology of plants and seeds, as well as ecological aspects of the genus. These works helped to expand the understanding of *Mammillaria* taxa.

Currently the classification of *Mammillaria* is in a state where few newly discovered species are likely, though some new species may yet be found when

the chaos of names created earlier by commercial plant collectors is sorted out. Many names that were introduced for plants barely differentiated by a shade of flower color or variation in spination were eliminated in attempt to make the use of names consistent with the rest of the botanical world. The number of taxa, which at one time numbered above 500, is now below 200. Some genera (*Dolichothele*, *Mammillopsis*, *Krainzia* and others) have been merged back into *Mammillaria*, and others like *Coryphantha*, *Escobaria* and *Mammilloidia* were confirmed as separate.

Intense studies of [DNA](#) of the genus are being conducted, with preliminary results published for over a hundred taxa, and this promising approach might soon end the arguments. Based on DNA research results, the genus does not seem to be [monophyletic](#) and is likely to be split into two large genera, one of them possibly including certain species of other closely related genera like *Coryphantha*, *Ortegocactus* and *Neolloydia*.

Selected species

[Mammillaria baumii](#)

[Mammillaria dawsonii](#)

[Mammillaria pseudoperbella](#)

[Mammillaria carnea](#)

[Mammillaria crocoidata](#)

[Mammillaria gigantea](#)

[Mammillaria kraehenbuehlii](#)

[Mammillaria poselgeri](#)

[Mammillaria tetrancistra](#) (California Pincushion) with fruits

[Mammillaria wiesingeri](#) ssp. *apamensis* flower

[Mammillaria albicoma](#)

[Mammillaria albiflora](#)

[Mammillaria albilanata](#)

[Mammillaria angelensis](#)

[Mammillaria anniana](#)

[Mammillaria aureilanata](#)

[Mammillaria backebergiana](#)

[Mammillaria barbata](#) – [Green Fishhook Cactus](#)

[Mammillaria baumii](#)

[Mammillaria berkiana](#)

[Mammillaria blossfeldiana](#)

[Mammillaria bocasana](#)

Mammillaria bocasana f. *multilanata* – [Powder-puff Pincushion](#)

Mammillaria bocasana ssp. *eschauziereni* – [Eschauzier's Pincushion](#)

[Mammillaria bombycina](#) – [Silken Pincushion](#)

[Mammillaria boolii](#)

[Mammillaria brachytrichion](#)

[Mammillaria candida](#)

[Mammillaria carmenae](#)

[Mammillaria carnea](#)

[Mammillaria celsiana](#)

[Mammillaria centricirrho](#)

[Mammillaria columbiana](#)

[Mammillaria compressa](#) – [Mother of Hundreds](#)

[Mammillaria crinita](#) – [Rose Pincushion Cactus](#)

[Mammillaria crocoidata](#)

[Mammillaria crucigera](#)

[Mammillaria dawsonii](#)

[Mammillaria decipiens](#)

[Mammillaria dioica](#) – [Strawberry](#)

[Cactus](#), [California Fishhook Cactus](#)

[Mammillaria discolor](#)

[Mammillaria dixanthocentron](#)

[Mammillaria duwei](#)

[Mammillaria elongata](#) – [Ladyfinger Cactus](#)

[Mammillaria fraileana](#)

[Mammillaria gasseriana](#)

[Mammillaria geminispina](#) – [Twin-spined Cactus](#)

Mammillaria geminispina f. *cristata* – [Crested Twin-spined Cactus](#)

[Mammillaria gigantea](#)

[Mammillaria glassii](#)

[Mammillaria glochidiata](#) – [extinct in the wild](#)

[Mammillaria goodridgei](#)

Mammillaria goodridgei var. *goodridgei*

Mammillaria goodridgei var. *rectispina*

[Mammillaria grahamii](#) – [Arizona Fishhook Cactus](#)

Mammillaria grahamii var. *oliviae* – [Pitahayita](#)

[Mammillaria grusonii](#)

[Mammillaria guelzowiana](#)

[Mammillaria guerreronis](#)

[Mammillaria guillauminiana](#) – [extinct in the wild](#)

[Mammillaria haageana](#)

[Mammillaria hahniana](#) – [Old Lady Cactus](#)

[Mammillaria hernandezii](#)

[Mammillaria herrerae](#)

[Mammillaria heyderi](#)

[Mammillaria huitzilopochtli](#)

[Mammillaria humboldtii](#)

[Mammillaria johnstonii](#)

[Mammillaria karwinskiana](#) – [Royal Cross Mammillaria](#)

[Mammillaria klissingiana](#)

[Mammillaria kraehenbuehlii](#)

[Mammillaria krameri](#)

[Mammillaria lasiacantha](#) – [Golf-ball Pincushion Cactus](#)

[Mammillaria lauii](#)

[Mammillaria lenta](#)

[Mammillaria longiflora](#)

[Mammillaria longimamma](#) – [Finger Cactus](#)

Mammillaria longimamma var. *sphaerica* – [Longimamma Nipple Cactus](#)

[Mammillaria luethyi](#)

[Mammillaria magnifica](#)

[Mammillaria magnihahha](#)

[Mammillaria mainiae](#) – [Counter-clockwise Pincushion](#)

[Mammillaria magnimamma](#) – [Mexican Pincushion](#)

[Mammillaria marcosii](#)

[Mammillaria marksiana](#) – [Cabeza de Viejo](#)

[Mammillaria mathildae](#)

[Mammillaria matudae](#)

[Mammillaria melaleuca](#)

[Mammillaria melanocentra](#)

[Mammillaria mercadensis](#)

[Mammillaria microhelia](#)

[Mammillaria microthele](#)

[Mammillaria muehlenpfordtii](#)

[Mammillaria multidigitata](#)

[Mammillaria mystax](#)

[Mammillaria neopalmeri](#)

[Mammillaria nivosa](#) – [Woolly Nipple Cactus](#)

[Mammillaria nunezii](#)

[Mammillaria obconella](#) ^{[[verification needed](#)]}

[Mammillaria painteri](#)

[Mammillaria parkinsonii](#) – [Owl's Eyes](#)

[Mammillaria pectinifera](#) – [Conchilique](#)

[Mammillaria pennispinosa](#)

[Mammillaria perbella](#)

[Mammillaria perezdelarosa](#)

[Mammillaria petrophila](#)

[Mammillaria petterssonii](#)

[Mammillaria plumosa](#) – [Feather Cactus](#)

[Mammillaria polythele](#)

[Mammillaria pondii](#)

[Mammillaria poselgeri](#)

[Mammillaria pottsii](#) – [Rattail Cactus](#)

[Mammillaria prolifera](#) – [Texas Nipple Cactus](#)

[Mammillaria rekoii](#)

[Mammillaria rettigiana](#)

[Mammillaria rhodantha](#) – [Rainbow Pincushion](#)

[Mammillaria saboae](#)

[Mammillaria sanchez-mejoradae](#)

[Mammillaria sartorii](#)

[Mammillaria schiedeana](#)

[Mammillaria schumannii](#)

[Mammillaria schwarzii](#)

[Mammillaria sempervivi](#)

Mammillaria senilis - a.k.a. Cochemia
senilis, a.k.a. Mamillopsis senilis,
a.k.a. Mamillopsis diguetii, a.k.a.
Mammillaria diguetii

[Mammillaria sheldonii](#) – [Sheldon's
Pincushion](#)

[Mammillaria sonorensis](#)

[Mammillaria spinosissima](#) – [Red-
headed Irishman](#)

Mammillaria spinosissima ssp. pilcay-
ensis – [Bristle Brush Cactus](#)

[Mammillaria standleyi](#)

[Mammillaria stella-de-tacubaya](#)

[Mammillaria supertexta](#)

[Mammillaria surculosa](#)

[Mammillaria tetrancistra](#) – [California
Pincushion](#)

[Mammillaria theresae](#)

[Mammillaria thornberi](#) – [Clustered
Fishhook Pincushion](#)

[Mammillaria uncinata](#)

[Mammillaria vetula](#)

[Mammillaria voburnensis](#)

[Mammillaria weingartiana](#)

[Mammillaria wiesingeri](#)

[Mammillaria winterae](#)

[Mammillaria wrightii](#) – [Brown Pin-
cushion](#)

Mammillaria wrightii ssp. wilcoxii –
[Wilcox's Nipple Cactus](#)

[Mammillaria zeilmanniana](#)