

Rainer Wahl

L o b i v i a 1 9 8 9

English translation of
the latin diagnoses
Lobivia 85 W. Rausch

Listing of the collection numbers Lobivia
Misprint corrections
Additions
Reference works

Preface

This booklet represents a supplement to the book "Lobivia 85" from Walter Rausch. It should help the lover to appreciate the plants by means of the English translations of the first descriptions. Furthermore misprints are rectified and supplementing data are given. A list of collection numbers of Walter Rausch complete the Lobivia overview.

The collection numbers correspond to the knowledge of Walter Rausch in "Lobivia 85" and include the field collections of his journey in 1987.

They are indicated both in ascending order, and sorted geographically; this is to give an overview, from which country, from which province or from which department the plants come.

Reference works complete this booklet.

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Limburg

September 1989 , Rainer Wahl

Rainer Wahl

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German translation of
the diagnoses of W.
Rausch - Lobivia 85

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*Rainer
Wahl*

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Lobivia atrovirens Backbg. var. *pseudoritteri* Rausch

pseudoritteri = false *ritteri*

First Description: *Lobivia* 85 , 1985/86 , p. 137

Solitary or in small groups, globular or little elongated, up to 25 mm in diameter, yellow-green and brown-violet suffused, with a napiform root; ribs 12-13, vertical, divided into round 3-5 mm long tubercles; areoles oval, 1.5 mm long, white-felted; radial spines 4-5 pairs and one directed upward and one downward, up to 10 mm long, bent toward the plant body and interlaced, brown, later grey, central spine 0.

Bloom 4 cm long and diameter, ovary and tube pink, green scales with white wool; outer petals pink with green central strip; inner petals dark red; throat pink, stamens purple, style and stigmata (6) light green. Fruit globular, 6 mm in diameter, brown-violet with grey wool and white bristles.

Seed as *Lobivia atrovirens* Backbg.

Home: Bolivia, Tarija, Abra de Sama.

Type: Rausch 506

This Population is uniform.

Lobivia atrovirens Backbg. var. *Yuncharasensis* Rausch

yuncharasensis = from Yunchara.

First description: *Lobivia* 85 , 1985/86 , p. 137

Solitary, globular to somewhat elongated, 25 mm in diameter, dark glaucous green and violet suffused, with a napiform root; ribs 12, straight, divided by transverse furrows in 3 mm long and wide round tubercles; areoles oval, 1.5 mm long, brown-felted, spines 4 Pairs and one downward, adpressed, up to 4 mm long, sometimes one more stronger spine upward pointing, central spine 0.

Blooms 35 mm long and diameter, ovary and tube ochre-coloured with dark-green scales and white wool; outer petals lanceolate, violet-pink with brown-green central stripe; inner petals orange-red with red central stripe; throat greenish-white, stamens red, style and stigmata (8) green.

Fruit and seed as *Lobivia atrovirens* Backbg., only somewhat larger.

Home: Bolivia, Tarija, Yunchara.

Type: Rausch 91

This Population is uniform.

Lobivia aurea (Br. & R.) Backbg. var. sierragrandensis
Rausch

sierragrandensis = from the Sierra Grande.

First description: Lobivia 85 , 1985/86 , p. 137
Ill.p. 138

Solitary, globular, diameter to 8 cm, glaucous green with flat roots; ribs to 15, straight ascending; areoles round, 2 mm in diameter, white-felted, 3-5 mm apart; radial spines 6-8 pairs adpressed and interlaced, up to 10 mm long; central spines 1-2, up to 25 mm long, porrect, later somewhat curved downward, flexible, yellowish with a dark-brown, thickened base.

Bloom, fruit and seed similar to the variety aurea (Br. & R.) Backbg.

Home: Argentina, Cordoba, in the Sierra Grande at 1600-1800 m.

Type: Rausch 711b

This population is variable.

Lobivia aurea (Br. & R.) Backbg. var. *tortuosa* Rausch

tortuosus = tortuous, referring to the spines

First description: *Lobivia* 85 , 1985/86 , p. 137/138
Ill. p. 138

Solitary or in small groups, 10 cm high and 7 cm in diameter, ribs to 14, straight; areoles round, 5 mm in diameter, white-felted, later grey, 12-14 mm apart; radial spines 2 Pairs, sometimes one downward, up to 25 mm long, spreading and interlaced; central spines 1-2, up to 30 mm long; all spines brown to black, later grey, bent irregularly and tortuous, subulate with thickened base. Bloom, fruit and seed as *Lobivia aurea* (Br. & R.) Backbg.

Home: Argentina, Santiago del Estero, close Ojo de Agua.

Type: Rausch 711e

This Population is variable.

Lobivia einsteinii (Fric) Rausch var. *atrospinosa*
Rausch

atrospinosus = black spined

First description: *Lobivia* 85 , 1985/88 , p. 138

Solitary, globular to ovoid, 15 mm in diameter (significantly larger in culture), dark glaucous green and the lower half brownish, with a branched, fleshy napiform root; ribs 13, arranged in spiral of very flat tubercles; areoles oval with light brown felt; radial spines in 3-4 pairs, up to 15 mm long and one upward up to 25 mm long, all spines thin, bristly, irregularly interlaced, dark-brown to black with brighter base, later brown.

Bloom 35 mm long and diameter, ovaries and tube olive-brown with dark-brown scales and grey-brown hairs; outer petals spatulate, ochre gold with violet-brown tips; inner petals spatulate-serrate, orange and brighter inside, brown-violet tipped; throat orange-grey, stamens orange-pink, style and stigmata yellow. Fruit and seed similar to *Lobivia einsteinii* (Fric) Rausch.

Home: Argentina, Salta, Cachinal at 4100 m.

Type: Rausch 163

This Population is variable.

Lobivia euanthema Backbg. var. *tilcarensis* Rausch
tilcarensis = from Tilcara.

First description: *Lobivia* 85 , 1985/86 , p. 138,139
Ill. p. 35

Solitary or in small groups, globular or a little elongated, 25 mm in diameter, matt glaucous green, the lower part of the body violet tinted, with fleshy, branched root system; ribs 13-14, straight ascending, divided by transverse furrows in 2-4 mm long tubercles; areoles oval, 1.5 mm long, white-felted; spines in 4 pairs and one downward, adpressed, straight, glassy-white with dark-brown, thickened base, 4-8 mm long; central spines 0. Bloom 40 mm long and diameter, ovaries and tube violet-red with dark-green scales, white hair and bristles; outer petals round with slightly acuminate, violet-pink with a green-brown central stripe; inner petals round and serrate, red with darker central stripe; throat violet-pink, stamens violet, the outer darker, style connate only over 1 mm, style and stigmata light-green. Fruit globular, 6 mm in diameter, brown-pink with white hair and bristles, fruit flesh pink; seed cap-shaped, black rough, with basal, large hilum.

Home: Argentina, Jujuy, on the highest summits near Tilcara.

Type: Rausch 700

This population is uniform.

Lobivia grandiflora Br. & R. var. herzogii Rausch

herzogii = named after Dietrich Herzog,
Argentina.

First description: Lobivia 85 , 1985/88 , p.159 180
Ill. p.159

[Wahl:] [*Cespitose*] Short-cylindrical, to 15 cm high and 7 cm thick, cespitose; ribs 17-20, straight, divided into 15-18 mm long, chin-like tubercles; areoles sitting at the top of the tubercles, round to oval, 5 mm long, white-felted; radial spines 10-12, radiating, up to 12 mm long and a smaller downward, acicular to subulate, up to 25 mm long, sometimes somewhat curved upward; all spines brown, later grey.

Blooms appear high-laterally, 65 mm long and 50 mm wide; ovary and tube olive-green, light brown acute scales with white to brown wool; outer petals acute-lanceolate, violet-pink with brownish-white central stripe; inner petals spatulate-rounded and serrate, orange-red, violet-red at the margin, and light-red inside; throat pink, stamens violet, style and stigmata (11) green.

[Diagnose:] [*Fruit globular to oval, 10 mm in diameter, flesh juicy.*]

[Wahl:] [*Fruit globular to oval, 10 mm thick, flesh juicy, fruit 15 mm in diameter, orange-yellow with pink scales and grey-brown wool.*]

Seed similar to Lobivia grandiflora Br. & R., small, shining black with inclined hilum.

Home: Argentina, Tucuman, Tafi del Valle.

Type: Rausch 795

This population is variable.

Lobivia grandiflora Br. & R. var. *longispina* Rausch

longispinus = long spine

First description: *Lobivia* 85 , 1985/86 , p. 139

Ill. p. 138

Cespitose up to 50 heads, single head to 15 cm high and 6 cm in diameter; 13-14 ribs, vertical; areoles round to oval, 5 mm in diameter, white-felted and later bald; radial-spines 3-4 pairs and one downward, spreading and interlaced, up to 2 cm long; 1-4 central spines, at first upward standing, later downward pointing, to 4 cm long; all spines thinly-acicular, prickly, whitish pink with brown tip, later horn-colored.

Bloom 8 cm long and 6 cm in diameter; petals smaller than with the other varieties, outer to 7 mm and inner up to 10 mm wide; bloom colour, fruit and seed as with the other Varieties.

Home: Argentina, Catamarca, Agua de las Palomas

Type: Rausch 151

This Population is variable.

Lobivia grandiflora Br. & R. var. pumila Rausch

pumilus = dwarfish

First description: Lobivia 85 , 1985/86 , p. 139 140
Ill. p. 139

More or less proliferous; globular, to 45 mm in diameter, yellow-green with flat roots; 11-12 ribs, straight; areoles round, 3-5 mm apart, 2-3 mm in diameter, yellow-felted later white; radial spines 4-6 pairs, one downward and one upward, spreading and interlaced, up to 7 mm long, acicular, yellowish; central spines usually 1, rarely 2-3, superimposed, porrect, up to 20 mm long, acicular to subulate, yellow with brown tip.

Bloom appearing near to the vertex, 70 mm long and 60 mm in diameter; ovary and tube green with green scales and white hair; outer petals lanceolate, light-red, inner petals spatulate-round with blunt tip, red; throat and stamens dark-violet; style greenish and red above, stigmata 13, yellow, up to 7 mm long.

[Wahl:] [Fruit and seed somewhat smaller than with *Lobivia huascha* (Web.) Marsh.]

Fruit globular, 25 mm in diameter, yellow-orange-pink with small scales and grey, bristly wool, flesh juicy-watery.

Seed pouch-shaped, black-shining with narrow, inclined hilum.

Home: Argentina, Catamarca, Agua Blanca up 1400 m high.

Type: Rausch 758

This population is variable.

Lobivia haagei (Fric & Schelle) Wessn. var. crassa
Rausch
crassus = thick

First description: Lobivia 85 , 1985/86 , p. 140
Ill. p. 139

Solitary or in small groups, globular to short-cylindrical, up to 30 mm in diameter, glaucous green with a napiform root; ribs 11-12, vertical, divided into 3-4 mm long and wide tubercles by transverse furrows; areoles oval, 2-3 mm long, white felted; radial spines 11-13, 5-6 Pairs, 5-6 mm long and a smaller downward, adpressed, glassy-white with thick, dark-brown to black base. Central spine 0. Bloom 40 mm long and in diameter, ovaries and tube brown-pink with brown scales, white hair and some brown bristles. Outer petals spatulate slightly acuminate, violet-pink with a brown central stripe; inner petals spatulate slightly acuminate, orange red; throat whitish, 17 mm long, connate over 3 mm, stamens in two series, the inner 7 mm over the ovary and the outer from a small "Hymen", pink; style 2 cm long, green, stigmata (5), 5 mm long, yellowish. Fruit and Seed as Lobivia haagei (Fric & Schelle) Wessner.

Home: Bolivia, Tarija, in high situations near Sama.

Type: Rausch 501

This population is variable.

Lobivia haagei (Fric & Schelle)Wessn. var. elegantula
Rausch

elegantula = delicate, small

First Description: Lobivia 85 , 1985/86 , p. 140

Small groups, body globular to somewhat elongated, light glaucous-green and violet suffused, 8 mm in diameter; ribs 12, vertical, divided into 2 mm long tubercles; areoles round, 1 mm in diameter, brown felted; radial spines 10-11, adpressed, bristly, glassy-white; central spine 0. Bloom 25 mm long and diameter. Bloom, fruit and seed as with Lobivia haagei (Fric & Schelle) Wessn.

Home: Argentina, Jujuy, at the river San Juan de Oro.

Type: Rausch 502

This population is uniform.

Lobivia haagei (Fric & Schelle)Wessn. var. pelzliana
Rausch

pelzliana = named after Erich Pelzl, Austria.

First Description: Lobivia 85 , 1985/86 , p. 140
Ill. p. 139

Solitary, short-cylindrical, 30 mm high and 20 mm in diameter, glaucous-green and violet suffused, napiform root; ribs 13, vertical, divided by transverse furrows in 2-3 mm long tubercles; areoles oval, 1 mm long, white to brown felted; radial spines in 3-5 pairs, one upward and one smaller downward, spreading and interlaced, [up to 5 mm long,] fragile like glass, light brown with dark brown base; central spine 0.

Bloom 30 mm long and 35 mm in diameter; ovary pink with brown scales and white hair, tube pink, light green above, dark-green scales with white felt and hairs; outer petals round, pink with greenish central stripes, inner petals round, light-red; throat whitish, style connate over 4 mm, stamens pink, style and stigmata (7) green.

Home: Argentina, Jujuy near Tafna at 3600 m.

Type: Rausch 333a

This population is uniform.

Lobivia haematantha (Speg.) Br. & R. var. *jasimanensis*
Rausch

jasimanensis = from Jasimana.

First description: *Lobivia* 85 , 1985/86 , p. 140
Ill. p. 139

Solitary, globular to ovoid, up to 50 mm in diameter, glaucous green with a taproot; 13 ribs, straight, divided into tubercles 7-10 mm long; areoles round to oval, 5 mm long, white-felted; radial spines 3-5 pairs and one downward, up to 20 mm long, horn-coloured and curved toward the body; central spine 1, upward directed, up to 55 mm long, subulate-rigid and curved.

Bloom 50 mm long and diameter, ovary and tube greenish-brown with brown scales with pink tips and grey wool; outer petals carmine with brown central stripes; inner petals orange, red edged; hymen white, throat greenish, stamens white, style and stigmata (10) greenish-yellow.

Fruit and seed as for *Lobivia haematantha* (Speg.) Br. & R.. Fruit globular to oval, 15 mm long, up-drying. Seed globular, rugose dark, with arillus remainder, and nearly round, sunken hilum.

Home: Argentina, Salta, near Jasimana.

Type: Rausch 792

This population is variable.

Lobivia haematantha (Speg.) Br. & R. var. *viridis* Rausch

viridis = green

First Description: *Lobivia* 85 , 1985/86 , p. 140 141
Ill. p. 139

Differs from the type by its short-globular body (the type is short-cylindrical), fresh-green epidermis (the type is dark-green), light yellow spines with brown tips, later white (brown to black in the type).

Home: Argentina, Salta, River Yacuchuya at
2500-2800 m.

Type: Rausch 709a

This population is uniform.

Lobivia huascha (Web.)Marsh. var. *robusta* Rausch

Robustus = tough

First Description: *Lobivia* 85 , 1985/86 , S. 141

Cespitose, 1.5 m long and 8-9 cm in diameter, light green; ribs ca. 16, straight; areoles round to oval, 4-5 mm in diameter, white-felted, 3-4 mm apart; radial spines in 6 Pairs and one downward, radiating and interlaced, up to 25 mm long; central spines 1-4, up to 60 mm long; all spines white with yellowish tip, flexible. Bloom (yellow), fruit and seed as *Lobivia huascha* (Web.) Marsh.

Home: Argentina, Catamarca, near Hualfin.

Type: Rausch 229

This population is variable.

Lobivia jajoiana Backbg. var. aurata Rausch

auratus = gold (coloured)

First Description: Lobivia 85 , 1985/86 , p. 141

Solitary, flat-globular to globular, to 5 cm diameter, with a napiform root, glaucous green and often violet suffused; ribs 11, straight or somewhat spiraling, divided in 10 mm long tubercles; areoles oval, 4mm long, white-felted; radial spines 2-3 [3-4] pairs, adpressed and somewhat downward curved, up to 15 mm long, thin and flexible; central spine 0-1, stronger, up to 20 mm long and somewhat curved; all spines whitish with brown tip.

[Wahl:]

Flower 50 mm long and diameter, campanulate, scented; ovaries and tube glaucous green with violet-brown scales and grey wool; outer petals lanceolate, grey-pink with violet-brown central stripes; inner petals spatulate, wavy, gold-coloured to orange; throat, hymen and stamens black-violet; style green, stigmata 7, yellow. Fruit and seed similar to the other Varieties.

Home: Argentina, Jujuy, Punta Corral.

Type: Rausch 701

This population is variable.

Lobivia jajoiana Backbg. var. *elegans* Rausch

Elegans = fine, delicate

First Description: *Lobivia* 85 , 1985/88 p. 141

Ill. p. 142

Solitary, globular, up to 60 mm in diameter, glaucous green; 16 ribs, straight or somewhat spiraling resolved in 8-10 mm long, sharp-edged tubercles; areoles oval, 5 mm long, white-felted; radial spines 8-14, radiating, thin-flexible, somewhat curved, pink-white with brown tips, up to 10 mm long; central spine 1, up to 30 mm long, pink-grey with brown tip, curved or somewhat hooked.

Bloom 50 mm long and diameter, from ocher-orange to dark violet-red. Fruit and seed as with the other varieties.

Home: Argentina, Jujuy, in high situations west of Tilcara.

Type: Rausch 36

This population is variable.

Lobivia jajoiana Backbg. var. *nidularis* Rausch

nidularis = nest-shaped

First Description: *Lobivia* 85 , 1985/86 , p. 141

Ill. p. 142

Solitary, flat-globular, up to 10 cm in diameter, fresh-green with a napiform root; ribs ca. 22, spiraling, resolved in 12 mm long, sharp-edged tubercles; areoles 7-8 mm long, white-felted;

radial spines 10-12, up to 40 mm long, adpressed to spreading, nest-shaped interlaced; central spines 1-3, porrect, up to 50 mm long; all spines soft-flexible, whitish with brown tips.

Bloom smaller than with the other varieties, only 35 mm long, red only. Fruit and seed as with *Lobivia jajoiana* Backbg.

Home: Argentina, Jujuy, one day riding the horse north of Iruya.

Type: Rausch 702

This population is variable.

Lobivia jajoiana Backbg. var. *pungens* Rausch

pungens = prickly

First Description: *Lobivia* 85 , 1985/86 , p. 141

Ill. p. 74

Solitary, globular to flat-globular, to 9 cm diameter, fresh-green; ribs 18, spiraling, divided in 2 cm long tubercles; areoles sitting at the top of the tubercles, oval, 6-7 mm long, white-felted; radial spines 3-6 Pairs, one upward and one downward, 25 mm long, spreading-porrect; central spines 1-2, up to 60 mm upward directed; all spines acicular, hard-pricking, yellowish to red-brown.

Bloom, fruit and seed somewhat smaller than *Lobivia jajoiana* Backbg.

Home: Argentina, Salta, near Trigohuaico at 3000 m.

Type: Rausch 516

This population is variable.

Lobivia maximiliana (Heyder) Backbg. var. durispina
Rausch

durispinus = hard-spined

First Description: Lobivia 85 , 1985/86 , p. 141 142
Ill. p. 142

Group-forming, short-cylindrical, to 15 cm high and 5 cm diameter, glaucous green, with flat roots; ribs 10-12, straight; areoles 6-8 mm apart, broad oval, 5 mm wide, white-felted; radial spines ca. 10, up to 20 mm long; central spines 1(-4), up to 4 cm long; all spines subulate, yellow-brown, later grey; bloom 75 mm long and 35 mm in diameter, ovary and tube olive-green, with violet-brown fleshy scales and only few white to brown hairs; outer petals lanceolate, violet-pink, [*spread apart*]; inner petals round and serrate [*and much shorter than with the type, like an extension of the tube*], orange with pink central stripes; throat tubular, 45 mm long, light green, stamens light-pink above, light-green below; style [*50 mm long*], greenish; Stigmata (8) [*8-9*], greenish. Fruit and seed as Lobivia caespitosa (Purp.) Br. & R.

[Wahl:]

[Wahl:]

[Wahl:]

[Wahl:]

Homeland: Bolivia, Cochabamba, near Tapacari at 3700 m.

Type: Rausch 204

This population is variable.

Lobivia nigricans Wessn. var. *albispina* Rausch

albispinus = white-spines

First Description: *Lobivia* 85 , 1985/86 , p. 142

Ill. p. 98

Solitary or in small group, globular, up to 35 mm in diameter, light glaucous green with a napiform root; ribs ca. 12, straight or only little spiraling, divided into 7 mm long, round, somewhat warty tubercles; areoles oval, 5 mm long, white-felted; radial-spines 5 Pairs and one downward, spreading to adpressed, more or less interlaced, up to 6 mm long, bristly; central spine 0.

Bloom 30 mm long and 25 mm in diameter, ovary and tube light-green with dark-green scales, white wool and bristles: outer petals round thinely acuminate, green with pink margin; inner petals round, dark red, shining.

Style and tube connate up to halfway; throat only 4 mm long, white, stamens white, style and stigmata (5) light-green. Fruit and seed as with *Lobivia nigricans* Wessn.

Home: Argentina, Salta, Escoype at 2700 m.

Type: Rausch 771

This population is uniform.

Lobivia pampana Br. & R. var. *borealis* Rausch

Borealis = from the northern area

First Description: *Lobivia* 85 , 1985/86 , p. 142 143
Ill. p. 102

Solitary, globular, to 4 cm diameter, glaucous green and often violet suffused, with a napiform root; ribs to 17, only slightly spiralling, divided in 10 mm long, sharp-edged tubercles; areoles sitting on the top of the tubercles, round, 2 mm in diameter, white-felted; radial spines 6, spreading and curved toward the body, up to 15 mm long; central spine 1, up to 25 mm long, flexible and upward curved; all spines brown.

Bloom 50-60 mm long and 40-50 mm in diameter; ovary and tube ocher-colored, pink scales with brown tips, grey and dark-brown hairs; outer petals lanceolate, pink with orange-red Middle-stripes and brown tips; inner petals lanceolate, magenta to pink (or also orange-pink) iridescent, inner lighter; throat white, stamens pink or orange and inside white, style white, stigmata 8, yellowish. Fruit globular, 10 mm in diameter, dark-green with brown wool. Seed as *Lobivia pampana* Br. & R., only somewhat smaller.

Home: Peru, Churin

Type: Rausch 387a

This population is variable.

Lobivia pugionacantha (Rose & Boed.) Backbg. var.
corrugata Rausch

corrugatus = corrugated, referring to the ribs.

First Description: *Lobivia* 85 , 1985/86 , S. 143

Solitary, flat-globular to globular, to 3 cm in diameter, with a napiform root, light green; ribs ca.13, somewhat spiraling, divided in long, narrow tubercle, their narrow edge is wavyly crumpled; areoles sitting at the top of the tubercles, oval, to 3 mm long, white-felted; radial spines 2 pairs, sometimes 1 smaller downward, adpressed to spreading, yellowish-white, thickened ochre-coloured base, the upper pair longest, up to 10 mm long; central spine 0. Blooms beside yellow, also orange, pink or red.

Fruit and seed as *Lobivia pugionacantha* (Rose & Boed.) Backbg.

Home: Argentina, Jujuy, close to Yavi.

Type: Rausch 176

This population is variable.

Lobivia pugionacantha (Rose & Boed.) Backbg.
var. *haemantha* Rausch

haemanthus = blood red flowering

First Description: *Lobivia* 85 , 1985/88 , p. 143 144
Ill. p. 111
Abb. *Lobivia* 1975, p. 87

Solitary, flat-globular to globular, to 8 cm in diameter glaucous green, with a napiform root; ribs to 30, spiraling, divided in 1 cm long tubercles; areoles oval, 5 mm long, white-felted; radial spines in 5 Pairs and 1 smaller upward and 1 downward, spreading and interlaced, up to 25 mm long; central spine 0, rarely 1, up to 20 mm long; all spines hard prickling, subulate, yellowish-white with red-brown, thickened base.

Blooms 40 mm long and diameter; ovary broad globular, tube wide funnelform, green, with green scales and grey to black hairs; outer petals pink with green central stripes; internal petals spatulate slightly acuminate, dark red, inside somewhat lighter; hymen carmine, throat 17 mm long and opening above 20 mm, carmine; stamens pink-red, style only 10 mm long, thick, green, stigmata 9, white, 7 mm long. Fruit and seed same as var. *culpinensis* (Ritt.) Rausch.

Home: Bolivia, Sud Cinti, near Inga Huasi at 3200 m

Type: Rausch 639

This population is variable.

Lobivia pygmaea (Fries) Backbg. var. *knizei* Rausch

knizei = named after Karel Knize, Peru.

First description: *Lobivia* 85 , 1985/86 , p. 144

Ill. p. 143

Solitary or in small groups, short-cylindrical, 20 mm high and 15 mm in diameter, glaucous green and violet suffused; ribs 10, straight or somewhat twisted, divided by transverse furrows into 2-3 mm long tubercles; areoles round to oval, 2 mm long, white and brown felted; radial spines 5 Pairs, one upward and one downward, radiating-adpressed, glassy horn-coloured with a brown, thickened base; central spines 1, straight porrect, 4 mm long, light brown with darker base and tip.

Bloom 30 mm long and diameter, ovary and tube pink brown with brown scales, with white hair and bristles; outer petals lanceolate, light yellow with a brown-pink central stripe, inner petals lanceolate with a long acuminate tip, yellow; throat, style, stamens and stigmata (5) light green; style and tube connate over 2 mm. Fruit spherical, 5 mm in diameter, ocher coloured, with white hairs and bristles.

Seed as *Lobivia pygmaea* (Fries) Backbg.

Home: Bolivia, close to Challapata at 3800 m.
(Knize : by Pazna)

Type: Rausch 676a

This population is uniform.

Lobivia pygmaea (Fries) Backbg. var. polypetala
Rausch

Polypetalus = many petals

First Description: Lobivia 85 , 1985/86 , p. 144
Ill. p. 143

Solitary, short-cylindrical, up to 20 mm in diameter, glaucous green, napiform root; ribs 11, straight or slightly twisted, divided by transverse notches into 3 mm long tubercles; areoles oval, 2 mm long, brown-felted; radial spines 10-12, adpressed, up to 3 mm long, horn [to gold] coloured with brown base; central spines 0.

[Diagnose]:

[Wahl]:

Bloom 35 [25] mm long and 35 mm in diameter; ovary and tube brown-pink with dark-brown narrow scales, white hair and bristles; outer petals violet with a brown central stripe, [strongly bent outward]; internal petals spatulate-serrate, red and inside orange, gold, numerous and thus flower densely filled; throat white, stamens white with reddish base, beginning at half height of the tube, style slightly connate, green, stigmata (8), green.

[Wahl]:

Fruit globular, 5 mm in diameter, violet-brown with lighter scales and white hairs. Seed [similar to

[Diagnose]:

[Wahl], [Diagnose]: Lobiviae pygmaeae (Fries) Backbg.,] spherical-campulate [(cap-shaped), black], [with arillus remainder] and large basal hilum.

Home: Bolivia, Potosi, Cucho Ingenio at 3700 m.

Type: Rausch 301

This population is uniform.

Lobivia pygmaea (Fries) Backbg. var. *tafnaensis* Rausch

tafnaensis = from Tafna.

First Description *Lobivia* 85 , 1985/86 p. 144
Ill. p. 114

Solitary to only a little sprouting, globular to short-cylindrical, with fleshy napiform root, 15 mm in diameter, light glaucous green and a little violet tinted; ribs 10, straight or slightly twisted, divided by transverse furrows in 1.5 mm long tubercles; areoles oval, 1 mm long, light brown felted; radial spines 10-12, radiating, interlaced, up to 5 [4] mm long, bristly, yellowish-white with thickened, brown base; central spine 0.

[Wahl:]

Bloom 30 mm long and diameter; ovary and tube light brown with dark-brown scales, white hair and bristles; outer petals pink with green-brown central stripe; inner petals red-orange; throat, style and stigmata (6-7) green, style and tube only slightly connate.

Fruit and seed as with the type.

Home: Argentina, Jujuy, near Tafna at 3800 m.

Type: Rausch 508a

This population is uniform.

Lobivia pygmaea (Fries) Backbg. var. violaceostaminata
Rausch

violaceostaminatus = with violet-coloured stamens

First Description: Lobivia 85 , 1985/86 , p. 144
Ill. p. 143

Solitary, globular, up to 20 mm diameter, glaucous green and brown-violet suffused, with a napiform root; ribs 10-12, straight or slightly spiraled; areoles oval, to 1 mm long, 1-2 mm apart, light brown felted; radial spines 11-13, adpressed and interlaced, up to 5 mm long, yellowish with thick, brown base; central spines 0-3, shorter, subulate, brown.

Bloom 25 mm long and 30 mm in diameter, ovary and tube olive-green with brown scales and white hairs; outer petals lanceolate, pink with brown central stripe; internal petals round and serrate, orange, with a reddish central stripe on the back side; throat greenish-white, stamens violet, yellow at the tip, style connate, greenish-white, stigmata 6, green. Fruit globular, 5 mm in diameter, reddish-brown, with white wool.

Seed as the Type.

Home: Bolivia, Sud Cinti, near La Cueva at 3300 m.

Type: Rausch 742

This population is variable.

Lobivia saltensis (Speg.) Br. & R. var. zapallarensis
Rausch

zapallarensis = from the Sierra Zapallar.

First Description: Lobivia 85 , 1985/86 , p. 144-145

Solitary or in small groups, globular to short-cylindrical, up to 3 cm in diameter, dark green, with a napiform root; ribs 9-11, straight, 7-8 mm high; areoles round, 1 mm in diameter, white-felted, 1 mm apart; radial spines 6-10, adpressed, to 3 mm long, horn-coloured with brown base; central spine 0 or 1, to 6 mm long, somewhat curved, black.

Bloom 55 mm long and 40 mm in diameter, ovary elongated, 12 mm long and 5 mm in diameter, tube very narrow, brown-violet, scales of the same colour and brown wool; outer petals narrow lanceolate, violet-pink with brown central stripes; internal petals spatulate, serrate thinly acuminate, orange[-red and inside orange], hymen whitish, throat up to halfway very thin and then opening up to 10 mm, violet; stamens in two series, inner violet, outer from the hymen yellow, style short, green, stigmata (12) green. Fruit oval, dark-brown-violet with small, pink scales and brown wool, transversally opening.

[Wahl:]

Seed as Lobivia saltensis (Speg.) Br. & R.

Home: Argentina, Salta, from the Cachipampa toward Amblayo at 3500 m.

Type: Rausch 585

This population is variable.

Lobivia schreiteri Castell. var. *riolarensis* Rausch

riolarensis = named after the River Lara.

First Description: *Lobivia* 85 , 1985/86 , p. 145
Ill. p. 142

Solitary, globular to flat-globular, to 10 cm diameter, dark glaucous-green with a long napiform root; ribs to 20, spiraling, divided in sharp-edged tubercles 15-20 mm long and 10 mm high; areoles round to oval, 2-3 mm long, sitting at the top of the tubercle, grey felted; radial spines 6-8-10, spreading and curved toward the body, to 25 mm long and interlaced; central spines 1-2, somewhat upward curved, up to 40 mm long; all spines acicular to subulate, horn-coloured.

Bloom 45 mm long and diameter, star shaped; ovary and tube dark glaucous green with very narrow, light pink scales and dark-brown hairs; outer petals lanceolate, brown, pink edged; internal petals lanceolate, only up to 6 mm wide, orange-red and carmine edged; hymen whitish pink, throat and stamens pink, style green, stigmata 9, white, 5 mm long. Fruit and seed similar to var. *stilowiana* (Backbg.)

[Wahl:] [*Rausch*].

Home: Argentina, Catamarca, Rio Lara at 3100 m.

Type: Rausch 793

This population is variable.

Lobivia spiniflora (K.Sch.) Rausch var. *macrantha*
Rausch

macranthus = large-flowering

First Description: *Lobivia* 85 , 1985/86 , p. 158
Ill. p. 158

Solitary, flat-globular to globular, to 10 cm diameter, light green; ribs to 18, straight, divided into 15 mm long, sharp-edged tubercles; areoles round, 5 mm in diameter, white-felted; radial spines 4-5 pairs and one downward, up to 15 mm long, spreading and curved toward the body; central spines 1-2, upward curved, 20 mm long; all spines subulate, horn-coloured with orange base.

Bloom 8 cm long and 6 cm diameter, ovary and tube green with narrow, green scales, with brown paper-like tips 0.5-1 mm wide and 5 mm long, and white wool; outer petals white with light-pink or light-green mid-stripes and brown, paper-like tips; internal petals white; throat, stamens, style and stigmata (9) green; style very short, with a greenish-white wool ring at the base. Seed globular, 1 mm in diameter, matt, finely tuberculate to nearly smooth, covered with arillus remainder and a deep, round hilum.

Home: Argentina, Catamarca, near El Alto

Type: Rausch 761

This population is uniform.

Lobivia steinmannii (Solms Laub.) Backbg.
var. *applanata* Rausch

applanatus = flattened

First Description: *Lobivia* 85 , 1985/86 , p. 145

Solitary or in small groups, globular, up to 30 mm in diameter, light glaucous green, with fleshy root; ribs 11-12, straight, flatter than in the type, divided into 3 mm long tubercles by transverse furrows; areoles oval, 2 mm long, light brown felted; radial spines ca. 12, in 5 pairs with one downward and one upward, 6-8 mm long, adpressed to spreading, interlaced, glassy-white; central spine 0-1, up to 10 mm long, glassy-white with brown tip.

Bloom 50 mm long and 40 mm in diameter, ovary brownish-red with dark-green scales, tube pink with green scales, white hairs and bristles; outside petals violet-pink with green central stripes; internal petals round and serrate, orange-red; throat whitish pink, style connate halfway, stamens whitish-pink, style and stigmata (6) greenish-white.

Fruit and seed as *Lobivia steinmannii* (Solms Laub.) Backbg.

Home: Bolivia, Chuquisaca, Rio Honda at 3800 m.

Type: Rausch 486

This population is uniform.

Lobivia steinmannii (Solms-Laub.) Backbg. var. *leucacantha* Rausch

leucacanthus = white-spines

First Description: *Lobivia* 85 , 1985/86 , p. 145-146

Solitary or in small groups, short-cylindrical, 20 mm in diameter, glaucous green, napiform root; ribs 10, straight, divided into 2 mm long tubercles by small transverse furrows; areoles round to oval, 1.5 mm long brown felted; radial spines 5 pairs and one downward, up to 6 mm long, bristly, spreading, somewhat curved and interlaced, white; central spine 0.

Bloom 40 mm long and diameter; ovary and tube green with dark-green scales, white hairs and bristles; outer petals spatulate with small acute tip, violet-pink with green central stripes; internal petals spatulate-round, serrate, with small acute tip, orange-red; throat 20 mm long, connate over 7 mm, whitish, stamens light-pink, style and stigmata (6) green. Fruit and seed as *Lobivia steinmannii* (Solms-Laub.) Backbg.

Home: Bolivien, Sud Cinti, above La Cueva at 3700 m.

Type: Rausch 644

This population is uniform.

Lobivia steinmannii (Solms Laub.) Backbg.
var. *major* Rausch

major = large

First description: *Lobivia* 85 , 1985/86 , p. 146
Ill. p. 146

Solitary or in small groups, globular to short-cylindrical, up to 60 mm high and 35 mm in diameter, yellowish green with fleshy root; ribs 10-12, straight or slightly spiraled, divided into 4-5 mm long tubercles by transverse furrows; areoles oval, 2 mm long, light brown felted; radial spines 14, interlaced, up to 10 mm long, glassy-yellow with thickened brown base; central spines 1-3, up to 15 mm long, yellowish; all spines bristly.

Bloom, fruit and seed as *Lobivia steinmannii* (Solms Laub.) Backbg.

Bloom 30 mm long and 30 mm in diameter, ovary and tube ochre-yellow with dark-brown scales, white hairs and bristles; outer petals lanceolate and serrate, violet-pink with olive-green central stripes; internal petals spatulate, serrate, round or with broad tip, red and inside orange; throat whitish-grey, stamens white with pink base, style thick, connate over ca. 5 mm, green, stigmata (8) yellowish green. Fruit globular, 4 mm in diameter, green-brown with darker scales, white wool and bristles. Seed as the type.

Home: Argentina, Jujuy, near Tafna at 3600 m.

Type: Rausch 334

This population is uniform.

Lobivia steinmannii (Solms-Laub.) Backbg.
var. *melanocentra* Rausch

melanocentrus = black central, referring to the
central spine

First description: *Lobivia* 85 , 1985/86 , S. 146

Solitary or in small groups, globular to short-cylindrical, up to 40 mm high and 30 mm in diameter, glaucous green and violet suffused, fleshy root; ribs 12, straight, divided into 3-4 mm long tubercles; areoles oval, 1 mm long, light brown felted; radial spines 10, spreading and interlaced, up to 8 mm long, bristly, yellowish-white with brown tip; central spine 1, up to 15 mm long, brown to black. Bloom, fruit and seed as with *Lobivia steinmannii* (Solms-Laub.) Backbg.

Home: Bolivia, Tarija, west of Iscayachi auf 3800 m.

Type: Rausch 744

This population is uniform.

Lobivia steinmannii (Solms-Laub.) Backbg.
var. *parvula* Rausch

Parvulus = delicate, tiny

First description: *Lobivia* 85 , 1985/86 , p. 146
Ill. p. 146

Solitary or in small groups, globular to short-cylindrical, 10-15 mm in diameter, yellowish green with a napiform root; ribs 10-11, straight, divided into 2 mm long tubercles by transverse furrows; areoles oval, 1 mm long, white felted; radial spines in 5 pairs and one downward, straight, spreading, up to 5 mm long, glassy yellowish white with brown, thick, base; central spines 0.

Bloom 30 mm long and 30 mm in diameter; ovary and tube brown-pink with dark-brown scales, white hairs and bristles; outer petals violet-pink with greenish-brown central stripes; inner petals orange-red, throat pink, white inside, stamens pink, style and stigmata (6-8) green. Fruit globular, 5 mm in diameter, dark-brown-violet, blackish scales, dense yellowish-white wool and a few bristles.

Seed as *Lobivia steinmannii* (Solms-Laub.) Backbg.

Home: Bolivia, Potosi, Cucho Ingenio at 3800 m.

Type: Rausch 296

This population is uniform.

Lobivia steinmannii (Solms-Laub.) Backbg. var. *tuberculata* Rausch

tuberculatus = Tubercled

First description: *Lobivia* 85 , 1985/86 , p. 145
Ill. p. 143

Solitary or in small groups, globular, 15 mm in diameter, light-green, napiform root; ribs 12, straight, divided into 3 mm long tubercles by transverse furrows; areoles oval, 2 mm long, white-felted; radial spines 10-11, spreading diverging, 5 mm long, glassy-white, thickened, red-brown base; central spine 0.

Bloom 35 mm long and diameter, ovary and tube pink with brown scales and white wool; outer petals lanceolate, pink with brown central stripes and tips; internal petals round with slightly acuminate, red and inside whitish; throat whitish, stamens light-pink, style and stigmata green. Fruit and seed as *Lobivia steinmannii* (Solms-Laub.) Backbg.

Home: Bolivien, Sud Cinti, in the locality of La Cueva

Type: Rausch 743

This population is uniform.

Lobivia thionantha (Speg.) Br. & R. var. erythrantha
Rausch

erythranthus = blood-red flowering

First description : Lobivia 85 , 1985/86 p. 155
Ill. p. 155

Solitary, flat-globular to globular, to 10 cm in diameter; ribs ca. 16, straight and divided by cross-furrows in ca. 12 mm long chin-shaped tubercles; arceoles sitting at the top of the tubercles, round to oval, up to 5 mm long, felt ochre-coloured to white; radial spines 6-8, radiating-spreading, somewhat curved, up to 35 mm long; central spine 0, an upper spine rarely recognizable as central; all spines subulate, black with red base, later violet-grey. Bloom appears in the upper half of the body, 25-30 mm long and diameter; ovary and tube green with small dark-green scales, ending in a brown papery tip; outer petals whitish-light red, with green central stripes and long, papery tip; internal petals spatulate and irregularly serrate, curved, red; throat whitish pink, stamens red, style very short, ochre-colored, at bottom surrounded by a white wool ring, stigmata 10, white. Fruit globular to ovoid, 10 mm in diameter, grey-green with small, papery scales, tufted white-grey hairs and brown bristles, up-drying, transversally opening. Seed globular, rough, brown-black, with arillus remainders and straight, deep hilum.

Home : Argentina, Salta, Paranilla [*Abra de Candeado*] Arca Yaco, over 3000 m.
[Wahl:]

Type : Rausch 763

This population is variable.

Lobivia thionantha (Speg.) Br. & R. var. *munita* Rausch

munitus = armed

First description: *Lobivia* 85 , 1985/86 , p. 154
Ill. p. 154

Solitary, flat-globular to globular, 7 cm diameter, glaucous green, short taproot; ribs 13-14, straight, divided into tubercles 15-20 mm long by transverse furrows; areoles oval, up to 7 mm long, grey felted; radial spines in 3 pairs, 1 downward and 1 upward, spreading, somewhat curved and interlaced; central spine 0-1, porrect and somewhat curved; all spines up to 45 mm long, hard subulate, pink brown grey with dark tip.

Bloom 50 mm long and diameter; ovary and tube green with green scales, brown wool and bristles; outer petals lanceolate with long, papery, red-brown, small acuminate tip; internal petals spatulate-round and fringed, red (or yellow), throat light red, stamens red, style and stigmata (12) green, with a brown wool ring at the style base. Fruit and seed as *Acanthocalycium thionanthum* (Speg.) Backbg.

Home: Argentina, Salta, in average situations around Cerro Zorrito.

Type: Rausch 772

This population is variable.

Appendix A

Correction of the misprints
and
addition

Correction of misprints - Lobivia 85 -

Error	P.	Co	L.	Correction
..mit großen, geraden Nabel	09	le	20	..mit großem, geradem Nabel.....
..mit diesen Namen.....	12	ri	31	..mit diesem Namen.....
..Lobivia ritterii.....	13	le	18	..Lobivia ritteri.....
.."Pygmaen".....	13	ri	27	.."Pygmaeen".....
..hasiensis.....	13	ri	27	..huasiensis.....
..Blütenblätter.....	13	ri	37	..Blütenblätter.....
..der größeren, rotgestri- chelten Blüte.....	24	ri	21	..die größere, rotgestrichelte.. Blüte.....
..und großen, fast.....	25	ri	25	..und mit großen, fast.....
..gonjianii (Kiesl.) Don...	32	ri	01	..gonjianii (Kiesl.) Rausch comb. nov.
..etc., Kaktus ABC.....	33	le	25	..etc. Backbg., Kaktus ABC.....
..var. elegans (Backbg.) comb nov.	33	ri	32	..var. elegans (Backbg.) Rausch comb. nov.
..Kleinerer Blüte.....	37	ri	44	..Kleinere Blüte.....
..Echinopsis rowley.....	52		03	..Echinopsis rowleyi.....
..Trichocer. rowley.....	52	le	04	..Trichocer. rowleyi.....
..lach rosa orange.....	56	le	23	..lachs rosa orange.....
..Blüten).	56	le	35	..Blüten.....
..authentisches.....	56	ri	42	..authentisches.....
..K. u. a. S 1972/4.....	57	le	05	..Succulenta 1972/4.....
..var. orurensis (Backbg.) Don	57	le	30	..orurensis (Backbg.) Rausch.... comb nov.
..helloran-ger rosa.....	57	ri	24	..Helloran-ge rosa.....
..amblayensis (Rausch)Rausch	60	ri	34	..amblayensis (Rausch) Rausch... comb nov.
..protestierte Fric und.....	64	le	25	..protestierten Fric und.....
..com nov.	65	ri	35	..comb. nov.
..Mittel dorn.....	73	ri	09	..Mittel dornen.....
..schwarz violetten.....	76	le	16	..schwarz violetten.....
..fabrigen.....	80	ri	13	..farbigen.....
..(Rausch) Rausch comb. nov..	88	ri	01	..(Rausch) Rowley, The Nat. Cact. ..Succ. J. Gt. Bt. 1982/80.....
..Kaktus Lex.	88	le	04	..Kakteenlexikon.....
..schmalen Hilum.....	88	le	17	..schmalem Hilum.....
..Var. Corbula.....	89	le	30	..Var. corbula.....
..iner.....	89	ri	40	..inner.....
..Lobivia nigricans Krainz..	100	le	03	..Mediolobivia nigricans Krainz.

Addition:

..Rausch comb. nov. .. 72 le 01 ..Rowley.....

Correction of misprints - Lobivia 85 -

Error	P.	Co	L.	Correction
.. "Pygmaean".....	100	le	39	.. "Pygmaean".....
.. Backbgr.	104	le	46	.. Backbgr.
.. mangels besserem Wissens..	104	ri	28	.. mangels besseren Wissens.....
.. Knizeii.....	116	le	18	.. knizeii.....
.. Knizeii.....	116	le	24	.. knizeii.....
.. dunklerer Epidermis und	124	le	11	.. dunklere Epidermis und helleren
.. hellerem Blütenschlund....				.. Blütenschlund.....
veranlaßte mich.....	124	ri	06	veranlaßten mich.....
.. "Pygmaean".....	128	le	17	.. "Pygmaean".....
.. "Pygmaean".....	129	ri	08	.. "Pygmaean".....
.. (mitte).....	134	le	ob	.. (Mitte).....
.. Knizee.....	136	le	03	.. Knize.....
.. stigmatibus.....	137	ri	03	.. stigmatibus.....
.. Argentina.....	137	ri	20	.. Argentina.....
.. (Ojo de agua).....	138	ri	ob	.. (Ojo de Agua).....
.. var. cassa.....	139	le	ob	.. var. crassa.....
.. clare viridibus.....	139	le	07	.. clare viridibus.....
.. costia.....	143	ri	11	.. costis.....
.. ordientibus.....	144	le	56	.. orientibus.....
.. alibs.....	145	ri	05	.. albis.....
.. interioribus.....	145	ri	13	.. interioribus.....
.. Chuquisaea.....	145	ri	22	.. Chuquisaca.....
.. proliferas.....	146	le	36	.. proliferans.....
.. rubiflora.....	148	le	05	.. rubriflora.....
.. 62 a.....	148	le	39	.. 62 c.....
.. 62 c.....	148	le	43	.. 62 b.....
.. Cullmann.....	149	le	51	.. Cullmann.....
.. yasimanensis.....	149	ri	07	.. jasimanensis.....
.. violacea (Rausch 1979).....	150	ri	06	.. Violacea (Rausch) Rowley.....
.. 637 a.....	150	le	29	.. 673 a.....
.. rosealbiflora.....	151	ri	25	.. rosalbiflora.....
.. rowleyi.....	151	ri	32	.. rowleyi.....
.. sarathroides.....	151	ri	52	.. sarothroides.....

Addition:

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P.148 , left column 62 a var. gigantea Rausch n. n.

The combination "Lob. pygmaea var. nigrescens (Rausch) Rausch" is invalid.

"Lob. pygmaea var. atrovirens (Rausch) Rausch" is correct.

The followings should be changed accordingly:

P. 115 caption above

P. 116 right column line 12

P. 151 right column line 3

On page 85 of "Lobivia 85" the following reference work is to be supplemented:

Lobivia maximiliana(Heyder)Backbg., Kat. 10 Jahre Kakteen-
forschung 1937/28

The following combinations are not recognised according to the "ICBN"(INTERNATIONAL CODE of BOTANICAL NOMENCLATURE)

a) according to article 37.1:

Lobivia formosa var. uebelmanniana (Lembcke & Backeberg) Rausch

b) according to article 57.1, 57.3:

Lobivia jajoiana var. paucicostata (Rausch) Rausch

c) according to article 9.5:

Lobivia lateritia var. rubriflora (Backeberg) Rausch

Lobivia thionantha var. variiflora (Backeberg) Rausch

d) according to article 56:

Lobivia pygmaea var. nigrescens Rausch

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Appendix B

Collection numbers - R -

Lobivia

Collection numbers - L o b i v i a

005	chrysantha	Salta	Puerta Tastil	3000 m A
013	haematantha var. molinensis nom. prov.	Salta	Piedra de Molino	3700 m A
014	nigricans	Salta	Cachipampa	3700 m A
015	formosa var. nivalis	Salta	Cachipampa	3800 m A
016	saltensis var. zapallarensis	Salta	Cachipampa Amblayo	3500 m A
017	haematantha var. kuehnrichii	Salta	Cachipampa	3500 m A
019	haematantha var. amblayensis	Salta	östl. Amblayo	2800 m A
022	thionantha var. chionantha	Salta	Cachipampa Cachi	2300 m A
025	haematantha var. elongata	Salta	Cachi	2300 m A
026	haematantha var. rebutioides	Jujuy	Volcan	2200 m A
027	haematantha var. rebutioides	Jujuy	Tilcara	2500 m A
030	haematantha var. densispina	Jujuy	Tumbaya	2300 m A
031	ferox	Jujuy	Que. de Humahuaca	2600 m A
033	jajoiana var. nigrostoma	Jujuy	Maimara	2500 m A
035	haagei	Jujuy	Que. de Humahuaca	3300 m A
036	jajoiana var. elegans	Jujuy	westl. Tilcara	3000 m A
037	marsoneri	Jujuy	Humahuaca	3000 m A
037a	marsoneri var. iridescens	Jujuy	Humahuaca	3500 m A
038	marsoneri var. iridescens	Jujuy	Humahuaca	3500 m A
043	formosa var. tarijensis	Jujuy	Humahuaca	3800 m A
047	aurea var. callochrysea	Salta	Cafayate Alemania	1200 m A
048	thionantha	Salta	Cafayate	1200 m A
054	acanthoplegma	Cochabamba	Cliza	2500 m B
057	maximiliana var. caespitosa	Cochabamba	Cochabamba	3500 m B
058	acanthopl. var. oligotricha	Cochabamba	Cuchu Punata	2600 m B
062	cinnabarina	Chuquisaca	Sucre	2800 m B
062a	cinnabarina var. gigantea n.n.	Chuquisaca	Sucre	3000 m B
062b	cinnabarina var. zudanensis	Chuquisaca	Zudanez	2500 m B
062c	cinnabarina var. gracilis n.n.	Chuquisaca	Otuyo	3000 m B
065	cinnabarina var. draxleriana (draxleriana var. minor n.n.)	Santa Cruz	Santa Ana	2300 m B
070	pugionacantha var. rossii	Potosi	Huari Huari	3800 m B
071	steinmannii var. costata	Potosi	Potosi	4000 m B
073	cinnabar. var. walterspielii	Potosi	Huari Huari	3600 m B
074	ferox var. potosina	Potosi	Cucho Ingenio	3700 m B
078	lateritia	Chuquisaca	Camargo	2700 m B
083	pugionacan. var. culpinensis	Chuquisaca	Culpina	3000 m B
084	tiegeliana	Tarija	Tarija	2200 m B
084a	tiegeliana var. ruberrima	Tarija	Tucumilla	2600 m B

Collection numbers - L o b i v i a

090	tiegeliana var. pusilla	Tarija	Uriondo	2000 m	8
091	atovir. var. yuncharasensis	Tarija	Yunchara	3200 m	B
092	pugionacantha	Jujuy	La Quiaca	3600 m	A
093	marsoneri var. iridescens	Jujuy	Aguiar	4000 m	A
101	aurea	Cordoba	Sierra Chica	1100 m	A
109	spiniflora	Cordoba	Sierra Grande	1000 m	A
112	aurea var. quinesensis	San Luis	Quines	1000 m	A
116	aurea var. leucomalla	San Luis	Sierra de San Luis	1200 m	A
117	aurea	San Luis	San Martin	1000 m	A
122	huascha	La Rioja	Famatina	1500-2000 m	A
122a	huascha var. calliantha	La Rioja	Cuesta Miranda	3000 m	A
122b	huascha	La Rioja	Famatina	1500 m	A
127	famatimensis	La Rioja	Famatina	3000-3500 m	A
128	formosa var. ingens	La Rioja	Andalgala	2500 m	A
128a	formosa var. velascoensis n. prov.	La Rioja	Sierra Velasco	2800 m	A
129	formosa var. rosarioana	La Rioja	Famatina	3000 m	A
136	aurea var. catamarcensis	La Rioja	Sierra Velasco	1000 m	A
146	haematantha var. hualfinensis	Catamarca	Hualfin	2600 m	A
146a	haematantha var. hualfinensis (hualfinensis var. australis n.n.)	Catamarca	Hualfin	2000 m	A
147	thionantha var. glauca	Catamarca	Hualfin Belen	1600 m	A
148	thionantha var. aurantiaca	Catamarca	Andalgala	3000 m	A
151	grandiflora var. longispina	Catamarca	Agua de las Palomas	2000 m	A
151a	grandiflora var. crassicaulis	Catamarca	Andalgala-Estancia	1800 m	A
151b	grandiflora	Catamarca	Andalgala	2200 m	A
152	aurea var. shaferi	Catamarca	Andalgala	1100 m	A
153	huascha var. rubriflora	Catamarca	Sierra Ancasti	1000 m	A
157	haemat. var. chorrillosensis	Salta	Chorrillos	2600 m	A
158	einsteinii var. aureiflora	Salta	Que. del Toro	2600 m	A
161	chrysantha var. hypocyrtia	Salta	Cachinal	4000 m	A
162	nigricans var.	Salta	La Poma	4000 m	A
163	einsteinii var. atrospinosa	Salta	Cachinal	4100 m	A
165	haematantha	Salta	Cachi	2500-3000 m	A
168	saltensis var. ps. cachensis	Salta	Escoype	2300 m	A
169	formosa var. bruchii	Tucuman	Tafi del Valle	2000 m	A
170	schreiteri	Tucuman	Tafi del Valle	2000 m	A
171	schreiteri var. stilowiana	Tucuman	Infernillo	3000 m	A
172	ferox var. longispina	Jujuy	La Quiaca	3600 m	A
173	chrysochete	Jujuy	La Quiaca-Sta. Victoria	4000 m	A
176	pugionacantha var. corrugata	Jujuy	Yavi	3500 m	A

Collection numbers - L o b i v i a

177	<i>saltensis</i>	Salta	Cafayate Alemania	2300 m A
180	<i>arachnacantha</i>	Sta. Cruz	Samaipata	2000 m B
184	<i>arachnacantha</i> var. <i>densisetata</i> (var. <i>vallegrandensis</i>)	Sta. Cruz	Valle Grande	2100 m B
186	<i>arachnacantha</i> var. <i>densisetata</i>	Sta. Cruz	Valle Grande	2100 m B
188	<i>calorubra</i> var. <i>pojoensis</i>	Cochabamba	Pojo	2900 m B
193	<i>calorubra</i> var. <i>grandiflora</i>	Cochabamba	Mizque	2200 m B
197	<i>caineana</i>	Cochabamba	Rio Caine	2500 m B
197a	<i>caineana</i> var. <i>albiflora</i> n.n.	Cochabamba	Capinota	3500 m B
200	<i>backebergii</i> var. <i>oxyalabestra</i>	Cochabamba	Tapacari	3400 m B
201	<i>pentlandii</i>	La Paz	Altiplano	3800-4200 m B
202	<i>maximiliana</i>	La Paz	Lago Titicaca	3880-4500 m B
203	<i>maximiliana</i> var. <i>hermamiana</i>	La Paz	La Paz	3800-4000 m B
204	<i>maximiliana</i> var. <i>durispina</i>	Cochabamba	Tapacari	3700 m B
205	<i>schieliana</i> var. <i>quiabayensis</i>	La Paz	Quiabaya	3600 m B
206	<i>maximiliana</i> var. <i>charazanensis</i>	La Paz	Charazani	4000 m B
207	<i>schieliana</i>	La Paz	Chuma-Consata	3000 m B
208	<i>steinmannii</i> = 454	Oruro	Eucaliptos	4000 m B
208a	<i>atrovirens</i> var. <i>haefneriana</i>	Oruro	LLallagua	3800 m B
209	<i>ferox</i>	Oruro	Oruro	4100 m B
210	<i>haagei</i> var. <i>orurensis</i>	Oruro,	Oruro,	4100 m B
211	<i>ferox</i> var. <i>longispina</i>	Potosi	Tupiza	3000 m B
213	<i>jajoiana</i>	Jujuy	Volcan	2300 m A
214	<i>euanthema</i>	Jujuy	Volcan	3000 m A
215	<i>chrysochete</i> var. <i>markusii</i>	Jujuy	Volcan	3200 m A
217	<i>jajoiana</i> var. <i>paucicostata</i>	Jujuy	Purmamarca	3000 m A
218	<i>jajoiana</i> var. (<i>glauca</i>)	Jujuy	Abra de Pives	3000 m A
219	<i>haematantha</i> var. <i>rebutioides</i>	Jujuy	Abra de Pives	2800 m A
221	<i>haematantha</i> = 165	Salta	Angastaco	2600 m A
229	<i>huascha</i> var. <i>robusta</i>	Catamarca	Hualfin	2400 m A
230	<i>haematantha</i> var. <i>hualfinensis</i>	Catamarca	Nacimientos	2500 m A
231	<i>thionantha</i> var. <i>brevispina</i>	Salta	Cafayate	1700 m A
238	<i>haematantha</i> var. <i>kuehnrchii</i>	Salta	La Poma	3600 m A
238a	<i>haematantha</i> var. <i>antennifera</i> nom. prov.	Salta	Potrero	3500 m A
239	<i>haematantha</i> var. <i>amblayensis</i>	Salta	südl. Amblayo	2300 m A
252	<i>pentlandii</i>	Cochabamba	Challa	3500 m B
257	<i>acanthoplegma</i>	Cochabamba	Anzaldo	3000 m B
261	<i>acanthoplegma</i>	Cochabamba	Vacas	3000 m B
262	<i>acanthoplegma</i> var. <i>oligotr.</i>	Cochabamba	Colomi	3000 m B

Collection numbers - L o b i v i a

264	backebergii var. larvae	Cochabamba	Rio Caine	3000	m B
265	cinnabarina var. grandiflora	Chuquisaca	Padilla	2300	m B
272	calorubra var. megaloccephala	Sta. Cruz	Straße bei Pojo	2800	m B
273	arachn. var. torrecillasensis	Sta. Cruz	Comarapa	2200	m B
279	cinnabarina var. draxleriana	Cochabamba	Aiquile	2600	m B
295	haagei var. violascens	Potosi	Cucho Ingenio	3700	m B
295a	haagei var.	Potosi	Cucho Ingenio	3700	m B
296	steinmannii var. parvula	Potosi	Cucho Ingenio	3800	m B
297	steinmannii var. rauschii	Potosi	Huari Huari	3600	m B
298	pentlandii	Potosi	Potosi	4000	m B
299	pugionacantha var. versicolor	Potosi	Cucho Ingenio	3600	m B
300	steinmannii var. cincinnata	Potosi	Cucho Ingenio	3600	m B
301	pygmaea var. polypetala	Potosi	Cucho Ingenio	3700	m B
303	lateritia var. rubriflora	Chuquisaca	Camargo	3300	m B
304	haagei var. Cucho Ingenio	Potosi	Cucho Ingenio	3600	M B
306	lateritia var. rubriflora	Chuquisaca	Camargo Culpina	2800	m B
306a	lateritia var. Impora	Chuquisaca	Impora	3000	m B
307	ferox	Chuquisaca	Camargo	3300	m B
311	steinmannii var. camargoensis	Chuquisaca	Camargo	3200	m B
313	atrovirens var. huasiensis	Chuquisaca	Inca Huasi	3300	m B
313a	atrovirens var. huasiensis	Chuquisaca	Yuquina	3200	m B
323	tiegeliana var. flaviflora	Tarija	Angostura	1900	m B
329	ferox var. longispina	Tarija	Cieneguillas	3100	m B
331	ferox var. longispina	Jujuy	La Quiaca	3600	m A
332	ferox var. longispina	Jujuy	La Quiaca	3600	m A
333	haagei var. eos	Jujuy	Tafna	3700	m A
333a	haagei var. pelzliana	Jujuy	Tafna	3600	m A
333b	haagei var. lange Stacheln	Jujuy	Tafna	3700	m A
333c	haagei var. rosa Blüte	Jujuy	Tafna	3700	m A
334	steinmannii var. major	Jujuy	Tafna	3600	m A
335	pygmaea	Jujuy	Yavi 3500 m A		
335a	pygmaea var. Tafna	Jujuy	Tafna	3700	m A
335b	pygmaea var. iscayachensis	Tarija	Iscayachi, Abra de Sama	3800	m B
387	tegeleriana var. akersii	Lima	Churin-Oyon	3500	m P
387a	pampana var. borealis	Lima	Churin-Oyon	3500	m P
394	tegeleriana	Junin	Tarma	3500	m P
395	tegeleriana var.	Junin	Incahuasi	3200	m P
396	wrightiana	Huancavelica	La Mejorada	3100	m P
405	tegeleriana var.	Ayacucho	Ayacucho	3500	m P
407	zecheri	Ayacucho	Huanta-Ayacucho	2400	m P
408	maximiliana var. westii	Apurimac	Andahuaylas	3300	m P

Collection numbers - L o b i v i a

409	maximiliana var. intermedia	Apurimac	Challuauca	3000 m P
412	maximiliana var. corbula	Cuzco	Cuzco	3500 m P
413	hertrichiana	Cuzco	Cuzco-Ruinen	2900 m P
414	hertrichiana (minuta)	Cuzco	Ollantaytambo	2700 m P
415	hertrichiana (larabei)	Cuzco	Ollantaytambo	2800 m P
416	hertrichiana (echinata)	Cuzco	Ollantaytambo	2900 m P
418	hertrichiana (incaica)	Cuzco	Urubamba	3300 m P
419	hertrichiana var. lauii	Cuzco	Urubamba	3000 m P
420	hertrichiana (incaica)	Cuzco	Pisac	3000 m P
421	hertrichiana (divaricata)	Cuzco	Huambutio	3000 m P
422	schieliana var. leptacantha	Cuzco	Paucartambo	3000 m P
423	hertrichiana var. simplex	Cuzco	Huambutio	2900 m P
424	maximiliana var. corbula	Cuzco	Ocongate	3400 m P
425	hertrichiana (huilcanota)	Cuzco	Urcos	3000 m F
428	maximiliana var. sicuaniensis	Cuzco	Sicuani	3700 m P
433	pampana	Arequipa	Misti	3300 m P
443	tegeleriana var. incuiensis	Ayacucho	Incuyo	3700 m P
446	pampana	Arequipa	Pampa de Arrieros	3700 m P
452	maximiliana var. miniatiflora	La Paz	Inquisivi	3500-4000 m B
453	formosa var. orurensis	La Paz	Oruro	4000 m B
4.54	steinmannii	La Paz	Eucaliptos	4000 m B
456	backebergii	La Paz	La Paz	3000-3500 m F
457	acanthopl. var. roseiflora	Cochabamba	Angostura	2600 m B
462	pentlandii	Cochabamba	Capinota	3200 m B
463	calorubra var. mizquensis	Cochabamba	Vila Vila - Rio Caine	3200 m B
463a	calorubra	Cochabamba	Totora	3000 m B
484	haagei var. nazarenoensis	Salta	Nazareno	3350 m A
485	atrovirens var. raulii	Chuquisaca	Rio Honda	3200 m B
488	steinmannii var. applanata	Chuquisaca	Rio Honda	3600 m B
490	lateritia = 78	Chuquisaca	Villa Abecia	2800 m B
492a	steinmannii var. christinae	Salta	Nazareno Rodeo	3500 m A
493	atrovirens var. grün	Tarija	Iscayachi	3500 m B
494	steinm. var. rubriflora n.n.	Tarija	Iscayachi	3800 m B
497	chrysochete var. tenuispina	Tarija	Iscayachi	3500 m B
498	cardenasiana	Tarija	östl. Tarija	2300-2400 m B
499	tiegeliana	Tarija	Santa Ana	2500 m B
500	pugionacantha var. cornuta	Tarija	Yunchara	3900 m B
500a	spec. nov.	Tarija	Yunchara	3900 m B
501	haagei var. crassa	Tarija	Abra de Sama	3800 m B

Collection numbers - L o b i v i a

502	haagei var. elegantula	Jujuy	Rio San Juan de Oro	3700 m A
506	atovir. var. pseudoritteri	Tarija	Abra de Sama	3800 m B
506a	pygmaea var. Iscayachi	Tarija	Iscayachi	3800 m B
507	haagei var. Sta. Catalina	Jujuy	Santa Catalina	3800 m A
507a	haagei var. dick	Jujuy	Santa Catalina	3800 m A
508	atovirens var. Sta. Ana	Jujuy	Santa Ana	3500 m A
508a	pygmaea var. tafnaensis	Jujuy	Tafna	3800 m A
509	einsteinii	Jujuy	Chani	4000 m A
509a	einsteinii var. brachyarthra nom. prov.	Jujuy	Chani	4200 m A
512	chrysochete var. minutiflora	Salta	Iruya-Sta.Victoria	3500-4200 m A
513	tiegeliana var. cinnabarina	Salta	Rodeo	2800-3300 m A
514	sanguiniflora	Salta	Sta. Victoria	2500-2700 m A
515	atovirens var. haefneriana	Salta	Sta. Victoria	3500 m A
515a	atovirens var. haefneriana	Potosi	Llallagua	4000 m B
515b	atovirens var. haefneriana	Potosi	Cucho Ingenio	3700 m B
516	jajoiana var. pungens	Salta	Trigohuaico	3000 3300 m A
517	sanguiniflora var. duursmaiana	Salta	Trigohuaico	3000 m A
520	atovirens var. ritteri	Salta	Sta. Victoria	3200 m A
522	einsteinii var. aureiflora	Salta	Que. del Toro	2700 m A
524	haematantha var. rebutioides	Jujuy	Chani	3900 m A
525	grandiflora var. lobivoides	Catamarca	Totoral	1200 m A
526	aurea var. depressicostata	Catamarca	La Puerta	1600 m A
526a	grandiflora	Catamarca	El Rodeo	2000 m A
527	aurea var. dobeana	Catamarca	Ancasti	1800 m A
528	formosa var. bruchii (rosarioana var. rubriflora)	Catamarca	Poman	3000 m A
547	formosa	Mendoza	Que. del Toro	2600 m A
547a	formosa var. uebelmanniana	San Juan	Arrequin	3000 m A
557	famatim. var. sanjuanensis	San Juan	San Juan	1700 m A
557a	famatim. var. jachalensis	San Juan	Jachal	1200 m A
565	formosa var. hyalacantha	La Rioja	Pinchas	2400 m A
570	thionantha var. catamarcensis	Catamarca	Punta Balasto	2600 m A
572	thionantha var. ferrarii	Salta	Sierra de Quilmes	3500 m A
573	formosa var. kieslingii	Salta	Sierra de Quilmes	4000 m A
576	pygmaea var. Chaci	Potosi	Chaci	4000 m B
577	haagei var. Purmamarca	Jujuy	Purmamarca	3300 m A
578	einsteinii var. gonzianii	Jujuy	Tilcara	3500 m A
579	pygmaea var. Aguilar	Jujuy	Mina Aguilar	3900 m A
580	jajoiana var. fleischeriana	Jujuy	Volcan	2400 m A
581	bruchii var. nivalis	Salta	Chani	4300 m A

Collection numbers - L o b i v i a

582	sanguiniflora var. breviflora	Salta	Sta. Victoria	2800 m A
584	chrysantha	Salta	Que. del Toro	2700 m A
585	saltensis var. zapallarensis	Salta	Cachipampa	3500 m A
585a	haematantha var. albolanata	Jujuy	Purmamarca	2200 m A
606	maximiliana var. caespitosa	Cochabamba	Cocapata	3500 m B
608	arachnacantha var. sulphurea	Sta. Cruz	Pasorapa	2300 m B
610	calorubra var. mizquensis	Cochabamba	Santiago	3000 m B
622	maximiliana var. caespitosa	Cochabamba	Piscomayo	4000 m B
623	pentlandii	Potosi	Potosi	4000 m B
624	ferox var. potosina	Potosi	Don Diego	3600 m B
625	pentlandii	Potosi	Potosi	3800 m B
630	pygmaea var. minor	Chuquisaca	Yuquina	3600 m B
631	pygmaea var. diersiana	Chuquisaca	Yuquina	3200 m B
632	atrovirens var. yuquinensis	Chuquisaca	Yuquina	3200 m B
633	pygmaea var. atrovirens	Chuquisaca	Salitre	3200 m B
635	rauschii	Chuquisaca	Yuquina	3100 m B
636	pugionacantha var. salitrensis	Chuquisaca	Salitre	3200 m B
637	formosa var. randallii	Chuquisaca	Camargo-Paicho	3300 m B
638	chrysochete	Chuquisaca	Culpina-Chunchuli	3200 m B
639	pugionacantha var. haemantha	Chuquisaca	Inga Huasi	3200 m B
642	haagei var. canacruzensis	Chuquisaca	Cana Cruz-Camargo	3700 m B
644	steinmannii var. leucacantha	Chuquisaca	La Cueva	3700 m B
645	haagei var. pallida	Chuquisaca	La Cueva	3500 m B
646	pygmaea var. friedrichiana	Chuquisaca	La Cueva	3500 m B
647	pugionacantha var. culpinensis	Chuquisaca	La Cueva	3700 m B
648	chrysochete	Tarija	Iscayachi Sama	4000 m B
650	atrovirens var. zecheri	Tarija	Pueblo Viejo	3600 m B
651	pugionacantha var. cornuta	Tarija	Curque	4000 m B
652	tiegeliana = 84	Tarija	Sta. Ana	2100 m B
859	formosa var. tarijensis	Tarija	Iscayachi	3700 m B
660	pygmaea var. colorea	Tarija	Abra de Sama	3800 m B
662	saltensis var. multicosata	Salta	Cuesta de Lajar	1900 m A
666	formosa var. bertramiana	La Paz	Comanche	4000 m B
666a	pampana (glaucescens Ritt.)	Moquegua	Tarata	3800 m P
667	acanthoplegma var. pilosa	Cochabamba	Cerro Q'ara Q'ara	3100 m B
672	acanthoplegma	Cochabamba	Tarata	3200 m B

Collection numbers - L o b i v i a

673	<i>ferox</i> var. <i>longispina</i>	Potosi	Uyuni-Tupiza	4000 m B
673a	<i>lateritia</i> var. <i>kupperiana</i>	Potosi	Tupiza	3500 m B
674	<i>lateritia</i> var. <i>cotagaitensis</i>	Potosi	Cotagaite	3000 m B
676	<i>pygmaea</i> var. <i>diersiana</i>	Potosi	Tupiza	3500 m B
676a	<i>pygmaea</i> var. <i>knizei</i>	Potosi	Challapata	3800 m B
680	<i>einsteinii</i> var. <i>elegans</i>	Salta	Yacones	2600 m A
689	<i>haagei</i> var. <i>mudanensis</i>	Salta	Cerro Mudana	3500-4300 m A
690	<i>nigricans</i> var. <i>carmeniana</i>	Jujuy	Caspala	3100 m A
690a	<i>haagei</i> var. <i>Caspala</i>	Jujuy	Caspala	3300 m A
691	<i>chrysochete</i> var. <i>subtilis</i>	Salta	Sta. Ana	3300 m A
692	<i>ferox</i>	Jujuy	Caspala	3200 m A
693	<i>jajoiana</i> var. <i>caspalasensis</i>	Jujuy	Caspala	3200 m A
698	<i>marsoneri</i>	Jujuy	Humahuaca	3100 m A
700	<i>euanthema</i> var. <i>tilcarensis</i>	Jujuy	Tilcara	3000 m A
700a	<i>atrovirens</i> var. <i>ritteri</i>	Jujuy	Aguilar	4000 m A
701	<i>jajoiana</i> var. <i>aurata</i>	Jujuy	Punta Corral	3700 m A
702	<i>jajoiana</i> var. <i>nidularis</i>	Salta	Iruya	3300 m A
708	<i>formosa</i> var. <i>amaichensis</i> n.n.	Tucuman	Amaicha	2800 m A
709	<i>huascha</i> var. <i>walteri</i>	Salta	Escoipe	2800 m A
709a	<i>haematantha</i> var. <i>viridis</i>	Salta	Rio Yacuchuya	2500-2800 m A
710	<i>aurea</i> var. <i>albiflora</i>	Cordoba	Piedrita Blanca	500 m A
711	<i>aurea</i> var. <i>depressicostata</i>	Catamarca	Catamarca	1400 m A
711a	<i>aurea</i> var. <i>fallax</i>	La Rioja	Malanzan	1100 m A
711b	<i>aurea</i> var. <i>sierragrandsensis</i>	Cordoba	Sierra Grande	1600-1800 m A
711c	<i>aurea</i>	Cordoba	Cordoba	1000 m A
711d	<i>aurea</i> var. <i>Tulumba</i>	Cordoba	Tulumba	700 m A
711e	<i>aurea</i> var. <i>tortuosa</i>	S.d. Estero	Ojo de Agua	700 m A
735	<i>maximiliana</i> var. <i>violacea</i>	Cochabamba	Ayopaya, Altamachi	3400-3700 m B
737	<i>pugionacantha</i> var. <i>culpinensis</i>	Chuquisaca	Rio Honda	3300 m B
742	<i>pyg.</i> var. <i>violaceostaminata</i>	Chuquisaca	La Cueva	3000 m B
743	<i>steinmannii</i> var. <i>tuberculata</i>	Chuquisaca	La Cueva	3000 m B
744	<i>steinmannii</i> var. <i>melanocentra</i>	Tarija	Iscayachi	3600 m B
745	<i>haagei</i> var. <i>Talina</i>	Potosi	Talina	3800 m B
748	<i>lateritia</i> var. <i>citriflora</i>	Potosi	Talina	3300 m B
750	<i>haagei</i> var. <i>Aparzo</i>	Jujuy	Aparzo	4000 m A
751	<i>einsteinii</i> var. <i>lanata</i>	Jujuy	Abra de Pives	4000 m A
752	<i>haagei</i> var. <i>Chani</i>	Jujuy	Abra de Pives	4000 m A

Collection numbers - L o b i v i a

758	<i>grandiflora</i> var. <i>pumila</i>	Catamarca	Agua Blanca	1400 m A
759	<i>thionantha</i> var. <i>variiflora</i>	Catamarca	Amaicha	2700-3000 m A
760	<i>spiniflora</i> var. <i>klimpeliana</i>	Cordoba	La Higuera	700 m A
761	<i>spiniflora</i> var. <i>macrantha</i>	Catamarca	El Alto	1000 m A
762	<i>spiniflora</i> var. <i>peitscheriana</i>	Cordoba	Cruz del Eje	700 m A
763	<i>thionantha</i> var. <i>erythrantha</i>	Salta	Paranilla-Arca Yaco	3000 m A
771	<i>nigricans</i> var. <i>albispina</i>	Salta	Escoype	2700 m A
772	<i>thionantha</i> var. <i>munita</i>	Salta	Cerro Zorrito	2600 m A
773	<i>saltensis</i> var. <i>nealeana</i>	Salta	Cerro Zorrito	3000 m A
778	<i>haagei</i> var. <i>Berque</i>	Potosi	Berque	3700 m B
777	<i>haagei</i> var. <i>crassa</i>	Potosi	Berque	3700 m B
792	<i>haematantha</i> var. <i>jasimanensis</i>	Salta	Jasimana	3200 m A
793	<i>schreiteri</i> var. <i>riolarensis</i>	Catamarca	Rio Lara	3100 m A
794	<i>einsteinii</i> var. (<i>ps. -einsteinii</i>)	Salta	Que. del Toro	3000 m A
795	<i>grandiflora</i> var. <i>herzogii</i>	Tucuman	Tafi del Valle	2000 m A
802	<i>einsteinii</i> var. <i>aureiflora</i>	Salta	Salta	2400 m A
813	<i>aurea</i> var. <i>fallax</i>	La Rioja	Villa Union	1000 m A
814	<i>formosa</i> var. <i>hyalacantha</i>	La Rioja	Pinchas	1800 m A
815	<i>jajoiana</i> var. <i>fleischeriana</i>	Jujuy	Tumbaya	2600 m A
816	<i>haagei</i> var. <i>Tumbaya</i>	Jujuy	Tumbaya	2600 m A
817	<i>formosa</i> var. <i>rosarioana</i>	La Rioja	Carrizal	2800 m A
820	<i>formosa</i> var. <i>korethroides</i>	Jujuy	Abra de Pives	4000 m A

Lobivia

Collection numbers - R -

Arranged by
locations

A r g e n t i n a

Catamarca

146	haematantha var. hualfinensis	Hualfin	2600 m
146a	haematantha var. hualfinensis (hualfinensis var. australis n.n.)	Hualfin	2000 m
147	thionantha var. glauca	Hualfin Belen	1600 m
148	thionantha var. aurantiaca	Andalgala	3000 m
151	grandiflora var. longispina	Agua de las Palomas	2000 m
151a	grandiflora var. crassicaulis	Andalgala-Estancia	1800 m
151b	grandiflora	Andalgala	2200 m
152	aurea var. shaferi	Andalgala	1100 m
153	huascha var. rubriflora	Sierra Ancasti	1000 m
229	huascha var. robusta	Hualfin	2400 m
230	haematantha var. hualfinensis	Nacimientos	2500 m
525	grandiflora var. lobivoides	Totoral	1200 m
528	aurea var. depressicostata	La Puerta	1600 m
526a	grandiflora	El Rodeo	2000 m
527	aurea var. dobeana	Ancasti	1800 m
528	formosa var. bruchii (rosarioana var. rubriflora)	Poman	3000 m
570	thionantha var. catamarcensis	Punta Balasto	2600 m
711	aurea var. depressicostata	Catamarca	1400 m
758	grandiflora var. pumila	Agua Blanca	1400 m
759	thionantha var. variiflora	Amaicha	2700-3000 m
761	spiniflora var. macrantha	El Alto	1000 m
793	schreiteri var. riolarensis	Rio Lara	3100 m

Cordoba

101	aurea	Sierra Chica	1100 m
109	spiniflora	Sierra Grande	1000 m
710	aurea var. albiflora	Piedrita Blanca	500 m
711b	aurea var. sierragrandensis	Sierra Grande	1600-1800 m
711c	aurea	Cordoba	1000 m
711d	aurea var. Tulumba	Tulumba	700 m
760	spiniflora var. klimpeliana	La Higuera	700 m
762	spiniflora var. peitscheriana	Cruz del Eje	700 m

A r g e n t i n a

Jujuy

026	haematantha var. rebutioides	Volcan	2200 m
027	haematantha var. rebutioides	Tilcara	2500 m
030	haematantha var. densispina	Tumbaya	2300 m
031	ferox	Que. de Humahuaca	2600 m
033	jajoiana var. nigrostoma	Maimara	2500 m
035	haagei	Que. de Humahuaca	3300 m
036	jajoiana var. elegans	westl. Tilcara	3000 m
037	marsoneri	Humahuaca	3000 m
037a	marsoneri var. iridescens	Humahuaca	3500 m
038	marsoneri var. iridescens	Humahuaca	3500 m
043	formosa var. tarijensis	Humahuaca	3800 m
092	pugionacantha	La Quiaca	3600 m
093	marsoneri var. iridescens	Aguilar	4000 m
172	ferox var. longispina	La Quiaca	3600 m
173	chrysochete	La Quiaca Sta. Victoria	4000 m
176	pugionacantha var. corrugata	Yavi	3500 m
213	jajoiana	Volcan	2300 m
214	euanthema	Volcan	3000 m
215	chrysochete var. markusii	Volcan	3200 m
217	jajoiana var. paucicostata	Purmamarca	3000 m
218	jajoiana var. (glauca)	Abra de Pives	3000 m
219	haematantha var. rebutioides	Abra de Pives	2800 m
331	ferox var. longispina	La Quiaca	3600 m
332	ferox var. longispina	La Quiaca	3600 m
333	haagei var. eos	Tafna	3700 m
333a	haagei var. pelzliana	Tafna	3600 m
333b	haagei var. lange Stacheln	Tafna	3700 m
333c	haagei var. rosa Blüte	Tafna	3700 m
334	steinmannii var. major	Tafna	3600 m
335	pygmaea	Yavi	3500 m
335a	pygmaea var. Tafna	Tafna	3700 m
502	haagei var. elegantula	Rio San Juan de Oro	3700 m
507	haagei var. Sta. Catalina	Santa Catalina	3800 m
507a	haagei var. dick	Santa Catalina	3800 m
508	atrovirens var. Sta. Ana	Santa Ana	3500 m
508a	pygmaea var. tafnaensis	Tafna	3800 m
509a	einsteinii var. brachyarthra	Chani	4200 m

Jujuy

524	haematantha var. rebutioides = 219	Chani	3900 m
577	haagei var. Purmamarca	Purmamarca	3300 m
578	einsteinii var. gonjianii	Tilcara	3500 m
579	pygmaea var. Aguilar	Mina Aguilar	3900 m
580	jajoiana var. fleischeriana	Volcan	2400 m
585a	haematantha var. albolanata	Purmamarca	2200 m
690	nigricans var. carmeniana	Caspala	3100 m
690a	haagei var. Caspala	Caspala	3300 m
692	ferox	Caspala	3200 m
693	jajoiana var. caspalasensis	Caspala	3200 m
698	marsoneri	Humahuaca	3100 m
700	euanthema var. tilcarensis	Tilcara	3000 m
700a	atrovirens var. ritteri	Aguilar	4000 m
701	jajoiana var. aurata	Punta Corral	3700 m
750	haagei var. Aparzo	Aparzo	4000 m
751	einsteinii var. lanata	Abra de Pives	4000 m
752	haagei var. Chani	Abra de Pives	4000 m
815	jajoiana var. fleischeriana	Tumbaya	2600 m
816	haagei var. Tumbaya	Tumbaya	2600 m
820	formosa var. korethroides	Abra de Pives	4000 m

La Rioja

122	huascha	Famatina	1500-2000 m
122a	huascha var. calliantha	Cuesta Miranda	3000 m
122b	huascha	Famatina	1500 m
127	famatimensis	Famatina	3000-3500 m
128	formosa var. ingens	Andalgala	2500 m
128a	formosa var. velascoensis n.n.	Sierra Velasco	2800 m
129	formosa var. rosarioana	Famatina	3000 m
136	aurea var. catamarcensis	Sierra Velasco	1000 m
565	formosa var. hyalacantha	Pinchas	2400 m
711a	aurea var. fallax	Malanzan	1100 m
813	aurea var. fallax	Villa Union	1000 m
814	formosa var. hyalacantha	Pinchas	1800 m
817	formosa var. rosarioana	Carrizal	2800 m

Mendoza

547	formosa	Que. del Toro	2600 m
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A r g e n t i n a

Salta

005	chrysantha	Puerta Tastil	3000 m
013	haematantha var. molinensis	Piedra de Molino	3700 m
014	nigricans	Cachipampa	3700 m
015	formosa var. nivalis	Cachipampa	3800 m
016	saltensis var. zapallarensis	Cachipampa Amblayo	3500 m
017	haematantha var. kuehnrichii	Cachipampa	3500 m
019	haematantha var. amblayensis	östl. Amblayo	2800 m
022	thionantha var. chionantha	Cachipampa Cachi	2300 m
025	haematantha var. elongata	Cachi	2300 m
047	aurea var. callochrysea	Cafayate Alemania	1200 m
048	thionantha	Cafayate	1200 m
157	haematantha var. chorrillosensis	Chorrillos	2600 m
158	einsteinii var. aureiflora	Que. del Toro	2600 m
161	chrysantha var. hypocyrtia	Cachinal	4000 m
162	nigricans var.	La Poma	4000 m
163	einsteinii var. atrospinosa	Cachinal	4100 in
165	haematantha	Cachi	2500 3000 m
168	saltensis var. pseudocachensis	Escoype	2300 m
177	saltensis	Cafayate Alemania	2300 m
221	haematantha = 165	Angastaco	2600 m
231	thionantha var. brevispina	Cafayate	1700 m
238	haematantha var. kuehnrichii	La Poma	3600 m
238a	haematantha var. antennifera	Potrero	3500 m
239	haematantha var. amblayensis (amblayensis var. albispina)	südl. Amblayo	2300 m
484	haagei var. nazarenoensis	Nazareno	3350 m
492a	steinmannii var. christinae	Nazareno Rodeo	3500 m
512	chrysochete var. minutiflora	Iruya-Sta. Victoria	3500-4200 m
513	tiegeliana var. cinnabarina	Rodeo	2800-3300 m
514	sanguiniflora	Sta. Victoria	2500-2700 m
515	atrovirens var. haefneriana	Sta. Victoria	3500 m
516	jajoiana var. pungens	Trigohuaico	3000-3300 m
517	sanguiniflora var. duursmaiana	Trigohuaico	3000 m
520	atrovirens var. ritteri	Sta. Victoria	3200 m
522	einsteinii var. aureiflora	Que. del Toro	2700 m
572	thionantha var. ferrarii	Sierra de Quilmes	3500 m

A r g e n t i n a

Salta

573	formosa var. kieslingii	Sierra de Quilmes	4000 m
581	formosa var. nivalis	Chani	4300 m
582	sanguiniflora var. breviflora	Sta. Victoria	2800 m
584	chrysantha	Que. del Toro	2700 m
585	saltensis var. zapallarensis	Cachipampa	3500 m
662	saltensis var. multicosata	Cuesta de Lajar	1900 m
680	einsteinii var. elegans	Yacones	2600 m
689	haagei var. mudanensis	Cerro Mudana	3500-4300 m
691	chrysochete var. subtilis	Santa Ana	3300 m
702	jajoiana var. nidularis	Truya	3300 m
709	huascha var. walteri	Escoipe	2800 m
709a	haematantha var. viridis	Rio Yacuchuya	2500-2800 m
763	thionantha var. erythrantha	Paranilla-Arca Yaco	3000 m
771	nigricans var. albispina	Escoype	2700 m
772	thionantha var. munita	Cerro Zorrito	2600 m
773	saltensis var. nealeana	Cerro Zorrito	3000 m
792	haematantha var. jasimanensis	Jasimana	3200 m
794	einsteinii var. (ps. einsteinii)	Que. del Toro	3000 m
802	einsteinii var. aureiflora	Salta	2400 m

San Juan

547a	formosa var. uebelmanniana	Arrequintin	3000 m
557	famatimensis var. sanjuanensis	San Juan	1700 m
557a	famatimensis var. jachalensis	Jachal	1200 m

San Luis

112	aurea var. quinesensis	Quines	1000 m
116	aurea var. leucomalla	Sierra de San Luis	1200 m
117	aurea	San Martin	1000 m

Santiago de Estero

711e	aurea var. tortuosa	Ojo de Agua	700 m
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A r g e n t i n a

Tucuman

169	formosa var. bruchii	Tafi del Valle	2000 m
170	schreiteri	Tafi del Valle	2000 m
171	schreiteri var. stilowiana	Infernillo	3000 m
708	formosa var. amaichensis n.n.	Amaicha	2800 m
795	grandiflora var. herzogii	Tafi del Valle	2000 m

B o l i v i a

Chuquisaca

062	<i>cinnabarina</i>	Sucre	2800 m
062a	<i>cinnabarina</i> var. <i>gigantea</i> n.n.	Sucre	3000 m
062b	<i>cinnabarina</i> var. <i>zudanensis</i>	Zudanez	2500 m
062c	<i>cinnabarina</i> var. <i>gracilis</i> n.n.	Otuyo	3000 m
078	<i>lateritia</i>	Camargo	2700 m
083	<i>Pugionacantha</i> var. <i>culpinensis</i>	Culpina	3000 m
303	<i>lateritia</i> var. <i>rubriflora</i>	Camargo	3300 m
306	<i>lateritia</i> var. <i>rubriflora</i>	Camargo Culpina	2800 m
306a	<i>lateritia</i> var. <i>Impora</i>	Impora	3000 m
307	<i>ferox</i>	Camargo	3300 m
311	<i>steinmannii</i> var. <i>camargoensis</i>	Camargo	3200 m
313	<i>atrovirens</i> var. <i>huasiensis</i>	Inca Huasi	3300 m
313a	<i>atrovirens</i> var. <i>huasiensis</i>	Yuquina	3200 m
485	<i>atrovirens</i> var. <i>raulii</i>	Rio Honda	3200 m
486	<i>steinmannii</i> var. <i>applanata</i>	Rio Honda	3600 m
490	<i>lateritia</i> = 78	Villa Abecia	2800 m
630	<i>pygmaea</i> var. <i>minor</i>	Yuquina	3600 m
631	<i>Pygmaea</i> var. <i>diersiana</i>	Yuquina	3200 m
632	<i>atrovirens</i> var. <i>yuquinensis</i>	Yuquina	3200 m
633	<i>Pygmaea</i> var. <i>atrovirens</i>	Salitre	3200 m
635	<i>rauschii</i>	Yuquina	3100 m
636	<i>Pugionacantha</i> var. <i>salitrensis</i>	Salitre	3200 m
637	<i>formosa</i> var. <i>randallii</i>	Camargo-Paicho	3300 m
638	<i>chrysochete</i>	Culpina-Chunchuli	3200 m
639	<i>Pugionacantha</i> var. <i>haemantha</i>	Inca Huasi	3200 m
642	<i>haagei</i> var. <i>canacruzensis</i>	Cana Cruz-Camargo	3700 m
644	<i>steinmannii</i> var. <i>leucacantha</i>	La Cueva	3700 m
645	<i>haagei</i> var. <i>Pallida</i>	La Cueva	3500 m
646	<i>Pygmaea</i> var. <i>friedrichiana</i>	La Cueva	3500 m
647	<i>Pugionacantha</i> var. <i>culpinensis</i>	La Cueva	3700 m
737	<i>Pugionacantha</i> var. <i>culpinensis</i>	Rio Honda	3300 m
742	<i>Pygmaea</i> var. <i>violaceostaminata</i>	La Cueva	3000 m
743	<i>steinmannii</i> var. <i>tuberculata</i>	La Cueva	3000 m

B o l i v i a

Cochabamba

054	acanthoplegma	Cliza	2500 m
057	Maximiliana var. caespitosa	Cochabamba	3500 m
058	acanthoplegma var. oligotricha	Cuchu Punata	2600 m
188	calorubra var. pojoensis	Pojo	2900 m
193	calorubra var. grandiflora	Mizque	2200 m
197	caineana	Rio Caine	2500 m
197a	caineana var. albiflora n.n.	Capinota	3500 m
200	backebergii var. oxyalabastra	Tapacari	3400 m
204	maximiliana var. durispina	Tapacari	3700 m
252	pentlandii	Challa	3500 m
257	acanthoplegma	Ansaldo	3000 m
281	acanthoplegma	Vacas	3000 m
262	acanthoplegma var. oligotricha	Colomi	3000 m
264	backebergii var. laeae	Rio Caine	3000 m
285	cinnabarina var. grandiflora	Padilla	2300 m
279	cinnabarina var. draxleriana	Aiquile	2600 m
457	acanthoplegma var. roseiflora	Angosturo	2600 m
482	pentlandii	Capinota	3200 m
463	calorubra var. mizquensis	Vila Vila-Rio Caine	3200 m
463a	calorubra	Totora	3000 m
608	maximiliana var. caespitosa	Cocapata	3500 m
610	calorubra var. mizquensis	Santiago	3000 m
622	maximiliana var. caespitosa	Piscomayo	4000 m
667	acanthoplegma var. pilosa	Cerro Q'ara Q'ara	3100 m
672	acanthoplegma	Tarata	3200 m
735	maximiliana var. violacea	Ayopaya, Altamachi	3400-3700 m

La Paz

201	Pentlandii	Altiplano	3800-4200 m
202	maximiliana	Lago Titicaca	3800-4500 m
203	maximiliana var. hermanniana	La Paz	3800-4000 m
205	schieliana var. quiabayensis	Quiabaya	3600 m
206	maximiliana var. charazanensis	Charazani	4000 m
207	schieliana	Chuma-Consata	3000 m
452	maximiliana var. miniatiflora	Inquisivi	3500-4000 m
454	steinmannii	Eucaliptos	4000 m
456	backebergii	La Paz	3000-3500 m
666	formosa var. bertramiana	Comanche	4000 m

B o l i v i a

Oruro

208	steinmannii = 454	Eucaliptos	4000 m
208a	atrovirens var. haefneriana	bei Llallagua	3800 m
209	ferox	Oruro	4100 m
210	haagei var. orurensis	Oruro	4100 m
453	formosa var. orurensis	Oruro	4000 m

Potosi

070	pugionacantha var. rossii	Huari Huari	3800 m
071	steinmannii var. costata	Potosi	4000 m
073	cinnabarina var. walterspielii	Huari Huari	3600 m
074	ferox var. potosina	Cucho Ingenio	3700 m
211	ferox var. longispina	Tupiza	3000 m
295	haagei var. violaseens	Cucho Ingenio	3700 m
295a	haagei var.	Cucho Ingenio	3700 m
298	steinmannii var. parvula	Cucho Ingenio	3800 m
297	steinmannii var. rauschii	Huari Huari	3600 m
298	pentlandii	Potosi	4000 m
299	pugionacantha var. versicolor	Cucho Ingenio	3600 m
300	steinmannii var. cincinnata	Cucho Ingenio	3600 m
301	pygmaea var. polypetala	Cucho Ingenio	3700 m
304	haagei var. Cucho Ingenio	Cucho Ingenio	3600 m
515a	atrovirens var. haefneriana	Llallagua	4000 m
515b	atrovirens var. haefneriana	Cucho Ingenio	3700 m
576	pygmaea var. Chaci	Chaci	4000 m
623	pentlandii	Potosi	4000 m
624	ferox var. potosina	Don Diego	3600 m
625	pentlandii	Potosi	3800 m
673	ferox var. longispina	Uyuni-Tupiza	4000 m
873a	lateritia var. kupperiana	Tupiza	3500 m
674	lateritia var. cotagaitensis	Cotagaite	3000 m
676	pygmaea var. diersiana	Tupiza,	3500 m
676a	pygmaea var. knizeii	Challapata	3800 m
745	haagei var. Talina	Talina	3600 m
746	lateritia var. citriflora	Talina	3300 m
776	haagei var. Berque	Berque	3700 m
777	haagei var. crassa	Berque	3700 m

B o l i v i a

Santa Cruz

065	<i>cinnabarina</i> var. <i>draxleriana</i> (<i>draxleriana</i> var. <i>minor</i> n.n.)	Santa Ana	2300 m
180	<i>arachnacantha</i>	Samaipata	2000 m
184	<i>arachnacantha</i> var. <i>densisetata</i> (var. <i>vallegrandensis</i>)	Valle Grande	2100 m
186	<i>arachnacantha</i> var. <i>densisetata</i>	Valle Grande	2100 m
272	<i>calorubra</i> var. <i>megalocephala</i>	Straße bei Pojo	2800 m
273	<i>arachnacantha</i> var. <i>torrecillasensis</i>	Comarapa	2200 m
608	<i>arachnacantha</i> var. <i>sulphurea</i>	Pasorapa	2300 m

Tarija

084	<i>tiegeliana</i>	Tarija	2200 m
084a	<i>tiegeliana</i> var. <i>ruberrima</i>	Tucumilla	2600 m
090	<i>tiegeliana</i> var. <i>pusilla</i>	Uriondo	2000 m
091	<i>atrovirens</i> var. <i>yuncharasensis</i>	Yunchara	3200 m
323	<i>tiegeliana</i> var. <i>flaviflora</i>	Angostura	1900 m
329	<i>ferox</i> var. <i>longispina</i>	Cieneguillas	3100 m
335b	<i>pygmaea</i> var. <i>iscayachensis</i>	Iscayachi	3800 m
493	<i>atrovirens</i> var. <i>grün</i>	Iscayachi	3500 m
494	<i>steinmannii</i> var. <i>rubriflora</i> n.n.	Iscayachi	3800 m
497	<i>chrysochete</i> var. <i>tenuispina</i>	Iscayachi	3500 m
498	<i>cardenasiana</i>	östl. Tarija	2300 2400 m
499	<i>tiegeliana</i>	Santa Ana	2500 m
500	<i>pugionacantha</i> var. <i>cornuta</i>	Yunchara	3900 m
500a	spec. nov.	Yunchara	3900 m
501	<i>haagei</i> var. <i>crassa</i>	Abra de Sama	3800 m
506	<i>atrovirens</i> var. <i>pseudoritteri</i>	Abra de Sama	3800 m
506a	<i>pygmaea</i> var. <i>Iscayachi</i>	Iscayachi	3800 m
648	<i>chrysochete</i>	Iscayachi Sama	4000 m
650	<i>atrovirens</i> var. <i>zecheri</i>	Pueblo Viejo	3600 m
651	<i>pugionacantha</i> var. <i>cornuta</i>	Curque	4000 m
652	<i>tiegeliana</i> = 64	Santa Ana	2100 m
659	<i>formosa</i> var. <i>tarijensis</i>	Iscayachi	3700 m
660	<i>pygmaea</i> var. <i>colorea</i>	Abra de Sama	3800 m
744	<i>steinmannii</i> var. <i>melanocentra</i>	Iscayachi	3600 m

P e r u

Apurimac

408	maximiliana var. westii	Andahuaylas	3300 m
409	maximiliana var. intermedia	Challuanca	3000 m

Arequipa

433	pampana	Misti	3300 m
446	pampana	Pampa de Arrieros	3700 m

Ayachuco

405	tegeleriana var.	Ayachuco	3500 m
407	zecheri	Huanta-Ayachuco	2400 m
443	tegeleriana var. incuiensis	Incuyo	3700 m

Cuzco

412	maximiliana var. corbula	Cuzco	3500 m
413	hertrichiana	Cuzco Ruinen	2900 m
414	hertrichiana (minuta)	Ollantaytambo	2700 m
415	hertrichiana (larabei)	Ollantaytambo	2800 m
416	hertrichiana (echinata)	Ollantaytambo	2900 m
418	hertrichiana (incaica)	Urubamba	3300 m
419	hertrichiana var. lauii	Urubamba	3000 m
420	hertrichiana (incaica)	Pisac	3000 m
421	hertrichiana (divaricata)	Huambutio	3000 m
422	schieliana var. leptacantha	Paucartambo	3000 m
423	hertrichiana var. simplex	Huambutio	2900 m
424	maximiliana var. corbula	Ocongate	3400 m
425	hertrichiana (huilcanota)	Urcos	3000 m
426	maximiliana var. sicuaniensis	Sicuani	3700 m

Huancavelica

396	wrightiana	La Mejorada	3100 m
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P e r u

Junin

394	tegeleriana	Tarma	3500 m
395	tegeleriana var.	Incahuasi	3200 m

Lima

387	tegeleriana var. akersii	Churin-Oyon	3500 m
387a	pampana var. borealis	Churin-Oyon	3500 m

Moquegua

866a	pampana (glaucescens Ritt.)	Tarata	3800 m
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Species and Varieties described

by Walter Rausch

Sorted according to genera species varieties

The following abbreviations are used:

A.	Acanthocalycium
Ayl.	Aylostera
Dig.	Digitorebutia
E.	Echinopsis
G.	Gymnocalycium
L.	Lobivia
N.	Notocactus
P.	Parodia
R.	Rebutia
S.	Sulcorebutia
Teph.	Tephrocactus
Tr.	Trichocereus
W.	Weingartia

K.u.a.S. Kakteen und andere Sukkulente

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A. aurantiacum Rausch	K.u.a.S. 19(05):1968, 92	148
A. ferrarii Rausch	Succulenta 55(05):1976, 82	572
Dig. nazarenoensis Rausch	Succulenta 58(08):1979, 186	484
E. mamillosa var. flexilis	K.u.a.S. 28(10):1977, 235	510
E. rauschii var. megaloccephala	K.u.a.S. 25(11):1974, 241-242	272
E. arachnacantha var. vallegrandensis	K.u.a.S. 26(01):1975, 1-2	184
E. kladiwaiiana	K.u.a.S. 23(10):1972, 265	447
G. alboareolatum	Succulenta 64(10):1985, 213	716
G. ferrari	K.u.a.S. 32(01):1981, 6-7	718
G. ritterianum	K.u.a.S. 23(07):1972, 180-181	126
G. tillianum	K.u.a.S. 21(04):1970, 66	227
G. uebelmannianum	Succulenta 51(04):1972, 62-64	141
L. acanthoplegma var.	Succulenta 53(08):1974, 150	054
L. acanthoplegma var. pilosa	K.u.a.S. 31(08):1980, 242-243	667
L. acanthoplegma var. roseiflora	K.u.a.S. 28(04):1977, 75	457
L. akersii	K.u.a.S. 24(02):1973, 25-26	387
L. amblayensis	K.u.a.S. 23(03):1972, 67-68	019
L. amblayensis var. albispinata	K.u.a.S. 23(03):1972, 68	239
L. arachnacantha var. densiseta	K.u.a.S. 19(03):1968, 49	186
L. atrovirens var. pseudoritteri	Lobivia 85 1985, 137	506
L. atrovirens var. yuncharasensis	Lobivia 85 1985, 137	091
L. aurea var. albiflora	Succulenta 58(07):1979, 162	710
L. aurea var. quinesensis	K.u.a.S. 17(06):1986, 107-108	112
L. aurea var. sierragrandensis	Lobivia 85 1985, 137	711b
L. aurea var. tortuosa	Lobivia 85 1985, 137-138	711e
L. caespitosa var. violacea	K.u.a.S. 30(07):1977, 161-162	735
L. cardenasiana	K.u.a.S. 23(02):1972, 32-33	498
L. chorrillosensis	K.u.a.S. 25(05):1974, 145-146	157
L. chrysantha var. hypocyrta	K.u.a.S. 23(11):1972, 292-293	161
L. chrysochete var. minutiflora	K.u.a.S. 28(04):1977, 74	512
L. chrysochete var. subtilis	Succulenta 59(03):1980, 54	691
L. cinnabarina var. grandiflora	K.u.a.S. 23(11):1972, 291-292	265
L. cornuta	Succulenta 51(03):1972, 42-43	500
L. draxleriana	Succulenta 50(10):1971, 193-194	279
L. echinata	K.u.a.S. 24(08):1973, 169-170	416
L. einsteinii var. atrospinosa	Lobivia 85 1985, 138	163
L. euanthema var. tilcarensis	Lobivia 85 1985, 138-139	700
L. famatimensis var. jachalensis	K.u.a.S. 28(12):1977, 289	557a
L. famatimensis var. sanjuanensis	K.u.a.S. 28(04):1977, 75	557

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L. fricii	K.u.a.S. 24(10):1973,	220-222 513
L. glauca var. paucicostata	Succulenta 50(09):1971,	169-170 217
L. grandiflora var. herzogii	Lobivia 85 1985,	159-160 795
L. grandiflora var. longispina	Lobivia 85 1985,	139 151
L. grandiflora var. pumila	Lobivia 85 1985,	139-140 758
L. haagei var. crassa	Lobivia 85 1985,	140 501
L. haagei var. elegantula	Lobivia 85 1985	140 502
L. haagei var. pelzliana	Lobivia 85 1985,	140 333a
L. haematantha var. jasimanensis	Lobivia 85 1985,	140 792
L. haematantha var. viridis	Lobivia 85 1985,	140-141 709a
L. hualfinensis	K.u.a.S. 19(04):1968,	67-68 146
L. hualfinensis var. fechseri	Succulenta 51(07):1972,	123-124 230
L. huascha var. robusta	Lobivia 85 1985,	141 229
L. intermedia	K.u.a.S. 23(10):1972,	263-264 409
L. jajoiana var. aurata	Lobivia 85 1985,	141 701
L. jajoiana var. caspalasensis	K.u.a.S. 28(04):1977,	75 693
L. jajoiana var. elegans	Lobivia 85 1985,	141 036
L. jajoiana var. nidularis	Lobivia 85 1985,	141 702
L. jajoiana var. pungens	Lobivia 85 1985,	141 516
L. kieslingii	K.u.a.S. 28(11):1977,	249-250 573
L. lateritia var. citriflora	Succulenta 59(02):1980,	30 748
L. lateritia var. cotagaitensis	K.u.a.S. 28(10):1977,	235 674
L. leptacantha	K.u.a.S. 23(08):1972,	207 422
L. markusii	K.u.a.S. 17(07):1966,	121-122 215
L. maximiliana var. durispina	Lobivia 85 1985,	141-142 204
L. mizquensis	K.u.a.S. 23(06):1972,	151 463
L. nigricans var. albispina	Lobivia 85 1985,	142 771
L. oxyalabastra Card. & Rausch	K.u.a.S. 17(04):1966,	76-77 200
L. pampana var. borealis	Lobivia 85 1985,	142-143 387a
L. pojoensis	K.u.a.S. 19(01):1968,	8 9 188
L. pojoensis var. grandiflora	K.u.a.S. 19(01):1968,	8 9 193
L. pugionacantha var. corrugata	Lobivia 85 1985,	143 176
L. pugionacantha var. haemantha	Lobivia 85 1985,	143-144 639
L. pygmaea var. knizeii	Lobivia 85 1985,	144 676a
L. pygmaea var. polypetala	Lobivia 85 1985,	144 301
L. pygmaea var. tafnaensis	Lobivia 85 1985,	144 508a
L. pygmaea var. violaceostaminata	Lobivia 85 1985,	144 742
L. quiabayensis	K.u.a.S. 19(02):1968,	22-23 205
L. rosarioana	K.u.a.S. 30(12):1977,	284-288 129

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<i>L. rosarioana</i> var. <i>rubriflora</i>	K.u.a.S. 30(12):1977, 286	528
<i>L. salitrensis</i>	Succulenta 53(04):1974, 42-43	636
<i>L. salitrensis</i> var. <i>flexuosa</i>	Succulenta 53(04):1974, 43	647
<i>L. saltensis</i> var. <i>multicostata</i>	K.u.a.S. 28(04):1977, 75	682
<i>L. saltensis</i> var. <i>zapallarensis</i>	Lobivia 85 1985, 144-145	016
<i>L. schreiteri</i> var. <i>riolarensis</i>	Lobivia 85 1985, 145	793
<i>L. sicuaniensis</i>	Succulenta 50(12):1971, 229	426
<i>L. simplex</i>	Succulenta 51(08):1972, 134-135	423
<i>L. spiniflora</i> var. <i>macrantha</i>	Lobivia 85 1985, 158	761
<i>L. steinmannii</i> var. <i>applanata</i>	Lobivia 85 1985, 145	486
<i>L. steinmannii</i> var. <i>leucacantha</i>	Lobivia 85 1985, 145-146	644
<i>L. steinmannii</i> var. <i>major</i>	Lobivia 85 1985, 146	334
<i>L. steinmannii</i> var. <i>melanocentra</i>	Lobivia 85 1985, 146	744
<i>L. steinmannii</i> var. <i>parvula</i>	Lobivia 85 1985, 146	296
<i>L. steinmannii</i> var. <i>tuberculata</i>	Lobivia 85 1985, 145	743
<i>L. thionantha</i> var. <i>erythrantha</i>	Lobivia 85 1985, 155	763
<i>L. thionantha</i> var. <i>munita</i>	Lobivia 85* 1985, 154	772
<i>L. tiegeliana</i> var. <i>ruberrima</i>	Succulenta 51(06):1972, 102	084a
<i>L. tiegeliana</i> var. <i>uriondoensis</i>	Succulenta 58(10):1979, 234	090
<i>L. versicolor</i>	K.u.a.S. 25(08):1974, 169-170	299
<i>L. glauca</i>	Succulenta 50(09):1971, 169-170	218
<i>L. zecheri</i>	Succulenta 50(08):1971, 148	407
<i>N. vanvlietii</i>	K.u.a.S. 21(05):1970, 89	378
<i>N. vanvlietii</i> var. <i>gracilis</i>	K.u.a.S. 21(05):1970, 90	375
<i>P. hausteiniana</i>	K.u.a.S. 21(03):1970, 45	192
<i>P. herzogii</i>	K.u.a.S. 32(02):1981, 30-31	707a
<i>P. malyana</i>	K.u.a.S. 20(01):1969, 8	156
<i>P. minuscula</i>	Succulenta 64(09):1985, 178,230	757
<i>Pyr. megliolii</i>	K.u.a.S. 25(10):1974, 220-221	559
<i>Pyr. pachacoensis</i>	K.u.a.S. 26(04):1975, 73-74	556
<i>Pyr. villicumensis</i>	K.u.a.S. 25(12):1974, 268	555
<i>R. fabrisii</i>	K.u.a.S. 28(03):1977, 52-53	688
<i>R. fabrisii</i> var. <i>aureiflora</i>	K.u.a.S. 28(03):1977, 53	687
<i>R. fabrisii</i> var. <i>nana</i>	Succulenta 64(05):1985, 101-102	688a
<i>R. margarethae</i>	K.u.a.S. 23(01):1972, 04-05	521
<i>R. (Ayl.) buiningiana</i>	K.u.a.S. 23(04):1972, 98-99	511
<i>R. (Ayl.) camargoensis</i>	Succulenta 55(03):1976, 42	311
<i>R. (Ayl.) froehlichiana</i>	Succulenta 54(12):1975, 226	649
<i>R. (Ayl.) fulviseta</i>	K.u.a.S. 21(02):1970, 29	319

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R. (Ayl.) heliosa	K.u.a.S. 21(02):1970, 30-31	314
R. (Ayl.) hoffmannii Diers et Rausch	K.u.a.S. 28(05):1977, 105-106	521a
R. (Ayl.) huasiensis	K.u.a.S. 28(02):1977, 25-26	313
R. (Ayl.) jujuyana	K.u.a.S. 24(07):1973, 147-148	220
R. (Ayl.) kieslingii	K.u.a.S. 28(08):1977, 177-178	694
R. (Ayl.) leucanthema	K.u.a.S. 28(06):1975, 125	305
R. (Ayl.) mamillosa	Succulenta 51(04):1972, 69-70	302
R. (Ayl.) padcayensis	K.u.a.S. 21(04):1970, 65	322
R. (Ayl.) pulchella	K.u.a.S. 23(12):1972, 340	320
R. (Ayl.) schatzliana	K.u.a.S. 26(11):1975, 244-245	640
R. (Ayl.) simoniana	K.u.a.S. 35(09):1984, 204-205	739
R. (Ayl.) sumayana	Succulenta 65(04):1986, 74-75	738
R. (Ayl.) supthutiana	K.u.a.S. 27(06):1976, 121-122	629
R. (Ayl.) tarijensis	K.u.a.S. 26(09):1975, 195-198	087
R. (Ayl.) wahliana	Succulenta 64(12):1985, 276-277	654
R. (Ayl.) zecheri	Succulenta 56(02):1977, 30	650
R. (Dig.) albopectinata	K.u.a.S. 23(09):1972, 236-237	312
R. (Dig.) brunescens	K.u.a.S. 23(09):1972, 235-236	480
R. (Dig.) canacruzensis	K.u.a.S. 27(03):1976, 49-50	642
R. (Dig.) carmeniana	K.u.a.S. 29(05):1978, 105-106	690
R. (Dig.) christinae	K.u.a.S. 26(07):1975, 145-146	492a
R. (Dig.) cincinnata	K.u.a.S. 27(01):1976, 04-05	300
R. (Dig.) diersiana	K.u.a.S. 26(02):1975, 25-28	631
R. (Dig.) diersiana var. atrovirens	K.u.a.S. 26(02):1975, 26	633
R. (Dig.) diersiana var. minor	Succulenta 58(11):1979, 258-259	630
R. (Dig.) eos	Succulenta 51(01):1972, 02-03	333
R. (Dig.) friedrichiana	Succulenta 55(06):1976, 103	646
R. (Dig.) iscayachensis	Succulenta 56(01):1977, 03	335b
R. (Dig.) mudanensis	K.u.a.S. 27(08):1976, 169-170	689
R. (Dig.) pallida	Succulenta 56(10):1977, 234	645
R. (Dig.) raulii	K.u.a.S. 31(06):1980, 170-171	485
R. (Dig.) yuquinensis	K.u.a.S. 31(10):1980, 307	632
S. vasqueziana	K.u.a.S. 21(08):1970, 102	284
S. cochabambina	Succulenta 64(07):1985, 152	275
S. crispata	K.u.a.S. 21(06):1970, 103	288
S. flavissima	K.u.a.S. 21(06):1970, 105	277
S. frankiana	K.u.a.S. 21(06):1970, 104	290
S. frankiana var. aureispina	Succulenta 53(01):1974, 3	473
S. krahni	K.u.a.S. 21(06):1970, 104	269

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S. losenickyana	K.u.a.S. 25(03):1974, 49 50	477
S. markusii	K.u.a.S. 21(06):1970, 103	195
S. mizquensis	K.u.a.S. 21(06):1970, 102	194
S. pampagrandensis	K.u.a.S. 25(05):1974, 97 98	466
S. santiaginiensis	K.u.a.S. 30(10):1979, 237 238	730
S. steinbachii var. australis	Succulenta 65(11):1986, 240	729
S. steinbachii var. horrida	K.u.a.S. 24(09):1973, 193 194	259
S. tarabucoensis	K.u.a.S. 15(05):1964, 91 93	066
S. taratensis var. minima	K.u.a.S. 19(06):1968, 112	196
S. unguispina	Succulenta 64(06):1985, 132	731
S. vasqueziana var. albispina	Succulenta 52(12):1973, 222	474
S. verticillacantha var. aureiflora	K.u.a.S. 23(05):1972, 123	479
S. verticillacantha var. cuprea	K.u.a.S. 23(05):1972, 124	476
S. alba	Succulenta 50(05):1971, 94 96	472
S. oenantha	Succulenta 50(06):1971, 112 113	465
Teph. malyanus	K.u.a.S. 22(03):1971, 43	428
Teph. weberi var. deminutus	Succulenta 65(12):1986, 251	241
Tr. vasquezii	K.u.a.S. 25(09):1974, 193 194	619
W. kargliana	K.u.a.S. 30(05):1979, 105 106	677

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According to Rep. Plant. Succulentarum XL (1989) appendix (08/1990 issue) the following information and/or corrections are necessary:

According to ICBN code art. 33,2 ex. 4 the following species and/or varieties are based on wrong basionyms:

Lobivia: *L. atrovirens* var. *huasiensis*, var. *raulii*, var. *yuquinensis*, var. *zecheri*; *L. haagei* var. *canacruzensis*, var. *mudanensis*, var. *pallida*; *L. nigricans* var. *carmeniana*; *L. pygmaea* var. *diersiana*, var. *friedrichiana*, var. *iscayachensis*, var. *minor*; *L. steinmannii* var. *camargoensis*, var. *christinae*, var. *cincinnata*, var. *rauschii*.

According to the code specified above these bibliographic errors do not make the combinations invalid.

The correct basionym would e.g. be "Rebutia (Aylostera) huasiensis Rausch"

The combination *Rebutia* (*Digitorebutia*) *eos* Rausch is invalid because of a huge error in the quotation of the publication of the basionym (correct: "Succulenta" instead of "Kakteen und andere Sukkulenten").

the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million (12.5% of the population).

There are a number of reasons for this increase. One of the main reasons is the growth of the public sector. The public sector has grown from 10.5 million in 1990 to 12.5 million in 2000, an increase of 20%.

Another reason is the increase in the number of people who are employed in the public sector. The number of people employed in the public sector has increased from 10.5 million in 1990 to 12.5 million in 2000, an increase of 20%.

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