

# CACTI

THE

## ILLUSTRATED DICTIONARY



ROD & KEN PRESTON-MAFHAM

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## **ACKNOWLEDGEMENTS**

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We must also thank the long-suffering wives of some of the above, who had to put up with the loss of their spouses during the many hours spent discussing the ins and outs of cactus taxonomy!

Finally, special thanks go to RP-M's wife, Jean, for her assistance in the preparation of the manuscript.

# INTRODUCTION

We have set out in this volume to attempt the impossible, that is to illustrate all of the globular cacti popularly collected by enthusiasts and to give them their correct scientific name.

Our concept of the term 'globular' has had to be expanded somewhat to avoid excluding the increasingly popular genus *Echinocereus*, which contains only a few truly globular members but without which the book would be of greatly reduced use to the average enthusiast. On the other hand, to avoid including the fairly large genus *Trichocereus*, which mainly contains large columnar plants with very restricted appeal, we have adopted a narrow generic concept. This has enabled us to include the globular plants of the genus *Echinopsis* in its old, restricted sense without also including *Trichocereus*, which is now generally united with *Echinopsis* but which is seldom seen as such in seed and plant lists.

We have also taken the difficult decision to maintain familiar, long-used genera such as *Lobivia* (now included in *Echinopsis*), and *Notocactus* (now included in *Parodia*). However, we should point out that not all professional and amateur botanists working on the Cactaceae accept the current conservative trend towards uniting genera in this way.

The above remarks also apply to current thinking on the thorny problem of how to define a species within the Cactaceae, a subject which has provoked – and continues to provoke – more heated argument amongst interested scientists and enthusiasts than any other topic. It seems to us that this is an argument which is unlikely ever to have a conclusive solution that is acceptable to all botanists throughout the world. The crux of the problem lies in the incredible variability to be observed both within and between individual populations of cacti in the wild. This is because the Cactaceae appear to be in a state of very active evolution compared with other plants.

In many cases an individual population will have a well-defined and unique set of characters which continually breed true both in the wild and in cultivation, enabling instant recognition of the species concerned. Where this is a species such as *Mammillaria plumosa*, which shows little variation over its fairly narrow range and has no close relationship with or tendency to intergrade into any other species, there is no problem.

However, with a species such as *Sulcorebutia glomerspina* or *S. tiraquensis* the situation is much more complex and difficult to resolve. Both are obviously closely related to what was in earlier times described as *S. steinbachii* and could indeed be regarded as varieties of the latter. To understand their relationship more fully requires a study of the plants in their natural habitat. *S. glomerspina*, for example, grows within a few miles of a very variable *S. steinbachii* population. *S. glomerspina*, however, maintains a relatively limited and well-defined set of characteristics, which originally led to its being described as a separate species from *S. steinbachii*. *S. glomerspina* remains

distinct in cultivation and is worth acquiring on this account, but in purely botanical terms it is very doubtful if it should be treated as a separate species although it is maintained as such in the present work.

In fact the whole situation concerning a complex 'core' species such as *S. steinbachii* is very difficult to resolve satisfactorily, especially where plants are sufficiently distinct to be of interest to collectors. For example the gradation from *S. steinbachii* to *S. tirquensis* seems to be via a series of plants currently enjoying specific or varietal status but which perhaps could be more properly regarded as forming a botanical cline (i.e., the gradual change in characteristics of a species along a geographical line, with the result that plants at either end of this line may superficially appear to be quite distinct species), within a single species, i.e., *S. steinbachii*.

Since this situation occurs commonly throughout the Cactaceae the decision as to whether or not these distinctive, self-maintaining populations should be considered as species in their own right (as most now are), or reduced to varieties of a single, widespread and extremely variable species (as is the current trend), is basically a subjective one. One botanist's species may therefore be another, equally well-qualified, botanist's variety.

In response to this never-ending problem we have decided to adopt a middle-of-the-road approach, which we hope combines common-sense with the need to satisfy the interests of the reader who will be familiar with the numerous specific names currently in use. The notes provided beneath the illustrations may help in understanding our decisions in this context as well as the relationships between plants.

The situation is further complicated by the extreme variation even within a single accepted species. Sometimes, within a discrete population, plants growing next to each other and often from the same seed pod can be of a surprisingly different appearance. Body colour and shape, spine number, length and colour, as well as the colour of the flower and petal shape, can vary so widely that the plants may at first sight appear to be a mixture of several different species, and consequently may be described as such. It is mistakes like this which have tended to give rise to many of the superfluous specific names which are shown in italics in the index.

Careful study of such a variable population may often reveal that in reality there is no such thing as the 'typical' plant, which a collector may have come to expect from his familiarity with the species in cultivation. This restricted concept of a species' characteristics has often been due to the small amount of living material originally imported which was frequently selected by the field collector for its uniform appearance.

In view of the above we have had some difficulty with certain species in illustrating a plant which adequately sums up the general characteristics of the species as it occurs in the wild. In some instances we have overcome this by showing two markedly different forms in the same plate. Where this is not possible, the reader is referred to the notes for information regarding the variability of the species. Where a species shows easily recognized named varieties and/or forms, these are also illustrated where space permits.

The large number of plants we have photographed in order to illustrate this volume have come both from our own collection and those of other helpful and enthusiastic collectors. As far as possible we have photographed material of known origin, either field-collected plants or plants grown from field-collected seed. Where possible we have taken advantage of access to well-grown vegetative propagations (or clones), from the original type plant. There are, however, a good number of species which show very little variation and for which material with field

data is not easily available. For these we have used a picture of a plant as typically seen in cultivation.

The fact that we have considerably reduced the number of species does not in itself necessarily affect the numbers of collectable cacti. Previously, for example, the reader might have collected three different so-called species, based upon differences in flower colour alone. The present situation might be that he or she now obtains the same number of plants, each with a different flower colour, with long and short spines and with a hooked or straight central spine in order to have a true representation of a single species in the collection.

# USING THE DICTIONARY

The book is divided into two sections: the first comprises a large number of plates with accompanying notes, set out in alphabetical order; the second is a cross-referencing index containing most of the names which have been in common use during the last 20 years.

When requiring information about a particular species, for example a name taken from a seed list, the reader should first search for it in the illustrated main section. If the name is not to be found there, it should then be sought in the index, where hopefully the equivalent, as illustrated in the book, will be found.

In both sections names may be found in **bold type** for species which we accept and in *normal italics* for those names which we regard as invalid synonyms. (We accept that some readers will disagree with some of our decisions, although these are based upon KGP-M's wide experience of the extreme variability of cacti in habitat).

Some of the names that we accept appear in inverted commas, which are used for three reasons. Firstly they indicate plants which we consider sufficiently distinct for inclusion in the book but which currently lack a valid description. Secondly, they indicate plants which have been validly described but not in the way in which we feel they should be used, for instance in the 'wrong' genus or at specific rather than varietal rank, or *vice versa*. Thirdly, some names in common use are invalid, that is to say, some mistake has been made in the original description, or material of the original plant has not been deposited in a herbarium. Until such time as these plants are validly described, their names will have to be maintained as in our opinion there are no viable alternatives. The new 'combinations' thus seen in inverted commas are purely for our own use to serve as indications of our own ideas and are NOT intended to be considered as validly published.

We anticipate that many people will use this book as a method of deciding which species from a plethora of many, perhaps unfamiliar names, would be worth purchasing from seed and plant lists.

Many lists contain numerous redundant or invalid names: for example, the reader may see a species listed as *Echinocereus caespitosus*. On looking this up in the index you will be referred to *Echinocereus reichenbachii*, which is now accepted as the correct name for this species. Your plant list may also include *Echinocereus baileyi* which the index will give as a variety of *E. reichenbachii*.

Some names in the index will be followed by the epithet 'status doubtful' and it is important to cactus collecting that these names are eventually taken out of use. In many instances they refer to species whose original descriptions were scant, habitats were vague or no material was deposited from which later collections could positively be identified. Some recent collections are reckoned to be redis-

coveries of some of these 'lost' species, but to us it seems that much of this is wishful thinking and in most instances it would be better to describe a new species or variety rather than maintain a doubtful old name. We have tracked down as many of these spurious names as possible but the true identity of some of them has continued to elude us.

### SOURCES OF THE PLANTS

We have included in code, in square brackets, as much information as is available to us with regard to the origin, nature and ownership of the plant. In a few cases we do not have this information. First, if known, comes the collector's code and number as follows:

B=	Frau Muhr	L=	Lau
SB=	S. Brack	JL=	J. Lambert
Card.=	M. Cardenas	FO=	F. Otero
JD=	J. Donald	P=	J. Piltz
OF=	O. Ferrari	PM=	Preston-Mafham
RMF=	R. Ferryman	WR=	W. Rausch
H=	D. Hunt	Repp=	W. Reppenhagen
DH=	D. Herzog	FR=	F. Ritter
HU=	Horst-Uebelmann	Schl=	H. Schlosser
K=	H. Klein	HS=	H. Swoboda
FK=	F. Katterman	NPT=	N. Taylor
HK=	H. Kuentzler	DV=	D. van Vliet
KK=	K. Knize	MLV=	M. Vereb
KR=	W. Krahn		

Second is the origin of the plant: H = a plant photographed in habitat; IP = a plant imported from the wild or a vegetative propagation from such a plant; HS = a plant grown from seed collected in habitat; CS = a plant grown from commercial seed.

Third is the collection from which the plant was photographed:

EC=	E. Charles	K=	H. Klein
GC=	G. Charles	M=	M. Muse
ERC=	Echinocereus	P=	C. Pugh
	Reference Collection	PM=	Preston-Mafham
E=	L. Evans	RM=	R. Mottram
DHS=	Donald/Hole/Smart	R=	A. Rollason
F=	R. Ferryman	W=	S. Woolcock.
G=	P. Gavin		

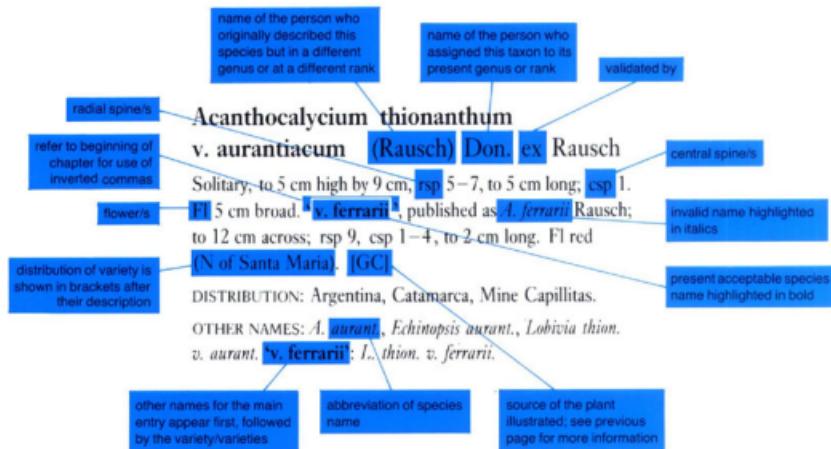
### UNDERSTANDING THE NOTES

It may not be obvious why some entries contain virtually a full description of the plant while others mention only the briefest details. Within the space available for each entry we have given as much information as possible for the newer, lesser-known species and for those which show a large amount of variation. However, with less variable or

more familiar species we are letting the illustrations of the plants speak for themselves, on the basis that a clear picture is worth a thousand words.

For those of you who are not fully versed in the naming of cactus species, the following diagram should help you understand more easily the information contained in the text. Where we have problems with space, species names have been abbreviated, but only after they have been mentioned in full at least once somewhere within the entry. Again, due to limited space, any particularly lengthy entry has been extended into a separate appendix.

Sizes given are only rough guides, for experience has shown us that the eventual size of a plant will often vary from collection to collection, depending upon how 'hard' the plants are grown, meaning how much food and water they are supplied with. Again, plants in cultivation often show a lesser development of spines than those to be found in the wild.



# **ILLUSTRATED A-Z OF SPECIES**



*Acanthocalycium spiniflorum*  
(Sch.) Bkbg.

Solitary, to 60 cm high by 15 cm; spines 14–20. Fl pink, v. *klimpelianum* (Werd. & Weidl.) Don (illus.); to 10 cm by 10 cm, spines fewer. Fl white (nr Cordoba). [B3/M]

DISTRIBUTION: Argentina, NW Cordoba.

OTHER NAMES: *v. klimpelianum*; *A. klimpelianum*, *A. pretischerianum*, *Lobivia* spm. & v. *klimp.*



*Acanthocalycium spiniflorum*  
fa. *violaceum* (Werd.) Don

Mainly differentiated from the species by its beautiful violet coloured fl. [CS/PM]

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *A. violaceum*, *Lobivia* spm. v. *violacea*.



*Acanthocalycium thionanthum*  
(Speg.) Bkbg.

Solitary, to 12 cm high by 6–10 cm. v. *brevispinum* (Ritt.) Don., to 30 cm by 6 cm, spines darker and shorter. Fl yellow (Cafayate). v. *chionanthum* (Speg.) Hoss; similar. Fl white (Cachi-Cachipampa). [CS/PM]

DISTRIBUTION: Argentina, Salta, Cachi.

OTHER NAMES: *A. catamarcense*, *A. griseum*, *Lobivia thion.* v. *cat.* var.; *A. brevi-*, *A. chiva*, *Lobivia thion.* v. *brevi*, *L. thion.* v. *chiva*.



*Acanthocalycium thionanthum*

v. *aurantiacum* (Rausch) Don. ex Rausch

Solitary, to 5 cm high by 9 cm, esp 5–7, to 5 cm long; esp 1. Fl 5 cm broad, 'v. ferrarii', published as *A. ferrarii* Rausch; to 12 cm across; esp 9, esp 1–4 to 2 cm long. Fl red (N of Santa Maria). [GC]

DISTRIBUTION: Argentina, Catamarca, Mine Capillitas.

OTHER NAMES: *A. aurant.*, *Echinopsis aurant.*, *Lobivia thion.* v. *aurant.* 'v. ferrarii'; *L. thion.* v. *ferrarii*.



*Acanthocalycium thionanthum*

v. *glaucum* (Ritt.) Don. ex Rausch

Solitary, to 15 cm high by 7 cm, grey-blue. Fl 6 cm across. [CS/PM]

DISTRIBUTION: Argentina, Catamarca, between Belen and Huafin.

OTHER NAMES: *A. glaucum*, *Echinopsis glauca*, *Lobivia thion.* v. *glauc.*



*'Acanthocalycium thionanthum*

v. *variiflorum*' (Bkbg.) Don.

Globular, to 10 cm across. Fl yellow or orange to red. v. *munita*, published as *Lobivia thion.* v. *munita* Rausch; spines longer and more bent, Fl smaller (Cerro Zorrito). [CS/PM]

DISTRIBUTION: Argentina, Tucuman, W of the Abra de Infernillo.

OTHER NAMES: *A. variiflorum*, *Lobivia thion.* v. *varif.*



**Ancistrocactus crassihamatus**  
(Web.) Benson

Solitary, to 20 cm or so high by 10–15 cm. Fl not opening widely, 2 cm long, purple. [IP/K]

DISTRIBUTION: Mexico, Queretaro.

OTHER NAMES: *Glandulicactus crassihamatus*.



**Ancistrocactus scheeri** (S-D) B. & R.

Solitary, to 10 cm high by 6 cm. Fl to 2.5 cm long, greenish-yellow. [H]

DISTRIBUTION: Texas and N Mexico.

OTHER NAMES: *A. breviflatus*, *A. negrizzii*.



**Ancistrocactus uncinatus** (Gall.) Benson

Solitary, to 20 cm high by 7 cm. Csp to 4, to 9 cm long. Fl 2.5 cm long, brownish, v. *wrightii* (Engelm.) Benson, esp 1, to 15 cm. Fl to 3.5 cm, purple (Texas to N Mexico, Chihuahua). [PM155/HS/PM]

DISTRIBUTION: Mexico, Chihuahua to San Luis Potosí.

OTHER NAMES: *Glandulicactus uncinatus*, v. *wrightii*; *G. anc.* *wrightii*.

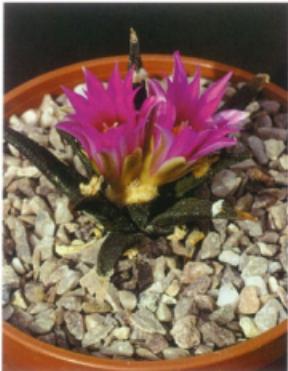


**Arequipa hemprichiana** (Guerke) Oehme

Globular to elongated, spination extremely variable, often much denser than in the plant illustrated. [RMF30/IP/F]

DISTRIBUTION: N Chile and S Peru.

OTHER NAMES: All other species of *Arequipa*, *Borzicactus hemprichiana*, *B. remigii* & var.



**Ariocarpus agavoideus** (Castan.) Anderson

Fairly easy from seed, reaches flowering size in seven years. [CS/GC]

DISTRIBUTION: Mexico, Tamaulipas.

OTHER NAMES: *Nesogonosperma agavoideus*.



**Ariocarpus fissuratus** (Englm.) Sch.

Extremely variable in body size, tubercle shape and sculpting. In v. *Lloydii* (Rose) Anderson the tubercle furrow is only about half the length of the tubercle. [IP/P]

DISTRIBUTION: SW Texas and New Mexico.

OTHER NAMES: *Rosicactus fissuratus*, v. *Lloydii*; *A. intermedius*, *A. lloydii*, *R. intermedius*, *R. lloydii*.

**Ariocarpus kotschoubeyanus** (Lem.) Sch.

There is also a white-flowered form. [IP/EC]

DISTRIBUTION: Mexico: Durango; Nuevo Leon; San Luis Potosí.

OTHER NAMES: *Roseocactus kotschoubeyanus*.**Ariocarpus retusus** (Scheidw.)

Illustrated is a seed-grown plant. Tubercles smooth.

v. *furfuraceus* (Watson) Thoms. tubercles calloused. [CS/EC]

DISTRIBUTION: Mexico, widespread in San Luis Potosí, Coahuila and Nuevo Leon.

**Ariocarpus scaphirostris** (Boed.)

DISTRIBUTION: Mexico, Nuevo Leon. [IP/EC]

**Ariocarpus trigonus** (Web.) Sch.A v. *elongatus* (S-D) Blbg. with longer tubercles has been described. [IP/GC]

DISTRIBUTION: Mexico, Nuevo Leon.

**Astrophytum asterias** (Zucc.) Lem.A fairly constant plant in cultivation; noticeable raised ribs usually indicate a hybrid with *A. capricorne*. [CS/EC]

DISTRIBUTION: NE Mexico and S Texas.

**Astrophytum capricorne** (Dietr.) B. & R.

Varies in the amount of flock on the surface and in the number and length of the twisted brown spines. Some forms may lack the red centre to the fl or the flock may be partly or wholly missing. [CS/PM]

DISTRIBUTION: N Mexico.



**Astrophytum capricorne v. niveum** (Kays.) Ok.

Included here as arguably the most beautiful of all the forms to be found in the genus *Astrophytum*. [K161//P/K]

DISTRIBUTION: N Mexico.

OTHER NAMES: *Astrophytum niveum*



**Astrophytum coahuilense** (Moell.) Kays.

Distinguished from the superficially similar *A. myriostigma* by its softer, dirtier flock and the red centre to large flower. [CS/PM]

DISTRIBUTION: Mexico, Coahuila.



**Astrophytum myriostigma** Lem.

Many varieties/forms described for this species including the columnar *v. columnare* (Sch.) Tsuda, the four ribbed *v. quadricostatum* (Moell.) Baum and the flock-less *v. nudum* (R. Mey.) Ihbg. [CS/PM]

DISTRIBUTION: C to N highland areas of Mexico.

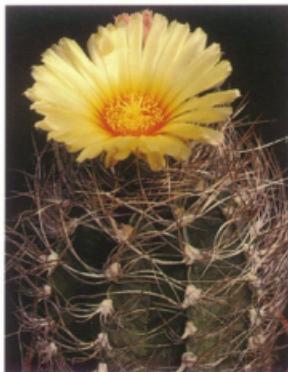
OTHER NAMES: Varieties may all have been referred to as full species at one time or another.



**Astrophytum ornatum** (DC.) Web.

Not illustrated here is the *v. mirabilii* (Lem.) Ol. with golden spines and more flock, and the *F. glabrescens* (Web.) Ihbg., dark green with little or no flock. [CS/GC]

DISTRIBUTION: Mexico, Hidalgo to Queretaro.



**Astrophytum senile** Fric

In *v. aureum* (Moell.) the young spines are pale yellow. [CS/EC]

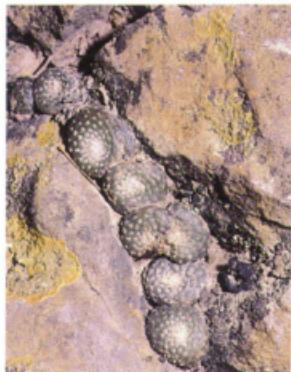
DISTRIBUTION: N Mexico.



**Aztekium ritteri** (Boed.) Boed.

A very constant species now frequently grown from seed. [IP/F]

DISTRIBUTION: Mexico, Nuevo Leon.

**Blossfeldia liliputana** Werd.

Tends to be difficult to grow on its own roots and is usually found as a grafted plant in collections. [H]

DISTRIBUTION: N Argentina and S Bolivia.

OTHER NAMES: *B. atroviridis*, *B. campaniflora*, *B. fischeri*, *B. minima*, *B. pectiniflora*.

**Copiapoa boliviiana** (Pfeiff.) Ritt.

[KK/IP/GCJ]  
DISTRIBUTION: Chile, hills in the area around Antofagasta.

OTHER NAMES: *Copiapoa atacamensis*.

**Copiapoa bridgesii** (Pfeiff.) Blbg.

Closely related to *C. marginata*. [PM261/H]  
DISTRIBUTION: Chile, hills N of Chanaral Airfield.

**Copiapoa calderana** Ritt.

Plants in habitat develop a greyish bloom not found on seed-grown plants in cultivation. [H]

DISTRIBUTION: Chile, coast N of Caldera.

OTHER NAMES: *C. lewisiae*.

**Copiapoa cinerascens** (S-D) B. & R.

Extremely variable in habitat where it exists in numerous closely spaced mini-populations differing in the number and size of heads, colour of epidermis and spine, length, thickness, number and colour. [PM210/H]

DISTRIBUTION: Chile, around Chanaral.

OTHER NAMES: *C. appianata*.

**Copiapoa cinerea** (Phil.) B. & R.

The greyish-white bloom on the habitat plant illustrated under this species does not develop on seed-grown plants in cultivation. [PM198/H]

DISTRIBUTION: Chile, around Taltal.

OTHER NAMES: *C. tenella*.



**Copiapoa cinerea v. columnaria-alba**

(Ritt.) Blbkg.

Occurs as two closely adjacent populations in habitat differing markedly in spine length and colour and in body height. [KK622/1P/GC]

DISTRIBUTION: Chile, mainly in Pan de Azucar National Park, N of Taltal.

OTHER NAMES: *C. edmonstonei*-alba & *C. melanoleuca*.



**Copiapoa cinerea v. haseltoniana**

(Blbkg.) N.P. Taylor

In habitat very variable in all of its characters except in its flowers. [PM202/H]

DISTRIBUTION: Chile, around Paposo.

OTHER NAMES: *C. haseltoniana*, *C. gigantea*, *C. cinerea* v. *gigantea* & *C. cronophila*.



**Copiapoa dealbata** Ritt.

Forms huge multheaded mounds in habitat. [H]

DISTRIBUTION: Chile, Carrizal Bajo.

OTHER NAMES: *C. carrialeensis* & *C. cinerea* v. *dealbata*.



**Copiapoa desertorum** Ritt.

Clumping, stems to 50 cm high by 6–10 cm. Fl yellow. [RMF153/1P/F]

DISTRIBUTION: Chile, E of Gifuncho. *Copiapoa hornilloensis* Ritt. from the Cerro Hornillo, N of Esmeralda, may only be a variety of this species.



**Copiapoa dura** Ritt.

Extremely variable in habitat, each population with its own distinctive set of characters. [PM210/H]

DISTRIBUTION: N Chile, around Totoral and Carrizal Bajo.

OTHER NAMES: *C. alisostata*, *C. exasperata*.



**Copiapoa echinata** Ritt.

v. *borealis* Ritt. from Monte Amargo is a very distinctive plant with much shorter spination. [PM220/H]

DISTRIBUTION: Chile, N and S of Carrizal Bajo.

OTHER NAMES: v. *borealis*: *C. nitidulaensis*.

**Copiapoa esmeraldana** Ritt.

Plants in habitat are virtually buried and very difficult to find; however cultivated plants quickly become cylindrical and rather elongated. [CS/PM]

DISTRIBUTION: Chile, Esmeralda above coastal cliffs where they are much eaten by vicunas.

**Copiapoa fiedleriana** (Sch.) Bkhg.

[RMFI83/IP/F]

DISTRIBUTION: Chile, Huasco.

OTHER NAMES: *C. peperinae* v. *fiedleriana*.

**Copiapoa grandiflora** Ritt.

Clomping. [RMFI64/IP/F]

DISTRIBUTION: Chile, Esmeralda.

**Copiapoa humilis** (Phil.) Hutch.

One of the most variable of all cacti in its body and spine characters. [IP/GC]

DISTRIBUTION: Coast of N Chile, e.g. Paposo.

OTHER NAMES: *C. longispina*, *C. paposensis*.

**Copiapoa hypogaea** Ritt.

Very variable in spination, the v. *barquitensis* Ritt. from Barquito having longer and thinner spines. [CS/GC]

DISTRIBUTION: Chile, coastal mountains N of Chanaral.

OTHER NAMES: *C. mollisca*, *C. montana*, *C. variosa*.

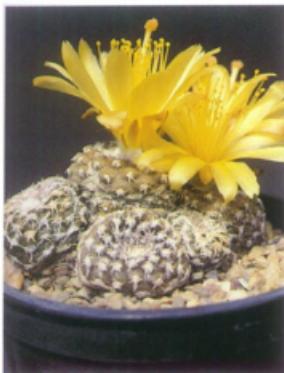
v. *barquitensis*: '*C. barquitensis*'.

**Copiapoa kraenziana** Ritt.

In habitat seems to form hybrid swarms with *C. cinerea*. Some of these may be seen in cultivation labelled *C. kraenziana* but these have hard spines rather than the soft almost hair-like spines typical of the latter species. [PM206/H]

DISTRIBUTION: Chile, coastal mountains N of Taltal.

OTHER NAMES: *C. sophia*.



**Copiapoa lauui** Diers

The smallest of the copiapas with heads less than 2 cm in diameter. Flowers more freely on its own roots. [RMF162/IP/F]

DISTRIBUTION: Chile, Esmeralda.



**Copiapoa longistaminea** Ritt.

Forms large, handsome, many-headed mounds in habitat. [H]

DISTRIBUTION: Chile, Esmeralda.

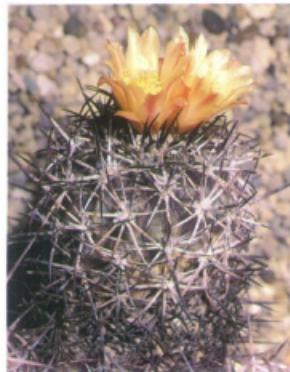


**Copiapoa marginata** (S-D) B. & R.

Distinctive for its long, dense, heavy spination; closely related to *C. bridgesii*. [PM219/H]

DISTRIBUTION: Chile, SW of Caldera, Morro Copiapo.

OTHER NAMES: *C. septentrionalis*.



**Copiapoa megarhiza** B. & R.

Rarely seen in cultivation. [RMF129/IP/F]

DISTRIBUTION: Chile, Copiapo valley.

OTHER NAMES: *C. megarhiza* s. *macrorhiza* Ritt.



**Copiapoa olivana** Ritt.

Globular to 7 cm broad. [RMF150/IP/F]

DISTRIBUTION: Chile, N of Talal.



**Copiapoa pendulina** Ritt.

A very variable species. [H]

DISTRIBUTION: Chile, around Coquimbo and S to Frai Jorge and E to La Serena.

OTHER NAMES: *C. coquimbana* & s. *wagenbrenneri*, *C. pseudocoquimbana* & var., *C. sericeana*.

**Copiapoa rupestris** Ritt.

Fl yellow. The plant named as *C. rubriflora* Ritt. occurs nearby and is probably just a red-flowered variant.  
[RMF 154/IP/F]

DISTRIBUTION: Chile, Cifuncho.

**Copiapoa serpentisulcata** Ritt.

A distinctive and attractive plant; unhappily it is very rare in cultivation. Fl yellow. [PM212/H]

DISTRIBUTION: Chile, N of Chanaral.

**Copiapoa solaris** (Ritt.) Ritt.

A spectacularly spined species difficult in cultivation. Has been heavily collected from its narrow habitat. Fl yellow. [RMF43/IP/F]

DISTRIBUTION: Chile, El Coire.

OTHER NAMES: *C. foras*, *Pilosocarpus solaris*.

**Copiapoa tenuissima** Ritt.

Another member of the *C. humilis* complex but very distinctive in its spination. [RMF318/IP/F]

DISTRIBUTION: Chile, coastal mountains S of Antofagasta.

**Copiapoa tocopillana** Ritt.

[RMF312/IP/F]

DISTRIBUTION: Chile, N of Tocopilla and S towards Antofagasta, the most northerly member of the genus.

**Copiapoa vallenarensis** Ritt.

Closely related to *C. pendulina* and *C. fiebigeriana*. [H]

DISTRIBUTION: Chile, Vallenar to near Huasco.



*Copiapoa variispinata* Ritt.

[RMFS3/IP/F]

DISTRIBUTION: Chile, N of Paposo.



*Coryphantha andreae* Purpus & Boed.

Fl yellow, 5–6 cm across. [CS/W]

DISTRIBUTION: Mexico, Vera Cruz.



*Coryphantha bergeriana* Boed.

Fl yellow, 7 cm across. [K102/IP/K]

DISTRIBUTION: Mexico, Nuevo Leon.



*Coryphantha bernalensis* Bremer.

Body to 10 cm high and 9 cm across. Fl 6 cm across.

DISTRIBUTION: Mexico, Queretaro, N of Bernal on the road to Toliman.



*Coryphantha bumamma* (Ehrenb.) B. & R.

Fl yellow, 5–6 cm across. [CS/W]

DISTRIBUTION: Mexico, Morelos and Guerrero States.



*Coryphantha calipensis* H. Bravo

[PM12/IS/PN]

DISTRIBUTION: Mexico, Puebla, near Calipan.



**Coryphantha clavata** (Scheidw.) Bkgd.

Fl yellow, 4 cm broad. v. *radicantissima* is more globular with a fl only 2.5 cm across. [K18/IP/K]

DISTRIBUTION: Mexico Hidalgo and just spreading into the adjacent states of Queretaro and Mexico DF.

OTHER NAMES: *C. nephridiastris*. Very similar but with more than one csp is *C. clava* (Pfeift.) Lem. from Hidalgo.



**Coryphantha compacta** (Engelm.) B. & R.

[K237/IP/K]

DISTRIBUTION: Mexico, Chihuahua, Coahuila, Chiapas.



**Coryphantha connivens** B. & R.

Fl yellow to 7 cm across. [CS/PM]

DISTRIBUTION: Mexico, near the capital city.



**Coryphantha cornifera** (DC) Lem.

Fl to 5 cm across, lemon yellow. [K18/IP/K]

DISTRIBUTION: Mexico, Hidalgo State around Ixmiquilpan.

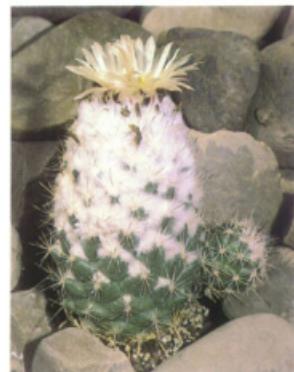


**Coryphantha delaetiana** (Quchl) Berg.

Fl yellow plant eventually forming mats in habitat.

[K215/IP/K]

DISTRIBUTION: Mexico, Coahuila State.



**Coryphantha durangensis** (Rge.) B. & R.

[CS/PM]

DISTRIBUTION: Mexico, Durango State.

*Coryphantha echinus* (Engelm.) B. & R.

Fl yellow. [K231/IP/K]

DISTRIBUTION: USA, W Texas; N Mexico, Coahuila State.

OTHER NAMES: *C. cornifera* v. *echinus*.*Coryphantha elephantidens* (Lem.) Lem.

[CS/PM]

DISTRIBUTION: Mexico, Michoacan State.

*Coryphantha erecta* (Lem.) Lem.

Fl up to 7.5 cm across, light yellow. [CS/PM]

DISTRIBUTION: Mexico, Hidalgo.

*Coryphantha gladiispina* (Boed.) Berg.

Fl yellow. [K127/IP/K]

DISTRIBUTION: Mexico, Coahuila, Parras.

*Coryphantha gracilis* Bremer & LauSolitary, occasionally sprouting to form small clumps.  
Stems 8 cm high by 3.5–4 cm, rcp 12–18, csp 0. Fl 4–5 cm wide, pale yellow to cream. [L645/IP/K]

DISTRIBUTION: Mexico, Chihuahua, Delayo on hills E of Rancho El Toro.

*Coryphantha greenwoodii* H. Bravo

Fl 5 cm broad, yellow with a fine brownish stripe.

Populations adjacent to the original show greater variation in radial spine count, almost resembling a different species. [K15/IP/K]

DISTRIBUTION: Mexico, Vera Cruz, Aculzingo Valley.



**Coryphantha guerkeana** (Boed.) B. & R.  
Fl white. [K30/IP/K]

DISTRIBUTION: Mexico, near the city of Durango.



**Coryphantha jalpanensis** Buchenau  
Fl pale yellow-green up to 1.2 cm across. [CS/W]

DISTRIBUTION: Mexico, Queretaro, hills around Jalpan.



**Coryphantha laui** Bremer

Solitary, globose to elongate; 5 cm across; rcp 18–20, 9–13 mm long; cap 1, to 16 mm long. Fl 4.5 cm across, light yellow. [CS/W]

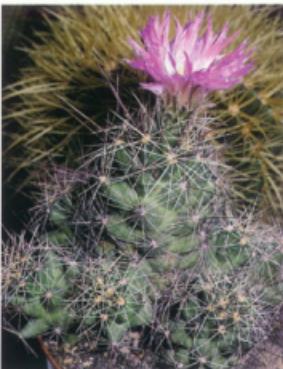
DISTRIBUTION: Mexico, Coahuila, 30 miles N of El Marte, 2000–2500 m.



**Coryphantha longicornis** Boed.  
Fl yellow. [CS/W]

DISTRIBUTION: Mexico, N Durango.

OTHER NAMES: *C. gracilis*.



**Coryphantha macromeris** Engelm.

The plant illustrated is v. *runnyonii* B. & R. which has fewer rcp and a smaller fl than the type. [CS/PM]

DISTRIBUTION: From W Texas and New Mexico in the N to Zacatecas State, Mexico in the S; v. *runnyonii* Texas, Rio Grande.

OTHER NAMES: *Lepidocoryphantha macromeris*, v. *runnyonii*; *L. runyonii*.



**Coryphantha maiz-tablasensis** Blbg.  
Fl yellowish. [K261/IP/K]

DISTRIBUTION: Mexico, San Luis Potosi, Ciudad Maiz.

**Coryphantha melleospina** BravoDistinctive but probably conspecific with *C. retusa*.

[K148-1/JP/K]

DISTRIBUTION: Mexico, Oaxaca, Huajuapan de Leon.

**Coryphantha pallida** B. & R.

Fl light yellow, 5–7 cm broad. [CS/W]

DISTRIBUTION: Mexico, Puebla, Tlaxcala.

**Coryphantha palmeri** B. & R.

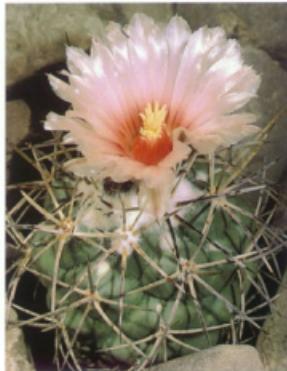
An extremely variable species, each population within its vast range differing in body size and spination to the extent that there is probably no such thing as a 'typical' plant. [JP/K]

DISTRIBUTION: Mexico: Durango, Zacatecas, Coahuila and San Luis Potosí States.

**Coryphantha poselgeriana** (Dietr.) B. & R.

[CS/PM]

DISTRIBUTION: Mexico, Coahuila, nr. Saltillo.

OTHER NAMES: *C. eigeneriana*.**Coryphantha poselgeriana v. valida** (Purpus) Heinr.

[CS/PM]

DISTRIBUTION: As for the species.

**Coryphantha potosiana** (Jac.) Glass & Foster

[IP/K]

DISTRIBUTION: Mexico, San Luis Potosí.

**Coryphantha pseudochinensis** Boed.

Flower pink, 3 cm across. [CS/PM]

DISTRIBUTION: Mexico, Sierra de la Paila.

OTHER NAMES: *C. pusilla*.**Coryphantha pseudonickelsiae** Blbg.

Fl 3.5 cm wide, pale yellow. [K160/IP/K]

DISTRIBUTION: Mexico, Durango State.

**Coryphantha pullemeana** (Blbg.) Glass

[CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, near Matchula.

OTHER NAMES: *Nenadzia pullemeana*.**Coryphantha pycnantha** (Mart.) Lem.

Flowers 4–5 cm broad, lemon-yellow. [K13/IP/K]

DISTRIBUTION: Mexico, Oaxaca State.

**Coryphantha radians** (DC) B. & R.

Fl lemon-yellow to over 7 cm broad. [K255/IP/K]

DISTRIBUTION: Central Mexico, Hidalgo State etc.

OTHER NAMES: *H. peritumata*, *C. pseudoradians*.**Coryphantha ramillosa** Cut.

Fl fairly large, more or less pink. [K231/IP/K]

DISTRIBUTION: Texas.



*Coryphantha recurvata* (Engelm.) B. & R.

Fl lemon-yellow, notoriously reluctant to fl in cultivation.  
[K202/IP/K]

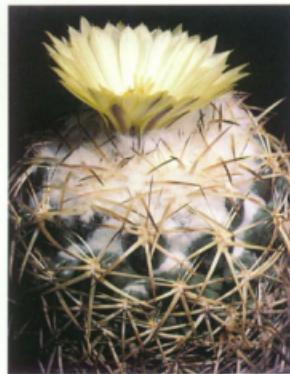
DISTRIBUTION: Arizona to N Sonora, Mexico.



*Coryphantha reduncispina* Boed.

Fl yellow with a red throat, 4–5 cm broad. The seedling illustrated is only just developing its 3 downwards pointing esp. [DHIS]

DISTRIBUTION: Mexico, Tamaulipas.



*Coryphantha retusa* (Pfciiff.) B. & R.

[IP/K]

DISTRIBUTION: Mexico, Oaxaca State.



*Coryphantha salm-dyckiana*

(Scheer) B. & R.

[K42/IP/K]

DISTRIBUTION: Mexico, Chihuahua State.



*Coryphantha scheeri* (Kunze) Benson

Fl yellow, filaments pink. [K213/IP/K]

DISTRIBUTION: S Arizona to N Mexico.

OTHER NAMES: *Coryphantha mitchleyana*.



*Coryphantha scolymoides*

(Scheidw.) Berg.

Fl over 5 cm broad, yellow with a red throat. [K46/IP/K]

DISTRIBUTION: N Mexico.

**Coryphantha speciosa** Boed.

Flowers 6 cm across, golden yellow with a dark centre.  
[K167/IP/K]

DISTRIBUTION: Mexico, Coahuila State W of Monclova.

**Coryphantha sulcata** (Engelm.) B. & R.

Clumping, heads to 12 cm across; esp 12–14; csp 0 at first, [as in the young plant illustrated] then several, one stouter, curved outwards. Fl to over 5 cm wide, yellow with red centre. [CS/PM]

DISTRIBUTION: S Texas.

**Coryphantha sulcolanata** (Lem.) Lem.

[K247/IP/K]

DISTRIBUTION: Mexico, Hidalgo, Mineral del Monte.

**Coryphantha villarensis** Bkgd.

Fl 5 cm across, light yellow. [CS/W]

DISTRIBUTION: Mexico, San Luis Potosí.

**Coryphantha vogtherriana** Werd. & Boed.

[CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí.

**Coryphantha werdermannii** Boed.

Fl with a red throat. [K230/IP/K]

DISTRIBUTION: Mexico, Sierra de la Paila.

**Cumarinia odorata** (Boed.) Buxb.

[CS]

DISTRIBUTION: Mexico, Tamaulipas and San Luis Potosí States.

OTHER NAMES: *Nopaloides odorata***Denmoza rhodacantha** (Salm-Syck) B. & R.

Solitary, becoming slightly columnar to 30 cm across. Fl 7 cm long. [CS/PM]

DISTRIBUTION: Argentina, widespread in the mountains.

OTHER NAMES: *D. erythrocyclala*.**Discocactus bahiensis** B. & R.

Solitary, to 6 cm broad. Fl to 5 cm long, cream. [CS/GC]

DISTRIBUTION: Brazil, Bahia.

**Discocactus hartmannii** (Sch.) B. & R.

Broadly spherical, glossy. Fl white. [IP/DE: Hendi Coll.]

DISTRIBUTION: Paraguay, Paraguari and Brazil, S Mato Grosso.

OTHER NAMES: *D. magnimanus*, *D. melleus*,  
*D. paralias*.**Discocactus heptacanthus** (Rodr.) B. & R.

Solitary, depressed spherical, to 16 cm across, exceedingly variable in spination and rib formation. Fl white. [CS/GC]

DISTRIBUTION: Brazil to Bolivia.

OTHER NAMES: *D. boliviensis*, *D. campensis*,  
*D. catimpola*, *D. cephalanthinum*, *D. diversans*, *D. estrepsi*,  
*D. flexipinnus*, *D. goiana*, *D. lindiana*, *D. melanolekera*,  
*D. nigricans*, *D. paranaensis*, *D. rapobizca*, *D. semi-companuliflora*, *D. squamibacana*, *D. infernus-proliferans*.**Discocactus horstii** Buin. & Bred.

Solitary, 4.5 cm across. Fl 6 cm wide, white. [FC]

DISTRIBUTION: Brazil, Grão Mogol.

OTHER NAMES: *D. inanisianus*.

*Discocactus insignis* Pfeiff.

Fl off-white. [CS/GC]

DISTRIBUTION: Brazil, Minas Geraes, Grao Mogol.

*Discocactus placentiformis* (Lem.) Sch.

Broadly flattened. Fl white. [H]

DISTRIBUTION: Brazil, Minas Geraes and N Bahia.

OTHER NAMES: *D. alboeius*, *D. latipinnus*, *D. fieki*,  
*D. mactukenianus*, *D. paganaeanthus*, *D. palmeicapitatus*,  
*D. sebastodes*.*Discocactus zehntneri* B. & R.Solitary or clustering, densely covered in spines. Fl only  
3 cm long, white. [CS/GC]

DISTRIBUTION: Brazil, N Bahia.

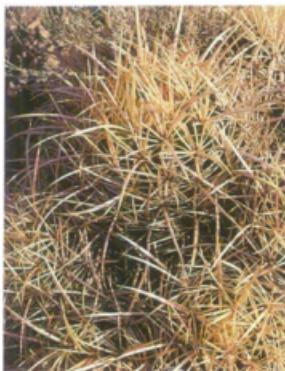
OTHER NAMES: *D. albispinus*, *D. araniferinus*,  
*D. horstii*.*Echinocactus grusonii* Hildm.A white-spined form of this species is now in cultivation.  
[CS/PM]

DISTRIBUTION: Mexico, San Luis Potosi to Hidalgo States.

*Echinocactus horizonthalonius* Lem.An extremely variable plant in habitat, probably related to its enormous range with big variations in height of the plant, spine length and flexibility and spine count. Fl pink. v.  
*nichollii* L. Benson; columnar, to 50 cm high, spines few (Arizona Desert). [H]DISTRIBUTION: Mexico State to S States of the USA,  
Chihuahuan Desert.*Echinocactus platyacanthus* Link & OttoSolitary, to 3 m high by 1 m. Fl yellow. Adult plants in the wild look quite unlike the seedling illustrated.  
[PM46/HS/PM]

DISTRIBUTION: Over a wide area of C and NC Mexico.

OTHER NAMES: *E. grandis*, *E. ingens*, *E. palmeri*, *E. turgidus*.

**Echinocactus polycephalus** Engelm. & Big.

Spherical to cylindric, to 70 cm high, forming large groups of heads. Fl yellow. v. *xeranthemoides* Coulter (illus.), solitary or sparingly clumping, otherwise similar in appearance (Navajuan Desert). [H]

DISTRIBUTION: USA, Mojave Desert.

OTHER NAMES: v. *xeranthemoides*; *E. xeranthemoides*.

**Echinocactus texensis** Hopff.

The plant shown is fairly typical, weaker or stronger-spined forms occur. Grows up to 15 cm high by 30 cm, flower 6 cm across. [HS/PM]

DISTRIBUTION: Texas and SE New Mexico to NE Mexico.

OTHER NAMES: *Heteracantha texensis*.

**Echinocereus adustus** Engelm.

A few plants have a single, long, black central spine. [CS/PM]

DISTRIBUTION: Mexico, Chihuahua.

OTHER NAMES: *Echinocactus radiatus* Engelm.

**Echinocereus adustus** v. *schwarzii*

(Lau) N.P. Taylor

Cap vary from 1 to 5, flowers are generally larger than those of the type. [L1305/CS/PM]

DISTRIBUTION: Mexico, Durango.

OTHER NAMES: *E. schwarzii*.

**Echinocereus barthelowianus** B. & R.

A clumping plant with 8–10 ribs and a purple fl 5–7 cm across, though these are rarely seen in cultivation. [IP/ERC]

DISTRIBUTION: Mexico, Baja California, Santa Maria Bay.

**Echinocereus berlandieri**

(Eng.) Hort. F.A. Haage

Stems creeping, 1.5–5 cm thick, fl with a dark throat. [IP/ERC]

DISTRIBUTION: S Texas, NE Mexico, Nuevo Leon and Tamaulipas.

OTHER NAMES: *E. blanchii* v. *berlandieri*.

**Echinocereus brandegeei** (Coulter) Sch.

A plant very easily recognized by its sword-like central spines. Fl pink to pale purple with a bright crimson throat but seldom seen in cultivation. [CS/PM]

DISTRIBUTION: Mexico, Baja California and neighbouring islands.

**Echinocereus bristolfii** W.T. Marsh

Solitary or sparingly branched, to 20 cm long by 5 cm; esp. 20. Fl to 11 cm long and 13 cm across, light magenta with darker midstripes. [IP/ERC]

DISTRIBUTION: Mexico, Sonora, Sopaya.

**Echinocereus bristolfii**

v. *pseudopectinatum* N.P. Taylor

Update 1990: now a good species *E. pseudopectinatum* (N.P. Taylor) N.P. Taylor. Solitary, esp 12–15. [I.609/CS/PM]

DISTRIBUTION: Mexico, NE Sonora; SF. Arizona.

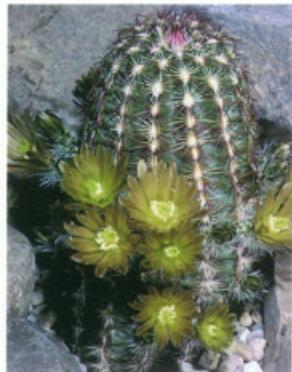
OTHER NAMES: *E. pectinatum* v. *minor*. This variety was distributed for some years as the true *E. bristolfii*.

**Echinocereus chisoensis** W.T. Marsh

Solitary. Fl 5 cm across, pinkish magenta, throat white, v. *fobeanum* (Oehme) N.P. Taylor (illus.), clumping, spines weaker. Fl 7–12 cm across. Plants become quickly deformed and ugly with age (Mexico, borders of SW Coahuila and E. Durango). [HK.803/CS/PM]

DISTRIBUTION: Texas, Chisos Mountains, Big Bend region.

OTHER NAMES: *E. reichenbachii* v. *chisoensis*, v. *fob.*; *E. fobeana*.

**Echinocereus chloranthus** (Engelm.) Hort. F.A. Haage

Clumping, 20 cm high by 5–7.5 cm; esp 3–6. Fl never open fully, unscented. v. *neocapillus* resembles v. *chloranthus* when mature. v. *cylindricus* (Engelm.) N.P. Taylor (illus.); distinguished from v. *chloranthus* by esp. 0(–3). [HS/PM]

DISTRIBUTION: All three S New Mexico and W Texas.

OTHER NAMES: *E. viridiflorus* v. *chloranthus*, v. *cylindricus*; *E. viridiflorus* v. *cylindrica*.

**Echinocereus chloranthus** v. *russanthus* (Wenig.) Lamb ex G. Rowley

A clumping variety more spiny than v. *chloranthus* and with a reddish fl. [I.1076/CS/PM]

DISTRIBUTION: Mexico, Chihuahua and W. Texas.

OTHER NAMES: *E. fernii*, *E. russanthus*.



*Echinocereus cinerascens* (DC) Lem.

A very variable, clumping plant stems 4–10 cm broad, ribs 6–12, glassy spines; esp equal to or less than the stem diameter. Fl purple with a lighter throat, tends to be little seen in cultivation. v. *chrenbergii* (Pfeiff.) H. Bravo-H. has fewer ribs and narrower stems whose diameter is exceeded by the esp. [H]

DISTRIBUTION: C. Mexico.

OTHER NAMES: v. *chrenbergii*; *E. chrenbergii*.



*Echinocereus engelmannii* (illus. above)  
(Parry ex Engelm.) Lem.

A very variable species split into a number of varieties; v. *acicularis*, v. *munzii*, v. *nicholii*, v. *armatus*, v. *chrysocentrus*, v. *howei*, v. *varegregatus* (illus. above) & v. *purpureus*. These differ mainly in details of spination. [H]

DISTRIBUTION: NW Mexico and SW USA.



*Echinocereus engelmannii* v. *nicholii*  
Benson

Update 1990: now a good species *E. nicholii* (Benson) Parfit. The most distinctive segregate within the *engelmannii* complex, with its characteristic long, dense, straw-coloured spination and small, very pale-pink flower. [HS/PM]

DISTRIBUTION: Mexico, NW Sonora State to USA, SC Arizona.



*Echinocereus enneacanthus* Engelm.

Stems to 15 cm broad, esp to 8 cm long. v. *brevispinus* has much slimmer stems to 5 cm, and shorter esp to 5 cm. [CS/PM]

DISTRIBUTION: N. Mexico and adjacent areas of the USA.

OTHER NAMES: *E. dubius*, *E. enneacanthus*, v. *dubius*,  
*E. merrii*, *E. setisepalum*, v. *brevispinus*. *E. enneacanthus*.



*Echinocereus fendleri* (Engelm.) Ruempler

[HS/PM]

DISTRIBUTION: C and E. Arizona, S Colorado, New Mexico, W Texas and Mexico in adjacent Chihuahua State.



*Echinocereus fendleri* v. *bonkerae*  
(Thornber & Bonker) Benson

[H]

DISTRIBUTION: C and SE. Arizona.

OTHER NAMES: *E. bonkerae* & *E. fasciculatus* v. *bonkerae*.

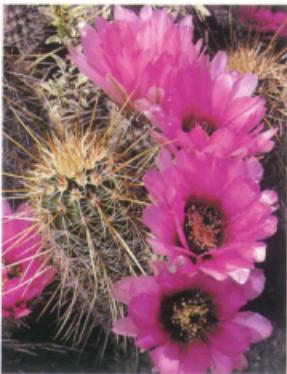


*Echinocereus fendleri* v. *boyce-thompsonii* (Orcutt) Benson

[H]

DISTRIBUTION: C Arizona

OTHER NAMES: *E. boyce-thompsonii*, *E. fasciculatus* v. *boyce-thompsonii*.



*Echinocereus fendleri* v. *fasciculatus* (Engelm. ex B.D. Jackson) N.P. Taylor

[H]

DISTRIBUTION: W and C Arizona and SW New Mexico; Mexico, N and C Sonora State.

OTHER NAMES: *E. fasciculatus*, *E. fendleri* v. *robustus*.



*Echinocereus fendleri* v. *kuenzleri* (Castetter et al) Benson

Fl as in the species [HK1267/HS/PM]

DISTRIBUTION: S New Mexico.

OTHER NAMES: *E. kempelii*, *E. kuenzleri*.



*Echinocereus fendleri* v. *ledingii* (Peebles) N.P. Taylor

Easily recognized by its long, down-curved central spine, the small fl are not often seen in cultivation. Still considered by many to be a distinct species. [HS/PM]

DISTRIBUTION: Mountains, SE Arizona.

OTHER NAMES: *E. ledingii*.



*Echinocereus fendleri* v. *rectispinus* (Peebles) Benson

DISTRIBUTION: SE Arizona, SW New Mexico, W Texas and neighbouring parts of Sonora, Mexico.

OTHER NAMES: *E. rectispinus*.



*Echinocereus ferreiranus* H. Gates

Clustering, stems to 40 cm high by 8 cm; csp mostly 4. Fl with pale green to whitish stigmas. [CS/PM]

DISTRIBUTION: Mexico, N Baja California.



*Echinocereus ferreirianus* v. *lindsayi*  
(Meyran) N.P. Taylor

Solitary, to 13 cm high by 10 cm; much more strongly spined, esp. 4-7. Stigma deep green. [ERC]

DISTRIBUTION: Mexico, Baja California, between Catavina and Laguna Chapala.

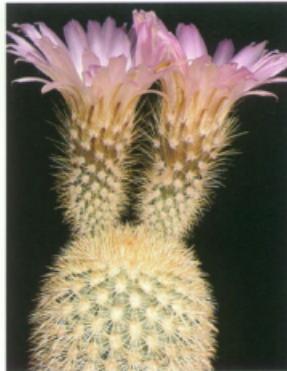
OTHER NAMES: *E. lindauji*.



*Echinocereus freudenbergeri* Frank  
A difficult species to fl in cultivation. Fl similar to that of *E. nivosus*. [CS/PM]

DISTRIBUTION: Mexico, S Coahuila.

OTHER NAMES: *E. delectii* v. *freudenbergeri*.



*Echinocereus grandis* B. & R.

Fl can be white, pale yellow or pale pink. [CS/PM]

DISTRIBUTION: Islands in the Gulf of California.



*Echinocereus knippelianus* Liebm.

Whereas the type is normally single-headed in habitat (but not always in cultivation), the v. *kruegeri* Glass & Foster is normally caespitose with whitish fl arising near the stem apex. [US/PM]

DISTRIBUTION: Mexico, SE Coahuila and S Nuevo Leon.

OTHER NAMES: v. *kruegeri*; *E. knippelianus* v. *rejoi*.



*Echinocereus lauui* Frank

[L780/CS/PM]

DISTRIBUTION: Mexico, E Sonora near Yecora.



*Echinocereus leucanthus* N.P. Taylor

Stem 3-6 mm thick. Fl white, 4 cm broad. [SB435/CS/C]

DISTRIBUTION: Mexico, S Sonora and N Sinaloa, known from only a handful of localities.

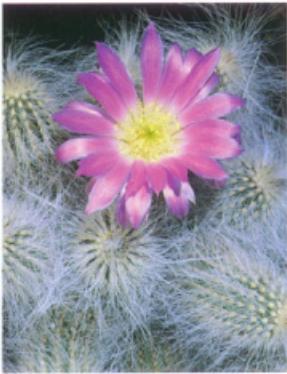
OTHER NAMES: *Wilosia albiflora*.

E. *poselgeri* Lem. from S Texas, E. Coahuila, N Nuevo Leon and Tamaulipas is very similar but has thicker stems and a pink fl 7 cm across; *Wilosia praecl*.

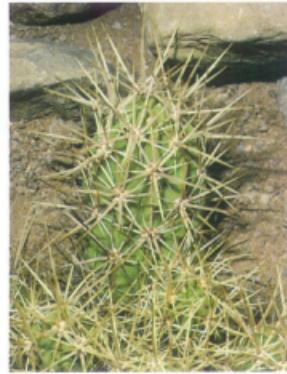
*Echinocereus longisetus* (Engelm.) Lem.

Fl purplish-pink with a white throat, 6 cm across. [IP/K]

DISTRIBUTION: Mexico, Coahuila State.

*Echinocereus longisetus* v. *delaetii*  
(Guerke) N.P. TaylorEasily recognized by its long, fine, hair-like spines. Its fl are usually only seen on fairly old plants in cultivation.  
[CS/PM]

DISTRIBUTION: Mexico, Coahuila.

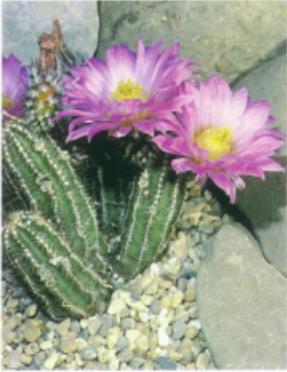
OTHER NAMES: *E. delaetii*.*Echinocereus maritimus*  
(M.E. Jones) Sch.Fl rarely produced in cultivation in the UK, 3–6 cm long, greenish-yellow in colour. v. *hancockii* (Davidson) N.P. Taylor is a more stoutly built plant with more and longer spines. [CS/PM]

DISTRIBUTION: Mexico, Baja California, W Coast and adjacent sand-dunes.

OTHER NAMES: v. *hancockii*; *E. hancockii*.*Echinocereus nivosus* Glass & Foster

This species varies somewhat in the density of the spination depending upon which particular collection it comes from. It tends to be a shy flowerer in cultivation. [CS/P]

DISTRIBUTION: Mexico, SE Coahuila.

OTHER NAMES: *E. albatus*, *E. longistylus* v. *albatus*.*Echinocereus palmeri* B. & R.

Develops a characteristic large taproot. [IP/P]

DISTRIBUTION: Mexico, Chihuahua State.

*Echinocereus pumilus* Lau

Becomes quite large with stems up to 35 cm high by 8 cm. Small plants flower freely in cultivation. [L1247/CS/PM]

DISTRIBUTION: Mexico, W Zacatecas, W Rio Huaynamota Valley.

**Echinocereus papillosus**

A. Link ex Ruempler

The v. *angusticeps* (Coker) W.T. Marsh (illus.) is more common in collections with stems up to 3 cm in diameter. The type has broader (3–5 cm) and longer stems and does not clump as readily. [CS/P]

DISTRIBUTION: Lowland areas of S Texas and adjacent Mexico.

OTHER NAMES: v. *angusticeps*; *E. angusticeps*.

**Echinocereus parkeri** N.P. Taylor

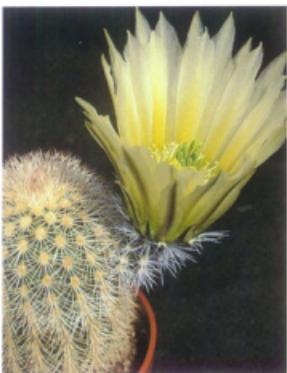
Clumping, stems to 6 cm across. Fl to 6 cm across, magenta to deep pink, throat white. v. *gonzalezi* N.P. Taylor (illus.), stems slimmer, more densely spiny (SE Nuevo Leon, SW Tamaulipas and N San Luis Potosí). [L1375/HS/PM]

DISTRIBUTION: Mexico, SE Nuevo Leon.

**Echinocereus pectinatus** (Scheidw.) Engelm.

Rsp 22–30, not interlaced. Fl are pinkish to lavender in colour with a maroon to white throat. v. *wenigeri* Benson, endemic to Texas, has fewer rsp (14–20). [HK1129/HS/GC]

DISTRIBUTION: N Mexico over a huge range northwards into S Texas.

**Echinocereus pectinatus** v. *dasyanthus* (Engelm.) N.P. Taylor

Rsp 15–25, interlaced. Fl usually yellow but sometimes whitish, orange, pink or purplish. [HK1114/HS/GC]

DISTRIBUTION: N Mexico; Arizona, New Mexico and Texas.

OTHER NAMES: *E. dasycanthus*, *E. pectinatus* v. *noveboracensis* and *E. pectinatus* v. *strobilus*.

**Echinocereus pensilis** (K. Brandegeei) Purpus

Stems slim, pendant, 1–4 m long, 2–5 cm broad; hangs from rocks. [IP/PM]

DISTRIBUTION: Mexico, Baja California, Cape region.

OTHER NAMES: *Morogea pensilis*.

**Echinocereus pentalophus** (DC) Lem.

Ribs 4–5, spines 3–7; v. *lemnensis* (Mathiassen) N.P. Taylor from NE Mexico has 6–8 ribs and up to 9 spines per areole.

Fl similar to the species. [PM32/HS/PM]

DISTRIBUTION: C to NF, Mexico, S Texas.

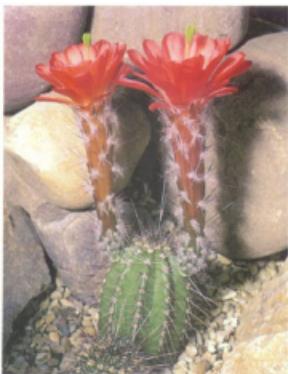
OTHER NAMES: *E. pruinosum*, *E. pentaphyllum* v. *pruinosum*, *E. tenuis*, *E. kerdiandii* sensu Weniger, v. *lemnensis*; *E. lemnensis*.

**Echinocereus polyacanthus** Engelm.

Stems 3–100. Fl 4–7 cm long, 3–4 cm across, free-flowering in cultivation. v. *pacificus* (Engelm.) N.P. Taylor; up to 400 stems per clump. Fl 3–5 cm long, 2–3 cm wide (N Baja California). [CS/PM].

DISTRIBUTION: NW Mexico, SW USA.

OTHER NAMES: *E. durangensis* v. *pacificus*; *E. pacificus*.

**Echinocereus polyacanthus v. densus**

(Regel) N.P. Taylor

Characterized by its particularly large fl which is up to 8 cm in diameter and 14 cm in length, sometimes slightly zygomorphic. [HS/PM].

DISTRIBUTION: N, C and W Mexico.

OTHER NAMES: *E. acifer*, *E. leucome*.

**Echinocereus primolanatus**

F. Schwarz ex N.P. Taylor

Fl 10.5 cm in diameter, bright pink with a slightly darker mid-stripe. [Holotype/IP/ERC].

DISTRIBUTION: Mexico, S Coahuila, S edge of Sierra de la Parra.

**Echinocereus pulchellus** (Mart.) Sch.

Stem 2.5–5 cm in diameter, spines usually short, around 4 mm in length. [CS/PM].

DISTRIBUTION: Mexico: N Oaxaca, Puebla, Hidalgo and SE Queretaro States.

**Echinocereus pulchellus v. amoenus**

(Dietr.) Sch.

Stem 3–7.5 cm broad, spines usually around 6 mm long. [CS/PM].

DISTRIBUTION: Mexico: SW San Luis Potosi and S Nuevo Leon States.

OTHER NAMES: *E. amoena*.

**Echinocereus pulchellus v. weinbergii**

(Wgt.) N.P. Taylor

Stem 6–13 cm broad, spines obvious, up to 10 mm long. [CS/PM].

DISTRIBUTION: Mexico, W Zacatecas.

OTHER NAMES: *E. weinbergii*.



*Echinocereus rayonesensis* N.P. Taylor  
[CS/PM]

DISTRIBUTION: Mexico, Nuevo Leon, Valley of Rayones.  
OTHER NAMES: *E. longigaster* sensu Werder.



*Echinocereus reichenbachii*  
(Terscheck ex Walp.) Hort. F.A. Haage

Csp always absent; esp 18–30 or more up to 6 mm long, varying from brown to white. *E. armatus* (Pöhlger) N.P. Taylor (on right); esp up to 23, to 8 mm in length, esp almost always present, to 20 mm long, usually black. Fl often large, pink with a green throat (Nuevo Leon, Huasteca Canyon). [HS/PM]

DISTRIBUTION: Texas, Oklahoma and NE Mexico.  
OTHER NAMES: *E. corymbosus*, *E. parpusus*, *E. armatus*.



*Echinocereus reichenbachii* v. *baileyi*  
(Rose) N.P. Taylor

Rsp up to 14, usually up to 12 mm (exceptionally 25 mm) long; csp 1–3, up to 3 mm long rather resembling the radials. Spines brown to white. [HK114B/HS/PM]  
DISTRIBUTION: S Oklahoma and neighbouring areas of Texas.

OTHER NAMES: *E. baileyi*, *E. baileyi* v. *albispinus*, *E. reichenbachii* v. *albispinus*.



*Echinocereus reichenbachii* v. *fitchii*  
(B. & R.) Benson

Rsp up to 22, up to 7.5 mm in length, esp 1–7 up to 9 mm long. The spectacular pink fl with its deep crimson throat is particularly attractive. [HK1277/HS/GC]

DISTRIBUTION: S Texas and adjacent NE Mexico.  
OTHER NAMES: *E. fitchii*, *E. reichenbachii* v. *alberti*, *E. melanostictus*.



*Echinocereus reichenbachii* v. *perbellus*  
(B. & R.) Benson

Rsp up to 16 (occasionally 20), up to 6 mm in length. Csp not always present, only 1 mm long. Fl pinkish magenta with a crimson throat. [HS/PM]

DISTRIBUTION: S Colorado, E New Mexico, N and C Texas.  
OTHER NAMES: *E. perbellus*.



*Echinocereus rigidissimus*  
(Engelm.) Hort. F.A. Haage

Stem to 11 cm in diameter, esp 15–23, 6–10 mm in length. Fl brilliant pink with a white throat, 6–9 cm broad. [HK1283/HS/PM]

DISTRIBUTION: Mexico, N Sonora; SW New Mexico and SE Arizona.

OTHER NAMES: *E. pectinatus* v. *rigidissimus*.



*Echinocereus rigidissimus* v. *rubispinus*  
(Frank) N.P. Taylor

Stem 4–6 cm broad, esp 30–35 up to 5 mm long. Named for the deep pink of the young spines around the apex. [L1088/CS/PM]

DISTRIBUTION: Mexico, W Chihuahua, Sierra Oscura.

OTHER NAMES: *E. perfinatus* v. *rubispinus*, *E. rubispinus*.



*Echinocereus scheeri* (S-D) Scheer

There is probably no such thing as a typical *E. scheeri*. Fl vary through pink to scarlet and orange, ribs vary from 7–10, esp from 9–13; usually 1 but as many as 4 csp. [L1082/CS/PM]

DISTRIBUTION: Mexico: Sonora, Chihuahua and Durango States.

OTHER NAMES: *E. sabr-djikianus*, *E. subnervosus*, *E. stiegae*.



*Echinocereus scheeri* v. *gentrii*  
(Clover) N.P. Taylor

Usually 4 or 5-ribbed but in cultivation may have up to 7. Spines absent or up to 2 mm long. [CS/PM]

DISTRIBUTION: Mexico: E. Sonora and W Chihuahua States.

OTHER NAMES: *E. acacuii*, *E. gentrii*.



*Echinocereus schmollii*  
(Weingart.) N.P. Taylor

Shows little variation in cultivation where its swollen root can be susceptible to overwatering. [CS/PM]

DISTRIBUTION: Mexico, SE Queretaro.

OTHER NAMES: *Wiliaria schmollii*.



*Echinocereus sciurus*  
(K. Brandegee) Dams

A fairly constant species in cultivation, forming clumps; has the distressing habit of flowering from the apex of the stem and blinding itself. [CS/PM]

DISTRIBUTION: Southern end of Baja California Mexico.



*Echinocereus sciurus* v. *floresii*  
(Bkhg.) N.P. Taylor

Differentiated from the type by the obvious central spines and the tendency to fl below the apex. [HK1036/HS/PM]

DISTRIBUTION: Mexico, Sinaloa.

OTHER NAMES: *E. floresii*.

**Echinocereus scopulorum** B. & R.

Normally solitary, 10–40 cm high by 10 cm. Fl funnel-shaped and sweetly scented, 10 cm in diameter, pink with a white throat. Often flowers from the centre blinding itself. [CS/PM]

DISTRIBUTION: Mexico, Sonora State.

OTHER NAMES: *E. pastinacoides* Z. Meissn.

**Echinocereus spinigemma** Lau

This species flowers fairly readily in cultivation on mature stems when it is instantly recognized by the extremely spiny fl buds which later form equally spiny fruits. Clumping with stems up to 30 cm long. [L1246/CS/P]

DISTRIBUTION: Mexico: W Zacatecas and NW Jalisco States.

**Echinocereus stoloniferus** W.T. Marsh

Clumping solely via underground stolons; stems cylindrical up to 30 cm high by 5 cm. [CS/PM]

DISTRIBUTION: Mexico, SF. Sonora.

**Echinocereus stoloniferus** v. *tayoppinsis* (W.T. Marsh) N.P. Taylor

Clumping from the stem base and sides; stems fatter than the type to 8 cm broad and 15 cm high. [L1779/CS/PM]

DISTRIBUTION: Mexico: E Sonora and W Chihuahua.

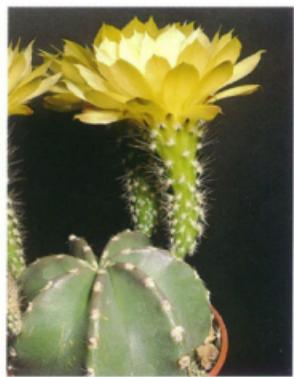
OTHER NAMES: *E. lespessieri*.

**Echinocereus stramineus** (Engelm.) Ruempler

Forms large handsome clumps of fiercely spined stems up to 45 cm long and 8 cm in diameter near the base. Fl large to 12.5 cm across. [PM56/HS/PM]

DISTRIBUTION: SW USA and N Mexico.

OTHER NAMES: *E. crassiflorus* v. *stramineus*.

**Echinocereus subinermis** S-D ex Scheer

Forms small compact clumps of fat heads. Csp 0–1; flowers up to 13 cm broad. [CS/PM]

DISTRIBUTION: Mexico: N Sinaloa, S Sonora and SW Chihuahua States.

OTHER NAMES: *E. latens*, *E. subinermis* v. *latens*, *E. subinermis* v. *andreae*.



**Echinocereus subinermis v. ochoterenae  
(Ortega) Unger**

Noticeably spinier than the type with more cylindrical heads; esp prominent, 1–4. Fl to 6.5 cm across. [L.771/CS/PM]

DISTRIBUTION: Mexico, S Sonora.

OTHER NAMES: *E. schistosac.*



**Echinocereus triglochidiatus Engelm.**

Stems clumping up to 30 cm long by 7.5 cm; spines 3–4 to 2.5 cm long, triangular in section. Csp 0–1. v. paucispinus (Engelm.) W.T. Marsh is similar but spines 4–6, 3–4 cm long, not angular, more closely applied to the body. [HK1442/HS/PM]

DISTRIBUTION: New Mexico, NE Arizona and S Colorado, v. paucispinus: S Texas.

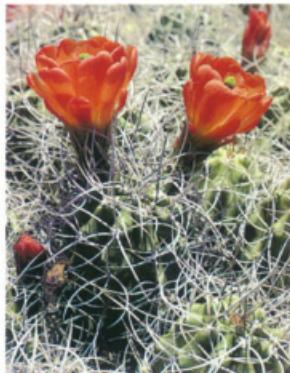


**Echinocereus triglochidiatus  
v. melanacanthus (Engelm.) Benson**

Forming mounds, stems 7.5–15 cm in length by 2.5–6 cm; spines 6–14 of which 1–3 are straight, smooth esp. 'fa. inermis' is a spineless, usually dwarf form from mountains in Utah and Colorado. [HK 1258/HS/PM]

DISTRIBUTION: As for the species.

OTHER NAMES: *E. inermis*, *E. evanescens*, 'fa. inermis'; *E. inermis*', *E. hexaedrus*, *E. hexaedrus* v. *inermis*.



**Echinocereus triglochidiatus  
v. mojavensis (Engelm. & Big.) Benson**

Forming clumps; spines 6–10 up to 7 cm long with 1–2 esp all curving and twisted. v. gonacanthus (Engelm. & Big.) Boissier, & Davidson, spines 6–9, esp (0–) 1 (–2) 1 (–2) to 4.4 cm long, fl as for species (New Mexico, NE Arizona, S Colorado). [H]

DISTRIBUTION: Mojave Desert region of USA and N Mexico.

OTHER NAMES: *E. mojavensis*, v. *gonacanthus*: *E. gonacanthus*.



**Echinocereus triglochidiatus  
v. neomexicanus (Standley) Benson**

Clumping, spines 11–22 of which 4 are esp to 4 cm long. Fl scarlet, salmon-pink or white, v. arizonicus (Rose ex Orcutt) Benson similar with fewer, thicker spines (Arizona). v. gurneyi Benson stems few; spines 8–10 including 1–2 esp to 2 cm (SW USA, NW Mexico). [HS/PM]

DISTRIBUTION: SE Arizona, S and W New Mexico, W Texas; Mexico, N Chihuahua.

OTHER NAMES: *E. muc.*, *E. neomexicanus*, v. *arizonicus*: *E. arizonicus*.



**Echinocereus viereckii Werd.**

Stems yellowish, ribs 6–9, tuberculate; spines very thin. Fl violet-pink to 11 cm broad. Illustrated is v. morrisonii (Riha) N.P. Taylor. Usually seen as the slim-stemmed almost spineless plant illustrated but this grades into a larger, more stocky-stemmed and prominently spined plant. [HK376/HS/PM]

DISTRIBUTION: Mexico, SW Tamaulipas and adjacent Nuevo Leon.

OTHER NAMES: v. *morr.*; *E. morr.*

**Echinocereus viridiflorus** Engelm.

Spines red, brownish, pale grey or white, radials to 4.5 mm long. v. *correllii* Benson, from a small area in Texas, has yellowish-green and off-white spines in horizontal bands, the radials up to 9 mm long. Fl open widely, lemon scented. [SB931/CS/PM]

DISTRIBUTION: From S Dakota and SE Wyoming to Texas.

OTHER NAMES: v. *correllii*; ‘*E. correllii*’.

**Echinocereus viridiflorus****v. davisii** (Houghton) W.T. Marsh

A tiny plant, in the wild only 1.2–2 cm high by 0.9–1.2 cm, growing larger and eventually clumping in cultivation. [CS/PM]

DISTRIBUTION: S of Marathon, Texas.

OTHER NAMES: *E. davisii*.

**Echinocereus websterianus** Lindsay

Without experience not easily distinguished from *E. grandis* except when in flower, which in the present species is only 3–4 cm in diameter and of a deeper shade of pink. [CS/PM]

DISTRIBUTION: Mexico, Gulf of California, Isla San Pedro Nolasco.

**Echinomastus durangensis** (Rge.) B. & R.

Globose to elongated, to 25 cm high by 10 cm. Fl small, brownish-red. [CS/W]

DISTRIBUTION: Mexico, Durango, Rio Nazas.

**Echinomastus erectocentrus** (Coultr.) B. & R.

Ovoid to short-cylindric, 20 cm high by 10 cm. Fl 3–4 cm wide, pink. [CS/W]

DISTRIBUTION: SE. Arizona.

OTHER NAMES: *Nesolepidia erectocentrus*.

**Echinomastus intertextus** (Engelm.) B. & R.

Stem to 12.5 cm high by 5–7 cm. Fl 2.5 cm long. [H]

DISTRIBUTION: Arizona, New Mexico, Texas.

OTHER NAMES: *Nesolepidia intertexta* & v. *dayacantha*.

**Echinomastus mariposensis** Hester

Stem solitary, 6–10 cm long by 4–6 cm. Fl 4 cm across, pink. [CS/W]

DISTRIBUTION: Mexico, Coahuila and Texas, SW Brewster County.

OTHER NAMES: *Nesliydia maripensis*.

**Echinomastus unguispinus** (Engelm.) B. & R.

Solitary, to 10 cm high by 7 cm. Fl 2.5 cm wide. [CS/GC]

DISTRIBUTION: Mexico: Chihuahua; Zacatecas.

OTHER NAMES: *E. mapimensis*, *E. leucostoma*.

**Echinomastus warnockii** Glass & Foster

Solitary, to 11 cm high by 7.5 cm. Fl 2.5 cm wide. [SBH17/CS/W]

DISTRIBUTION: Mexico: Chihuahua; Texas and New Mexico.

OTHER NAMES: *Nesliydia warnockii*.

**Echinopsis ancistrophora** Speg.

A small, flattened species up to 8 cm broad. Fl 12–16 cm long, unscented. [P231/CS/PM]

DISTRIBUTION: Argentina, Tucuman-Salta.

OTHER NAMES: *E. hamatastricha*, *E. eratocycliana*, *E. leucobdentha*, *E. telephracta*, *E. polycyclista*.

*E. ancistrophora* and these other names have all been included in the genus *Pseudoechinopsis*.

**Echinopsis arebaloi** Card.

Freely offsetting to 10 cm high and broad, fl 16 cm long, white. [KK469/IP/M]

DISTRIBUTION: Bolivia, Comarapa.

**Echinopsis ayopayana** Ritt. & Rausch.

Body at first globular, later strongly elongated. Fl 10–12 cm long, white. Fruit very large. *E. kladiviana*

Rausch would seem to be merely a taller-growing variety of this species with very long esp (up to 10 cm). [L1973/IP/M]

DISTRIBUTION: Between Independencia and Tiquipaya, Bolivia at 3000–3500 m altitude.

OTHER NAMES: *Lobivia megacarpa* n.n.

**Echinopsis baldiana** Spec.

Usually solitary, to 30 cm high by 15 cm. Fl very large and scented. The plant pictured seems to equate well with the original description of the species. [P166/M]

DISTRIBUTION: Argentina, Catamarca.

**Echinopsis boyuibensis** Ritt.

Ribs 10 to 12, esp 2–6, 7–20 mm long, the longest usually with a hooked tip; esp usually lacking but when present often hooked, 2–4 cm long. Fl 20 cm long, white. [IP/M]

DISTRIBUTION: Bolivia, hills near Boyuibe.

OTHER NAMES: *Pseudoechinopsis boyuibensis*.

**Echinopsis bridgesii** S-D

Offsetting, stem to 10 cm broad, central spine long, fl 15–18 cm long. Similar but much more elongated, to 50 cm long, and with much shorter spines is *E. cochabambensis* Blkg., from Cochabamba. [PM146/H]

DISTRIBUTION: Bolivia, highlands around La Paz.

OTHER NAMES: *E. cotacajensis* Card., *E. ibicuatus* Card., *E. pojensis* Card. and *E. vallegrandensis* Card. all appear to be forms of this variable species.

**Echinopsis calochlora** Sch.

Rather small, light green, 6–9 cm broad, ribs 13. Fl 16 cm long. [M]

DISTRIBUTION: Brazil, Corumba.

**'Echinopsis cardenasiана'**

published as *Lobivia cardenasiana* Rausch.

Simple, rather flattened to 10 cm broad. Fl from the side, 8–10 cm long, 6–7 cm broad, magenta or scarlet. [GS/PM]

DISTRIBUTION: Bolivia, E. of Tarija.

OTHER NAMES: *E. acutangula* Kupper, *cardenasiana*.

**Echinopsis chacoana** Schuetz

Becoming short-cylindric, light yellowish-green. Fl white. [P251/CS/PM]

DISTRIBUTION: Paraguayan Chaco.

**Echinopsis dehrenbergii** Fric

Spherical, Fl white. [CS/M]

DISTRIBUTION: Paraguay.

OTHER NAMES: *E. paraguayensis*.**Echinopsis cyriesii** (Turp.) Zucc.

Solitary at first then freely offsetting, spines very short. Fl 17–25 cm long, white. [M]

DISTRIBUTION: S Brazil to Argentina, Entre Ríos.

OTHER NAMES: *E. turbinata* and *E. gemmata* seem to equate with this species.**Echinopsis klingleriana** Card.

Simple, 12–14 cm high by 13 cm. Fl funneliform, 12 cm long, white. [L362/IP/M]

DISTRIBUTION: Bolivia, Chiquitos.

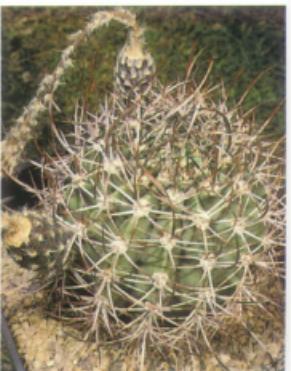
**Echinopsis leucantha** (Gill.) Walp.

Spherical, never columnar to 15 cm across. Fl up to 17 cm long, white. [B29/IP/M]

DISTRIBUTION: Argentina, NW provinces.

OTHER NAMES: *E. intricatissima*, *E. campylacantha*, *E. cordobensis*, *E. speciosissima*.**Echinopsis mammillosa** GuerkeSolitary, to 12 cm high by 10 cm; esp 5–10 mm long, esp to 10 mm. Fl 13–18 cm long by 8 cm, white. In v. *flexilis* Rausch the esp are very long (N Argentina), v.*hystrichoides* (Ritt.) Rausch also has pink fl (around Culipina). v. *kermesina* (Kraatz) Fried. has huge, carmine fl. [KK769/CS/M]

DISTRIBUTION: Bolivia, around Tarija.

OTHER NAMES: *E. herkensis*, *E. orceana*, *Parodobothia orceana*, v. *hystrichoides*; *E. hystrichoides*, v. *kermesina*; *Pseudobothia kermesina*, *E. kermesina'*.**Echinopsis melanopotamica** Speg.

Becoming cylindrical to 50 cm high by 15 cm. Fl 22 cm long, whitish. [P98a/CS/M]

DISTRIBUTION: Argentina, Rio Negro and Rio Colorado.

**Echinopsis minuana** Speg.

Solitary, to 80 cm high by 15 cm. Fl unscented, 20 cm long, white. [P255/M]

DISTRIBUTION: Argentina, Entre Ríos.

OTHER NAMES: *E. robinsoniana*.

**Echinopsis molesta** Speg.

Solitary, spherical up to 20 cm broad. Fl faintly perfumed, 20–24 cm long, white. [R134/CS/M]

DISTRIBUTION: Argentina, Córdoba.

**Echinopsis obrepanda** (S-D) Sch.

For a discussion of this complex group see Appendix 1. [CS/PM]

**Echinopsis obrepanda** v. *calorubra*  
(Card.) Rausch

Forms large, flattened clumps with individual heads up to 14 cm across and of a lighter shade of green than in other populations. Fl 15 cm long, pinkish-red. [CS/PM]

DISTRIBUTION: C Bolivia, e.g. Aiquile.

OTHER NAMES: *Pseudoechinopsis calorubra*, *Echinopsis calorubra*.

**Echinopsis obrepanda**  
v. *mizqueensis* (Rausch) Rausch

Body only to 14 cm across. Fl smaller to 7.5 cm long, red, v. *aguilarii* (Vasqu.) Rausch is similar but slightly larger and more densely covered in darker, longer spines (Bolivia, Molino). [CS/PM]

DISTRIBUTION: Bolivia, between Vila Vila and Rio Caine.

OTHER NAMES: *Lobivia mizqueensis* v. *aguilarii*: *Lobivia aguilarii*.

**Echinopsis oxygona** (Link) Zucc.

Solitary or offsetting, up to 25 cm across, esp to 1.5 cm, csp longer. Fl 22 cm long, pinkish red. f. *brevispina* Ritt. spines shorter. [SchLIP/M]

DISTRIBUTION: S Brazil, Uruguay and NE Argentina.

OTHER NAMES: *E. brasiliensis* & *E. multiplex*; f. *brevispina*: *E. cyathigera* v. *grandiflora* & *E. wendemannii*.

**Echinopsis rauschii** Fried.

Up to 9 cm across, fresh green in colour. Fl orange-red, 6 cm long. v. *grandiflora* Rausch [from Mizque]; to 10 cm across with a brilliant red fl 10 cm long. v. *megalocephalia* Rausch; to 13 cm across with the orange-red fl 12 cm long. [CS/PM]

DISTRIBUTION: Bolivia, Pojo.

OTHER NAMES: *Lobivia pojensis* & *L. pojensis* var. *grandiflora*, *Echinopsis acanthophora* subsp. *pojensis* & var. *grandiflora* & *megalocephalia*.

**Echinopsis rhodotricha** Sch.

Offsetting, becoming cylindric to 80 cm high by 9 cm. Fl 15 cm long, white. [HS/M]

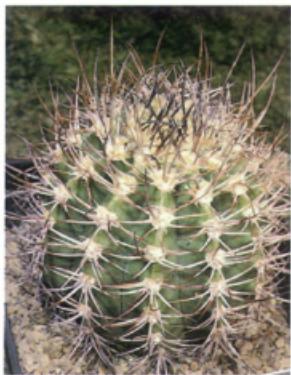
DISTRIBUTION: Paraguay and NW Argentina.

**Echinopsis semidenudata** Card.

Becoming cylindric, spines so short as almost to appear absent. Fl white with a long, narrow tube. [KK1273/IP/M]

DISTRIBUTION: Bolivia, Tarja, Villa Montes.

OTHER NAMES: *E. paupera*, *E. seminuda*.

**Echinopsis shaferi** B. & R.

Solitary or occasionally offsetting, up to 1.5 m high by 18 cm. Fl 20 cm long, white. [M]

DISTRIBUTION: Argentina, Tucuman, Trancas.

**Echinopsis silvestrii** Spec.

At first globular then elongated to 10 cm high by 8 cm, spines all fairly short and stiff, to 1.2 cm long, pale yellow, becoming dirty grey. Fl 20 cm long, white, lacking perfume. [B36/IP/M]

DISTRIBUTION: Argentina, borders of Tucuman and Salta.

**Echinopsis subdenudata** Card.

Solitary up to 8 cm high by 12 cm. Fl to 20 cm long, white. [Lau IP/M]

DISTRIBUTION: Bolivia, Angostura de Villamontes.

**Echinopsis sucrensis** Card.

Spherical, later short cylindric forming large clumps. Fl 20 cm long, 10 cm across, white. Part of the *E. bridgesii* complex. [PM164/11]

DISTRIBUTION: Bolivia, Sucre and widespread in the district around.

**Echinopsis tapecuana** Ritt.

Body 5–12 cm broad. Fl 8 cm long, white. [FR777/CS/M]

DISTRIBUTION: Bolivia, Tapecua.

**'Echinopsis tortispina'**

Clumping, spines fairly long and twisted. Fl white. [L400/IP/M]

DISTRIBUTION: Argentina, Entre Ríos.

**Echinopsis tubiflora** (Pfeiff.) Zucc.

Solitary or offsetting, up to 12 cm across, more or less spherical. Fl 20 cm long white. [Schl/IP/M]

DISTRIBUTION: Argentina: Tucumán, Salta and Catamarca.

**Epithelantha bockei** Benson

Simple or with a few offsets. [CS/PM]

DISTRIBUTION: W Texas.

OTHER NAMES: *E. micromeris* v. *bockei*.

**Epithelantha micromeris** (Engelm.) Web.

Simple or offsetting, spines to 2 mm long. v. *densispina* (Bravo) Blbg. spines to 1 cm in the crown v. *greggii* (Englm.) Borg longer, stouter csp (Coquile) v. *unguispinis* (Borch.) Blbg. (flower has curved, darker projecting spines (Nuevo Leon). [CS/W])

DISTRIBUTION: W Texas to N Mexico.

OTHER NAMES: *E. polypetala*, *E. rupestris* v. *densispina*; *E. densispina* v. *unguispinis*; *E. spinosissima*.

**Epithelantha pachyrhiza** (Marsh.) Bkbg.

Elongated, sometimes forming cushions, with a taproot and a prominent tuft of spines in the crown. [CS/W]

DISTRIBUTION: Mexico, Coahuila.

**Eriosyce megacarpa** Ritt.

Solitary, globular, 10–14 cm or more across. Fl 1.5–2 cm wide, purplish-red. [H]

DISTRIBUTION: Chile, Chanaral and to the N and S along the coast.

OTHER NAMES: *Rodentiophila megacarpa*, *E. rodentiophila* = *R. atacamensis*.

**Eriosyce sandillon** (Remy) Phil.

Solitary, very variable in size and spination, usually to around 40 cm high and broad. Fl 2.5–3 cm across, purplish-red. [H]

DISTRIBUTION: Widespread in NC Chile.

OTHER NAMES: *E. annae*, *E. algarensis*, *E. austefiana*, *E. crinita* and var., *E. thorelyanae*, *E. spinifloris*.

**Escobaria aguirreana**

(Glass & Foster) N.P. Taylor  
[CS/PM]

DISTRIBUTION: Mexico, Coahuila.

OTHER NAMES: *Gymnocalycium aguirreana*.

**Escobaria chihuahuensis** B. & R.

Stems to 20 cm high by 7 cm. Fl 2 cm across, pale pink to purplish. [CS/PM]

DISTRIBUTION: Mexico, C Chihuahua.

**Escobaria dasycantha** (Engelm.) B. & R.

To 7 cm across; fl to 2.5 cm long. [CS/PM]

DISTRIBUTION: S New Mexico, W Texas and Mexico, Coahuila and Chihuahua.

**Escobaria dasycantha v. chaffeyi**

(B. &amp; R.) N.P. Taylor

Spines finer and more even in length than the species. Fl only to 1.5 cm long. v. *duncani* (Hester) N.P. Taylor; stem to 3.5 cm broad. Fl to 3 cm long (S New Mexico and W Texas). [CS/PM]

DISTRIBUTION: Mexico, N Zacatecas.

OTHER NAMES: *E. chaffeyi*, v. *duncani*; *Coryphantha duncani*, *E. duncani*.

**Escobaria emskoetteriana** (Quchl) Borg

Stems 5 cm high by 4 cm, prolifically clustering. Fl to 3 cm long. [HK1321/Hs/P]

DISTRIBUTION: NE Mexico and SW Texas.

OTHER NAMES: *E. machibacana*, *E. rayonii*, *Coryphantha pottsii*, *C. neomex.*

**Escobaria henricksonii** Glass & Foster

Stems cylindric, to 3 cm across, clumping. Fl to 2.5 cm across, pinkish-purple. [CS/W]

DISTRIBUTION: Mexico, S Chihuahua and NE Durango.

**Escobaria hesteri** (Y. Wright) Buxb.

Stems to 4 cm high, globose. [CS/W]

DISTRIBUTION: Texas, Brewster County.

OTHER NAMES: *Coryphantha hesteri*.**Escobaria laredoi**

(Glass &amp; Foster) N.P. Taylor

Stems globose or slightly elongated, to 4.5 cm across. Fl crimson. [CS/P]

DISTRIBUTION: Mexico, SE Coahuila.

OTHER NAMES: *Coryphantha laredoi*, *E. rigida*.**Escobaria leei** Boed.

Stem slimmer than in the related *E. sneadii* with which it occasionally occurs but apparently does not interbreed. Spines pointing inwards towards the stem. Fl dull brownish-pink. [IP/DHS]

DISTRIBUTION: New Mexico, Guadalupe Mts.

OTHER NAMES: *Coryphantha sneadii* v. *leei*, *E. sneadii* v. *leei*.



**Escobaria minima** (Baird) D.R. Hunt  
Stem to 4 cm high by 2 cm, clumping. [CS/GC]

DISTRIBUTION: Texas, near Marathon.

OTHER NAMES: *Coryphantha minima*, *C. nelliæ*, *E. nelliæ*.



**Escobaria missouriensis** (Sweet) D.R. Hunt  
Stems 5–10 cm across, clumping; rcp 8–20. Fl to 2.5 cm across, greenish-yellow to pink. v. *asperispina* (Boed.) N.P. Taylor; rcp 9–10 (NE Mexico); v. *marstonii* (Cleve) D.R. Hunt; fl to 5 cm, yellow (Utah, Arizona). [IP/G]

DISTRIBUTION: Montana, N Dakota and W Minnesota south to N Colorado and Kansas.

OTHER NAMES: *Neskenia min.*, *N. wiemannii*, *N. masteinii*, *N. asperispina*, *Coryphantha marstonii*.



**Escobaria missouriensis** v. *similis* (Engelm.) N.P. Taylor

Stem to 10 cm broad, clumping. Fl to 6 cm across, light yellow to pink. [HK1480/HG/GC]

DISTRIBUTION: SE Kansas, SW Arkansas, W Louisiana, E Oklahoma, E Texas.

OTHER NAMES: *Neskenia similis*, *N. miffiana*, *N. min. v. caespitosa*.



**Escobaria organensis** (Zimmerman) Castetter et al.  
Stems to 12 cm high by 3 cm. Fl to 1.5 cm, pinkish. [CS/W]

DISTRIBUTION: New Mexico, Organ Mts.

OTHER NAMES: *Coryphantha organensis*.



**Escobaria Robbinsorum** (Earle) D.R. Hunt  
Solitary, to 5 cm across and high. Fl pink to olive. [CS/DHS]

DISTRIBUTION: SE Arizona.

OTHER NAMES: *Cochlearia robb.*



**Escobaria rosana** (Boed.) Schmoll ex Brix

Stem to 5 cm across, clumping. Fl 2 cm across. A recently discovered form from Nuevo Leon resembles *Mammillaria elongata*. [CS/PM]

DISTRIBUTION: Mexico, SE Coahuila and adjacent Nuevo Leon.

OTHER NAMES: *Gymnocalycium rosanae*.

**Escobaria sneedii** B. & R.

Stem to 7.5 cm high by 2.5 cm, densely clustering. Fl 12 mm across, pale pink to magenta. E. guadalupensis Brack & Heil is similar but usually solitary, to 10 cm high by 5 cm. Fl pale yellow, cream or pink, with pink midstripe [Texas, Guadalupe Mts.] [CS/E]

DISTRIBUTION: New Mexico, Dona Ana County and Texas, El Paso County.

OTHER NAMES: *Coryphantha sneedii*.

**Escobaria strobiliformis** Scheer ex Boed.

Extremely variable, 5–12 cm high by 2.5–7 cm. Fl 2.5–3.5 cm across, pale pink to whitish. [CS/P/M]

DISTRIBUTION: New Mexico and W Texas; Mexico, Coahuila, Durango and Chihuahua States.

OTHER NAMES: *E. tuberculosa*, *E. variolosa*, *E. dasypantha* v. *variolosa*.

**Escobaria villardii** Castetter et al

Clumping. Fl to 2.5 cm across, white with a light brown to pink midstripe. A member of the *E. occulta* group, including *E. sandbergii* and *E. albicolumnaria*, all of which are similar-looking plants (see Appendix 2). [CS/W]

DISTRIBUTION: New Mexico, W face of the Sacramento Mts.

**Escobaria vivipara** (Nutt.) F. Buxb.

Clustering, stem exposed. Fl to 6 cm wide, v. *kaibabensis* (P. Fisher) N.P. Taylor, usually solitary, spinier. Fl with pale throat (N Arizona). v. *radiosa* (Engelm.) D.R. Hunt; tubercles longer, more, longer and paler spines, petals long and narrow (SW Oklahoma, NC Texas, SE New Mexico). [HS/P/M]

DISTRIBUTION: S Canada and Kansas to Texas.

OTHER NAMES: *Coryphantha vivipara* v. *kaibab*; *Cory* v. *vivip*; *v. kaibab*; *v. radiosa*; *C. columbaria*.

**Escobaria vivipara v. arizonica** (Engelm.) D.R. Hunt

Clumping, stems to 9.5 cm high by 7 cm; esp 2–6. v. *neomexicana* (Engelm.) Buxb.; similar, esp 4–11, fl usually paler (New Mexico, W Texas, N Chihuahua). v. *rosea* (Cleop.) D.R. Hunt; stem larger, esp stouter (S Nevada, California). [H]

DISTRIBUTION: S Utah, SW Colorado, Arizona, NW New Mexico.

OTHER NAMES: *Coryphantha* v. *v. arizonica* & *neomexicana*.

**Escobaria vivipara v. bisbeciana** (Orcutt) D.R. Hunt

Clumping, fl 5–7 cm wide, pink, v. *bisbeciana* (P. Fisher) N.P. Taylor; clumping, fl small, peach to light pink (Arizona, near Bagdad). v. *deserti* (Engelm.) D.R. Hunt; similar to v. *bisbeciana*, fl small, brownish (USA, Mojave Desert). [KZ38/IP]

DISTRIBUTION: SW USA and New Mexico.

OTHER NAMES: *Coryphantha* *aggregate*, *Escobaria* agg. (misapplied names). *C. viv.* v. *kaib*, *C. viv.* v. *hof*, v. *deserti*; *C. columbaria* & v. *deserti*, *Esc. columbaria*, *Esc. deserti*.

**Escobaria zilziana** (Boed.) Bkgb.

Stem to 10 cm high by 3 cm, clumping. Fl 3 cm across, pale yellow, olive-green or whitish, petals with pink midstripe. [HK1326/H/S/GC]

DISTRIBUTION: Mexico, Coahuila.

**Ferocactus chrysacanthus** (Orcutt) B. & R.

Solitary, spines usually yellow, sometimes red, stem to 1 m high by 30 cm. Fl yellow or orange. [CS/PM]

DISTRIBUTION: Mexico, Baja California, Cedros and San Benito Islands.

**Ferocactus cylindraceus** (Engelm.) Orcutt

Usually solitary, to 3 m high by 50 cm. Fl green or yellow. *v. lecontei* (Engelm.) H. Bravo-H., *v. eastwoodiae* (Benson) N.P. Taylor & v. *tortulispinus* (Gates) H. Bravo-H. differ mainly in spination. *F. johnstonianus* B. & R. is probably a dwarf island race. [HS/PM]

DISTRIBUTION: SW USA and NW Mexico.

OTHER NAMES: *F. arborescens* & *turr.*, *F. rotundifolia*.  
*v. tortulispinus*: *F. rotundispina*.

**Ferocactus echidne** (DC) B. & R.

Very variable, 35–80 cm high by 20–30 cm. Fl occasionally red. Seed-raised plants flower well in cultivation. [CS/PM]

DISTRIBUTION: Widespread in EC Mexico.

OTHER NAMES: *F. rafaelensis*, *F. rhodanthus*, *F. victoriensis*.

**Ferocactus emoryi** (Engelm.) Orcutt

Solitary, to 2.5 m high by 1 m; esp 1, 4–10 cm long. Fl red or yellow. *v. rectispinus* (Engelm.) N.P. Taylor, to 1.5 m high by 45 cm; esp to 25 cm; fl yellow (Baja California, San Ignacio to S of Loreto). [PF6853/HS/PM]

DISTRIBUTION: SW Arizona; Mexico, Sonora to N Sinaloa.

OTHER NAMES: *F. ouelletii* v. *rect.*; *F. rotundispina*.

**Ferocactus flavovirens** (Scheidw.) B. & R.

Stems to 40 cm high by 20 cm, forming mounds 2 m broad. Fl red. [CS/PM]

DISTRIBUTION: Mexico, SE Puebla to N Oaxaca.

**Ferocactus fordii** (Orcutt) B. & R.

Solitary, spherical to short cylindric, to 12 cm across. Fl 4 cm long, purple. [H]

DISTRIBUTION: Mexico, W coast of Baja California.

**Ferocactus glaucescens** (DC) B. & R.

Solitary or clumping, to 45–70 cm high by 50 cm. Fl yellow, produced on very old plants in cultivation (see plate). [CS/P]

DISTRIBUTION: Mexico: Hidalgo; Queretaro and San Luis Potosí.

**Ferocactus gracilis** H. Gates

Solitary, to 3 m high by 30 cm. Fl red. v. *coloratus* (Gates) G. Lindsay (illus.) is shorter and thicker (S Baja California). *F. gatesii* G. Lindsay may be only an island form of *F. gracilis*. [H]

DISTRIBUTION: Mexico, Central N Baja California.

OTHER NAMES: v. *coloratus*: *F. color*, *F. vicinensis*, *F. peninsulae* v. *visc.*

**Ferocactus haematacanthus**

(S-D) H. Bravo-H.

Stem 30–120 cm high by 26–36 cm. Fl purplish-pink. [H]

DISTRIBUTION: Mexico, Puebla/Veracruz, Esperanza, Barrancas de Acultzingo and Maltrata.

**Ferocactus hamatacanthus**

(Muell.-H.) B. & R.

Usually solitary, to 60 cm high by 30 cm, ribs rounded. Fl yellow, throat often red, to 7.5 cm wide, v. *sinuatus* (A. Dietr.) Benson; smaller, ribs more acute, lower esp. twisted and flattened (SE Texas; NE Mexico). [PM45/HS/PM]

DISTRIBUTION: SE New Mexico, W and S Texas; CN Mexico, S to San Luis Potosí.

OTHER NAMES: *Haworthia* *hamata*, *H. longiflora*\*, *F. ham.* v. *crassispina*, *v. sinuatus*, *H. sinuatus*, *F. sinuatus*\*.

**Ferocactus histris** (DC) G. Lindsay

Solitary, to 110 cm high by 80 cm. Fl yellow. [PM35/HS/PM]

DISTRIBUTION: Widespread in C Mexico.

OTHER NAMES: '*F. elephasina*'.

**Ferocactus latispinus** (Haw.) B. & R.

Solitary, to 30 cm high by 40 cm. Fl 4 cm across, purplish or yellow, v. *spiralis* (Karw. ex Pfeiff.) N.P. Taylor, more cylindric, fl smaller, whitish with pinkish midstripes (Puebla to S Oaxaca). [H]

DISTRIBUTION: Very widespread in C Mexico.

OTHER NAMES: v. *spiralis*, *F. nearensis*.

**Ferocactus lindsayi** H. Bravo-H.

Solitary, to 60 cm high and 40 cm wide. Fl yellow. [H]

DISTRIBUTION: Mexico, Michoacan, of Rio Balsas basin, SE of Apatzingan.

**Ferocactus macrodiscus** (Mart.) B. & R.

Solitary, flattened, to 40 cm across, ribs 13–35. Fl 3–4 cm across, purplish-pink with white petal margins. A form with fewer, more pronounced ribs from Guanajuato is in trade and deserves a name. Flowers well in cultivation. [H, from Oaxaca]

DISTRIBUTION: Mexico, Oaxaca.

**Ferocactus peninsulae** (Weber) B. & R.

Solitary, to 2.5 m high by 50 cm. v. *townsendianus* (B. & R.) N.P. Taylor; smaller, rarely to 1 m (S Baja California). v. *santa-maria* (B. & R.) N.P. Taylor (see plate); globular, to 60 cm high, spines stout, free-flowering (Isla Magdalena & adjacent mainland). [CS/PM]

DISTRIBUTION: Mexico, C and E Baja California.

OTHER NAMES: v. *towns*; *F. townsendianus*, v. *santa-maria*; *F. towns*, v. *santa-m.*

**Ferocactus pilosus** (Gal. ex S-D) Werd.

Stems clumping, to 3 m high by 50 cm. Fl small, orange.

DISTRIBUTION: Widespread in NC Mexico.

OTHER NAMES: *F. tamaulipeca* & v. *pilosus*.

**Ferocactus pottsii** (S-D) Blkg.

Solitary, to 1 m high by 50 cm, esp straight. Fl yellow. v. *alamosanus* (B. & R.) G. Unger; stems to 25 cm high by 30 cm, spination denser (Sonora, Alamos Mountain). [CS/PM]

DISTRIBUTION: Mexico, SW Chihuahua, SE Sonora and N Sinaloa.

OTHER NAMES: 'F. guiroboensis', v. *alamosanus*; *F. alamosana*.

*Ferocactus repenngae* Unger

Solitary, globose, then to 80 cm high by 24 cm. Seed-grown plants flower well in cultivation. [CS/PM]

DISTRIBUTION: Mexico: Colima, Michoacan and Oaxaca.

*Ferocactus robustus* (Pfeiff.) B. & R.

Stems 15–20 cm broad, forming clumps to 5 m across. Fl 3–4 cm wide, yellow. [PM16/HS/PM]

DISTRIBUTION: Mexico, Puebla.

*Ferocactus schwarzii* Lindsay

Solitary, to 80 cm high by 50 cm, flowering when around 10 cm across. [CS/P]

DISTRIBUTION: Mexico, Sinaloa.

*Ferocactus viridescens*

(Torrey & Gray) B. & R.

Solitary, to 30 cm high and broad, ribs 13–25; largest esp. flattened. Fl 6 cm wide, v. *litoralis* G. Lindsay; stems to 30 cm by 18 cm across, ribs 21–34, spines not flattened. Fl 2.5 cm across (Baja, coast between Punta Salispuedes and Misión Santo Domingo). [CS/PM]

DISTRIBUTION: California, SW corner; Mexico, NW Baja California.

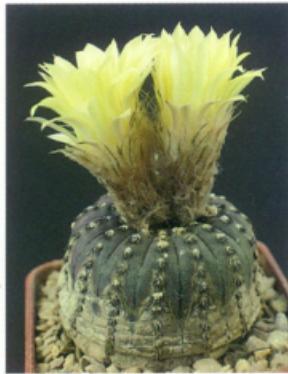
OTHER NAMES: *F. ornata*.

*Ferocactus wislizeni* (Engelm.) B. & R.

Solitary, to 1.6 m high by 80 cm. Fl orange to red. v. *herrerae* (J.G. Ortega) N.P. Taylor; stems to 2 m by 45 cm, less spiny; (S Sonora, N Sinaloa, W Durango), v. *tiburonensis* Lindsay; fl yellow, from Tiburon Island. [H]

DISTRIBUTION: SW USA and NW Mexico.

OTHER NAMES: vars: *F. herreana*, *F. tiburonensis*.

*Frailea castanea* Bkbg.

Solitary, fl 4 cm broad. [IP/RM]

DISTRIBUTION: S Brazil to N Uruguay.

OTHER NAMES: *F. asterolepis*.

**Frailea columbiana** (Werd.) Bkgd.

Clumping, fl 2.5 cm long. [CS/PM]

DISTRIBUTION: Said to be from Colombia (Dagua) but never rediscovered despite considerable searching.

OTHER NAMES: *F. drysantha*.**Frailea grahliana** (Haage jr.) B. & R.

Clumping, stems to 4 cm across. Fl 4 cm wide. [CS/PM]

DISTRIBUTION: Paraguay, Rio Paraguari and Argentina, Misiones, Santa Ana.

OTHER NAMES: *F. pseudograhliana*, *F. schultesiana*.**Frailea horstii** Ritt.

Slender cylindric, to 10 cm and more high, 2.5 cm across. Fl 5 cm across. [CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, Cacipava.

**Frailea phaeodisca** Speg.

Solitary, flattened-globular, 1.5–3 cm broad. Fl 4 cm broad, yellow. [CS/P]

DISTRIBUTION: Uruguay, Tacuarembó.

OTHER NAMES: *F. perbella*, *F. pygmaea* v. *phaeodisca*.**Frailea pumila** (Lem.) B. & R.

Clumping, spherical. Fl 2 cm. [Schl532/IP/RM]

DISTRIBUTION: Paraguay and adjacent Argentina.

OTHER NAMES: *F. atropurpurea*, *F. carmeniflamentosa*, *F. friedrichii*.**Frailea pygmaea** (Speg.) B. & R.

Solitary or offsetting, to 3 cm long and broad. Fl 3 cm across, yellow. [CS/R]

DISTRIBUTION: Uruguay and Argentina.

OTHER NAMES: *F. asperipina*, *F. axona*, *F. asterinum*, *F. austrospina*, *F. dadokii*, *F. feliciana*, *F. palmerina*.

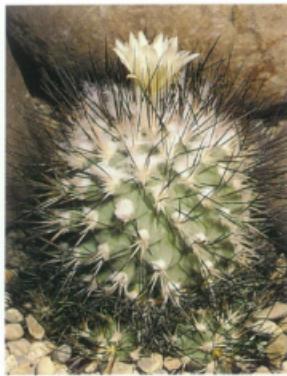


*Gymnocalyx heghianii* nom. illeg. = *Neolloydia smithii* (Muehlpl.) Kladiva & Fittkau

Solitary, to 10 cm high by 4.5 cm. Fl magenta with lighter petal margins. [CS/PM]

DISTRIBUTION: Mexico, Coahuila, near Saltillo and Nuevo Leon, e.g. near Ascension.

OTHER NAMES: *Gymnocalyx heghianii* & v. *smithii* & v. *smitii*.

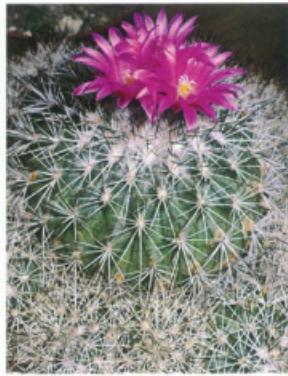


*Gymnocalyx gielsdorffianus* (Werd.) Bkbg.

Solitary to clustering, 5–7 cm high by 4.5–5 cm. Fl 2 cm across. [CS/W]

DISTRIBUTION: Mexico, Tamaulipas, near Jaimave.

OTHER NAMES: *Nesliodysia gielsd.*, *Thelocactus gielsd.*, *Turbinicarpus gielsd.*



*Gymnocalyx horripilus* (Lem.) Bkbg.

Clustering, individual heads 10 cm high by 6.5 cm. Fl 2.5–3.5 cm across. [CS/PM]

DISTRIBUTION: Mexico, Hidalgo, Metztitlan.

OTHER NAMES: *Nesliodysia horrip.*, *Turbinicarpus horrip.*



*Gymnocalyx knuthianus* (Boed.) Bkbg.

Usually solitary, to 6 cm high by 7 cm. Fl 2.5 cm across. [CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, near Guadalcazar.

OTHER NAMES: *Nesliodysia knuth.*, *Thelocactus knuth.*, *Turbinicarpus knuth.*



*Gymnocalyx saueri* (Boed.) Bkbg.

Solitary, to 5 cm high by 6 cm. Fl 2.5 cm across. [CS/W]

DISTRIBUTION: Mexico, Tamaulipas, near San Vicente.

OTHER NAMES: *Nesliodysia saueri*, *Thelocactus saueri*, *Turbinicarpus saueri*.



*Gymnocalyx subterraneus* (Bkbg.) Bkbg.

Stem solitary, to 7 cm high by 4 cm. Fl magenta. v. *zaragozae* (Glass & Foster) from Dr. Arroyo has a brownish-yellow flower. [CS/J. Arnold]

DISTRIBUTION: Mexico, Nuevo Leon, Ambranner.

OTHER NAMES: *Nesliodysia sub. v. zaragozae*. Nesl. sub. t. zar.



**Gymnocalycium viereckii** (Werd.) Bkbg.  
Heads to 5 cm across by 4 cm, clustering. Fl magenta.  
*v. major* (Glass & Foster) Anderson; solitary, to 7 cm high  
by 6.5 cm. Fl white (Nuevo Leon and San Luis Potosí).  
[CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, Jaimeave Valley,  
Los Mimos.

OTHER NAMES: *Neolloydia viereckii*, *Turbinicarpus viereckii*.



**Gymnocalycium achirasense**  
Till & Schatzl

Plant up to 6 cm high by 7 cm, more or less covered in spines; fl funnel-shaped, 7 cm across, off-white flushed with pink. Appears to be intermediate between  
*G. horridispinum* and *G. mionvillei*. [P104/HS/DHS]  
DISTRIBUTION: Argentina, Province of San Luis at Achiras.



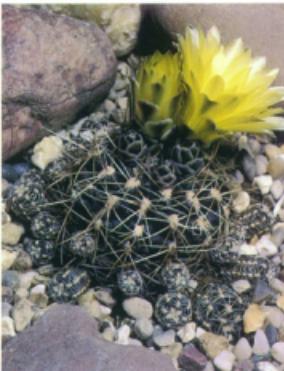
**Gymnocalycium alboareolatum** Rausch  
Flattened-globular. Fl pinkish-white. A member of the  
*G. mazanense* complex. [P221/IP/DHS]

DISTRIBUTION: Argentina, La Rioja, near Sanagasta.



**Gymnocalycium ambatoense** Piltz  
Single, more or less globular, up to 15 cm across, 5–10 cm  
high; fl up to 4.5 cm long, 3–4 cm across, white with  
a pinkish midstripe or pink. Closely related to  
*G. mazanense*. [P29/HS/DHS]

DISTRIBUTION: Argentina, Catamarca, Sierra Ambato  
amongst grass and moss.

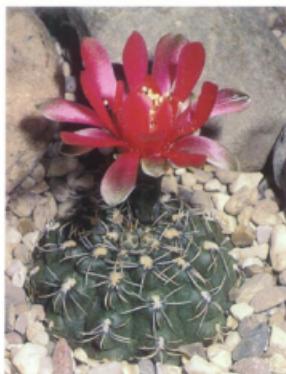


**Gymnocalycium andreae** (Boed.) Bkbg.  
One of the few yellow-flowered members of the genus;  
offsetting with age. [Fecher IP/DHS]  
DISTRIBUTION: Argentina, Córdoba.

OTHER NAMES: *G. andreae* v. *grandiflorum*.



**Gymnocalycium anisitsii** (Sch.) B. & R.  
Solitary, to over 10 cm long, leaf-green. Fl 4 cm long, white.  
[GC]  
DISTRIBUTION: Paraguay, Rio Tigrayami.

**Gymnocalycium baldianum** (Speg.) Speg.

Usually solitary to 7 cm broad. Fl often bright red but can be pink or even white. [P127/CS/PM]

DISTRIBUTION: Argentina, Catamarca.

OTHER NAMES: *G. venturiorum*.

**Gymnocalycium bayrianum** Till

Illish-green, normally solitary. Fl 4 cm broad, creamy white with a pink throat. [L447/IP/DHS]

DISTRIBUTION: Argentina, Tucuman, near Medina.

**Gymnocalycium bicolor** Schuetz

Spherical, up to 15 cm across. Fl 4.5 cm broad, white. [B44/IP/DHS]

DISTRIBUTION: Argentina, Cordoba.

**Gymnocalycium borthii** Koop

Closely related to *G. gibbosum*. Body flattened becoming elongated-globular, up to 10 cm high by 9 cm. Fl 5 cm across, white with a pink throat. [OF19-80/HS/DHS]

DISTRIBUTION: Argentina, San Luis, at Quines.

**Gymnocalycium bozsingianum** Schuetz

Fl pink with a red throat, petals olive brown on the outside. [P205/IP/DHS]

DISTRIBUTION: Argentina, La Rioja, Chipes Viejo.

**Gymnocalycium bruchii** (Speg.) Hoss.

Forming large clumps of small, densely spined heads with white flowers flushed light to deep pink. v. *breggetti* Pilz has far fewer spines exposing the body beneath and bright pink flowers. [P200/IP/DHS]

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *G. althipineum*, *G. lofaldense*.

**Gymnocalycium buenekeri** Smiales

Clumping, body not glossy, fl pink. [CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, Sao Francisco de Assis.

OTHER NAMES: *G. hastii* v. *buenekeri*.**Gymnocalycium calochlorum** (Boed.) ItoForming mounds of rather small, flattened heads to 6 cm across. Fl 6 cm long, pale pink. v. *proliferum* Bkbg. has a darker body and a larger fl with brownish-white, pink or pure white petals. [P109b/IP/DHS].

DISTRIBUTION: N Argentina.

**Gymnocalycium capillaense** (Schick.) Bkbg.To 9 cm high and broad, offsetting. Fl large up to 7 cm long and 6 cm across, delicate shell pink. Closely related to *G. sigelianum*. [R39/IP/DHS].

DISTRIBUTION: Argentina, Cordoba.

**Gymnocalycium cardenasianum** Ritt.

Noted for its long, strong spines. Fl pink to white, 5 cm long, up to 9 cm across, often failing to open properly because of the spines. [J 929/IP/DHS].

DISTRIBUTION: Bolivia, Dept. of Tarija, Carrizal.

**Gymnocalycium carminanthum** Borth & Koop

Spines strong, curving back over the matt-green body, esp usually lacking. [P133/IP/DHS].

DISTRIBUTION: Argentina, Catamarca, Sierra de Ambato.

**Gymnocalycium castellanossii** Bkbg.

Body simple, matt bluish-green, up to 15 cm high and 10 cm broad, spines robust. Fl 4.5 cm broad, bell-shaped, white with a pinkish throat. [B73/IP/DHS].

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *G. aorreganum*.



**Gymnocalycium chiquitanum** Card.

Flattened spherical, later offsetting round the base, 6–9 cm across, of a characteristic shade of greyish-green turning reddish in strong sunlight. Fl up to 6 cm long, blac pink. [CS/PM].

DISTRIBUTION: Bolivia, San José.

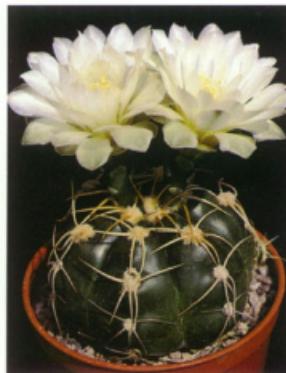
OTHER NAMES: *G. hammerioides*.



**Gymnocalycium damsii** (Sch.) B. & R.

Simple, light, shiny green often flushed red. Fl up to 5 cm long and 5 cm across, white with a red centre.  
 v. *tucavocense* Blbkg. differs in its prolific branching habit while Backeberg's other varieties v. *centrifugum*, v. *stellulatum* & v. *tuberculatum* differ in no significant way from the species. [KK497/CS/PM]

DISTRIBUTION: N Paraguay. v. *tucavocense*, Bolivia, San José.



**Gymnocalycium denudatum**

(Link & Otto) Pfeiff.

Body flattened-globose, up to 8 cm broad, spines usually 5. Fl up to 7 cm across, white. [Patou IP/GC]

DISTRIBUTION: Over a wide area of NE Argentina and SW Brazil.

OTHER NAMES: *G. paraguajense*.



**Gymnocalycium erinaceum** Lambert

Solitary, globose to 5 cm high by 5.5 cm in diameter, white. [JI40/H/S/DHS]

DISTRIBUTION: Argentina, Córdoba, Sierra de Tulumá, Sauce Punco.



**Gymnocalycium eurypleurum** Ritt.

Simple, up to 7 cm across. Fl 4.5–5 cm broad. [CS/GC]

DISTRIBUTION: Paraguay, Cerro Leon.



**Gymnocalycium ferrarii** Rausch

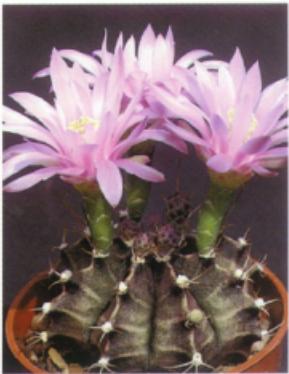
Single, flattened-globular, 3–4 cm high by 9 cm greenish-grey. Fl 4.5 cm long and 3.5 cm across, whitish-pink with pink midstripe, throat pink. [IP/DHS]

DISTRIBUTION: Argentina, Catamarca, near Santa Theresa.

**Gymnocalycium fleischerianum** Bkbg.

Spherical to elongated, occasionally offsetting. Fl up to 4 cm long, white with a pink throat. [CS/GC]

DISTRIBUTION: Paraguay.

**Gymnocalycium friedrichii** Pazout

Body reddish brown with sharply angled ribs, marked with distinctive horizontal banding. Flowers pink. [CS/GC]

DISTRIBUTION: Paraguayan Chaco.

**Gymnocalycium gibbosum** (Haw.) Pfeiff.

A very variable species, body spherical to elongated, up to 6 cm high by 15 cm, varying from green to black, spines thin. Fl up to 6.5 cm long, whitish. [Pf01/IP/DHS]

DISTRIBUTION: S Argentina, widespread.

OTHER NAMES: *G. brachypetalum*, *G. obscurum*, *G. gerardii*.

**Gymnocalycium glaucum** Ritt.

Slow-growing, up to 12 cm across. Fl up to 4.5 cm across, white with darker midstripe. [P36/IP/DHS]

DISTRIBUTION: N Argentina, SE of Timogasta.

**\*Gymnocalycium griseopallidum** Bkbg.

Body pale greyish-green up to 6.5 cm across and 3 cm high, later forming offsets. Fl off-white, similar to those of *G. darsii*. [CS/GC]

DISTRIBUTION: Bolivia, salt dunes near San Jose.

**Gymnocalycium hamatum** Ritt.

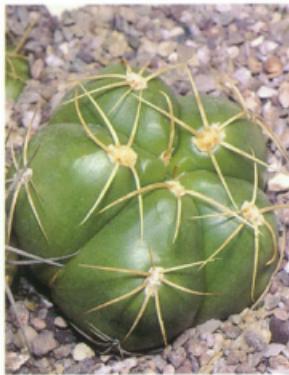
Body sub-spherical, coppery brown; spines often but not always hooked. Fl 5 cm long, white. [CS/GC]

DISTRIBUTION: Bolivia, Province of Gran Chaco, Palos Ilancos.

**Gymnocalycium horridispinum** Frank

To 20 cm or more high by 8 cm, epidermis dark green. Fl white with pinkish edging to the petals or wholly pink, 6 cm across. [CS/PM]

DISTRIBUTION: N Argentina, Cordoba, SW of Salsacate.

**Gymnocalycium horstii** Buin.

Up to 7 cm high by 11 cm, glossy, bright green. Fl up to 11 cm long and broad, white. [IP/R]

DISTRIBUTION: Brazil, Rio Grande do Sul, near Cacapava.

**Gymnocalycium hybopleurum**

(Sch.) Blkbg.

Body broadly spherical, spination very variable with some plants being extremely strongly spined. Fl 4 cm long, white. The seven varieties erected by Backeb erg have little or no botanical significance in such a variable plant. [L491/IP/GC]

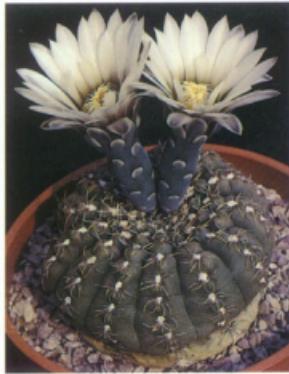
DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *G. eachlorum* nom. prov. *G. elukilon*, *G. paguianum*.

**'Gymnocalycium intertextum'** Blkbg.

Depressed spherical to 11 cm across. Fl white. [CS/DHS]

DISTRIBUTION: Given as N Argentina, not positively collected in view of Backeb erg's typically inadequate habitat information.

**Gymnocalycium kieslingii** Ferrari

Stems globose, depressed, grey-green, solitary, 6–9 cm broad and 2 cm high. Fl 5–6 cm broad, white. [B63/IP/GC]

DISTRIBUTION: Argentina, La Rioja.

**Gymnocalycium leeanum**

(Hook.) B. & R.

Usually clumping. [CS/PM]

DISTRIBUTION: Uruguay and adjacent areas of Argentina.

**Gymnocalycium mazanense** Blbgs.

A large, spherical species, dull green and strongly spined. Fl short and stout, whitish to pink. Probably conspecific with *G. nudilobum* & *G. weissianum*, also described by Backeberg from the same general area. [L510/IP/DHS]

DISTRIBUTION: Argentina, Mazar.

OTHER NAMES: *G. nudilobum*; *G. graniticum*.

**Gymnocalycium mesopotamicum**

Stems solitary (seems to clump in cultivation) up to 4 cm

broad, dark, fairly glossy green. Fl 7 cm long by 6.5 cm petals long and thin, white with a pinkish-green midstripe. [P241/CS/PMJ]

DISTRIBUTION: Argentina, Province of Corrientes, Mercedes.

**Gymnocalycium mihanovichii**

(Fröhl & Guerke) B. & R.

Broadly spherical, becoming elongated and up to 6 cm broad; generally a very variable plant in both spination and flower colour, which varies from yellowish white to pink. In view of the broad distribution and innate variability, the many named varieties probably have little botanical significance. [FR1181/GC]

DISTRIBUTION: Paraguayan Chaco.

OTHER NAMES: *v. friedrichii* Werd. = *G. friedrichii* Paynt.

**Gymnocalycium monvillei** (Lem.) B. & R.

Body simple, spherical, up to 22 cm across, of a characteristic glossy shade of light green. Fl up to 8 cm long and broad, white, often flushed with pink. [IP/DHS]

DISTRIBUTION: Paraguay.

OTHER NAMES: *G. brachycentrum*.

**Gymnocalycium moserianum** Schuetz

Depressed spherical, up to 15 cm across and 10 cm high. Fl white with a red centre. [Fechser IP/DHS]

DISTRIBUTION: Argentina, N Cordoba near Serrazuela.

**Gymnocalycium mostii** (Guerke) B. & R.

Simple, bluish-green, up to 13 cm high and across, Fl large, up to 8 cm across, pink. In v. *kurtzianum* (Guerke) Blbgs. the fl is white with a red throat. [B9/IP/DHS]

DISTRIBUTION: Both from Argentina, Cordoba.

OTHER NAMES: v. *kurtzianum*; *G. kurtzianum*.



**Gymnocalycium multiflorum**  
(Hook.) B. & R.

Eventually forming clumps, single heads up to 9 cm high and more, by 12 cm, fresh green; spines very variable in length, Fl up to 4 cm long, pink to almost white. The named varieties fall within the species. [B17/IP/DHS]

DISTRIBUTION: Argentina, Córdoba and San Luis.

OTHER NAMES: *G. exanthematum*.



**Gymnocalycium nidulans** Bkbg.

Solitary later clumping, up to 30 cm high by 18 cm spination very variable. Probably conspecific with *G. mazanense* & *G. weissianum* from the same general area. [CS/PM]

DISTRIBUTION: Argentina, Mazar.



**Gymnocalycium nigriareolatum** Bkbg.

Broadly spherical, simple, up to 15 cm across. Fl shimmering porcelain-white. Despite the name, the areoles are not black in young, cultivated plants. [IP/GC]

DISTRIBUTION: Argentina, Catamarca.



**Gymnocalycium occultum**  
Fric ex Schuetz

Solitary, flattened. Fl 3 cm long by 2–2.5 cm off-white. [B131/IP/DHS]

DISTRIBUTION: Argentina, N Córdoba and S La Rioja.



**Gymnocalycium paedophilum**  
Ritt. ex Schuetz

Plant normally solitary. Fl 5.5 cm broad, creamy yellowish at first, later white. [SII1593/M]

DISTRIBUTION: Paraguay, Cerro Leon.



**Gymnocalycium pflanzii** (Vpl.) Werd.

Body very large, to 50 cm across, matt green. Fl only 5 cm long and broad, white to salmon-pink, vars. *millaresii* & *riograndense* (Card.) Don, show only superficial differences from the species. [L938/IP/DHS]

DISTRIBUTION: N Argentina and S Bolivia.

OTHER NAMES: The above varieties as species, *G. chiquitanum*, *G. conopaeum* n.s., *G. marquezii*.



**Gymnocalycium pflanzii v. lagunillasense** (Card.) Don.

This is the most easily recognizable member of the group (upper illus.) [KK-492/IP/DHS], v. *zegarae* (Card.) Don. (lower illus.) has the strongest spination. [J-946/IP/DHS] (Bolivia, Perez-Mairano road)

DISTRIBUTION: Bolivia, Lagunillas.

OTHER NAMES: *G. lagunillense* v. *zegarae*; *G. zegarae*.



**Gymnocalycium piltziorum** Shuetz

Single, flattened globular, 10 cm high and 16 cm broad. Fl 7 cm long and 6 cm broad, pinkish. [P38/IP/DHS]

DISTRIBUTION: Argentina, La Rioja, Sierra Velasco.



**Gymnocalycium quehlianum** (Haage jr.) Berg.

A very variable species, plants from each of the widely scattered populations often differing in numerous details. Body usually 7 cm broad, greenish grey to reddish. Fl with a slender tube, up to 6 cm long, white with a reddish throat. [CS/P160/DHS]

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: v. *albiflorum*, v. *flaviflorum*, v. *polkaeum* & v. *zumamerianum* fall within the species.



**Gymnocalycium ragonesii** Castellanos

Small, noticeably flattened, greyish-brown. Fl up to 4 cm long, creamy-white with a dull red throat. [CS/FC]

DISTRIBUTION: Argentina, Catamarca.



**Gymnocalycium ritterianum** Rausch

Simple or forming small groups, later developing offsets on the upper part of the body. Fl 6.5 cm long by 7.5 cm, glossy white with a pale violet-pink throat. [Kiesling IP/DHS]

DISTRIBUTION: Argentina, La Rioja, near Famatina.



**Gymnocalycium saglionis** (Cels) B. & R.

Simple, up to 30 cm broad. Fl only 3.5 cm long, white tinged with pink. [IP/DHS]

DISTRIBUTION: Argentina: Salta, Catamarca and Tucuman.

OTHER NAMES: *Brachycalyxum tiliaefolium*.

**Gymnocalycium schatzlianum**

Strigl &amp; W. Till

Body flattened-globular, dark bright green. Fl 7–8 cm broad, funnel-shaped, white with a greenish-white throat. [IP93/CS/GC]

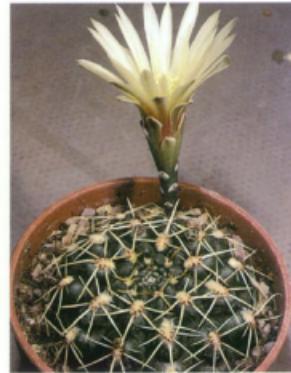
DISTRIBUTION: Argentina, Province of Buenos Aires, Sierra de Tandil.

**Gymnocalycium schickendantzii  
(Web.) B. & R.**

Simple, to 10 cm across, in habitat becoming columnar with age, spination very variable. Fl up to 5 cm long, whitish or pinkish. v. *deflectii* (K. Sch.) Bölg. is a distinctive plant with more rounded tubercles and shorter spines. [L473/CS/PM]

DISTRIBUTION: NW Argentina, Córdoba to Tucuman.

OTHER NAMES: *G. paucicostatum* Kiesling has only 9–11 very angulate ribs and only 3 spines as against 5–7 for the other varieties. [CS/PM]

**Gymnocalycium schroederianum**

van Osten

Body simple, depressed, up to 15 cm broad and 5 cm high, ribs 15–18. Fl up to 7 cm long and 5.5 cm broad, whitish. v. *bayense* Kiesling has smaller stems, mostly up to 7 cm broad and fl only 4–5 cm long. v. *paucicosatum* Kiesling has only 9–11 very angulate ribs and only 3 spines as against 5–7 for the other varieties. [CS/PM]

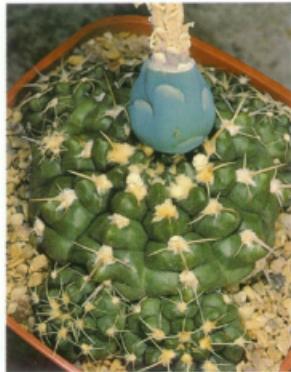
DISTRIBUTION: Uruguay (species only) and Argentina (species and vars.)

**Gymnocalycium schuetzianum**

Till &amp; Schatz

Flattened-globular, 9–11 cm broad, old plants up to 15 cm high and 17 cm broad, offsetting with age. Fl 6–8 cm broad. Related to *G. monvillei*. [FR430/offset from type plant/DHS]

DISTRIBUTION: Argentina, Córdoba, near Cruz del Eje. (Found by Ritter).

**Gymnocalycium sigelianum  
(Schick.) Berg.**

Flattened to over 7 cm broad. Fl pink. Closely related to *G. capillaense*. [IP/DHS]

DISTRIBUTION: Argentina, Córdoba.

**Gymnocalycium spegazzinii** B. & R.

Simple, depressed-globose, up to 20 cm high and 18 cm broad. Spination very variable in length, sometimes clasping the body, sometimes not. Fl up to 7 cm long and 5 cm across, white, sometimes with a pink tinge. [L530/IP/DHS]

DISTRIBUTION: Argentina: Salta; Catamarca and Tucuman.

**Gymnocalycium stellatum** (Speg.) Speg.

One of the most variable species in the genus. Body flattened to 10 cm broad, greyish, brownish or blackish-green, spines brown or black, variable in number and length. Fl 6 cm long, white, r. pauciflora fits within the species. [I-479/IP/DHS]

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *G. asterium* and its vars. *G. whistereai* and 4 vars., *G. bodebenderianum*, *G. kozelkijanum*, *G. rosenei*, *G. tricuspidatum*.

**Gymnocalycium strigianum** Jeggelle

Body simple, bluish-grey to brown, up to 3 cm high and 8 cm across. Fl 4 cm broad, 5 cm long, creamy-white, suffused with pink. [WRS48/IP/DHS]

DISTRIBUTION: Argentina, Mendoza.

**Gymnocalycium sutterianum** (Schick) Berg.

Solitary, flattened-spherical. Fl large, whitish-pink. [I-93/IP/DHS]

DISTRIBUTION: Argentina, Cordoba.

**'Gymnocalycium taningaense'**

Characteristically dark hoffed. [P212/IP/DHS]

DISTRIBUTION: Argentina, F. Cordoba.

**Gymnocalycium tillianum** Rausch

Simple, up to 10 cm high and 15 cm across, greyish-green. Fl 3 cm long, 2.5 cm broad, red. [CS/PM]

DISTRIBUTION: Argentina, Sierra Ambato.

**Gymnocalycium tudae** Ito

Flattened-spherical, up to 6 cm high and 17 cm across, greyish-green, esp to 7, esp absent. Fl 4 cm long and broad, white. [CS/DHS]

DISTRIBUTION: Paraguay to Brazil.

OTHER NAMES: *G. frigidae*, *G. karwinskyana*, *G. marsneri*, *G. matucana*, *G. megalae*, *G. oxyacanthoides*, *G. sandwicense*, *G. seminudum*, *G. tortuga*.

**'Gymnocalycium tudeae v. izozogii'**

Smaller than the species, with more rcp and one central spine. [CS/GC]

DISTRIBUTION: Bolivia, Santa Cruz, Izozog basin.

OTHER NAMES: *G. izozogii*, *G. flanzii* v. *izozogii*.

**'Gymnocalycium tudeae v. pseudomalacocarpus'** (Bkhg.) Don.

Flattened-globular, 7 cm broad and 3 cm high, offsetting, usually reddish-green, spines 3–5. [CS/GC]

DISTRIBUTION: Bolivia, salt dunes near San Jose.

OTHER NAMES: *G. pseudomalacocarpus*.

**'Gymnocalycium uebelmannianum'**

Rausch

Simple, flattened-globular, 1 cm high and up to 7 cm across, with a huge taproot, green with a waxy bloom. Fl 3.5 cm long and broad, white with a pink throat. [WR141/IP/DHS]

DISTRIBUTION: Argentina, Sierra de Velasco.

**Gymnocalycium uruguayanense**

(Areh.) B. & R.

Clumping to form many headed mounds in cultivation of dark green, flattened-globular heads. Fl 4 cm long, yellow, white or pink. [WR350/IP/DHS]

DISTRIBUTION: Uruguay.

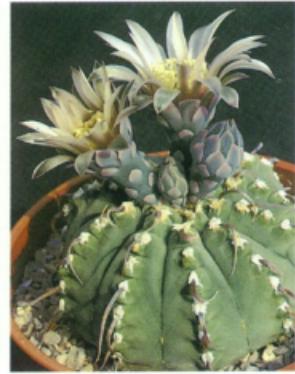
OTHER NAMES: *G. artigas*, *G. gaertnerianum*, *G. melancarpum*.

**Gymnocalycium valnicekianum** Jajo

Broadly spherical, becoming elongated up to 30 cm high by 18 cm, bright grassy-green. Fl 5 cm broad, white with a reddish throat. [BH65/IP/GC]

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *G. imbricatum*.

**Gymnocalycium vatteri** Buin.

Flattened, 4 cm high, 9 cm broad, matt olive-green, spines mostly only 1–3. Fl 5 cm long and 4 cm broad, white with a reddish throat. [CS/GC]

DISTRIBUTION: Argentina, Cordoba, Sierra Grande, near Noro.

**Gymnocalycium weissianum** Bkhg.

Broadly globular, up to 9 cm high and 14 cm across, matt greyish-green. Fl more or less bell-shaped, brownish or whitish-pink with a darker throat. Probably conspecific with *G. mazanense* and *G. midulans*. [I485/IP/GC]

DISTRIBUTION: Argentina, Mendoza.

**Leuchtenbergia principis** Hook.

Simple or offsetting with age, up to 70 cm high. Fl up to 8 cm long, yellow to pink. [CS/PM]

DISTRIBUTION: C to N Mexico.

**Lobivia acanthoplegma** (Bkhg.) Bkhg.

Holotype Das Kakteen Lexikon 1963 p195 III 190. Single, flattened-globular, up to 15 cm across, esp. 0. Fl 5 cm across, red, often with a purple sheen. [CS/PM]

DISTRIBUTION: Bolivia, near Ansaldi on the road to the Rio Cañe.

OTHER NAMES: *Pseudolobivia acanthoplegma*, *Lobivia tarantula*, *L. cinnabarinus* subsp. *acanthoplegma*, *Cinnabarinus acanthoplegma*.

**Lobivia acanthoplegma** v. *oligotricha* (Card.) Rausch

Single, globular to somewhat elongated, up to 10 cm across, spination variable in density according to the population from which the plants are derived. Fl 3–3.5 cm broad, red, sometimes with a paler throat. [WBS108–3/EP/DHS]

DISTRIBUTION: Bolivia around Tiraque.

OTHER NAMES: *Lobivia oligotricha*, *L. novocinnabarinus*, *L. pseudocinnabarinus*, *Cinnabarinus pseudocinnabarinus*, *L. cinnabarinus* subsp. *acanthoplegma*, v. *oligotricha* & v. *novocinnabarinus*.

**Lobivia acanthoplegma** v. *patula* Rausch

Single, flattened-globular, bright grassy-green, up to 15 cm across. Fl 3–5 cm across, blood-red to orange, without purple tints. [PM190/H]

DISTRIBUTION: Bolivia, Cilia, in an unusual habitat for a lobivia on flat alluvial land where farming and building have rendered this beautiful variety virtually extinct.

**Lobivia acanthoplegma** v. *roseiflora* Rausch

Noticeably more flattened than the previous three, spination white. Fl smaller to 3 cm, always pink, sometimes with a white throat. [CS/PM]

DISTRIBUTION: Bolivia, Angostura.

OTHER NAMES: *Lobivia cinnabarinus* subsp. *acanthoplegma* v. *roseiflora*.



*Lobivia arachnacantha* Buin. & Ritt.

Offsetting, heads to 4 cm broad. Fl to 4 cm long.  
v. *norecillasensis* (Card.) Bkbg. (from Comarapa,  
Bolivia) spination denser, flowers red. v. *sulphurea* Vasqu.  
(from Pauroapa, Bolivia) brighter green, lemon-yellow  
flower. [KK499/IP/GC]

DISTRIBUTION: Bolivia, Samapata.

OTHER NAMES: *Echinopsis arachnacantha*, *E. aculeophora*  
*subsp. arachnacantha*.



*Lobivia arachnacantha* v. *densisetia*

Rausch

Distinguished by its dense covering of brownish-red spines  
up to 20 mm long and its red flowers 7.5 cm long. [CS/GC]

DISTRIBUTION: Bolivia, Valle Grande.

OTHER NAMES: *Echinopsis arachnacantha* v. *vallagrandensis*,  
*E. aculeophora* subsp. *arachnacantha* v. *densitia* & v.  
*vallagrandensis*.



*Lobivia aurea* (B. & R.) Bkbg.

Single-headed, body spherical to elongated up to 10 cm  
high, with 14–15 acute ribs. Rsp whitish, usually 10 around  
1 cm long, csp darker, usually 1 sometimes up to 4, thicker,  
up to 3 cm long. Fl 9 cm long, 8 cm broad, lemon-yellow.  
[P185/IP/DHS]

DISTRIBUTION: Argentina, Cordoba.

OTHER NAMES: *Echinopsis aurea*, *Lobivia cylindrica*,

*Pseudolobivia aurea*, *P. latiflora*, *Hymenrochia aurea*.

For varieties of *L. aurea* other than those below see

Appendix 3.



*Lobivia aurea* v. *fallax* (Oehme) Rausch

Single or forming small groups, up to 40 cm high by 8 cm,  
strongly spined. [P137/CS/PM]

DISTRIBUTION: Argentina, Sierra de Malanzan.

OTHER NAMES: *Lobivia fallax*, *Pseudolobivia aurea* v. *fallax*,  
*Hymenrochia aurea* v. *fallax*.



*Lobivia aurea* v. *quinesensis*

(Rausch) Rausch

Single, short-cylindrical, up to 12 cm high by 6 cm,  
densely spined, csp up to 6 cm long. Fl pale yellow.  
[WR112/IP/DHS]

DISTRIBUTION: Argentina, San Luis, between Quines and  
San Martin.

OTHER NAMES: *Echinopsis aurea* v. *quinesensis*.



*Lobivia aurea* v. *shaferi* (B. & R.) Rausch

Stem to 25 cm high by 4 cm; csp 5 cm long v. leucomalla  
(Wessn.) Rausch from San Luis; solitary, to 12 cm high by  
6 cm, densely covered with whitish bristly spines. [IP/GC]

DISTRIBUTION: Argentina, Andalgalá.

OTHER NAMES: *Lobivia cylindrica*, *L. shaferi*  
v. *leucomalla*; *L. leucomalla*, *L. demissina* v. *leucomalla*'.

*L. famatinensis* v. *leucomalla*.

**Lobivia backebergii** (Werd.) Bkg.

Solitary or offsetting, flattened-globular in habitat, much more cylindrical in cultivation, when the stem is also much brighter green. Fl red to carmine with a white throat. [PM141/H1]

DISTRIBUTION: Bolivia, highlands around La Paz.

**Lobivia bruchii** B. & R.

Large, globular, to 20 cm or more across. Fl. 5 cm across, deep red. [RM]

DISTRIBUTION: N Argentina, Tafi del Valle.

OTHER NAMES: *Schotzia bruchii*, *L. formosa* v. *bruchii*, *Trichocereus bruchii*.

**Lobivia caineana** Card.

Solitary, up to 20 cm high and 9 cm thick. Fl 7 cm long. [JP/DHS]

DISTRIBUTION: Bolivia, Rio Caine, e.g. at Capinota.

**Lobivia chrysantha** (Werd.) Bkg.

Single, up to 7 cm across, with a tap-root. Fl 5.5 cm long, yellow with a red throat. v. *hypocyrrta* Rausch has a yellow fl striped red. [CS/PM]

DISTRIBUTION: Argentina, Salta, around Puerto Tastil.

OTHER NAMES: *Lobivia junciniana*, *L. staffordii*, *L. khouareki*, *L. dragei*, *L. polysticta*.

**Lobivia chrysochete** Werd.

Body flattened-globular, to 20 cm across, spines 30, to 10 cm. Fl 4 cm wide, orange-red to red. [IP/M] v. *markusii* (Rausch) Rausch (lower illus.), spines 50, to 5 cm, much thinner, golden yellow (Volcan). [CS/PM] v. *teniuspina* (Ritt.) Rausch; spines to 20, to 9 cm brown to black. Fl yellow to orange (Bolivia, San Antonio to Iscayache).

DISTRIBUTION: Argentina, Santa Victoria.

OTHER NAMES: v. *markusii*: *L. mariesii*, v. *teniuspina*: *L. teniuspina*.

**Lobivia cinnabarina** (Hook.) B. & R.

Mainly solitary, flattened-globular, up to 15 cm across. Fl 6–8 cm across. [KK228/CS/PM]

DISTRIBUTION: Bolivia, widespread around Sucre, variable hence the following synonyms.

OTHER NAMES: *Lobivia duratina*, *Cinnabariina cinnabarina*, *L. cinnabarina* v. *walpersii*, *C. walpersii* v. *sanguiniflora*, *L. zadenensis*, *L. ann. v. zadenensis*, *L. pumila*, *L. ann. v. grandiflora*.

**Lobivia cinnabarina v. draxleriana**

(Bausch) Rausch

Solitary, up to 15 cm across. Fl 7 cm across. [CS/PM]

DISTRIBUTION: Bolivia, Aiquile.

OTHER NAMES: *L. draxleriana*.**Lobivia famatimensis** (Speg.) B. & R.Solitary, up to 3.5 cm across with a fleshy tap-root. Fl 3–5 cm across. v. *santjuanensis* Rausch; up to 20 cm high and 5 cm across. Fl up to 9 cm across (from San Juan). v. *jachalensis* Rausch; areoles more woolly, fl smaller (near Jachal). [WR127/IP/DHS]

DISTRIBUTION: Argentina, La Rioja, in the Famatina Mountains.

OTHER NAMES: *Reinhardia pseudoreicheana*.**Lobivia ferox** B. & R.

Solitary, 30–70 cm high by 30 cm, esp up to 18 cm long. Fl 9–11 cm long, 6–8 cm broad, white to whitish-pink. [CS/PM]

DISTRIBUTION: Very widespread, from Oruro in N Bolivia to Pumamarca in Argentina.

OTHER NAMES: *Lobivia ferox* v. *camargensis*, *L. ferox* v. *potosina*, *L. dacti pauli*, *L. potosina*, *Echinopsis ferox*, *E. leucostoma*, *E. potosina*, *E. cerdina*, *Pseudolobivia ferox*, *P. leucostoma* & *P. potosina*.**Lobivia ferox v. longispina**

(B. &amp; R.) Rausch

Always smaller, sometimes even flattened. Fl white, yellow, pink or red, often scarcely opening because of wild spination. [PM184/1H]

DISTRIBUTION: N Argentina to S Bolivia.

OTHER NAMES: *Lobivia longispina*, *L. australiaca*, *L. cleopatrae*, *L. dacti pauli* v. *rufibifera*, *L. barifera*, *L. horrida*, *L. pictiflora*, *L. variispina*, *Pseudolobivia longispina*, *P. williamsii*.**Lobivia grandiflora** B. & R.

Short-cylindric, individual stems to 20 cm high by 10 cm, clumping. Fl 8–10 cm long. [CS/PM]

DISTRIBUTION: Argentina, Catamarca, between Andalgala and Concepcion.

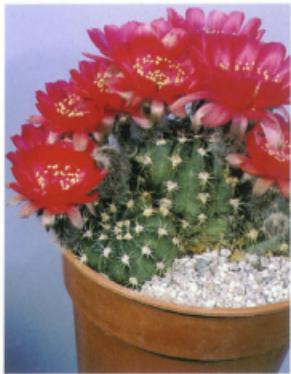
OTHER NAMES: *Echinopsis maderae*, *Trichocereus maderae*, *Holanthocereus grandiflorus*, *Hymenolobivia purpureoimbricata*, *Lobivia grand.* v. *lobivida*.**Lobivia grandiflora v. crassicaulis**

(Blkbg.) Rausch

Stems 15 cm high and 11.5 cm across, offsetting. Fl 6–8 cm long. [CS/PM]

DISTRIBUTION: Argentina, Catamarca, La Estancia.

OTHER NAMES: *Holanthocereus crassicaulis*, *Lobivia andalgalaensis* B. & R. nov sp., *L. crassicaulis*, *Trichocereus catamaranensis*.



*Lobivia haematantha* (Speg.) B. & R.  
Solitary, 5–10 cm high by 6–7 cm. Fl 5–7 cm long and broad, red with a white throat. [WR157/CS/PM]

DISTRIBUTION: Argentina, Salta, W of Cachi to Angostura. *v. chorillensis* (Rausch) Rausch (illus.); body 4 cm across, solitary or sometimes with one or two offsets. Fl orange-red to red, 4–5 cm across.

DISTRIBUTION: Argentina, Quebrada del Toro.  
OTHER NAMES: *v. choril.* *Lobivia chorillensis*.



*Lobivia haematantha* v. *amblyanthes* (Rausch)

Normally solitary 2 cm high by 3 cm (often clumping in cultivation and becoming much more lax and elongated). Fl 6–10 cm across, yellow to orange. [L.569/CS/PM]

DISTRIBUTION: Argentina, Amblyaya.

OTHER NAMES: *Lobivia amblyanthes* & v. *ubiquina*, *L. haem.* subsp. *kuehnrichii* v. *Am.*



*Lobivia haematantha* v. *densispina* (Werd.) Rausch

Solitary, 8 cm high and 7 cm across. Fl 6–8 cm broad. [CS/PM]

DISTRIBUTION: Argentina, Jujuy, near Tumbaya.

OTHER NAMES: *Lobivia densispina*, *L. fatamontensis* 'hort.'



*Lobivia haematantha* v. *elongata* (Blkbg.) Rausch

Solitary, to 20 cm high by 6 cm. Fl 5–6 cm across. [WR25/CS/PM]

DISTRIBUTION: Argentina, S of Cachi.

OTHER NAMES: *L. elongata*.



*Lobivia haematantha* v. *hualfinensis* (Rausch) Rausch

Solitary, 7 cm across with csp up to 8 cm long. Fl 5.5 cm across, orange-red to red with a white throat. [WR146/IP/PM]

DISTRIBUTION: Argentina, Catamarca, near Huailin.

OTHER NAMES: *Lobivia hualfinensis* & v. *februeri*.



*Lobivia haematantha* v. *kuehnrichii* (Fric) Rausch

Solitary (clumping in cultivation) 4–6 cm high. Fl yellow, orange or red, 5 cm across. [WR238/CS/PM]

DISTRIBUTION: Argentina, Salta, from La Poma to Piedra de Molino.

OTHER NAMES: *Lobivia kuehnrichii*, *L. diceriana* & *var.*, *L. nigripina*, *L. peruviana*.



**Lobivia haematantha v. rebutoioides**  
(Bkbg.) Rausch

In habitat solitary but clumping in cultivation; heads 3–5 cm across. Fl 6–10 cm broad, white, yellow, orange, red, pink to violet. [OP91–80/TP/DHS]

DISTRIBUTION: Argentina, Jujuy, Quebrada de Humahuaca.

OTHER NAMES: *Lobivia rebutoioides* & var., *L. subluniflora*, *L. patagonica*, *L. chilongonca*, *L. weseneriana*, *L. fumatimensis*, *L. napina*.



**Lobivia hertrichiana** Bkbg.

Forming many-headed clumps, individual heads up to 8 cm across; spination very variable, from sparse and short to dense and long (to 6 cm in *L. ehrhartiae*). Fl bright red to carmine often with a white throat. [PM68/HIS/PM]

DISTRIBUTION: Peru, Uritimbaba Valley.

OTHER NAMES: *Lobivia alleoprasina*, *L. buckbergii* subsp. *hort.* & t. *laui*, *L. bigibberiana*, *L. incisa*, *L. hirsutissima*, *L. minata*, *L. planiceps*, *L. argentea*, *L. ciliata*, *L. laui*, *L. hertrichiana*, *Neslobivia divaricata*, *N. prodigera*.



**Lobivia hertrichiana v. simplex**  
(Rausch) Rausch

Solitary, 20 cm high by 10 cm; csp can be up to 8 cm long. Fl 5 cm across, red with a white throat. [WR423/CS/PM]

DISTRIBUTION: Peru, Huamantillo.

OTHER NAMES: *Lobivia simplex*, *L. buckbergii* subsp. *hort.* *v. simplex*.



**Lobivia jajoiana** Bkbg.

Solitary, globular, up to 6 cm across; csp up to 3 cm long, somewhat hooked. Fl up to 6.5 cm broad, tomato red with a glossy black/violet hymen, scented. [CS/PM]

DISTRIBUTION: Argentina, Volcan.

OTHER NAMES: *L. huasingana*, *Hymenolobivia huasingana*.



**Lobivia jajoiana v. nigristoma**  
(Buijn.) Bkbg.

Solitary, somewhat elongated up to 7 cm across; csp up to 6 cm long, brown to black. Fl to 8 cm across, yellow, orange or red with a black/violet hymen. [FR401/CS/PM]

DISTRIBUTION: Argentina, Quebrada de Humahuaca.

OTHER NAMES: *Lobivia nigristoma*, *L. vatteri*, *L. chrysanthra* subsp. *japonica* t. *vatteri*.



**Lobivia jajoiana v. paucicostata**  
(Rausch) Rausch

Single (usually sparingly offsetting in cultivation), of a characteristic shade of matt greyish-green. Fl 5 cm across, red with a black hymen. [CS/PM]

DISTRIBUTION: Argentina, S of Purmamarca.

OTHER NAMES: *Lobivia glauca* & t. *parvovirgata*, *Hymenolobivia miniatingua*, *L. chrysanthra* subsp. *japonica* t. *paucicostata*.

**Lobivia kieslingii** Rausch

Solitary, globular up to 25 cm across. Fl 9 cm across, orange-red to carmine. [CS/PM]

DISTRIBUTION: Argentina, Tucumán, in the Sierra de Quilmes.

OTHER NAMES: *Lobivia formosa* v. *kieslingii*.

**Lobivia larae** Card.

Solitary, up to 10 cm or more high and across; spines up to 5 cm long (central to 6 cm at times). Fl 6 cm long. [IP/DHS]

DISTRIBUTION: Bolivia, Tarata-Rio Caine.

OTHER NAMES: *Lobivia pentlandii* v. *larae*, *L. buckbergii* v. *larae*.

**Lobivia lateritia** (Guerke) B. & R.

Solitary, to 50 cm high by 10 cm, spines pale. Fl 5 cm long, amazingly variable in colour even within a single population: white, pink, yellow, orange, red and crimson and every possible intermediate or even combinations, e.g. yellow with a pink centre. [PM173/FH]

DISTRIBUTION: Bolivia, widespread across the mts from El Pueyo to Impora and Cotagaité.

OTHER NAMES: *Lobivia cintensis*, *L. scopulina*, *L. camataquensis*, *Hymenocereus cintensis*, *L. imperata* n.n.

**Lobivia lateritia** v. *kupperiana* (Bkbg.) Rausch

Solitary, up to 10 cm high by 8 cm, spines dark, up to 4 cm long. Fl 5 cm across, ochre-yellow, v. *ruberiflora* (Bkbg.) Rausch has dark spines to 5 cm long and a brilliant red flower (Bolivia, Mal Paso). [CS/PM]

DISTRIBUTION: Bolivia, Tupiza.

OTHER NAMES: *Lobivia esperanzae*, v. *ruberiflora*; *L. kupperiana* v. *ruberiflora*, *Hymenocereus torquatensis*, *L. torquata*, *L. horrida* v. *sanguiniflora*.

**Lobivia marsoneri** (Werd.) Bkbg.

Solitary, up to 8 cm across with a short taproot; esp up to 7 cm long. Fl up to 6 cm broad, yellow to red with a red throat, scented. In v. *iridescentis* (Bkbg.) Rausch spines are only to 10 mm long. Fl 4.5 cm broad (Tres Cruces, Azul Pampa etc.). [L.470/CS/PM]

DISTRIBUTION: Argentina, Jujuy, Quebrada de Humahuaca.

OTHER NAMES: *Lobivia rubescens*, *L. kaugana* var., *L. chrysanthra* subsp. *mar.* & v. *rubescens*, v. *iridescentis*; *L. iridescentis*, *L. utriculiformis*, *L. meebiae*.

**Lobivia maximiliana** (Heyder) Bkbg.

Mound-forming with individual heads up to 10 cm across. Fl 5 cm long and 4 cm across, orange, v. *violacea* (Rausch) Rausch from Altamachai has a beautiful violet fl and longer spines. [L.252/CS/PM]

DISTRIBUTION: Bolivia, around Lake Titicaca.

OTHER NAMES: *Lobivia orbula*, *L. pentlandii* v. *maximiliana*, *L. capiquensis*, *L. pseudoechinocactus*, v. *violacea*; *L. acapitosa* v. *violacea*.



**Lobivia maximiliana v. caespitosa**  
(Purp.) Rausch

Clumping, heads up to 20 cm high by 6 cm; esp to 7 cm long. Fl 7–9 cm long, 5–6 cm across, orange. v. *miniatiiflora* (Ritt.) Rausch; stem to 6 cm high by 4 cm; esp to 5 cm. Fl 6 cm long, 4 cm wide, crimson (Inquisivi-Quime). [IWR57/1P/DHS]

DISTRIBUTION: Bolivia, from Cacapata and Challa to Copachuncho.

OTHER NAMES: *Lobivia caespitosa*, *L.* *longiflora*,  
v. *miniatiiflora*; *L.* *miniatiiflora*.

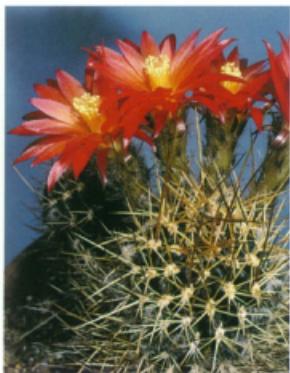


**Lobivia maximiliana v. charazanensis**  
(Card.) Rausch

Clumping, heads in cultivation becoming rather long and cylindric; spination yellowish. Fl yellow. v. *hermanniana* (Bübg.) Rausch, from N of La Paz, forms large clumps with much longer spines and a 7 cm long and 6 cm broad orange-coloured fl. [CS/PM]

DISTRIBUTION: Bolivia, Charazani.

OTHER NAMES: *Lobivia charazanensis*, *L.* *mac.* subsp. *caespitosa* v. *charaz.*, v. *hermanniana*; *L.* *hermanniana*, *L.* *caespitosa* v. *ritonensis*, *L.* *mac.* subsp. *caesp.* v. *herm.*



**Lobivia maximiliana v. corbula**  
(Herrera) Rausch

Sparingly offsetting, heads up to 8 cm across, spines brown, esp 0. Fl 5–6 cm long and 4 cm across, golden yellow, red or violet. v. *sicuaniensis* (Rausch) Rausch from Sicuani, is mainly differentiated by its 3–4 cm long fl. [I.154/CS/PM]

DISTRIBUTION: Bolivia, around Cuzco.

OTHER NAMES: *Lobivia laurana*, v. *sicuaniensis*; *L.* *sicuaniensis*.



**Lobivia maximiliana v. westii**  
(Hutch.) Rausch

Sparingly offsetting, heads up to 20 cm high by 7 cm, esp may attain 10 cm. Fl 7–9 cm long, 4–6 cm across, orange. v. *intermedia* (Rausch) Rausch (illus.), from Chalbaanca, is mainly distinguished by its red fl, 7.5 cm long by 4 cm broad. [CS/PM]

DISTRIBUTION: Bolivia, Andahuaylas.

OTHER NAMES: *Lobivia westii*, *L.* *cruciataeispina*,  
v. *intermedia*; *L.* *intermedia*, *L.* *mac.* subsp. *westii*,  
v. *intermedia*.



**Lobivia oxyalabastra** Card. & Rausch

Offsetting with heads up to 6 cm across. Fl 5 cm long. [WR200/CS/PM]

DISTRIBUTION: Bolivia, Tapacari.

OTHER NAMES: *L. buckbergii* v. *oxyalabastra*.



**Lobivia pampana** B. & R.

Single or very sparingly clumping, globular, 10 cm across; spines up to 7 cm long but usually shorter. Fl 7 cm across. [CS/PM]

DISTRIBUTION: Bolivia, Pampa de Arriens, Volcan Misti, Moquegua etc.

OTHER NAMES: *Lobivia mistensis* & var., *L.* *arequipensis*,  
*L.* *glaucostigma*.

**Lobivia pentlandii** (Hook.) B. & R.

Extremely variable, clumping, heads to 12 cm across; spines short or up to 10 cm. Fl 5 cm across, yellow, orange, pink, violet or red, all with a white throat. [PM143/H]

DISTRIBUTION: Bolivia, S of Titicaca to Potosí.

OTHER NAMES: *Lobivia aculeata*, *L. argentea*, *L. aurantiaca*, *L. boliviensis*, *L. buxineno-resae*, *L. carminantha*, *L. capensis*, *L. hirsutissima*, *L. Higginsiana*, *L. johnsoniana*, *L. leucotricha*, *L. leucotricha*, *L. manicata*, *L. nephridacantha*, *L. schiediana*, *L. titicaeum*, *L. varianum* & *L. nephiana*.

**Lobivia pugionacantha**

(Rose & Boed.) Bkbg.

Single, up to 7 cm across; spines dagger-like with broad bases, radials 5–7 to 2 cm long and lying horizontal on body. Fl 5 cm broad, yellow to yellowish-orange. v. *cornuta* (Rausch) Rausch from S of Tarija has broader, flatter ribs and a more upright spination. [CS/PM]

DISTRIBUTION: Bolivia/Argentina border region, e.g. Villazón and La Quiaca.

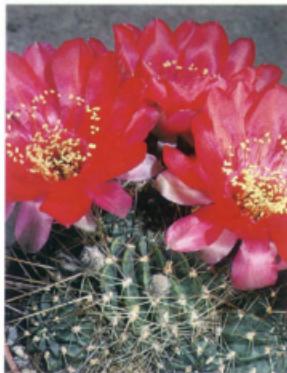
OTHER NAMES: *Lobivia pugionacantha* v. *flaviflora*, v. *cornuta*: *L. adpressispina*, *L. cornuta*.

**Lobivia pugionacantha v. culpinensis**  
(Ritt.) Rausch

Single, buds 5–15 cm across; esp 2–6 cm long. Fl 6 cm across, yellow, orange or red. [PM180/H]

DISTRIBUTION: Bolivia, around Culpina.

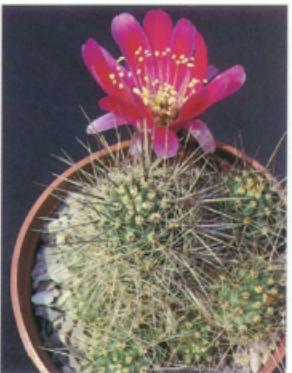
OTHER NAMES: *Lobivia culpinensis*, *L. campioides*, *L. pag.* v. *haemorrhidea*.

**Lobivia pugionacantha v. salitreensis**  
(Rausch) Rausch

Sparingly clumping, heads 4–6 cm across. [WR636/CS/PM]

DISTRIBUTION: Bolivia, Salitre and Yequina.

OTHER NAMES: *Lobivia salitreensis* & v. *flexuosa*.

**Lobivia rauschii** Zecher

Offsetting to form many-headed mounds, body up to 15 cm high by 5 cm. Fl 4 cm across, red. [WR635/IP/GC]

DISTRIBUTION: Bolivia, Yuquina near Culpina.

**Lobivia rosarioana** Rausch

Solitary, globular up to 10 cm across. Fl 6.5 cm long by 5 cm. [WR129/DHS]

DISTRIBUTION: Argentina, Sierra Famatina.

OTHER NAMES: *Lobivia formosa* v. *rosarioana*, *L. grandis* v. *rosarioana*.



**Lobivia rossii** Boed.

Single (but sparingly offsetting in cultivation), up to 7 cm across; spines up to 6 cm long, awl-shaped, brownish-yellow. Fl 5–6 cm across, shades of yellow or yellow-orange. [CS/PM]

DISTRIBUTION: Bolivia, Potosí, near Huan Huari.

OTHER NAMES: *Cirrhularia bunderiana*, *L. pagosanthus* E. Mey.



**Lobivia saltensis** (Speg.) B. & R.

Single, to 5 cm across; spines thin. Fl to 5 cm across. v. *pseudocachensis* (Blbkg.) Rausch; bodies small, clumping, more densely spined than the species, fl similar (Argentina, Fascepe). [WR177/DHS]

DISTRIBUTION: Argentina, between Salta and Tucuman.

OTHER NAMES: v. *pseudocachensis*; *L. pseudocach.* var., *L. eremae*.



**Lobivia sanguiniflora** Blbkg.

Solitary, flattened up to 8 cm across, esp sometimes hooked. Fl 5 cm broad, red with a white throat. [CS/PM]

DISTRIBUTION: Argentina, around Santa Victoria.

OTHER NAMES: *Lobivia sanguiniflora* v. *pseudotetraploidea*,  
v. *breviflora* & v. *davuriana*, *L. breviflora*, *L. davuriana*& *L. polycyphala*.



**Lobivia schieliana** Blbkg.

Multicellular, heads to 5 cm across, dark green; spines to 3 cm long, bent towards the body. Fl 5 cm across, red or yellow, v. *quiabayensis* (Rausch) Rausch; heads 6 cm across, grass-green, spines way to 5 cm, fl orange/red, red to carmine. [J1004/IP/DHS]

DISTRIBUTION: Bolivia, valley of the Rio Consato.

OTHER NAMES: *Lobivia bunderiana* subsp. *schieliana*,  
v. *quiabayensis*; *L. quiabayensis* & *L. maximiliana* subsp.  
*quiabayensis*.



**Lobivia schieliana** v. *leptacantha* (Rausch)

Cylindrical, 15 cm high by 7 cm, sparingly offsetting; spines 3–7 cm long, thin, elastic. Fl 5.5 cm across, yellow, red to violet. [WR422/IP/DHS]

DISTRIBUTION: Peru, at Paucartambo.

OTHER NAMES: *Lobivia leptacantha*, *L. maximiliana* subsp.  
*quiabayensis* v. *lept.*



**Lobivia schreiteri** Castell

Body 2–4 cm across, clumping, 15 cm across, orange to dark red with a black throat. [CS/PM]

DISTRIBUTION: Argentina, Tucuman, Tafi del Valle.

OTHER NAMES: *Lobivia saltensis* v. *schreiteri*.

**Lobivia schreiteri v. stilowiana**

(Bkhg.) Rausch

Heads up to 7 cm across, sparingly offsetting. Fl 4 cm broad, orange or carmine without the black throat. v. *riolarensis* Rausch is solitary, up to 12 cm across with an orange fl (Argentina, Catamarca, Rio Lara). [CS/PM]

DISTRIBUTION: Argentina, Tucuman, Abra de Infernillo.

OTHER NAMES: *Lobivia stilowiana*, *L. saltemii* v. *stilowiana*.**Lobivia silvestrii** (Speg.) Rowley

Forming dense masses of finger-like stems. Fl 4 cm across, orange-red to red. [IP/DHS]

DISTRIBUTION: Argentina, between Tucuman and Salta.

OTHER NAMES: *Chamaeleocactus silvestrii*.**Lobivia tegeleriana** Bkhg.

Usually solitary, up to 10 cm across. Fl 4 cm long and 1.5 cm across, yellow, orange or red. v. *ineptiensis* (Rausch & Illeg.) Rausch is bigger. Fl 2 cm broad, red. v. *akersii* (Rausch) Rausch is up to 70 cm across. Fl 2 cm across, orange. [CS/DHS]

DISTRIBUTION: C. Peru.

OTHER NAMES: *Anastelobivia tegeleriana*, *Lob. apiculifera*, v. *ineptiensis*; *L. inaeq.* Auctn. *inac.* v. *akersii*, *L. akersii*, *L. egenia*, *L. charuentii*.

**Lobivia tiegeliana** Wessn.

Single, up to 7 cm across, flattened-globular. Fl 5.5 cm across, purple to violet-red. v. *ruberina* Rausch, the plant illustrated, differs mainly by its pure red fl and slightly less dense spination. [CS/PM]

DISTRIBUTION: Bolivia, near Tarija.

OTHER NAMES: *Lobivia peckiana*.**Lobivia tiegeliana v. cinnabarinata** (Fric) Rowley

Body normally single (clumping in cultivation), up to 7 cm across. Fl 3.5 cm across, red with violet tints. [WRS13/CS/PM]

DISTRIBUTION: Argentina, Salta, Rodeo to Nazareno.

OTHER NAMES: *Lobivia gracilis* v. *cinnabarinata*, *L. fricii* & *L. tieg.* v. *fricii*.**Lobivia tiegeliana v. pusilla** (Ritt.) Rausch

Heads up to 4 cm across forming multi-headed clumps. Fl 4 cm across, v. *flaviflora* (Ritt.) Rausch differs mainly by its lemon-yellow fl. [CS/PM]

DISTRIBUTION: Bolivia, S of Tarija.

OTHER NAMES: *Lobivia pusilla*, *Melodilechia hispidissima*, *L. nigra* v. *unidentata*, v. *flaviflora*; *L. pusilla* f. *flaviflora*.

**Lobivia versicolor Rausch**

Solitary, globular to short-cylindric, 5–7 cm across, csp 6 cm long. Fl yellow, 3–4 cm across. [PM168/H]

DISTRIBUTION: Bolivia, Cuchío Ingénio.

OTHER NAMES: *Lobivia pugnacanthia* v. *versicolor*.

**Lobivia wrightiana Bkhbg.**

Single (often forming large clumps in cultivation), csp 1, to 7 cm long, twisted. Fl 5 cm across. [CS/PM]

DISTRIBUTION: Peru, around Huancavelica.

OTHER NAMES: *Lobivia chilensis* & *L. buckbergii* subsp. *wrightiana*.

**Lobivia wrightiana v. winteriana (Ritt.) Rausch**

Solitary, 7 cm thick, becoming quite elongated in cultivation. Fl 8 cm across, brilliant pink and orange-pink. [CS/DHS]

DISTRIBUTION: Peru, Villa Arul.

OTHER NAMES: *Lobivia winteriana* & *L. buckbergii* subsp. *wrightiana* v. *winteriana*.

**Lobivia zeecheri Rausch**

Solitary or sparingly offsetting, becoming somewhat cylindrical, 6–7 cm thick, csp 0–1, to 8 cm long. Fl 4 cm broad. [KK1546/IP/M]

DISTRIBUTION: Peru, between Ayacucho and Huanta.

OTHER NAMES: *Lobivia zeecheri* v. *flaviflora*, *L. buckbergii* subsp. *zeecheri*.

**Lophophora diffusa (Croiz.) Bravo**

[CS/PM]

DISTRIBUTION: Mexico, Querétaro.

OTHER NAMES: *L. echinata* v. *diffusa*.

**Lophophora williamsii (Lem. ex S-D) Coulter**

Fl can be deep violet-pink in 'f. jordanniana'. [CS/PM]

DISTRIBUTION: Texas to C. Mexico.

OTHER NAMES: *Lophophora frickii*, *L. williamsii* v. *deiciens*.

**Mammillaria alamensis** Craig

Although included here as a separate species its closeness to *M. sheldonii* is very obvious. [Repp. 569a/CS/W]

DISTRIBUTION: Mexico, Sonora, Alamos.

**Mammillaria albata** Repp.

Forms beautiful white clumps of heads 4–8 cm high and 5–8 cm across. *v. longispina* Repp. (ills.) is always single-headed, 10 cm or more high (Buenavista, SLP). *v. sanctirostris* Repp. forms small clumps, esp brown or black (San Cirio, SLP). [K260/1P/K]

DISTRIBUTION: Mexico, San Luis Potosí, Arroyo Carrascal.

**Mammillaria albicans** (B. & R.) Berg.

Plant clumping, stems 20 cm long and 6 cm broad. [K305/1P/K]

DISTRIBUTION: Mexico, islands of Santa Cruz and San Diego, Baja California.

OTHER NAMES: *Mammillaria devoni*.

**Mammillaria albicoma** Boed.

Clumping, heads 5 cm across. [CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, near Jaumave and Miquihuana.

**Mammillaria albiflora** (Werd.) Bkbg.

Eventually clumping from the base. Fl white, 3 cm across. [W]

DISTRIBUTION: Mexico, Querétaro.

OTHER NAMES: *M. horrense* v. *albiflora*.

**Mammillaria albilanata** Bkbg.

Stem up to 15 cm high by 8 cm; fl 7 mm long, deep carmine but a rather shy flowerer in cultivation. [IP/K]

DISTRIBUTION: Mexico, Guerrero, Chilpancingo.

**Mammillaria angelensis** Craig

There has been some confusion over the identity of this species but illustrated is a plant collected from the original type locality by H. Klein. [K.307/IP/K]

DISTRIBUTION: Mexico, Baja California, Angel de la Guarda Is.

**Mammillaria angelensis v. estebanensis** (Lindsay) Repp.

The plant illustrated is from the type locality of the Isla San Esteban in the Gulf of California. Csp brown. Fl 2 cm across, yellow. [K.309/IP/K]

DISTRIBUTION: Mexico, Baja California, Isla San Esteban.  
OTHER NAMES: *M. estebanensis*.

**Mammillaria anniana** Glass & Foster

Offsetting, heads up to 3 cm diameter; fl only 6 mm across. [CS/PMJ]

DISTRIBUTION: Mexico, Tamaulipas, E. of Ciudad Mante, Cerro Bernal.

**Mammillaria apamensis** Repp.

Solitary, to 9 cm high by 12 cm; rcp 13–16, 3–5 mm long; csp 1–2, 7–10 mm long. Fl 14–16 mm across, carmine.

Closely related to *M. discolor*. [Repp#10/IP/Repp]

DISTRIBUTION: Mexico, Hidalgo, San Lorenzo Apan.

**Mammillaria apozolensis** Repp.

Forming large clumps with heads up to 12 cm high and 8 cm across; spines forc-red. *v. saltensis* Repp. is always single-headed up to 12 cm high and broad, spines yellow (Monte Escobalo, Zac.). [L.1045/IP/K]

DISTRIBUTION: Mexico, Zacatecas, along Rio Juchipila, near Apozol.

**Mammillaria arida** Rose ex Quehl

Solitary, flattened-globular, to 6 cm across; closely related to *M. baxteriana* but with more csp and a different ecology. [K.192–1/IP/K]

DISTRIBUTION: Mexico, Baja California, near La Paz.

**Mammillaria armillata** K. Brandegee

Sparingly clumping, up to 30 cm high, 5 cm across. Fl 2 cm long and broad, white to pink. [K245—1/IP/K]

DISTRIBUTION: Mexico, Baja California, San José del Cabo.

**Mammillaria aureilanata** Bkhg.

Solitary, up to 7.5 cm high, young spines white turning pale yellow with age, the v. *alba* Bkhg. maintains a white spination. [CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí.

**Mammillaria aureispina** (Lau) Repp.

Cylindrical up to 12 cm high by 5 cm; fl carmine. [L1055/CS/PM]

DISTRIBUTION: Mexico, Oaxaca, Quiotepec and Yolox.

OTHER NAMES: *Mammillaria rebii* t. *aureispina*.

**Mammillaria aurihamata** Boed.

Solitary or clumping, stems to 4 cm across; fl 1.2 cm across. [CS/W]

DISTRIBUTION: First recorded from Monte Goedo, Guanajuato, Mexico, but apparently not recently re-collected from this locality.

**Mammillaria backebergiana** Buchenau

Becoming elongated, 5–6 cm broad, soon offsetting, faded green. [CS/PM]

DISTRIBUTION: Mexico, border areas of Guerrero, Michoacan and Mexico DF, e.g. near Ixtapan.

OTHER NAMES: *Mammillaria ferrillii*.

**Mammillaria backebergiana v. ernestii** (Fitt.) Glass & Foster

Differs from the species by its darker green body and fewer, thicker spines. [CS/PM]

DISTRIBUTION: Mexico, Totonac.

OTHER NAMES: *Mammillaria ernestii*.



**Mammillaria bambusiphila** Repp.  
Cylindrical up to 20 cm high by 8 cm, esp 16–20, 3–6 mm long, esp 4, to 11 mm long. [Repp. 748/CS/W]

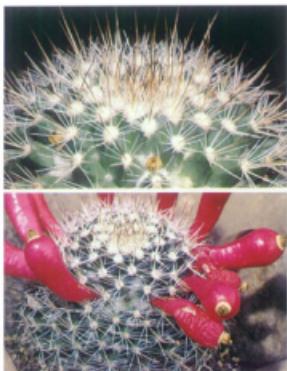
DISTRIBUTION: Mexico, Michoacan, near Huasca.



**Mammillaria barbata** Engelm.  
Solitary or clumping, heads up to 5 cm broad; fl 2 cm across. [K237/IP/K]  
DISTRIBUTION: Mexico, Chihuahua, Coahuila and other localities.  
OTHER NAMES: *Mammillaria gerasii*, *M. merricallii*, *M. sanctaclarensis*.



**Mammillaria baumii** Boed.  
Forming compact, low clumps, individual heads up to 6 cm across; fl to 3 cm across, highly perfumed. [CS/PM]  
DISTRIBUTION: Mexico, Tamaulipas, near San Vicente and Jaumave.  
OTHER NAMES: *Dolichokolea baumii*, *Mammillaria radiatissima*.



**Mammillaria baxteriana** (Gates) Boed.  
Solitary, flattened-globose, up to 10 cm across. *M. marshalliana* (Gates) Boed., (lower illus.) [CS/PM], from near San Bartolo is distinctive but probably conspecific. [CS/W]  
DISTRIBUTION: Mexico, Baja California, SE of La Paz.



**Mammillaria beiselii** Diers  
Clumping, heads up to 40 cm high and 12 cm across. [IP/K]  
DISTRIBUTION: Mexico, borders of Colima and Michoacan near the coast.



**Mammillaria bella** Bkhg.  
Solitary later offsetting, stems 15 cm high and 9 cm across; fl bright carmine. [CS/W]  
DISTRIBUTION: Mexico, Guerrero, near Taxco.  
OTHER NAMES: *M. deliciosa*.

**Mammillaria beneckei Ehrenb.**

Clumping, stems up to 10 cm high and 7 cm broad; seldom flowers in cultivation, winter tender. [CS/GC]

DISTRIBUTION: Mexico, widely distributed from Sinaloa to Oaxaca.

OTHER NAMES: *Dolichocactus balsasensis*, *D. beneckei*, *D. nelsonii*, *M. balsasensis*, *M. ayacorensis*, *M. balsasensis*, *M. bartenii*, *M. calostoma*, *M. guangdalensis*, *M. nelsonii*.

**Mammillaria berkiana Lau**

Forming clumps of up to 40 heads, each 4–6 cm broad. Rsp 35–38, 6 mm long, white; csp 5–8, with 2–4 hooked, 10 mm long, brown. Fl 10 mm across. [CS/PM]

DISTRIBUTION: Mexico, Jalisco, San Andres Cohamiata.

**Mammillaria bernalensis Repp.**

Stems to 20 cm long by 8 cm, clumping; rsp 1–3, 1–3 mm long, white or brown; csp 3–5, 5–50 mm long, the lowest the longest, grey tipped brown. Fl 1.5–2 cm broad, pink to carmine. Closely related to *M. compressa*. [Repp790/IP/Repp]

DISTRIBUTION: Mexico, Queretaro, San Pablo/Bernal.

**Mammillaria blossfeldiana Boed.**

Single in habitat, clumping in cultivation, up to 4 cm across, short-cylindric, v. *shuriana* (Gates) Wigging (illus.) is solitary, more cylindric and has pinker flowers. [CS/PM]

DISTRIBUTION: Mexico, Baja California.

OTHER NAMES: *M. shuriana*.

**Mammillaria bocasana Poselger**

Clumping, heads 4–8 cm across; various cultivars exist, mainly selected for their dense, white wool. [PM36/HS/PM]

DISTRIBUTION: Mexico, San Luis Potosi, near the state capital.

**Mammillaria boccensis Craig**

Clumping, heads flattened-globular, to 8.5 cm broad and 9 cm high. [L76/IP/K]

DISTRIBUTION: Mexico, Sonora, Las Bocas.

OTHER NAMES: 2*M. neoschwarzana*.

**Mammillaria bocensis v. rubida** Repp.

Usually solitary, stems to 9 cm high by 13 cm.  
[K184/IP/K]

DISTRIBUTION: Mexico, Sinaloa, Sierra Madre near Bacumito.

OTHER NAMES: *M. rubida*.

**Mammillaria bombycinia** Quehl

Solitary or strongly clumping, heads up to 20 cm high by 6 cm. [CS/PM]

DISTRIBUTION: Mexico, only recently re-discovered in the wild.

**Mammillaria boolii** Lindsay

Sparingly clumping, heads up to 4 cm high by 3 cm; fl 2.5 cm wide. [CS/PM]

DISTRIBUTION: Mexico, Sonora, San Pedro and San Carlos Bays.

**Mammillaria brandegeei**  
(Coulter) K. Brandegee

Globose to cylindric, later clumping sparingly, heads to 9 cm across; fl greenish-yellow. v. *gabbi* (Coulter) Craig has a smaller, reddish yellow fl (Baja California, San Ignacio). [K201/IP/K]

DISTRIBUTION: Mexico, Baja California, San Jorge.

**Mammillaria brauneana** Boed.

Solitary, flattened-globular, up to 8 cm across, greyish-green. [CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, Jaumave.

**Mammillaria brevicirrinita** Repp.

Forming small clumps, heads up to 4 cm high and broad. [Repp1483/CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, Labor Vieja.



**Mammillaria bucareliensis** Craig

Usually clumping, to 5 cm high by 9 cm. v. *multiflora* Repp. [flower illus., JRepp355a/CS/PM], always solitary, smaller, the crown woolier (Caudal Maz, San Luis Potosí). v. *tamaulipa* Repp., noted for its long, twisted, black spines (Ocampo Pass, Tamaulipas) [CS/PM]

DISTRIBUTION: Mexico, Guanajuato, Bucareli.

OTHER NAMES: *M. hispida*.



**Mammillaria buxbaumeriana** Repp.

To 12 cm high by 5 cm, usually clumping; esp 15–20, 7–11 mm long, white tipped black, esp 1–4, 5–8 mm long, brown to black. Closely related to *M. densispina*. [Repp.2037/IP/Repp]

DISTRIBUTION: Mexico, Guanajuato, Tierra Blanca.



**Mammillaria cadereyensis** Craig

Solitary, branching dichotomously; the plant pictured comes close to the original description and some (but not all) plants in cultivation under this name are very similar. [IP/K]

DISTRIBUTION: Mexico, Querétaro, Cadereyta.



**Mammillaria calacantha** Tiegel

Solitary, stoutly cylindric. Closely related to *M. rhodantha*. [CS/PM]

DISTRIBUTION: Mexico, Querétaro, Angostura de Charcos.



**Mammillaria camptotricha** Dams

Clumping, single heads up to 7 cm broad. [CS/PM]

DISTRIBUTION: Mexico, Querétaro between Higuerillas and San Pablo.

OTHER NAMES: *Dolichochele camptotricha*, *D. albrechtii*, *M. albicans*.



**Mammillaria candida** Scheid.

Solitary to clumping, spines white but sometimes with a pink flush in the crown (*v. rosea*), up to 14 cm across. [PM25/HS/PM]

DISTRIBUTION: Mexico, widely distributed in Coahuila, Nuevo Leon, San Luis Potosí and Tamaulipas.

OTHER NAMES: *M. citreaeoides*, *M. orizabana*, *M. leucostoma*.



**Mammillaria canelensis** Craig

Solitary, globose, csp 2–4, 3 cm long orange-yellow, rsp 22–25, 5–15 mm long, white. Fl greenish-yellow. No plants now available exactly fit this description. The above plant, perhaps an imposter, is in trade as this species. [CS/I]

DISTRIBUTION: Mexico, Chihuahua, Sierra Canelo.

OTHER NAMES: *M. aurivulosa*, *M. aurivulcha*, *M. bellaventra*, *M. flava*, *M. laevigatissima*, *M. sajovenii*, ?*M. morettii*.



**Mammillaria capensis** (Gates) Craig

Clustering, stems cylindric, up to 25 cm high by 3.5 cm, csp hooked or straight; fl pinkish or whitish. This name is often wrongly applied to other similar species. [CS/W]

DISTRIBUTION: Mexico, Baja California, inland from Puerto de Bahía de los Muertos, Cabo San Lucas.



**Mammillaria carmenae** Casteneda

Clumping with heads 5–8 cm long and 3–4 cm in diameter; fl white, tinged pink, or cream. [CS/W]

DISTRIBUTION: Mexico, Tamaulipas, between Ciudad Victoria and Jaumave on the ranch 'La Reja'.



**Mammillaria carnea** Zucc. ex Pfeiff.

Solitary or forming small clumps, stems to 10 cm high, 4–5 cm across; spine length very variable, forms with very long spines occur. [K91–2/1P/K]

DISTRIBUTION: Mexico, Puebla, Oaxaca and Guerrero.



**Mammillaria carretti** Rebut ex Sch.

Forming clusters of flattened-globular heads 5–7 cm in diameter. [CS/PM]

DISTRIBUTION: Mexico, Nuevo Leon, scattered.

OTHER NAMES: *M. suffracta*.



**Mammillaria casoii** Bravo

Spherical, dividing dichotomously. Closely related to *M. rotula*. [K146–1/1P/K]

DISTRIBUTION: Mexico, Oaxaca, between Suchixtahuaca and Tejupan in oak woodland.

OTHER NAMES: *M. mitracanthia*.

**Mammillaria centralifera** Repp.

Stem to 8 cm high and 9 cm across, sometimes clumping; rcp 4–5, 2–12 mm long; csp (1–)2, 1–6 mm long, spines glassy-yellow or glassy-white tipped black. Fl 2 cm wide, carmine. Closely related to *M. compressa*. [Repp1140/JP/Repp]

DISTRIBUTION: Mexico, Querétaro, Arroyo Seco.

**Mammillaria centraliplumosa** Fittkau

Stems cylindric up to 15 cm high by 5 cm, eventually clumping. A member of the *M. spinosissima* complex. [CS/PM]

DISTRIBUTION: Mexico, Mexico DF, near Calderon.

**Mammillaria cerralboana** (B. & R.) Orcutt

Stem elongated to 40 cm or more high by 6 cm, usually solitary. Possibly an island form of *M. armillata*. [CS/PM]

DISTRIBUTION: Mexico, Baja California, Cerralbo Is.

**Mammillaria chica** Repp.

Solitary, in cultivation becoming cylindric up to 8 cm high and 4 cm across. [CS/F]

DISTRIBUTION: Mexico, Coahuila, Viesca.

OTHER NAMES: *M. ziemensis* n.n.

**Mammillaria chionocephala** Purpus

Solitary up to 20 cm high by 12 cm. [K101/IP/K]

DISTRIBUTION: Mexico, Coahuila, Sierra de Parras.

OTHER NAMES: *M. australis*.

**Mammillaria claviformis** Repp.

Stems to 20 cm high by 7 cm, clumping, rcp 20–28, 2–6 mm long, glassy; csp 4–6, 4–15 mm long, brown, lowest longest and often hooked. Fl 1.5 cm across, carmine. [Repp1462/IP/Repp]

DISTRIBUTION: Mexico, Puebla, Teosoyuca.



**Mammillaria coahuilensis** (Boed.) Moran

Usually solitary, to 4 cm across with a huge, carrot-like root, fl 3 cm broad, white with a pinkish stripe. [CS/PM]

DISTRIBUTION: Mexico, Coahuila, near San Pedro.

OTHER NAMES: *M. adianthoides*, *Porfiria schwartzii*, *M. schwartzii*.

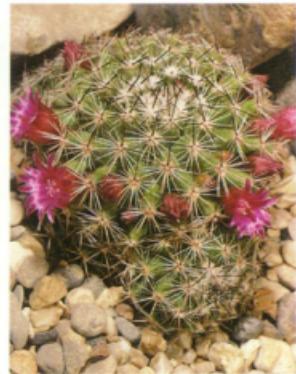


**Mammillaria columbiana** S-D

Stems up to 15 cm or more tall, columnar, later offsetting around the base. Fl small, hardly protruding through the wool, pinkish-red. [CS/W]

DISTRIBUTION: Colombia and Venezuela.

OTHER NAMES: *M. bogotensis*, *M. kennedi*, *M. tamayonii*, *M. uchidai*.



**Mammillaria compacticaulis** Repp.

Body usually solitary, up to 10 cm high by 7.5 cm. [Repp1047/CS/PM]

DISTRIBUTION: Mexico, Michoacan, Uruapan.



**Mammillaria compressa** DC

Forming huge, many-headed clumps, individual stems to 20 cm long, 8 cm across; flowers sparingly in cultivation. [PM2/1S/PM]

DISTRIBUTION: Mexico, widespread in Hidalgo and Queretaro.

OTHER NAMES: *M. argentea*, *M. cornifera*.



**Mammillaria conspicua** Purpus

Always solitary, to 40 cm and more high by 10 cm. A close but distinctively large relative of *M. haageana*. [K148/IP/K]

DISTRIBUTION: Mexico, Puebla, Zapotlán.



**Mammillaria craigii** Lindsay

Solitary, flattened-globular up to 10 cm across. [CS/W]

DISTRIBUTION: Mexico, SW Chihuahua, Sierra Tarahumare, in the Barranca del Río Urique.

**Mammillaria crassa** Repp.

Solitary, to 8 cm high by 9 cm; csp 7–9, 4–9 mm long, fuscous or brown tipped dark; esp 1–3, 7–15 mm long, brown, fuscous-red or black. Fl 2.5 cm wide, whitish-pink. Closely related to *M. pettersonii*. [Repp#880/IP/Repp]

DISTRIBUTION: Mexico, Aguascalientes, Colomos.

**Mammillaria crassimammillaris** Repp.

Body 4 cm high by 7 cm, clumping to form large mounds; spines 4–6, 2–8 mm long, yellowish to brownish, tipped dark. Fl 3–3.5 cm across, brownish-yellow. Closely related to *M. winterae*. [Repp#1620/IP/Repp]

DISTRIBUTION: Mexico, Nuevo Leon, Aramberri.

**Mammillaria crassior** Repp.

Stems to 50 cm long by 9 cm, clumping; esp 10–15, 4–18 mm long, pale yellowish; esp 2–6, 6–30 mm long, glassy-yellow often tipped brown. Fl 2–2.5 cm across, carmine. Closely related to *M. spinosissima*. [Repp#761/HJ]

DISTRIBUTION: Mexico, Morelos, Tlayacapan.

**Mammillaria crinita** DC.

Spherical, up to 4 cm across, sometimes clumping; fl 1.6 cm long, white to yellowish or pinkish-cream. The plant illustrated seems firmly attached to this name within the trade but may not be the plant originally described. [CS/W]

DISTRIBUTION: Mexico, Hidalgo, Zimapán.

OTHER NAMES: *M. criniflora*.

**Mammillaria crucigera** Mart.

Clumping by splitting dichotomously, heads to 4 cm across; fl small, deep pinkish-purple. New and distinctive forms of this species are constantly being collected from new localities. [K11/IP/K]

DISTRIBUTION: Mexico, seemingly fairly widespread in the border area between Puebla and Oaxaca.

OTHER NAMES: *M. huastecana*.

**Mammillaria decipiens** Scheidw.

Clumping, individual heads 4–7 cm across. [CS/PM]

DISTRIBUTION: Mexico; San Luis Potosí and Querétaro.

OTHER NAMES: *Dolichistele decipiens*.

**Mammillaria deherdtiana** Farwig

Clumping in cultivation, heads up to 4.5 cm across; esp 0-6, 3-7 mm long. Fl 5 cm across. v. *dodsonii* (Bravo) Glass & Foster [illus.] esp 3-5, 1-2 cm long (N of Oaxaca City). [P345/IP/DHIS]

DISTRIBUTION: Mexico, Oaxaca, around Nejapa.

OTHER NAMES: v. *dodsonii*; *M. dodsonii*.

**Mammillaria densispina** (Coulter) Orcutt

Solitary, up to 10 cm high and broad; fl small, pale yellow. [CS/W]

DISTRIBUTION: Widely distributed in C Mexico.

OTHER NAMES: *M. evansii*.

**Mammillaria dioica** K. Brandege

Offsetting from the base to form small clumps, stems to 33 cm high by 10 cm. [K244/IP/K]

DISTRIBUTION: S California to Mexico, mainland Baja California and several islands.

**Mammillaria discolor** Haw.

Clumping, heads up to 18 cm high by 13 cm; fl 1.6 cm wide; esp 22-28, esp 4-6. [DHR852/HS/E]

DISTRIBUTION: Mexico: Puebla; Hidalgo; Oaxaca and Mexico DF.

OTHER NAMES: *M. amesii*, *M. esperanzae*, *M. gressneriae*, *M. schaffnerae*, *M. pachyrhiza*, *M. schmidii*.

**Mammillaria discolor** v. *multispina*

Repp.

Generally smaller than the species, body to only 8 cm across, esp 30-38, esp 6-8 (upper illus. [K315/IP/K]). v. *longispina* Repp. (flower illus. [K316/IP/K]) is characterized by its golden esp up to 4 cm long.

DISTRIBUTION: v. *multispina* Zimapán/Sierra Juarez, Hidalgo & v. *longispina* San Alejo, Hidalgo, Mexico.

**Mammillaria dixanthocentron**

Bkbg. ex Mottram

Solitary, to 20 cm high and 7 cm across. [K140/IP/K]

DISTRIBUTION: Mexico: Puebla and Oaxaca.



**Mammillaria dixanthocentron  
v. flavidicentra** (Bkhg.) Repp.

Solitary, to 18 cm or more high by 9–10 cm. [K143/IP/K]

DISTRIBUTION: Mexico, Puebla/Oaxaca border.

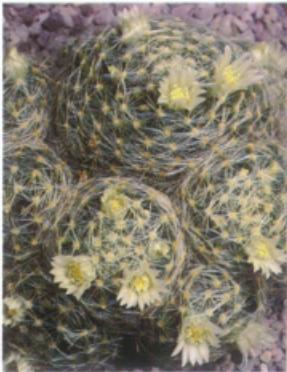
OTHER NAMES: *M. flavidicentra*.



**Mammillaria drogeana**  
Hild. emend. Repp.

Cylindrical, solitary or offsetting, heads up to 20 cm long by 6 cm; rcp 24–32, 6–8 mm long, esp 8–11, 7–12 mm long. Fl 1.5 cm across, pink. [K279-1/IP/K]

DISTRIBUTION: Mexico, Queretaro, Sierra de San Moran.



**Mammillaria dumetorum** Purpus

Clumping, heads up to 2.5 cm across, spines stiff, a spring flowering species. [CS/GC]

DISTRIBUTION: Mexico, San Luis Potosi, near Minas de San Rafael.



**Mammillaria duoformis** Craig & Dawson

Stems up to 9 cm high by 3.5 cm, later clumping, esp straight or hooked. [Repp830/CS/W]

DISTRIBUTION: Mexico, Puebla, near Tehuitzingo.



**Mammillaria durangicola** Repp.

Solitary, 4–8 cm high by 5–8 cm; rcp 10–16, 4–15 mm long, esp 1–3, 10–17 mm long. Fl 2.5–3 cm broad. Closely related to *M. pachycylindrica*. [K35/IP/K]

DISTRIBUTION: Mexico, Durango, Cuencame.



**Mammillaria durispina** Boed.

Solitary, up to 20 cm high by 11 cm. Closely related to *M. polythecia*. [K149/IP/K]

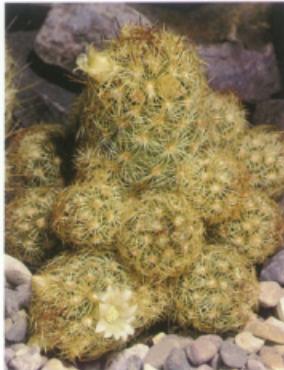
DISTRIBUTION: Mexico: Guanajuato; Queretaro, Sierra Zamorano W of Bernal.



**Mammillaria duwei** Rogozinski & Braum

Later clumping in cultivation, heads up to 5 cm across; esp 0-2. [P301/IP/GC]

DISTRIBUTION: Mexico, Guanajuato, near San Luis de la Paz.

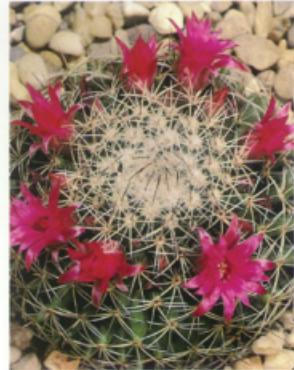


**Mammillaria elongata** DC.

Stems narrow, elongated, spinulation very variable from pale cream to dark reddish-brown, esp 0-4. v. *echinaria* (DC) Blkg. is a stouter plant which always has fairly long esp. [FO-045/CS/PM]

DISTRIBUTION: Mexico, Hidalgo.

OTHER NAMES: *M. echinaria*.



**Mammillaria erectacantha** C.F. Foerster

Becoming squatly columnar, with a large fleshy root. [CS/PM]

DISTRIBUTION: Mexico, Sierra de Guadalupe and Tlalnepantla, NE of Mexico City.



**Mammillaria eriacantha**

Link & Otto ex Pfeiff.

Stems elongated to 30 cm and more, 5 cm across, eventually offsetting at the base; fl minute, not protruding beyond the spines. [PM19/HS/PM]

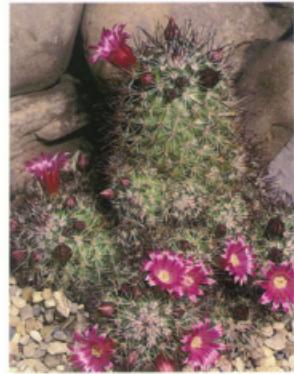
DISTRIBUTION: Mexico, Vera Cruz, Jalapa district.



**Mammillaria erythra** Repp.

Solitary, to 9 cm high by 20 cm, esp 0-4, 2-3 mm long; esp 2, 4-30 mm long. Fl 10-12 mm broad, carmine. Closely related to *M. mystax*. [Repp1350/H]

DISTRIBUTION: Mexico, Puebla/Veracruz border, Puerto del Aire.



**Mammillaria erythrocaxis** Buchenau

Clumping, individual heads up to 15 cm high. Possibly only a form of *M. duformii*. [Repp838/CS/PM]

DISTRIBUTION: Mexico, Puebla, S of Chiautla.

**Mammillaria erythrosperma** Boed.

Forms clumps of small heads up to 5 cm high by 4 cm; spination variable in both length and density. [ISI1172/IP/DHS]

DISTRIBUTION: Mexico, San Luis Potosí, Alvarez.

OTHER NAMES: *M. multiflora*

**Mammillaria evermanniana**

(B. & R.) Orcutt

Usually solitary, spherical to oblong, 5–7 cm across; flower 1.5 cm long, yellowish-cream with a pinkish-brown midstripe. [CS/W]

DISTRIBUTION: Mexico, Baja California, Cerralbo Island.

**Mammillaria felippensis** Repp.

Always solitary, up to 6 cm high and 4 cm across. [Repp636/CS/W]

DISTRIBUTION: Mexico, Guanajuato, San Felipe.

**Mammillaria fera-rubra** Schmoll ex Craig

Solitary, up to 10 cm high by 9 cm; fl purplish-red, 1.5 cm long. Closely related to *M. rhodantha*. [CS/P]

DISTRIBUTION: Mexico, Queretaro, San Lazara.

**Mammillaria fittkaui** Glass & Foster

Clumping, stems 10 cm high by 4–5 cm. [CS/PM]

DISTRIBUTION: Mexico, Jalisco, Lake Chapala.

**Mammillaria formosa** Gal. ex Scheidw.

A very variable plant, usually solitary, depressed-globose up to 10 cm or more across; spines can be light or dark, also longer than pictured. Body colour from dark green to lighter blue-green. [PM33/HS/PM]

DISTRIBUTION: Mexico, San Luis Potosí.



**Mammillaria fraileana** (B. & R.) Boed.  
Stems cylindric up to 15 cm high, later clumping; fl 3 cm  
across. [CS/PM]

DISTRIBUTION: Mexico, Baja California, Pichilingue Island  
and on the mainland opposite.



**Mammillaria freudenbergeri** Repp.  
Solitary, globose, to 20 cm across; rcp 4–6, 6–15 mm long;  
csp 0. A member of the *M. heyderi* group. [IP/Repp]

DISTRIBUTION: Mexico, Coahuila, Múralia.



**'Mammillaria fuscohamata'** Bkbg.  
Spherical, up to 6 cm high and broad. [Repp717/CS/PM]

DISTRIBUTION: Mexico, Jalisco.



**Mammillaria gasseriana** Boed.  
Globular, 3–4 cm broad. [CS/W]

DISTRIBUTION: Mexico, Coahuila, Torreón; the plant  
pictured is from the adjacent Río Nazas area of Durango.



**Mammillaria gasterantha** Repp.  
At first solitary but soon offsetting at the base to  
form mounds. Heads at first globular, later to 14 cm high  
and 5.5 cm across. Fl small, not opening widely.  
[Repp934/CS/PM]

DISTRIBUTION: Mexico, N Guerrero, W of Iguala.



**Mammillaria gatesii** M.E. Jones  
Mostly solitary, up to 20 cm high by 15 cm. Closely related  
to *M. baxteriana* and *M. petrophila*. [K195–2/IP/K]  
DISTRIBUTION: Mexico, Baja California, between Cabo  
San Lucas and San José del Cabo.

**Mammillaria gaumeri** (B. & R.) Orcutt

Forming small clumps, individual heads up to 15 cm across; fl 10–14 mm long. [CS/P]

DISTRIBUTION: Mexico, Yucatan, on sand dunes near Progreso.

**Mammillaria geminispina** Haw.

Forming magnificent mounds up to 2 m broad in habitat. Fls up to 18 cm long, 8 cm across, cor 1–8 cm long; fl sparingly produced, small, cream with a carmine centre. [K230/IP/K]

DISTRIBUTION: Mexico, Hidalgo, widespread S of Zimapán but at its best in the Barranca de Metztitlán.

OTHER NAMES: *M. geminispina* v. *nobilis*.

**Mammillaria gigantea** Hildm. ex Sch.

Solitary, depressed-spherical, up to 10 cm high and 17 cm across; spines brown, to black in 'woolly' fl. 1.5 cm broad, reddish bordered green. [K313/IP/K]

DISTRIBUTION: Mexico, Guanajuato.

OTHER NAMES: *M. armatissima*, *M. hamifrons*, *M. austifera*, *M. oviliformis*.

**Mammillaria gilensis** Boed.

Globose to short cylindrical, up to 4 cm across, sparingly offsetting. Spines originally described as brownish-yellow but in the form pictured, from Ojo Caliente, they are blackish-red. [CS/W]

DISTRIBUTION: Mexico, Aguascalientes, San Gil.

**Mammillaria glareosa** Boed.

Flattened, usually solitary, up to 4 cm across. Closely related to *M. brandegeei*. [K203–2/IP/K]

DISTRIBUTION: Mexico, Baja California.

OTHER NAMES: *M. dorsomaculata*.

**Mammillaria glassii** R.A. Foster

Clustering, heads to 3 cm across; fl tiny, pink v. *ascensionis* (Repp) Glass & Foster (illus); fl 1.8–2.2 cm broad (Nuevo Leon, Ascension). v. *nominis-dulcis* Lai; heads to 5 cm broad; fl to 1.8 cm across (N.L., Díuces Nombres), v. *siberiensis* Lai to 10 cm across (N.L., Siberia). [CS/PM]

DISTRIBUTION: Mexico, Nuevo Leon, near Dicclocho de Marzo.

OTHER NAMES: v. *ascen.* *M. anomalis*.

*Mammillaria gracilis* Pfeiff.

Cylindric, up to 10 cm high by 4.5 cm, prolifically offsetting; esp described as light to dark brown. Fl 1.3 cm across, yellowish-white. The densely white-spined form normally seen is a cultivar 'Palchella'. [F]

DISTRIBUTION: Mexico: Hidalgo around Meztilan and Zimapán; Querétaro, San Joaquín.

OTHER NAMES: *M. fragilis*.

*Mammillaria grahamii* Engelm.

Stems up to 11 cm high and 8 cm across, esp 1–3, the longest hooked; fl 3.5–4 cm across, v. *oliviae* (Orcutt) Benson has shorter, unhooked esp. [CS/W]

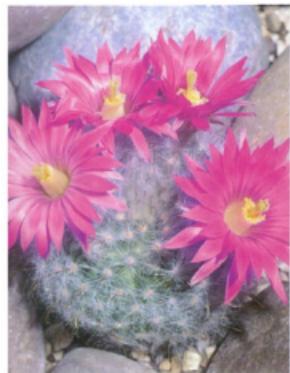
DISTRIBUTION: Arizona, New Mexico and E. Texas.

OTHER NAMES: *M. microcarpa* v. *grahamii*, v. *oliviae*; *M. marmorata*, *M. oliviae*, *M. pseudolacandonii*.

*Mammillaria grusonii* Runge

Usually solitary, spherical to elongated, up to 25 cm across. [HS/PM]

DISTRIBUTION: Mexico, Coahuila, Sierra Blanca.

*Mammillaria guelzowiana* Werd.

Simple or clustering, heads up to 7 cm across; fl 6 cm wide. [CS/PM]

DISTRIBUTION: Mexico, Durango, mountainsides N of Rio Nazas.

OTHER NAMES: *Kraenzlia guelzowiana*.

*Mammillaria guerrerensis*

(Bravo) [attrib. to Boed. by] Bkgg. & Knuth

Body cylindric up to 60 cm long, 6 cm broad, eventually clumping, esp hooked or straight. Fl small, red. [IP/K]

DISTRIBUTION: Mexico, Guerrero, Canyon del Zapotlán.

OTHER NAMES: *M. zapotlanensis*.

*Mammillaria gummifera* Engelm.

Solitary, up to 12 cm across and 11 cm high. [HS/PM]

DISTRIBUTION: Mexico, Chihuahua, Cosaláirachi.

**Mammillaria haageana** Pfeiff.

Usually solitary, to 15 cm tall by 10 cm. [PM6/HS/PM]

DISTRIBUTION: Mexico, widespread in Puebla and Oaxaca.

OTHER NAMES: *M. acanthophlema*, *M. albidula*, *M. callina*,  
*M. doublata*, *M. donatii*, *M. dyckiana*, *M. fimbriata*,  
*M. sanangelensis*, *M. tuerpeli*.**Mammillaria hahniana** Werd.

Clustering, heads up to 9 cm high by 10 cm; some plants are far more hairy than others. [CS/PM]

DISTRIBUTION: Mexico, Queretaro, Sierra de Jalapa.

OTHER NAMES: *M. brasiliensis*, *M. mendeliana*, '*M. quevedoi*',  
*M. undulata*.**Mammillaria halei** T.S. Brandege

Clustering, stems up to 50 cm high by 7.5 cm; fl 2.5–5 cm long, scarlet, long tubed. [CS/PM]

DISTRIBUTION: Mexico, Baja California, Magdalena and Santa Margarita Islands and the adjacent mainland.

OTHER NAMES: *Cochrionia halei*.**Mammillaria hamata** Lehm. ex Pfeiff.

Identify somewhat suspect. The name is currently attached to the plant pictured, which fits the rather brief original description quite well. [Repp957/CS/W]

DISTRIBUTION: Mexico, NW Puebla.

**Mammillaria heidiae** Krainz

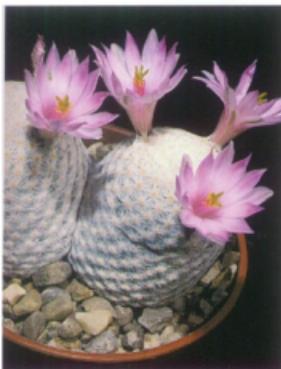
Simple or clustering, stem to 6 cm across, rather flattened. [CS/P]

DISTRIBUTION: Mexico, Puebla, N of Acapulco, near El Papayo.

**Mammillaria hernandezii** Glass & Foster

Solitary, depressed globose, 2.5–4.5 cm across; fl 2 cm across. [Hernandez IP/W]

DISTRIBUTION: Mexico, Oaxaca, near Telotlahuaca.

**Mammillaria herrerae** Werd.

Solitary or clustering from the base, globular but elongating with age, up to 3.5 cm across; fl 2.5 cm across. [DHS]

DISTRIBUTION: Mexico, Queretaro near Cadereyta and in adjacent San Luis Potosi.

**Mammillaria hertrichiana** Craig

Heads flattened-globular, up to 13 cm across, clustering to form clumps nearly 1 m wide. [CS/PM]

DISTRIBUTION: Mexico, Sonora on the Rancho El Agrimensor E of Tesopaco.

**Mammillaria heyderi** Muchlf.

Becoming fairly globular, to about 12 cm across; fl 2–2.5 cm long, brownish-pink.

DISTRIBUTION: New Mexico and widespread in Texas and N Mexico.

OTHER NAMES: *M. appilata*, *M. heyderi v. appilata*, *M. heyderi v. bullingtonianus*.

**Mammillaria heyderi v. hemisphaerica** Engelm.

Flattened, 8–12 cm across, spines usually shorter than in the plant pictured, which is from a local population in N Mexico. [K166–1/1P/K]

DISTRIBUTION: S Texas and N Mexico.

OTHER NAMES: *M. hemisphaerica*.

**Mammillaria huajuapensis** Bravo

Solitary, 10–12 cm in diameter; fl small, purple. Probably a variety of *M. mystax*. [NPT540/1H]

DISTRIBUTION: Mexico, Oaxaca, hills E of Huajuapan de Leon.

**Mammillaria hubertmulleri** Repp.

Always solitary, at first globular, later columnar up to 30 cm high and 10 cm across; rcp 14–22 to 7 mm long, white, esp 2–4, 5–15 mm long, the lower one longest and hooked, brown to black. [FO-2/CS/PM]

DISTRIBUTION: Mexico, Morelos, wooded gorge near Chinameca, El Cajon.

**Mammillaria huiguensis** Repp.

Solitary, to 20 cm high by 15 cm. Rsp 7–9, 3–15 mm long. Csp 2, 11–30 mm long. Fl 25–30 mm long bright pink. Closely related to *M. wagneriana*. [Repp 975/CS/W]

DISTRIBUTION: Mexico, Zacatecas, La Huigera.

**Mammillaria huitzilopochtli** D.R. Hunt

Solitary, eventually branching, up to 13 cm high by 9 cm. Csp 0–1, 4 mm long; an additional curving, dark csp is sometimes produced later in older plants. Fl not opening widely, small, carmine. [L.AU/IP/GC]

DISTRIBUTION: Mexico, Oaxaca, Tomellin Valley.

**Mammillaria huitzilopochtli v.** L.1495.

A distinctive plant with its frizzy spination. [L.1495/CS/W]

DISTRIBUTION: Mexico, Oaxaca, Rio Grande-Rio Santo Domingo.

**Mammillaria humboldtii** Ehrenb.

Solitary or clumping, individual heads globose, up to 7 cm across. [IP/FC]

DISTRIBUTION: Mexico, Hidalgo, hills between Ixmiquilpan and Metztitlán.

**Mammillaria hutchisoniana**

(Gates) Boed.

Usually clumping, stems up to 20 cm tall by 4–6 cm; fl 3 cm across, cream, outer petals striped maroon. [CS/W]

DISTRIBUTION: Mexico, C and S Baja California.

OTHER NAMES: *M. fulgurans*.

**Mammillaria ignota** Repp.

Solitary or clumping, heads up to 7 cm high and thick. Rsp 20–22, 2–4 mm long, white; csp 2–4, 4–7 mm long, white with brown tip. Fl 1.8 cm long. [L.1108/IP/K]

DISTRIBUTION: Mexico, Oaxaca, Tomellin Canyon.

**Mammillaria igualensis** Repp.

Stems to 10 cm high and 6 cm across, clumping to form large mounds; esp 20–25, 3–5 mm long; esp 2–4, 5–12 mm long. Fl 8–10 mm broad, dark carmine. Closely related to the solitary-growing *M. albilanata*.

[Repp#32/IP/Repp]

DISTRIBUTION: Mexico, Guerrero, Iguala.

**Mammillaria insularis** Gates

Usually solitary, cultivated plants shortly columnar, old plants sparingly offsetting around the base. Fl 2.5 cm across. [CS/W]

DISTRIBUTION: Mexico, outermost islet of Smith Island group, Los Angeles Bay, Baja California.

**Mammillaria isotensis** Repp.

Stems to 25 cm high by 5.5 cm, clumping; esp 10–13, 3–7 mm long; esp 2, 6–17 mm long, lowest longest and hooked, brown to black. Fl 16–18 mm across, carmine. [CS/PM]

DISTRIBUTION: Mexico, Mexico DF, El Isote.

**Mammillaria jaliscana** (B. & R.) Boed.

Solitary, becoming oblong, up to 5 cm broad.

[I.1044/CS/PM]

DISTRIBUTION: Mexico, various localities in Jalisco and in bordering areas of Aguascalientes, Querétaro and Guanajuato.

OTHER NAMES: *M. flavidiflora*.

**Mammillaria johnstonii** (B. & R.) Orcutt

Solitary, up to 20 cm high by 10 cm; spination very variable, from short and straight to long and twisted, this being linked, incorrectly, to varietal names. [K181–1/IP/K]

DISTRIBUTION: Mexico, Sonora, San Carlos Bay.

OTHER NAMES: *M. johnstonii* v. *grypnospis* & v. *sauveterreana*.

**Mammillaria karwinskiana** Mart.

Offsetting or branching dichotomously, stems up to 10 cm across. Spine length and axillary wool amounts very variable. [PM7/IS/PM]

DISTRIBUTION: Mexico, around the city of Oaxaca.

OTHER NAMES: *M. confusa*, *M. malivita*, *M. conzantii*, *M. elenaeana*, *M. fockerti*, *M. nessystax*, *M. pyrrhocyphepha*.

*Mammillaria kleiniorum* Appenzeller

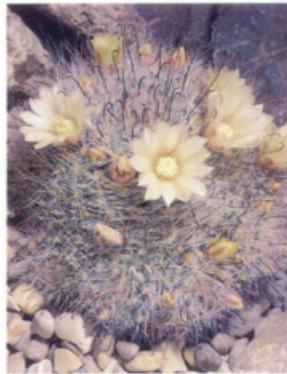
Solitary, stem up to 13 cm across; fl 2 cm across. Related to *M. jaliscana* & *M. zuarensis*. [K190-7/1P/K]

DISTRIBUTION: Mexico, Michoacan, Iquiltan.

*Mammillaria kliissingiana* Boed.

At first globular then elongating to 16 cm high and 9 cm across, eventually offsetting. Fl shably produced, 8 mm across, pale pink. [SH270/CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, Jaumave Valley.

*Mammillaria knobelliana* Boed.

Stem offsetting, to 6 cm high, 4.5 cm across; esp at first 4, later 5–7, the lowest 15 mm long, hooked, reddish-brown. Rsp 20–25, very fine, white. Fl 15 mm broad, yellow. Plant pictured, SH29, appears to fit the original description. [SH29/CS/PM]

DISTRIBUTION: Mexico, Sierra de San Luis Potosí.

OTHER NAMES: *M. haerteliana*.

*Mammillaria knippelianiana* Quechl

Stems up to 8 cm high by 6 cm, strongly offsetting; fl 10 mm broad, straw yellow with red tips to the petals. [CS/W]

DISTRIBUTION: Mexico, Morelos, near Cuernavaca.

*Mammillaria kraehenbuechlii* (Kraenzl) Kraenzl

Densely clumping, individual stems up to 3.5 cm across. [CS/W]

DISTRIBUTION: Mexico, Oaxaca, near Tamazulapan.

OTHER NAMES: '*M. alpina*'.

*Mammillaria krasuckae* Repp.

Solitary, to 8 cm high by 6 cm; esp 26–32, 2–4 mm long, white; esp 4–6, 6–25 mm long, yellowish, dark-brown or black, lowest longest and usually hooked. Fl 2 cm broad, carmine. Closely related to *M. rekoi*. [Repp1647/IP/Repp]

DISTRIBUTION: Mexico, Oaxaca, near Reforma.

**Mammillaria lanigera** Repp.

Solitary, up to 12 cm high by 8 cm across.  
[Repp/94/CS/W]

DISTRIBUTION: Mexico, Oaxaca, San Miguel  
Minamaltepex.

**Mammillaria lasiacantha** Engelm.

Stem small, usually solitary but eventually clustering in cultivation. Fl white, striped brownish-red. [H]

DISTRIBUTION: W Texas, New Mexico and a large area of  
NW Mexico.

OTHER NAMES: *M. deudata*, *M. lasiacantha* v. *deudata*,  
*M. egregia*.

**Mammillaria laui** D.R. Hunt

Strongly clumping, individual heads up to 4.5 cm across;  
spines stiff. [L.1173/IP/DHS]

DISTRIBUTION: Mexico, Tamaulipas, between Ciudad  
Victoria and Jaumave, La Reja.

**Mammillaria lenta** K. Brandegege

Forming small clumps of flattened heads to 5 cm across.  
[IP/E.C.]

DISTRIBUTION: Mexico, Coahuila, Viesca and Cuatro  
Cienegas.

**Mammillaria leptacantha** (Lau) Repp.

Cylindrical, offsetting, 8–10 cm high by 5–6 cm.  
[L.1314/IP/GC]

DISTRIBUTION: Mexico, Oaxaca, near Las Animas.  
OTHER NAMES: *M. retusa* v. *leptacantha*.

**Mammillaria leucantha** Boed.

Solitary or clustering, up to 3.5 cm across the stems.  
[CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, near Soledad  
Diez Gutierrez.

**Mammillaria lewisiana** Lindsay

Solitary, flattened to globular, up to 11 cm across.  
[CS/PM]

DISTRIBUTION: Mexico, Baja California, N. Visacino Desert, 7 miles NW of Mesquital Ranch.

**Mammillaria limonensis** Repp.

Body 12 cm high by 5 cm, clumping; rcp 14–20, 4–7 mm long, white; esp 4–7, 7–18 mm long, lowest longest and hooked, all brown to black. Fl 14 mm across, pink. Closely related to *M. fittkauii*. [Repp f620/1H]

DISTRIBUTION: Mexico, Jalisco, El Limón.

**Mammillaria lindsayi** Craig

Clumping, heads up to 30 cm high by 15 cm. The plant pictured is the one usually traded as this species but differs from the original description in a number of ways.  
[CS/PM]

DISTRIBUTION: Mexico, Chihuahua, Molinas to Sierra Colorado.

**Mammillaria lloydii** (B. & R.) Orcutt

At first flattened but later becoming elongated up to 10 cm high by 7 cm. Perhaps a straight-spined form of *M. uncinata*. [K68-1/IP/K]

DISTRIBUTION: Mexico, Zacatecas and San Luis Potosí.

**Mammillaria longiflora** (B. & R.) Berg.

Usually solitary, up to 10 cm across, fa. stampferi (Repp) D.R. Hunt, from El Salto, Durango is pictured above the species, although it would seem to us to be more deserving of the rank of variety than mere form [CS/PM]

DISTRIBUTION: Mexico, Durango, near Santiago Papasquiaro.

OTHER NAMES: *Kratzizia longiflora*, fa. stampferi: *M. stampferi*.

**Mammillaria longimamma** DC.

Solitary or clumping, individual heads to 12 cm across; fl 6 cm wide. [CS/PM]

DISTRIBUTION: C. Mexico, Hidalgo, e.g. near Venados.

OTHER NAMES: *Dolichothelos longimammosus*, *D. alvarensis*, *M. long. t. alv.*, *M. sphaer.*



**Mammillaria luisiae** Lindsay

Usually solitary, becoming rather cylindrical in cultivation, which usually encourages clumping. Stem up to 6 cm tall and half as broad. A close relative of *M. hutchisoniana*. [CS/P]

DISTRIBUTION: Mexico, Baja California, S of Socorro.

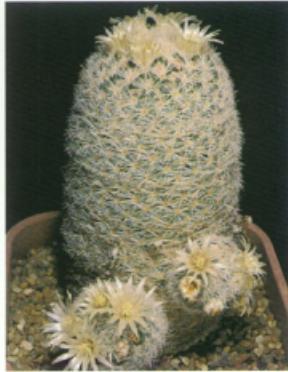


**Mammillaria macdougalii** Rose

Plants flattened-globular up to 12.5 cm broad. [HS/PM]

DISTRIBUTION: SE. Arizona and adjacent Sonora, Mexico.

OTHER NAMES: *M. heyderi* v. *macdougalii*, *M. gavmifera* v. *macdougalii*.



**Mammillaria magallanii** Schmoll ex Craig

Sprinkly clumping, stems to 6 cm high by 4.5 cm; esp 0–1 usually straight, may be hooked. Probably only a form of *M. lasiacantha*. [CS/E]

DISTRIBUTION: Mexico, Coahuila, near Parras.

OTHER NAMES: *M. nascentia*, *M. mag.* v. *homalopina*, *M. neobrittaniana*.



**Mammillaria magnifica** Buchenau

Clumping, individual stems to 40 cm high and 9 cm across, v. *minor* Buch. from a separate population is smaller and more weakly spined. [CS/P]

DISTRIBUTION: Mexico, Morelos, El Peñon de Amayuca, between Cuautla and Ixtapan de Matamoros.



**Mammillaria magnimamma** Haw.

Very variable, clustering with heads up to 12 cm across. Esp short and fairly straight through to long and curved or even twisted. Fl deep pink to pale yellow. [K254/IP/K]

DISTRIBUTION: Mexico, Hidalgo; S San Luis Potosí and near Mexico City.

OTHER NAMES: *M. centricarpa*, *M. flaveolens*, *M. gladiata*, *M. macrocarpa*, *M. troximii*, *M. tagagnina*.



**Mammillaria mainiae** K. Brandegee

Clustering, stems 12 cm broad by 10–15 cm. [HS/PM]

DISTRIBUTION: S. Arizona and Mexico, Sonora, near Nogales.

**Mammillaria mammillaris** (L.) Karsten

Usually solitary, up to 8 cm high by 5 cm. Fl minute.  
[CS/PM]

DISTRIBUTION: Lesser Antilles, some islands of the Netherlands Antilles and widespread in Venezuela.

OTHER NAMES: *M. elvensis*, *M. pseudoplexis*, *M. simplex*.

**Mammillaria maritima**  
(Lindsay) D.R. Hunt

Forming clumps 1 m in diameter, stems to 50 cm high by 3–7 cm broad. Fl 3 cm long, scarlet. [IP/W]

DISTRIBUTION: Mexico, Baja California, Punta Blanca.

OTHER NAMES: *Cochenuea maritima*.

**Mammillaria marksiana** Krainz

Body bright green, up to 5 cm tall by 8 cm, later clumping.  
[CS/PM]

DISTRIBUTION: Mexico, Sinaloa, W Sierra Madre and in Durango in the Quebrada de Topia.

**Mammillaria mathildae**

Krachenbuehl & Krainz

Clustering, stems 5–6 cm tall and 5 cm across. [CS/PM]

DISTRIBUTION: Mexico, Queretaro, near La Canada.

**Mammillaria matudae** H. Bravo

Solitary or clustering from the base, stems to 30 cm or more high to 5 cm broad. v. *serpentiformis* Fittkau has stems up to 1.55 m long (Guerrero, La Laguna). [CS/PM]

DISTRIBUTION: Mexico, La Junta.

**Mammillaria mazatlanensis**

Sch. ex Guerke

Clumping, stems cylindric up to 12 cm high by 4 cm.  
[Repp080/CS/W]

DISTRIBUTION: Mexico, Sinaloa, Mazatlan.

OTHER NAMES: *M. jucunda*, *M. sinuosa*.

**Mammillaria meiacantha** Engelm.

Solitary, flattened-globular, up to 11 cm across. [HS/PM]  
DISTRIBUTION: SE Arizona, New Mexico, Texas and in  
Mexico southwards to Zacatecas.

OTHER NAMES: *M. guamachera* v. *meiacantha*, *M. keyseri*  
E. Meyen.

**Mammillaria meissneri** Ehrenb.

Stems cylindric, up to 12.5 cm high by 2.5 cm, offsetting  
from the sides. The plant pictured, L679, is one of a  
number of contenders for this name, some of which are  
wider-bodied, less freely-clumping plants with less wool.  
[L679/IP/K]

DISTRIBUTION: Originally given as just Mexico, L679 is  
from between San Antonio and Calapa, Oaxaca.

OTHER NAMES: *M. elegans* v. *schmidii*.

**Mammillaria melaleuca** Karw.

Usually solitary, globular, glossy green. [CS/E]

DISTRIBUTION: Mexico, Tamaulipas, near Jaumave.

OTHER NAMES: *Dolichothelos melaleuca*.

**Mammillaria melanocentra** Poselger

Solitary, up to 16 cm high by 11 cm, bluish-green; esp up to  
5.5 cm long. Fl 2.5 cm broad, pink. [K165-1/HS/PM]

DISTRIBUTION: Mexico, Nuevo Leon, Huasteca Canyon  
and elsewhere near Monterrey.

OTHER NAMES: *M. calathia*, *M. mayanii*.

**Mammillaria mercadensis** Patoni

Globular, up to 5 cm across, forming small clusters; fruit  
red. v. *guillaminiana* (Bübg.) Repp.; heads slightly  
broader, fruit white (El Salto, Durango). [CS/PM]

DISTRIBUTION: Mexico, Durango, Cerro Mercado.

OTHER NAMES: *M. acromonii* v. *guillaminiana*; *M. guillaminiana*.

**Mammillaria meyranii** Bravo

Stem columnar up to 55 cm long by 5 cm, clustering from  
the base. [Repp968/CS/PM]

DISTRIBUTION: Mexico, valley of the Rio Tlilostic and  
Michoacan, barranca de San Jose Purna.

OTHER NAMES: *M. meyranii* v. *michoacana*, possibly  
*M. michoacanensis*.

**Mammillaria microhelia** Werd.

Stems up to 15 cm long by 3.5–4.5 cm, clustering from the base with age. Fl white to yellowish-green, sometimes pink. [CS/PM]

DISTRIBUTION: Mexico, Queretaro, Sierra de Zamorano.  
OTHER NAMES: *M. microhelia*.

**Mammillaria microthele** Muehlenpfört

Heads flattened, up to 8 cm across, eventually clustering; fl white. [K116/IP/K]

DISTRIBUTION: Mexico, Tamaulipas and San Luis Potosí, E. of Huizache.

OTHER NAMES: *M. microthele* v. *superflua* R.R.

**Mammillaria miegiana** Earle

Solitary, up to 16 cm high by 10 cm. [K207/IP/K]

DISTRIBUTION: Mexico, Sonora, between the Rio Sonora and Rio Moctezuma, N of Ures.

**Mammillaria mieheana** Tiegel

Clustering, stems up to 15 cm long by 5 cm; fl 15 mm long, pale yellow. Intermediate between *M. elongata* and *M. densispina*. [W]

DISTRIBUTION: Mexico, Queretaro.

**Mammillaria milleri** (B. & R.) Boed.

Clustering, heads up to 15 cm high by 5 cm; fl 2.5 cm broad. [Pm79/Hs/PM]

DISTRIBUTION: Arizona, E California and N Sonora, Mexico.

OTHER NAMES: *M. micromarpa* & vars.

**Mammillaria moelleriana** Boed.

Solitary, globose to short-cylindric, up to 11 cm high and 10 cm broad; fl pale pink or white with yellowish midstripe. [CS/PM]

DISTRIBUTION: Mexico, Durango and near Jerez, Zacatecas.

OTHER NAMES: *M. coniferae*.

**Mammillaria mollendorffiana** Shurly

Solitary, up to 35 cm high by 10 cm. [K253/IP/K]

DISTRIBUTION: Mexico, Hidalgo between Cardonal and Satchari.

**Mammillaria monticola** Repp.Usually solitary, to 8 cm high by 6 cm; rcp 20–27, 2–5 mm long, white; csp 1–2, 2–3 mm long, brown or whitish tipped brown. Fl 18 mm broad, dark carmine. Closely related to *M. conspicua*. [Repp844/IP/Repp]

DISTRIBUTION: Mexico, Puebla, Puerto Marques.

**Mammillaria morganiana** Tiegel

Stem 8 cm broad, dichotomizing to produce clumps, esp 4–5, 10 mm, white tipped brown; rcp 40–50, hairlike, white. The plant illustrated, K112, seems to fit the original description fairly closely. [K112/IP/K]

DISTRIBUTION: Mexico, Guanajuato.

**Mammillaria muehlenpfordtii** Fuerst.

Globular, to 15 cm broad. [K149–1/IP/K]

DISTRIBUTION: Mexico: Queretaro, Guanajuato and S San Luis Potosi.

OTHER NAMES: *M. arizana*, *M. neopatula*.**Mammillaria multidigitata**

[Radley] ex Lindsay

Heads cylindric, 20 cm long by 5 cm, forming large clumps. [CS/PM]

DISTRIBUTION: Mexico, Baja California, San Pedro Nolasco Is.

**Mammillaria multisetata** Ehrenb.

Globular, up to 12 cm high by 8 cm, sometimes dichotomizing. The plant illustrated, Repp 940, appears to fit the original description reasonably well. [Repp940/CS/PM]

DISTRIBUTION: Mexico, original description without locality, reported by Bravo &amp; Reppenagen from Puebla, between Petalzingo and Acatlan.

**Mammillaria mundtii** Sch.

Spherical to elongated, up to 7 cm broad. The plant illustrated has become widely distributed as this species but does not exactly fit the original brief description and illustration. [CS/PM]

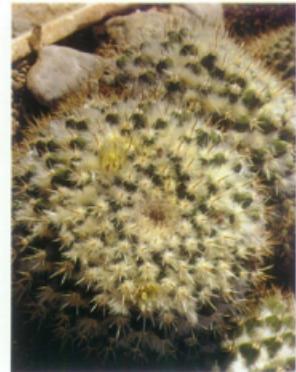
DISTRIBUTION: Mexico, originally without locality. Present plants originally came from Nevado de Toluca, Mexico DF.

**Mammillaria mystax** Mart.

Solitary, to 30 cm high by 15 cm. [K226/IP/K]

DISTRIBUTION: Mexico; Puebla and Oaxaca.

OTHER NAMES: *M. atrofloreus*, *M. crispifera*, *M. mutabilis*, *M. mystax*.

**Mammillaria naghiana** Repp.

To 9 cm high by 8 cm, clumping; rcp 5–7, 4–11 mm long, glassy tipped dark; csp 1, 4–20 mm long, glassy brown tipped black. Fl 18 mm across, bright yellow. [Repp1045/IP/Repp]

DISTRIBUTION: Mexico, Michoacan, Aguililla.

**Mammillaria nana** Bkgb. ex R. Mottram

Solitary or clustering, heads to 4 cm across. [CS/W]

DISTRIBUTION: Mexico, San Luis Potosi, road to Balnearios de Lourdes.

OTHER NAMES: '*M. monanistratiformis*', '*M. nardii*'.

**Mammillaria napina** Purpus

Usually solitary, 4–6 cm broad. Fl 4 cm across. [CS/E]

DISTRIBUTION: Mexico, Puebla, near Tehuacan.

**Mammillaria nazasensis**  
(Glass & Foster) Repp.

Freely clustering, heads 2–4 cm across. [CS/PM]

DISTRIBUTION: Mexico, Durango, near the Rio Nazas.

OTHER NAMES: *M. peninsularis* v. *nazasensis*.



**Mammillaria nejapensis** Craig & Dawson

Body to 15 cm high by 7.5 cm, offsetting or branching dichotomously. Apparently just a distinctive form of *M. karwinskiana*. [CS/PM]

DISTRIBUTION: Mexico, Oaxaca, Nejapa.



**Mammillaria neopalmeri** Craig

Heads up to 9 cm high by 5 cm, strongly clumping. [CS/PM]

DISTRIBUTION: Mexico, Baja California, San Benito Island.



**Mammillaria nivosa** Link ex Pfeiff.

Solitary or clustering, globular, to 7 cm broad. Fl. 1.5 cm long, cream. [CS/EC]

DISTRIBUTION: Numerous islands in the West Indies.

OTHER NAMES: *M. flava* var. *nivosa*.



**Mammillaria noureddineana** Repp.

Solitary, up to 15 cm high by 8 cm. Rsp 15–20, 2–4 mm, white; esp 4–6, 4–5 mm, white with a brown tip. Fl 10 mm bead, carmine. Fruit red. [K223/IP/K]

DISTRIBUTION: Mexico, Oaxaca, San Lazaro.



**Mammillaria nunezii** (B. & R.) Orcutt

Usually solitary, to 15 cm or more high, 8 cm across. Csp straight or occasionally hooked. [K281/IP/K]

DISTRIBUTION: Mexico, Guerrero, Cerro de Buenavista de Cuellar and Taxco.

OTHER NAMES: *M. solisi*, *M. mauleriana*.



**Mammillaria obconella** Scheidw.

Solitary, up to 30 cm or more high, 12 cm across. [K314/IP/K]

DISTRIBUTION: Mexico: Hidalgo, Metztitlán and Venados; S San Luis Potosí; Querétaro Toliman, Guanajuato, W of Nizhu.

OTHER NAMES: *M. dolichocentra*, *M. tetricantha*.

*Mammillaria occidentalis* (B. & R.) Boed.

Stem cylindric to 15 cm high by 3 cm, strongly clumping. Cap 4–5, the lowest hooked or straight. [ISH1235/IP/GC]

DISTRIBUTION: Mexico, Colima, near Manzanillo.

*Mammillaria oerstetteri* Boed.

Solitary, globose to short-cylindric to 20 cm tall by 12 cm. The plant pictured, PM30, from hills W of Santa Catarina, San Luis Potosí corresponds well to the original illustration. [PM30/HS/PM]

DISTRIBUTION: Mexico, originally reported from Puebla, probably in error, present collections are from San Luis Potosí.

*Mammillaria oteroii* Glass & Foster

Profusely clustering, heads to 4 cm across. [CS/PM]

DISTRIBUTION: Mexico, Oaxaca, Alta Mixteca, near Buenavista de la Concepción.

*Mammillaria pachycylindrica* Bkgd.

Solitary, up to 26 cm high by 11 cm. [K185/IP/K]

DISTRIBUTION: Mexico, originally without locality, recent collections from Nazas, Durango.

*Mammillaria pacifica*

(Gates) Boed. ex Bkgd. & Knuth

Flattened-globular, up to 15 cm across, often clumping. Closely related to *M. petrophila*. [K194-1/IP/K]

DISTRIBUTION: Mexico, Baja California, just N of Todos Santos.

*Mammillaria papasquairensis* (Bravo) Repp.

Globular to 30 cm and more across. [K294/IP/K]

DISTRIBUTION: Mexico, Monte Blanco, S of Nazas.

OTHER NAMES: *M. zapotecum*, v. *pap.*

**Mammillaria parkinsonii Ehrenb.**

Heads 15 cm high and 8 cm broad branching dichotomously to form large groups. [K85/IP/K]

DISTRIBUTION: Mexico, Hidalgo, near San Onofre in the Mineral del Doctor.

OTHER NAMES: *M. aviazioides*, *M. arilla-similis*,  
*M. infernalis*, *M. queretaria*, *M. rosenii*, *M. negligens*,  
*M. pseudopurpurea*.

**Mammillaria parrasensis Repp.**

Body to 6 cm high by 10 cm, branching when old; rcp 5–7, 2–10 mm long; esp 1, 5–7 mm long. Fl 3 cm wide, whitish-pink. Closely related to *M. gracilis*. [Repp1083/IP/Repp]

DISTRIBUTION: Mexico, Coahuila, Parras.

**Mammillaria pectinifera (Ruebner) Web.**

Solitary, to 7 cm high by 4 cm. [CS/PM]

DISTRIBUTION: Mexico, Puebla, near Tehuacan.

OTHER NAMES: *Solisia pertusa*.

**Mammillaria peninsularis**

(B. & R.) Orcutt

Flattened-globular, to 5 cm across. [DHS]

DISTRIBUTION: Mexico, Baja California, Cabo San Lucas.

**Mammillaria pennispinosa Krainz**

Body 4 cm across, eventually clustering. [CS/PM]

DISTRIBUTION: Mexico, SW Coahuila and N Durango between Bermejillo and Mapimi.

OTHER NAMES: *M. penn.* v. *natasensis* = *M. nazensis*.

**Mammillaria perbella Hildm. ex Sch.**

Heads to 6 cm across, branching dichotomously to form small clumps. [E]

DISTRIBUTION: Mexico; Hidalgo, Toliman and Queretaro, San Pablo.

OTHER NAMES: Probably *M. aljibensis*.

**Mammillaria perezdelarosae**

Bravo &amp; Scheinvar

Solitary or clustering, heads to 7.5 cm high by 4.5 cm.  
[HS/R]

DISTRIBUTION: Mexico, Jalisco.

**Mammillaria petrophila** K. BrandegeeBodies 15 cm high and broad, axis very woody.  
[L052/CS/W]

DISTRIBUTION: Mexico, Baja California, Sierra de la Laguna and San Francisqueño.

**Mammillaria petterssonii** Hildm.

Globular, to 30 cm across, usually solitary, spine length and colour variable. [HS ex Lau/GC]

DISTRIBUTION: Mexico. Recent collections from near the city of Guanajuato; original locality not given.

OTHER NAMES: Probably *M. obscuria*, *M. palemita*.**Mammillaria phitauiana** (Baxter) Werd.Stems cylindrical to 25 cm high, eventually clumping.  
[K311-L/JP/K]

DISTRIBUTION: Mexico, in the less arid parts of the central part of the Cape region of Baja California.

**Mammillaria picta** Meinhshausen

Heads becoming elongated to 4 cm across, eventually clumping. [CS/E]

DISTRIBUTION: Mexico, Tamaulipas, Rio Blanco.

OTHER NAMES: *M. variseta*, *M. schiediana*.**Mammillaria pilcayensis** BravoStems to 50 cm high by 5 cm, spines whitish-yellow, sometimes tipped red. A member of the *M. spinosissima* complex. [CS/PM]

DISTRIBUTION: Mexico. In the Barranca de Pilcaya, Guerrero and Barranca de Malinaltenango, Mexico DF.

OTHER NAMES: *M. pitayensis*.

**Mammillaria pilispina** Purpus

Heads to 4.5 cm across forming small clumps. [CS/W]

DISTRIBUTION: Mexico, San Luis Potosí, Minas de San Rafael.

OTHER NAMES: *M. andicola*, *M. subtilis*.**Mammillaria plumosa** Web.

Forming large mounds, heads to 7 cm across. Fl sparingly produced. [IP/P]

DISTRIBUTION: Mexico: Coahuila, Mariposa and in Nuevo Leon, Huasteca Canyon.

**Mammillaria polyedra** Mart.

Stems 10 cm high and broad, eventually clumping. Rsp 2-4, uppers 3-4 mm long, lower 6-25 mm long. [CS/W]

DISTRIBUTION: Mexico, Oaxaca, e.g. Tonala and Huajuapan.

**Mammillaria polythele** Mart.

Solitary, cylindric to 60 cm tall by 10 cm. A very variable species. [FO-059/CS/W]

DISTRIBUTION: Mexico, Hidalgo, between Zimapán and Actopan.

OTHER NAMES: *M. affinis*, *M. nephacantha*,  
*M. hoffmanniana*, *M. kelleriana*, *M. leonensis*, *M. subdarwina*,  
*M. kudalgensis*, *M. ingens*.**Mammillaria pondii** Greene

Stems cylindric to 30 cm high by 4 cm, branching sparingly. Fl nearly 5 cm long, scarlet. [F]

DISTRIBUTION: Mexico, Baja California, Cedros Island.

OTHER NAMES: *Cochenicia pondii*.**Mammillaria poselgeri** Hildm.

Stems long and slender to 2 m long by 4-5 cm, branching from the base and soon sprawling. [CS/PM]

DISTRIBUTION: Mexico, lower elevations of Cape region of Baja California.

OTHER NAMES: *Cochenicia poselgeri*.

**Mammillaria pottsii** Scheer ex S-D

Stems cylindric, to 15 cm high by 4 cm, clumping. v. *multicaulis* Repp.; very strongly clumping, stems slimmer (Lerdo, Durango). v. *gigas* Repp.; stouter, to 25 cm long and 7 cm broad (La Cardina, Zacatecas). [CS/W]

DISTRIBUTION: S Texas through N Mexico S to Zacatecas.

OTHER NAMES: *M. lorna*.

**Mammillaria priessnitzii** Repp.

Solitary, flattened-globular, 3–9 cm high by 5–11 cm. Rsp 4–5, 2–7 mm long, white tipped brown. Cap 1–2, 4–15 mm long, thicker, grey or brown with black tip. Fl 16 mm across. [K25B/IP/K]

DISTRIBUTION: Mexico, Queretaro, Jalpan.

**Mammillaria pringlei**  
(Coulter) K. Brandege

Stems to 20 cm high by 15 cm, solitary or branching dichotomously. Fl purple 10 mm across. [CS/W]

DISTRIBUTION: Mexico, San Luis Potosi, e.g., Totonango and Jilotepec.

OTHER NAMES: *M. parensis*.

**Mammillaria prolifera** (Miller) Haw.

Heads 4.5 cm broad, clumping. v. *arachnoidea* D.R. Hunt from Tamaulipas & Hidalgo, v. *hastensis* (K. Schum.) Borg from Haiti and v. *texana* (Poselger) Borg from Texas differ mainly in details of spination and stem size. [SB713/CS/PM]

DISTRIBUTION: Cuba.

OTHER NAMES: *M. maldiviana*, *M. pusilla*.

**Mammillaria pseudocrucigera** Craig

Solitary or clustering, heads to 9 cm across. [K86/IP/K]

DISTRIBUTION: Mexico, Queretaro, Bernal.

**Mammillaria pseudoperbellia** Quchl

Usually solitary, to 10 cm high by 8 cm. [IP/K]

DISTRIBUTION: Mexico, originally without locality, recently reported from Queretaro, Higuerrillas.



**Mammillaria puberula** Repp.

Solitary or rarely sprouting from the base to form small clumps. Stems 1–5 cm high by 2–6 cm; esp 14–19, 4–6 mm long, esp 3–4, 7–11 mm long, thicker than the esp, the lowest hooked. Fl 15–18 mm across, white to yellowish. [CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, Sotis.



**Mammillaria pulcherrima** Repp.

Body solitary, to 6 cm high by 5 cm. [IP/K]

DISTRIBUTION: Mexico, Oaxaca, Nejapa, near Portillo.



**Mammillaria pygmaea** (B. & R.) Berg.

Usually clustering, stems to 10 cm high by 5.5 cm. [CS/PM]

DISTRIBUTION: Mexico, S Queretaro.

OTHER NAMES: *M. medihamata*, *M. adereyana*, *M. painteri*, *M. parviflora*.



**Mammillaria rectispina** (Dawson) Repp.

Heads 6 cm high by 5 cm, often later clumping. [CS/K]

DISTRIBUTION: Mexico, Baja California, Cedros Island.

OTHER NAMES: *M. goudrichii* v. *rectispina*.



**Mammillaria rekoi** (B. & R.) Vaupel

Solitary, to 12 cm high by 5–6 cm. Lower esp hooked or straight. [FO-022/CS/PM]

DISTRIBUTION: Mexico, Oaxaca, Mitla.

OTHER NAMES: *M. mitlensis*, *M. pseudorekoi*, '*M. rekoi*'.



**Mammillaria reppenagenii** D.R. Hunt

Usually solitary, to 15 cm high by 6 cm. [CS/P]

DISTRIBUTION: Mexico, Colima, Rancho Tecuan,

Cerro Barrigón and nearby on Cerro de Carrizal.

**Mammillaria rettigiana** Boed.

Solitary, globular, about 4 cm across. Fl pale pink, 1.5 cm across. [CS/W]

DISTRIBUTION: Mexico, original locality not cited, plants fitting the description have been collected recently between the city of Guanajuato and Dolores Hidalgo.

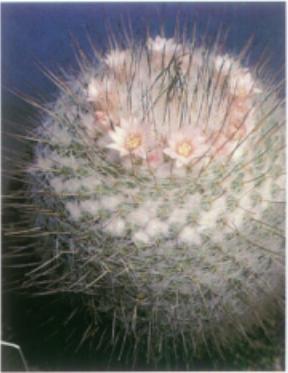
OTHER NAMES: *M. pachiana*.

**Mammillaria rhodantha** Link & Otto

Usually solitary, stems to 40 cm high by 12 cm. Rsp 17–24, 4–9 mm, glassy-white to pale yellow; esp 4–9, to 25 mm, yellowish to reddish-brown. [K248/IP/K]

DISTRIBUTION: Mountains to the E. and N of the Valley of Mexico.

OTHER NAMES: *M. aureicarpa*, *M. fuscata*.

**Mammillaria ritteriana** Boed.

Solitary, globular, 6 cm across. Closely related to *M. chionocephala* but much smaller and with longer and finer spines. [K286-1/IP/K]

DISTRIBUTION: Higueras, between Monterrey and Saltillo, in Coahuila, Mexico.

**Mammillaria roseocalyx** Boed.

Solitary, depressed-globose, to 18 cm across, 6 cm high. [SH285/CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, Progreso, near Victoria.

**Mammillaria rubrograndis** Repp. & Lau

Solitary, 4–10 cm high by 10–18 cm. Fl rarely produced, (at least in the British Isles), 4.5 cm across, bright carmine. [CS/PM]

DISTRIBUTION: Mexico: Tamaulipas, between Jaimave and Ciudad Victoria; Nuevo Leon, Dulces Nombres.

**Mammillaria rupestri** Quechl

Solitary, to 40 cm high by 7 cm. [CS/W]

DISTRIBUTION: Guatemala, Honduras.

**Mammillaria saboae** Glass

Clumping, stems 1–2 cm tall and broad. Fl 4 cm across. v. *goldii* (G. & F.) Glass & Foster, (illus.); sparingly offsetting, stem to 3 cm by 3 cm. Fl 3.5 cm wide [Nacozari, Son.] fa. *haudeana* (Lau & Wagner) D. Hunt; clumping, stem to 4 cm tall. Fl 6.5 cm wide [Yecora, Son.] [P/P]

DISTRIBUTION: Mexico, SW Chihuahua, near Terrenas.

OTHER NAMES: *v. goldii*; *M. goldii* fa. *haudeana*; *M. haudeana*.

**Mammillaria saetigera** Boed. & Tieg.

Solitary, globose, to 7 cm high. Fl 2 cm wide, white with pink midstripe. A plant of uncertain status but the illustration shows a habitat specimen of the plant commonly in circulation as this species. [H]

DISTRIBUTION: Mexico: Querétaro and San Luis Potosí.

**Mammillaria sartorii** Purpus

Stems to 12 cm tall by 10 cm, clumping. [CS/P]

DISTRIBUTION: Mexico, Vera Cruz, Barranca de Tenampa.

**Mammillaria saxicola** Repp.

Heads to 10 cm high by 8 cm, later offsetting to form small clumps. Rsp 6–8, 2–5 mm, glassy-yellow, brown tipped; cap 1–2, 7–40 mm long, lowest longest, glassy-yellow or brown, dark tip. Fl 20 mm long. [Repp1139/CS/PM]

DISTRIBUTION: Mexico, Querétaro, Jalpan.

**Mammillaria schiedeana** Ehrenb.

Heads to 10 cm high by 4 cm, clustering, spines soft; fl in autumn. [CS/W]

DISTRIBUTION: Mexico, Hidalgo, Puente de Dios and Barrancas around Metztitlán.

**Mammillaria schumannii** Hildm.

Heads to 13 cm long by 4.5 cm, strongly clumping. Fl 4 cm across. v. *globosa* Wolf is solitary, globose, 4–5 cm across, with shorter spinulation (Cabo San Lucas). [CS/W]

DISTRIBUTION: Mexico, Baja California, near San José del Cabo and between Bahía de las Palmas and Cabo San Lucas.

OTHER NAMES: *Bartschella schumannii*.

**Mammillaria schwarzii** Shurly

Heads 2–3 cm across, clumping. Spines glassy-white, often tipped reddish-brown. [CS/DHS]

DISTRIBUTION: Mexico, N Guanajuato.

**Mammillaria scrippsiana** (B. & R.) Orcutt

Solitary or clumping, to 29 cm high by 8.5 cm, esp 6–10, esp 1–2. Fl pink. v. *pseudoscrippsiana* (Bkg.) Repp. has cream fl with reddish-brown midstripe (Ahucatlan, Nayarit). [K91/EP/K]

DISTRIBUTION: Mexico. Numerous localities in Jalisco and Nayarit and from Santa Rosa in Zacatecas.

OTHER NAMES: *M. oreogae*, *M. scrip.* v. *asthenensis*; v. *pseudoscrip.*; *M. pseudoscrippsiana*.

**Mammillaria semperfervivi** DC.

Solitary later clumping, heads to over 7 cm broad, spherical to elongated. Cap 2–4. Fl dirty white with pink midstripe. [CS/E]

DISTRIBUTION: Mexico, Hidalgo, Zimapán to Venados.

OTHER NAMES: *M. semp.* v. *tetraontha*, *M. aqua-medusae*, *M. semp.* v. *capit-med.*

**Mammillaria senilis**

[attrib. to Lodd. by] S-D

Heads globular to cylindric, up to 15 cm high by 10 cm forming large mounds. [CS/PM]

DISTRIBUTION: Mexico, from Chihuahua through the high Sierra Madre S to Jalisco.

OTHER NAMES: *Mammillaria senilis*. Probably *M. diguetii* originally *Mammillaria diguetii*.

**Mammillaria setispina**

(Coulter) K. Brandegee

Heads up to 30 cm high by 6 cm, strongly clustering. Fl red, 5 cm long. [CS/PM]

DISTRIBUTION: Mexico, Baja California, San Julio Canyon, near San Borgia.

OTHER NAMES: *Cockenaea setispina*.

**Mammillaria sheldonii** (B. & R.) Boed.

Stems to 10 cm high by 3 cm, clumping. [SB545/CS/PM]

DISTRIBUTION: Mexico, Sonora, Hermosillo to N Sinaloa.

OTHER NAMES: ?*M. gueldemanniana*, ?*M. guadalcanalensis*.

**Mammillaria silvatica** Repp.

Body to 9 cm high by 6 cm, solitary or clumping; rcp 19–24, 3–8 mm long, glassy white; esp 2–5, 6–20 mm long, brown. Fl 10–12 mm broad, carmine. A member of the *M. spinosissima* complex. [Repp1603/IP/Repp]

DISTRIBUTION: Mexico, Jalisco, Los Cerritos.

**Mammillaria sinistrohamata** Boed.

Solitary, (clumping in cultivation), heads to 4.5 cm across, globose. Closely related to *M. mercadensis*. [CS/W]

DISTRIBUTION: Mexico, NE Zacatecas.

**Mammillaria solisioides** Bkhg.

Solitary in habitat, clustering in cultivation, stems to 6 cm high and 5 cm across. [CS/GC]

DISTRIBUTION: Mexico, Puebla, S of Pefalzingo.

OTHER NAMES: *M. pectinifera* fa. *solisioides*.

**Mammillaria sonorensis** Craig

Heads globose, to 8 cm across, clumping. Rsp 8–15, 1–20 mm, esp 1–4, 5–45 mm. [K243/IP/K]

DISTRIBUTION: Mexico, in the region where Sonora, Chihuahua and Sinaloa meet.

OTHER NAMES: *M. bellisima*.

**Mammillaria sphaelata** Mart.

Stems cylindric to 20 cm long by 3 cm, clumping. [K226-1/IP/K]

DISTRIBUTION: Mexico, around Toluca, Puebla and S into adjacent Oaxaca.

**Mammillaria sphaerica** Dietr.

Heads flattened-globose to 5 cm across, clumping. Fl 6 cm across. [CS/PM]

DISTRIBUTION: SE Texas into Tamaulipas, Mexico.

OTHER NAMES: *Dolichothelium sphaericum*.

**Mammillaria spinosissima** Lem.

Clustering, stems to 30 cm or more high by 10 cm, spines very variable in colour from whitish through yellowish-brown, pink or reddish-brown to ruby-red. [Repp772/CS/PM]

DISTRIBUTION: Mexico: Mexico DF; Morelos and S into Guerrero scattered localities on cliffs.

OTHER NAMES: *M. auricoma*, *M. flava*, *M. blaudiae*.

**Mammillaria standleyi** (B. & R.) Orcutt

Solitary, to 10 cm across, depressed-spherical. [W]

DISTRIBUTION: Mexico, Sonora, near Alamos.

**Mammillaria subducta** (Hunt) Repp.

Solitary or sparingly clumping, heads to 7 cm across. Spines hard. [CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, between Ciudad Victoria and Jaujave.

OTHER NAMES: *M. laui* *fa. subducta*.

**Mammillaria subducta**

*v. dasycantha* (Hunt) Repp.

Heads to 5 cm across, strongly clumping in cultivation. Spines relatively soft. [E]

DISTRIBUTION: Mexico, Tamaulipas, between Ciudad Victoria and Jaujave.

OTHER NAMES: *M. laui* *fa. dasycantha*.

**Mammillaria supertexta** Mart. ex Pfeiff.

Solitary, to 12.5 cm high by 9.5 cm. [K5/IP/K]

DISTRIBUTION: Mexico, N Oaxaca and adjacent Puebla.

OTHER NAMES: *M. leonata*, *M. martinii*.

**Mammillaria surculosa** Boed.

Heads to 2 cm across, strongly offsetting to form mats. [CS/P]

DISTRIBUTION: Mexico: Tamaulipas, Mapimí and San Luis Potosí, between Huizache and Tula.

OTHER NAMES: *Dolichothelos surculosa*.



**Mammillaria swinglei** (B. & R.) Boed.  
Stems to 30 cm high by 5 cm, sparingly clustering from the base. [I.606/CS/PM]  
DISTRIBUTION: Mexico, Sonora, Guaymas.  
OTHER NAMES: *M. inaeiae*.



**Mammillaria tayloriorum** Glass & Foster  
Stems globose to cylindric to 25 cm high by 11 cm, eventually clustering. [K242/IP/K]  
DISTRIBUTION: Mexico, Sonora, Isla San Pedro Nolasco.



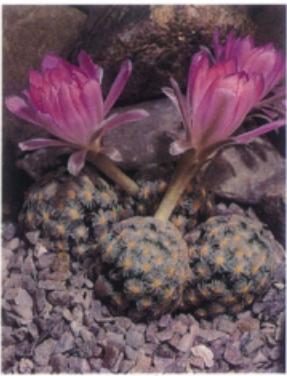
**Mammillaria tegelbergiana**  
Gates ex Lindsay  
Solitary (clumping in cultivation) stems to 9 cm tall by 6 cm. [IP/K]  
DISTRIBUTION: Mexico, Chiapas, W of Ocozocauila and other sites; S Oaxaca.



**Mammillaria tesopacensis** Craig  
Solitary, spherical to oblong, to 18 cm high by 13 cm. Fl. cream or pink (e. rufiflora, illus.). Possibly only a form of *M. sonorensis*. [K179/IP/K]  
DISTRIBUTION: Mexico, Sonora, near Tesopaco.



**Mammillaria tetrancistra** Engelm.  
Stems to 25 cm high by 7.5 cm, clustering. [CS/E]  
DISTRIBUTION: California near San Felipe, otherwise widely distributed in SW USA and NW Mexico.  
OTHER NAMES: *Phellosperma tetrancistra*.



**Mammillaria theresae** Cutak  
Stem to 4 cm high by 2 cm, sparingly clustering. [IP/GC]  
DISTRIBUTION: Mexico, Durango, E slope of Coneto Mts.  
OTHER NAMES: *M. subserrata theresae*.

**Mammillaria thornberi** Orcutt

Stems cylindric, to 10 cm high by 2.5 cm, densely clustering. [CS/PM]

DISTRIBUTION: S Arizona and Mexico, N Sonora.  
OTHER NAMES: *M. fasciculata*.

**Mammillaria tlahocii** Repp.

Solitary, to 20 cm high by 7 cm. Fl not opening widely, 8–10 mm across, carmine. [L1109/IP/K]

DISTRIBUTION: Mexico, Oaxaca, Barranca Ixcatlán.

**Mammillaria tonalensis** D.R. Hunt

Slender cylindric, to 12 cm or more long by 3 cm. Fl 12 mm across, petals carmine with whitish margins. [IP/W]

DISTRIBUTION: Mexico, Oaxaca, Puerto de Tonala.

**Mammillaria tropica** Repp.

Stem to 10 cm high by 8 cm, forming large clumps; spines 4(–5), glassy yellow tipped brown. Fl yellowish, 1.5 cm broad. Closely related to *M. knippeiana*. [Repp677/H]

DISTRIBUTION: Mexico, Jalisco, Tomatlán.

**Mammillaria uncinata** Zuc. ex Pfeiff.

Stems depressed-globos-, to 10 cm across, occasionally offsetting sparingly from the base. [PM26/HS/PM]

DISTRIBUTION: Mexico, Hidalgo, near Pachuca and widely distributed in CS Mexico.

**Mammillaria vallensis** Repp.

Clumping, body to 6 cm high by 8 cm, esp 2–3, 1–3 mm long; esp 1, 1–4.5 cm long, v. *brevispina* Repp. (lower illus. [Repp1119/CS/PM]) is solitary; esp 4–6, esp 1, 5–20 mm long (Tamaulipas, Abra Celeya). [Repp1117/IP/Repp]

DISTRIBUTION: Mexico, San Luis Potosí, Abra/Valles.

**Mammillaria variabilis** Repp.

Stem to 8 cm high by 4 cm, clumping; rcp 14–19, 6–10 mm long, white; csp 4–9, 7–10 mm long, the lowest longest and hooked, all glassy white to reddish- or dark-brown. Fl 12–16 mm broad, whitish, yellowish or pinkish. [Repp1393/IP/Repp]

DISTRIBUTION: Mexico, Guanajuato, Abasolo.

**Mammillaria varieaculeata** Buchenau

Stems to 13 cm high by 9 cm forming large clumps. Fl 17–18 mm long, reddish-purple. [K145-1/IP/K]

DISTRIBUTION: Mexico, Puebla, S of Chilac.

**Mammillaria vetula** Mart.

Stems to 4 cm across, clustering. Fl 12 mm across, dirty yellowish-cream. [W]

DISTRIBUTION: Mexico, Hidalgo, San Jose del Oro.

OTHER NAMES: *M. kuetzingiana*, *M. magnifica*.

**Mammillaria viereckii** Boed.

Stems to 5 cm high by 4 cm, sparingly clumping. Related to *M. pieta*. [CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, near Nogales.

**Mammillaria viperina** Purpus

Stems slender-cylindric, to 2 cm across. Fl 11 mm long, light carmine, not opening widely. Probably only an extreme southern form of *M. sphacelata*. [HIS/PM]

DISTRIBUTION: Mexico, Puebla, Rio de Zapoalpan.

**Mammillaria virginis** Fittkau & Kladiwa

Usually solitary, to 25 cm high by 8 cm. A member of the complex of plants centred on *M. spinosissima*. [CS/W]

DISTRIBUTION: Mexico, Guerrero, near Ancon.



**Mammillaria viridiflora** (B. & R.) Boed.

Stem usually solitary but sometimes clustering, heads to 10 cm high by 7.5 cm. [CS/W]

DISTRIBUTION: Arizona, near Boundary Monument.

OTHER NAMES: *M. quetzalii*, *M. oreastera*, *M. wilcoxii* v. *viridiflora*, *M. weinbergii* v. *viridiflora*.



**Mammillaria voburnensis** Scheer

Heads to 20 cm long by 8 cm, freely offsetting. Fl 2 cm long, yellow with brownish dorsal stripe. v. *eichlamiae* (Qzebl) Repp., v. *collinsii* (B. & R.) Repp. and v. *quetzalcoatl* Repp. differ in a number of minor details. [CS/W]

DISTRIBUTION: Guatemala, Mexico, Oaxaca, Tehuantepec (v. *collinsii*); Oaxaca, Mixtequilla (v. *quetz.*); Chiapas, Rio Grijalba, Tuxtla Gutierrez. (v. *eichl.*).

OTHER NAMES: *M. collinsii*, *M. eichlamiae*.



**Mammillaria wagneriana** Boed.

Solitary, depressed-globose to 10 cm across. Fl 1.5 cm broad, dirty white with pale pink midstripe. [Repp1508/CS/W]

DISTRIBUTION: Mexico, Zacatecas.



**Mammillaria weingartiana** Boed.

Stems globose, 4–5 cm across, usually solitary, perhaps offsetting with age. Fl pale greenish-yellow with pinkish-brown midstripe. [CS/E]

DISTRIBUTION: Mexico, Nuevo Leon, Ascension.

OTHER NAMES: *M. weingartiana*.



**Mammillaria wiesingeri** Boed.

Solitary, depressed-globose, to 4 cm tall by 8 cm. [K247-1/IP/K]

DISTRIBUTION: Mexico, Hidalgo, near Metzquititlan.

**Mammillaria wilcoxii** Toumey ex Sch.

Stem spherical to elongated to 10 cm high by 5 cm, solitary or clumping. Fl 4 cm across. [L-778/CS/PM]

DISTRIBUTION: SW New Mexico, S Arizona, N Sonora and adjacent Chihuahua, Mexico.

OTHER NAMES: *M. weingartii* v. *wilcoxii*, *M. meridionalis*.

**Mammillaria wildii** A. Dietrich

In habitat small, in cultivation to 15 cm long by 6 cm, clumping. [SB14/C/S/PM]

DISTRIBUTION: Mexico, Hidalgo, Barranca of the Rio Grande, E. of Metepecan.

OTHER NAMES: *M. sulcata*.

**Mammillaria winterae** Boed.

Solitary, depressed-globose, up to 30 cm across. [K289/IP/K]

DISTRIBUTION: Mexico, Coahuila around Saltillo and in Nuevo Leon near Monterrey.

OTHER NAMES: *M. zehniiana*.

**Mammillaria wohlschlageri** Repp.

Solitary, body flattened-globular to 3 cm high by 6 cm. Spines 26–36, 2–6 mm long. Fl not widely opening, 18–20 mm long, dirty white. [K291/IP/K]

DISTRIBUTION: Mexico, Zacatecas, La Cardona.

**Mammillaria wrightii** Engelm. & Bigelow

Usually solitary, globular to short-columnar, to 8 cm across. Flower 2.5 cm broad, deep pink. v. *wolffii* (Hunt) Repp. (illus.) from Santa Clara Canyon, Chihuahua, Mexico, has white flowers. [CS/F]

DISTRIBUTION: Arizona and New Mexico.

OTHER NAMES: v. *wolffii*; *M. wrightii* f. *wolffii*; '*M. wolffii*'.

**Mammillaria xantianguensis**

Sánchez-Mejorada

Stem to 20 cm high by 8 cm, solitary or occasionally clustering. Fl small, yellowish with purple stripes on the outer petals. [CS/W]

DISTRIBUTION: Mexico: Guerrero, near Xantianguis and other localities; Michoacan, near Aguililla and between Playa Azul and Arteaga.

**Mammillaria xochipilicola** Repp.

Solitary, to 20 cm high by 9 cm; spines 4–6, 3–20 mm long, brown to black. Fl 12–15 mm across, carmine. Closely related to *M. magnimamma*. [Repp1709/H]

DISTRIBUTION: Mexico, Hidalgo, San Jose del Oro.

**Mammillaria yaquensis** Craig

Joints to 7 cm by 1.5 cm, clustering freely. Probably a southern variety of *M. thornberi*. [CS/PM]

DISTRIBUTION: Mexico, Sonora, Rio Yaqui and S of Guaymas.

**Mammillaria yucatanensis**  
(B. & R.) Orcutt

Stems to 15 cm high by 6 cm. [IP/K]

DISTRIBUTION: Mexico, Yucatan, Progreso, possibly extinct.

**Mammillaria zacatecasensis** Shurly

Solitary, to 12 cm high by 7 cm. [CS/PM]

DISTRIBUTION: Mexico, mountains near the city of Zacatecas.

**Mammillaria zeilmanniana** Boed.

In cultivation heads to 12 cm high by 8 cm, solitary or clustering. [CS/P]

DISTRIBUTION: Mexico, Guanajuato, near San Miguel Allende.

**Mammillaria zephyranthoides** Scheidw.

Solitary, to 8 cm high by 10 cm. Fl 4 cm across. [CS/P]

DISTRIBUTION: Mexico: Oaxaca; Puebla; Hidalgo and Queretaro.

OTHER NAMES: *Dolichostele zephyranthoides*.

**Mammillaria zeyeriana** Haage ex Sch.

Solitary, up to 10 cm or more across, flattened-globose. [CS/PM]

DISTRIBUTION: Mexico, Coahuila, Viesca.

**Mammillaria zubleri** Repp.

Body to 5 cm high by 4.5 cm, clumping; rcp 20–24, 4–7 mm long, white tipped yellow; csp 5–6, 5–9 mm long, glossy yellow. Fl 14–16 mm across, bright yellow. Closely related to *M. picta*. [IP/Repp]

DISTRIBUTION: Mexico, Tamaulipas, Ocampo.

**Mammillaria zuccariniana** Mart.

Solitary, to 20 cm high by 10 cm or more; rcp 3–4, 2–6 mm long; csp 2, the upper 25 mm, the lower slightly longer. Fl 25 mm long, rose-purple. The plant illustrated is the one which currently best fits this original description. [CS/W]

DISTRIBUTION: Mexico, Hidalgo, reported originally from Ixmiquilpan; recent collections from between Zimapán and Encarnación.

**Matucana aurantiaca** (Vpl.) Ritt.

Usually solitary, to 15 cm high and broad. Fl to 9 cm long. [CS/PM]

DISTRIBUTION: Peru: Cajamarca between Chota and Huallayoc; Huancabamba near Sondor.

OTHER NAMES: *Burseria aurantiaca*, *B. calvescens*, *M. calvescens*, *Submatucana aurantiaca*, '*S. aguarensis*', '*S. calvans*', '*S. calvescens*', '*S. grandiflora*', '*S. nitosa*'.

**Matucana auriciflora** Ritt.

Flattened-globular, to 13 cm across. Fl to 4.5 cm long. [L104/IP/GC]

DISTRIBUTION: Peru, Cajamarca, Banos del Inca.

OTHER NAMES: *Submatucana aureiflora*, *Burseria aureiflora*.

**Matucana comacephala** Ritt.

Solitary, becoming columnar, usually to 75 cm high by 8 cm. Fl pink to carmine (L103, L185) or pinkish-orange (L173). [L185/IP/DHS]

DISTRIBUTION: Peru; mountains above the Río Marañón, from Balsas to Llamellín and Huari (*M. auricentra* s.n.).

OTHER NAMES: *M. calcicephala*, *M. winteri*.

**Matucana crinifera** Ritt.

Globular to elongated, 30 cm high by 10 cm. Fl 6–7 cm long. Probably only an extension of the range of the previous species. [IP/F]

DISTRIBUTION: Peru, Dept. of Ancash, Machac.

**Matucana formosa** Ritt.

Globular, up to 15 cm across. Fl 9–10 cm long, carmine.

DISTRIBUTION: Peru, Dept. of Cajamarca, Balsas.

OTHER NAMES: *Submatucana formosa*, *Borziacactus formosus*.

**Matucana haynei** (Otto) B. & R.

Usually solitary to 60 cm high by 15 cm. Fl 5–7 cm long, red. 'v. breviflora' (*M. breviflora* Rauh & Blbg.) is globular, 15 cm tall and broad; fl only 4 cm long. [W of Inciøo]. [IP/GC]

DISTRIBUTION: Peru, various valleys running inland from the sea e.g. Pisco Valley, Fortaleza Valley.

OTHER NAMES: *M. manci*, *M. crevidea*, *M. elongata*, *M. kerripiana*, *M. leptira* & var., *M. radiata*, *M. superista*, *M. variabilis*, *M. jangonensis*, *Borziacactus haynei*, *B. variabilis*.

**Matucana huagalenensis**

(Don & Lau) Bregman et al

Solitary, short-cylindric. Fl originally described as pale pink but all subsequent collections seem to be as illustrated. [CS/PJ]

DISTRIBUTION: Peru, Hacienda Huagal, near junction of the Rio Crisnejas and Rio Maranon.

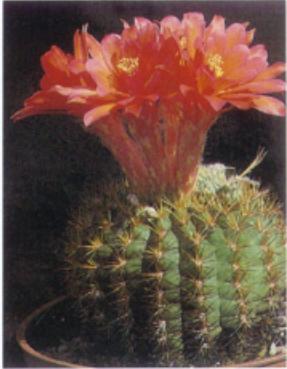
OTHER NAMES: *Borziacactus huagdenis*.

**Matucana intertexta** Ritt.

Solitary, to 36 cm high by 7–18 cm. Fl 7.5–10.5 cm long, petals golden yellow, blood-red above. [KK/IP/GC]

DISTRIBUTION: Peru, Puente Crisnejas, N of Cajamarca.

OTHER NAMES: *Borziacactus inter*, *Submatucana inter*.

**Matucana intertexta** v. *celendinensis* (Ritt.) Bregman

*Matucana intertexta* v. *celendinensis* (Ritt.) Bregman et al.

Solitary, to 12 cm across. Fl 7.5 cm long. [IP/GC]

DISTRIBUTION: Peru, between Celendin and Balsas.

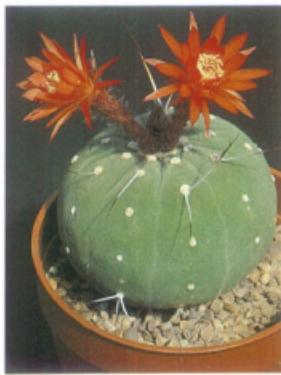
OTHER NAMES: *Borziacactus intertextus* v. *celendinensis*, *M. celeni*.

**Matucana krahni** (Don.) Bregman

Heads 5–6 cm across, depressed-globose, solitary. Fl to 8.5 cm long. [KK758/IP/GC]

DISTRIBUTION: Peru, Dept. of Amazonas, East of Balsas.

OTHER NAMES: *M. callistetha*, *Borziacactus krahni*.

**Matucana madisoniorum**

(Hutch.) Rowley

Spherical, later becoming elongated, to 7 cm across. Fl 8–10 cm long. [HS/GC]

DISTRIBUTION: Peru, Dept. of Amazonas, near the Río Marañon.

OTHER NAMES: *Sabratuana mad.*, *Breviscuta mad.***Matucana myriacantha** (Vpl.) Bux.

Usually solitary, body globose to short cylindric, 8 cm across; np white, pale yellow or light brown; esp ginger with darker tips. [CS/PM]

DISTRIBUTION: Peru, 20 km NE of Balsas.

OTHER NAMES: *M. pauperaeifolia*, *M. rosealba*.**Matucana oreodoxa** (Ritt.) Slaba

Flattened globular, to 8 cm across, solitary. Fl 4–6 cm long. [CS/PM]

DISTRIBUTION: Peru, Dept. of Ancash, Rahuapampa Gorge.

OTHER NAMES: *Borzicactus oreodoxa*.**Matucana pallarensis** Ritt.Globular, to 10 cm across, solitary. Probably only a form of *M. aurantiaca*. [CS/PM]

DISTRIBUTION: Peru, Dept. of La Libertad, El Pallar.

OTHER NAMES: *Borzicactus weberbaueri* v. *pall.***Matucana paucicostata** Ritt.

Body to 14 cm high by 7 cm, freely clustering. Fl 6 cm long. [L187a/IP/GC]

DISTRIBUTION: Peru, Dept. of Ancash, Rahuapampa.

OTHER NAMES: *Borzicactus pauc.*, *Sabratuana pauc.*, *M. acerifolia*, *M. emiliae*, *M. huarizensis*, *M. paucipina*, *M. senilis*, *M. tenuis*, *M. tarkniformis*.**Matucana polii** Diers, Don. & Zecher

Strongly offsetting, heads to 5 cm high by 8 cm. Fl to 7 cm long, red. [IP/DHS]

DISTRIBUTION: Peru, above the Río Marañon in SW part of Dept. of Huanuco.

**Matucana pujupati**

(Don. &amp; Lau) Bregman

Similar to *M. madisoniorum* but ribs more tuberculate, body greener, spines always present. LAU IP/GC.

DISTRIBUTION: Peru, Dept. of Amazonas, near Puente Julio 24 on the Chama to Hagua road.

OTHER NAMES: *Borzicactus mad. v. pujupati*.**Matucana ritteri** Buin.

Depressed globose, to 14 cm broad, eventually clumping. Fl to 9 cm long. [IP/GC]

DISTRIBUTION: Peru, Dept. of La Libertad, Otuzco.

OTHER NAMES: *Submatucana ritteri*, *Borzicactus ritteri*.**Matucana tuberculosa** Ritt.

Stems 4–6 cm across, globular to elongated, clumping. Fl 5.5 cm long. [IP/F]

DISTRIBUTION: Peru, Dept. of La Libertad, El Chagual.

**Matucana weberbaueri** (Vpl.) Bkbg.

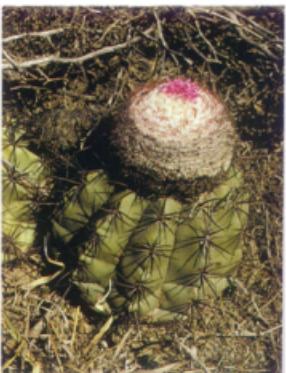
Body to 7 cm high by 15 cm, sometimes offsetting. Fl 5.5 cm long, lemon-yellow. 'v. flammatus' has orange-yellow flowers. [IP ex Lau/GC]

DISTRIBUTION: Peru, Dept. of Amazonas, Balsas.

OTHER NAMES: *Borzicactus weberbaueri*; 'v. flammatus'; *M. weberi*, *fl. flava*.**Melocactus azureus** Buin. & Bred.

Solitary, to 17 cm high by 14 cm. [IP/Hovens]

DISTRIBUTION: Brazil, Bahia, Serra do Espinhaco above the Rio Jacare.

**Melocactus caesius** Wendl.

S solitary. [PM137/11]

DISTRIBUTION: Widespread along the coast of Venezuela and inland into the drier areas.



**Melocactus glaucescens** Buin. & Bred.

Solitary, to 14 cm high and broad. [H]

DISTRIBUTION: Brazil, C. Bahia, in W Serra do Espinhaco.



**Melocactus matanzanus** Leon

To 8 cm high and 9 cm across. [IP/Hovens]

DISTRIBUTION: Cuba, Matanzas.



**Melocactus oreas** Miqu.

To 12 cm or more high, spines noticeably long.  
[PM123/H]

DISTRIBUTION: Brazil, Bahia, particularly common around Jequié on the Rio do Contas.

OTHER NAMES: *M. crenospinus*, *M. erythracanthus*,  
*M. longipinnis*, *M. rubrispinosa*.



**Melocactus oreas subsp. ernestii**

(Vpl.) Braun

Spines longer and more twisting than in the species,  
brownish to yellowish. [PM130/H]

DISTRIBUTION: Brazil, Bahia, Rio das Contas valley.

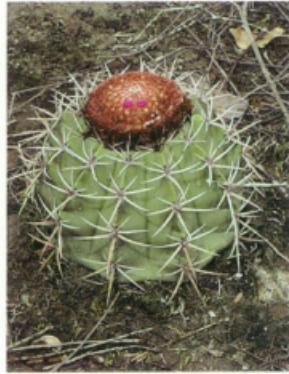
OTHER NAMES: *M. acadiana*, *M. ernestii*, *M. nitida*.



**Melocactus peruvianus** Vpl.

DISTRIBUTION: Widespread in Peru.

OTHER NAMES: '*M. alpina*', *M. amnitiae*, *M. chalensis*,  
*M. haduleanensis*, *M. janseniana*, *M. trujillensis*,  
*M. seguineae*.



**Melocactus salvadorensis** Werd.

Solitary, hemispherical, to 12 cm across.

DISTRIBUTION: Brazil, Bahia.

**Mila caespitosa** B. & R.

Stems to 30 cm long by 3 cm, spination very variable in colour and length. Fl 2 cm across. [PM61/H]

DISTRIBUTION: Peru, in several river valleys, e.g. Rimac, Larin, Santa and Pisco.

OTHER NAMES: Any other Mila name is now regarded as this species.

**Neolloydia conoidea** (DC.) B. & R.

Stems usually clustering, to 15 cm high by 5 cm. Flower 6 cm across. [PM54/H; PM]

DISTRIBUTION: From Texas and throughout a large area of Tamaulipas and San Luis Potosí in Mexico, with many local forms.

OTHER NAMES: *N. ceratites*, *N. grandiflora*, *N. mattheioides*, *N. tenella*.

**Neopoteria aspillagai** (Sohr.) Blkg.

Stem to 15 cm across, flattened, sparingly offsetting. Probably a variety of *N. horrida*. Fl 4 cm long. [L880/IP/F]

DISTRIBUTION: Chile, Hacienda Tamame.

OTHER NAMES: *Newkirkia aspil.*, *Pyrhocactus aspil.*

**Neopoteria atroviridis**

(Ritt.) R.M. Ferryman.

Solitary, to 10 cm across, becoming elongated. Fl 4–5 cm across, petals pink edged yellow. [PM234/H]

DISTRIBUTION: Chile, around Vallenar.

OTHER NAMES: *Horridocactus atrov.*, *Nop. infernalis* v. *atrov.*, *Pyrhocactus atrov.*

**Neopoteria calderana**

(Ritt.) Don. & Rowley

Solitary, 5–8 cm across, globose to elongate; rcp 8–10, 1–3.5 cm long, esp 3–5, 2–4 cm long. Fl 3.5 cm broad, white to pink. [RMF171/IP/F]

DISTRIBUTION: N Chile, Caldera to Chanaral.

OTHER NAMES: *Newkirkia cald.*, *Pyrhocactus cald.*, *Nop. intermed.*, *Nop. int.*, *Pyr. pilosiss.*, *Pyrho. pil.*, *Pyrho. gigantea*, *Nop. pilosiss.* & *fa. gig.*, *Horridocactus separans*, *Nop. separans*, *Nop. sing.*, *Pyrh. sep.*, *Nop. gracilis*, *Nop. cald. fa. grac.*, *Pyrho. grac.*

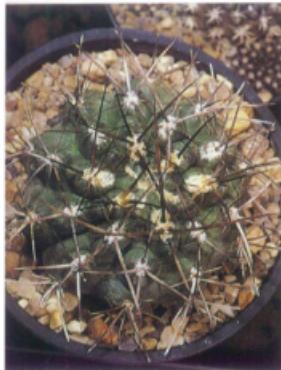
**Neopoteria chilensis**

(Hildm.) Don. & Rowley

Solitary or clumping to 30 cm high and 10 cm across. Fl pink or white, 5 cm across. [PM258/H]

DISTRIBUTION: Coast of Chile to N and S of Pichidangai.

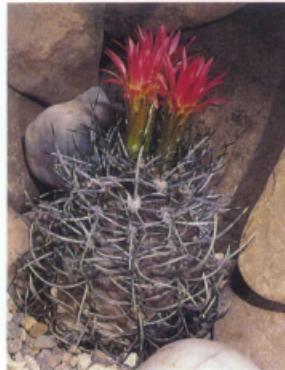
OTHER NAMES: *Newkirkia chilensis*, *Pyrhocactus chilensis*, *P. chilensis* v. *albiflora*.

**Neopoteria chorosensis**

(Ritt.) Don. &amp; Rowley

Solitary, flattened-globular, to 6 cm across. Fl 4 cm across, light yellow. [RMF17/1P/F]

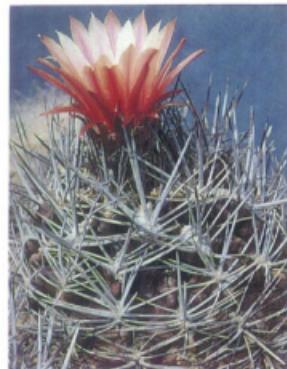
DISTRIBUTION: Chile, Chorus to Trapiche.

OTHER NAMES: *Nesichilia choru*, *Nes. deherdtiana*, *Nes. schiedii* n.n., *Nes. minima* n.n., *Pyrhocactus choru*, *P. trapichei*.**Neopoteria clavata** (Sohr.) Werd.At first globular then to 1.5 m high by 15 cm. Fl 5 cm long, v. *procera* Ritt. has smaller flowers and is less spiny. [RMF117/1P/F]

DISTRIBUTION: Chile, Elqui Valley.

**Neopoteria coimensis** Ritt.Solitary, to 30 cm and more high by 12 cm. Fl 5–7.5 cm long, 4 cm broad, widely opening, v. *robusta* (Ritt.) Ritt., (upper, [RMF182/1P/F]) tends to have thicker and darker spinulation; fl to 8 cm long (E of Montenegro). [RMF105/1P/F]

DISTRIBUTION: Chile, Las Coimas and from Las Chicas in the S to N of Illapel.

OTHER NAMES: v. *robusta*: *Neopoteria robusta*.**Neopoteria confinis**

(Ritt.) Don. &amp; Rowley

Solitary, body green or black, globular later elongated, 6–8 cm broad. Fl 3 cm across. [RMF173/1P/F]

DISTRIBUTION: Chile, Monte Amargo.

OTHER NAMES: *Nesichilia confinis*, *Pyrhocactus confinis*.**Neopoteria crassa** (Ritt.) Don. & Rowley

Solitary, flattened-globular to 7 cm across, spination hair-like. Fl 3.5 cm across, pale yellow with a narrow purple midstripe. [IP/F]

DISTRIBUTION: Chile, Freirina.

OTHER NAMES: *Pyrhocactus crassus*, *Harrildiactus crassus*, *Nesichilia nigrosparsa*.**Neopoteria curvispina** (Bert.) Don. & Rowley

Solitary, globular to over 15 cm across, spination very variable fl 3.5 cm across, straw coloured (often with a red midstripe). [RMF221/1P/F]

DISTRIBUTION: Chile. A very variable taxon widespread in the mts. around Santiago, and a long way N and S.

OTHER NAMES: *Harrildiactus curvifl*, *H. andinulus* & var., *H. hissaricus* & v. *gracilis*, (= *H. egglei* v. *brouni* & Nepp. eng. v. br.) *Neop. curv. v. auct.*, *N. curv. v. and.*, *N. curv. v. liss.*, *Pyrhocactus curvifl*, *P. oligonyx*.



**Neopoteria curvispina v. grandiflora**  
(Ritt.) Don. & Rowley

Solitary, globose to 15 cm broad. Fl to 7 cm across.  
[PM192/H]

DISTRIBUTION: Chile, Cerro Ramon, over 2000 m.

OTHER NAMES: *Horridocactus grandif.*, *Pyrhocactus grandif.*



**Neopoteria echinus**  
(Ritt.) R.M. Ferryman

Solitary, globular to elongated, 6–9 cm across, rcp 8–14,  
csp 1–8. Fl to 3 cm long, 2 cm wide, white with pink  
midstripe, sometimes flushed yellow. [RMF42/IP/F]

DISTRIBUTION: Chile, Cerro Coloso and El Cobre, near  
Antofagasta.

OTHER NAMES: *Horridocactus echinus*, *N. curvispina*  
v. *echinus*, *N. eriophala* v. *glaucescens*, *Nenc.* *glaucescens*,  
*Pyrhocactus echinus*, *P. glaucescens*.



**Neopoteria echinus v. floccosa**  
(Ritt.) R.M. Ferryman

Mainly distinguished from the species by the generally  
larger amount of hair, which can be quite dense in the  
crown, but may often be absent or nearly so. [CS/PM]

DISTRIBUTION: Chile, coastal mountains Prov. of  
Antofagasta.

OTHER NAMES: *Newihelia flacc.*, *Pyrhocactus flacc.*, *Nep.*  
*eriocephala* (Bübg.) Don. & Rowley wrongly applied here  
(= *Neop. odieri* v. *malleolata*).



**Neopoteria engleri** (Ritt.) Don. & Rowley  
Solitary, to 30 cm high by 18 cm, spines, white, yellow, or  
brown with black tips. Fl 4.5 cm across, yellow usually with  
pink midstripe. [IP/F]

DISTRIBUTION: Chile, mountains between Santiago and  
Valparaiso.

OTHER NAMES: *Horridocactus engleri*, *Pyrhocactus engleri*.



**Neopoteria eriosyzoides**  
(Ritt.) Don. & Rowley

Solitary, green, globular to elongated, 9–12 cm wide. Fl  
3 cm broad, brownish-yellow with a reddish-brown  
midstripe. v. *domeykoensis* (Ritt.) R.M. Ferryman comb.  
nov. (*Pyrhocactus eriosyzoides* v. *domeykoensis* Ritt. 1980),  
Kak, in Sudam. 3: 938.; body with blackish tints, spines  
paler, more rcp. Fl larger (Domeyko). [RMF123/IP/F]

DISTRIBUTION: Chile, Elqui Valley, Huanta.

OTHER NAMES: *Pyrhocactus eris*, *Horridocactus eris*,  
*Newihelia eris*.



**Neopoteria esmeraldana**  
(Ritt.) Don. & Rowley

Solitary or offsetting, flattened, heads to 4 cm across. Fl to  
5 cm long, pale greenish-yellow. [RMF159/IP/F]

DISTRIBUTION: N Chile, Esmeralda.

OTHER NAMES: *Newihelia conic.*, *Chilobrotia conic.*,  
*Thelephylax conic.*

**Neopoteria garaventai**

(Ritt.) R.M. Ferryman.

Solitary or sparingly clumping, heads to 25 cm high by 12 cm. Fl 4 cm across, pale yellow often with a reddish midstripe. [RMF232/1P/F]

DISTRIBUTION: Chile, Cerro La Campana.

OTHER NAMES: *Horridocactus garai*, *Pyrhocactus subaianus*, *N. curvispinia* f. *garai*, *N. subaiana*.

**Neopoteria heinrichiana**

(Bkhg.) R.M. Ferryman.

Solitary, globular, to 6 cm or more across. Fl 4 cm broad with red tips. [RMF266/1P/F]

DISTRIBUTION: Chile, Chanaral de Aceitunas.

OTHER NAMES: *Horridocactus heini*, *Pyrhocactus heini*, *Nop. curvispinia* f. *heini*, *Pyrh., chaniarensis*.

**Neopoteria horrida**

(Remy ex Gay) D. Hunt

Usually solitary, to 20 cm high and broad, but dwarf clustering forms occur. Spination very variable in number, length and spine diameter. Some populations are similar to forms of *N. curvispinia* with probable hybrids between the two. [FK208/1P/F]

DISTRIBUTION: Over a wide area of C Chile.

OTHER NAMES: See Appendix 4.

**Neopoteria huascensis**

(Ritt.) Don. &amp; Rowley

Solitary, hemispherical to oblong, to 8 cm across. Fl to 4.5 cm long. [CS/PM]

DISTRIBUTION: N Chile, near Huasco.

OTHER NAMES: *Newchilene huascensis*, *Pyrhocactus huasc.***Neopoteria iquiquensis**

(Ritt.) Don. &amp; Rowley

Solitary, globular to elongated, 5–6 cm across; rcp 8–10, esp 2–4(–6). Fl 2 cm across. [RMF36/1P/F]

DISTRIBUTION: N Chile, Arica to Pisagua.

OTHER NAMES: *Newchilene aricensis*, *Nop. iquiquensis*, *Nop. aricensis*, *Nop. reichei* f. *floribunda*, *Pyrhocactus florib.*, *P. aricensi*, *P. sastreiagui*, *Reichocactus florib.*

**Neopoteria islayensis**

(Foerst.) Don. &amp; Rowley

Solitary, 5–7 cm broad, oblong. Fl 2 cm long. [IP/F]

DISTRIBUTION: S Peru, Islay.

OTHER NAMES: *Islaya cognipinnis*, *I. floridæ*, *I. islayensis*, *I. longicarpa*, *I. maritima*, *I. minuscida*, *I. molleodens*, *I. minor*, *I. grandiflora*, *Nop. islayensis* v. *islayensis* f. *brevicylindrica*, f. *grandiflora*, f. *minor*, f. *molleodens*, f. *sppurior*.



**Neopoteria islayensis v. divaricatiliflora**  
(Ritt.) Don. & Rowley

Solitary, globose, to 7 cm broad; fl 2–3 cm broad, greenish-yellow or reddish. [IP/GC]

DISTRIBUTION: Peru, Camana.

OTHER NAMES: *Ileja divaricatiliflora*.



**Neopoteria jussieui** (Monv.) B. & R.

Solitary, short-cylindric to 7 cm high by 4 cm. Fl 4 cm broad. [RMF115/IP/F]

DISTRIBUTION: Chile, Elqui Valley, above Vicuña, Las Rojas etc.

OTHER NAMES: *Neckelisia juss.*, *N. noefaria*, *N. tanquillii*, *Pyrhocactus juss.*



**Neopoteria jussieui v. wagenknechti**  
(Ritt.) Hoffmann

Usually solitary, globular to elongated to 9 cm across. Fl 3.5 cm wide, shades of yellow, to reddish. *v. dimorpha* (Ritt.) Hoffmann has an almost spineless 'juvenile' form and a spine 'adult' form. [RMF308/IP/F]

DISTRIBUTION: Chile, from Coquimbo to La Serena.

OTHER NAMES: *Neckelisia magdenaei*, *Pyrhocactus sagen*., *Neop. nitens*, *v. dim.*, *New. dimorpha*, *Pyrho. dimorphus*.



**Neopoteria krainziana**  
(Ritt.) Don. & Rowley

Solitary, becoming short-cylindric in cultivation. Fl 3 cm broad, scented. [IP/F]

DISTRIBUTION: N Chile, near Poconchile close to the Peruvian border.

OTHER NAMES: *Ileja krainziana*, *I. seguiniana*.



**Neopoteria kunzei** (Foerst.) Bkgb.

Solitary to 12 cm across becoming short-cylindric. Fl to 3–3.5 cm across. Plants purporting to be this species often turn out to be *N. eriosyoides*. [IP ex Ritt./F]

DISTRIBUTION: Chile, around Copiapo.

OTHER NAMES: *Neckelisia kunzei*, *Pyrhocactus kunzei*.



**Neopoteria limariensis**  
(Ritt.) R.M. Ferryman

Solitary, globular becoming slightly elongated, 5–15 cm across. Fl 4.5–5.5 cm long. [RMF290/IP/F]

DISTRIBUTION: Chile midway between Frai Jorge and the Pan American Highway; also from Ovalle (smaller flowers) and Incienso.

OTHER NAMES: *Pyrhocactus limariensis*, *P. paucamii*.



**Neopoteria marksiana** (Ritt.) Don. & Rowley

Globular, to 24 cm across. Fl 4 cm broad, lemon or reddish-yellow. Closely related to *N. curvispina*. [PM251/TH]

DISTRIBUTION: Chile, Vila Prat to San Fernando.

OTHER NAMES: *Horridocactus marksianus* & v. *tenuis*, *Nop. marksiana* v. *tenuis*, *Pyrrobraecus marks. v. tenuis*, *P. truncispinus*.



**Neopoteria microsperma** Ritt.

Solitary, to 50 cm high by 10 cm, sometimes clumping. Fl 2.5 cm long. [RMF366/IP/F]

DISTRIBUTION: Chile, Elqui Valley.

OTHER NAMES: *Nop. subgibbosa* v. *microsperma*, *N. micros.* v. *serenana* & v. *gracilis*.



**Neopoteria napina** (Phil.) Bkbg.

Solitary, club-shaped, to 3.5 cm across, elongating in cultivation. Fl 4 cm across, white to pink or brownish. [RMF184/IP/F]

DISTRIBUTION: Chile, Dept. of Copiapo, near the coast in many localities, and N to Carrizal Bajo, Dept. of Freirina.

OTHER NAMES: *Noschilia napina* v. *spiniosus*, *Nop. glabrescens*, *Nop. nuda*; *Nop. napina* v. *nuda* & *fa. glabrescens*, *Nop. napina* v. *spiniosus*; *Chileocereus napina*; *Thelocereus napina*; *T. nuda*, *T. tenebrosa*.



**Neopoteria napina** v. *fankhauseri* (Ritt.) Hoffmann.

Usually solitary, flattened, to 7 cm across. Fl 4 cm long. [RMF79/HS/GC]

DISTRIBUTION: Chile, near Doméyko.

OTHER NAMES: *Thelocereus fankhauseri*, *N. napina* v. *longiger* n. n.



**Neopoteria neohankeana** (Ritt.) R.M. Ferryman.

Solitary, spherical to oblong, 4–7 cm across, either green or black. Fl 3.5 cm long, pale yellowish or reddish. [RMF149/IP/F]

DISTRIBUTION: Chile, various canyons N of Talca.

OTHER NAMES: *Noschilia hankeana* & var., *Pyrrobraecus neohankeana*, *Nop. talcahuensis* v. *flaviflora*, *Deloëtia asperimixta*.



**Neopoteria nidus** (Sohr.) B. & R.

Solitary, spherical, becoming cylindric in cultivation, to 12 cm high by 7 cm, spinulation extremely variable, soft and wavy or harder and curved. Colour white, gold, brown or black. Fl 4–5 cm long. [RMF251/IP/F]

DISTRIBUTION: Chile, around Ovalle.

OTHER NAMES: *Nop. sensilis*, *Nop. nidus* v. *matancillana*, *Nop. nidus* v. *sensilis*.



**Neopoteria nidus v. gerocephala** (Ritt.) Hoffmann

Distinguished from the species by its much smaller size and softer spination. Spines white, grey or black. [RMF302/IP/F]

DISTRIBUTION: Chile, Elqui Valley.

OTHER NAMES: *Neop. gerocephala*.



**Neopoteria nidus v. multicolor** (Ritt.) Hoffmann

Solitary, to 20 cm high by 8 cm. Range of spination as for the species. Fl 6–8 cm long. [RMF248, left; RMF249, right/IP/F]

DISTRIBUTION: Chile, E. of Salamanca and in the mountains E. of Illapel.

OTHER NAMES: *N. multicolor*.



**Neopoteria nigrihorrida** (Bkhg.) Bkhg.

Solitary, to 20 cm high by 10 cm. Fl 4–7 cm long. [RMF192/IP/F]

DISTRIBUTION: Chile along the coast on both sides of Coquimbo.

OTHER NAMES: *Neph. radicans* v. *nigra*. All the named varieties fall within the species.



**Neopoteria occulta** (Sch.) B. & R.

Body flattened, to 4.5 cm across, sometimes clumping. Fl 2.5 cm long, pale yellow. [CS/PM]

DISTRIBUTION: N Chile, Taltal to Paposo.

OTHER NAMES: *Nesohenia setata*, *Pyrrhocactus setatus*.



**Neopoteria odieri** (Lem.) Berg.

Solitary, flattened to 6 cm across, esp 6–10. Fl 3 cm broad, white to pink. *v. malleolata* (Ritt.) R.M. Ferryman comb. nov. (*Chichkenia malleolata* Ritt.) 1963, Taxon 12(3): 123, often clumps, esp 4–8, fl pale brownish-yellow to pale orange-red (Chanarral). [RMF338/IP/F]

DISTRIBUTION: Chile, coasts N and S of Copiapo.

OTHER NAMES: See Appendix 5.



**Neopoteria odieri v. monte-amargensis** (Bkhg.) R.M. Ferryman comb. nov. *Basionym*

*Neochilenia monte-amargensis* Bkhg. 1963, Cact. Nov. III: Holotype Das Kakteen Lexicon 1965 p632 III 259.

Stems depressed-spherical to 5 cm across, spines often longer than in the plant pictured, offsetting to form small clumps. [RMF339/IP/F]

DISTRIBUTION: Chile, Monte Amargo.

OTHER NAMES: '*Neop. monte-amargensis*'.

**Neopoteria omasensis**

(Ostolaza &amp; Mischler) R.M. Ferryman.

Solitary, to 30 cm high by 14 cm. Fl 1.7 cm across. [IP/GC]

DISTRIBUTION: Peru: Omas Valley, 90 km S of Lima; Pacoto and Topara Gorges; Huatiana Gorge at Chinch'a Alta. Extends the distribution of *Neopoteria* 400 km northwards.OTHER NAMES: *Isaya omasensis*.**Neopoteria paucicostata**

(Ritt.) Don. &amp; Rowley

Solitary, to 30 cm high by 8 cm, body bluish-grey or green. Fl 5 cm across. [RMF57/IP/F]

DISTRIBUTION: Chile, along the coast to the N &amp; S of Paposo.

OTHER NAMES: *Herricksactus pauc.*, *Nochilenia pauc.*, *Pyrrohocactus pauc.* & var. *viridis* for all of these.**Neopoteria pulchella**

(Ritt.) R.M. Ferryman.

Solitary, globular later somewhat elongated to 7 cm across. Fl 2.5 cm across, white with a reddish midstripe. [II]

DISTRIBUTION: Rare, in scattered localities from Cifuncho to Barquito, Chile.

OTHER NAMES: *Nochilenia pulchella*, *Pyrrohocactus pulchellus*.**Neopoteria condita**

(Ritt.) Don. &amp; Rowley

Solitary, dwarf, 2.5–4.5 cm across, esp 1–2, 1–1.5 cm long. Fl 3.5 cm across, white to yellowish, v. *residua* (Ritt.) Hoffmann is up to 8 cm across, esp 2–5(–8), 1–3 cm long (Antofagasta to Tocopilla). [IP ex Ritt./F]

DISTRIBUTION: Chile, mountains N of Antofagasta.

OTHER NAMES: *Nochilenia record.*, *Pyrrohocactus record.*, *v. residua*: *Noce. residua*, *Pyrro. residua*.**Neopoteria condita v. vexata**

(Ritt.) Hoffmann

Solitary, flattened-globular, to 3 cm (rarely to 5 cm) across. Fl 3 cm long. [RMF40/IP/F]

DISTRIBUTION: Chile, Morro Moreno, NW of Antofagasta.

OTHER NAMES: *Pyrrohocactus vexatus*.**Neopoteria reichei** (Sch.) Bkgb.Usually solitary, often becoming unnaturally elongated in cultivation, to 10 cm or more long by 3–4.5 cm. Fl 2.5 cm across. v. *aerocarpa* (Ritt.) R.M. Ferryman comb. nov. (*Chileocereus aerocarpa* Ritt. 'Cactus' 64.1 Suppl. Aug. 1959.) is usually clumping and has a larger carmine flower (Carrizal Alto to Totoral). [RMF176/IP/F]

DISTRIBUTION: Chile, Vallenar to Huasco.

OTHER NAMES: See Appendix 6.



**Neopoteria setosiflora**  
(Ritt.) Don. & Rowley

Body flattened to globular, to 6 cm across, sometimes offsetting. Fl to 4–6 cm across, yellowish to brick-red. Close to *N. jussieui* and possibly only a variety of it. [RMF98/IP/F]

DISTRIBUTION: Chilean coastal region.

OTHER NAMES: *Nesokilia setosa* & v. *intermedia*, *Pyrhocactus setosus* & v. *intermedius*.



**Neopoteria simulans**  
(Ritt.) Don. & Rowley

Solitary, to 20 cm long and 8 cm across. Fl 4 cm across. [RMF187/IP/F]

DISTRIBUTION: Chile, near Choros.

OTHER NAMES: *Nesokilia simulans*, *Pyrhocactus simulans*.



**Neopoteria sociabilis** Ritt.

Solitary or sparingly clumping, heads to 40 cm high and 8 cm across. Fl 2.2–3.3 cm long, pink. [RMF267/IP/F]

DISTRIBUTION: Chile, Totoral Bajo to Huasco.

OTHER NAMES: *N. sociabilis* v. *nigra*.



**Neopoteria subgibbosa** (Haw.) B. & R.

Usually solitary, at first globular, later to 1 m and more long by 10 cm. Fl 4 cm long. [RMF199/IP/F]

DISTRIBUTION: Chile, from Coquimbo S along the coast.

OTHER NAMES: *Nop. subgibb. v. orientalis*, *N. littoralis* & v. *intermedia*, *N. subgibb. f. fibrosa*.



**Neopoteria subgibbosa** v. *castanea*  
(Ritt.) R.M. Ferryman.

Solitary, globular becoming elongated to 15 cm across; spines dark gingerish-brown or glassy whitish-grey. Fl 6–7 cm long. [PM260/IP/F]

DISTRIBUTION: Chile, near Vila Prat.

OTHER NAMES: *Nop. castanea*, *N. subgibb. v. subgibb. f. castanea*.



**Neopoteria taltalensis** Hutch.

Solitary, to 12 cm high by 8 cm, body black or green. Fl 2.5–3 cm across, pinkish-purple. [RMF163/IP/F]

DISTRIBUTION: Chile, from near Paposo to N of Charanal.

OTHER NAMES: *Nesokilia tatal*, *Pyrhocactus tatal*, *Nop. rugicola*, *Pyrho. rugic.*, *Nop. rugic.*, *Nec. viscidiflora* n.n. *Pyrho. tenua*.



**Neopoteria totoralensis**

(Ritt.) Don. & Rowley

Solitary or sparingly offsetting, flattened to globular to 5 cm across; rcp 6–8, 15–10 mm long; csp 0–1 (rarely 2–5), 2–3 cm long. Fl 4 cm across. [RMF292/IP/F]

DISTRIBUTION: Chile, Totoral Bajo.

OTHER NAMES: *Nechilenia totoral*, *Pyrhocactus totoral*.



**Neopoteria totoralensis v. carrialensis**

(Ritt.) R.M. Ferryman comb. nov.

*Pyrhocactus carrialensis* Ritt. 1963, *Taxon* 12(1): 33.

Solitary, 13 cm high by 7 cm; rcp 12–18, 10–25 mm long; csp 4–8, 2–4 cm long. Fl 4.5–7 cm across. [RMF281/IP/F]

DISTRIBUTION: Chile, around Carrizal Bajo.

OTHER NAMES: *Herradsaurus carrial*, *Pyr. carri*.



**Neopoteria transiens**

(Ritt.) R.M. Ferryman.

Solitary, globular 5–7 cm across. Fl 2.5–3 cm long. [RMF134/IP/F]

DISTRIBUTION: Chile, N of Caldera.

OTHER NAMES: *Pyrhocactus transiens*.



**Neopoteria transitensis**

(Ritt.) R.M. Ferryman.

Solitary, to 16 cm high by 11 cm. Fl 3 cm across. [RMF354/IP/F]

DISTRIBUTION: Chile, around Transito.

OTHER NAMES: *Nechilenia transitensis*, *Nosp. curripina* v. *transitensis*, *Pyrhocactus transitensis*.



**Neopoteria vallenarense**

(Ritt.) Hoffmann

Solitary, globular to elongated to 10 cm across. Fl 3.5–5.5 cm broad, yellow, greenish-yellow or orange-yellow, often with a reddish midstripe. [RMF122/IP/F]

DISTRIBUTION: Chile, Elqui Valley above and below Vicuna.

OTHER NAMES: *Herradsaurus vallen*, *Nosp. curripina* v. *vallen*, *Pyrhocactus vallen*.



**Neopoteria villosa** (Monv.) Berg.

Solitary, at first globular then cylindric to 15 cm high by 8 cm. Fl 2 cm long. [RMF185/IP/F]

DISTRIBUTION: Chile, around Huasco and Carrizal Bajo.

OTHER NAMES: *Nosp. atripinnua*, *N. cephalophora*, *N. lanigera*, *N. polycephala*.

***Neopoteria wagenknechtii* Ritt.**

Solitary, to 30 cm high by 11 cm. Fl 2.2 cm long.  
[RMF91/IP/F]

DISTRIBUTION: Chile, N of La Serena, Juan Soldado Gorge.

OTHER NAMES: *N. angust.* v. *nepalica*, *N. rapifera*.

***Neopoteria wagenknechtii***

v. *vallenensis* (Ritt.) Hoffmann

Solitary, at first globular, later elongated up to 6 cm across.  
Ribs 11-12. Fl 3.5 cm long. [RMF177/IP/F]

DISTRIBUTION: Chile, between Vallenar and Freirina. Rare  
due to grazing and trampling by goats.

OTHER NAMES: *Neopoteria vallenensis*.

***Neowerdermannia chilensis* Bkhg.**

Solitary, 3-4 cm across. [IP/F]

DISTRIBUTION: N Chile, Ticinamar.

OTHER NAMES: *Weingartia okimii*.

***Neowerdermannia chilensis* v. *putrensis*  
n.n.**

Much larger and with thinner spines than the species. Fl flushed pink. [RMF/IP/F]

DISTRIBUTION: Chile, Putre.

***Neowerdermannia vorwerkii* Fric**

Solitary, flattened (becoming globular-elongate in cultivation). [IP ex Lau/F]

DISTRIBUTION: Over a large area of the Andean Altiplano from N Argentina to N Bolivia.

OTHER NAMES: *Weingartia vorwerkii*.

***Notocactus buenekeri* (Buin.) Bux.**

Solitary, to 5 cm high by 6 cm. Fl 4 cm across, yellow.  
[RM]

DISTRIBUTION: All from S Brazil, Rio Grande do Sul.

OTHER NAMES: *Brasilianus buenek.*, *Parodia buenek.*

Larger, to 8 cm broad is N. *alacripotanus* (Bkhg. & Voll.) Bux.

OTHER NAMES: *Brasilip. alac.*, *Par. alac.*

Spines to only 4 mm is N. *breviamatus* (W. Hge.) Bux.

OTHER NAMES: *Brasilip. brev.*, *Par. brev.*

**Notocactus buiningii** Bux.

Solitary, to 8 cm high and 12 cm across. Fl 5–8 cm across.  
[CS/PM]

DISTRIBUTION: Uruguay, near Livramento, rare.

**Notocactus caespitosus** Speg.

Clumping, to 8 cm high and 3 cm across. Fl 4 cm long.  
[IP/GC]

DISTRIBUTION: Brazil, Rio Grande do Sul, near Alegrete and in N Uruguay.

OTHER NAMES: *N. minima*, *N. tenuicostata*.

**Notocactus concinnus** (Monv.) Berg.

Solitary, 10 cm across and 6 cm high. Spination fairly variable from quite short and neat to tawdry and interlacing. Fl 7 cm long, canary yellow. [DV9c/IP/G]

DISTRIBUTION: S Brazil and Uruguay.

OTHER NAMES: *N. agrestes*, *N. ariacina*, *N. maxuariana*, *N. horrense*, *N. eremita*, *N. multifloratus*, *N. tabularis*.

**Notocactus crassigibbus** Ritt.

Solitary, flattened, to 10 cm across. Fl to 10 cm long.  
[CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, Lavras.

OTHER NAMES: *N. arachnites*.

**Notocactus erinaceus** (Haw.) Krainz

Globular, to 15 cm high and broad. Fl to 7 cm broad, canary yellow. [CS/PM]

DISTRIBUTION: S Brazil, Uruguay and Argentina.

OTHER NAMES: *Malacocarpus cyclophyllum*, *Higinia cyc*, *Noto cyc*, *M. parastis*, *W. cur*, *M. erinaceus*, *W. erinaceus*, *N. erinaceus* c. *spinosa*, *M. frici*, *N. frici*, *W. frici*, *M. kentzii*, *M. leucanthi*, *N. leuc*, *W. leuc*, *W. longispina*, *M. sellowii*, *N. sell*, *W. sell*, *M. seymourensis*, *N. seym*, *M. stephaniana*, *N. step*, *W. step*, *N. tenuis*, *M. tephraeaventris*, *W. teph*, *M. turbouensis*, *W. turb*, *M. vorwerkiana*, *W. vor*.

**Notocactus fuscus** Ritt.

Solitary, 4–7 cm across. Fl 3 cm or more long.  
[HU29/CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, 15 km W of Sao Francisco de Assis.



**Notocactus graessneri** (Sch.) Berg.  
Usually solitary, to 10 cm high by 15 cm; spines usually hard and yellow but paler and softer in 'v. alisieni'. Fl. greenish or yellow. fa. *microdasy* P.J. Braun has extremely short spines. [IP/G]  
DISTRIBUTION: Brazil, Rio Grande do Sul, Jaquerama.  
OTHER NAMES: *Braulicactus gracilior*.



**Notocactus herzbergii** (F. Hge.) Berg.  
Solitary, to 10 cm high by 15 cm, spines white or yellowish ('v. stellaris'). [IGC]  
DISTRIBUTION: Brazil, Rio Grande do Sul.  
OTHER NAMES: *Braulicactus herzbergii*.



**Notocactus herteri** Werd.  
Spherical to elongated, 15 cm or more across, solitary. fa. *pseudohertteri* (Bain.) Hemm. has yellow fl. [Schiff 62/CS/PM]  
DISTRIBUTION: Uruguay, Cerro Galgo.  
OTHER NAMES: fa. *pseudohertteri*: *N. pseudohertteri*.



**Notocactus horstii** Ritt.  
Usually solitary, to 30 cm high by 14 cm. Fl. orange to purple. [CS/PM]  
DISTRIBUTION: Brazil, Rio Grande do Sul, Serra Geral.  
OTHER NAMES: *Noto purpurea*, '*N. magnificus*'.



**Notocactus leninghausii** (Hge. jr.) Berg.  
Clumping, heads to 1 m high by 10 cm. Fl. 5 cm across. Related to *N. nigripinus* (Sch.) Buijn.; clumping, to 40 cm high by 16 cm across, ribs 24, spines thicker and fewer (between Carepeua and Acaay). [CS/PM]  
DISTRIBUTION: Brazil, Rio Grande do Sul, to Paraguay, Cerro Santo Thomas and Cerro Acaay.  
OTHER NAMES: *Eriacactus leninghausii*.



**Notocactus magnificus** (Ritt.) Krainz  
Clumping, body to 20 cm across, globular later becoming elongated. Fl. 5–6 cm across. [E]  
DISTRIBUTION: Brazil, Rio Grande do Sul, Serra Geral, Jelito de Castilho.  
OTHER NAMES: *Eriacactus magnificus*.

**Notocactus mammulosus** (Lem.) Berg.

Solitary, to 10 cm high by 6 cm. Fl 4 cm long. Similar but less free-flowering is *N. aliosiphon* Marchesi (Uruguay, Rivera, Valle Ar. Platón). [R346/1G]

DISTRIBUTION: Argentina and Uruguay.

OTHER NAMES: *N. eriphantius*, *N. florionis*,  
*N. eriphantius*; *N. pampenae*, *N. sabammalensis* &  
*N. pampenae*.

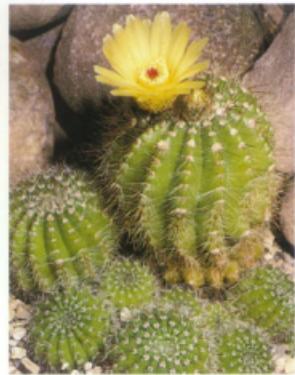
*N. megalanthus* Schl. & Bred. from the Cerro Mosquitos, Uruguay appears to be an intermediate between *N. mammulosus* and *N. concinnum*.

**Notocactus mueller-melchersii**

Fric ex Bkbg.

Solitary, to 8 cm high by 6 cm. Fl 5 cm across, pale golden yellow. [SCHI.151/1P/G]

DISTRIBUTION: Uruguay, Sierra de los Animos.

**Notocactus muricatus** (Otto) Berg.

Clumping, heads to 20 cm and more high. Fl 3 cm long. [HU19/CS/PM]

DISTRIBUTION: S Brazil, Rio Grande do Sul, near Taquarichim.

**Notocactus neorechavaletai**

(Sch. ex Speg.) Elsner

Solitary, spherical to elongated, esp dark brown or black. Fl 5 cm across. [CS/PM]

DISTRIBUTION: Uruguay, near Maldonado.

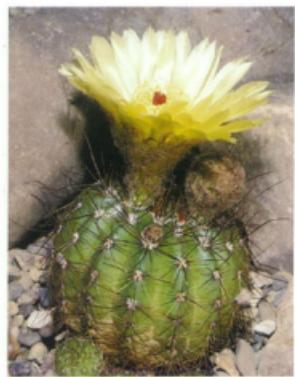
OTHER NAMES: *Malawurpus arachaeata*, *Wigginsia arach.*

**Notocactus neohorstii** (Ritt.) Theun.

Solitary, globular to elongated. Fl 3.5 cm wide.  
v. *juveniliformis* Ritt. resembles, when adult, a juvenile form of the species (Cacapava).

DISTRIBUTION: Brazil, Rio Grande do Sul, Mine Camaqua.

OTHER NAMES: *Wigginsia horstii*.

**Notocactus ottonis** (Lehm.) Berg.

Exceedingly variable yet instantly recognizable because of the general characteristics so obvious in the plate. Fl to 6 cm or more across. The most distinctive forms are those with more sharply-angled ribs, (e.g. *N. sanctiverdulatus*). [CS/PM]

DISTRIBUTION: S Brazil, Uruguay, Paraguay, and NE Argentina.

OTHER NAMES: See Appendix 7.



**Notocactus ottonis v. tortuosus**  
(Link & Otto) Berg.

Flower smaller, 3–4 cm across, deeper lemon-yellow than the species. [HU:22/G]

DISTRIBUTION: Brazil, Rio Grande do Sul.

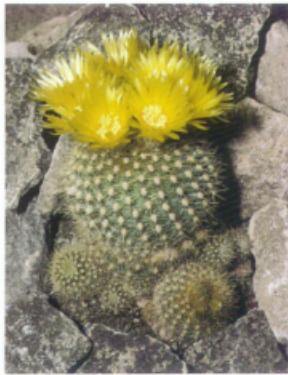
OTHER NAMES: *N. catandubensis*, *N. linkii*, *N. megasticticus*.



**Notocactus rauschii** van Vliet

Solitary, globular to 7 cm across, elongating somewhat to 10 cm. Fl 5–6 cm across. [CS/PM]

DISTRIBUTION: Uruguay, Cuchilla Negra.



**Notocactus reichenensis** Buin.

Forming small clumps, heads to 7 cm long by 5 cm. Fl 3–3.5 cm across. [CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, near Ara Reche.

OTHER NAMES: *Brasilianidium reichenensis*.



**Notocactus roseiflorus** Schl. & Bred.

Solitary, to 12 cm high by 6.5 cm. Fl 3.5 cm across. [CS/CG]

DISTRIBUTION: Uruguay, Prov. of Artigas, Cuchilla Yacare.



**Notocactus roseoluteus** van Vliet

Solitary, body globose, to 18 cm high and broad. Fl to 8 cm across. [CS/PM]

DISTRIBUTION: Uruguay, near Tranqueras.



**Notocactus rutilans** Daen. & Kraenz

Solitary, slightly elongated, to 5 cm high by 4 cm. Fl to 6 cm across. [CS/PM]

DISTRIBUTION: Uruguay, Cerro Largo.



**Notocactus schlosseri** van Vliet

Solitary, short-cylindric to 18 cm high by 11 cm. Fl 5 cm across. [Schl157/G]

DISTRIBUTION: Uruguay, near Garzon.

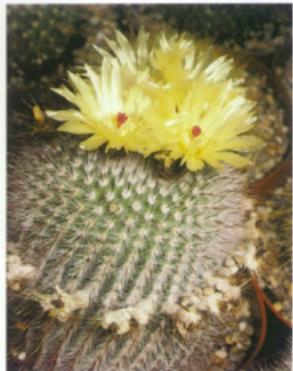


**Notocactus schumannianus**  
(Sch.) Berg. emend. Buin.

Body columnar, to 30 cm broad. Fl 4 cm across, pale golden-yellow. [R]

DISTRIBUTION: Paraguay, Cerro Santa Thomas and Cerro Acay.

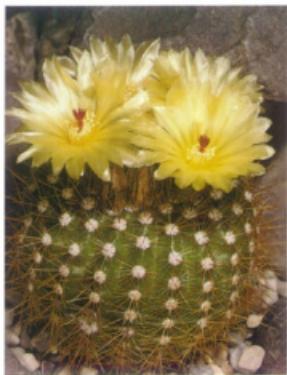
OTHER NAMES: *Eriocactus ampliostanatus*, *E. daviesii*, *E. grossii*, *Noto. daviesii*.



**Notocactus scopula** (Spreng.) Berg.

Solitary, to 25 cm and more high by 10 cm. Cap brown to white. Fl 4 cm across. Many vars. — more properly just forms — most distinct being v. *marchesii* Abraham strongly clumping, heads to 10 cm long, 4 cm across. Cap white to orange. Fl 5 cm across (Dept. of Treinta y Tres, Uruguay). [CS/P]

DISTRIBUTION: S Brazil and Uruguay.  
OTHER NAMES: ?*N. radiobunkei*.



**Notocactus succineus** Ritt.

Solitary, spherical to oblong, 3–7 cm across. Fl 3.5 cm long. [FRI139/CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, Sao Gabriel.

OTHER NAMES: *N. neobunkei*.



**Notocactus uebelmannianus** Buin.

Solitary, to 12 cm high by 17 cm. Fl to 5 cm across, purple or yellow. [CS/PM]

DISTRIBUTION: Brazil, Rio Grande do Sul, near Capapava.

OTHER NAMES: *N. uebelmanni*, v. *flaviflorus*.



**Notocactus vanvlietti** Rausch

Solitary, 10 cm high by 6 cm. Fl to 5.5 cm across. v. *gracillimus* Rausch is smaller, with curly spines and flowers yellow to orange yellow (between Minas de Corales and Amsina). [DV18/G]

DISTRIBUTION: Uruguay, Cuchilla de los Once Cerros.

**Notocactus veenianus** Van Vliet

Solitary, to 20 cm high by 8 cm. Fl 5 cm across. [CS/PM]

DISTRIBUTION: Uruguay, Tacuarembó.

OTHER NAMES: '*N. erissi*', '*N. exiguus*', '*N. pauloi*', '*N. spinulosus*'.**Notocactus warasii** Ritt.

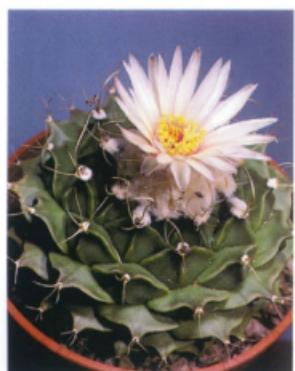
Solitary, to 50 cm high by 20 cm or more. Fl 6 cm across. [CS/PM]

DISTRIBUTION: Brasil, Rio Grande do Sul.

OTHER NAMES: '*Eriocactus warasii*'.**Notocactus werdermannianus** Herter

Solitary, to 13 cm high by 10 cm. Fl over 7 cm across. [G]

DISTRIBUTION: Uruguay, Tacuarembó.

**Obregonia denegrii** Fric

Solitary, to 12 cm across. Fl 2.5 cm across. [CS/P]

DISTRIBUTION: Mexico, Tamaulipas, San Vicente near Ciudad Victoria.

OTHER NAMES: '*Arisocactus denegrii*', '*Strombocactus denegrii*'.**Oroya borchersii** (Boed.) Bkhg.

Solitary, to over 20 cm high and broad, spines brown or yellow. Fl 1 cm across. [L114a/PI]

DISTRIBUTION: N Peru, Cordillera Blanca and Cordillera Negra.

**Oroya peruviana** (Sch.) B. & R.Solitary, depressed-spherical, to 14 cm across. Fl to 2.2 cm broad, pink and yellow, lemon-yellow (e.g. '*O. caryophylla*') or carmine. [HP/F]

DISTRIBUTION: C Peru, around Oroya.

OTHER NAMES: '*O. andina*', '*O. huarmeyana*', '*O. phlebia*' & var., '*O. latiorolata*' & var., '*O. rospigliosii*' & var., '*O. subcaerulea*' & var., var. of *O. peruviana*.

**Ortegocactus macdougallii** Alex.

Heads globular, to 4 cm across, clustering. Fl 2.5 cm broad. [GC]

DISTRIBUTION: Mexico, Oaxaca, near San José Lachiguiri.

**Parodia argerichiana** Wesk.

Solitary, 6 cm across. Fl 5 cm wide, red. [DH108/CS/DHS]

DISTRIBUTION: N Argentina, Salta, Sierra del Muerto, between Santa Barbara and Santa Rosa.

**Parodia aureicentra** Bkg.

Becoming elongated to 15 cm across, usually clumping, spination very variable. Fl 4 cm broad, light blood-red. [P252/CS/DHS]

DISTRIBUTION: N Argentina, Salta, Cachipampa.

OTHER NAMES: *P. auricula*, *t. smaragdina* & *radiiflora*, *P. mutabilis*, *P. russellii*, *P. abdigiana*, *P. variicolor*.

**Parodia aureispina** Bkg.

Solitary, globose, to 6.5 cm across. Fl also red. Plants circumscribed as *P. mutabilis* are invariably this species. [WR7076/CS/DH]

DISTRIBUTION: N Argentina, Salta.

OTHER NAMES: *P. auribarbara*', *P. mutabilis*, *P. scopasidae*.

**Parodia ayopayana** Card.

Stems to 8 cm high by 9 cm, prolifically clumping. [CS/PM]

DISTRIBUTION: Bolivia, Puente Pilatos.

OTHER NAMES: *P. estacajensis*, *P. elata*, *P. pseudayopayana*.

**Parodia campestrae** Brandt

Solitary, to 11 cm high by 7 cm, spines straight. [CS/PM]

DISTRIBUTION: Argentina, meeting point of Salta, Tucuman and Santiago del Estero Provinces on the road E of Antilla.

**Parodia chrysacanthion** (Sch.) Bkgb.

Solitary, spherical Fl small, yellow. [CS/PM]

DISTRIBUTION: N Argentina, Jujuy.

**Parodia columnaris** Card.

Solitary, to 30 cm high by 7 cm. Fl 3 cm across, light yellow. [Donald IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, Angosto de Perez.

OTHER NAMES: *P. legitima*.**Parodia comarapana** Card.

Solitary, to 5 cm high by 8 cm. Fl 5 mm across, orange-yellow. [KK1462/IP/DHS]

DISTRIBUTION: Bolivia, Comarapa.

OTHER NAMES: *P. neglesta*, *P. negleoides*.**Parodia commutans** Ritt.

Solitary, to 30 cm by 16 cm. Fl to 3.5 cm long, yellow.

DISTRIBUTION: Bolivia, near Impora.

OTHER NAMES: *P. massuii* v. *commutans*, *P. obtusa*.Illustrated but probably only a variety is *Parodia maxima* Ritt. which is solitary, cylindric, to 25 cm high. Cap in seedlings hooked, straight in mature plants. Fl 4 cm across. [I.928/IP/DHS]

DISTRIBUTION: Bolivia, Cieneguillas.

OTHER NAMES: *P. massuii* v. *commutans* *fa. maxima*.**'Parodia dextrohamata'** Bkgb.

Solitary, to 5 cm high by 3.5 cm. Fl 2 cm across, yellow. [P44a/CS/DHS]

DISTRIBUTION: N Argentina.

**Parodia dichroacantha** Brandt & Wesk.

Hemispherical or later elongated. Fl 6 cm across, brilliant yellow or red. [B53/IP/DHS]

DISTRIBUTION: N Argentina, N of Salta and Tucuman.

OTHER NAMES: *P. rigidia*.

**Parodia echinopsoides** Brandt

Solitary, to 40 cm high by 10 cm, ribs always 13. Fl 3.5–4 cm long, yellow. [CS/DHS]

DISTRIBUTION: Bolivia, Prov. Méndez, Colpana on the Rio Playa.

OTHER NAMES: *P. separata*, *P. tridecimcostata*.

**Parodia faustiana** Bkbg.

Solitary, to 6 cm across. Fl scarlet outside, golden-yellow inside. [B160/IP/DHS]

DISTRIBUTION: N Argentina, Salta, Quebrada del Toro.

OTHER NAMES: *P. cruci-nigricentra* n.n.

'**Parodia fechseri'** Bkbg.

Solitary, to 8 cm high by 4 cm. Fl 4 cm across, yellow. [IP ex Fechser/DHS]

DISTRIBUTION: N Argentina.

OTHER NAMES: *P. membrina*.

**Parodia formosa** Ritt.

Solitary, globular to elongated, to 8 cm across. Spination rather variable. Fl 4 cm long, sulphur-yellow. [CS/DHS]

DISTRIBUTION: Widespread in C and S Bolivia.

OTHER NAMES: *P. cataparia*, *P. cardenavii*, *P. chaetocarpa*, *P. chiriquegarana*, *P. pachycypha*, *P. parvula*, *P. purpureo-aurea*, *P. paucia*, *P. setispina*, *P. tiliifolia*.

**'Parodia fuscato-viridis'** Bkbg.

Solitary, spherical to 4.5 cm broad. Fl 3.5–6 cm broad, yellow. [P239/CS/DHS]

DISTRIBUTION: N Argentina, Quebrada de Belén.

**Parodia gibbosoides** Brandt

Broadly spherical, to 10 cm across. Fl 1 cm across. [CS/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba in the mountains N of the Rio Grande.

OTHER NAMES: *P. gibbula*.

**Parodia hausteiniana** Rausch

Solitary, short-cylindric, to 5 cm across. Fl 10 mm across, yellow. [ICS/PM]

DISTRIBUTION: Bolivia, near Mizque.

**Parodia herzogii** Rausch

Solitary, to 6 cm high by 9 cm. Fl 4 cm across, golden-yellow to orange. [WK707a/CS/DHS]

DISTRIBUTION: Argentina, Salta, E. of Cafayate.

**Parodia heteracantha** Ritt. & Wesk.

Solitary, 9.5 cm high by 5.5 cm. Fl yellowish-orange. [W62/CS/DHS]

DISTRIBUTION: N Argentina, Salta, near Cachi.

**Parodia horrida** Brandt

Solitary, slim-cylindric to 9 cm or more high. Fl yellow. [Muhr IP/DHS]

DISTRIBUTION: N Argentina, Salta, Rio Calchaqui.  
OTHER NAMES: *P. piltziorum*.

**Parodia hummeliana** Lau & Wesk.

Solitary, 6 cm high by 7 cm. Related to *P. microsperma*. [L567/CS/DHS]

DISTRIBUTION: Argentina, Salta, Amblaya.

**Parodia krahnii** Wesk.

Solitary or clumping, to 30 cm high by 8 cm. Fl yellow. [CS/DHS]

DISTRIBUTION: Bolivia, Prov. Tarata, La Vina on the Rio Caime.

**Parodia lauii** Brandt

Solitary, to 7 cm high by 9 cm. Fl to 4 cm across, salmon red. [CS/PM]

DISTRIBUTION: Bolivia, between Mirque and Mine Asientos, above the Rio Caine.

**Parodia maassii** (Heese) Berg.

Very variable, solitary or clumping, body large or small, spines long or relatively short, white to brown to black. Fl various shades of red. [H]

DISTRIBUTION: Over a wide area of C and S Bolivia and N Argentina.

OTHER NAMES: *P. bellata*, *P. bermejensis*, *P. camargensis*, *P. castanea*, *P. cintensis*, *P. escuacheanus*, *P. fuliginea*, *P. haageana*, *P. knizei*, *P. lanuginosa*, *P. mendezana*, *P. strobliana*, *P. perplexa*, *P. ritteri* & *P. cintensis*, *P. rostrisperma*, *P. rubida*, *P. suprema*, *P. iskleana*, *P. tijuenii*.

**Parodia macrancistrata** (Sch.) Wesk.

Solitary, to 8 cm high by 6.5 cm, esp to 3.7 cm long. Undoubtedly a long-spined form of *P. microsperma*. [B24/IP/DHS]

DISTRIBUTION: N Argentina, Tucuman at the foot of the Sierra Medina.

OTHER NAMES: *P. tafarensis*.

**Parodia mairanana** Card.

Broadly spherical to over 5 cm across, greyish-green to glossy dark green. Fl to 3.5 cm across, orange to golden-yellow. Plants distributed under the name '*P. mairanana v. atua'* are often nothing to do with this species. [FR744/HS/DHS]

DISTRIBUTION: Bolivia, Mairana.

OTHER NAMES: '*P. mairanana v. atua*'.

**Parodia malayana** Rausch

Solitary, to 6 cm high by 5 cm, esp straight, Fl to 4 cm across, yellow or red. [CS/DHS]

DISTRIBUTION: Argentina, Catamarca, near Ancasti.

**Parodia mercedesiana** Wesk.

Solitary, to 5.5 cm high by 6.5 cm. Fl 6 cm across, red or yellow. [DH116/CS/DHS]

DISTRIBUTION: N Argentina, Salta, NW of Las Cumbres.

**Parodia microsperma** (Web.) Speg.

Solitary, to 20 cm high by 10 cm. Fl yellow to red to 4 cm across. [B155/IP/DHS]

DISTRIBUTION: N Argentina, Tucuman.

OTHER NAMES: *P. amplexipetala*, *P. bettiana*,  
*P. catamarcensis*, *P. chlorocarpa*, *P. glauca*,  
*P. rufuliflora*, *P. sanguata*, *P. stricta*, *P. spinosa*,  
*P. thiantha*, *P. tuberculata*-*estata*, *P. weckemanniae*.

**Parodia miguelensis** Card.

Solitary, to 6 cm high by 4 cm. Fl only 7 mm broad, pale yellow. [I,1001/IP/DHS]

DISTRIBUTION: Widespread in river gorges in C N Bolivia.

OTHER NAMES: *P. horrida*, *P. sessilis*, *P. echinata*,  
*P. macdonaldii*.

**Parodia minuscula** Rausch

Solitary, globose, to 4 cm broad, esp hooked. Closely related to *P. malyana*. [WR757/CS/DHS]

DISTRIBUTION: Argentina, Catamarca, along the Rio Guyamita.

OTHER NAMES: *P. minusca* Rausch non Brandt.

**Parodia nivosa** Fric ex Bkgb.

Solitary, to 15 cm high by 8 cm. Fl 5 cm broad, red. [B41/IP/DHS]

DISTRIBUTION: N Argentina, Salta.

**Parodia ocamponi** Card.

Stem to 7 cm high by 6 cm, forming cushions to 40 cm across. Fl 3 cm long, golden yellow. *P. compressa* Ritt. (illus.) appears to be merely a red-flowered slightly steeper form from only a few miles distant. [H]

DISTRIBUTION: Bolivia, Potosí Arce.

OTHER NAMES: ?*P. caerulea*, *P. compressa*, *P. ignota*.

**Parodia occulta** Ritt.

Solitary, flattened, to 2.5(–5) cm across. Fl to 2–4 cm across, red, reddish-orange or yellow. The smallest of the parodias. [H]

DISTRIBUTION: Bolivia, between Camargo and Culipata.

**Parodia otuyensis** Ritt.

Solitary, flattened-globular, to 11 cm broad. [H]

DISTRIBUTION: Bolivia, Dept. Potosí, near Otuyo.

OTHER NAMES: *P. baileya*, *P. firmissima*, *P. idaea*,  
*P. querubina*, *P. salmayerensis*, *P. streptocarpa*, *P. juniperina*.**Parodia penicillata** Fech. & v.d. SteegSolitary, to 70 cm long by 12 cm, spines usually (on cultivated plants) glassy straw-coloured but can be fulvous. Fl red, v. *nivosa* Fechser, spines thicker, white. Fl more orange. [CS/PM]

DISTRIBUTION: N Argentina, Salta.

**Parodia pluricentralis** Bkbg. & Brandt

Solitary, to 12 cm high by 5 cm. Fl 5 cm across, yellow. [P169/CS/DHS]

DISTRIBUTION: Argentina, Salta, near Ambloyo.

**Parodia prestoensis** Brandt

Solitary, 8 cm high by 10 cm. Fl 1.3 cm broad, golden yellow. [L384/TP/DHS]

DISTRIBUTION: Bolivia, Presto.

**Parodia procera** Ritt.

Solitary, to 30 cm high by 5 cm. Fl to 3 cm long. [IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, mouth of Rio Challamarca.

OTHER NAMES: *P. challemarana*, *P. pseudopercera*.**Parodia punae** Card.

Solitary, 8 cm high by 7 cm. Fl 2 cm broad, dark orange to red. [Lau IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, near Mine Asientos.

OTHER NAMES: *P. claudiae*, *P. zehneri*.

**Parodia riojensis** Ritt. & Wesk.

Clumping. Fl 4 cm wide, yellow. [P27/DHS]

DISTRIBUTION: Argentina, border between Catamarca and La Rioja.

OTHER NAMES: *P. macanensis* R.R.**Parodia roscoalba** Ritt.Solitary or forming large clumps, heads to 15 cm across. Fl 3.5 cm long. Probably only a white-spined phase of *P. maassii*. [H]

DISTRIBUTION: Bolivia, from near Tupiza to near Camargo.

OTHER NAMES: *P. agata*, *P. rosea* v. *australis*.**Parodia rubristaminea** Ritt.

Solitary, to 5 cm across. Fl 3–4 cm across, scented. [MLV59/HS/PM]

DISTRIBUTION: Argentina, Salta, SW of Alemania.

**Parodia saint-pieana** Blkbg.

Clumping, stems to 6 cm across. Fl 2.5 cm long, yellow. Not positively rediscovered in the wild. [Offset from original collection IP/DHS]

DISTRIBUTION: N Argentina, Jujuy.

**Parodia sanguiniflora** Fric ex Blkbg.Solitary, globular to elongated, to over 5 cm across. Fl 4 cm across. Probably only a form of *P. microsperma*. [CS/PM]

DISTRIBUTION: N Argentina, Salta.

OTHER NAMES: *P. rubriflora*.**Parodia sanguiniflora v. comata** Ritt.

Solitary, globose. Fl 4 cm broad. [H168/IP/DHS]

DISTRIBUTION: N Argentina, Tucuman, Tafi del Valle.

OTHER NAMES: *P. inflexa*.



**Parodia schwebsiana** (Werd.) Bkbg.

Solitary, to 11 cm high by 7 cm. Fl 2 cm broad, wine to rust red. [K1663/IP/DHS]

DISTRIBUTION: Bolivia, Cochabamba, occurs even within the city limits.

OTHER NAMES: *P. applegatei*, *P. erinacea*, *P. minima*, *P. schw.* v. *applegatei*.



**'Parodia setosa'** Bkbg.

Solitary, to 25 cm high by 12 cm. Fl red. [PI71/CS/DHS]

DISTRIBUTION: Argentina, Tumbaya.



**Parodia spegazziniana** Brandt

Solitary, to 9 cm high by 7 cm. Fl 5 cm across, red. [P51/CS/DHS]

DISTRIBUTION: Argentina, Jujuy.

OTHER NAMES: *P. capillitans*, *P. gigantea* v. *jujuyana*.



**Parodia stuemeri** (Werd.) Bkbg.

Usually solitary, to 20 cm high by 15 cm; rcp to 25, thin. Fl 4 cm long, yellow to orange. v. *robustior* Bkbg.; spines shorter, rcp 12–13. Fl red, 2–5 cm across (Maimara). [B91/IP/DHS]

DISTRIBUTION: N. Argentina.

OTHER NAMES: *P. friciana*, *P. gigantea*, *P. gokarukana*, *P. pseudostuemerii*, *P. rigidispina*, *P. rubricentra*, *P. scoparia*, *P. villosa*.



**Parodia subterranea** Ritt.

In habitat small and flattened, in cultivation becoming larger and elongated, 6 cm across; csp hooked or straight. Fl to 3 cm long. [CS/PM]

DISTRIBUTION: Bolivia, near Culipina.

OTHER NAMES: *P. calviniensis*, *P. massili* v. *subterranea*, *P. nigrescens*, *P. salarenensis*, *P. zelotacana*.



**Parodia taratensis** Card.

In cultivation becoming cylindric and clumping. Fl 1.5 cm across, yellow. [L979/IP/DHS]

DISTRIBUTION: Bolivia, road from Tarata to the Rio Caine.

OTHER NAMES: *P. albicans*.

**Parodia tuberculata** Card.

Solitary, to 5 cm high by 7 cm. Fl 1 to 1.8 cm long, yellowish-red. [KK874/IP/DHS]

DISTRIBUTION: Bolivia, Ormeza, Hacienda Ressini and around Sucre.

OTHER NAMES: *P. kraschkeana*, *P. sucrensis*.

**Parodia uebelmanniana** Ritt.

Solitary, globose to elongated, to 8 cm across. Fl 3.5 cm wide, golden yellow. [P153/CS/DHS]

DISTRIBUTION: Argentina, Salta, Lumbres.

OTHER NAMES: *P. rufiflora* Ritt. n.n., *P. rufiflora* R.R.

**Parodia weberiana** Brandt

Solitary, to 7 cm high by 10 cm. Fl yellow [P247/CS/DHS]

DISTRIBUTION: N Argentina, valley of the Rio Grande de Salice.

**Pediocactus knowltonii** Benson

Stems 0.7–5.5 cm tall, 1–3 cm across, clumping. Fl 1–2.5 cm broad. [Withers coll.]

DISTRIBUTION: Near the Los Pinos River in Colorado and New Mexico, USA.

OTHER NAMES: *P. bradyi* v. *knowltonii*.

**Pediocactus papyracanthus** (Engelm.) Benson

Solitary, to 10 cm high by 2.5 cm. Fl 1.25 cm across, white. [H]

DISTRIBUTION: New Mexico and N Arizona, rare.

OTHER NAMES: *Tucomya papyracantha*.

**Pediocactus peeblesianus** (Croiz.) Benson

Solitary, to 6 cm high by 4 cm; esp 0. Fl to 17 mm long, cream to yellow. [GJ]

DISTRIBUTION: N Arizona, between Holbrook and Joseph City. v. *fickeseni* (Birkb.) Benson is more densely spined; esp. 1.

DISTRIBUTION: N Arizona, Grand Canyon area.

OTHER NAMES: *Natouya peeblesiana*; v. *fickeseni*; *N. foliacea*.



**Pediocactus simpsonii** (Engelm.) B. & R.

Globular, solitary to clumping. Fl yellowish, greenish-pink, pink or white. [H]

DISTRIBUTION: Washington and Oregon, S Idaho, Montana, Wyoming to C Nevada, Colorado, N Arizona, Utah, W Kansas, New Mexico.



**Pelecyphora aselliformis** Ehrenbg.

Up to 10 cm high by 5.5 cm, clumping. Fl 3 cm across. [IP/GC]

DISTRIBUTION: Mexico, San Luis Potosí.



**Pelecyphora strobiliformis** (Werd.) Kreuz.

Spherical. Fl 3 cm long. [IP/F]

DISTRIBUTION: Mexico, Nuevo Leon, near Dr. Arroyo.

OTHER NAMES: *Encyliastrus stroblii*.



**'Pyrrhocactus andreaeanaus'** (Bkbg.) Ritt.

Solitary, to 15 cm high by 5 cm. Fl 3-4 cm broad, light scarlet to coppery-red. [GC]

DISTRIBUTION: Argentina, La Rioja, Famatina Massif.

OTHER NAMES: *Nenadinia andreaeanaus*.



**Pyrrhocactus bulbocalyx** (Werd.) Bkbg.

Solitary, spherical to elongated. Fl to 4 cm long. [L504/IP/F]

DISTRIBUTION: N Argentina.

OTHER NAMES: *P. sanjuanensis*.



**Pyrrhocactus megliolii** Rausch

Solitary, 45 cm high by 12 cm. Fl 2.5 cm across. [WR559/IP/GC]

DISTRIBUTION: Argentina, San Juan, near Marayes.

**Pyrrhocactus strausianus** (Sch.) Berg.

Solitary, to 16 cm high by 9 cm. [IP/F]

DISTRIBUTION: Argentina.

OTHER NAMES: *P. atropurpureum* (= *Nosporeria backebergii* (Don & Rowley), *N. catamarcensis*, *P. catamarc.*, *P. dubia*, *P. pachacensis*, *P. platyacanthus*, *N. setifera*, *P. setif.***Pyrrhocactus umadeave** (Fric) Bkbg.

Solitary, to 10 cm high by 11 cm. Fl to 3.5 cm long, pale yellowish. [IP/F]

DISTRIBUTION: N Argentina.

**Rebutia albiflora** Ritt. & Buin.

Heads very small, forming mats. [PM]

DISTRIBUTION: Bolivia, NE Tarija, Rio Pilaya.

OTHER NAMES: *Ajeleria albiflora*.**Rebutia albipilosa** Ritt.

Sparingly offsetting. Fl 3 cm across, orange, to red. [IP/P]

DISTRIBUTION: Bolivia, Narvaez.

OTHER NAMES: *Ajeleria albipilosa*.**Rebutia albopectinata** Rausch

Density of spination somewhat variable. [CS/PM]

DISTRIBUTION: Bolivia, Culpina.

**Rebutia archibuiningiana** Ritt.

Profusely offsetting, fl 2.5 cm across. [L404/CS/PM]

DISTRIBUTION: Bolivia, Padcaya.

**Rebutia brunescens** Rausch

Fl 3 cm across. [L383/IP/DHS]

DISTRIBUTION: Bolivia, Tariuco.

**Rebutia buiningiana** Rausch

Fl 3 cm across. [KK860/IP/DHS]

DISTRIBUTION: Argentina, Jujuy, near Iruya.

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

A very variable species. (see Appendix 8). [DHS]

DISTRIBUTION: N Argentina and S Bolivia, widespread.

OTHER NAMES: *Ajedrea deminuta*, *R. albitarsolate*,  
*R. boliviensis*, *R. caespitosa*, *R. mazina*, *R. nitida*,  
*R. rugulosa*, *R. paternalis*, *R. pseudomirimicula*,  
*R. rugosissima*, *R. tenuiseta*, *R. tuberosa*.**Rebutia donaldiana** Lau & Rowley

Fl 2.5 cm across. [CS/PM]

DISTRIBUTION: Bolivia, Pucara.

**Rebutia einsteinii** Fric

Stem cylindric, stems to 2 cm or more across, spine length extremely variable. Fl 3.5 cm across. [WR159/IP/DHS]

DISTRIBUTION: N Argentina, Salta, Volcan Chani.

OTHER NAMES: *Cylindrorebutia cinti*, *Mediolobivia schmedemannii* & var., *Lobivia cinti*.**'Rebutia einsteinii v. auriciflora'**published as *R. auriciflora* Blbkg.

Heads globular, to 3 cm across. Fl 4 cm across, yellow, violet-pink or orange-red. [CS/PM]

DISTRIBUTION: Argentina, Salta, Quebrada del Toro.

OTHER NAMES: *R. sanvicensis*, *Mediolobivia auricif. & vanc.*,  
*M. duarrensis*, *M. mediolobivia*, *M. rufiflora*,  
*Reb. albilongistyla*, *R. longistyla*, *Lobivia cinti* v. *auriciflora*.



**Rebutia einsteinii** v. *gonjianii*  
(Kies.) Don.

Stems only 1 cm across, spines short. [WR578/IP/DHS]

DISTRIBUTION: Argentina, Salta, from Purmamarca to Tícaro.

OTHER NAMES: *R. gonjianii*, *Lobivia cintz.* v. *gong.*



**Rebutia euanthaema** (Bkgg.) Buin. & Don.  
[CS/PM]

DISTRIBUTION: Argentina, Volcan and Tumbaya.

OTHER NAMES: *Digitorebutia euanth.*, *Mediolobivia euanth.*,  
*R. osculata*.



**Rebutia fabripii**  
Rausch. & v. *aureiflora* Rausch

Heads small, only 2 cm across, flower red. The variety has

smaller, yellow flower. [WR688 upper; WR687 lower/F]

DISTRIBUTION: Argentina, Jujuy, between Santa Ana and Valle Colorado.



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

Some plants have much longer, straighter golden spines than the one pictured. [CS/PM]

DISTRIBUTION: Bolivia, widespread and very variable.

OTHER NAMES: *Ajolera fiebr.* & v. *densita*, *A. spinosissima*,  
*R. arequipina*, *R. cintensis*, *R. fiebr.* v. *densita*,  
*R. spinosissima*.



**Rebutia flavistyyla** Ritt.

F1 3 cm long. [CS/PM]

DISTRIBUTION: Bolivia, near Cajas.



**Rebutia fulviseta** Rausch

Body dark blackish-green. F1 2.5 cm across. [CS/PM]

DISTRIBUTION: Bolivia, Areco, near Padcaya.

OTHER NAMES: *Ajolera fulviseta*.



**Rebutia heliosa** Rausch

Fl orange. [CS/PM]

DISTRIBUTION: Bolivia, road to Narvaez.

OTHER NAMES: *Ajolera heliosa*.



**Rebutia heliosa v. condorensis** Don.

Spination longer and less neat than in the species, heads larger forming bigger clumps in cultivation. Fl orange or red. [I, 405/CS/PM]

DISTRIBUTION: Bolivia, Condor Pass and Cajas Pass.

OTHER NAMES: *R. heliosa v. cajensis*.



**Rebutia hoffmannii** Diers & Rausch

Probably only a form of *R. fiebrigii*. Fl to 4.5 cm across. [Hoff2018/IP/DHS]

DISTRIBUTION: Argentina, Salta, near Santa Victoria.



**Rebutia huasiensis** Rausch

Fl to 3.5 cm across. [WR313a/IP/DHS]

DISTRIBUTION: Bolivia, near Inca Huasi.



**Rebutia ithyacantha** (Card.) Diers

Spine-length rather variable. Fl 2.5 cm across. [I, 350/IP/DHS]

DISTRIBUTION: Bolivia, near Comarapa.

OTHER NAMES: *Mediolobivia ithyacantha*.



**Rebutia jujuiana** Rausch

[WR220/CS/PM]

DISTRIBUTION: Argentina, widespread in Jujuy Province.

OTHER NAMES: *Ajolera jujuiana*.

**Rebutia kieslingii** Rausch

Fl orange or red. [CS/PM]

DISTRIBUTION: Argentina, Salta, Capulá.

**Rebutia krainziana** Kessel.

A cultivar, not known from the wild. [CS/PM]

**Rebutia kupperiana** Boed.

Fl 3.5 cm across. [CS/PM]

DISTRIBUTION: Bolivia, near Tarija.

OTHER NAMES: *Ajolera kupperiana*.**Rebutia leucanthema** RauschFl 2.5 cm broad, white or pink, v. *cocciniflora* Ritt. has longer, denser spinulation and a scarlet flower (N of Camargo). [WR305/IP/DHS]

DISTRIBUTION: Bolivia, Caña Cruz.

**Rebutia mamillosa** Rausch

Fl 4 cm across. The plant illustrated is possibly a cultivar since wild plants normally have pure orange-red flowers. [CS/PM]

DISTRIBUTION: Bolivia, near Camargo.

OTHER NAMES: *R. graciliflora* & var.**Rebutia margarethae** Rausch

Spinulation rather variable, from short and soft to long and needle-like. Fl orange to red. [L530/IP/DHS]

DISTRIBUTION: Argentina, Salta, near Santa Victoria.

**Rebutia marsoneri** Werd.

Solitary or only sparingly offsetting, heads to 5 cm or more across. Fl usually yellow, also red. [DHS]

DISTRIBUTION: N Argentina, Jujuy.

**Rebutia minuscula** Sch.

Fl to 4 cm long. [DHS]

DISTRIBUTION: Argentina, Tucuman.

*Rebutia minuscula* v. *grandiflora* (Blkhg.) Buin. & Don.  
Fl to 6.5 cm long.

DISTRIBUTION: Argentina, Salta, Quebrada Escoipe.

**Rebutia muscula** Ritt. & Thiele.

Spination very soft. [CS/PM]

DISTRIBUTION: Bolivia, Narvaez.

OTHER NAMES: *Ajolatera muscula*.

**Rebutia narvaecensis** (Card.) Don.

Fl pale to deep pink. [KK1518/IP/DHS]

DISTRIBUTION: Bolivia, near Narvaez.

OTHER NAMES: *Ajolatera narvaecensis*, *R. spinosae*'

**Rebutia padcayensis** Rausch

Fl 3.5 cm across. [CS/PM]

DISTRIBUTION: Bolivia, W of Padcaya.

OTHER NAMES: *Ajolatera padcay*, *R. singularis*.

**Rebutia perplexa** Don.

Heads small, to 1.5 cm across. Initially distributed as *R. narvaecensis*. [L329a/IP/F]

DISTRIBUTION: Bolivia, Mine Asientos.

**Rebutia pseudodeminuta** Bkbg.

Clumping, stems to 10 cm long. Fl red. [R642/DHS]

DISTRIBUTION: N Argentina, Salta. (See also Appendix 8).

**Rebutia pulchella** RauschA distinctive short-spined member of the fiebrigii complex.  
[DHS]

DISTRIBUTION: Bolivia, N of Padilla.

OTHER NAMES: *Ajantera pulchella*.**Rebutia pulvinosa** Ritt. & Buin.

Forming mats of small heads. Fl 1.5 cm across. [DHS]

DISTRIBUTION: Bolivia, Narvaez.

OTHER NAMES: *Ajantera pulvinosa*.**Rebutia pygmaea** (Fries) B. & R.Fl 2.5 cm across, bright red to dark purple-red (*Ride*  
Rausch). [IP/DHS]

DISTRIBUTION: N Argentina, Jujuy, Yavi.

OTHER NAMES: *Lobivia digitiformis*, *L. pygmaea*,  
*R. graciliformis*, *R. aligiformis*, *R. pascuareolata*, *R. petinata*,  
*R. tenuipata*.**\*Rebutia pygmaea v. colorea\***Published as *Rebutia colorea* Ritt.Distinguished from the species by its dark body colour and  
brown spines. [CS/PM]

DISTRIBUTION: Bolivia, Iscayache, Abra de Sama.

OTHER NAMES: *Lobivia pygmaea* v. *colorea*.**\*Rebutia pygmaea v. diersiana\***Published as *Rebutia diersiana* Rausch.Body bright grey-green, spines white. Fl yellow. A small-  
bodied form also from Yequina is traded as *R. diersiana*  
*minor* (= *Lobivia pygmaea* v. *minor* (Rausch) Rausch)  
[CS/PM]

DISTRIBUTION: Bolivia, Yequina near Calpina.

OTHER NAMES: *Digitorebutia diersiana*, *Lobivia pygmaea* v.  
*diersiana*, *R. rutiliflora*.



**'Rebutia pygmaea v. eos'**  
published as *Rebutia* em Rausch.

*v. canacruzensis* pub. as *Rebutia canacruzensis* Rausch is virtually identical (Cana Cruz). [CS/PM]

DISTRIBUTION: S Bolivia, Tafna and Tafna.

OTHER NAMES: *Lobivia haagei* v. *eos*, *R. rosuliflora*, *R. minuta*, *v. canacruzensis*, *L. haagei* v. *can.*



**'Rebutia pygmaea v. friedrichiana'**  
Published as *Rebutia friedrichiana* Rausch.  
Body larger than any other variety, to 5 cm high by 3 cm. Fl 3 cm across. [CS/PM]

DISTRIBUTION: Bolivia, La Cueva.

OTHER NAMES: *Lobivia pygmaea* v. *friedrichiana*, *R. odontopetala*.



**'Rebutia pygmaea v. haagei'**  
published as *Rebutia haagei* Fric & Schelle.  
Fl 4 cm broad. [RK84-4/IP]

DISTRIBUTION: Argentina, Jujuy.

OTHER NAMES: *Mediobibia pygmaea* Bltg. *Lobivia haagei*.



**'Rebutia pygmaea v. iscayachensis'**  
Published as *Rebutia iscayachensis* Rausch  
Body broader, squatter and paler green than its near neighbour *v. colorata*. Fl larger and less glossy than in the latter. [CS/PM]

DISTRIBUTION: Bolivia, Iscayache, Abra de Samá.

OTHER NAMES: *Lobivia pygmaea* v. *iscayachensis*. See Appendix 9 for other varieties.



**Rebutia ritteri** (Wessm.) Don.  
Fl 4.5 cm across, flame to crimson. *Rebutia raulii* Rausch, similar, but larger stems, to 4 cm across and a smaller, redder flower (Río Honda). Similar, *R. yuguenensis* Rausch with greener epidermis and smoky-red flower (Culipina). [WR650/IP/DHS]

DISTRIBUTION: Bolivia, near Iscayache.

OTHER NAMES: *Lobivia arroicensis* v. *ritteri*, *Mediobibia ritteri*, *R. sigrioni*, *R. sphacelia*, *R. tarimensis*, *R. zehneri*. *Lobivia atrecrensis* v. *raulii*, *L. atre*, v. *jaquin*.



**Rebutia schatzliana** Rausch  
Closely related to *Rebutia albopectinata* but spines more bristly. [DHS]

DISTRIBUTION: Bolivia, Nord Cinti, Pucara.

**Rebutia senilis** Blkbg.

Body to 8 cm high by 7 cm, spines relatively long and dense, glassy-white, Fl 3.5 cm across, 'v. brevisteta' lkbg. is pictured below the species. For other varieties see Appendix 10. [Upper P181/CS/PM] [Lower CS/PM]

DISTRIBUTION: N Argentina, Salta, upper Quebrada Escopé.

**Rebutia spegazziniana** Blkbg.

Fl 4 cm across. [L547/CS/PM]

DISTRIBUTION: N Argentina, Salta.

OTHER NAMES: *Ayleptera* spieg., *R. fissa*, *R. pectillaria*, *R. songarica*, *R. spieg. v. atroviridis*, *R. robustispina*, *R. thoreae*, *R. zulphis*, *R. walliana*.

**Rebutia steinmannii**  
(Solms-Laubach) B. & R.

Body 2 cm high by 1.5–2.5 cm. Spines 8–11. Fl 2 cm long, red. For varieties other than those illustrated see Appendix 11. [L421/IP/P]

DISTRIBUTION: Bolivia, between Oruro and Cochabamba, Encalpitos.

OTHER NAMES: *Ayleptera steinmannii*, *Mesobolusca* *eucliptana*, *R. eucliptana*, *R. iridescens*, *R. leucostoma*, *R. posina*, *R. salpigastera*.

**'Rebutia steinmannii v. christinae'**

Published as *Rebutia christinae* Rausch.

With a neat, hard, interlacing spinulation. [CS/PM]

DISTRIBUTION: N Argentina, Salta, Nazareno and Rodeo.

OTHER NAMES: *Rebutia christinae*.

**Rebutia sumayana** Rausch

Fl 2.5 cm across. [WR738/IP/DHS]

DISTRIBUTION: Bolivia, Sud Cinti, Sumaya.

**Rebutia supputiana** Rausch

Fl 4 cm broad. [WR629/IP/DHS]

DISTRIBUTION: Bolivia, N of Culpina and Inca Huasi.

**Rebutia tarvitaensis** Ritt.

Flower is one of the largest in the genus, to 5 cm or more across. [CS/PM]

DISTRIBUTION: Bolivia, Tarija.

**Rebutia tropacoliptica** Ritt.

Fl 3.5 cm long. [CS/DHS]

DISTRIBUTION: Bolivia, Mal Paso.

**Rebutia violaciflora** Bkbg.

Solitary in the wild, later clumping in cultivation. [CS/PM]

DISTRIBUTION: N Argentina.

OTHER NAMES: *R. kuriiana*, *R. minima* f. *violaciflora*.

**Rebutia violascens** Ritt.

Fl 3–4 cm across. [CS/PM]

DISTRIBUTION: Bolivia, near Camargo N to Illallaga.

OTHER NAMES: *Lobivia huayra* v. *visid*.

**Rebutia walteri** Diers

Closely related to *R. hoffmannii*. [WR784/DHS]

DISTRIBUTION: Argentina, Salta, Santa Victoria.

**Rebutia wessneriana** Bew.

Characterized by its rather dense spination. Fl 5.5 cm across. v. *calliantha* (Bew.) Don. has a flame-coloured fl. [Holotype/DHS]

DISTRIBUTION: N Argentina.

OTHER NAMES: *R. hypoleuca* v. *calliantha*; *R. calliantha*.



**Rebutia wessneriana v. beryllioides**  
(Buin. & Don.) Don.

Body flattened, glossy-green. Fl scarlet.

DISTRIBUTION: N Argentina.

OTHER NAMES: *R. ciliata* v. *beryllioides*, '*R. beryllioides*'.

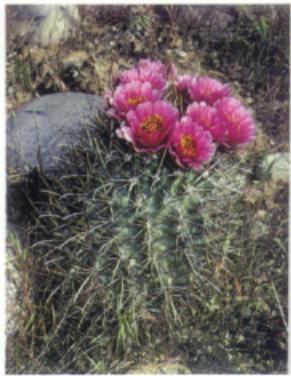


**Rebutia xanthocarpa** Blkg.

Fl only 2 cm across. fa. *dasyphryssa* (Card.) Buin. & Don.; spines longer, fl bluish-red. fa. *salmonea* (Blkg.) Buin. & Don.; fl salmon-red. fa. *violaciflora* (Blkg.) Buin. & Don.; fl brilliant violet. fa. *graciliflora* (Blkg.) Don.; fl only 1.7 cm across, light red tinged yellowish.  
[WRJ/JP/DHS]

DISTRIBUTION: N Argentina, Salta, Quebrada del Toro.

OTHER NAMES: fa. *dasy*: *R. day*. fa. *gracil*; *R. graciliflora* Blkg.



**Sclerocactus parviflorus** Clover & Jotter

Stem solitary or 2–3; upper esp pink. Fl averages 4–4.5 cm across. v. *intermedius* (Pech.) Woodruff & Benson (flus); upper esp white; fl averages 3 cm across (higher altitude juniper-pinyon woodland in Colorado, Utah and N Arizona and New Mexico. [H])

DISTRIBUTION: Lower parts of Navajoan Desert Arizona.



**Sclerocactus whipplei**  
(Engelm. & Big.) B. & R.

Solitary, to 7.5 cm high by 9 cm. Fl 2.5–3.5 cm across. [H]  
DISTRIBUTION: Lower parts of Navajoan Desert, Arizona.



**Sclerocactus wrightiae** Benson

Solitary. Fl 2 cm broad. [H]

DISTRIBUTION: Utah.



**Stenocactus albatus** (Dietr.) A.W. Hill

The plant pictured is commonly circulated as this species, it does not fit the original description and is of unknown wild provenance. [CS/P]



**Stenocactus cotonogonus**  
(Lem.) A.W. Hill

The only member of the genus which is easily and quickly referable to a specific identity. Characterized by the non-way ribs. [CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí State.



**Stenocactus crispatus** (DC) A.W. Hill

So variable that we are including several plates of the more distinctive forms, which are best acquired under collection numbers rather than names. Fl with purple pigments [L.1377; fl large, purple]. The plant pictured, Lau738, is an "average" form. [L.738/CS/PM]

DISTRIBUTION: Mexico, from Puebla and Oaxaca northwards to N San Luis Potosí and Zacatecas.

OTHER NAMES: Too uncertain to state.



**Stenocactus crispatus 'lloydii'**

One of the more distinctive members of the complex in cultivation, with its long, curved ceps. The plant illustrated, Lau1008, is virtually indistinguishable from the "lloydii" in trade. [L.1008/CS/PM]

OTHER NAMES: *Echinofossulocactus lloydii*.



**Stenocactus crispatus** "Huizache form."

One of a number of forms from widely scattered localities noted for their long ceps. This plant is in trade as PM49 and SB437. [PM49/HS/PM]



**Stenocactus multicostatus**  
(Hildm ex Sch.) A.W. Hill

Ribs numerous, to 100 or more, no more than 1 mm wide. Fl 2.5 cm long, white with purple midstripes. [P288/CS/PM]

DISTRIBUTION: Scattered in Zacatecas, Coahuila, Nuevo Leon and Durango, Mexico.



**Stenocactus multicostatus**  
"zacatecaensis"

Solitary, globular, to 10 cm across. Fl 3–4 cm broad. [SB7/HS/PM]

DISTRIBUTION: Mexico, N Zacatecas.

OTHER NAMES: *Echinofossulocactus zacatecaensis*.



**Stenocactus ochoterenaus** Tiegel  
Globose, 7 cm high and 10 cm across; upper esp to 6 cm long and 2 mm broad. Fl whitish-pink. [H]

DISTRIBUTION: Mexico, Sierra Madre Occidental.



**Stenocactus phyllacanthus**  
(Dietr. & Otto) A.W. Hill  
Usually solitary, 4–10 cm across. Fl to 2 cm long, white to pale yellow, sometimes with a thin, brown midstripe. [PM28/H5/PM]

DISTRIBUTION: Mexico: Hidalgo, Guanajuato; San Luis Potosí and Zacatecas.

OTHER NAMES: *E. tricuspidata*.



**Stenocactus vaupelianus**  
(Werd.) A.W. Hill  
Solitary, flattened-globe, to 10 cm across. Fl to 22 mm across very pale yellow. [H]

DISTRIBUTION: Mexico, the plant pictured was growing a few miles N of Zimapán, Hidalgo.



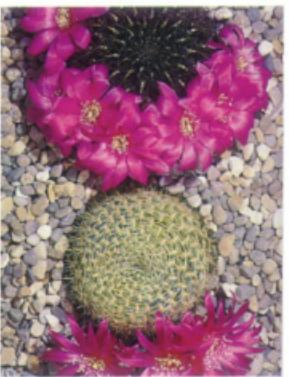
**Strombocactus disciformis** (DC.) B. & R.  
Slow-growing. Fl 4 cm across. [IP/DHS]

DISTRIBUTION: Mexico, Hidalgo.



**Sulcorebutia alba** Rausch  
Fls only red. [WR472/IP/DHS]  
DISTRIBUTION: Bolivia, road from Sucre to Los Alamos.

OTHER NAMES: *S. coccinea* v. *chrysanthemiflora*.



**Subcolebutia albissima** (Brandt) Pilbeam  
Spine colour and arrangement very variable.  
[Upper HS24/IP/DHS; Lower KK1567/IP/DHS]  
DISTRIBUTION: Bolivia, Province Moxos.

OTHER NAMES: *Wingertia albissima*, *S. albida* n.n.



**Sulcorebutia arenacea** (Card.) Ritt

Only sparingly offsetting, spine-length variable.  
[Card. 4480/IP/DHS]

DISTRIBUTION: Bolivia, Province Ayopaya, near Tiquipaya.

OTHER NAMES: *Rebutia arenacea*.



**Sulcorebutia augustinii** G. Hentschel

[HS152/IP/DHS]

DISTRIBUTION: Bolivia, Province Campero, at Vana Kumichio.



**Sulcorebutia breviflora** Bkbg.

Fl size and spine length variable. Fl usually yellow but also white, rose, pink and pink with white. [Upper Card. IP/DHS; Lower L315/IP/DHS]

DISTRIBUTION: Bolivia, Province Tarata, by the Rio Caine, La Vina.

OTHER NAMES: *S. gaimara*, *S. haelbomii*.



**Sulcorebutia candiae**

(Card.) Buin. & Don.

Spine-length very variable. [WR245/IP/DHS]

DISTRIBUTION: Bolivia, Province Ayopaya, near Tiquipaya.

OTHER NAMES: *Rebutia candiae*, *S. sanguibutha*.



**Sulcorebutia canigualerialii**

(Card.) Buin. & Don.

[KR217-2/IP/DHS]

DISTRIBUTION: Bolivia, Sucre.

OTHER NAMES: *Rebutia canig*.



**Sulcorebutia canigualerialii v. applanata**

Don. & Krahn

Noted for its flattened stems and deep magenta-red fl. [KR217a/IP/DHS]

DISTRIBUTION: Bolivia, Sucre, on the road from the Rio Chico valley.

OTHER NAMES: *S. tenuiciliolata* n. *applanata*.

**Sulcorebutia caracarensis** sensu Rausch

No recent collections which are definitely this plant have been made. The plant illustrated is Rausch's concept of the species. WR598. [WR598/IP/DHS]

DISTRIBUTION: Bolivia, originally given as Province Zinánez, Caracara Hills.

OTHER NAMES: *Rubbia caracarensis*.

**Sulcorebutia cardenasiana** Vasq.

[WR609/IP/DHS]

DISTRIBUTION: Bolivia, Province Campero, near Pasorapa.

**Sulcorebutia cochabambina** Rausch

Rather variable, spines long or short, epidermis green or bronze. Fl always magenta. [WR611-7/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, around Cliza and Arque and near Arque.

OTHER NAMES: *S. elizae* nom. prav.

**Sulcorebutia crispata** Rausch

Spine and fl colour variable (see illus.). [L390/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, Tomina.

**Sulcorebutia cylindrica** Don. & Lau

The original Lau collection illustrated has a slim, cylindrical body and a yellow fl, though white fl forms also occur. Later collections from other localities have turned up broader plants with magenta fls, e.g., 'c. ornata' n.n. [L335/IP/DHS]

DISTRIBUTION: Bolivia, between Vila Vila and Cruce.

**Sulcorebutia fischeriana** Augustin

[HS79/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, Cerro Kasichancha.

**Sulcorebutia flavissima** Rausch

Flower pink or white. This species almost certainly is a yellow-spined form of *S. mentosa*. [L338/IP/DHS]

DISTRIBUTION: Bolivia, between Aiquile and Mioque, near Ordóñez Abuelo.

OTHER NAMES: *S. eximia* n.n., *S. flava*.

**Sulcorebutia frankiana** Rausch

[HS75/IP/DHS]

DISTRIBUTION: Bolivia, Sucre, road to Los Alamos.

**Sulcorebutia glomeriseta** (Card.) Ritt.

Though distinctive in cultivation it seems to be merely a form of *S. menesesii*. [Card. IP/DHS]

DISTRIBUTION: Bolivia, Provincie Ayopaya, near Naranjito.

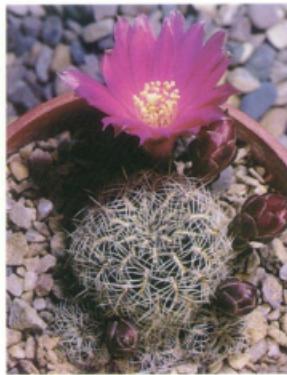
OTHER NAMES: *Rebutia glomeriseta*.

**Sulcorebutia glomerispina** (Card.) Buin. & Don.

Doubtfully distinct from *S. steinbachii*, which is often the plant passed off as *glomerispina* in trade. [WR249/IP/DHS]

DISTRIBUTION: Bolivia, Huazaní.

OTHER NAMES: *Rebutia glomerispina*.

**Sulcorebutia inflexiseta** (Card.) Don.

[Card. 6308/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca.

OTHER NAMES: *Rebutia inflexiseta*.

**Sulcorebutia jolantana** nom. nud.

Merely a yellow-spined population of the very variable *S. purpurea*. [HS68a/IP/DHS]

DISTRIBUTION: Bolivia, near Laguna.



**Sulcorebutia krahniiflora** Rausch  
[HS33/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Santa Cruz, N of Comarapa, Cerro Tukiphulla.



**Sulcorebutia kraeberi** (Card.) Ritt.  
Flowers yellow or reddish. [Card.5495/IP/DHS]

DISTRIBUTION: Bolivia, near Cochabamba.



**Sulcorebutia kraeberi v. hoffmanniana**  
(Bkhg.) Don.

Spines very variable in density, and colour which ranges from yellowish-white to various shades of brown. [DHS]

DISTRIBUTION: Bolivia, Cachí Punata, La Villa and Tacachi.

OTHER NAMES: *Lobivia hoffmanniana*, *S. spinivora*,  
*S. zuurikelli*, *S. hoffmanniana*.



**Sulcorebutia langeri**  
Neumann & Falkenburg *nom. prov.*  
[Langer IP/DHS]

DISTRIBUTION: Bolivia, Dept. Santa Cruz, near Pampa Grande, on the Rio Chico.

OTHER NAMES: "S. luehrsii".



**Sulcorebutia losenickiana** Rausch  
Stem solitary, to 7 cm tall, sparingly clustering only with age. Fl bright red. The pinkish-magenta fl plants often sold under this name are not this species. [WR477/IP/DHS]

DISTRIBUTION: Bolivia, near the road from Sacre to Ravelo.

OTHER NAMES: *S. marenii* Ritt. n.n.



**Sulcorebutia mariana** Swoboda  
Probably only a form of *S. totorensis*. [HS15/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, W of Misque.

**Sulcorebutia markusii** Rausch

Spination very variable in colour and density (see plate). Fl 3.5 cm across deep magenta or scarlet. [Upper WR195/IP/DHS; Lower HS64/IP/DHS]

DISTRIBUTION: Bolivia, Prov. Mizque, near Villa Vila.

**"Sulcorebutia markusii v. cuprea"**

Published as *S. verticillacantha* v. *cuprea*  
Rausch.

Spines longer than in the species. Fl 4.5 cm across, red with an orange throat. [WR476/IP/DHS]

DISTRIBUTION: Bolivia.

**Sulcorebutia menesesii**

(Card.) Buin. & Don.

Many plants labelled incorrectly as *S. haseltonii* in collections should be referred here. [IP/DHS]

DISTRIBUTION: Bolivia, Prov. Ayopaya, near Naranjito.

OTHER NAMES: *S. menesii* v. *kuwamurai*.

**Sulcorebutia menesesii v. muschii**

(Vasq.) Don.

[WR607/IP/DHS]

DISTRIBUTION: Bolivia, Prov. Ayopaya, Chicote Grande.

**Sulcorebutia mentosa** Ritt.

[HS104/IP/DHS]

DISTRIBUTION: Bolivia, Aiquile.

**Sulcorebutia mizquensis** Rausch

[WR194/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, near Mizque.

**Sulcorebutia oenantha** Rausch

Solitary; to 10 cm across. [KK/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, S of Totoro.

**Sulcorebutia pampagrandensis** Rausch

Solitary, 7–8 cm across. Occurs but a few miles from the preceding species into which it grades. [WR466/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, S of Totoro, Hacienda Pampagrande.

OTHER NAMES: 'S. weingartensis'.

**Sulcorebutia perplexiflora** BrandtCollectors may be more familiar with this plant as one of the contenders for the confused *S. pulchra* (see next entry). [I.387/IP/DHS]

DISTRIBUTION: Bolivia, Presto-Pasopaya.

**Sulcorebutia pulchra** (Card.) Don.

Plants exactly matching the original description have yet to be relocated. Plants commonly bearing this name in cultivation are most often Rausch's 593 &amp; 599. However, the plant illustrated, HS78a, seems a better contender. [HS78a/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, between Rio Grande and Presto.

OTHER NAMES: Originally published in error as *S. pulchra*.**Sulcorebutia purpurea** Don.

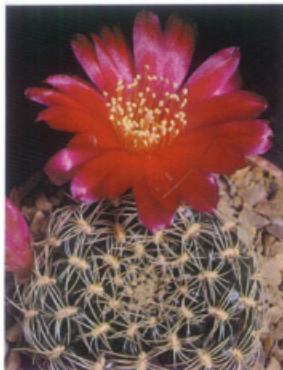
Usually solitary, to 9 cm or more across, very variable. [Upper HS67/IP/DHS; Lower L336/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, Lagunillas to within 12 km of Aiquile, near Novillero and almost as far W as Castra.

OTHER NAMES: *S. argentea*, *Weingartia rubriflora*.**Sulcorebutia rauschii** Frank

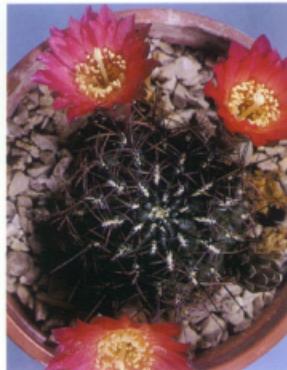
Body green to purple, spines black or gold. [CS/PM]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, near Zudanéz.

**Sulcorebutia santiaginicensis** Rausch

A small-bodied member of the *S. purpurea* complex.  
[JD178a/IP/DHS]

DISTRIBUTION: Bolivia, Aiquile.

**Sulcorebutia steinbachii** (Werd.) Bkbg.

So variable that it seems pointless to uphold any of the named varieties except see right. Within a single population fl may vary from gold, to gold-orange, flame orange, magenta or scarlet; spines from almost pectinate to long and dagger-like. [Card. IP/DHS]

DISTRIBUTION: Bolivia, widespread around Cochabamba.

OTHER NAMES: *S. steinii*, *v. australis*, *v. gracilior*, *v. horrida*,  
*v. violaceiflora*, *'S. bicolor'*, *S. tuberculata-chrysanthia*,  
*Weingartia clavata*.

**Sulcorebutia steinbachii v. polymorpha**  
(Card.) Pilbeam

A population with the two flower colours depicted in the plate and rather fresh-green bodies. [Upper KK875/IP/DHS; Lower KK869/IP/DHS]

DISTRIBUTION: Bolivia, Karyani.

OTHER NAMES: *S. polymorpha*.

**Sulcorebutia swobodae** Augustin

Spines light or dark. Closely related to *S. mentosa* and probably better treated as a variety thereof.  
[HS27a/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, between  
Aiquile and Mizque.

**Sulcorebutia tarabucoensis** Rausch

Spination usually rather untidy and curly. Fl red. Closely related to *S. caniguerai*. [L382/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, near Tarabuco.

**'Sulcorebutia tarabucoensis v. aureiflora'**  
Published as *S. verticillacantha v. aureiflora*  
Rausch.

Heads smaller and slimmer than in the species. Fl yellow.  
[L389/IP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, near  
Tarabuco.

OTHER NAMES: See heading. Also *Wrightia raffallensis*,  
*W. rufra-area*.

**Sulcorebutia taratensis** (Card.) Bkhg.

Typically a dark bodied plant. [Vasquez IP ex Krahn/DHS]

DISTRIBUTION: Bolivia, around Tarata.

**Sulcorebutia tarijensis** Ritt.Body can be much blacker than in the plant illustrated.  
[KK804/1P/DHS]

DISTRIBUTION: Bolivia, Cuesta de Sama

OTHER NAMES: *Weingertia tarijensis*, *W. oligantha*,  
*W. sanguinea-tarijensis*.**Sulcorebutia tiraquensis** (Card.) Ritt.

Spines dark-yellow to dark-brown; fl purple to red. 'v. bicolorispina' Knorr same prov.; (fls.), fl magenta sometimes red. [KK1770/1P/DHS]

DISTRIBUTION: Bolivia, near Monte Puncu.

OTHER NAMES: *S. tirapu*, v. *spinosa*. *Weingertia nigrofusca*  
v. *bicolorispina*; *Weingertia agilae*, *S. tamaracoi*; *S. senilis***'Sulcorebutia tiraquensis  
v. electracantha'** Blbg.Spines white to yellow, fl orange to red. Not really a good variety as it grows mixed in with the species.  
[KK1801/1P/DHS]

DISTRIBUTION: As for the species.

**Sulcorebutia tiraquensis v. longiseta** (Card.) Dom.

Described as being long-spined but short-spined forms also occur [Krahn IP/DHS]

DISTRIBUTION: Bolivia, Cochabamba, isolated on islands near Lopez Mendoza.

**Sulcorebutia torotorensis** (Card.) Bred. & Dom.The largest of the sulcorebutias, to 15 cm across.  
[KK1771/1P/GC]

DISTRIBUTION: Bolivia, Dept. Potosí, near Toro-Toro.

OTHER NAMES: *Weingertia torotorensis*.

**Sulcorebutia totorensis** (Card.) Ritt.

Body dark-green, esp 3–6, to 2 cm long. Fl dark reddish-purple, 3.5 cm long, v. *lepidia* (Ritt.) Pilbeam ex Don. (illus.); body very dark-green or purplish-brown, esp usually 0(–6), 5–8 mm long. Fl dark red, 3 cm long. (50 km E. of Copachuncho.) [WR196a/JP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, from Copachuncho S towards Lagunillas.

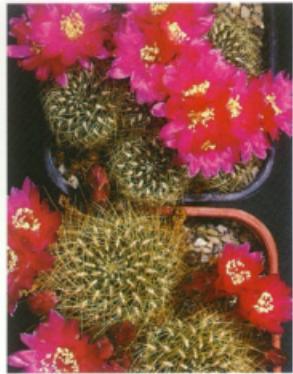
OTHER NAMES: *Rebutia totorensis*, v. *lepidia*: *S. lepidia*.

**Sulcorebutia tunariensis**

(Card.) Buin. & Don.  
[L971/JP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, around Tunari.

OTHER NAMES: *Rebutia tunariensis*.

**Sulcorebutia vasqueziana** Rausch

Spine colour variable, see plate. v. *albispina* Rausch has white spines. [Upper HS72/JP/DHS; Lower WR474/JP/DHS]

DISTRIBUTION: Bolivia, Dept. Chuquisaca, Sucre, near the road to Los Alamos.

OTHER NAMES: v. *albispina*: *S. ritteri*, 'S. sucreni'; *S. terminalis* v. *albispina*.

**Sulcorebutia verticillacantha** Ritt.

Fl pale violet-purplish or vermilion with an orange throat. v. *minima* Pilbeam ex Rausch has tiny stems and magenta-pink fl [Prov. Areque, at Anzaldo]. [JP/DHS]

DISTRIBUTION: Bolivia, Dept. Cochabamba, near Areque and near Laata.

**Thelocactus bicolor**

(Gal. ex Pfeiff.) B. & R.

Spination so variable that most varieties can be sunk within the species. v. *flavidispinus* Blbgb.; a dwarf plant restricted to a unique soil type near Marathon, Texas. [CS/PM]

DISTRIBUTION: Widely distributed in SW Texas and N Mexico.

OTHER NAMES: *T. bicolor* v. *schoettii*, v. *teocui*, v. *tricolor* & v. *angustifolius*, *T. angustiorum*; *Ferocactus bicolor*, v. *flavidispinus*; *Fern. bicolor* v. *flavid*. *T. flavid*.

**Thelocactus bicolor v. bocanaensis**

(Runge) Knuth

Noted for its beautiful dense covering of pale, yellowish-white spines. Fl lacks the red centre usually found in the species. [CS/W]

DISTRIBUTION: Mexico, Coahuila, Sierra Blanca.

OTHER NAMES: *Ferocactus bicolor* v. *bocanaensis*.



**Thelocactus bicolor v. schwarzii**  
(Bkhg.) Anderson

Csp usually absent. [CS/PM]

DISTRIBUTION: Mexico, Tamaulipas, S of Llera.

OTHER NAMES: *T. schwarzii*, *Fenestractus bicolor v. schwarzii*.



**Thelocactus conothelos**  
(Regel & Klein) Bkhg. & Knuth

Solitary, fl magenta, purple or white, v. *aurantiacus* Glass & Foster (illus.), is very similar but fl yellow. In some populations pink and yellow flowered forms grow together so it may not be a good variety (Nuevo Leon, near Aramberri). [CS/PM]

DISTRIBUTION: Mexico: Nuevo Leon, Tamaulipas and San Luis Potosi.

OTHER NAMES: *T. sphaeroides*.



**Thelocactus conothelos v. argenteus**  
Glass & Foster

Solitary, spines glassy, silvery greyish-white. [CS/PM]

DISTRIBUTION: Under pines near La Ascension, Nuevo Leon, Mexico.

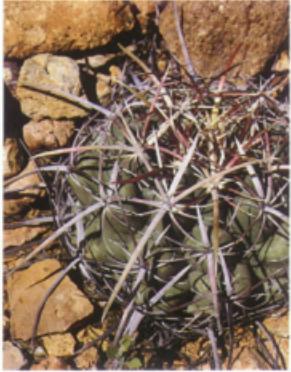


**Thelocactus hastifer**  
(Werd. & Boed.) Knuth

Stem solitary, long-cylindrical, fl 3.5–5 cm across. [IP/K]

DISTRIBUTION: Mexico, Queretaro.

OTHER NAMES: *Fenestractus hastifer*.



**Thelocactus heterochromus**  
(Web.) van Oosten

Seemingly intermediate between *T. bicolor* and *T. hexaedrophorus*. Fl to 10 cm across, light violet with a darker centre. [NPT-499/1H]

DISTRIBUTION: Mexico, Chihuahua to Coahuila.

OTHER NAMES: *Fenestractus heterochromus*.



**Thelocactus hexaedrophorus**  
(Lem.) B. & R.

Spination and body form rather variable. Fl white, v. *Bloydii* (B. & R.) Kladiva & Fitzkau has very conspicuous broad tubercles and a pink flower (Zacatecas, e.g., near Fresnillo). [CS/PM]

DISTRIBUTION: Mexico, widespread in San Luis Potosi, Tamaulipas and Nuevo Leon.

OTHER NAMES: *T. fuscatus*, *T. hex.* v. *fus.* *Bloydii*, *T. Bloydii*.

***Thelocactus leucacanthus***

(Zucc. ex Pfeiff.) B. &amp; R.

Eventually clumping. Fl 4.5 cm across, yellow, or pinkish-violet to carmine in 'v. schmidii' & 'v. sanchezmejoradae'. [CS/PM]

DISTRIBUTION: Mexico: Hidalgo and Queretaro.

OTHER NAMES: *Ferocactus leucacanthus*, *T. okobergeri*.***Thelocactus macdowellii***

(Rebut ex Quechl) Glass

Solitary or clumping, fl 5 cm across, pink. [CS/PM]

DISTRIBUTION: Mexico: Coahuila and Nuevo Leon, especially between Monterrey and Saltillo.

OTHER NAMES: *T. conothelos* v. *macdowellii*.***Thelocactus rinconensis* (Poselg.) B. & R.**

Solitary, to 20 cm across, spines variable in length from short in 'v. pijnackeri' to as much as 6 cm in 'v. nivalis'. [CS/PM]

DISTRIBUTION: Mexico: Coahuila and Nuevo Leon.

OTHER NAMES: *T. lophophorele* & v. *nivalis*, *T. nivalis*, *T. pijnackeri*.***Thelocactus setispinus***

(Engelm.) Anderson

Solitary, to 12 cm high by 9 cm. Fl 3–4.2 cm across. [SIB85b/CS/PM]

DISTRIBUTION: S Texas and Mexico in Coahuila, Nuevo Leon and Tamaulipas.

OTHER NAMES: *Ferocactus set.*, *Hammatacactus set.****Thelocactus tulensis* (Poselger) B. & R.**

Solitary or clumping, elongate. Fl 3.5–4.2 cm across, white with pale pink midstripe. Yellow-flowered plants labelled 'v. neotropica' are in cultivation. v. *bueckii* (Klein) Anderson; body squat, tubercles pointed, less spiny (Nuevo Leon, e.g. Aramberri). [IP/W]

DISTRIBUTION: Mexico: Tamaulipas and San Luis Potosí.

OTHER NAMES: v. *bueckii*; *T. buceki*.***Thelocactus tulensis* v. *matudae***

(Sanchez-Mej. &amp; Lau) Anderson

Solitary, to 15 cm across. Fl 7.5–8 cm across. [L744/CS/PM]

DISTRIBUTION: Mexico, Nuevo Leon, Valley of Rayones.

OTHER NAMES: *T. matudae*.

***Turbinicarpus laui*** Glass & Foster

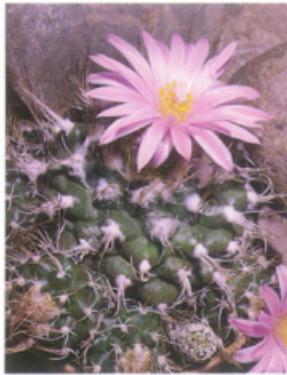
Solitary, globose, to 3.5 cm across. Fl 3–3.5 cm wide.  
[CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, near Villa Juarez.  
OTHER NAMES: *Nesbrydia laui*.

***Turbinicarpus lophophoroides*** (Werd.) Bux. & Bkbg.

Solitary, to 3.5 cm high and 4.7 cm broad. Fl 3.5 cm across.  
[CS/PM]

DISTRIBUTION: Mexico, San Luis Potosí, Las Tablas.  
OTHER NAMES: *Nesbrydia loph.*

***Turbinicarpus pseudomacrochele*** (Bkbg.) Bux. & Bkbg.

Usually solitary, to 4 cm high by 3.5 cm. Fl 3–3.5 cm wide.  
[CS/PM]

DISTRIBUTION: Mexico: Hidalgo and Queretaro.  
OTHER NAMES: *Nesbrydia pseudom.*

***Turbinicarpus pseudomacrochele*** v. *kraiinianus* (Frank) Glass & Foster

Almost invariably clumping in cultivation, to 4 cm high by 3 cm. Fl yellow. This form not record in the wild but a miniature pink-flowered form has recently been found in Hidalgo. [CS/PM]

DISTRIBUTION: Mexico, Queretaro.

OTHER NAMES: *Turbinicarpus kraiin.*, *Tiameya pseudomac.*, *v. kraiin.*, *Strombicactus pseudomac.*, *v. kraiin.*

***Turbinicarpus pseudopectinatus*** (Bkbg.) Glass & Foster

Solitary, to 5 cm high by 2–3.5 cm. 'v. *rubriflora*' has reddish-pink fl. [CS/PM]

DISTRIBUTION: Mexico: Tamaulipas and Nuevo Leon.  
OTHER NAMES: *Nesbrydia pseudo*, *Normanbrydia pseudo*, *Pelocypsoha pseudo*.

***Turbinicarpus schmiedickeanus*** (Berg.) Bux. & Bkbg.

Solitary, to 2.5 cm high and broad. Fl 1.8–2.8 cm across, white to pinkish with light magenta mid-veins. [IP/P]

DISTRIBUTION: Mexico, Tamaulipas, near Miquihuana.  
OTHER NAMES: *Nesbrydia schmied.*



*Turbinicarpus schmiedickeanus  
v. dickisoniae* Glass & Foster

Solitary, 2.5 cm high by 3.5 cm. Fl 1.7 cm across. [CS/P]

DISTRIBUTION: Mexico, Nuevo Leon, near Aramberri.

OTHER NAMES: *Neslophidium schmied. v. dick.*, *Turbinicarpus dick.*; *T. gracilis*, *v. dick.*



*Turbinicarpus schmiedickeanus  
v. flavidiflorus* (Frank & Lau) Glass & Foster

Solitary, to 3 cm high by 2 cm. Fl 1–1.5 cm across. [IP/GC]

DISTRIBUTION: Mexico, San Luis Potosí, near Santa Rita.

OTHER NAMES: *Neslophidium schmied. v. flav.*, *Turbinicarpus flav.*



*Turbinicarpus schmiedickeanus  
v. gracilis* Glass & Foster

Solitary, to 2.5 cm high by 3 cm. Fl 1.5 cm across. [CS/P]

DISTRIBUTION: Mexico, Nuevo Leon, near Aramberri.

OTHER NAMES: *Neslophidium schmied. v. gracilis*, *T. gracilis*.



*Turbinicarpus schmiedickeanus  
v. klinkerianus* (Bkhg. & Jacobs.) Glass & Foster

Solitary, to 3 cm high by 5 cm. [IP/DHS]

DISTRIBUTION: Mexico, San Luis Potosí.

OTHER NAMES: *Neslophidium schmied. v. klink.*, *T. klinkeriana*.



*Turbinicarpus schmiedickeanus  
v. macrochela* (Werd.) Glass & Foster

Solitary, to 3 cm high by 4 cm. Fl to 3.2 cm across. [IP/GC]

DISTRIBUTION: Mexico, San Luis Potosí, Motaulea.

OTHER NAMES: *Neslophidium schmied. v. macro.*, *T. macro.*



*Turbinicarpus schmiedickeanus  
v. schwarzi* (Shurly) Glass & Foster

Solitary, to 3 cm high by 4 cm. Fl 2.5–3.2 cm across. [IP/DHS]

DISTRIBUTION: Mexico, E. San Luis Potosí.

OTHER NAMES: *Neslophidium schmied. v. schwarzi*, *Thelocactus macrochela v. schwarzi*, *Tsueyga mac. v. schw.*, *T. schw.*, *'T. palauki'*.

***Turbinicarpus valdezianus***

(Moell.) Glass &amp; Foster

Solitary, to 2.5 cm high. [CS/PM]

DISTRIBUTION: Mexico, Coahuila, Saltillo.

OTHER NAMES: *Gymnocalycium vald.* & *t. alboflorus*, *Nesioglypta vald.*  
*Normandisia vald.*, *Peltophorus vald.*, *Thelocactus vald.****Uebelmannia buiningii*** Don.

Solitary, short-cylindric to 8 cm broad. Fl to 2 cm across, yellow. [CS/GC]

DISTRIBUTION: Brazil, Minas Geraes, Serra Negra.

***Uebelmannia flavispina*** Buin. & Bred.

Solitary, to 35 cm high by 11 cm. Fl 7 mm broad, light yellow. [CS/GC]

DISTRIBUTION: Brazil, Minas Geraes, W of Diamantina.

***Uebelmannia gummosa***

(Bkgb. &amp; Vol.) Buin.

Solitary, to 10 cm high by 6 cm. Fl 1.5 cm wide, yellow. [H]

DISTRIBUTION: Brazil, Minas Geraes, Serra de Ambrosia.

OTHER NAMES: *P. gummosa*.***Uebelmannia meninensis*** Buin.

Solitary, to 50 cm long and 10 cm broad. Fl 3 cm across, pale yellow. [CS/GC]

DISTRIBUTION: Brazil, Minas Geraes, near Pedra Menina.

***Uebelmannia pectinifera*** Buin.Solitary, to 50 cm high by 15 cm. Fl greenish-yellow. v. *pseudopectinifera* Buin. is smaller, body greener, spines spreading sideways. [GC]

DISTRIBUTION: Brazil, Minas Geraes, near Diamantina.

OTHER NAMES: *U. amethystina*, *U. mattheiata*.

*Weingartia buiningiana* Ritt.

Solitary, 5–10 cm across, becoming elongated.  
[FR816/GC]

DISTRIBUTION: Bolivia, Capadala on the Río Pilcomayo.

*Weingartia cintiensis* Card.

[KK722/IP/DHS]

DISTRIBUTION: Bolivia, N. Cinti.

OTHER NAMES: *W. fidaiana* subsp. *cintiensis*.

*Weingartia fidaiana* (Bkhg.) Werd.

Usually solitary, to 12 cm or more across. Fl 1 to 3 cm long, yellow. [IP ex Lau/GC]

DISTRIBUTION: S. Bolivia, Tupiza.

*Weingartia kargliana* Rausch

Solitary, globular, to 5 cm across. Fl 3.5 cm across, yellow.  
[WR677/IP/GC]

DISTRIBUTION: Bolivia, N of Tupiza on the Pampa Mochaca.

OTHER NAMES: *W. pygmaea*.

*Weingartia lanata* Ritt.

Usually solitary, globular, to 17 cm across. Fl 1 to 3 cm across, yellow. *W. rugosensis* is merely a small-headed clumping form of this species. [IP/GC]

DISTRIBUTION: Bolivia, near Chuquicucho.

OTHER NAMES: *W. chiquichapensis*, *W. cornuta* (Cardenas 1971), *W. longigibba*.

*Weingartia neocumingii* Bkhg.

Solitary, to 20 cm high by 10 cm. Fl orange to golden yellow. subsp. *pulquinensis* (Card.) Don; globose, woolly, spines thinner, fl yellow. [KK1201/IP/GC]

DISTRIBUTION: Bolivia, widespread in NC Bolivia.

OTHER NAMES: *W. brachygraphia* subsp. *pulquinensis*; *W. multigyna*, *W. pulquinensis*, *W. kruzei*, *W. cornuta*, *W. cornacea* & *v. catamarcensis*.



**Weingartia neocumingii** subsp.  
**pulquinensis** v. **mairanensis** Don.

A particularly attractive form with its orange to brown spines. [L.958/GC]

DISTRIBUTION: Bolivia, near Mairana.

OTHER NAMES: "W. kapobiana".



**Weingartia neocumingii** subsp.  
**sucresis** (Ritt.) Don.

Solitary, depressed-spherical, to 15 cm across. Fl 3 cm  
broad, yellow. v. *trollii* (Oester) Don. (illus.); fl yellow to  
red. [GC]

DISTRIBUTION: Bolivia, E. of Sucre, Questa del Desmeador.

OTHER NAMES: *W. gracilipina*, *W. hedriana*,  
*W. newtoni* subsp. *sucresis* v. *hedriana*, *W. newtoni*,  
v. *trolli*; *W. tenuiflora*.



**Weingartia neumanniana** (Bkbg.) Werd.

Solitary, to 7 cm high by 5 cm. Fl 2.5 cm broad, yellow to  
reddish-orange. [IP/GC]

DISTRIBUTION: N Argentina, N of Humahuaca.



**Weingartia pilcomayoensis** Card.

Solitary, to 13 cm high by 12 cm. Fl 4 cm long, yellow. The  
plant illustrated is the small-flowered form of this species  
from Millares known as *W. pleyeri*. [KK829/IP/GC]

DISTRIBUTION: Bolivia, Dept. Potosí, between Puente  
Pilcomayo and Otuny.



**Weingartia westii** Hutch.

Solitary, to 20 cm high by 8 cm. Fl 3.5 cm broad, yellow.  
[West 6367, type plant/DHS]

DISTRIBUTION: Bolivia, Cache Ingenio.

OTHER NAMES: *W. lauriei*, *W. vilayensis*.

# APPENDICES

## APPENDIX 1.

### *Echinopsis obrepanda* (S-D) Sch.

Its wide distribution through the highlands of C and S Bolivia has caused this species to show a perplexingly broad range of variation. As a result, many individual populations showing their own distinctive characteristics of body morphology, spination and flower colour have been named as discrete species or varieties. A number of these names was based mainly on flower colour, but as populations are now known where a full range of colours – from white through pink and magenta to red and scarlet – can be found on adjacent plants, this form of splitting now seems untenable. Only where body and spine details differ in a consistent way within a population, which may also exhibit a single flower colour, is a name now retained, albeit at a varietal rather than specific level.

A general description of the species is as follows. Body depressed-spherical, glossy dark-green. Around Cochabamba and at Zudanéz the heads may reach a diameter of 30 cm, at which point they begin to form clumps. In some of these populations only a single flower colour is found, e.g. white or magenta, while in others the full range described above occurs. Rsp generally 9–11 up to 1 cm long, csp 1–3 up to 5 cm long, whitish to dark brown often with 1 csp hooked; fl 20 cm long. At Culipin a giant form occurs with more globular bodies up to 50 cm or more across and 30 cm high; spines longer than normal, straw-coloured, fl white.

OTHER NAMES: *E. callianthollilacina*, *E. callichroma*, *E. carmineflora*, *E. coronata*, *E. cristata*, *E. fiebrigii*, *Pseudolobivia frankii*, *E. mutaranensis*, *E. pseudomamillosa*, *E. ríosae de caralitii*, *E. rojasii*, *E. rosco-lilacina* & *E. toralapanana*, *E. obrepanda* v. *purpurea*.

## APPENDIX 2.

### *Escobaria albicolumnaria* Hester

Solitary or very sparingly branching; rsp 25–30; csp 11–15, to 18 mm long. Fl to 1.8 cm across, pinkish.  
DISTRIBUTION: W Texas.

### *Escobaria orcuttii* Boed.

Stem to 15 cm high by 6 cm, solitary or clumping; rsp 30–41; csp 15–18; fl 12 mm wide, pinkish, v. *macraxina* Castetter et al and v. *koenigii* Castetter et al; spine count higher, seeds larger otherwise similar (SW New Mexico).

DISTRIBUTION: SE Arizona and SW New Mexico.

OTHER NAMES: *Coryphantha orcutti*, *C. strobiliformis* v. *orcuttii*.

### *Escobaria sandbergii* Castetter et al

Stem to 7 cm across. Fl to 2.5 cm across, light pink to purple.  
DISTRIBUTION: New Mexico, San Andres Mts.

## APPENDIX 3.

### *Lobivia aurea*.

*Lobivia aurea* is one of those plants which shows such a bewildering degree of variation from population to population over its wide range that it is virtually impossible to draw any firm and distinct lines of differentiation between them. When a plant from any particular population varies from that of a neighbouring population in details of body morphology, spination and flower, and there are dozens of such populations, it can surely only be an arbitrary decision as to which of these merit specific or varietal status. Nevertheless, at present around twelve varieties are accepted, but it should be realized that a plant of this species acquired merely as *Lobivia aurea* may differ as much from the plant in the original description as do many of the named varieties. In view of this it is well worth obtaining plants from different localities distinguished only by the different collector's number.

A brief description of the named varieties other than those illustrated is as follows:

#### v. *albiflora* Rausch

Fl 7 cm long, white.  
DISTRIBUTION: Argentina, Sierra de Cordoba.

#### v. *callochrysea* (Ritt.) Rausch.

Solitary, cylindrical, up to over 20 cm high, with an 11 cm long yellow fl.

DISTRIBUTION: Argentina, Salta, Quebrada de las Conchas, the most northerly locality for this group.

OTHER NAMES: *Hymenorebutia aurea* v. *callochrysea*.

#### v. *catacamensis* (Ritt.) Rausch

Single or sparingly clumping, body to 20 cm high by 8 cm. Fl 8–9 cm long, yellow.

DISTRIBUTION: Argentina, Catamarca.

OTHER NAMES: *Hymenorebutia aurea* v. *catacamensis*.

#### v. *dobeana* (Doelz) Rausch

Clumping and characterized by the bright red flower.  
DISTRIBUTION: Argentina, Sierra Ancasti.

OTHER NAMES: *Lobivia dobeana*.

**v. sierragrandensis** Rausch

Solitary, globular, up to 8 cm across, dense, needle-like spination, csp to 2.5 cm. Fl yellow.

DISTRIBUTION: Argentina, Sierra Grande de Cordoba.

**v. tortuosa** Rausch

Simple, up to 8 cm high by 7 cm; spines black, up to 3 cm long, twisted. Fl yellow.

DISTRIBUTION: Argentina, Santiago del Estero, near Ojo de Agua.

**APPENDIX 4.****Neopoteria horrida** (Remy ex Gay) D. Hunt.

OTHER NAMES: *Horridocactus aconcaguensis*, *H. horridus*, *H. tuberculatus*, *H. chueapensis*, *Nochilinia odoriflora*, *Neopoteria chueapensis*, *Neop. odorif.*, *Neop. tuberis*, *Pyrrohacactus aconcaguensis*, *P. chueapensis*, *P. horridus*, *P. odorif.*, *P. tuberis*, *Neop. tuberculata* v. *cupreata*, v. *robusta* & v. *vegasana*; *Pyrroh. horridus* v. *aconcaguensis* & v. *robustus*, *Horrid. robustus* & v. *vegasanus*, *Neoc. robusta* & v. *vegasana*, *Pyrro. robustus* & v. *vegasanus*, *Neop. curvispinosa* v. *aconcaguensis* (wrongly applied), *Neop. horrida* v. *armata*, *H. armatus*, *Neop. armata*, *N. tuberculata* v. *armata*, *P. armatus*.

**APPENDIX 5.****Neopoteria odieri** (Lem.) Berg.

OTHER NAMES: *Nochilinia imitans*, *Noec. odieri*, *Noec. mall. & v. solitaria*, '*Noec. kraussii*', *Neop. reichei* v. *mall.* & *fa. kraussii* & *fa. solit.*, *Chilocerebutia odieri*, *C. kraussii*, *C. malleolata* & v. *solitaria*, *Thelocerephala odieri*, *T. kraussii*, *T. longirapa*, *T. malleolata* & v. *solitaria*, *Chilocerebutia fulva*, *Noec. fulva*, *Thel. fulva*. Wrongly applied to *N. reichei* v. *aerocarpa* was *Neoc. aerocarpa* v. *fulva* which belongs here.

**APPENDIX 6.****Neopoteria reichei** (Sch.) Bkgb.

OTHER NAMES: *Nochilinia reichei*, '*Noec. atru*', *Thelocerephala reichei*, *Chilocerebutia reichei*, '*Noec. lembekii*', *Thel. lemb.*, '*Noec. neoreichei*', '*N. pseudoreichei*', *Neop. reichei* v. *reichei* *fa. lembekii*, *fa. neoreichei*, *fa. duripalpa* & *fa. pseudoreichei*; *Chilocerebutia duripalpa*, *Noec. duri.*, *Thel. duri.*, v. *aerocarpa*; *Chilocerebutia aeroc.*, *Noec. aeroc.*, *Neop. reichei* v. *reichei* *fa. aeroc.*

**APPENDIX 7.****Notocactus ottonis** (Lehm.) Berg.

OTHER NAMES: *N. acutus*, *N. archachatalai* & vars., *N. campestrensis*, *N. glaucius*, *N. globularis*, *N. harmonianus*, *N. ibicuensis*, '*N. incomptus*', *N. laetivirens* Ritt., *N. oxyacanthus*, *N. securituberculatus*.

**APPENDIX 8.****Rebutia deminuta** (Web.) Br. & R.

KGP-M's observations of a population of flowering rebutias near Iscayache in Bolivia, along with those on plants in cultivation, seem to indicate an incredible degree of variation within this species. Spination, body-form and flower vary to such an extent that no two

plants are completely alike and a dozen so-called species can be found in a single locality, with bees flying at random from the flower of one to another. Previous collectors do not seem to have accepted that cacti can show this degree of variation and seem to have elected instead to select a number of the most similar looking plants from the population to name as species.

It seems almost certain that *R. fulviseta*, *R. kupperiana*, *R. pseudodeminita* & *R. spegazziniana* also fall within this variation, since plants corresponding quite closely to all these 'species' were also part of the same single population. However, as these three are distinctive enough to be valued by collectors, we are keeping them separate here, though they probably only deserve cultivar status.

**APPENDIX 9.****Rebutia pygmaea** vars.

'v. crassa' published as *Lobivia haagei* v. *crassa* Rausch.

A slightly larger form with more tuberculate ribs and a larger, redder orange fl.

DISTRIBUTION: Bolivia, Iscayache.

'v. elegantula' published as *Lobivia haagei* v. *elegantula* Rausch.

Smaller in all of its parts and noted for its prolific clumping habit.

DISTRIBUTION: Argentina, Rio San Juan de Oro.

'v. mudanensis' published as *Rebutia mudanensis* Rausch.

The largest variety, stems to 3 cm across and more globular, spination whitish-silver, quite dense. Fl large, very pale salmon-pink.

DISTRIBUTION: Argentina, Jujuy, Cerro Mudana.

OTHER NAMES: *Lobivia haagei* v. *mudanensis*.

'v. nazarenoensis' published as *Rebutia nazarenoensis* Rausch.

Similar to the last but with more upstanding spination, with 1 csp and darker orange fl.

DISTRIBUTION: N Argentina, near Nazareno.

OTHER NAMES: *Lobivia haagei* v. *nazarenoensis*.

'v. orurensis' published as *Lobivia orurensis* Bkgb.

Body with violet tints. Fl rich orange with paler throat.

DISTRIBUTION: N Bolivia, Oruro and Pazna.

OTHER NAMES: *Medolobivia orurensis*, *Med. pectinata* v. *orurensis*, *Lobivia haagei* v. *orurensis*.

'v. pallida' published as *Rebutia pallida* Rausch.

Body tinted pinkish-violet, spination pinkish-brown. Fl smaller, bright orange-pink.

DISTRIBUTION: Bolivia, Culpina, La Cueva.

OTHER NAMES: *Lobivia haagei* v. *pallida*.

'v. pelziana' published as *Lobivia haagei* v. *pelziana* Rausch.

A thinner spined v. eos with a bright orange-red flower.

DISTRIBUTION: Argentina, Jujuy, Tafna.

**APPENDIX 10.****Rebutia senilis** vars.

Numerous varieties of *Rebutia senilis* have been described and are in cultivation. These all breed true and are often worth collecting, so we are listing the more distinctive examples below. This does not

however imply any certainty that these are more than just forms from a very variable population.

*v. iseliniana* Krainz.  
Body more rounded, fl orange-red.

*v. kesselringiana* Bewg.  
Fl yellow, 'Rose of York' has white flowers.

*v. lilacino-rosea* Bkbg.  
Fl light lilac-pink.

*v. schieliana* Bewg.  
Fl 4 cm broad, outer petals crimson, inner orange-red.

*v. stuemerii* Bkbg.  
Fl with a brick-red throat, petals often bordered yellowish.

#### 'v. *applanata*'

Body thickened and rather flattened. Fl large, red.  
DISTRIBUTION: Bolivia, Rio Honda.

OTHER NAMES: *Lobivia steinmannii* v. *applanata* Rausch.

#### 'v. *cincinnata*'

A small form with curly white spines and reddish-orange flowers.  
DISTRIBUTION: Bolivia, Cuchu Ingénio.

OTHER NAMES: *R. cincinnata* Rausch., *Lobivia stein.* v. *cinc.*

#### 'v. *costata*'

Fresh-green, fl 3.5 cm across, orange with carmine edges.  
DISTRIBUTION: Bolivia, Potosí.

OTHER NAMES: *R. costata* Werd., *Lobivia stein.* v. *cost.*

#### 'v. *major*'

The largest form, 5 cm high and 3 cm across with scented orange-red fls.

DISTRIBUTION: Argentina, La Quiaca, Tafna.

OTHER NAMES: *Lobivia stein.* v. *major* Rausch.

#### 'v. *rauschii'*

The smallest form, fl only 2 cm long, orange.

DISTRIBUTION: Bolivia, Huari.

OTHER NAMES: *Reb. rauschii* Zecher, *Lobivia stein.* v. *rauschii*.

## APPENDIX 11.

*Rebutia steinmannii* (Salm-Laub.) Bkbg.

None of the following varieties has yet been placed in the genus *Rebutia*, so we are not quoting the authority after the combination. Instead this is quoted for the original publication in the 'OTHER NAMES' section for each variety.

# INDEX OF ALTERNATIVE NAMES

*Acanthocalycium andreaeanum* (Bkbg.) Don. = *Pyrrhocactus andreaeanus* (Bkbg.) Ritt.  
*A. aurantiacum* Rausch = *Acanthocalycium thionanthum v. aurantiacum* (Rausch) Don.  
*A. brevispinum* Ritt. = *Acanthocalycium thionanthum v. brevispinum* (Ritt.) Don.  
*A. catamarcense* Ritt. = *Acanthocalycium thionanthum* (Speg.) Bkbg.  
*A. chionanthum* (Speg.) Bkbg. = *Acanthocalycium thionanthum v. chionanthum* (Speg.) Hoss.  
*A. ferrarii* Rausch = *'Acanthocalycium thionanthum v. ferrarii'*  
*A. glaucum* Ritt. = *Acanthocalycium thionanthum v. glaucum* (Ritt.) Don. ex Rausch.  
*A. griseum* Bkbg. = *Acanthocalycium thionanthum* (Speg.) Bkbg.  
*A. klimpelianum* (Weidl. & Werd.) Bkbg. = *Acanthocalycium spiniflorum* (K. Sch.) Bkbg.  
*A. peitscherianum* Bkbg. = *Acanthocalycium spiniflorum* (K. Sch.) Bkbg.  
*A. variiflorum* Bkbg. = *Acanthocalycium thionanthum v. variiflorum* (Bkbg.) Don.  
*A. violaceum* (Werd.) Bkbg. = *Acanthocalycium spiniflorum fa. violaceum* (Werd.) Don.

*Acantholobivia incuiensis* (R. & B.) Rauh & Bkbg. = *Lobivia tegeleriana* Bkbg.

*A. tegeleriana* (Bkbg.) Bkbg. = *Lobivia tegeleriana* Bkbg.

*Ancistrocactus breviamatus* (Engelm.) B. & R. = *Ancistrocactus scheerii* (S-D) B. & R.

*A. megarizetus* (Rose) B. & R. = *Ancistrocactus scheerii* (S-D) B. & R.

*Arequipa erectocylindrica* Rauh & Bkbg. = *Arequipa hempeliana* (Guerke) Oehme.

*A. leuostachya* (Phil.) B. & R. is an *Oreocereus*.

*A. retiggi* (Quehl) Oehme = *Arequipa hempeliana* (Guerke) Oehme.

*A. spinosissima* Ritt. = *Arequipa hempeliana* (Guerke) Oehme.

*A. weingartiana* Bkbg. = *Arequipa hempeliana* (Guerke) Oehme.

*Ariocarpus elongatus* (S-D) M.H. Lee = *Ariocarpus trigonus* (Weber) Sch.

*A. intermedius* Bkbg. = *Ariocarpus fissuratus* v. *lloydii* (Rose) And.

*A. lloydii* (Rose) Berg. = *Ariocarpus fissuratus* v. *lloydii* (Rose) And.

*Astrophytum niveum* Kays. = *Astrophytum capricorne* v. *niveum* (Kays.) Ok.

*Aylostera albiflora* (Ritt. & Buin.) Bkbg. = *Rebutia albiflora* Ritt. & Buin.

*A. albipilosa* (Ritt.) Bkbg. = *Rebutia albipilosa* Ritt.

*A. deminuta* (Web.) Bkbg. = *Rebutia deminuta* (Web.) Br. & R.

*A. fiebrigii* (Guerke) Bkbg. = *Rebutia fiebrigii* (Guerke) B. & R.

*A. fiebrigii* v. *densiseta* Cullm. = *Rebutia fiebrigii* (Guerke) B. & R.

*A. fulviseta* Rausch = *Rebutia fulviseta* Rausch.

*A. heliosa* Rausch = *Rebutia heliosa* Rausch.

*A. jujuiana* Rausch = *Rebutia jujuiana* Rausch.

*A. kupperiana* (Boed.) Bkbg. = *Rebutia kupperiana* Boed.

*A. muscula* (Ritt. & Thiele) Bkbg. = *Rebutia muscula* Ritt. & Thiele.

*A. narvaecensis* Card. = *Rebutia narvaecensis* (Card.) Don.

*A. padayensis* Rausch = *Rebutia padayensis* Rausch.

*A. pseudodeminuta* (Bkbg.) Bkbg. = *Rebutia pseudodeminita* Bkbg.

*A. pseudominuta* (Speg.) Speg. = *Rebutia deminuta* (Web.) Br. & R.

*A. pulchella* Rausch = *Rebutia pulchella* Rausch.

*A. pulvinosa* (Ritt. & Buin.) Bkbg. = *Rebutia pulvinosa* Ritt. & Buin.

*A. rubiginosa* (Ritt.) Bkbg. = *Rebutia deminuta* (Web.) Br. & R.

*A. spegazziniana* (Bkbg.) Bkbg. = *Rebutia spegazziniana* Bkbg.

*A. spinosissima* (Bkbg.) Bkbg. = *Rebutia fiebrigii* (Guerke) B. & R.

*A. steinmannii* (Solms-Laub.) Bkbg. = *Rebutia steinmannii* Solms-Laub.

*A. tuberosa* (Ritt.) Bkbg. = *Rebutia tuberosa* Ritt.

*Bartschella schumannii* (Hildm.) B. & R. = *Mammillaria schumannii* Hildm.

*Blossfeldia atroviridis* Ritt.

*B. campaniflora* Bkbg.

'*felsleri*' Bkbg.

*B. minima* Ritt.

*B. pedicellata* Ritt.

} = *Blossfeldia liliputana* Werd.

*Borzicactus aurantiacus* (Vpl.) Kim. & Hutch. = *Matucana aurantiaca* (Vpl.) Bux.

*B. aureiflora* (Ritt.) Don. = *Matucana aureiflora* Ritt.

*B. calceolifera* Kim. & Hutch. = *Matucana aurantiaca* (Vpl.) Bux.

*B. formosa* (Ritt.) Don. = *Matucana formosa* Ritt.

*B. haynei* (Otto) Kim. & Hutch. = *Matucana haynei* (Otto) B. & R.

- B. huagalensis* Don. & Lau = *Matucana huagalensis* (Don. & Lau) Bregman et al.
- B. intertextus* (Ritt.) Don. = *Matucana intertexta* Ritt.
- B. intertexta v. cedleniensis* (Ritt.) Don. = *Matucana intertexta v. cedleniensis* (Ritt.) Bregman et al.
- B. krahni* Don. = *Matucana krahni* (Don.) Bregman.
- B. madisoniorum* Hutch. = *Matucana madisoniorum* (Hutch.) Rowley.
- B. madisoniorum v. pujupatii* Don. & Lau = *Matucana pujupatii* (Don. & Lau) Bregman.
- B. oreodoxa* (Ritt.) Don. = *Matucana oreodoxa* (Ritt.) Slaba.
- B. paucicostata* (Ritt.) Don. = *Matucana paucicostata* Ritt.
- B. ritteri* (Buin.) Don. = *Matucana ritteri* Buin.
- B. variabilis* (Raab & Bkbg.) Don. = *Matucana haynei* (Otto) B. & R.
- B. weberbaueri* (Vpl.) Don. = *Matucana weberbaueri* (Vpl.) Bkbg.
- Brachycalyxum tilcarense* (Bkbg.) Bkbg. = *Gymnocalycium saglionii* (Cels.) B. & R.
- Brasilicactus graessneri* (Sch.) Bkbg. = *Notocactus graessneri* Sch.
- B. haselbergii* (Haage) Bkbg. = *Notocactus haselbergii* Haage.
- Brasiliparodia alacriportana* (Bkbg. & Voll.) Ritt. = *Notocactus alacriportanus* (Phil. & Voll.) Bux.
- B. brevihamata* (W. Haage) Ritt. = *Notocactus brevihamatus* (W. Haage) Bux.
- B. buenekeri* (Buin.) Ritt. = *Notocactus buenekeri* (Buin.) Bux.
- B. rechensis* (Buin.) Ritt. = *Notocactus rechensis* Buin.
- Chamaecereus silvestrii* (Speg.) B. & R. = *Lobivia silvestrii* (Speg.) Rowley.
- Chilcorebutia aerocarpa* Ritt. = *Neopoteria reichei* v. *aerocarpa* (Ritt.) R.M. Ferryman
- '*C. carnegiflora*' = hort. hybrid.
- C. dirupiflora* Ritt. = *Neopoteria reichei* (Sch.) Bkbg.
- C. esmeraldana* Ritt. = *Neopoteria esmeraldana* (Ritt.) Don. & Rowley.
- C. fulva* Ritt. n.n. = *Neopoteria odieri* (Lem.) Berg.
- C. glabrescens* Ritt. = *Neopoteria napina* (Phil.) Bkbg.
- C. kraussii* Ritt. = *Neopoteria odieri* v. *malleolata* (Ritt.) R.M. Ferryman.
- '*C. lembeckii*' = catalogue name = *Neopoteria reichei* (Sch.) Bkbg.
- C. malleolata* & v. *solitaria* Ritt. = *Neopoteria odieri* v. *malleolata* (Ritt.) R.M. Ferryman.
- C. napina* (Phil.) Ritt. = *Neopoteria napina* (Phil.) Bkbg.
- C. odieri* (S-D) Ritt. = *Neopoteria odieri* (Lem.) Berg.
- C. reichei* Ritt. = *Neopoteria reichei* (Sch.) Bkbg.
- Cochemica halei* (K. Brand.) Walt. = *Mammillaria halei* K. Brandegee.
- C. maritima* Lindsay = *Mammillaria maritima* (Lindsay) D. Hunt.
- C. pondii* (Greene) Walt. = *Mammillaria pondii* Greene.
- C. poselgeri* (Hildm.) B. & R. = *Mammillaria poselgeri* Hildm.
- C. setispina* (Coul.) Walt. = *Mammillaria setispina* (Coul.) K. Brandegee.
- Copiapoa alticostata* Ritt. = *Copiapoa dura* Ritt.
- C. applanata* Bkbg. = *Copiapoa cinerascens* (S-D) B. & R.
- C. atacamensis* Middelitch = *Copiapoa boliviiana* (Pfeiff.) Ritt.
- '*C. barquitensis*' Ritt. n.n. = *Copiapoa hypogaea* v. *barquitensis* Ritt.
- C. carrialeensis* Ritt. = *Copiapoa dealbata* Ritt.
- C. chanaralensis* Ritt. = ?*Copiapoa cinerascens* (S-D) B. & R.
- C. cinerea* v. *dealbata* (Ritt.) Bkbg. = *Copiapoa dealbata* Ritt.
- C. columnaria-alba* Ritt. = *Copiapoa cinerea* v. *columna-alba* (Ritt.) Bkbg.
- C. conglomerata* (Phil.) Lembcke = status doubtful.
- C. coquimbana* (Karw. ex Ruemp.) B. & R. = nom. dub. plants obtained as these are usually forms of *Copiapoa pendulina*.
- C. cuprea* Ritt. = *Copiapoa dura* Ritt.
- C. cuprascens* (Poselg. ex Hildm.) Bkbg. = status doubtful.
- '*C. domeykoensis*' = *Copiapoa pendulina* Ritt.
- C. echinoidea* (Lem. ex S-D) B. & R. = status doubtful.
- C. crenulata* Ritt. = *Copiapoa cinerea* v. *haseltoniana* (Bkbg.) N.P. Taylor.
- C. ferox* Lembcke & Bkbg. = *Copiapoa solaris* (Ritt.) Ritt.
- C. haseltoniana* Bkbg. = *Copiapoa cinerea* v. *haseltoniana* (Bkbg.) N.P. Taylor.
- C. gigantea* Bkbg. = *Copiapoa cinerea* v. *haseltoniana* (Bkbg.) N.P. Taylor.
- '*C. imbricata*' = catalogue name = ?*Copiapoa dura* Ritt.
- C. intermedia* Ritt. n.n. = *Copiapoa cinerascens* (S-D) B. & R.
- C. lembeckii* Bkbg. = *Copiapoa calderana* Ritt.
- C. longispina* Ritt. = *Copiapoa humilis* (Phil.) Hutch.
- C. malleotiana* (Lem. ex S-D) Bkbg. = status doubtful.
- C. melanohystrix* Ritt. = *Copiapoa cinerea* v. *columna-alba* (Ritt.) Bkbg.
- '*C. militaris*' = catalogue name = ?*Copiapoa pendulina* Ritt.
- C. mollicula* Ritt. = *Copiapoa hypogaea* Ritt.
- C. montana* Ritt. = *Copiapoa hypogaea* Ritt.
- '*C. multicolor*' hort. = a name of no value.
- '*C. paposensis*' Ritt. = *Copiapoa humilis* (Phil.) Hutch.
- C. pepiniana* (Lem. [ex S-D]) Bkbg. = status doubtful.
- C. pepiniana* v. *fieldleriana* (Sch.) Bkbg. = *Copiapoa fieldleriana* (Sch.) Bkbg.
- C. pseudocoquimbana* Ritt. = *Copiapoa pendulina* Ritt.
- C. rarissima* Ritt. = *Copiapoa hypogaea* Ritt.
- C. rubriflora* Ritt. = *Copiapoa rupestris* Ritt.
- C. sspulina* Ritt. = *Copiapoa kraenziana* Ritt.
- C. serenana* Voldan = *Copiapoa pendulina* Ritt.
- C. streptocalyx* (Hook.) van Oosten = *Copiapoa marginata* (S-D) B. & R.
- C. taltalensis* (Werd.) Looser = *Copiapoa humilis* (Phil.) Hutch.
- C. tenebrosa* Ritt. = *Copiapoa cinerea* (Phil.) B. & R.
- C. totoralensis* Ritt. = *Copiapoa echinata* v. *borealis* Ritt.
- '*C. vulgata*' = *Copiapoa pendulina* Ritt.
- C. wagenerbuechtii* Ritt. n.n. = distinctive form of *Copiapoa pendulina* Ritt.
- Coryphantha clava* (Pfeiff.) Lem. see under *Coryphantha clavata*.
- C. columnaris* Lahman = *Escobaria vivipara* v. *radiosa* (Engelm.) D.R. Hunt.
- C. duncanii* (Hester) Benson = *Escobaria dasycantha* (Engelm.) B. & R.

- C. hesteri* Wright = *Escobaria hesteri* (Wright) Bux.  
*C. minima* Baird = *Escobaria minima* (Baird) D. Hunt.  
*C. muelenpfordtii* B. & R. = *Coryphantha scheerii* (Muehlenpf.) Lem.  
*C. neliae* Croiz. = *Escobaria minima* (Baird) D.R. Hunt.  
*C. organensis* Zimmerman = *Escobaria organensis* (Zimmerman) Castetter et al.  
*C. pectinata* (Engelm.) B. & R. = ?*Coryphantha radians* (DC) B. & R.  
*C. pinteae* Werd. = *Escobaria emskoetteriana* (Quelch) Borg.  
*C. pseudoradians* (Bravo) = *Coryphantha radians* (DC) B. & R.  
*C. sneadii* (B. & R.) Berg. = *Escobaria sneadii* B. & R.  
*C. sneadii* v. *leci* (Rosa ex Boed.) Benson = *Escobaria leci* Boed.  
*C. vivipara* (Nutt.) B. & R. = *Escobaria vivipara* (Nutt.) Bux.  
  
*Delactia wootersiana* Bkbg. = *Neopotereria neohankeana* (Ritt.) R.M. Ferryman.  
  
*Denmoza erythrocephala* (Sch.) Berg. = *Denmoza rhodacantha* (S-D) B. & R.  
  
*Discocactus albispinus* Buin. & Bred. = *Discocactus zehntneri* B. & R.  
*D. alteolepis* Lem. ex Dier. = status doubtful.  
*D. araneispinus* Buin. & Bred. = *Discocactus zehntneri* B. & R.  
*D. boliviensis* Bkbg. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. boottianus* Buin. & Bred. = *Discocactus zehntneri* B. & R.  
*D. angustissimus* Diers & Est. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. catigineola* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. cephaliaciculatus* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. diersianus* Est. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. estevae* Diers = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. ferricola* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. flavispinus* Buin. & Bred. ex Buin. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. gounellei* Diers & Est. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. grisea* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. latispinus* Buin. & Bred. = *Discocactus placentiformis* (Lem.) Sch.  
*D. limidianus* Diers & Est. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. magnimammus* Buin. & Bred. = *Discocactus hartmannii* (Sch.) B. & R.  
*D. mammillosus* Buin. & Bred. = *Discocactus hartmannii* (Sch.) B. & R.  
*D. melanochlorus* Buin. & Bred. ex Buin. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. multicolorispinus* Buin. & Bred. = *Discocactus placentiformis* (Lem.) Sch.  
*D. nigricostatus* Buin. & Bred. ex Buin. = *Discocactus heptacanthus* (Rodr.) B. & R.

- '*D. paranaensis*' Bkbg. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. patulifolius* Buin. & Bred. = *Discocactus hartmannii* (Sch.) B. & R.  
*D. pugionacanthus* Buin. & Bred. ex Buin. = *Discocactus placentiformis* (Lem.) Sch.  
*D. pulvinicarpitatus* Buin. & Bred. ex Buin. = *Discocactus placentiformis* (Lem.) Sch.  
*D. rapiphizae* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. semicanthaliflorus* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. sticticola* Buin. & Bred. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. siccifolius* Buin. & Bred. ex Buin. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. spinosior* Buin. & Bred. ex Buin. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. squamibaculus* Buin. & Bred. ex Buin. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. subterraneo-proliferans* Diers & Est. = *Discocactus heptacanthus* (Rodr.) B. & R.  
*D. subvridigera* Buin. & Bred. ex Buin. = *Discocactus placentiformis* (Lem.) Sch.  
*D. tricurus* Monv. ex Pfeiff. = *Discocactus placentiformis* (Lem.) Sch.  
*D. wootersianus* Bred. & v.d. Broek = *Discocactus horstii* Buin. & Bred. ex Buin.

- Dolichothele albescens* (Tiegs) Bkbg. = *Mammillaria camptotricha* Dams.  
*D. baumii* (Boed.) Werd. & Bux. = *Mammillaria baumii* Boed.  
*D. baliodes* (Craib) Bkbg. = *Mammillaria beneckeana* Ehrenb.  
*D. beneckeana* (Ehrenb.) Bkbg. = *Mammillaria beneckeana* Ehrenb.  
*D. camptotricha* (Dams) Tiegs = *Mammillaria camptotricha* Dams.  
*D. decipiens* (Scheidw.) Tiegs = *Mammillaria decipiens* Scheidw.  
*D. longimamma* (DG) B. & R. = *Mammillaria longimamma* DC.  
*D. melaleuca* (Karw.) Craig = *Mammillaria melaleuca* Karw.  
*D. nelsonii* (B. & R.) Bkbg. = *Mammillaria beneckeana* Ehrenb.  
*D. sphacelia* (Dietr.) B. & R. = *Mammillaria sphacelia* Dietr.  
*D. surculosa* (Boed.) Bux. = *Mammillaria surculosa* Boed.  
*D. uberiiformis* (Zucc.) B. & R. = *Mammillaria longimamma* DC.  
*D. zephyranthoides* (Scheidw.) Bkbg. = *Mammillaria zephyranthoides* Scheidw.

- Echinocactus grandis* Rose = *Echinocactus platyacanthus* Link & Otto.  
*E. ingens* Zucc. = *Echinocactus platyacanthus* Link & Otto.  
*E. palmeri* Rose = *Echinocactus platyacanthus* Link & Otto.  
*E. visnaga* Hook. = *Echinocactus platyacanthus* Link & Otto.  
*E. xeranthemoides* (Coul.) Engelm. = *Echinocactus polycephalus* v. *xeranthemoides* Coul.

- Echinocereus acifer* (Otto ex salm-Dyck) Hort. F. A. Haage =  
*Echinocereus polyacanthus* v. *densus* (Regel) N.P. Taylor.  
'i. albus' Bkbg. = *Echinocereus nivosus* Glass & Foster.

- E. amoenus* (A. Dietr.) Sch. = *Echinocereus pulchellus*  
*v. amoenus* (A. Dietr.) Sch.
- E. arizonicus* Rose ex Orcutt = *Echinocereus triglochidiatus*  
*v. arizonicus* (Rose ex Orcutt) Benson.
- E. armatus* (Poselger) Berg = *Echinocereus reichenbachii*  
*v. armatus* (Poselger) N.P. Taylor.
- E. baileyi* Rose = *Echinocereus reichenbachii v. baileyi* (Rose)  
 N.P. Taylor.
- E. blanckei* (Poselger) Ruempler = *Echinocereus enneacanthus*  
*v. brevispinus* (W.O. Moore) Benson.
- E. blanckei* v. *berlandieri* (Engelm.) Bkbg. = *Echinocereus*  
*berlandieri* (Engelm.) Hort. F.A. Haage.
- E. blanckei* v. *leonensis* (Mathsson) Bkbg. = *Echinocereus*  
*pentalophus* v. *leonensis* (Mathsson) N.P. Taylor.
- E. bonkerae* Thornb. & Bonk. = *Echinocereus fendleri*  
*v. bonkerae* (Thornb. & Bonk.) Benson.
- E. boyce-thompsonii* (Orcutt) = *Echinocereus fendleri* v. *boyce-thompsonii* (Orcutt) Benson.
- E. caespitosus* (Engelm.) Engelm. = *Echinocereus reichenbachii* (Terscheck ex Walp.) Hort. F.A. Haage.
- E. chlorophthalmus* (Hook.) B. & R. = *Echinocereus cinerascens* (DC.) Lem.
- E. coeruleus* Engelm. = *Echinocereus triglochidiatus*  
*v. melanacanthus* (Engelm.) Benson.
- E. cucumis* Werd. = *Echinocereus scheeri* v. *gentryi* (Clover) N.P. Taylor.
- E. davissii* A.D. Houghton = *Echinocereus viridiflorus* v. *davissii* (Houghton) W.T. Marsh.
- E. dasycanthus* Engelm. = *Echinocereus pectinatus*  
*v. dasycanthus* (Engelm.) N.P. Taylor.
- E. dubius* (Engelm.) Ruempler = *Echinocereus enneacanthus* Engelm.
- E. durangensis* Poselger ex Ruempler = *Echinocereus polyacanthus* Engelm.
- / *E. ehrenbergii* (Pfeiff.) Ruempler = *Echinocereus cinerascens*  
*v. ehrenbergii* (Pfeiff.) H. Brav.-H.
- E. enneacanthus* v. *dubius* (Engelm.) Benson = *Echinocereus*  
*enneacanthus* Engelm.
- E. fasciculatus* (Engelm. ex B.D. Jackson) Benson = *Echinocereus*  
*fendleri* v. *fasciculatus* (Engelm. ex B.D. Jackson) N.P. Taylor.
- E. fasciculatus* v. *bonkerae* (Thornber & Bonker) Benson =  
*Echinocereus fendleri* v. *bonkerae* (Thornber & Bonker) Benson.
- E. fasciculatus* v. *boyce-thompsonii* (Orcutt) Benson = *Echinocereus*  
*fendleri* v. *boyce-thompsonii* (Orcutt) Benson.
- '*E. finnii*' = catalogue name = *Echinocereus chloranthus*  
*v. russanthus* (Venig.) Lamb ex Rowley.
- E. fitchii* B. & R. = *Echinocereus reichenbachii* v. *fitchii* (B. & R.) Benson.
- E. floresii* Bkbg. = *Echinocereus sciurus* v. *floresii* (Bkbg.) N.P. Taylor.
- E. fobeanus* Oehme = *Echinocereus chisoensis* v. *fobeanus* (Oehme) N.P. Taylor.
- E. gentryi* Clov. = *Echinocereus scheeri* v. *gentryi* (Clover) N.P. Taylor.
- E. hemphillii* Fohre = *Echinocereus fendleri* v. *kuenzleri* (Castetter et al.) Benson.
- E. hexaedrus* (Engelm.) Ruempler = *Echinocereus triglochidiatus*  
*v. melanacanthus* (Engelm.) Benson.
- E. inermis* Hort. = a form of *Echinocereus triglochidiatus*  
*v. melanacanthus* (Engelm.) Benson.
- E. knippelianus* v. *reyesii* Lau = *Echinocereus knippelianus*  
*v. kruegeri* Glass & Foster.
- E. kuenzleri* Castetter et al. = *Echinocereus fendleri* v. *kuenzleri* (Castetter et al.) Benson.
- E. ledingii* Peebles = *Echinocereus fendleri* v. *ledingii* (Peebles) N.P. Taylor.
- E. lecanus* (Hook.) Lem. = *Echinocereus polyacanthus* v. *densus* (Regel) N.P. Taylor.
- E. leonensis* Mathsson = *Echinocereus pentalophus* v. *leonensis* (Mathsson) N.P. Taylor.
- E. lindsayi* Meyran = *Echinocereus ferreirianus* v. *lindsayi* (Meyran) N.P. Taylor.
- '*E. melanocentrus'* Lowry = *Echinocereus reichenbachii* v. *fitchii* (B. & R.) Benson.
- E. merkeri* Hilm. ex Sch. = *Echinocereus enneacanthus* Engelm.
- E. mojavensis* (Englm. & Big.) Ruempl. = *Echinocereus*  
*triglochidiatus* v. *mojavensis* (Englm. & Big.) Benson.
- E. mormorata* = *Echinocereus vicecchiai* v. *mormorata* (Rhia) N.P. Taylor.
- E. ochoterenae* = *Echinocereus subinermis* v. *ochoterenae* (J.G. Ortega) G. Unger.
- E. pectinatus* v. *ctenoides* (Engelm.) Weniger nom. inv. =  
*Echinocereus pectinatus* v. *dasyacanthus* (Engelm.) N.P. Taylor.
- E. pectinatus* v. *minor* (Englm.) Benson = *Echinocereus bristolii*  
*v. pseudopectinatus* N.P. Taylor.
- E. pectinatus* v. *neomexicanus* (J. Coulter) Benson = *Echinocereus*  
*pectinatus* v. *dasyacanthus* (Engelm.) N.P. Taylor.
- E. pectinatus* v. *rigidissimum* (Engelm.) Ruempler = *Echinocereus*  
*rigidissimum* (Engelm.) Hort. F.A. Haage.
- E. pectinatus* v. *rubispinus* Frank = *Echinocereus rigidissimum*  
*v. rubispinus* (Frank) N.P. Taylor.
- E. pentalophus* v. *ehrenbergii* (Pfeiff.) Bkbg. = *Echinocereus*  
*cinerascens* v. *ehrenbergii* (Pfeiff.) H. Brav.-H.
- E. pentalophus* v. *procumbens* (Engelm.) P. Fournier =  
*Echinocereus pentalophus* v. *pentalophus* (DC.) Lem.
- E. perbellus* B. & R. = *Echinocereus reichenbachii* v. *perbellus* (B. & R.) Benson.
- E. poselgeri* Lem. see under *Echinocereus leucanthus*.
- E. procumbens* (Engelm.) Lem. = *Echinocereus pentalophus*  
*v. pentalophus* (DC.) Lem.
- E. purpurascens* Lahman = *Echinocereus reichenbachii* (Terscheck ex Walp.) Hort. F.A. Haage.
- E. radians* Engelm. = *Echinocereus adustus* v. *adustus* Engelm.
- E. reichenbachii* v. *albertii* Benson = *Echinocereus reichenbachii*  
*v. fitchii* (B. & R.) Benson.
- E. reichenbachii* v. *albispinus* (Lahman) Benson = *Echinocereus*  
*reichenbachii* v. *baileyi* (Rose) N.P. Taylor.
- E. reichenbachii* v. *chisoensis* (W.T. Marsh) Benson = *Echinocereus*  
*chisoensis* W.T. Marsh.
- E. romeri* Hort. F.A. Haage = *Echinocereus triglochidiatus*  
*v. melanacanthus* (Engelm.) Benson.

- E. rosei* Wooton & Standley = *Echinocereus triglochidiatus*  
*v. neomexicanus* (Standley) Benson.
- E. russanthus* = *Echinocereus chloranthus v. russanthus*  
 (Weniger) Lamb ex G. Rowley.
- E. salm-dyckianus* Scheer = *Echinocereus scheeri* (S-D) Scheer.
- E. salmiana* Ruempler = *Echinocereus scheeri* (S-D) Scheer.
- 'E. sanborianus'* (J. Coulter) Bkbg. = *Echinocereus brandegeei* (J. Coulter) Sch.
- E. schwarzi* Lau = *Echinocereus adustus* v. *schwarzi* (Lau) N.P. Taylor.
- E. spinibarbis* Hort. F.A. Haage *sec.* Bkbg. = *Echinocereus cinerascens* v. *chrenbergii* (Pfeiff.) H. Bravo-H.
- E. standleyi* B. & R. = *Echinocereus viridiflorus* Engelm.
- E. steerae* Clover = *Echinocereus pectinatus* v. *dasyacanthus* (Engelm.) N.P. Taylor.
- E. stramineus* v. *conglomeratus* (Foerster ex Sch.) H. Bravo-H. = *Echinocereus stramineus* (Engelm.) Ruempler.
- E. subinermis* v. *aculeata* G. Unger = *Echinocereus subinermis* S-D ex Scheer.
- E. subinermis* v. *tutuensis* (B. & R.) Bkbg. = *Echinocereus subinermis* Salm-Dyck ex Scheer.
- E. subterranea* Bkbg. = *Echinocereus sciurus* (K. Brandegee) Dams.
- E. tayapensis* W.T. Marsh = *Echinocereus stoloniferus* v. *tayapensis* (W.T. Marsh) N.P. Taylor.
- E. viridiflorus* v. *chloranthus* (Engelm.) Bkbg. = *Echinocereus chloranthus* (Engelm.) Hort. F.A. Haage.
- E. viridiflorus* v. *cylindricus* (Engelm.) Ruempler = *Echinocereus chloranthus* v. *cylindricus* (Engelm.) N.P. Taylor.
- E. weinbergii* Weingart = *Echinocereus pulchellus* v. *weinbergii* (Weingart) N.P. Taylor.
- Echinofossulocactus albatus* (Dietr.) B. & R. = *Stenocactus albatus* (Dietr.) A.W. Hill.
- E. anfractuosus* (Mart.) Lawr. = *Stenocactus crispatus* complex.
- E. arrigens* (Link ex Dietr.) B. & R. = *Stenocactus crispatus* complex.
- E. beedeckerianus* (Berg.) Croiz. = status doubtful.
- E. bustamantei* (Bravo) Croiz. = *Stenocactus crispatus* complex.
- E. caespitosus* Bkbg. = status doubtful.
- E. confusa* B. & R. = status doubtful.
- E. coptonogonus* (Lem.) Lawr. = *Stenocactus coptonogonus* (Lem.) A.W. Hill.
- E. crispatus* (DC) Lawr. = *Stenocactus crispatus* (DC) A.W. Hill.
- E. dichroanthus* (Mart. ex Pfeiff.) B. & R. = status doubtful.
- E. erectocentrus* Bkbg. = status doubtful.
- E. gladiatus* (Link & Otto) Lawr. = status doubtful.
- E. gracilicornis* (Lem.) B. & R. = status doubtful.
- E. guerrierae* Bkbg. = *Stenocactus crispatus* complex.
- E. hastatus* (Hopff. ex Sch.) B. & R. = status doubtful.
- E. heteranthus* (Muellhpf.) B. & R. = status doubtful.
- E. kelleranus* (Dietr.) B. & R. = ?*Stenocactus crispatus* complex.
- E. lamellosus* (Dietr.) B. & R. = *Stenocactus crispatus* complex.
- E. lancifer* (Dietr.) B. & R. = *Stenocactus crispatus* complex.
- E. lezaxarii* (Bravo) Croiz. = *Stenocactus crispatus* complex.
- E. lloydii* B. & R. = *Stenocactus multicostatus* 'Iloydii'.
- E. multiareolatus* (Bravo) = *Stenocactus crispatus* complex.
- E. multicostatus* (Hildm. ex Sch.) B. & R. = *Stenocactus multicostatus* (Hildm. ex Sch.) A.W. Hill.
- E. ochoterenaus* (Tiegs) Whitmore = *Stenocactus ochoterenaus* Tiegs.
- E. pentacanthus* (Lem.) B. & R. = status doubtful.
- E. phyllacanthus* (Mart.) Lawr. = *Stenocactus phyllacanthus* (Mart.) A.W. Hill.
- E. tetraeziphus* (S-D ex Sch.) Oehme = status doubtful.
- E. tricuspidatus* (Scheidw.) B. & R. = *Stenocactus phyllacanthus* (Mart.) A.W. Hill.
- E. vaupelianus* (Werd.) Whitmore = *Stenocactus vaupelianus* (Werd.) A.W. Hill.
- E. violaceiflora* (Quchl.) B. & R. = *Stenocactus crispatus* complex.
- E. wippermannii* (Muellhpf.) B. & R. = status doubtful.
- E. xiphacanthus* (Miq.) Bkbg. = status doubtful.
- E. zacatecasensis* B. & R. = *Stenocactus multicostatus* 'zacatecasensis'.
- Encephalocarpus strobiliformis* (Werd.) Berg. = *Pelecyphora strobiliformis* (Werd.) Kreuz.
- Echinopsis aurantiaca* Friedr. & Rowley = *Acanthocalycium thionanthum* v. *aurantiacum* (Rausch) Don.
- E. buekiana* Fric ex Pazout = *Echinopsis oxygona* (Link) Zucc.
- E. calliantholacina* Card. = *Echinopsis obrepanda* (S-D) Sch.
- E. callichroma* Card. = *Echinopsis obrepanda* (S-D) Sch.
- E. calorubra* Card. = *Echinopsis obrepanda* v. *calorubra* (Card.) Rausch.
- E. campylacantha* Pfeiff. non R. Mey. = *Echinopsis leucantha* (Gill.) Walp.
- E. carmineiflora* = *Echinopsis obrepanda* (S-D) Sch.
- E. cerdania* Card. = *Lobivia ferox* B. & R.
- E. ochoterenae* Bkbg. *sec.* *Echinopsis bridgesii*.
- E. arborealis* Spec. = *Echinopsis leucantha* (Gill.) Walp.
- E. arnoldii* Card. = *Echinopsis obrepanda* (S-D) Sch.
- E. atucaeji* Card. = *Echinopsis bridgesii* S-D.
- E. cyrtisia* v. *grandiflora* R. Mey non Link = *Echinopsis oxygona* fa. *brevispina* Ritt.
- E. fallax* (Oehme) Friedr. = *Lobivia aurea* v. *fallax* (Oehme) Rausch.
- E. fiebrigii* Guerke = *Echinopsis obrepanda* (S-D) Sch.
- E. glauca* Friedr. & Rowley = *Acanthocalycium thionanthum* v. *glauca* (Ritt.) Don. ex Rausch.
- E. hamatacantha* Bkbg. = *Echinopsis ancistrophora* Spec.
- E. herbstii* Card. = *Echinopsis mammillosa* Guerke.
- E. hystrichoides* Ritt. = *Echinopsis mammillosa* v. *hystrichoides* (Ritt.) Rausch.
- E. ibicatuensis* Card. = *Echinopsis bridgesii* S-D.
- E. intricatissima* Spec. = *Echinopsis leucantha* (Gill.) Walp.
- E. kermesina* = catalogue name = *Echinopsis mammillosa* v. *kermesina* (Kraatz) Fried.
- E. kratochviliana* Bkbg. = *Echinopsis ancistrophora* Spec.
- E. leioriensis* Card. = *Lobivia ferox* B. & R.
- E. leucorrhodantha* Bkbg. = *Echinopsis ancistrophora* Spec.
- E. maturanensis* Card. = *Echinopsis obrepanda* (S-D) Sch.
- E. multiplex* (Pfeiff.) Zucc. = *Echinopsis oxygona* (Link) Zucc.
- E. orozasana* Ritt. = *Echinopsis mammillosa* Guerke.

- E. pamparuzzii* Card. = *Echinopsis semidenudata* Card.  
*E. paraguayensis* Knebel = *Echinopsis dehrenbergii* Fric.  
*E. plecyrachis* Bkhg. = *Echinopsis ancistrophora* Speg.  
*E. pojensis* Card. = *Echinopsis bridgesii* S-D.  
*E. polynicra* Bkhg. = *Echinopsis ancistrophora* Speg.  
*E. potosina* Werd. = *Lobivia ferox* B. & R.  
*E. pseudomamillosa* Card. = *Echinopsis obrepanda* (S-D) Sch.  
*E. risiere-de-caralii* Card. = *Echinopsis obrepanda* (S-D) Sch.  
*E. robinsoniana* Werd. = *Echinopsis minuana* Speg.  
*E. rojasti* Card. = *Echinopsis obrepanda* (S-D) Sch.  
*E. rosco-lilacina* Card. = *Echinopsis obrepanda* (S-D) Sch.  
*E. seminuda* = *Echinopsis semidenudata* Card.  
*E. spegazziniana* B. & R. = *Echinopsis leucantha* (Gill.) Walp.  
*E. toralapana* Card. = *Echinopsis obrepanda* (S-D) Sch.  
*E. turbinata* (Pfeiff.) Zucc. = *Echinopsis eyriesii* (Turp.) Zucc.  
*E. vallegrandensis* Card. = *Echinopsis bridgesii* S-D.  
*E. werdermannii* Fric ex Fleischer = *Echinopsis oxygona* (Link) Zucc.
- Eriocactus claviceps* Ritt. = *Notocactus schumannianus* (Sch.) Berg. emend Buin.  
*E. grossii* (Sch.) Bkhg. = *Notocactus schumannianus* (Sch.) Berg. emend. Buin. jr.  
*E. leninghausii* (Haage jr.) Bkhg. = *Notocactus leninghausii* Haage jr.  
*E. magnificus* Ritt. = *Notocactus magnificus* (Ritt.) Kraenz.  
*Eriosyce algarroensis* Ritt. = *Eriosyce sandillon* (Remy) Phil.  
*E. aurata* Bkhg. = *Eriosyce sandillon* (Remy) Phil.  
*E. ausseiliana* Ritt. n.n. = *Eriosyce sandillon* (Remy) Phil.  
*E. ceratites* B. & R. = *Eriosyce sandillon* (Remy) Phil.  
*E. ihotckyzuana* Ritt. = *Eriosyce sandillon* (Remy) Phil.  
*E. lapampensis* Ritt. = *Eriosyce sandillon* (Remy) Phil.  
*E. rodenticiphila* Ritt. = *Eriosyce megacarpa* Ritt.  
*E. spinibarbis* Ritt. = *Eriosyce sandillon* (Remy) Phil.
- Escobaria aggregata* = a name mis-applied to *Escobaria vivipara*.  
*E. asperispina* (Boed.) D. Hunt = *Escobaria missouriensis* v. *asperispina* (Boed.) N.P. Taylor.  
*E. bella* B. & R. = status doubtful.  
*E. chaffeyi* B. & R. = *Escobaria dasycantha* v. *chaffeyi* (B. & R.) N.P. Taylor.  
*E. duncanii* (Hester) Bkhg. = *Escobaria dasycantha* (Engelm.) B. & R.  
*E. guadalupensis* see under *Escobaria sneedii*.  
*E. lloydii* B. & R. = status doubtful.  
*E. muehlbaueriana* (Boed.) Knuth = *Escobaria emskoetteriana* (Quchl.) Borg.  
*E. nelliæ* (Croiz.) Bkhg. = *Escobaria minima* (Baird) D. Hunt.  
*E. occutii* & vars see under *Escobaria villardi*.  
*E. rigidæ* Bkhg. = *Escobaria laredoi* (Glass & Foster) N.P. Taylor.  
*E. runyonii* B. & R. = *Escobaria emskoetteriana* (Quchl.) Borg.  
*E. sandbergii* see under *Escobaria villardi*.  
*E. sneedii* v. *leei* (Boed.) D. Hunt = *Escobaria leei* Boed.  
*E. tuberculosa* (Engelm.) B. & R. = *Escobaria strobiliformis* (Poselg.) Boed.  
*E. varicolor* Tiegs. = *Escobaria strobiliformis* (Poselg.) Boed.
- Ferocactus acanthodes* sensu B. & R. = *Ferocactus cylindraceus* (Engelm.) Orcutt.  
*F. acanthodes* v. *eastwoodiae* Benson = *Ferocactus cylindraceus* v. *eastwoodiae* (Benson) N.P. Taylor.  
*F. acanthodes* v. *lecontei* (Engelm.) G. Lindsay = *Ferocactus cylindraceus* v. *lecontei* (Engelm.) H. Bravo-H.  
*F. acanthodes* v. *tortilispinus* (H. Gates) G. Lindsay = *Ferocactus cylindraceus* (Engelm.) Orcutt.  
*F. alamosanus* (B. & R.) B. & R. = *Ferocactus pottsii* v. *alamosanus* (B. & R.) G. Unger.  
*F. bicolor* (Gal. ex Pfeiff.) N.P. Taylor = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.  
*F. bicolor* v. *bolaensis* (Runge) N.P. Taylor = *Thelocactus bicolor* v. *bolaensis* (Runge) Berg.  
*F. bicolor* v. *flavidispinus* (Bkhg.) N.P. Taylor = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.  
*F. bicolor* v. *schwarzii* (Bkhg.) N.P. Taylor = *Thelocactus bicolor* v. *schwarzii* (Bkhg.) E.F. Anderson.  
*F. coloratus* H. Gates = *Ferocactus gracilis* v. *coloratus* (H. Gates) G. Lindsay.  
*F. ovillei* B. & R. = *Ferocactus emoryi* (Engelm.) Orcutt.  
*F. echidna* v. *victoriensis* (Rose) G. Lindsay = *Ferocactus echidna* (DC) B. & R.  
*F. electrantha*' hort. = *Ferocactus histrix* (DC) G. Lindsay.  
*F. guirocobensis*' F. Schwarz n.n. = *Ferocactus pottsii* (Salm-Dyck) Bkhg.  
*F. hamatacanthus* v. *cristispinus* (Engelm.) Benson = *Ferocactus hamatacanthus* (Muehlenpf.) B. & R.  
*F. hastifer* (Werd. & Boed.) N.P. Taylor = *Thelocactus hastifer* (Werd. & Boed.) Knuth.  
*F. heterochromus* (Weber) N.P. Taylor = *Thelocactus heterochromus* (Weber) van Oosten.  
*F. leucacanthus* (Zucc. ex Pfeiff.) N.P. Taylor = *Thelocactus leucacanthus* (Zucc. ex Pfeiff.) B. & R.  
*F. mathissonii* = *Ancistrocactus crassihamatus* (Web.) Benson.  
*F. occultus* (Engelm.) B. & R. = *Ferocactus viridescens* (Torrey & A. Gray) B. & R.  
*F. peninsulae* v. *visainensis* (H. Gates) G. Lindsay = *Ferocactus gracilis* v. *coloratus* (H. Gates) G. Lindsay.  
*F. rafaelensis* (Purpus) Borg = *Ferocactus echidna* (DC) B. & R.  
*F. rectispina* (Engelm.) B. & R. = *Ferocactus emoryi* v. *rectispinus* (Engelm.) N.P. Taylor.  
*F. recurvus* Borg = *Ferocactus macrodiscus* v. *spiralis* (Karw. ex Pfeiff.) N.P. Taylor.  
*F. setispinus* (Engelm.) Benson = *Thelocactus setispinus* (Engelm.) E.F. Anderson.  
*F. stainesii*' = *Ferocactus pilosus* (Gal. ex S-D) Werd.  
*F. townsendianus* B. & R. = *Ferocactus peninsulæ* v. *townsendianus* (B. & R.) N.P. Taylor.  
*F. townsendianus* v. *santa-maria* (B. & R.) G. Lindsay = *Ferocactus peninsulæ* v. *santa-maria* (B. & R.) N.P. Taylor.  
*F. victoriensis* (Rose) Bkhg. = *Ferocactus echidna* (DC) B. & R.  
*F. visainensis* H. Gates = *Ferocactus gracilis* v. *coloratus* (H. Gates) G. Lindsay.  
*Frailea albicepolata* Buin. & Bred. = *Frailea pumila* (Lem.) B. & R.  
*F. asteroides* Werd. = *Frailea castanea* Bkhg.  
*F. carmenifilamentosa* Kilian = *Frailea pumila* (Lem.) B. & R.

*F. friedrichii* Buin. & Moser. = *Frailea pumila* (Lem.) B. & R.  
*F. perbellia* Prestle = *Frailea phaeodisca* Speg.  
*F. pygmaea* v. *phaeodisca* (Speg.) Ito = *Frailea phaeodisca* Speg.

*Glandulicactus crassihamatus* (Web.) Bkbg. = *Ancistrocactus crassihamatus* (Web.) Benson.  
*G. uncinatus* (Gal.) Bkbg. = *Ancistrocactus uncinatus* (Gal.) L. Benson.

*Gymnocalycium acerrugatum* Lambert = *Gymnocalycium castellanosii* Bkbg.

*G. althipinum* Bkbg. = *Gymnocalycium bruchii* (Speg.) Hoss.  
*G. artigae* Hert. = *Gymnocalycium uruguayanense* (Arch.) B. & R.  
*G. asterium* Ito = *Gymnocalycium stellatum* Speg.  
*G. bayensis* n.n. = *Gymnocalycium schroederianum* v. *bayense* Kiesling.  
*G. bodenbenderianum* (Hoss.) Berg. = *Gymnocalycium stellatum* Speg.

*G. brachyanthum* (Guerke) B. & R. = *Gymnocalycium monvillei* (Lem.) B. & R.  
*G. brachyptetalum* Speg. = *Gymnocalycium gibbosum* (Haw.) Pfeiff.  
*G. chubutense* (Speg.) Speg. = *Gymnocalycium gibbosum* (Haw.) Pfeiff.  
*G. chiquitanum* Card. = *Gymnocalycium pflanzii* (Vpl.) Werd.  
*G. comarapense* Bkbg. n.n. = *Gymnocalycium pflanzii* v. *zegarraiæ* (Card.) Don.

*G. deesianum* Doeltz = status doubtful.  
*G. delaetii* = *Gymnocalycium schickendantzii* v. *delaetii* (Sch.) Bkbg.

'*G. elatitum*' = catalogue name = *Gymnocalycium hybopleurum* (Sch.) Bkbg.

'*G. epsteini*' = catalogue name.

*G. eichlorum* Bkbg. nom. prov. = *Gymnocalycium hybopleurum* (Sch.) Bkbg.

*G. eytianum* Card. = *Gymnocalycium pflanzii* (Vpl.) Werd.

*G. fricianum* Plesník = *Gymnocalycium tudae* Ito.

'*G. gerardi*' = catalogue name = *Gymnocalycium gibbosum* (Haw.) Pfeiff.

*G. grandiflorum* Bkbg. = status doubtful.

*G. guanchinense* Schuetz = *Gymnocalycium mazanense* Bkbg.

*G. guerrae* (Haage Jr.) Berg. = *Gymnocalycium uruguayanense* (Arch.) B. & R.

'*G. hammereschmidii*' Bkbg. = *Gymnocalycium chiquitanum* Card.

'*G. hennisi*' = hort. hybrid.

*G. horstii* v. *bueneckeri* Buin. = *Gymnocalycium buenekeri* Smiales.

*G. hossei* (Haage Jr.) Berg. = status doubtful.

*G. hyptiacanthum* (Lem.) B. & R. = status doubtful.

*G. izozogianum* Card. = *Gymnocalycium tudae* v. 'izozogii'.

*G. joossensianum* (Berg.) B. & R. = status doubtful.

*G. kozelskyanum* Schuetz = *Gymnocalycium stellatum* Speg.

*G. kurzianum* (Guerke) B. & R. = *Gymnocalycium mostii* (Guerke) B. & R.

*G. lajaldense* Vpl. = *Gymnocalycium bruchii* (Speg.) Hoss.

*G. lagunillasense* Card. = *Gymnocalycium pflanzii*

v. *lagunillasense* (Card.) Don.

*G. leptanthum* (Speg.) Speg. = status doubtful.

*G. marquezii* Card. = *Gymnocalycium pflanzii* (Vpl.) Werd.

*G. mattoense* Buin. & Bred. = *Gymnocalycium tudae* Ito.

*G. megalothelos* (Sencke) B. & R. = status doubtful.

*G. megatae* Ito = *Gymnocalycium tudae* Ito.

*G. melanocephalum* (Ar.) B. & R. = *Gymnocalycium uruguayense* (Arch.) B. & R.

*G. michoacanum* (Fric) Ito = *Gymnocalycium schickendantzii* (Web.) B. & R.

*G. mihanovichii* v. *friedrichii* Werd. = *Gymnocalycium friedrichii* Pazoout.

*G. millaresii* Card. = *Gymnocalycium pflanzii* v. *millaresii* (Card.) Don.

*G. mucidum* Oehme = *Gymnocalycium mazanense* Bkbg.

*G. netreliansum* (Monv.) B. & R. = *Gymnocalycium leeanum* (Hook.) B. & R.

*G. ochoterenai* Bkbg. = *Gymnocalycium stellatum* Speg.

*G. oenanthemum* Bkbg. = status doubtful.

*G. onychanthum* Ito = *Gymnocalycium tudae* Ito.

'*G. surselianum'* = *Gymnocalycium multiflorum* (Hook.) B. & R.

*G. paraguayanum* (Sch.) Schuetz = *Gymnocalycium denudatum* (Link & Otto) Pfeiff.

*G. parvulum* (Speg.) Speg. = *Gymnocalycium quehlianum* (Haage Jr.) Berg.

*G. pflanzii* v. 'izozogii' (Card.) Don. = *Gymnocalycium tudae* v. 'izozogii'.

*G. platense* (Speg.) B. & R. = status doubtful.

'*G. pseudomalacarpus*' Bkbg. = '*Gymnocalycium tudae* v. *pseudomalacarpus*' (Bkbg.) Don.

'*G. pseudomobile*' = catalogue name.

*G. pseudoragonense* n.n. = *Gymnocalycium obductum* n.n.

*G. pugionanthum* Bkbg. = *Gymnocalycium hybopleurum* (Sch.) Bkbg.

*G. pungens* Fleischer = *Gymnocalycium schickendantzii* (Web.) B. & R.

*G. riograndense* Card. = *Gymnocalycium pflanzii* v. *riograndense* (Card.) Don.

*G. rojense* Fric ex Pazoout = *Gymnocalycium stellatum* Speg.

*G. stuckerti* (Speg.) B. & R. = status doubtful.

'*G. tortuga*' hort. = *Gymnocalycium tudae* Ito.

*G. triacanthum* Bkbg. = *Gymnocalycium stellatum* Speg.

*G. venturianum* Fric = *Gymnocalycium baldianum* (Speg.) Speg.

*G. zegarraiæ* Card. = *Gymnocalycium pflanzii* v. *zegarraiæ* (Card.) Don.

*Hamatocactus hamatacanthus* (Muehlenpf.) Knuth = *Ferocactus hamatacanthus* (Muehlenpf.) B. & R.

*H. setispinus* (Engelm.) B. & R. = *Thelocactus setispinus* (Engelm.) E.F. Anderson.

*H. sinuatus* (Dietr.) Orcutt = *Ferocactus hamatacanthus* v. *sinuatus* (Dietr.) Benson.

*Helianthocereus crassicaulis* Bkbg. = *Lobivia grandiflora* v. *crassicaulis* (Bkbg.) Rausch.

*H. grandiflorus* Bkbg. = *Lobivia grandiflora* B. & R.

*Horridocactus acomaguensis* (Ritt.) Bkbg. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.

- H. andiculus* Ritt.  
*H. andiculus v. descendens* Ritt. = *Neopoteria curvispina*  
*H. andiculus v. mollensis* Ritt. (Bert.) Don. & Rowley  
*H. andiculus v. robustus* Ritt.  
*H. armatus* (Ritt.) Bkbg. = *Neopoteria horrida* (Remy ex Gay)  
D. Hunt.  
*H. atroviridis* (Ritt.) Bkbg. = *Neopoteria atroviridis* (Ritt.) R.M. Ferryman.  
*H. carrialensis* (Ritt.) Bkbg. = *Neopoteria totoralensis*  
v. *carrialensis* (Ritt.) R.M. Ferryman.  
*H. chouensis* (Ritt.) Bkbg. = *Neopoteria horrida* (Remy ex Gay)  
D. Hunt.  
*H. crispis* (Ritt.) Bkbg. = *Neopoteria crispa* (Ritt.) Don. &  
Rowley.  
*H. curvispinus* (Bert.) Bkbg. = *Neopoteria curvispina* (Bert.) Don.  
& Rowley.  
*H. echinus* (Ritt.) Bkbg. = *Neopoteria echinus* (Ritt.) R.M.  
Ferryman.  
*H. eriosyoides* Ritt. = *Neopoteria eriosyoides* (Ritt.) Don. &  
Rowley.  
*H. fructiculianus* (Sch.) Bkbg. = status doubtful.  
*H. garaventai* Ritt. = *Neopoteria garaventai* (Ritt.) R.M.  
Ferryman.  
*H. geissae* (Pos.) Doelz = status doubtful.  
*H. grandiflorus* (Ritt.) Bkbg. = *Neopoteria curvispina*  
v. *grandiflora* (Ritt.) Don. & Rowley.  
*H. heinrichianus* Bkbg. = *Neopoteria heinrichiana* (Bkbg.) R.M.  
Ferryman.  
*H. horridus* (Remy ex Gay) Bkbg. = *Neopoteria horrida* (Remy ex  
Gay) D. Hunt.  
*H. kesslerianna* Doelz = status doubtful.  
*H. lissocarpus* & v. *gracilis* (Ritt.) Bkbg. = *Neopoteria curvispina*  
(Bert.) Don. & Rowley.  
*H. marksiana* & v. *tunensis* (Ritt.) Bkbg. = *Neopoteria marksiana*  
(Ritt.) Don. & Rowley.  
*H. nigricans* (Dietr.) Bkbg. & Doelz = status doubtful.  
*H. paucostatus* & v. *viridis* (Ritt.) = *Neopoteria paucostata*  
(Ritt.) Don. & Rowley.  
*H. scoparia* n.n. Ritt. = *Neopoteria calderana* (Ritt.) Don. &  
Rowley.  
*H. tuberculatus* (Jac.) Ito. = *Neopoteria horrida* (Remy ex Gay)  
D. Hunt.  
*H. vallenarense* (Ritt.) Bkbg. = *Neopoteria vallenarense* (Ritt.)  
Hoffmann.
- Islaya chalaensis* Ritt. n.n. = *Neopoteria islayensis* (Först.) Don  
& Rowley.  
*I. coquipedes* Rauh & Bkbg. = *Neopoteria islayensis* (Först.)  
Don. & Rowley.  
*I. divaricatiflora* Ritt. = *Neopoteria islayensis* v. *divaricatiflora*  
(Ritt.) Don. & Rowley.  
*I. flavida* Ritt. n.n. = *Neopoteria islayensis* (Först.) Don. &  
Rowley.  
*I. grandiflores* Rauh & Bkbg. = *Neopoteria islayensis* (Först.)  
Don. & Rowley.  
*I. grandis* & v. *brevispina* Rauh & Bkbg. = *Neopoteria islayensis*  
v. *grandis* (Rauh & Bkbg.) Don. & Rowley.
- I. islayensis* (Först.) Bkbg. = *Neopoteria islayensis* (Först.) Don.  
& Rowley.  
*I. kraenziana* Ritt. = *Neopoteria kraenziana* (Ritt.) Don. &  
Rowley.  
*I. longicarpa*' = *Neopoteria islayensis* (Först.) Don. & Rowley.  
*I. maritima* Ritt. n.n. = *Neopoteria islayensis* (Först.) Don. &  
Rowley.  
*I. minor* Bkbg. = *Neopoteria islayensis* (Först.) Don. & Rowley.  
*I. minuscula* Ritt. n.n. = *Neopoteria islayensis* (Först.) Don. &  
Rowley.  
*I. mollendensis* (Vpl.) Bkbg. = *Neopoteria islayensis* (Först.) Don.  
& Rowley.  
*I. omasensis* Ostolaza & Mischler = *Neopoteria omasensis*  
(Ostolaza & Mischler) R.M. Ferryman.  
*I. paucispina* Rauh & Bkbg. = *Neopoteria islayensis* (Först.)  
Don. & Rowley.  
*I. paucispinosa* Rauh & Bkbg. = *Neopoteria islayensis* (Först.)  
Don. & Rowley.
- Krainzia guelzowiana* (Werd.) Bkbg. = *Mammillaria guelzowiana*  
Werd.  
*K. longiflora* (B. & R.) Bkbg. = *Mammillaria longiflora* (B. & R.)  
Berg.
- Lepidocoryphantha macromeris* (Engelm.) Bkbg. = *Coryphantha*  
*macromeris* Engelm.  
*L. runyonii* (B. & R.) Bkbg. = *Coryphantha macromeris*  
v. *runyonii* (B. & R.) Benson.
- Lobivia aculeata* Buin. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. adpressissima* Ritt. = *Lobivia pugionacantha* v. *cornuta*  
(Rausch) Rausch.  
*L. aguilari* Vasq. = *Echinopsis obrepanda* v. *aguilari* (Vasq.)  
Rausch.  
*L. akersii* Rausch = *Lobivia tegeleriana* v. *akersii* (Rausch)  
Rausch.  
*L. allegraiana* Bkbg. = *Lobivia hertrichiana* Bkbg.  
*L. amblayensis* & v. *albispina* Rausch = *Lobivia haematantha*  
v. *amblayensis* (Rausch) Rausch.  
*L. andalgadensis* B. & R. non Web. = *Lobivia grandiflora*  
v. *crassicaulis* (Bkbg.) Rausch.  
*L. argentea* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. atrovirens* v. *raulii* (Rausch) Rausch = *Rebutia raulii* Rausch.  
*L. atrovirens* v. *ritteri* (Wessn.) Rausch = *Rebutia ritteri* (Wessn.)  
Don.  
*L. atrovirens* v. *yuquinensis* (Rausch) Rausch = *Rebutia yuquinensis*  
Rausch.  
*L. aurantiaca* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. aureolilacina* Card. = *Lobivia ferox* v. *longispina* (B. & R.)  
Rausch.  
*L. aureolella* Knize = *Lobivia pampana* B. & R.  
*L. ayacachensis* Ito = *Lobivia tegeleriana* Bkbg.  
*L. backebergii* subsp. *wrightiana* (Bkbg.) Rausch = *Lobivia*  
*wrightiana* Bkbg.  
*L. backebergii* subsp. *zecheri* (Rausch) Rausch = *Lobivia zecheri*  
Rausch.  
*L. backebergii* v. *larae* (Card.) Rausch = *Lobivia larae* Card.

- L. buckbergii* v. *oxyalabastra* (Card. & Rausch) Rausch = *Lobivia oxyalabastra* Card. & Rausch.
- L. kingianum* Bkbg. = *Lobivia hertrichiana* Bkbg.
- L. holosiensis* B. & R. = *Lobivia pentlandii* (Hook.) B. & R.
- L. breviflora* Bkbg. = *Lobivia sanguiniflora* Bkbg.
- L. bruno-roosa* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.
- L. buiningiana* Ritt. = *Lobivia jajoiana* Bkbg.
- L. caespitosa* (Purp.) B. & R. = *Lobivia maximiliana* v. *caespitosa* (Purp.) Rausch.
- L. caespitosa* v. *rinoacadensis* Ritt. = *Lobivia maximiliana* v. *hermanniana* (Bkbg.) Rausch.
- '*L. callochrysea*' = *Lobivia aurea* v. *callochrysea* (Ritt.) Rausch.
- L. camataquensis* Card. = *Lobivia lateritia* (Guerke) B. & R.
- L. campio* Ritt. = *Lobivia pugionacantha* v. *culpinensis* (Ritt.) Rausch.
- L. carriquensis* Card. = *Lobivia maximiliana* (Heyder) Bkbg.
- L. carminantha* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.
- L. capitolinus* Rausch n.n. = *Lobivia pentlandii* (Hook.) B. & R.
- L. cardenasiana* Rausch = '*Echinopsis cardensiana*'
- L. caespitosa* v. *rinoacadensis* Ritt. = *Lobivia maximiliana* v. *hermanniana* (Bkbg.) Rausch.
- L. charcasina* Card. = *Lobivia cinnabarina* (Hook.) B. & R.
- L. chilensis* Knize n.n. = *Lobivia wrightiana* Bkbg.
- L. chloringona* Wessn. = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.
- L. chorrillosensis* Rausch = *Lobivia haematantha* v. *chorrilloensis* (Rausch) Rausch.
- L. charniensis* Johns. n.n. = *Lobivia tegeleriana* v. *akersii* (Rausch) Rausch.
- L. ciintensis* Card. = *Lobivia lateritia* (Guerke) B. & R.
- L. clavigiana* Bkbg. = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.
- L. corbula* (Herrera) B. & R. = *Lobivia maximiliana* v. *corbula* (Herrera) Rausch.
- L. corbula* B. & R. (non Herrera) = *Lobivia maximiliana* (Heyder) Bkbg.
- L. cornuta* Rausch = *Lobivia pugionacantha* v. *cornuta* (Rausch) Rausch.
- L. crassicaulis* Bkbg. = *Lobivia grandiflora* v. *crassicaulis* (Bkbg.) Rausch.
- L. cruciaureocarpa* Knize = *Lobivia maximiliana* v. *westii* (Hutch.) Rausch.
- L. culpinensis* Ritt. = *Lobivia pugionacantha* v. *culpinensis* (Ritt.) Rausch.
- L. cylindrica* Bkbg. = *Lobivia aurea* v. *shaferi* (B. & R.) Rausch.
- L. cylindrica* Bkbg. = *Lobivia aurea* (B. & R.) Bkbg.
- L. densispina* Werd. = *Lobivia haematantha* v. *densispina* (Werd.) Rausch.
- '*L. densispina* v. *leucomalla*' = *Lobivia aurea* v. *leucomalla* (Wessn.) Rausch.
- L. digitiformis* Bkbg. = *Rebutia pygmaea* (Fries) B. & R.
- L. dobeana* Doelz = *Lobivia aurea* v. *dobeana* (Doelz) Rausch.
- L. dragei* Fric n.n. = *Lobivia chrysanthia* (Werd.) Bkbg.
- L. draxleriana* Rausch = *Lobivia cinnabarina* v. *draxleriana* (Rausch) Rausch.
- L. drieveriana* & vars. Bkbg. = *Lobivia haematantha* v. *kuehnrichii* (Fric) Rausch.
- L. ducis pauli* Fric = *Lobivia ferox* B. & R.
- L. ducis pauli* v. *rubriflora* Schuetz = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.
- L. duursmaiana* Bkbg. = *Lobivia sanguiniflora* Bkbg.
- L. echinata* Rausch = *Lobivia hertrichiana* Bkbg.
- L. einsteinii* v. *aureiflora* (Bkbg.) Rausch = '*Rebutia einsteinii* v. *aureiflora*'.
- L. einsteinii* v. *gonjianii* (Kies.) Don. = '*Rebutia einsteinii* v. *gonjianii*'.
- L. elongata* Bkbg. = *Lobivia haematantha* v. *elongata* (Bkbg.) Rausch.
- L. euanthema* Bkbg. = '*Rebutia euanthema*'.
- L. fallax* Oehme = *Lobivia aurea* v. *fallax* (Oehme) Rausch.
- '*L. famatinensis*' hort. = *Lobivia haematantha* v. *densispina* (Werd.) Rausch.
- L. famatinensis* sensu Bkbg. = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.
- L. famatinensis* v. *leucomalla* (Wessn.) Bkbg. = *Lobivia aurea* v. *leucomalla* (Wessn.) Rausch.
- L. formosa* v. *bruchii* (B. & R.) Rausch = *Lobivia bruchii* B. & R.
- L. formosa* v. *kieslingii* (Rausch) Rausch = *Lobivia kieslingii* Rausch.
- L. formosa* v. *rosarioana* (Rausch) Rausch = *Lobivia rosarioana* Rausch.
- L. frici* Rausch = *Lobivia tiegeliana* v. *cinnabarina* (Fric) Rowley.
- L. glauca* & v. *paucicostata* Rausch = *Lobivia jajoiana* v. *paucicostata* (Rausch) Rausch.
- L. glaucescens* Ritt. = *Lobivia pampana* B. & R.
- '*L. grandis* v. *aureiflora*' = catalogue name = *Lobivia rosarioana* Rausch.
- L. grandiflora* v. *cinnabarina* Fric = *Lobivia tiegeliana* v. *cinnabarina* (Fric) Rowley.
- L. haageana* Bkbg. = *Lobivia marsomeri* (Werd.) Bkbg.
- L. haagei* (Fric & Schelle) Wessn. = *Rebutia pygmaea* v. *haagei* Fric & Schelle.
- L. haagei* v. *canacrucensis* (Rausch) Rausch = '*Rebutia pygmaea* v. *canacrucensis*'.
- L. haagei* v. *crassa* Rausch = '*Rebutia pygmaea* v. *crassa*'.
- L. haagei* v. *cos* (Rausch) Rausch = '*Rebutia pygmaea* v. *cos*'.
- L. haagei* v. *elegantula* Rausch = '*Rebutia pygmaea* v. *elegantula*'.
- L. haagei* v. *mudanensis* (Rausch) Rausch = '*Rebutia pygmaea* v. *mudanensis*'.
- L. haagei* v. *nazarenoensis* (Rausch) Rausch = '*Rebutia pygmaea* v. *nazarenoensis*'.
- L. haagei* v. *pallida* (Rausch) Rausch = '*Rebutia pygmaea* v. *pallida*'.
- L. haagei* v. *pelzliana* Rausch = '*Rebutia pygmaea* v. *pelzliana*'.
- L. haagei* v. *violascens* (Ritt.) Rausch = *Rebutia violascens* Ritt.
- L. hastifera* Werd. = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.
- L. hermanniana* Bkbg. = *Lobivia maximiliana* v. *hermanniana* (Bkbg.) Rausch.
- L. kingianum* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.
- L. korrida* Ritt. = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.
- L. kuaflinensis* & v. *feilseri* Rausch = *Lobivia haematantha* v. *kuaflinensis* (Rausch) Rausch.
- L. kuilanotu* Rausch & Bkbg. = *Lobivia hertrichiana* Bkbg.
- L. imparana* Ritt. n.n. = *Lobivia lateritia* (Guerke) B. & R.

- L. incisa* Bkbg. = *Lobivia hertrichiana* Bkbg.  
*L. inciensis* Rausch & Bkbg. = *Lobivia tegeleriana* v. *incuiensis* (Rausch & Bkbg.) Rausch.  
*L. intermedia* Rausch = *Lobivia maximiliana* v. *intermedia* (Rausch) Rausch.  
*L. iridescens* Bkbg. = *Lobivia marsoneri* v. *iridescens* (Bkbg.) Rausch.  
*L. janseniana* Bkbg. = *Lobivia chrysanthia* (Werd.) Bkbg.  
*L. johnsoniana* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. klusaceti* Fric = *Lobivia chrysanthia* (Werd.) Bkbg.  
*L. kuehnrichii* Fric = *Lobivia haematantha* v. *kuehnrichii* (Fric) Rausch.  
*L. kupperiana* Bkbg. = *Lobivia lateritia* v. *kupperiana* (Bkbg.) Rausch.  
*L. kupperiana* v. *ruberiflora* Bkbg. = *Lobivia lateritia* v. *ruberiflora* (Bkbg.) Rausch.  
*L. lauramaria* Rausch & Bkbg. = *Lobivia maximiliana* v. *corbula* (Herrera) Rausch.  
*L. lauji* Don. = *Lobivia hertrichiana* Bkbg.  
*L. leptacantha* Rausch = *Lobivia schieliana* v. *leptacantha* (Rausch) Rausch.  
*L. leucomalla* Wessn. = *Lobivia aurea* v. *leucomalla* (Wessn.) Rausch.  
*L. leucorrhoda* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. leucoviolacea* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. longiflora* Ito = *Lobivia maximiliana* v. *caespitosa* (Purp.) Rausch.  
*L. longispina* B. & R. = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.  
*L. markusii* Rausch = *Lobivia chrysocete* v. *markusii* (Rausch) Rausch.  
*L. megacarpa* Ritt. n.n. = *Echinopsis ayopayana* (Ritt.) Rausch.  
*L. miniatiflora* Ritt. = *Lobivia maximiliana* v. *miniatiflora* (Ritt.) Rausch.  
*L. minuta* Ritt. = *Lobivia hertrichiana* Bkbg.  
*L. mistensis* Bkbg. = *Lobivia pampana* B. & R.  
*L. mizquensis* Rausch = *Echinopsis obrepanda* v. *mizquensis* (Rausch) Rausch.  
*L. muhriae* Bkbg. = *Lobivia marsoneri* v. *iridescens* (Bkbg.) Rausch.  
*L. napina* Pauzou = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.  
*L. neomabarina* Bkbg. = *Lobivia acanthoplegma* v. *oligotricha* (Card.) Rausch.  
*L. nigripinna* Bkbg. = *Lobivia haematantha* v. *kuehnrichii* (Fric) Rausch.  
*L. nigristoma* Buin. = *Lobivia jajoiana* v. *nigristoma* (Buin.) Bkbg.  
*L. oligotricha* Card. = *Lobivia acanthoplegma* v. *oligotricha* (Card.) Rausch.  
*L. omasuyana* Card. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. oponica* Akers n.n. = *Lobivia tegeleriana* v. *akersii* (Rausch) Rausch.  
*L. pedulariana* Kraenzl. = *Lobivia tiegeliana* Wessn.  
*L. pectinifera* Wessn. = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.  
*L. pena poma* Blossf. n.n. = *Lobivia haematantha* v. *kuehnrichii* (Fric) Rausch.
- L. pentlandii* v. *larae* (Card.) Rausch = *Lobivia larae* Card.  
*L. pentlandii* v. *maximiliana* (Heyder) Rausch = *Lobivia maximiliana* (Heyder) Bkbg.  
*L. pictiflora* Ritt. = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.  
*L. planiceps* Bkbg. = *Lobivia hertrichiana* Bkbg.  
*L. pojoniensis* Rausch = *Echinopsis rauschii* Friedm.  
*L. polaskiana* Bkbg. = *Lobivia chrysanthia* (Werd.) Bkbg.  
*L. polycephala* Bkbg. = *Lobivia sanguiniflora* Bkbg.  
*L. potosina* = *Lobivia ferox* B. & R.  
*L. prestonae* Card. = *Lobivia cinnabarinia* (Hook.) B. & R.  
*L. pseudocachensis* Bkbg. = *Lobivia saltensis* v. *pseudocachensis* (Bkbg.) Rausch.  
*L. pseudocarpiquinensis* Card. = *Lobivia maximiliana* (Heyder) Bkbg.  
*L. pseudocinnabarinna* Bkbg. = *Lobivia acanthoplegma* v. *oligotricha* (Card.) Rausch.  
*L. pugionacantha* v. *rossii* (Boed.) Rausch = *Lobivia rossii* Boed.  
*L. pugionacantha* v. *versicolor* (Rausch) Rausch = *Lobivia versicolor* Rausch.  
*L. pusilla* Ritt. = *Lobivia tiegeliana* v. *pusilla* (Ritt.) Rausch.  
*L. pusilla* v. *flaviflora* Ritt. = *Lobivia tiegeliana* v. *flaviflora* (Ritt.) Rausch.  
*L. pygmaea* (Fries) Bkbg. = *Rebutia pygmaea* (Fries) B. & R.  
*L. pygmaea* v. *colorata* (Ritt.) Rausch = 'Rebutia pygmaea v. colorata'.  
*L. pygmaea* v. *diersiana* (Rausch) Rausch = 'Rebutia pygmaea v. diersiana'.  
*L. pygmaea* v. *friedrichiana* (Rausch) Rausch = 'Rebutia pygmaea v. friedrichiana'.  
*L. pygmaea* v. *iscayachensis* (Rausch) Rausch = 'Rebutia pygmaea v. iscayachensis'.  
*L. quatabayensis* Rausch = *Lobivia schieliana* v. *quatabayensis* (Rausch) Rausch.  
*L. raphidacantha* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. rebutioides* & vars. Bkbg. = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.  
*L. rubescens* Bkbg. = *Lobivia marsoneri* (Werd.) Bkbg.  
*L. salitrensis* Rausch = *Lobivia pugionacantha* v. *salitrensis* (Rausch) Rausch.  
*L. saltensis* v. *stiliowiana* (Bkbg.) Rausch = *Lobivia schreiteri* v. *stiliowiana* (Bkbg.) Rausch.  
*L. schneideriana* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.  
*L. scopulina* Bkbg. = *Lobivia lateritia* (Guerke) B. & R.  
*L. shaferi* B. & R. = *Lobivia aurea* v. *shaferi* (B. & R.) Rausch.  
*L. sicuanensis* Rausch = *Lobivia maximiliana* v. *sicuanensis* (Rausch) Rausch.  
*L. simplex* Rausch = *Lobivia hertrichiana* v. *simplex* (Rausch) Rausch.  
*L. spiniflora* (Sch.) Rausch = *Acanthocalycium spiniflorum* (Sch.) Bkbg.  
*L. spiniflora* v. *klimpelianae* (Weidl. & Werd.) Rausch = *Acanthocalycium spiniflorum* v. *klimpelianum* (Weidl. & Werd.) Don.  
*L. spiniflora* v. *violacea* (Werd.) Rausch = *Acanthocalycium spiniflorum* v. *violaceum* (Werd.) Don.  
*L. staffenii* Fric = *Lobivia chrysanthia* (Werd.) Bkbg.  
*L. steinmannii* v. *applanata* Rausch = 'Rebutia steinmannii v. applanata'.

- L. steinmannii v. cincinnata* (Rausch) Rausch = 'Rebutia steinmannii v. cincinnata'.
- L. steinmannii v. costata* (Werd.) Rausch = 'Rebutia steinmannii v. costata'.
- L. steinmannii v. major* Rausch = 'Rebutia steinmannii v. major'.
- L. steinmannii v. rauschii* (Zech.) Rausch = 'Rebutia steinmannii v. rauschii'.
- L. stiloiana* Bkbg. = *Lobivia schreiteri* v. *stiloiana* (Bkbg.) Rausch.
- L. sublimiflora* Bkbg. = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.
- L. taratensis* Card. = *Lobivia acanthoplegma* (Bkbg.) Bkbg.
- L. tenuispina* Ritt. = *Lobivia chrysocete* v. *tenuispina* (Ritt.) Rausch.
- L. thionantha* v. *aurantiaca* (Rausch) Rausch = *Acanthocalycium thionanthum* v. *aurantiacum* (Rausch) Don.
- L. thionantha* v. *brevispina* (Ritt.) Rausch = *Acanthocalycium thionanthum* v. *brevispinum* (Ritt.) Don.
- L. thionantha* v. *catamarcensis* (Ritt.) Rausch = *Acanthocalycium thionanthum* (Speg.) Bkbg.
- L. thionantha* v. *chionantha* (Speg.) Rausch = *Acanthocalycium thionanthum* v. *chionanthum* (Speg.) Hoss.
- L. thionantha* v. *ferrarii* (Rausch) Rausch = 'Acanthocalycium thionanthum' v. *ferrarii*'
- L. thionantha* v. *glauca* (Ritt.) Rausch = *Acanthocalycium thioanthum* v. *glaucum* (Ritt.) Don.
- L. thionantha* v. *variiflora* (Bkbg.) Rausch = *Acanthocalycium thionanthum* v. *variiflorum* (Bkbg.) Don.
- L. tiegeliana* v. *fricii* Rausch = *Lobivia tiegeliana* v. *cinnabarina* (Fric) Rowley.
- L. titicacensis* Card. = *Lobivia pentlandii* (Hook.) B. & R.
- L. uttewaleana* Buin. = *Lobivia marsoneri* v. *iridescens* (Bkbg.) Rausch.
- L. varians* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.
- L. variispina* Ritt. = *Lobivia ferox* v. *longispina* (B. & R.) Rausch.
- L. vatteri* Krainz = *Lobivia jajoiana* v. *nigristoma* (Buin.) Bkbg.
- L. weigelianus* Bkbg. = *Lobivia pentlandii* (Hook.) B. & R.
- L. wegneriana* Grunert & Klugel. = *Lobivia hertrichiana* Bkbg.
- L. wesueriana* Fritz. = *Lobivia haematantha* v. *rebutioides* (Bkbg.) Rausch.
- L. westii* Hutch. = *Lobivia maximiliana* v. *westii* (Hutch.) Rausch.
- L. winteriana* Ritt. = *Lobivia wrightiana* v. *winteriana* (Ritt.) Rausch.
- L. zudanensis* Card. = *Lobivia cinnabarina* (Hook.) B. & R.
- Lophophora echinata* Croiz = *Lophophora williamsii* (Lem. ex S-D) Coulter.
- L. echinata* v. *diffusa* Croiz = *Lophophora diffusa* (Croiz) Bravo.
- L. jordaniana* (Rebut) Kreuz. = *Lophophora williamsii* (Lem. ex S-D) Coulter.
- L. lutea* (Rouh.) Bkbg. = status doubtful.
- L. ziegleri* Schmoll = status doubtful.

*Malacocarpus* see under *Higgisia*.

*Mamillospis diguetii* (Web.) B. & R. = status uncertain.

*M. senilis* (S-D) B. & R. = *Mammillaria senilis* [attrib. to Lodd. by] S-D.

- Mammillaria acanthoplegma* Lem. = status doubtful.
- M. affinis* DC. = *Mammillaria polythele* Mart.
- M. albescens* Tiegel = *Mammillaria decipiens* Scheidw. with white spines.
- M. albiarmata* Boed. = *Mammillaria coahuilensis* (Boed.) Moran.
- M. albida* Haage ex Pfeiff. = *Mammillaria discolor* Haw.
- M. albida'* Bkbg. = *Mammillaria conspicua* Purpus.
- '*M. alibensis*' = catalogue name = ?*Mammillaria perbella* Hildm. ex Sch.
- M. ancistroides* Lem. = status doubtful.
- '*M. alpina*' hort. = catalogue name = *Mammillaria krachenbuechlii* (Kraenzl) Kraenzl.
- M. anomera* Hopfer ex S-D = *Mammillaria discolor* Haw.
- M. angularis* Link & Otto = *Mammillaria compressa* DC.
- M. applanata* Engelm. = *Mammillaria heyderi* Muell.
- M. armatissima* Craig = *Mammillaria gigantea* Hildm. ex Sch.
- M. ascensionis* Repp. = *Mammillaria glassii* v. *ascensionis* Glass & Foster.
- M. atroflorens* Bkbg. = *Mammillaria mystax* Mart.
- M. aureocincta* Lem. = *Mammillaria rhodantha* Link & Otto.
- M. aureoviridis* Heinr. = status doubtful.
- M. aurireolata* Tiegel = *Mammillaria parkinsonii* Ehrenb.
- M. auricantula* Craig = *Mammillaria canelensis* Craig.
- M. auricomia* Dietr. = *Mammillaria spinosissima* Lem.
- M. auriseta* Bkbg. = *Mammillaria picta* Meins.
- M. auritricha* Craig = *Mammillaria canelensis* Craig.
- M. avila-camacho* Shurly n.n. = *Mammillaria parkinsonii* Ehrenb.
- M. aylostera* Werd. = *Mammillaria beneckeii* Ehrenb.
- M. buekannii* Boed. = status doubtful.
- M. balsasensis* Boed. = *Mammillaria beneckeii* Ehrenb.
- M. balsasensis* Craig = *Mammillaria beneckeii* Ehrenb.
- M. Barkeri* Shurly n.n. = *Mammillaria beneckeii* Ehrenb.
- M. bellacanthus* Craig = *Mammillaria canelensis* Craig.
- M. bellissima* Craig = *Mammillaria sonorensis* Craig.
- M. bicornuta* Tiegel n.n. = *Mammillaria bucareliensis* Craig.
- M. boedeckeriana* Quehl = status doubtful.
- M. bogotensis* Werd. = *Mammillaria columbiana* S-D.
- M. bonariensis* Schmoll = ?*Mammillaria discolor* form.
- M. brasiliensis* Craig = *Mammillaria hahniana* Werd.
- M. buchenauana* Bkbg. = *Mammillaria crucigera* Mart.
- M. bullardiana* (Grates) Boed. = *Mammillaria hutchisoniana* (Gates) Boed.
- '*M. caderayana*' = catalogue name = *Mammillaria pygmaea* (B. & R.) Berg.
- M. caerulea* Craig = *Mammillaria chionocephala* Purpus.
- M. callleana* Bkbg. = *Mammillaria wildii* Dietr.
- M. casoi* H. Brava = *Mammillaria mystax* Mart.
- M. celstiana* Lem. = nom. dub., plants supplied under this name are invariably *Mammillaria muehlenpfordtii*.
- M. centricirrha* Lem. = *Mammillaria magnimamma* Haw.
- M. chavezii* Cowper = *Mammillaria viridiflora* (B. & R.) Boed.
- M. cirrhosa* Mart. = *Mammillaria compressa* DC.
- M. collina* Purpus = *Mammillaria haageana* Pfeiff.
- M. collinii* (B. & R.) Orcutt = *Mammillaria voburnensis* v. *collinii* (B. & R.) Repp.

- M. columensis* Craig = *Mammillaria beneckeii* Ehrenbg.  
*M. confusa* (B. & R.) Orcutt = *Mammillaria karwinskiana* Mart.  
*M. conzatti* (B. & R.) Orcutt = *Mammillaria karwinskiana* Mart.  
*M. coronaria* Sch. = status doubtful.  
*M. cooperae* Shurly = *Mammillaria moelleriana* Boed.  
*M. criniformis* DC = ?*Mammillaria crinita* DC.  
*M. crispa* Craig = *Mammillaria mystax* Mart.  
*M. crocata* Lem. = status doubtful.  
*M. davisonii* (Houghton) Craig = *Mammillaria glareosa* Boed.  
*M. dealbata* Dietr. = *Mammillaria haageana* Pfeiff.  
*M. deliciosa* Shurly = *Mammillaria bella* Bkbg.  
*M. denudata* (Engelm.) Berg = *Mammillaria lasiacantha* Engelm.  
*M. diacentra* Jac. = status doubtful.  
*M. diguetii* (Weber) D. Hunt = *Mammillaria senilis* [Att. to Lodd.] by S-D  
*M. dodsonii* Bravo = *Mammillaria deherdtiana* v. *dodsonii* (Bravo) Glass & Foster.  
*M. dolichocentra* Lem. = *Mammillaria obconella* Scheidw.  
*M. donatii* Berg. ex Sch. = status doubtful.  
*M. dyckiana* Zucc. = *Mammillaria haageana* Pfeiff.  
*M. ebenaeantha* Schmoll = *Mammillaria karwinskiana* Mart.  
*M. echinaria* DC = *Mammillaria elongata* DC.  
*M. ergotia* Bkbg. = *Mammillaria lasiacantha* Engelm.  
*M. eichlamii* Quehl = *Mammillaria voburnensis* v. *eichlamii* (Quehl) Repp.  
*M. ekmanii* Werd. = ?*Mammillaria mammillaris* (L.) Karst.  
*M. elegans* v. *schmollii* Craig = *Mammillaria meissneri* Ehrenb.  
*M. erectohamata* Boed. = status doubtful.  
*M. ernestii* Fitzk. = *Mammillaria backebergiana* v. *ernestii* (Fitzk.) Glass & Foster.  
*M. esperanzae* Boed. = *Mammillaria discolor* Haw.  
*'M. esaustris'* = catalogue name = *Mammillaria densispina* (Coulter) Orcutt.  
*M. escrivanii* Boed. = status doubtful.  
*M. estanzeolens* Moeller = *Mammillaria candida* Scheid.  
*M. estebanensis* Lindsay = *Mammillaria angelensis* v. *estebanensis* (Lindsay) Repp.  
*M. euthale* Bkbg. n.n. = *Mammillaria melanocentra* Poselg.  
*M. fasciculata* Englm. = *Mammillaria thornberi* Orcutt.  
*M. ferrilis* Hildm. = *Mammillaria backebergiana* Buchenau.  
*M. fischeri* Pfeiff. = *Mammillaria karwinskiana* Mart.  
*M. flavaescens* Haw. = *Mammillaria niveosa* Link ex Pfeiff.  
*M. flavescenti* v. *nivosa* (Link) Bkbg. = *Mammillaria niveosa* Link ex Pfeiff.  
*M. flavicentra* Bkbg. = *M. dianthocentron* v. *flavicentra* (Bkbg.) Repp.  
*M. flavibahamata* Bkbg. = *Mammillaria jaliscana* (B. & R.) Boed.  
*M. flavicorens* S-D = *Mammillaria magnimamma* Haw.  
*M. floresii* Bkbg. = *Mammillaria canelensis* Craig.  
*M. fragilis* S-D = *Mammillaria gracilis* Pfeiff.  
*M. fuliginea* S-D = status doubtful.  
*M. fuscata* Link & Otto = *Mammillaria rhodantha* Link & Otto.  
*M. garestierae* Couper = *Mammillaria barbata* Engelm.  
*'M. ginsuamiae'* = hort. var. = *Mammillaria discolor* Haw.  
*M. gladiata* Mart. = *Mammillaria magnimamma* Haw.  
*M. gloriosa* Mart. = status doubtful.
- M. goldii* Glass & Foster = *Mammillaria saboae* v. *goldii* (G. & F.) Glass & Foster.  
*M. godridgii* v. *rectispina* Dawson = *Mammillaria rectispina* (Dawson) Repp.  
*M. griseoeremata* Boed. = status doubtful.  
*M. gueldemanniana* Bkbg. = ?*Mammillaria sheldonii* (B. & R.) Boed.  
*M. guenguensis* Bravo = *Mammillaria beneckeii* Ehrenbg.  
*M. guillauminiana* Bkbg. = *Mammillaria mercadensis* v. *guillauminiana* (Bkbg.) Repp.  
*M. gurocobensis* Craig = ?*Mammillaria sheldonii* (B. & R.) Boed.  
*M. gymnophylla* v. *macdougalii* (Rose) Benson = *Mammillaria macdougalii* Rose.  
*M. gymnophylla* v. *meiacantha* (Engelm.) Benson = *Mammillaria meiacantha* Engelm.  
*'M. haasii'* = catalogue name = *Mammillaria virginis* Fitt. & Kladiwa.  
*M. hachneliana* Boed. = *Mammillaria knebeliana* Boed.  
*M. halbingeri* Boed. = status doubtful.  
*M. hamata* Lehmann ex Pfeiff. = nom. dub., plants currently supplied as this are similar to *Mammillaria duoformis* Craig & Dawson.  
*M. hamiltonhoylea* (Bravo) Werd. = *Mammillaria gigantea* Hildm. ex Sch.  
*M. hastifera* Kraenz & Keller = *Mammillaria gigantea* Hildm. ex Sch.  
*M. haudeana* Lau & Wagner = *Mammillaria saboae* fa. *haudeana* (Lau & Wagner) D. Hunt.  
*M. haynei* Ehrenb. = status doubtful.  
*M. heeriana* Bkbg. n.n. = status doubtful, plants supplied as this are similar to *Mammillaria duoformis* Craig & Dawson.  
*M. hemisphaerica* Engelm. = *Mammillaria heyderi* v. *hemisphaerica* (Engelm.) Engelm.  
*M. heideri* Boed. = *Mammillaria columbiana* S-D.  
*M. heideri* v. *macdougalii* (Rose) Benson = *Mammillaria macdougalii* Rose.  
*M. heideri* v. *meiacantha* (Engelm.) Benson = *Mammillaria meiacantha* Engelm.  
*M. kidalgensis* Purpus = *Mammillaria polythele* Mart.  
*M. hildmannii* = catalogue name.  
*M. hoffmanniana* (Tiegel) Bravo = *Mammillaria polythele* Mart.  
*'M. huriana'* = catalogue name.  
*M. icamolensis* Boed. = status doubtful.  
*M. inae* Craig = *Mammillaria sheldonii* (B. & R.) Boed.  
*M. infernalis* Craig = *Mammillaria parkinsonii* Ehrenb.  
*M. ingens* Bkbg. = *Mammillaria polythele* Mart.  
*M. kelleriana* Schmoll ex Craig = *Mammillaria polythele* Mart.  
*M. kevensis* D = *Mammillaria polythele* Mart.  
*'M. kladiweise'* = hort. = ?*Mammillaria spinosissima* Lem.  
*M. kuentziana* P. & B. Fearn = *Mammillaria vetula* Mart.  
*M. kunthii* Ehrenb. = *Mammillaria haageana* Pfeiff.  
*M. kunzeana* Boed. & Quchl = status doubtful, plants supplied as this are usually *Mammillaria bocasana* Poselg.  
*M. lanata* (B. & R.) Orcutt = *Mammillaria supertexta* Mart. ex Pfeiff.  
*M. lencussumae* Craig = *Mammillaria canelensis* Craig.  
*M. lauii* fa. *subducta* D. Hunt = *Mammillaria subducta* (D. Hunt) Repp.

- M. lengobletiana* Boed. = status doubtful.  
*M. leona* Poselg. = *Mammillaria pottsii* Scheer ex S-D.  
*M. lesanurii* (Rebut) Sch. = status doubtful.  
*M. leucocentra* Berg. = ?*Mammillaria geminispina* Haw.  
*M. macracantha* DC = *Mammillaria magnimamma* Haw.  
*M. magnetica* Meyran = *Mammillaria vetula* Mart.  
*M. marceriana* Bkbg. = *Mammillaria grahamii v. oliviae* (Orcutt)  
 Benson.  
*M. marshalliana* (Gates) Boed. ex Bkbg. = *Mammillaria baxteriana*  
 (Gates) Boed.  
*M. martinezii* Bkbg. = *Mammillaria supertexta* Mart.  
*M. mayensis* Craig = *Mammillaria cancelensis* Craig.  
*M. melispina* Werd. = status doubtful.  
*M. mendeliana* (Bravo) Werd. = *Mammillaria hahniana* Werd.  
*M. meridiorsei* Castetter et al = *Mammillaria wrightii v. wilcoxii*  
 (Toumey ex Sch.) Marshall.  
*M. mexicensis* Craig = status doubtful.  
*M. michoacanensis* = catalogue name = ?*Mammillaria meyranii*  
 Bravo.  
*M. microcarpa* Engelm. = *Mammillaria milleri* (B. & R.) Boed.  
*M. microcarpa v. grahamii* Engelm. = *Mammillaria grahamii*  
 Engelm.  
*M. microeliopsis* Werd. = *Mammillaria microelia* Werd.  
*M. milteensis* Bravo = *Mammillaria rekoi* (B. & R.) Vpl.  
*M. mixteccensis* Bravo = *Mammillaria casoii* Bravo.  
*M. mollisimata* Shurly = *Mammillaria pygmaea* (B. & R.) Berg.  
*M. monancistrantha* Bkbg. = *Mammillaria nana* Bkbg.  
 ex Mottram.  
*M. monocentra* Jac. = status doubtful.  
*M. montensis* Craig = ?*Mammillaria cancelensis* Craig.  
*M. morriailii* Cowper = *Mammillaria barbata* Engelm.  
*M. movensis* Craig = *Mammillaria standleyi* (B. & R.)  
 Orcutt  
*M. multicentralis* Craig = status doubtful.  
*M. multicaps S-D* = *Mammillaria prolifera* (Miller) Haw.  
*M. multififormis* (B. & R.) Boed. = *Mammillaria erythrosperma*  
 Boed.  
*M. multihamate* Boed. = status doubtful.  
*M. multiseta* Ehrenb. = *Mammillaria karwinskiana* Mart.  
*M. mutabilis* Scheidw. = *Mammillaria mystax* Mart.  
*M. nelsonii* (B. & R.) Boed. = *Mammillaria beneckei* Ehrenb.  
*M. neobertandiana* Bkbg. = *Mammillaria magallanii* Schmoll.  
*M. neovorrorae* Knuth = status doubtful.  
*M. neucrigera* Bkbg. = status doubtful.  
*M. neomyxtar* Bkbg. = *Mammillaria mystax* Mart.  
*M. neophaeacantha* Bkbg. = *Mammillaria polytele* Mart.  
*M. neopotosma* Craig = *Mammillaria muehlenfordtii* Foerst.  
*M. neoschwarziana* Bkbg. = *Mammillaria bocensis* Craig.  
*M. obscura* Hildm. = ?*Mammillaria petterssonii* Hildm.  
*M. obvallata* Otto ex Dietr. = status doubtful.  
*M. ocamponis* Ochot. = *Mammillaria mercadensis v.*  
*guillaujiniana* (Bkbg.) Repp.  
*M. ochoterenae* (Bravo) Werd. = *Mammillaria discolor* Haw.  
*M. ocellensis* Craig = *Mammillaria gigantea* Hildm.  
*M. oliviae* Orcutt = *Mammillaria grahamii v. oliviae* (Orcutt)  
 Benson.  
*M. oreastera* Benson = *Mammillaria viridiflora* (B. & R.) Boed.
- M. ortegae* (B. & R.) Orcutt = *Mammillaria scrippsiana* (B. & R.)  
 Orcutt.  
*M. ortiz-rubiona* (Bravo) Weid. = *Mammillaria candida* Scheid.  
*M. pachyrhiza* Bkbg. = *Mammillaria discolor* Haw.  
*M. painteri* Rose ex Quelh see under *Mammillaria pygmaea*.  
*M. palmeri* Jac. non Boed. = status doubtful.  
*M. parenthesis* Craig = *Mammillaria pringlei* (Coulter) K. Brandegees.  
*M. patonii* (Bravo) Boed. = *Mammillaria mazatlanensis* Sch.  
*M. pectinifera fa. solisoides* (Bkbg.) S.-Mejorada = *Mammillaria*  
*solisoides* Bkbg.  
*M. pennispinosa v. nazasensis* Glass & Foster = *Mammillaria*  
*nazasensis* (Glass & Foster) Repp.  
*M. pentacantha* Pfeiff. = status doubtful.  
*M. phaeacantha* Lem. = status doubtful.  
*M. phymatothele* Berg. = status doubtful.  
*M. pilensis* Shurly = *Mammillaria petterssonii* Hildm.  
*M. pilayensis* = incorrect spelling of *Mammillaria pilcayensis* Bravo.  
*M. polygyra* S-D = status doubtful.  
*M. possetiana* Boed. = *Mammillaria rettigiana* Boed.  
*M. praelii* Muchlpi. = status doubtful.  
*M. pseudolumens* Bkbg. = *Mammillaria grahamii v. oliviae*  
 (Orcutt) Benson.  
*M. pseudoreksi* [attrib. to (Rose) Boed. (1931) by] Boed. = *nom. dub.*  
*M. pseudoscheidiana* v. hort. = *Mammillaria dumetorum* Purpus.  
*M. pseudoscrippsiana* Bkbg. = *Mammillaria scrippsiana* (B. & R.)  
 Orcutt.  
*M. pseudosimplex* W. Haage & Bkbg. = *Mammillaria mammillaris*  
 (L.) Karsten.  
*M. pseudospertita* = catalogue name.  
*M. pubispina* Boed. = *Mammillaria pygmaea* (B. & R.) Berg.  
*M. pusilla* (DC) Sweet = *Mammillaria prolifera* (Miller) Haw.  
*M. pyrrhocephala* Scheidw. = *Mammillaria karwinskiana* Mart.  
*M. queretariensis* Craig = *Mammillaria parkinsoniae* Ehrenb.  
*M. quevedoi* = catalogue name = *Mammillaria hahniana* Craig.  
*M. radiüssima* Lindsay = *Mammillaria baumii* Boed.  
*M. rawlinii* = catalogue name = *Mammillaria nana* Bkbg.  
*M. rekoi v. aurispina* Lau = *Mammillaria aureispina* (Lau) Repp.  
*M. rekoi v. leptacantha* Lau = *Mammillaria leptacantha* (Lau)  
 Repp.  
*M. rekoi* Craig = *Mammillaria rekoi* (B. & R.) Vpl.  
*M. roseus* Craig = *Mammillaria parkinsoniae* Ehrenb.  
*M. roseocentra* Boed. & Ritt. = *Mammillaria magallanii* Schmoll ex  
 Craig.  
*M. rossiana* Heinr. = ?*Mammillaria duoformis* Craig & Dawson.  
*M. rubida* Schwarz = *Mammillaria bocensis v. rubida* Repp.  
*M. runyonii* (B. & R.) Boed. = *Mammillaria melanocentra* Poselg.  
*M. rutila* Zucc. ex Pfeiff. = status doubtful.  
*M. sabaea v. theresae* (Cutak) Rowley = *Mammillaria theresae*  
 Cutak.  
*M. saffordii* (B. & R.) Bravo = *Mammillaria carretii* Rebut ex Sch.  
*M. sandwiensis* Shurly = *Mammillaria pilispina* Purpus.  
*M. sanctaecrucis* Cowper = *Mammillaria barbata* Engelm.  
*M. scheideggeriana* Otto ex A. Dietr. = *Mammillaria*  
*erythrosperma* Boed.  
*M. schelhasii* Pfeiff. = status doubtful, plants supplied as this are  
 usually *Mammillaria bocasana*.  
*M. schieliana* Schick. = *Mammillaria picta* Meins.

- M. schmollii* (Bravo) Werd. = *Mammillaria discolor* Haw.  
*M. schmuckeri* hort. Schmoll = status doubtful.  
*M. schwartzii* (Boed.) Buxb. = *Mammillaria coahuilensis* (Boed.) Moran.  
*M. seideliana* Quehl = status doubtful.  
*M. seitziana* Mart. ex Pfeiff. = status doubtful.  
*M. shurliana* Gates ex Shurly = *Mammillaria blossfeldiana* v. *shurliana* (Gates) Wiggins.  
*M. simplex* Haw. = *Mammillaria mammillaris* (L.) Karsten.  
*M. sinaloensis* (Rose ex Ortega) Mottram = *Mammillaria mazatlanensis* Sch.  
*M. stevini* (B. & R.) Boed. = *Mammillaria albicans* (B. & R.) Berg.  
*M. soehlemannii* W. Haage & Bkbg. = *Mammillaria columbiana* Salm-Dyck.  
*M. solistii* (B. & R.) Boed. = *Mammillaria nunezii* (B. & R.) Orcutt.  
*M. stampferi* Repp. = *Mammillaria longiflora* fa. *stampferi* (Repp.) D. Hunt.  
*M. stella-de-tacubaya* Heese = identification uncertain.  
*M. subduriopina* Bkbg. = *Mammillaria polythele* Mart.  
*M. subtilis* Bkbg. = *Mammillaria pilispina* J.A. Purpus  
*M. tamayonii* Killip ex L. Schne = *Mammillaria columbiana* Salm-Dyck.  
*M. tenuispensis* (B. & R.) Berg = *Mammillaria sartorii* Purpus  
*M. tetricantha* S-D = *Mammillaria obconella* Scheidw.  
*M. tetricentra* [attrib. to Otto] Foerst. = status doubtful.  
*M. tigueliana* Bkbg. = *Mammillaria parkinsonii* Ehrenb.  
*M. tricarinata* Sch. = status doubtful.  
*M. troxarii* Hildm. ex Sch. = *Mammillaria magnimamma* Haw.  
*M. umbrina* Ehrenbg. = status doubtful.  
*M. uniflora* Boed. = *Mammillaria weingartiana* Boed.  
*M. vagaspira* Craig = *Mammillaria magnimamma* Haw.  
*M. vaupelii* Tiegel = *Mammillaria haageana* Pfeiff.  
*M. verhaertiana* Boed. = status doubtful.  
*M. vicenciana* = catalogue name = *Mammillaria chica* Repp.  
*M. vonwyssiana* Kraenz = *Mammillaria parkinsonii* Ehrenb.  
*M. wilcoxii* v. *viridiflora* (B. & R.) Marshall & Bock = *Mammillaria viridiflora* (B. & R.) Boed.  
*M. woodsi* Craig = *Mammillaria hahniana* Werd.  
*M. Wrightii* v. *viridiflora* (B. & R.) Marshall = *Mammillaria viridiflora* (B. & R.) Marshall.  
*M. Wrightii* v. *wilcoxii* (Toumey) Marshall = *Mammillaria wilcoxii* Toumey ex Sch.  
*M. wolfii* = *Mammillaria wrightii* v. *wolfii* (D. Hunt) Repp.  
*M. wuthemiana* Bkbg. = *Mammillaria nunezii* (B. & R.) Orcutt.  
*M. xanthina* (B. & R.) Boed. = status doubtful.  
*M. zahniana* Boed. = *Mammillaria winterae* Boed.  
*M. zapalensis* Craig = *Mammillaria guerreronis* (Bravo) [attrib. to Boed.] Bkbg. & Knuth.
- '*Matucana armillata*' = *Matucana haynei* (Otto) B. & R.  
*M. blanca* Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. breviflora* Rauh & Bkbg. = 'Matucana haynei' v. *breviflora*.  
*M. caespitosa* = *Matucana paucicostata* Ritt.  
*M. calliantha* Ritt. = *Matucana krahni* (Don.) Bregman.  
*M. calocephala* Skarupke = *Matucana myriacantha* (Vpl.) Bux.
- M. calvescens* (Kim. & Hutch.) Bux. = *Matucana aurantiaca* (Vpl.) Bux.  
*M. celendinensis* Ritt. = *Matucana intertexta* v. *celendinensis* (Ritt.) Bregman.  
*M. cereoides* Rauh & Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. clavigina'* = *Matucana haynei* (Otto) B. & R.  
*M. currandiensis* Ritt. = *Matucana aurantiaca* (Vpl.) Bux.  
*M. elongata* Rauh & Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. eriodicta'* = *Matucana paucicostata* Ritt.  
*M. herzogiana* Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. huaricensis* Kniez n.n. = *Matucana myriacantha* (Vpl.) Bux.  
*M. hystrica* Rauh & Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. multicolor* Rauh & Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. paucispina'* = *Matucana paucicostata* Ritt.  
*M. purpureola* Ritt. = *Matucana myriacantha* (Vpl.) Bux.  
*M. roseola* Ritt. n.n. = *Matucana myriacantha* (Vpl.) Bux.  
*M. senile'* = *Matucana paucicostata* Ritt.  
*M. senilis'* = *Matucana paucicostata* Ritt.  
*M. superstite* Ritt. = *Matucana haynei* (Otto) B. & R.  
*M. turbiniformis'* = *Matucana paucicostata* Ritt.  
*M. variabilis* Rauh & Bkbg. = *Matucana haynei* (Otto) B. & R.  
*M. villarica'* = *Matucana haynei* (Otto) B. & R.  
*M. winteri* Ritt. = *Matucana myriacantha* (Vpl.) Bux.  
*M. janganucensis* Rauh & Bkbg. = *Matucana haynei* (Otto) B. & R.
- Medilobivia* Not included below are a number of invalid combinations, (originally published as *nomen nudum* in this genus), from seed and plant merchants' catalogues. If not listed, these names should be sought under *Rebutia*.
- Medilobivia albopectinata* Rausch = *Rebutia albopectinata* Rausch.  
*M. aurantiida* (Wessn.) Kraenz = *Rebutia einsteinii* Fric.  
*M. aureiflora* (Bkbg.) Bkbg. and var. = 'Rebutia einsteinii' v. *aureiflora*'.  
*M. brunescens* Rausch = *Rebutia brunescens* Rausch.  
*M. conoidea* (Wessn.) Kraenz = *Rebutia einsteinii* Fric.  
*M. costata* (Werd.) Kraenz = 'Rebutia steinmannii' v. *costata*'.  
*M. duurstaalana* Bkbg. = 'Rebutia einsteinii' v. *aureiflora*'.  
*M. elegans* Bkbg. = *Rebutia einsteinii* Fric.  
*M. euanthema* (Bkbg.) Kraenz. = *Rebutia euanthema* (Bkbg.) Buin. & Don.  
*M. ecuagliptana* (Bkbg.) Kraenz = *Rebutia steinmannii* (Solms-Laub.) B. & R.  
*M. fuauiiana* Bkbg. = status doubtful.  
*M. haefneriana* Cullm. = ?*Rebutia pygmaea* (Fries.) B. & R.  
*M. ihyacantha* Card. = *Rebutia ihyacantha* (Card.) Diers.  
*M. nigricans* (Wessn.) Kraenz = *Rebutia ritteri* (Wessn.) Buin. & Don.  
*M. orurensis* Bkbg. = 'Rebutia pygmaea' v. *orurensis*.  
*M. pectinata* (Bkbg.) Bkbg. non Fric = *Rebutia pygmaea* (Fries.) B. & R.  
*M. pectinata* v. *orurensis* (Bkbg.) Bkbg. = 'Rebutia pygmaea' v. *orurensis*'.  
*M. pygmaea* Bkbg. = 'Rebutia pygmaea' v. *haagei*.  
*M. ritteri* (Wessn.) Kraenz = *Rebutia ritteri* (Wessn.) Don.  
*M. rubelliflora* Bkbg. = 'Rebutia einsteinii' v. *aureiflora*'.

- M. rubriflora* Bkbg. = *Rebutia einsteinii* v. *aureiflora*.  
*M. schmidcheniana* (Koehl.) Kraenzl and *tars.* = *Rebutia einsteinii* Fric.  
*M. spiralisepula* Jajo = status doubtful.
- '*Melocactus alpestris*' = *Melocactus peruvianus* Vpl.  
*M. anastomozans* Rauh & Bkbg. = *Melocactus peruvianus* Vpl.  
*M. azulensis* Buin. et al. = *Melocactus oreas* subsp. *ernestii* (Vpl.) Braun.  
*M. chaleensis* = *Melocactus peruvianus* Vpl.  
*M. crenophilus* Buin. & Bred. = *Melocactus oreas* Miqu.  
*M. ernestii* Vpl. = *Melocactus oreas* subsp. *ernestii* (Vpl.) Braun.  
*M. erythraeanthus* Buin. & Bred. = *Melocactus oreas* Miqu.  
*M. huallanensis* Rauh & Bkbg. = *Melocactus peruvianus* Vpl.  
*M. janssenianus* Bkbg. = *Melocactus peruvianus* Vpl.  
*M. longispinus* Buin. et al. = *Melocactus oreas* Miqu.  
*M. nitidus* Ritt. = *Melocactus oreas* subsp. *ernestii* (Vpl.) Braun.  
*M. rubripectus* Buin. et al. = *Melocactus oreas* Miqu.  
*M. trujillensis* Raul & Bkbg. = *Melocactus peruvianus* (Vpl.)  
*M. unguispinus* Bkbg. = *Melocactus peruvianus* Vpl.
- Mila:* for all published names see *Mila caespitosa* B. & R.
- Navajoa* sp. see under *Pediocactus peeblesianus* (Croiz.) Benson.
- Neobessera asperispina* (Boed.) Boed. = *Escobaria missouriensis* v. *asperispina* (Boed.) N.P. Taylor.  
*N. missouriensis* (Sweet) B. & R. = *Escobaria missouriensis* (Sweet) D. Hunt.  
*N. testicostata* (Brit.) B. & R. = *Escobaria missouriensis* v. *similis* (Engelm.) N.P. Taylor.  
*N. rosiflora* Lahn. = *Escobaria missouriensis* v. *similis* (Engelm.) N.P. Taylor.  
*N. similis* (Engelm.) B. & R. = *Escobaria missouriensis* v. *similis* (Engelm.) N.P. Taylor.  
*N. wissmannii* (Hildm.) B. & R. = *Escobaria missouriensis* (Sweet) D. Hunt.
- Neochilenia acerosarpa* (Ritt.) Bkbg. = *Neopoteria iquiquensis* (Ritt.) Don & Rowley.  
*N. andreaeana* Bkbg. = *Pyrrhocactus andreaeana* (Bkbg.) Ritt.  
*N. aricensis* (Ritt.) Bkbg. = *Neopoteria iquiquensis* (Ritt.) Don. & Rowley.  
*N. aspillagai* (Soehr.) Bkbg. = *Neopoteria aspillagai* (Soehr.) Bkbg.  
*N. 'atra'* Bkbg. = *Neopoteria reichei* (Sch.) Bkbg.  
*N. calderana* (Ritt.) Bkbg. = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. carneoflora* Kilian = probable hybrid.  
*N. chilensis* (Hildm.) Bkbg. = *Neopoteria chilensis* (Hildm.) Don. & Rowley.  
*N. chorosensis* (Ritt.) Bkbg. = *Neopoteria chorosensis* (Ritt.) Don. & Rowley.  
*N. confinis* (Ritt.) Bkbg. = *Neopoteria confinis* (Ritt.) Don. & Rowley.  
*N. deherdiniana* Bkbg. = *Neopoteria chorosensis* (Ritt.) Don. & Rowley.  
*N. dimorpha* (Ritt.) Bkbg. = *Neopoteria jussieui* v. *dimorpha* (Ritt.) Hoffmann.
- N. duripulpa* (Ritt.) Bkbg. = *Neopoteria reichei* (Sch.) Bkbg.  
*N. eriocephala* Bkbg. = status doubtful.  
*N. eriosyzoidea* (Ritt.) Bkbg. = *Neopoteria eriosyzoidea* (Ritt.) Don. & Rowley.  
*'N. esmeraldana'* (Ritt.) Bkbg. = *Neopoteria esmeraldana* (Ritt.) Don. & Rowley.  
*N. floccosa* (Ritt.) Bkbg. = *Neopoteria echinus* v. *floccosa* (Ritt.) R.M. Ferryman.  
*N. foecana* (Mieck.) Bkbg. = status doubtful.  
*N. fusca* (Muellp.) B. & R. = status doubtful.  
*N. glabrescens* Ritt. = *Neopoteria napina* (Phil.) Bkbg.  
*N. glaucescens* (Ritt.) Bkbg. = *Neopoteria echinus* (Ritt.) R.M. Ferryman.  
*N. gracilis* (Ritt.) Bkbg. = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. hancockii* & *tars.* = status doubtful.  
*N. huascensis* (Ritt.) Bkbg. = *Neopoteria huascensis* (Ritt.) Don. & Rowley.  
*N. imitans* Bkbg. = *Neopoteria odieri* (Lem.) Berg.  
*N. intermedia* (Ritt.) Bkbg. = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. iquiquensis* (Ritt.) Bkbg. = *Neopoteria iquiquensis* (Ritt.) Don. & Rowley.  
*N. jussieui* (Monv.) Bkbg. = *Neopoteria jussieui* (Monv.) B. & R.  
*N. kunzei* (Forst.) Bkbg. = *Neopoteria kunzei* (Forst.) Bkbg.  
*'N. krausi'* (Ritt.) Bkbg. = *Neopoteria odieri* v. *malleolata* (Ritt.) R.M. Ferryman.  
*'N. lemkei'* Bkbg. = *Neopoteria reichei* (Sch.) Bkbg.  
*N. malleolata* (Ritt.) Bkbg. = *Neopoteria odieri* v. *malleolata* (Ritt.) R.M. Ferryman.  
*N. malleolata* v. *solitaria* Ritt. = *Neopoteria odieri* v. *malleolata* (Ritt.) R.M. Ferryman.  
*N. mehnsii* (Hildm.) Bkbg. = status doubtful.  
*N. minima* n.n. = *Neopoteria chorosensis* (Ritt.) Don. & Rowley.  
*N. mitis* (Phil.) Bkbg. = *Neopoteria napina* (Phil.) Bkbg.  
*N. monte-amargensis* Bkbg. = *Neopoteria odieri* v. *monte-amargensis* (Bkbg.) R.M. Ferryman comb. nov.  
*N. napina* (Phil.) Bkbg. = *Neopoteria napina* (Phil.) Bkbg.  
*N. napina* v. *spinifera* (Bkbg.) Bkbg. = *Neopoteria napina* (Phil.) Bkbg.  
*N. neofusca* Bkbg. = *Neopoteria jussieui* (Monv.) B. & R.  
*N. neoreichei* Bkbg. = *Neopoteria reichei* (Sch.) Bkbg.  
*'N. nigrisporaria'* Bkbg. = *Neopoteria crispa* (Ritt.) Don. & Rowley.  
*N. occulta* (Sch.) Bkbg. = *Neopoteria occulta* (Sch.) B. & R.  
*N. odoriflora* (Ritt.) Bkbg. = *Neopoteria horrida* (Remy ex Gay)  
*N. paucicostata* & v. *viridis* (Ritt.) Bkbg. = *Neopoteria paucicostata* (Ritt.) Don. & Rowley.  
*N. pilispina* (Ritt.) Bkbg. = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. pulchella* (Ritt.) Bkbg. n.n. = *Neopoteria pulchella* (Ritt.) R.M. Ferryman.  
*N. pygmaea* (Ritt.) Bkbg. = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. recondita* (Ritt.) Bkbg. = *Neopoteria recondita* (Ritt.) Don. & Rowley.

- N. reichei* (Sch.) Blkbg. = *Neopoteria reichei* (Sch.) Blkbg.  
*N. residua* (Ritt.) Blkbg. = *Neopoteria recondita* (Ritt.) Don. & Rowley.  
*N. robusta* & v. *vegusana* (Ritt.) Blkbg. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.  
*N. rupestris* (Ritt.) Blkbg. = *Neopoteria taltalensis* Hutch.  
*N. saxifraga n.n.* = *Neopoteria iquiquensis* (Ritt.) Don. & Rowley.  
*N. scoparia* (Ritt.) Blkbg. = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. setosiflora* & v. *intermedia* (Ritt.) Blkbg. = *Neopoteria setosiflora* (Ritt.) Don. & Rowley.  
*N. subtilis* n.n. = *Neopoteria chorosensis* (Ritt.) Don. & Rowley.  
*N. taltalensis* v. *flaviflora* (Ritt.) Blkbg. n.n. = *Neopoteria neohankeana* (Ritt.) R.M. Ferryman.  
*N. totoralensis* (Ritt.) Blkbg. = *Neopoteria totoralensis* (Ritt.) Don. & Rowley.  
*N. transitensis* (Ritt.) Blkbg. = *Neopoteria transitensis* (Ritt.) R.M. Ferryman.  
*N. wambaudi* = *Neopoteria jussieui* (Monv.) B. & R.  
*N. violaceiflora* n.n. = *Neopoteria taltalensis* Hutch.  
*N. wagonknechti* (Ritt.) Blkbg. = *Neopoteria jussieui* v. *wagenknechti* (Ritt.) R.M. Hoffmann.
- Neognesia agavoidea* Castan. = *Ariocarpus agavoidea* (Castan.) And.
- Neolloydia ceratites* (Quehl) B. & R. = *Neolloydia conoidea* (DC) B. & R.  
*N. conoidea* v. *ceratites* (Quehl) Kladiwa & Fittkau = *Neolloydia conoidea* (DC) B. & R.  
*N. conoidea* v. *grandiflora* (Otto ex Pfeiff.) Kladiwa & Fittkau = *Neolloydia conoidea* (DC) B. & R.  
*N. conoidea* v. *mattheuensis* (Blkbg.) Kladiwa & Fittkau = *Neolloydia conoidea* (DC) B. & R.  
*N. erectocentrus* (Coul.) Benson = *Echinomastus erectocentrus* (Coul.) B. & R.  
*N. gielsdorfiana* (Werd.) Knuth = *Gymnocalyx gielsdorffianus* (Werd.) Blkbg.  
*N. grandiflora* (Otto ex Pfeiff.) Berg. = *Neolloydia conoidea* (DC) B. & R.  
*N. horripila* (Lem.) B. & R. = *Gymnocalyx horripilus* (Lem.) Blkbg.  
*N. intertexta* (Engelm.) Benson = *Echinomastus intertextus* (Engelm.) B. & R.  
*N. johnsonii* (Parry) Benson = *Echinomastus johnsonii* (Parry) Baxt.  
*N. knuthiana* (Boed.) Knuth = *Gymnocalyx knuthianus* (Boed.) Blkbg.  
*N. macdowellii* (Rebut ex Quehl) H.E. Moore = *Thelocactus macdowellii* (Rebut ex Quehl) C. Glass.  
*N. maripensis* (Hester) Benson = *Echinomastus maripensis* Hester.  
*N. odorata* (Boed.) Blkbg. = *Cumarinia odorata* (Boed.) Bux.  
*N. pseudoepechinatus* (Blkbg.) Anderson = *Turbinicarpus pseudoepechinatus* (Blkbg.) Glass & Foster.  
*N. pulleanea* Blkbg. = *Coryphantha pulleanea* (Blkbg.) Glass.  
*N. saueri* (Boed.) Knuth = *Gymnocalyx saueri* (Boed.) Blkbg.
- N. smithii* (Muehlpf.) Kladiwa & Fittkau = *Gymnocalyx beguinii* Blkbg. nom. inval.  
*N. schmiedickiana* (Boed.) Anderson = *Turbinicarpus schmiedickianus* (Boed.) Bux. & Blkbg.  
*N. schmiedickiana* v. *dickisoniae* (Glass & Foster) Anderson = *Turbinicarpus schmiedickianus* v. *dickisoniae* Glass & Foster.  
*N. schmiedickiana* v. *flaviflora* (Frank & Lau) Anderson = *Turbinicarpus schmiedickianus* v. *flaviflora* (Frank & Lau) Glass & Foster.  
*N. schmiedickiana* v. *gracilis* (Glass & Foster) Anderson = *Turbinicarpus schmiedickianus* v. *gracilis* Glass & Foster.  
*N. schmiedickiana* v. *klinkeriana* (Blkbg. & Jacobs.) Anderson = *Turbinicarpus schmiedickianus* v. *klinkerianus* (Blkbg. & Jacobs.) Glass & Foster.  
*N. schmiedickiana* v. *macrochele* (Werdl.) Anderson = *Turbinicarpus schmiedickianus* v. *macrochele* (Werdl.) Glass & Foster.  
*N. schmiedickiana* v. *schwarzii* (Shurly) Anderson = *Turbinicarpus schmiedickianus* v. *schwarzii* (Shurly) Glass & Foster.  
*N. subterranea* (Blkbg.) F. Moore = *Gymnocalyx subterraneus* (Blkbg.) Blkbg.  
*N. subterranea* v. *zaragosa* (Glass & Foster) Anderson = *Gymnocalyx subterraneus* v. *zaragoza* Glass & Foster.  
*N. valdeziana* (Moell.) Anderson = *Turbinicarpus valdezianus* (Moell.) Glass & Foster.  
*N. viereckii* (Werdl.) Knuth = *Gymnocalyx viereckii* (Werdl.) Blkbg.  
*N. warnockii* Benson = *Echinomastus warnockii* (Benson) Glass & Foster.
- Neopoteria andreana* (Blkbg.) Don. & Rowley = *Pyrrhocactus andreaeana* (Blkbg.) Ritt.  
*N. aricensis* (Ritt.) Don. & Rowley = *Neopoteria iquiquensis* (Ritt.) Don & Rowley.  
*N. armata* (Ritt.) Krainz = *Neopoteria horrida* (Remy ex Gay) D. Hunt.  
*N. atrispinosa* (Blkbg.) Blkbg. = *Neopoteria villosa* (Monv.) Berg.  
*N. calderana* f. *gracilis* (Ritt.) Don. & Rowley = *Neopoteria calderana* (Ritt.) Don. & Rowley.  
*N. castanea* Ritt. = *Neopoteria subgibbosa* v. *castanea* (Ritt.) R.M. Ferryman.  
*N. cephalophora* (Blkbg.) Blkbg. = *Neopoteria villosa* (Monv.) Berg.  
*N. chupensis* (Ritt.) Don. & Rowley = *Neopoteria horrida* (Remy ex Gay) D. Hunt.  
*N. curvispina* v. *acmocaguensis* (Ritt.) Don. & Rowley = *Neopoteria curvispina* (Bert.) Don. & Rowley.  
*N. curvispina* v. *andicola* (Ritt.) Don. & Rowley = *Neopoteria curvispina* (Bert.) Don. & Rowley.  
*N. curvispina* v. *carrizalensis* (Ritt.) Don. & Rowley = *Neopoteria totoralensis* v. *carrizalensis* (Ritt.) R.M. Ferryman.  
*N. curvispina* v. *echinus* (Ritt.) Don. & Rowley = *Neopoteria echinus* (Ritt.) R.M. Ferryman.  
*N. curvispina* v. *garaventai* (Ritt.) Don. & Rowley = *Neopoteria garaventai* (Ritt.) R.M. Ferryman.  
*N. curvispina* v. *heinrichiana* (Blkbg.) Don. & Rowley = *Neopoteria heinrichiana* (Blkbg.) R.M. Ferryman.  
*N. curvispina* v. *lissocarpa* (Ritt.) Don. & Rowley = *Neopoteria curvispina* (Bert.) Don. & Rowley.

- N. curvispina v. transiensis* (Ritt.) Don. & Rowley = *Neopoteria transiensis* (Ritt.) R.M. Ferryman.
- N. curvispina v. vallenarense* (Ritt.) Don. & Rowley = *Neopoteria vallenarense* (Ritt.) R.M. Ferryman.
- N. eriocephala* (Bkbg.) sensu Don. & Rowley = *Neopoteria odieri v. malleolata* (Ritt.) R.M. Ferryman.
- N. eriocephala v. glaucescens* (Ritt.) Don. & Rowley = *Neopoteria echinus* (Ritt.) R.M. Ferryman.
- N. foveana* (Mieckl.) Bkbg. = status doubtful.
- N. fissa* (Muehlpf.) B. & R. = status doubtful.
- N. geniculifolia* Ito = *Neopoteria nidus v. gerocephala* (Ito) Ritt.
- N. intermedius* (Ritt.) Don. & Rowley = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- N. islayensis v. islayensis fa. brevicylindrica* (Rauh & Bkbg.) Don. & Rowley = *Neopoteria islayensis* (Foerst.) Don. & Rowley.
- N. islayensis v. islayensis fa. grandiflora* (Rauh & Bkbg.) Don. & Rowley = *Neopoteria islayensis* (Foerst.) Don. & Rowley.
- N. islayensis v. islayensis fa. minor* (Bkbg.) Don. & Rowley = *Neopoteria islayensis* (Foerst.) Don. & Rowley.
- N. islayensis v. islayensis fa. molleldensis* (Vpl.) Don. & Rowley = *Neopoteria islayensis* (Foerst.) Don. & Rowley.
- N. islayensis v. islayensis fa. spinosior* (Rauh & Bkbg.) Don. & Rowley = *Neopoteria islayensis* (Foerst.) Don. & Rowley.
- N. lancipes* Ritt. = *Neopoteria villosa* (Monv.) Berg.
- N. lindleyi* (Först.) Don. & Rowley = *Neopoteria islayensis* (Foerst.) Don. & Rowley.
- N. littoralis* & *v. intermedia* Ritt. = *Neopoteria subgibbosa* (Haw.) B. & R.
- N. marksiiana v. tenuis* (Ritt.) Don. & Rowley = *Neopoteria marksiiana* (Ritt.) Don. & Rowley.
- N. microperma v. graciana* Ritt. = *Neopoteria microperma* Ritt.
- N. microperma v. sericeana* Ritt. = *Neopoteria microperma* Ritt.
- N. monte-amargensis* (Bkbg.) Don. & Rowley = *Neopoteria odieri v. monte-amargensis* (Bkbg.) R.M. Ferryman.
- N. multicolor* Ritt. = *Neopoteria nidus v. multicolor* (Ritt.) Hoffmann.
- N. napina v. laniger n.n.* = *Neopoteria napina v. fankhauseri* (Ritt.) R.M. Ferryman.
- N. napina v. mitis* (Phil.) Don. & Rowley = *Neopoteria napina* (Phil.) Bkbg.
- N. napina v. mitis fa. glabrescens* (Ritt.) Don. & Rowley = *Neopoteria napina* (Phil.) Bkbg.
- N. napina v. spinosior* (Bkbg.) Don. & Rowley = *Neopoteria napina* (Phil.) Bkbg.
- N. napina v. spinosior fa. mebbesii* (Hild.) Don. & Rowley = *Neopoteria napina* (Phil.) Bkbg.
- N. nidus v. matancillana* (Ritt.) *Neopoteria nidus* (Sohr.) B. & R.
- N. nidus f. senilis* (Phil.) Don. & Rowley = *Neopoteria nidus* (Sohr.) B. & R.
- N. nigrihorrida* vars. *major* & *minor* (Bkbg.) Bkbg. = *Neopoteria nigrihorrida* (Bkbg.) Bkbg.
- N. odorifera* (Ritt.) Bkbg. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- N. pilispina & fa. pygmaea* (Ritt.) Don. & Rowley = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- N. polyraphis* (Pfeiff.) Bkbg. = ?*Neopoteria villosa* (Monv.) Berg.
- N. rapifera* Ritt. n.n. = *Neopoteria wagenknechti* Ritt.
- N. reichei v. reichei fa. aerocarpa* (Ritt.) Don. & Rowley = *Neopoteria reichei v. aerocarpa* (Ritt.) R.M. Ferryman.
- N. reichei v. reichei fa. carneflora* (Kil.) Don. & Rowley = probable hybrid.
- N. reichei v. reichei fa. duripulpa* (Ritt.) Don. & Rowley = *Neopoteria reichei* (Sch.) Bkbg.
- N. reichei v. reichei fa. lembkei* (Bkbg.) Don. & Rowley = *Neopoteria reichei* (Sch.) Bkbg.
- N. reichei v. reichei fa. neoreichei* (Bkbg.) Don. & Rowley = *Neopoteria reichei* (Sch.) Don. & Rowley.
- N. reichei v. reichei fa. pseudoreichei* (Lemb. & Bkbg.) Don. & Rowley = *Neopoteria reichei* (Sch.) Bkbg.
- N. ritteri* Don. & Rowley = *Neopoteria jussieui v. wagenknechti* (Ritt.) Hoffmann.
- N. robusta* Ritt. = *Neopoteria coimasensis v. robusta* (Ritt.) Ritt.
- N. rupestris* (Ritt.) Don. & Rowley = *Neopoteria taftalensis* Hutch.
- N. scoparia* (Ritt.) Don. & Rowley = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- N. senilis* (Phil.) Bkbg. = *Neopoteria nidus* (Sohr.) B. & R.
- N. sociabilis v. napina* (Ritt.) = *Neopoteria sociabilis* Ritt.
- N. subaiana* (Bkbg.) Don. & Rowley = *Neopoteria garaventai* (Ritt.) R.M. Ferryman.
- N. subgibbosa v. microperma* (Ritt.) Don. & Rowley = *Neopoteria microperma* Ritt.
- N. subgibbosa v. nigrihorrida* (Bkbg.) Don. & Rowley = *Neopoteria nigrihorrida* (Bkbg.) Bkbg.
- N. subgibbosa v. orientalis* Ritt. = *Neopoteria subgibbosa* (Haw.) B. & R.
- N. subgibbosa v. subgibbosa fa. castanea* (Ritt.) Don. & Rowley = *Neopoteria subgibbosa v. castanea* (Ritt.) R.M. Ferryman.
- N. subgibbosa fa. littoralis* (Ritt.) Don. & Rowley = *Neopoteria subgibbosa* (Haw.) B. & R.
- N. tuberculata* (Jac.) Don. & Rowley = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- N. tuberculata v. atroviridis* (Ritt.) Don. & Rowley = *Neopoteria atroviridis* (Ritt.) R.M. Ferryman.
- N. tuberculata v. armata* (Ritt.) Don. & Rowley = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- N. tuberculata v. cupreatum* (Pos.) Don. & Rowley = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- N. tuberculata v. robusta* (Ritt.) Don. & Rowley = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- N. tuberculata v. teguana* (Ritt.) Don. & Rowley = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- N. vallenarense* Ritt. = *Neopoteria wagenknechti v. vallenarense* (Ritt.) Hoffmann.
- N. wagenknechti v. napina* Ritt. = *Neopoteria wagenknechti* Ritt.
- Normanbokeia pseudopectinata* (Bkbg.) Kladiwa & Bux. = *Turbinicarpus pseudopectinatus* (Bkbg.) Glass & Foster.
- N. valdeziana* (Moell.) Kladiwa & Bux. = *Turbinicarpus valdezianus* (Moell.) Glass & Foster.
- Notocactus acutus* Ritt. = *Notocactus ottonis* (Lohm.) Berg.
- N. aguetae* v. Vliet = *Notocactus concinnus* (Monv.) Berg.
- N. alacripotanensis* (Bkbg. & Voll) Bux. see under *Notocactus buenekeri*.

- N. allosiphon* Marchesi see under *Notocactus mammulosus*.  
*N. apricus* (Ar.) Berg. = *Notocactus concinnus* (Mony.) Berg.  
*N. arachnites* Ritt. = *Notocactus crassigibbus* Ritt.  
*N. archaevaletii* (Speg.) Hert. = *Notocactus ottonis* (Lehm.) Berg.  
*N. blauwuijanus* van Vliet = *Notocactus concinnus* (Mony.) Berg.  
*N. brevihamata* (Hge.) Bux. see *Notocactus buenekeri* (Buin.) Bux.  
*N. buenekeri* van Vliet = *Notocactus concinnus* (Mony.) Berg.  
*N. campestris* Ritt. = *Notocactus ottonis* (Lehm.) Berg.  
*N. carambeiensis* Buin. & Bred. = *Notocactus ottonis* v. *tortuosus* (Link & Otto) Berg.  
*N. eremicus* Ritt. = *Notocactus concinnus* (Mony.) Berg.  
*N. erizo'* = *Notocactus veenianus* van Vliet.  
*N. erythracanthus* Schl. & Bred. = *Notocactus mammulosus* (Lem.) Berg.  
*N. eugeniae* van Vliet = *Notocactus veenianus* van Vliet.  
*N. floricomus* (Ar.) Berg. = *Notocactus mammulosus* (Lem.) Berg.  
*N. glaucaurus* Ritt. = *Notocactus ottonis* (Lehm.) Berg.  
*N. globularis* Ritt. = *Notocactus ottonis* (Lehm.) Berg.  
*N. harmonianus* Ritt. = *Notocactus ottonis* (Lehm.) Berg.  
*N. ibicuensis* = *Notocactus ottonis* (Lehm.) Berg.  
*N. incomptus* = *Notocactus ottonis* (Lehm.) Berg.  
*N. laetivirens* Ritt. = *Notocactus ottonis* (Lehm.) Berg.  
*N. linkii* (Lehm.) Hert. = *Notocactus ottonis* v. *tortuosus* (Link & Otto) Berg.  
*N. megalanthus* Schl. & Bred. see under *Notocactus mammulosus* (Lem.) Berg.  
*N. megapotamicus* Ost. ex Hert. = *Notocactus ottonis* v. *tortuosus* (Link & Otto) Berg.  
*N. minimus* Fric & Kreuz. = *Notocactus caespitosus* Speg.  
*N. mueller-moelleri* Fric = status doubtful.  
*N. muegelianus'* = *Notocactus horstii* Ritt.  
*N. multistriatus* Buin. & Bred. = *Notocactus concinnus* (Mony.) Berg.  
*N. neobuenekeri* Ritt. = *Notocactus sucineus* Ritt.  
*N. nigripinus* (Sch.) Buin. see under *Notocactus leninghausii*.  
*N. orthacanthus* (Link & Otto) Hert. = status doubtful.  
*N. orthacanthus* sensu van Vliet = *Notocactus mammulosus* (Lehm.) Berg.  
*N. ottonis* v. *venelutinus* Schuetz = orange flowered ?hort. of *Notocactus ottonis*.  
*N. oxyostatia* Buin. & Bred. = *Notocactus ottonis* (Lehm.) Berg.  
*N. pampeanus* (Speg.) Bkbg. = *Notocactus mammulosus* (Lehm.) Berg.  
*N. paulus* Schl. & Bred. = *Notocactus veenianus* van Vliet.  
*N. pseudoharterti* Buin. = *Notocactus herteri* fa. *pseudoharterti* (Buin.) Herm.  
*N. pulvinatus* van Vliet = clumping form of *Notocactus erinaceus* Haw.  
*N. purpureus* Ritt. = *Notocactus horstii* Ritt.  
*N. securituberculatus* Ritt. = *Notocactus ottonis* (Lehm.) Berg.  
*N. submammulosus* (Lehm.) Bkbg. = *Notocactus mammulosus* (Lehm.) Berg.  
*N. tabularis* (Cels ex Sch.) Berg. = *Notocactus concinnus* (Mony.) Berg.  
*N. tenuicylindricus* Ritt. = *Notocactus caespitosus* Speg.  
*N. winkleri* van Vliet = *Notocactus veenianus* van Vliet.

- Oroya species*, with the exception of *Oroya borchersii* are all referable to *Oroya peruviana* (Sch.) B. & R.  
*Parodia agasta* Brandt = *Parodia rosealba* Ritt.  
*P. agrestis* Wesk nom. prov. = *Parodia dichroacantha* Brandt & Wesk.  
*P. ambleyensis* Brandt = *Parodia microsperma* (Web.) Speg.  
*P. applanata* Brandt = *Parodia schwebsiana* (Werd.) Bkbg.  
*'P. atroviridis'* Bkbg. = *Parodia microsperma* (Web.) Speg.  
*P. aurihamate* hort. = *Parodia aureispina* Bkbg.  
*P. buckbergiana* Brandt = *Parodia otuyensis* Ritt.  
*P. bellatula* Brandt = *Parodia maassii* (Heese) Berg.  
*P. bermejoensis* Brandt = *Parodia maassii* (Heese) Berg.  
*P. betaniana* Ritt. = *Parodia microsperma* (Web.) Speg.  
*P. bilbainensis* Card. = *Parodia taratensis* Card.  
*'P. blanca'* = catalogue name.  
*P. borealis* Ritt. = *Parodia miguellensis* Card.  
*P. cainena* Brandt = *Parodia ocamponi* Card.  
*P. canargensis* Ritt. = *Parodia maassii* (Heese) Berg.  
*P. camblayana* Ritt. n.n. = *Parodia maassii* (Heese) Berg.  
*P. candida* Brandt = hort. hybrid.  
*P. capillitaensis* Brandt = *Parodia spegazziniana* Brandt.  
*P. caraparana* Brandt = *Parodia formosa* Ritt.  
*P. cardenensis* Ritt. = *Parodia formosa* Ritt.  
*P. carinata* Bkbg. = *Parodia microsperma* (Web.) Speg.  
*P. carrierae* Card. = status doubtful.  
*P. castanea* Ritt. = *Parodia maassii* (Heese) Berg.  
*P. catamarcensis* Bkbg. = *Parodia microsperma* (Web.) Speg.  
*P. chaetocarpa* Ritt. = *Parodia formosa* Ritt.  
*P. challamarca* Brandt = *Parodia proceria* Ritt.  
*P. chirimoyarana* Brandt = *Parodia formosa* Ritt.  
*P. chloroscarpa* Ritt. = *Parodia microsperma* (Web.) Speg.  
*P. cinticrista* Ritt. = *Parodia maassii* (Heese) Berg.  
*P. comosa* Ritt. = *Parodia miguellensis* Card.  
*P. compressa* Ritt. = *Parodia ocamponi* Card.  
*P. cotacajensis* Brandt = *Parodia ayopayana* Card.  
*P. cruci-nigricentra* (Fric) Sub. = *Parodia faustiana* Bkbg.  
*P. culpinensis* Brandt = *Parodia subterranea* Ritt.  
*'P. durispina'* = catalogue name.  
*P. echinus* Ritt. = *Parodia miguellensis* Card.  
*'P. ekigiana'* = catalogue name. ?*Parodia proceria*.  
*P. elachista* Brandt = *Parodia punica* Card.  
*P. elata* Brandt = *Parodia ayopayana* Card.  
*P. elegans* Fuchs. n.n. = *Parodia microsperma* (Web.) Speg.  
*'P. eriodes'* = *Parodia schwebsiana* (Werd.) Bkbg.  
*P. erythrantha* (Speg.) Bkbg. = *Parodia microsperma* (Web.) Speg.  
*P. escayachensis* (Vpl.) Bkbg. = *Parodia maassii* (Heese) Berg.  
*P. firmissima* Brandt = *Parodia otuyensis* Ritt.  
*P. friciana* Brandt = *Parodia steumeri* (Werd.) Bkbg.  
*P. fideicipsa* Ritt. = *Parodia maassii* (Heese) Berg.  
*P. gibbulosa* Ritt. = *Parodia gibbulosoides* Brandt.  
*P. gigantea* Fric ex Krainz = *Parodia steumeri* (Werd.) Bkbg.  
*'P. gigantea' v. *jujuyana'** = *Parodia spegazziniana* Brandt.  
*P. glischarpa* Ritt. = *Parodia microsperma* (Web.) Speg.  
*P. gokrauseana* Heinr. = *Parodia steumeri* (Werd.) Bkbg.  
*P. gracilis* Ritt. = *Parodia ocamponi* Card.

- P. gummifera* Bkbg. & Vol. = Uebelmannia gummifera (Bkbg. & Vol.) Buin.
- '*P. guckenkuniana*' Bkbg. = Parodia steumeri microsperma (Web.) Speg.
- P. haegana* Brandt = Parodia maassii (Heese) Berg.
- '*P. higueritas*' = catalogue name.
- P. idiosa* Brandt = Parodia otuyensis Ritt.
- P. ignorata* Brandt = Parodia ocamponi Card.
- P. jujuyana* Fric ex Sub. = status doubtful.
- '*P. kilianiana*' Bkbg. = status doubtful. Plants sold as this are usually *Parodia faustiana*.
- P. knizei* Brandt = Parodia maassii (Heese) Berg.
- P. kochresiana* Brandt = hort. hybrid.
- P. krausiana* Brandt = Parodia tuberculata Card.
- P. lampropsina* Brandt = Parodia maassii (Heese) Berg.
- '*P. lecointensis*' = catalogue name. ?*Parodia maassii*.
- P. legitima* Brandt = Parodia columbaris Card.
- '*P. linnosa*' = catalogue name. Misspelling of next entry?
- P. lychnosa* Brandt = Parodia ocamponi Card.
- P. maassii v. commutans* (Ritt.) Don. & Rowley = *Parodia commutans* Ritt.
- P. maassii v. commutans fa. maxima* (Ritt.) Don. & Rowley = *Parodia maxima* Ritt. (see under *P. commutans* Ritt.)
- P. maassii v. subterranea* (Ritt.) Krainz = *Parodia subterranea* Ritt.
- P. macdonaldii* Brandt = Parodia miguelensis Card.
- P. matthesiana* Heinr. = status doubtful.
- P. maxima* Ritt. see under *Parodia commutans* Ritt.
- P. mazancensis* n.n. = *Parodia rijoensis* Ritt. & Wesk.
- P. mendeziana* Brandt = *Parodia maassii* (Heese) Berg.
- P. mesembria* Brandt = ?*Parodia fechseri* Bkbg.
- P. microthelae* Bkbg. = *Parodia microsperma* (Web.) Speg.
- P. minima* Brandt = *Parodia schwebiana* (Werd.) Bkbg.
- P. minima* Rausch = *Parodia minuscula* Rausch.
- P. miranda* Brandt = hort. hybrid.
- P. muhrii* Brandt = *Parodia aureicentra* Bkbg.
- '*P. multispinosa*' = catalogue name.
- P. mutabilis* Bkbg. = *Parodia aureispina* Bkbg.
- P. neglecta* Brandt = *Parodia comarapana* Card.
- P. neglectoides* Brandt = *Parodia comarapana* Card.
- P. nigrescens* Brandt = *Parodia subterranea* Ritt.
- P. obtusa* Ritt. = *Parodia commutans* Ritt.
- P. otaciana* Card. = *Parodia maassii* (Heese) Berg.
- P. pachys* Brandt = *Parodia formosa* Ritt.
- P. papagayana* Brandt = *Parodia microsperma* (Web.) Speg.
- P. paraguayensis* Speg. = status doubtful.
- P. parvula* Brandt = *Parodia formosa* Ritt.
- P. perplexa* Brandt = *Parodia maassii* (Heese) Berg.
- '*P. peruviana*' = status doubtful.
- P. pilziorum* Wesk. = *Parodia horrida* Brandt.
- '*P. potosina*' = catalogue name. ?*Parodia maassii*.
- P. pseudoyaoyapanica* Card. = *Parodia ayopayana* Card.
- P. pseudoproceria* Brandt = *Parodia proceria* Ritt.
- '*P. pseudostameri*' Bkbg. = *Parodia steumeri* (Werd.) Bkbg.
- P. pseudosubterranea* Brandt = hort. hybrid.
- P. purpureo-aurea* Ritt. = *Parodia formosa* Ritt.
- P. pusilla* Brandt = *Parodia formosa* Ritt.
- P. quechua* Brandt = *Parodia otuyensis* Ritt.
- '*P. rauschii*' Bkbg. = *Parodia aureicentra* Bkbg.
- P. rigidula* Bkbg. = *Parodia dichroacantha* Brandt.
- P. rigidissima* Krainz = *Parodia steumeri* (Werd.) Bkbg.
- P. riograndensis* Brandt = hort. hybrid.
- P. ritteri* Buin. = *Parodia maassii* (Heese) Berg.
- P. ritteri v. cintimensis* (Ritt.) Krainz = *Parodia maassii* (Heese) Berg.
- P. robustissima* Ritt. n.n. = *Parodia subterranea* Ritt.
- P. rostratum-sperma* Brandt = *Parodia maassii* (Heese) Berg.
- '*P. rubellihiamata*' Bkbg. = *Parodia microsperma* (Web.) Speg.
- P. rubida* Ritt. = *Parodia maassii* (Heese) Berg.
- P. rubricentra* Bkbg. = *Parodia steumeri* (Werd.) Bkbg.
- '*P. rubriflora*' Bkbg. = *Parodia sanguiniflora* Fric ex Bkbg.
- P. radikhinata* Ritt. n.n. = *Parodia microsperma* (Web.) Speg.
- P. salitrensis* Brandt = *Parodia subterranea* Ritt.
- P. salmoncea* Brandt = status doubtful.
- P. saurugasta* (Fric) Wgt. = *Parodia microsperma* (Web.) Speg.
- P. schneitzhoferi* Jajo = *Parodia steumeri* (Werd.) Bkbg.
- P. scopoidea* Bkbg. = *Parodia aureispina* Bkbg.
- P. scoparia* Ritt. = *Parodia steumeri* (Werd.) Bkbg.
- '*P. sebileensis*' = catalogue name.
- P. separata* Brandt = *Parodia echinopoides* Brandt.
- P. setiforma* Bkbg. = *Parodia microsperma* (Web.) Speg.
- P. setispina* Ritt. = *Parodia formosa* Ritt.
- P. setomajorensis* Ritt. = ?*Parodia otuyensis* Ritt.
- P. spinosa* Brandt = *Parodia microsperma* (Web.) Speg.
- P. speciosa* Brandt = hort. hybrid.
- P. splendens* Card. = status doubtful.
- P. stereocarpa* Brandt = *Parodia otuyensis* Ritt.
- P. succrens* Brandt = *Parodia tuberculata* Card.
- P. superba* Brandt = *Parodia microsperma* (Web.) Speg.
- P. suprema* Ritt. = *Parodia maassii* (Heese) Berg.
- '*P. taeniensis*' Bkbg. = *Parodia sanguiniflora v. comata* Ritt.
- P. talaensis* Brandt = *Parodia macracista* (Sch.) Wesk.
- P. tarabucana* Card. = status doubtful.
- P. theileana* Brandt = *Parodia maassii* (Heese) Berg.
- P. thionantha* Brandt = *Parodia microsperma* (Web.) Speg.
- P. tilarensis* (Werd. & Bkbg.) Bkbg. = *Parodia steumeri* (Werd.) Bkbg.
- P. tillii* Wesk. = *Parodia formosa* Ritt.
- P. tojoensis* Brandt = *Parodia maassii* (Heese) Berg.
- P. tridecemlobata* Ritt. = *Parodia echinopoides* Brandt.
- '*P. tuberculosa-ostata*' Bkbg. = *Parodia microsperma* (Web.) Speg.
- P. uebelmanniana* Ritt. = *Parodia microsperma* (Web.) Speg.
- P. ulbrichtiana* Bkbg. = *Parodia aureicentra* Bkbg.
- P. varicollis* Ritt. = *Parodia aureicentra* Bkbg.
- P. weberioides* Brandt = status doubtful.
- P. weskampiana* Krasucka & Spanowsky = *Parodia microsperma* (Web.) Speg.
- P. yamparacei* Card. = *Parodia otuyensis* Ritt.
- P. zaletaewana* Brandt = *Parodia subterranea* Ritt.
- P. zeckeri* Vasqu. = *Parodia punae* Card.
- Pediocactus bradyi v. knowltonii* (Benson) Bkbg. = *Pediocactus knowltonii* Benson.
- Pelecyphora pseudopectinata* Bkbg. = *Turbinicarpus pseudopectinatus* (Bkbg.) Glass & Foster.

- P. valdeziana* Moell. = *Turbinicarpus valdezianus* (Moell.) Glass & Foster.
- Phelosperma tetrancistra* (Engelm.) B. & R. = *Mammillaria tetrancistra* Engelm.
- Pilocyriopas solaris* Ritt. = *Copiapoa solaris* (Ritt.) Ritt.
- Porfria schwartzii* (Fric) Boed. = *Mammillaria coahuilensis* (Boed.) Moran.
- Pseudolobivia ancistrophora* (Speg.) Bkbg. = *Echinopsis ancistrophora* Speg.
- P. aurea* (B. & R.) Bkbg. = *Lobivia aurea* B. & R.
- P. boyuibensis* (Ritt.) Bkbg. = *Echinopsis boyuibensis* Ritt.
- P. callichroma* (Card.) Bkbg. = *Echinopsis obrepanda* (S-D) Sch.
- P. calorubra* (Card.) Bkbg. = *Echinopsis obrepanda v. calorubra* (Card.) Rausch.
- P. carminocifera* Hoffm. & Bkbg. = *Echinopsis obrepanda* (S-D) Sch.
- P. ferox* (B. & R.) Bkbg. = *Lobivia ferox* B. & R.
- P. furcigera* (Guerke) Bkbg. = *Echinopsis obrepanda* (S-D) Sch.
- P. frankii* Bosz. = *Echinopsis obrepanda* (S-D) Sch.
- P. hamatacantha* (Bkbg.) Bkbg. = *Echinopsis ancistrophora* Speg.
- P. kermesina* Kraenzl. = *Echinopsis mammillosa* v. *kermesina* (Kraenzl.) Friedm.
- P. kratochviliana* (Bkbg.) Bkbg. = *Echinopsis ancistrophora* Speg.
- P. lecointensis* (Card.) Bkbg. = *Lobivia ferox* B. & R.
- P. leucorrhodantha* (Bkbg.) Bkbg. = *Echinopsis ancistrophora* Speg.
- P. longispina* (B. & R.) Bkbg. = *Lobivia ferox v. longispina* (B. & R.) Rausch.
- P. luteiflora* Bkbg. = *Lobivia aurea* (B. & R.) Bkbg.
- P. obrepanda* (S-D) Bkbg. = *Echinopsis obrepanda* (S-D) Sch.
- P. ormeasana* (Ritt.) Bkbg. = *Echinopsis mammillosa* Guerke.
- P. pelecyhachis* (Bkbg.) Bkbg. = *Echinopsis ancistrophora* Speg.
- P. polycanistra* (Bkbg.) Bkbg. = *Echinopsis ancistrophora* Speg.
- P. potosina* (Werd.) Bkbg. = *Lobivia ferox* B. & R.
- P. rugosii* (Card.) Bkbg. = *Echinopsis obrepanda* (S-D) Sch.
- P. toralaphana* (Card.) Bkbg. = *Echinopsis obrepanda* (S-D) Sch.
- P. torrecillasensis* (Card.) Bkbg. = *Lobivia arachnacantha v. torrecillasensis* (Card.) Bkbg.
- P. wilkeae* Bkbg. = *Lobivia ferox v. longispina* (B. & R.) Rausch.
- Pyrrhocactus aconaguaensis* Ritt. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- P. aspilflaga* (Soehr.) Ritt. = *Neopoteria aspillagai* (Soehr.) Bkbg.
- P. aricensis* Ritt. = *Neopoteria iquiqueensis* (Ritt.) Don. & Rowley.
- P. armata* Ritt. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- P. atroviridis* Ritt. = *Neopoteria atroviridis* (Ritt.) R.M. Ferryman.
- P. calderanus* Ritt. = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- P. carizalensis* Ritt. = *Neopoteria totoralensis v. carizalensis* (Ritt.) R.M. Ferryman.
- P. chaniarensis* Ritt. = *Neopoteria heinrichiana* (Bkbg.) R.M. Ferryman.
- P. chilensis* (Hildm.) Ritt. = *Neopoteria chilensis* (Hildm.) Don. & Rowley.

- P. chaopensis* Ritt. = *Neopoteria horrida* (Remy ex Gray) D. Hunt.
- P. chorosensis* Ritt. = *Neopoteria chorosensis* (Ritt.) Don. & Rowley.
- P. coligayensis* Ritt. = *Neopoteria curvispina* (Bert.) Don. & Rowley.
- P. confinis* Ritt. = *Neopoteria confinis* (Ritt.) Don. & Rowley.
- P. crispus* Ritt. = *Neopoteria crispa* (Ritt.) Don. & Rowley.
- P. curvispina* (Bert.) Berg. = *Neopoteria curvispina* (Bert.) Don. & Rowley.
- P. dimorphus* Ritt. = *Neopoteria jussieui v. dimorpha* (Ritt.) Hoffman.
- P. echinus* Ritt. = *Neopoteria echinus* (Ritt.) R.M. Ferryman.
- P. engleri* (Ritt.) Ritt. = *Neopoteria engleri* (Ritt.) Don. & Rowley.
- P. eriosyzoides* (Ritt.) Ritt. = *Neopoteria eriosyzoides* (Ritt.) Don. & Rowley.
- P. eriosyzoides v. domeykoensis* Ritt. = *Neopoteria eriosyzoides v. domeykoensis* (Ritt.) R.M. Ferryman.
- P. floccosa* Ritt. = *Neopoteria echinus v. floccosa* (Ritt.) R.M. Ferryman.
- P. floribundus* (Bkbg.) Ritt. = *Neopoteria iquiqueensis* (Ritt.) Don. & Rowley.
- P. glaucescens* Ritt. = *Neopoteria echinus* (Ritt.) R.M. Ferryman.
- P. gracilis* Ritt. = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- P. grandiflorus* Ritt. = *Neopoteria curvispina v. grandiflora* (Ritt.) Don. & Rowley.
- P. heinrichiana* (Bkbg.) Ritt. = *Neopoteria heinrichiana* (Bkbg.) R.M. Ferryman.
- P. horrida* (Remy ex Gay) Bkbg. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- P. huascensis* Ritt. = *Neopoteria huascensis* (Ritt.) Don. & Rowley.
- P. intermedius* Ritt. = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- P. jussieui* (Monv.) Ritt. = *Neopoteria jussieui* (Monv.) B. & R.
- P. kunzei* (Foerst.) Ito = *Neopoteria kunzei* (Foerst.) Blbg.
- P. limariensis* Ritt. = *Neopoteria limariensis* (Ritt.) R.M. Ferryman.
- P. marksiana* & v. *tunensis* Ritt. = *Neopoteria marksiana* (Ritt.) Don. & Rowley.
- P. neohankeana* Ritt. = *Neopoteria neohankeana* (Ritt.) R.M. Ferryman.
- P. oculata* (Sch.) Ritt. = *Neopoteria occulta* (Sch.) B. & R.
- P. odoriflorus* Ritt. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- P. pamicana* Ritt. = *Neopoteria limariensis* (Ritt.) R.M. Ferryman.
- P. paucicostata* & v. *viridis* (Ritt.) Ritt. = *Neopoteria paucicostata* (Ritt.) Don. & Rowley.
- P. pilispinus* Ritt. = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- P. pulchellus* Ritt. = *Neopoteria pulchella* (Ritt.) R.M. Ferryman.
- P. pygmaeus* Ritt. = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- P. reconditus* Ritt. = *Neopoteria recondita* (Ritt.) Don. & Rowley.
- P. residuo* Ritt. = *Neopoteria recondita* (Ritt.) Don. & Rowley.
- P. robustus* & v. *vegasanus* Ritt. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- P. rupestris* Ritt. = *Neopoteria taltaensis* Hutch.

- P. saxifragus* Ritt. = *Neopoteria iquiquensis* (Ritt.) Don. & Rowley.
- P. securipera* Ritt. = *Neopoteria calderana* (Ritt.) Don. & Rowley.
- P. setosiflora* & *P. intermedium* Ritt. = *Neopoteria setosiflora* (Ritt.) Don. & Rowley.
- P. simulans* Ritt. = *Neopoteria simulans* (Ritt.) Don. & Rowley.
- P. subaiana* Bkbg. = *Neopoteria garaventai* (Ritt.) R.M. Ferryman.
- P. taltalensis* (Hutch.) Ritt. = *Neopoteria taltalensis* Hutch.
- P. tenuis* Ritt. = *Neopoteria taltalensis* Hutch.
- P. totoralensis* Ritt. = *Neopoteria totoralensis* (Ritt.) Don. & Rowley.
- P. transiens* Ritt. = *Neopoteria transiens* (Ritt.) R.M. Ferryman.
- P. transiensis* Ritt. = *Neopoteria transiensis* (Ritt.) R.M. Ferryman.
- P. tricapitata* Ritt. = *Neopoteria marksiana* (Ritt.) Don. & Rowley.
- P. tuberculatus* (Jac.) Berg. = *Neopoteria horrida* (Remy ex Gay) D. Hunt.
- P. vallenensis* Ritt. = *Neopoteria vallenensis* (Ritt.) Hoffmann.
- P. vexata* Ritt. = *Neopoteria recondita* v. *vexata* (Ritt.) Hoffmann.
- P. wagenknechtii* Ritt. = *Neopoteria jussiaei* v. *wagenknechtii* (Ritt.) Hoffmann.
- Rebutia albicephala* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. almeyeri* Heinr. ex Bkbg. = ?hort. hybrid.
- R. arenacea* Card. = *Sulcorebutia arenacea* (Card.) Ritt.
- R. beryllioides* = *Rebutia wessneriana* v. *beryllioides* (Buin. & Don.) Don.
- R. binervioides* Heinr. = status doubtful.
- R. boliviensis* = *Rebutia deminuta* (Web.) B. & R.
- R. brachyantha* (Wessn.) Buin. & Don. = *Rebutia steinmannii* (Solms-Laub.) B. & R.
- R. cajensis* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. calliantha* Bewg. = *Rebutia wessneriana* v. *calliantha* (Bewg.) Don.
- R. calliantha* v. *beryllioides* Buin. & Don. = *Rebutia wessneriana* v. *beryllioides* (Buin. & Don.) Don.
- R. canacruzensis* Rausch = 'Rebutia pygmaea v. canacruzensis'.
- R. candiae* Card. = *Sulcorebutia candiae* (Card.) Buin. & Don.
- R. caniguerallii* Card. = *Sulcorebutia caniguerallii* (Card.) Buin. & Don.
- R. caracarensis* Card. see *Sulcorebutia caracarensis* sensu Rausch.
- R. christinae* Rausch = 'Rebutia steinmannii v. christinae'.
- R. cincinnata* Rausch = 'Rebutia steinmannii v. cincinnata'.
- R. cintiensis* Ritt. = *Rebutia fiebrigii* (Guerke) B. & R.
- R. colorata* Ritt. = 'Rebutia pygmaea v. colorata'.
- R. costata* Werd. = 'Rebutia steinmannii v. costata'.
- R. detersiana* v. *minor* Rausch = 'Rebutia pygmaea v. detersiana'.
- R. eos* Rausch = 'Rebutia pygmaea v. eos'.
- '*R. espinosae*' = *Rebutia narvaecensis* (Card.) Don.
- R. encalyptana* (Bkbg.) Ritt. = *Rebutia steinmannii* (Solms-Laub.) B. & R.
- R. fiebrigii* v. *densisteta* (Cullm.) Oeser = *Rebutia fiebrigii* (Guerke) B. & R.
- R. friedrichiana* Rausch = 'Rebutia pygmaea v. friedrichiana'.
- R. fissa* Ritt. = *Rebutia spegazziniana* Bkbg.
- R. glomeriseta* Card. = *Sulcorebutia glomeriseta* (Card.) Ritt.
- R. gloriosa* Card. = *Sulcorebutia gloriosa* (Card.) Buin. & Don.
- R. gonijsiana* Kies. = *Rebutia einsteinii* v. *gonijiana* (Kies.) Don.
- R. gracilispina* Ritt. = *Rebutia pygmaea* (Fries) B. & R.
- R. grandiflora* Bkbg. = *Rebutia minuscula* v. *grandiflora* (Bkbg.) Buin. & Don.
- R. hyalanthia* (Bkbg.) Bkbg. = *Rebutia wessneriana* Bewg.
- R. inflexista* Card. = *Sulcorebutia inflexista* (Card.) Don.
- R. isayachensis* Rausch = 'Rebutia pygmaea v. isayachensis'.
- R. kuriusana* Wessn. = pink flowered form of *Rebutia violaciflora* Wessn. or *Rebutia marschneri* Werd.
- '*R. maxima*' = *Rebutia deminuta* (Web.) B. & R.
- R. minuscula* fa. *violaciflora* (Bkbg.) Don. = *Rebutia violaciflora* Bkbg.
- R. minutissima* Ritt. = *Rebutia spegazziniana* Bkbg.
- R. mudanensis* Rausch = 'Rebutia pygmaea v. mudanensis'.
- R. nazarenensis* Rausch = 'Rebutia pygmaea v. nazarenensis'.
- R. nigriana* (Wessn.) Bkbg. = *Rebutia ritteri* (Wessn.) Buin. & Don.
- R. nitida* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. nogalesensis* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. oculata* Werd. = *Rebutia euanthema* (Bkbg.) Buin. & Don.
- R. odontopterata* Ritt. = *Rebutia pygmaea* v. *friedrichiana*.
- '*R. oligitiformis*' = *Rebutia pygmaea* (Fries) B. & R.
- R. pallida* Rausch = 'Rebutia pygmaea v. pallida'.
- R. patericalyx* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. permutteri* Heinr. = status doubtful.
- R. pseudominucula* (Speg.) B. & R. = *Rebutia deminuta* (Web.) B. & R.
- R. rauschi* Zech. = 'Rebutia steinmannii v. rauschi'.
- R. robustissima* Ritt. = *Rebutia spegazziniana* Bkbg.
- R. rubiginosa* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. rutiliflora* Ritt. = 'Rebutia pygmaea v. diersiana'.
- R. sanguinea* Ritt. = *Rebutia spegazziniana* Bkbg.
- R. sarothroides* Werd. = 'Rebutia einsteinii v. auriciflora'.
- R. singularis* Ritt. = *Rebutia padcayensis* Rausch.
- '*R. sphaerica*' = *Rebutia ritteri* (Wessn.) Don.
- R. tamboensis* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. taricensis* Rausch = ?*Rebutia ritteri* (Wessn.) Don.
- R. tiraquensis* Card. = *Sulcorebutia tiraquensis* (Card.) Ritt.
- R. totorensis* Card. = *Sulcorebutia totorensis* (Card.) Ritt.
- R. tuberosa* Ritt. = *Rebutia deminuta* (Web.) B. & R.
- R. vallegrandensis* Card. = status doubtful.
- R. vulpina* Ritt. = *Rebutia spegazziniana* Bkbg.
- R. zecheri* Rausch = *Rebutia ritteri* (Wessn.) Don.
- '*Reichocactus floribundus*' Bkbg. = *Neopoteria iquiquensis* (Ritt.) Don. & Rowley.
- R. pseudoecheaneus* Bkbg. = *Lobivia famatimensis* (Speg.) B. & R.
- Rodentiophila atacamensis* Ritt. n.n. = *Eriosyce megacarpa* Ritt.
- R. megacarpa* Ritt. n.n. = *Eriosyce megacarpa* Ritt.
- Rosencactus fissuratus* (Eng.) Berg. = *Ariocarpus fissuratus* (Eng.) Sch.

- R. intermedius* Bkbg. & Kil. = *Ariocarpus fissuratus* v. *lloydii* (Rose) And.
- R. kotschoubeyanus* (Lem.) Berg. = *Ariocarpus kotschoubeyanus* (Lem.) Sch.
- R. lloydii* (Rose) Berg. = *Ariocarpus fissuratus* v. *lloydii* (Rose) And.
- Schoenlesia bruchii* (B. & R.) Bkbg. = *Lobivia bruchii* B. & R.
- Solisia pectinata* (Stein) B. & R. = *Mammillaria pectinifera* (Stein) Web.
- Submatucana aurantiaca* (Vpl.) Bkbg. = *Matucana aurantiaca* (Vpl.) Bux.
- S. aureiflora* (Ritt.) Bkbg. = *Matucana aureiflora* Ritt.
- '*S. galapagensis*' = *Matucana aurantiaca* (Vpl.) Bux.
- '*S. calimada*' = *Matucana aurantiaca* (Vpl.) Bux.
- S. calcicola* (Kim. & Hutch.) Bkbg. = *Matucana aurantiaca* (Vpl.) Bux.
- S. curradayensis* (Ritt.) Bkbg. = *Matucana aurantiaca* (Vpl.) Bux.
- S. formosa* (Ritt.) Bkbg. = *Matucana formosa* Ritt.
- '*S. grandiflora*' = *Matucana aurantiaca* (Vpl.) Bux.
- S. intertexta* (Ritt.) Bkbg. = *Matucana intertexta* Ritt.
- S. madisoniorum* (Hutch.) Bkbg. = *Matucana madisoniorum* (Hutch.) Rowley.
- S. paucicostata* (Ritt.) Bkbg. = *Matucana paucicostata* Ritt.
- S. ritteri* (Buin.) Bkbg. = *Matucana ritteri* Buin.
- Sulcorebutia albida* n. n. = *Sulcorebutia albissima* (Brands) Pilbeam.
- '*S. bicolor*' = *Sulcorebutia steinbachii* (Werd.) Bkbg.
- S. caineana* (Card.) Don. = *Sulcorebutia breviflora* Bkbg.
- '*S. camachoi*' = *Sulcorebutia tiraquensis* v. *bicolorispina* Knize nom. prov.
- S. capricornia* n. n. = *Sulcorebutia flavissima* Rausch.
- S. flavidia* Brandt = *Sulcorebutia flavissima* Rausch.
- S. haseltonii* (Card.) Don. = *Sulcorebutia breviflora* Bkbg.
- S. hoffmanniana* Bkbg. = *Sulcorebutia kruegeri* v. *hoffmanniana* (Bkbg.) Don.
- '*S. hookerii*' = *Sulcorebutia langeri* Neum. & Falk. nom. prov.
- S. lepida* Ritt. = *Sulcorebutia totorensis* v. *lepida* (Ritt.) Pilbeam ex Don.
- S. menesesi* v. *kamensis* n. n. = *Sulcorebutia menesesi* (Card.) Buin. & Don.
- S. muchii* Vasqu. = *Sulcorebutia menesesi* v. *muschii* (Vasqu.) Don.
- S. polymorpha* (Card.) Bkbg. = *Sulcorebutia steinbachii* v. *polymorpha* (Card.) Pilbeam.
- S. pulchera* = incorrectly published name for *Sulcorebutia pulchra* (Card.) Don.
- S. seinoiana* Vasqu. nom. prov. = *Sulcorebutia kruegeri* v. *hoffmanniana* (Bkbg.) Don.
- '*S. sensitiv'* = *Sulcorebutia tiraquensis* v. *bicolorispina* Knize nom. prov.
- S. steinbachii* v. *gracilior* Bkbg. } = *Sulcorebutia steinbachii* (Werd.) Bkbg.
- S. steinbachii* v. *horrida* Rausch } = *Sulcorebutia steinbachii* (Werd.) Bkbg.
- '*S. steinbachii* v. *violacea*'
- S. sucrensis* Ritt. n. n. = *Sulcorebutia losenickiana* Rausch.
- S. taratense* (Card.) Buin. & Don. = status doubtful.
- S. tuberculata-chrysanthia* (Card.) Don. = *Sulcorebutia steinbachii* (Werd.) Bkbg.
- S. unguisepina* Rausch = *Sulcorebutia purpurea* Don.
- S. vanheliae* n. n. = *Sulcorebutia kruegeri* v. *hoffmanniana* (Bkbg.) Don.
- S. verticillacantha* v. *applanata* Don. & Krahn = 'Sulcorebutia caniguerallae' v. *applanata*'.
- S. verticillacantha* v. *aureiflora* Rausch = 'Sulcorebutia tarabucoensis' v. *aureiflora*'.
- S. verticillacantha* v. *chatajillensis* Oeser & Bred. = *Sulcorebutia alba* Rausch.
- S. verticillacantha* v. *cuprea* Rausch = 'Sulcorebutia markusii' v. *cuprea*'.
- S. verticillacantha* v. *verticilosus* Ritt. = *Sulcorebutia verticillacantha* Ritt.
- '*S. weingartoides*' = *Sulcorebutia pampagrandensis* Rausch.
- S. xanthoantha* Bkbg. = *Sulcorebutia candiae* (Card.) Buin. & Don.
- S. zavaletae* (Card.) Bkbg. = status doubtful.

*Thelocactus bicolor* v. *schottii* Davis ex Bkbg. = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.

*T. bicolor* v. *texensis* Bkbg. nom. inval. = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.

*T. bicolor* v. *tricolor* Sch. = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.

*T. bicolor* v. *wagnerianus* (Berg.) Krainz = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.

*T. buekii* (Klein) B. & R. = *Thelocactus tulensis* v. *buekii* (Klein) E.F. Anderson.

*T. conothelos* v. *maccowelli* Glass & Foster = *Thelocactus maccowelli* (Rebut ex Quehl) C. Glass.

*T. flavidispinus* (Bkbg.) Bkbg. = *Thelocactus bicolor* (Gal. ex Pfeiff.) B. & R.

*T. hexaedrophorus* v. *fossulatus* (Scheidw.) S-D ex Lab. = *Thelocactus hexaedrophorus* (Lem.) B. & R.

*T. leucacanthus* v. *porrectus* (Lem.) Bkbg. = *Thelocactus leucacanthus* (Zucc. ex Pfeiff.) B. & R.

*T. leucacanthus* v. *sanchezmejoradai* (Meyran) Bkbg. = *Thelocactus leucacanthus* (Zucc. ex Pfeiff.) B. & R.

*T. lloydii* B. & R. = *Thelocactus hexaedrophorus* v. *lloydii* (B. & R.) Kladiwa & Fittkau.

*T. lophothelos* (S-D) B. & R. = *Thelocactus rinconensis* (Poselg.) B. & R.

*T. lophothelos* v. *nidulans* (Quchl) Kladiwa & Fittkau = *Thelocactus rinconensis* (Poselg.) B. & R.

*T. matudae* Sanchez-Mej. & Lau = *Thelocactus tulensis* v. *matudae* (Sanchez-Mej. & Lau) E.F. Anderson.

*T. nidulans* (Quchl) B. & R. = *Thelocactus rinconensis* (Poselg.) B. & R.

*T. phymatothelos*, 'cile' (Poselg. ex Ruemp.) B. & R. = *Thelocactus rinconensis* (Poselg.) B. & R.

*T. rinconensis* v. *nidulans* (Quchl) Glass & Foster = *Thelocactus rinconensis* (Poselg.) B. & R.

*T. rinconensis* v. *phymatothelos* (Poselg. ex Ruemp.) Glass & Foster = *Thelocactus rinconensis* (Poselg.) B. & R.

*T. sanchezmejoradai* Meyran = *Thelocactus leucacanthus* (Zucc. ex Pfeiff.) B. & R.

- T. saussieri* (Weber) Berg. = *Thelocactus conothelos* (Regel & Klein) Bkbg. & Knuth.  
*T. schwarzii* Bkbg. = *Thelocactus bicolor* v. *schwarzii* (Bkbg.) E.F. Anderson.

- Thelocephala aerocarpa* (Ritt.) Ritt. = *Neopoteria reichei* v. *aerocarpa* (Ritt.) R.M. Ferryman.  
*T. darwiniifolia* (Ritt.) Ritt. = *Neopoteria reichei* (Sch.) Bkbg.  
*T. esmeraldana* (Ritt.) Ritt. = *Neopoteria esmeraldana* (Ritt.) Don. & Rowley.  
*T. fankhauseri* Ritt. = *Neopoteria napina*. v. *fankhauseri* (Ritt.) Hoffmann.  
*T. fulva* (Ritt.) Ritt. = *Neopoteria odieri* (Lem.) Berg.  
*T. glabrescens* (Ritt.) Ritt. = *Neopoteria napina* (Phil.) Bkbg.  
*T. krausii* (Ritt.) Ritt. = *Neopoteria odieri* v. *malleolata* (Ritt.) R.M. Ferryman.  
*T. lembkei* (Bkbg.) Ritt. = *Neopoteria reichei* (Sch.) Bkbg.  
*T. longitrapa* Ritt. = *Neopoteria odieri* (Lem.) Berg.  
*T. malleolata* & v. *solitaria* (Ritt.) Ritt. = *Neopoteria odieri* (Lem.) Berg.  
*T. napina* (Phil.) Ito = *Neopoteria napina* (Phil.) Bkbg.  
*T. nuda* Ritt. = *Neopoteria napina* (Phil.) Bkbg.  
*T. odieri* (S-D) Ritt. = *Neopoteria odieri* (Lem.) Berg.  
*T. reichei* (Sch.) Ritt. = *Neopoteria reichei* (Sch.) Bkbg.  
*T. tenebraria* Ritt. = *Neopoteria napina* (Phil.) Bkbg.

- Toumeya papyracanthia* (Engelm.) B. & R. = *Sclerocactus papyracanthus* (Engelm.) Benson.  
*'Turbinicarpus dickisoniae'* = *Turbinicarpus schmiedickeanus* v. *dickisoniae* Glass & Foster.  
*T. flavidorsum* Frank & Lau = *Turbinicarpus schmiedickeanus* v. *flaviflorus* (Frank & Lau) Glass & Foster.  
*T. gielsserianus* (Werd.) V. John & Riha = *Gymnocalyx gielsserianus* (Werd.) Bkbg.  
*T. gracilis* Glass & Foster = *Turbinicarpus schmiedickeanus* v. *gracilis* (Glass & Foster).  
*T. horripilus* (Lem.) V. John & Riha = *Gymnocalyx horripilus* (Lem.) Bkbg.  
*T. klinkerianus* Bkbg. & Jacobs. = *Turbinicarpus schmiedickeanus* v. *klinkerianus* (Bkbg. & Jacobs.) Glass & Foster.  
*T. knuthianus* (Boed.) V. John & Riha = *Gymnocalyx knuthianus* (Boed.) Bkbg.  
*T. kraiyanus* (Frank) Bkbg. = *Turbinicarpus pseudomacrochele* v. *kraiyanus* (Frank) Glass & Foster.  
*T. macrochele* (Werd.) Bux. & Bkbg. = *Turbinicarpus schmiedickeanus* v. *macrochele* (Werd.) Glass & Foster.  
*T. polaskii* Bkbg. nom. inval. = *Turbinicarpus schmiedickeanus* v. *schwarzii* (Shurly) Glass & Foster.  
*T. schwarzii* (Shurly) Bkbg. = *Turbinicarpus schmiedickeanus* v. *schwarzii* (Shurly) Glass & Foster.  
*T. viereckii* (Werd.) V. John & Riha = *Gymnocalyx viereckii* (Werd.) Bkbg.

- Weingartia aglaia* Brandt = *Sulcorebutia tiraquensis* v. *bicolorispina* Knize nom. prov.

- W. alboides* Brandt = status doubtful.  
*W. albissima* Brandt = *Sulcorebutia albissima* (Brandt) Pilbeam.  
*W. ambigua* (Hildm.) Bkbg. = status doubtful.  
*W. buckeburgiana* Brandt = *Sulcorebutia steinbachii* (Werdl.) Bkbg.  
*W. brachygraphica* Brandt = *Weingartia neocumingii* Bkbg.  
*W. calceolans* Brandt = 'Sulcorebutia tarabucoensis' v. *aureiflora*.  
*W. chilensis* (Bkbg.) Bkbg. = *Neowerdermannia chilensis* Bkbg.  
*W. chiquichaguensis* Brandt = *Weingartia lanata* Ritt.  
*W. clavata* Brandt = *Sulcorebutia steinbachii* (Werdl.) Bkbg.  
*W. corriana* Card. 1971 = *Weingartia lanata* Ritt.  
*W. (Sulcorebutia) croceareolata* Brandt = status doubtful.  
*W. cumingii* (S-D) Werdl. see *Weingartia neocumingii* Bkbg.  
*W. crinita* Ritt. = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. flavidula* Brandt = *Sulcorebutia flavissima* Rausch.  
*W. formosa* Brandt = status doubtful.  
*W. gracilispina* Ritt. = *Weingartia neocumingii* subsp. *sucrensis* (Ritt.) Don.  
*W. hajekiana* = *Weingartia neocumingii* subsp. *pulquinensis* v. *mairanensis* Don.  
*W. hedioniana* Bkbg. = *Weingartia neocumingii* subsp. *sucrensis* (Ritt.) Don.  
*W. knizei* Brandt = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. leiorhiza* Card. = *Weingartia westii* Hutch.  
*W. longigibba* Ritt. = *Weingartia lanata*.  
*W. marranana* Brandt = *Weingartia neocumingii* subsp. *pulquinensis* v. *mairanensis* Don.  
*W. matandrensis* Brandt = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. multispina* Ritt. = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. neglecta* Brandt = *Weingartia neocumingii* subsp. *sucrensis* (Ritt.) Don.  
*W. nigro-fusca* Brandt = *Sulcorebutia tiraquensis* (Card.) Ritt.  
*W. oligantha* Brandt = *Sulcorebutia tarrijensis* Ritt.  
*W. platygona* Card. = *Weingartia lanata* subsp. *pilcomayoensis* (Card.) Don.  
*W. pruinosa* n.n. = catalogue name = ?*Weingartia neocumingii* Bkbg.  
*W. pulquinensis* Card. = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. pygmaea* Ritt. = *Weingartia kargliana* Rausch.  
*W. riograndensis* Ritt. = *Weingartia lanata* subsp. *riograndensis* (Ritt.) Don.  
*W. rio-orensis* = catalogue name = *Weingartia neocumingii* Bkbg.  
*W. rubro-aurea* = 'Sulcorebutia tarabucoensis' v. *aureiflora*.  
*W. sancta* Brandt = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. saipinenis* Brandt = *Weingartia neocumingii* subsp. *pulquinensis* (Card.) Don.  
*W. sucrensis* Ritt. = *Weingartia neocumingii* subsp. *sucrensis* (Ritt.) Don.  
*W. tominensis* = catalogue name.  
*W. torotorense* Card. = *Sulcorebutia torotorense* (Card.) Bred. & Don.

- W. totoralensis* Brandt = status doubtful.
- W. trollii* Oeser = *Weingartia neocumingii* subsp. *succrensis* (Ritt.) Don.
- W. vilayensis* Card. = *Weingartia westii* Hutch.
- Wigginsia arechavaletai* (Sch. ex Speg.) D.D. Port. = *Notocactus neorechavaletai* (Sch. ex Speg.) Elsner.
- W. orynodes* (Otto ex Pfeiff.) S-D = *Notocactus erinaceus* (Haw.) Krainz.
- W. erinacea* (Haw.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. fricii* (Ar.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. horstii* Ritt. = *Notocactus neohorstii* (Ritt.) Theun.
- W. langsdorffii* (Lehm.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. leucocarpa* (Ar.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- '*W. pulvinata*' = *Notocactus erinaceus* (Haw.) Krainz.
- W. sessiliflora* (Mackie) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. stegmannii* (Bkbg.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. tephrocantha* (Link & Otto) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. turbinata* (Ar.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- W. vorwerkiana* (Werd.) D.M. Port. = *Notocactus erinaceus* (Haw.) Krainz.
- Wiloxia albiflora* Bkbg. = *Echinocereus leucanthus* N.P. Taylor.
- W. australis* hort. n.n. = *Echinocereus poselgeri* Lem. (see under *Echinocereus leucanthus*).
- W. poselgeri* (Lem.) B. & R. = *Echinocereus poselgeri* Lem. (see under *Echinocereus leucanthus*).
- W. schmollii* (Weingart) Bkbg. = *Echinocereus schmollii* (Weingart) N.P. Taylor.
- W. tamandipensis* Werd. = *Echinocereus poselgeri* Lem. (see under *Echinocereus leucanthus*).

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*TL*=Top Left; *TM*=Top Middle; *TR*=Top Right

*BL*=Bottom Left; *BM*=Bottom Middle; *BR*=Bottom Right

Rod and Ken Preston-Mafham have grown cacti for nearly thirty years and the brothers have a varied and extensive collection. Ken Preston-Mafham was for many years the sole writer on cacti for *Amateur Gardening* magazine and, with his brother Rod, maintains an extensive network of contacts with other growers in all parts of the world.

For several years Dr Rod Preston-Mafham was Head of Biology at a local grammar school before fully devoting his time to authorship in the zoological and botanical fields. His brother Ken is a professional wildlife photographer and author. He has travelled the globe in search of original and unique photographs – and for this book studied and photographed cacti in their native habitat in the USA, Mexico, Costa Rica, Venezuela, Brazil, Bolivia, Chile and Peru.

Together with Rod's wife, Jean, they operate Premaphotos Wildlife, a photo library with a large range of natural history photographs which are in constant demand internationally.

'This is an excellent reference book . . . The Index of Alternative Names is commendable. This will go a long way towards answering the queries and frustrations of those cactus 'addicts' who are sometimes confused over what names apply to their plants.'

Clive Innes, *The Garden*

Photographs on the front of the book jacket show (clockwise from the top left) *Mammillaria blossfeldiana v. shuriana*, *Thelocactus bicolor*, *Rebutia sp. KK871* and *Notocactus roseoluteus*.

Photographs on the rear show (clockwise from the top left) *Notocactus herteri*, *Lobivia jajoiana*, *Ferocactus pilosus*, *Parodia lauii*, *Mammillaria subducta v. dasycantha* and *Rebutia marsloneri*.

*Ferocactus pilosus* © G. Charles; all other photographs © Premaphotos Wildlife.

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