

# Those pesky numbers in *Sulcorebutia*

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From the very beginning the genus *Sulcorebutia* has been well-documented by collectors in the field, and enthusiasts for this genus have benefited from the finds of a succession of intrepid souls who have trod the highways of Bolivia seeking out these wonderful plants in this wonderful genus. Among the first was Walter Rausch, who described many of his finds in the German society's journal (*Kakteen und andere Sukkulente*)

and the Dutch and Belgian society's journal (*Succulentia*). Other field collectors' numbers which became available from propagations of their plants were those of Alfred Lau in his travels in Bolivia, as well as the Bolivian botanist Martin Cárdenas, Wolfgang Krahn and others at that time. More recently another doughty explorer, Heinz Swoboda, showed an interest in this genus and brought back from Bolivia a succession of plants, which under the clever knife of Willi Fischer working at Cactus Centrum Oberhausen in Germany, became available to visitors to that nursery. Apart from Walter Rausch, Swoboda was the most prolific of collectors at the time and seemed to find things new with an amazing regularity.

He traveled to Bolivia and for sev-

eral years brought back plants from all over the *Sulcorebutia* area until his untimely death in a road accident in China, where he was collecting entirely different plants. His collections of *sulcorebutias* live on and grace many enthusiasts' glasshouses in Europe and further afield.

Some of the plants he collected were duplicates of earlier collections but were

sometimes somewhat different, emphasizing the variation in many of the species of this genus, which in some is boundless, while others, perhaps less widespread, show a remarkable sameness in their appearance.

When I wrote my book on this genus (Pilbeam, 1985), it was intended as a reflection of the current state of play at that time of the genus, i.e., what had been described and where, with a description and accompanying photographs to help enthusiasts identify what they had acquired. It has remained the only reference under one cover in English since then, although there has been much going on in the various cactus journals by way of new descriptions, new combinations and the like. There is now a new book on the genus published in 2000 by three German enthusiasts, Karl Augustin, Willi Gertel and



Figure 1. *Sulcorebutia swobodae* (HS 27).



Figure 2. *S. mariana* (HS 15).

Günter Hentzschel, but unfortunately it is only available in German. It gives a good account of the relationships of species, and indeed combines several former species beneath older names. Some of the various field collections that have been made in more recent times are variously allocated together with some older finds. Quite a few of Heinz Swoboda's undetermined numbers are also mentioned in the text, but many are not so included. At the end of the discus-

sion on various recognized species, there are several *sulcorebutias* left in limbo, identified merely by locality and field-collection number, and several HS numbers are included in this holding station.

English-speaking enthusiasts without knowledge of German have probably spent hours poring over the text, dictionary in hand, or persuading some German-speaking friend to translate parts of the narrative for their enlightenment or sometimes their bewilderment. By no means all the questions of relationships are answered, and no doubt discussion will continue on this subject for years to come as more



Figure 3. *S. albissima* ? (HS 24).

and more plants are brought to light and made available to avid collectors of things new, or maybe new, in this genus. One thing is clear—many enthusiasts for the genus do not accept the reduction in the 1999 *CITES Cactaceae Checklist* of this very individual genus beneath a broad concept of *Rebutia*. Right or wrong, the name still holds sway for many *Sulcorebutia* fans.

For the benefit of those who do not care to wade through the German text of the new book, the following are some of the changes that have taken place in it or recently in foreign-language journals and ratified in the book.



Figure 4. *S. kruegeri* (HS 41a).

*S. breviflora* var. *haseltonii* (Cárd.) Diers (1991), a new combination, has long spines and yellow flowers. It was formerly considered as being synonymous with the type.

Field numbers: Cárd. (Martín Cárdenas, Bolivia) 6222, 6223; HS (Heinz Swoboda, Austria) 144, 144a, KA (Karl Augustin, Austria) 217 217a; Lau (Alfred Lau, Germany/Mexico) 315; R (Walter Rausch, Austria) 198; RV (Roberto Vasquez, Bolivia) 372; WK (Wolfgang Krahn, Germany) 167.



Figure 5. *S. cylindricalvizcarrae*, white-flowered (HS 44a).

*S. breviflora* var. *laui* Diers (1991), a new variety formerly regarded as conspecific with the type, with short, pectinate spines and with yellow, magenta or white flowers. Field number: Lau 314.

*S. candiae* var. *kamiensis* (Brederoo & Donald) Augustin & Gertel (2000), previously *S. menesiesii* var. *kamiensis*, with yellow or stunning orange flowers. Field numbers: G (Willi Gertel, Germany) 130; HS188, 189, 189a, 191, 191a; KA 229, 230, 231, 232; Lau 974; R 607; RV 562.

*S. krugerae* var. *hoffmannii* (Back.) Augustin & Hentschel (2000), previously *Sulcorebutia hoffmanniana*, with red and yellow, or rarely all-red flowers. Field numbers: G 85, 194, 195; HS 90, 90a; KA 33; KK (Karel Knize, Peru) 1213; R 254, 275 in part.

*S. losenickyana* var. *chatajillensis* (Oeser & Brederoo) Augustin & Gertel (2000), previously *S. verticillacantha* var. *chatajillensis* (but see comments on the next variety, below), with close spination, small bodies and dark red flowers. Field numbers: G 42, 42a; FK (Franz Kühhas, Austria) 72; WF (Willi Fischer, Germany) 18.

*S. losenickyana* var. *vasqueziana* (Rausch) Augustin & Gerte!

(2000), previously *S. vasqueziana*, and still so, since the latter was described before *S. losenickyana* and so has priority at species rank. This and the previously mentioned variety as well as the type, *S. losenickyana* var. *loosenickyana*, if they are regarded as part of one species, should be reduced beneath *S. vasqueziana*, and no doubt someone will put this right in print soon. Field numbers: G 27; HS 72; JK (Johan Pot and Kik van Boxtel,

Netherlands) 74; KA 69; R 284, 474.

*S. mariana* var. *laui* (Brederoo & Donald) Augustin & Gertel (2000), previously *S. vizcarrae* var. *laui*, with more robust spination than the type. Field numbers: G 96, 97; HS 83; KA 43; lau 324.

*S. mentosa* var. *swobodae* (Augustin) Augustin (2000), previously *S. swobodae*, with soft, yellow or brown spination. Field numbers: G 63; HS 27, 27a; KA 171, 185; (*S. flavissima* is declared synonymous with *S. mentosa* var. *mentosa*).

*S. oenanthe* var. *pampagrlandensis* (Rausch) Augustin Gertel (2000), previously *S. pampagrlandensis*, with closer, more pectinate spination



Figure 6. *S. cylindricalvizcarrae*, pale-pink-flowered (HS 44a).





Figure 7. *S. vizcarrae*? (Lau 337).

than the type. Field numbers: G 16, 16a; HS 23, JD (John Donald, England) 163; JK 29, 30; KA 19; R 466.

*S. pasopayana* (F. Brandt) Gertel (1991), new species, previously considered referable to *S. pulchra* or *S. perplexiflora*. Field numbers: EH (Erich Haugg, Germany) 6235, 6236, 6237; EM (Ernst Markus, Austria) 356; G 161, 162; Lau 387; R 593).

*S. purpurea* var. *unguispina* (Rausch) Augustin & Gertel (2000), previously *S. unguispina*, smaller-growing and with much more reduced spination than the type. Field number R 731.

*S. steinbachii* var. *tunariensis* (Cárd.) Augustin & Gertel (2000), previously *S. tunariensis*, much less spiny than the type and with usually smaller heads, flowers red with orange throat. Field numbers: Cárđ. 5555; G 127; HS 132; KA 225; Lau 971; R 260; WK 223).

*S. tarabucoensis* var. *aureiflora* (Rausch) Augustin & Gertel (2000), previously *S. verticillacantha* var. *aureiflora*, tiny stems with yellow or red flowers with yellow throat. Field numbers: EH 6246; G 49, 153, 201.; JK 63, 185; R479.

*S. tarabucoensis* var. *callecallensis* (F. Brandt) Augustin & Gertel (2000), previously considered synonymous with the previous subspecies, and not that different, with small stems and similar flowers. Field numbers: EM 351; Lau 389; RH (Ralf Hillmann, Switzerland) 1570; VZ (Johan and Elisabeth de Vries, Netherlands) 56.

*S. tiraquensis* var. *aguilari* Augustin & Gertel (1999), beautifully spined in yellow or brown and remi-

niscient of *S. swoboda* in appearance, but the spines are not so silky-soft as in that species. Field numbers: G 176; He (Erwin Herzog, Germany) 94; HS 220; RH 797.

*S. tiraquensis* var. *lepida* (Ritter) Augustin & Gertel (2000), previously *S. lepida*, *S. totorensis* var. *lepida*, and *S. tiraquensis* var. *spiniosior*, with dark brown or green bodies and dark brown or yellow spines, and deep pink or very dark red flowers. Field numbers: FR (Friedrich Ritter, Germany/Chile) 369; G 74, 76, 76a, 177; HS 32; KA 159, 160; R 189, 190; WK 212.

*S. tiraquensis* var. *renatae* Hentschel & Beek (1999), a new variety with long, bristly, flexible, dark brown or yellow spines and dark red flowers.



Figure 8. *S. mentosa* (prev. *flavissima*) white-flowered (HS 48).

Field numbers: G 108, 198, 185, 222; He 1112, 113; RH 820, 821.

*S. tiraquensis* var. *totorensis* (Cárd.) Augustin & Gertel (2000), previously *S. totorensis*, large bodies with dark brown spines and deepest purple-red flowers. Field numbers: Cárd. 5494; G 111, 112, 114, 179, 180b; HS 149; KA 20, 22).

*S. verticillacantha* var. *taratensis* (Cárd.) Augustin & Gertel (2000), previously *S. taratensis*, *S. taratensis* var. *minima*, and *S. pojoniensis* nom. prov., with small dark bodies, close spination and deep pink flowers. Field numbers: Card. 5553; EH 7159, 7160, 7161; HS 147; KA 221; R 266; WK 713.

And as an afterthought, a new variety has recently (December 2000) been described by Willi Gertel in *Cactus & Co.*, viz., *S. markusii* subsp. *tintiniensis* Gertel, a smaller-stemmed form with close spination and deep pink to dark red flowers. Field numbers: G 140, 141, 142, 143, 144, 196, 197, 198; He 37, 38, 39, 40, 41; HS 57, 57a, 57b; RH 712, 713, 714, 715, 716, 717; US (?) 73, 74, 75, 76, 77, 78. In passing, Gertel mentions plants under the numbers EH 7139, 7140; G 35, 90; Lau

333; HS 64; R 195a, which, though similar, differ somewhat from *S. markusii* subsp. *markusii* but they are not considered part of this newly named subspecies.

Many of the above-mentioned plants are becoming available to enthusiasts through propagations, which with this genus's proclivity to offsetting is a relatively simple affair. Most commonly seen are Heinz Swoboda's numbers, as they have been commercially available, as mentioned above, for some years. Quite a few of these are particularly worthwhile plants for the collector, and I should like to draw attention to a few that have delighted this *Sulcorebutia* enthusiast at least.

HS 27. (Fig. 1) It is appropriate to start out of numerical order for the plant named for Heinz Swoboda, reduced in the recent book to *S. mentosa* var. *swoboda*. It is an unusually fine-spined, strokeable plant with spines in either yellow, or brown, and pink flowers (with the odd white-flowered sport), and stays solitary for some time before clustering, as most *Sulcorebutia*



Figure 9. '*S. jolantana*' nom. prov. (HS 68).



Figure 10. '*S. pedroensis*' nom. nud. (HS 76a) entirely obscured by flowers.

species do readily in cultivation.

**HS 13.** For many years this plant was considered quite erroneously to be *S. santiaginiensis* and marketed as such, to the confusion of recipients of plants under this number, for it was quite clearly referable to *S. albissima* species with variably colored spines from white through yellow to brown—as the picture taken in Willi Fischer's collection clearly shows. It was there-

fore unfortunately named as "albissima" (the whitest), but with whatever color spines it is a beautiful, strong-growing, large-stemmed plant, eventually forming a cluster of heads about tomato-size, and with flowers varying from pale pinkish purple to deepest lilac.

**HS 15** (Fig. 2) wrung my withers when I first saw it in Willi Fischer's collection, recently arrived, and clearly something quite different from anything I had seen before. It was subsequently named *S. mariana* and is regarded as a good species. For me it makes large individual dessert-apple-sized heads, with an attractive dark brown body color, and with that dark, dark red which is characteristic of the genus, as opposed to *Rebutia* in the narrow sense.



Figure 10. *S. albissima* (HS 100a).



Figure 11. *S. fischeriana* (HS 79).

**HS 24** (Figs. 3, 18) still mystifies me, as I have received plants under this number with spines varying from white, yellow with brown tips, to deep reddish brown. It has been referred to *S. albissima*, but the spination stands out from the body much more than most plants seen under this name. Whatever, it is a beautiful plant and worth growing.

**HS 41a.** This white-spined and more pectinate form of *S. cardenasiana* seems to give less trouble in cultivation—for me at least—than other more ordinary plants with slightly more correct spines in brown and yellow, which became available when the species was originally described. The flowers are always yellow, in either form.

**HS 44a** (Figs. 5, 6) has been ascribed to *S. cylindrica*, normally seen with yellow or purple-pink flowers and distinctly columnar in habit, sprawling if allowed to do so in cultivation. I acquired several plants when they first became available, and all but one had white flowers—the odd one had pale pink flowers. The plants have remained more globu-





Figure 13. *S. mentosa* var. *mentosa* (HS 104a).

lar and much thicker than I have seen in *S. cylindrica*. When it originally appeared it was referred to *S. vizcarrae*, as a white-flowered form, and it certainly resembles a plant I received from Alfred Lau (Lau 337, Fig. 7) in all but flower color. But the three authors of the recent book cast doubt on the identification of plants that have appeared in cultivation under the name *S. vizcarrae*, originally described (with a poor photograph) by Cárdenas in 1970 from near Mizque. As far as can be seen, it seems to resemble my plant of Lau 337, and my doubts about its placing remain.

**HS 48.** (Fig. 8) The photograph shows a white-flowered form of *S. flavissima* instead of the more usual pink flowers of this species, which unlike *S. swobodae* is not recognized at any rank in the recent book but is submerged beneath *S. mentosa*, hitherto regarded as usually having only dark blackish-brown spines. When I met Willi Fischer with his wonderful collection of plants, he showed me what he referred to as yellow spined forms of *S. mentosa*, as well as what he referred to as blackish-brown-spined forms of *S. flavissima*. I looked at him carefully, for I was not aware that Germans often exhi-

bited what I would regard as an Irish sense of humor, but I believe he was serious. The amalgamation of these two has long been in the cards, but also threatened was similar treatment for *S. swobodae* and *S. albissima* from the same area. My regards for the differences rather than the similarities (the definition of a splitter, I think) is gratified by the upholding of the name

"swobodae", albeit as a variety of *S. mentosa*, and the complete recognition of *S. albissima* in the German book as a good species. I shall certainly keep in my collection all my various plants of *S. albissima*, as well as the darkspined original *S. mentosa*, and the yellowspined, and other handsome variations, especially the white-flowered form—I have not yet rewritten the labels on these nor on the more spiny yellow form with Karel Knize distributed under his unvalidated catalogue name of "*S. cupreata*" (KK 1800), not referred to at all by the authors of the German book.

**HS 68** (Fig. 9) has borne the unofficial name of "*S. jolantana*" for some years. The plants are hand-



Figure 14. *Sulcorebutia* sp., between totora and Omereque, Bolivia (HS 151).



Figure 15. *S. augustinii* (HS 152).

some, densely-spined and large-growing, with solitary stems for many years before clustering haphazardly. The deep purplish-red flowers are splendid, and the plant seems to fit clearly within the species *S. purpurea*. The German authors leave it in limbo, acknowledging its individuality, and ally it with *S. purpurea*, although a relationship with *S. torotorensis* has also been suggested. I guess it will remain for the present labeled as "formerly *S. jolantana*". Again I say: whatever-it is a beautiful, individual plant worth growing.

**HS 76a** (Fig. 10). While I accept the referral to *S. alba* of HS 76 made available under the undescribed name "*S. pedroensis*", there is a mystery plant in my collection under the number HS 76a with quite different spination and dark, purple flowers, very freely produced, as the photograph shows. It is not mentioned in the German book.

**HS 79** (Fig. 11) was laudably named in honor of Herr Willi Fischer, who made many of these 118 numbers available to us all. It is a handsome, densely white-spined, slowgrowing species with solid red flowers, a fitting tribute to a propagator extraordinary.

**HS 100a** (Fig. 12) has been referred in the book to *S. albissima*, which I suppose is right, but it is a smaller-stemmed, very shortspined form with the spines clasping the body very closely and with no porrect centrals apparent.

**HS 125** has proved popular with enthusiasts for its shag-pile spination, reminiscent of *Cephalocereus senilis* in its manner of growth. It has been marketed under the invalid catalogue

name *S. senilis* but seems to be just a variation of *S. crispata* with unusually long spines. Nonetheless it is worth seeking out, as are many forms of *S. crispata*, a most variable spined plant. In passing, a "new" species which has been described recently in *Cactus & Co.*, *S. gemmae* Mosti & Roveda, seems to be no more than one of the smaller forms of *S. crispata*. Although the authors deny this, pointing out the development of central spines in cultivation and differences in the testa, its separation at species level seems tenuous.

**HS 130** is an unusually long-spined form of *S. krugerae* according to the book. It makes much larger heads in cultivation than normally seen in



Figure 16. *S. tiraquensis* var. *aguilarii* (HS 220).



this species and is an attractive amber yellow rather than the dull brown of older collections. **HS 140** is another that has been in cultivation for a while, worth seeking out, as it is a darkbodied, close-spined good-looking plant with fire-engine-red flowers. It comes from Torotoro, and the nearest similar looking plant from this area

is *S. verticillacantha* var. *cuprea*; a passing reference to this number is made under this name in the German book.

**HS 151** (Fig. 14) is a stunningly beautiful plant, which was questionably allied to *S. augustinii* (HS 152) when it was described in 1989 by Günter Hentzschel. It is listed separately in the book but not given a name. It comes from between Totora and Omereque, and in the



Figure 18. *S. albissima*? (HS 24) in variety in Willi Fischer's collection.



Figure 17. Variations of *S. swobodae* in Willi Fischer's collection.

same area to the north are *S. tiraquensis* (type) and *S. tiraquensis* var. *totorensis*, while to the south is *S. augustinii*. Hopefully someday someone will have the courage to attach at least a subspecific name to this deserving individual find.

And there are more, which I would be too demanding of space to expand on in this short article. Two photographs of *sulcorebutias* in the collection of Willi Fischer are included to show the incredible variation in some of the species. If these don't turn you on to this genus, then nothing will.

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