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A NEW CRASSULA FROM SOUTHERN NAMIBIA

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Reprinted from CACTUS AND SUCCULENT JOURNAL  
Vol. 64, No. 6, November-December, 1992  
*Made in United States of America*

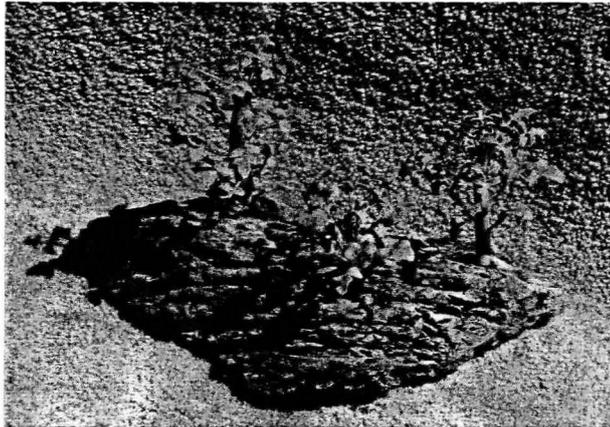
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## MORE SUCCULENTS IN BRONZE

As there has been considerable interest in the bronze reproductions of succulents by Valeria Minor (see this Journal, *Echeveria* cover, March-April, 1992, issue No. 2). Here we have some other works of this artist, on display and for sale at Abbey Garden nursery, 4620 Carpinteria Ave., Carpinteria, CA 93013. The plants pictured, clockwise from top left, are: *Senecio articulatus*, *Euphorbia* sp., *Euphorbia resinifera* and *Crasula* 'Buddha's Temple'. As we stated in the cover caption on page 54, these plants are solid bronze mounted on natural rock. The artist makes a

ter mold. When it cools she has an exact replica of the plant, once the plaster is removed. The green patina is achieved with application of an acid that speeds up oxidization. You've heard of the "lost-wax process" . . . well this is the "lost succulent" process so don't try it on your favorite plant!



## A NEW CRASSULA FROM SOUTHERN NAMIBIA

GRAHAM WILLIAMSON

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### *Crassula aurusbergensis* Williamson, sp. nov.

*C. ausense* P. C. Hutch. affinis sed foliis glabris apicibus inaequalibus lobatis, floribus sessilibus, calycibus non hirsutis sed papillatis, corollis non tubis sed cupulis differt.

**Typus.** Namibia, Sperrgebiet, summit of Aurus mountains, G. and F. Williamson 4416 (holotypus BOL; isotypus NBG).

Perennial plants with basal rosette of leaves growing in dense clumps arising from short woody stems; old leaves not deciduous. Individual plants up to 20 mm high excluding inflorescence and about 38 mm across. Leaves very fleshy, light green with numerous red to dark green spots on upper surface, glabrous, obovate to ovate, largest about 14 mm × 9 mm and at least 4 mm thick;

margin hyaline, minutely serrated with rounded teeth angled towards the leaf base and with the acute apex very unequally bilobed. Inflorescence up to 20 mm across with several dense dichasia terminal on a spike up to 15 mm long and 1 mm wide subtended from 2 or 3 basal lanceolate bracts. Calyx segments very fleshy, dark green, narrowly triangular, fused at the base, covered with raised shiny papillae and with a blunt apex. Corolla white, a shallow cup fused basally for about 1.8 mm; lobes 1.5 mm long, broadly oblong, slightly recurved, obtuse and without dorsal appendage. Stamens up to 2.5 mm long with a slight bulge towards base; anthers triangular, yellow, about 0.5 mm long. Squamae 0.7 × 0.5 mm, yellow, fleshy, transversely oblong with saddle-

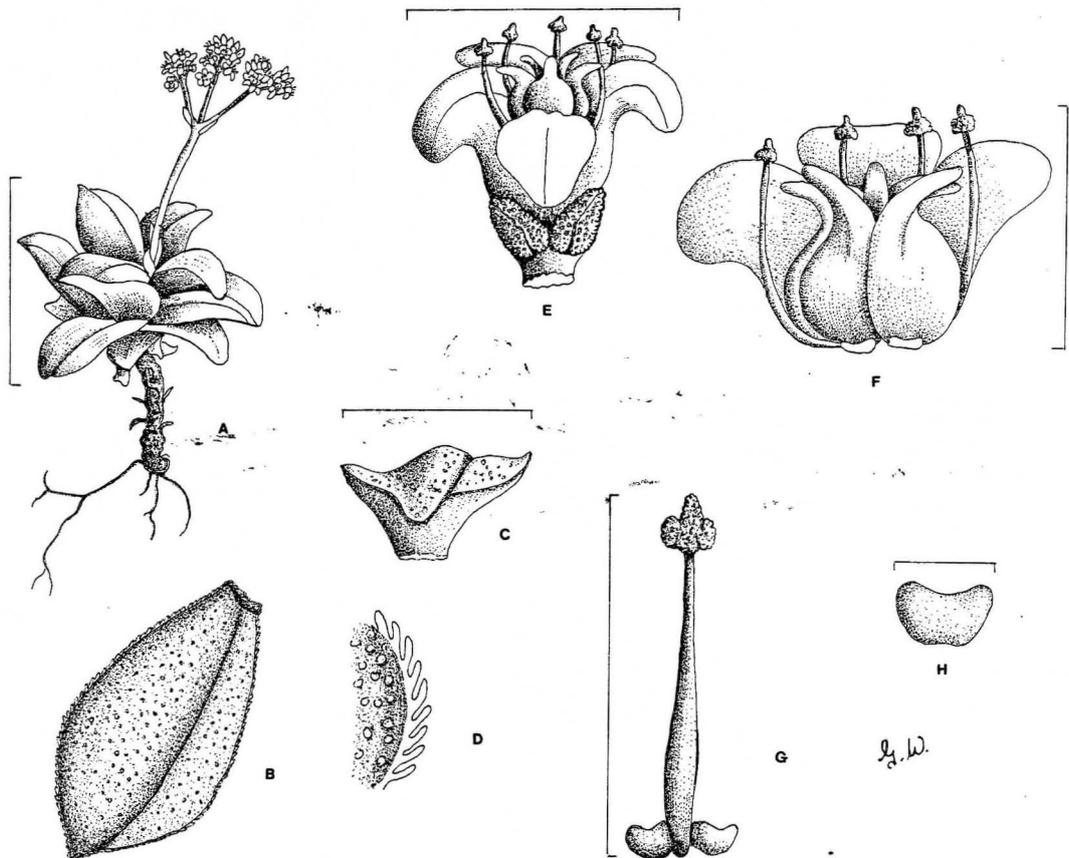


Fig. 1. *Crassula aurusbergensis* Williamson. A. Habit (scale 17 mm). B. Leaf from above (scale 14 mm). C. Leaf from front (scale 14 mm). D. Enlarged leaf margin, showing serrations and red spots (scale 4 mm). E. Flower (scale 4 mm). F. Flower with 2 lobes removed, showing stamens and carpels (scale 2.5 mm). G. Anther, stamen and basal squamae (scale 2.5 mm); squama (scale 0.6 mm). All from G. & F. Williamson 4416.



Fig. 2. *Crassula aurusbergensis* Williamson. The spots on the leaf, the white hyaline serrated border and the unequally lobed apex of the leaves are all visible.

shaped scallop on upper margin. Carpels subspherical, gradually constricting into recurved styles.

This miniature succulent *Crassula*, with its short stem, densely clustered fleshy leaves with the central veins unevenly placed, is best keyed into Sect. *Argyrophylla* (Schonl.) Tölken. To date it is only known from south-facing protected rock crevices on the summit (1,082 m) of the Aurus Mountains in southern Namibia. This high massif runs in a northwesterly direction and is situated about 60 km northwest of the bulge of the Orange River, which in this region is the northern border of South Africa. The mountains rise steeply out of the bleak dune desert about 60 km east of the sea and are host to a rich succulent flora. These montane desert plants owe their survival to fogs which roll in from the cold Atlantic seaboard and almost daily envelop the high summits. Close to the *Crassula* grows the rare *Aloe erinacea*, *Conophytum ernianum* and in tandem two unknown miniature tylecodons. On damp protected rock faces, banks of the desert orchid *Holothrix filicornis* were seen in full flower.

#### Acknowledgments

I would like to thank John Lavranos for bringing this new species to my notice. During our arduous expedition to the forbidden area, Derek Clarke, previously of Lüderitz and Conservator of the Department of Nature Conservation, guided us to the summit of the Aurusberg. The other members of our party are also gratefully acknowledged for their enthusiastic contribution to the collecting of plants, especially Steve Hammer of Belen, New Mexico. The 1989 expedition to the forbidden diamond area was made possible by the kind co-operation and permission of Mr. K. Whitelock, G.M. of CDM (Pty) Ltd., and Roger Burchell, the Senior Security Superintendent, Oranjemund, Namibia.

#### References

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## GROWING CACTI FROM SEED IN ARIZONA

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There are about as many methods for growing cacti and other succulents from seed as there are growers. The following method is fairly simple and is a good choice for the beginner.

If it is to be a first effort, try some of the easier-to-grow types. Write the name of each species on a plastic plant tag. I use a number code, keeping the information in a note book. It is much easier to look up "1-25" than to try and decipher sun-faded information from a plant tag, especially after a few months in the Arizona sunlight. The first number "1" would refer to the flat number, and the "25" refers to the packet of seeds that was planted in that space in the flat.

Next, decide which type of container is to be used. I prefer a rectangular plastic tub similar to a nursery flat. They are inexpensive, easy to clean, and hold up to the elements better than standard wooden flats. The softer more pliable plastic holds up better; it doesn't get brittle after a couple of seasons as the harder plastics tend to do.

Next, choose a good quality potting soil, screening out any large sticks, etc. Mix about two parts of sand to one part potting mix. I use silica (sandblasting) sand #30, larger grit if I can find it. The mix is then baked in a 375°F oven for 30 minutes, or, if a microwave oven is available, the mix may be "nuked" to 165°F and held for

five minutes using a temperature probe. Fill the flats with cooled planting mix from 1/2 to 2/3 full. If using plastic containers, be sure to drill enough holes in the bottom for adequate drainage.

Arrange the plant tags on their sides, pressing them into the soil so that they form a grid pattern of sorts. This prevents the seeds from floating to another area during watering. This is especially important if varieties and forms of the same species are being planted.

Lightly sprinkle seeds onto the soil, spreading them out as much as possible in their allowed space. Gently press them with a flat piece of wood or similar object so that they make good contact with the soil. Continue this process until planting is complete.

Now it is time for the top dressing, which is important, because, once the seeds germinate, the gravel will help anchor the seedlings until they grow enough roots to support themselves. It is advisable to bake the top dressing, using the same method as described above for the soil mix. It is a good idea to wash the gravel prior to baking. The gravel of choice can be found in pet stores that sell aquarium supplies; the smaller size is best.

Happy growing!

### ERRATA

The following corrections should be noted for the article appearing in *Cactus and Succulent Journal* (U.S.), Vol. 64(4), July-August, 1992 on page 169.

The article title reads "THE GENUS ECHINOCACTUS LINK & OTTO, SUBGENUS HOMALOCEPHALA (BRITTON & ROSE) STAT. NOV." This should be corrected by removal of the phrase "STAT. NOV." and insertion of the name BERGER.

The subheading at the beginning of the text should be altered to read *Echinocactus* Link & Otto, 1827; subgenus *Homalocephala* (Britt. & Rose) Berger, 1929.

The citation for this combination is *Echinocactus* Link & Otto subgenus *Homalocephala* (Britt. & Rose) Berger, *Kakteen*, p. 228, 1929.

In light of this combination (missed by myself), the first sentence of the text is not entirely true, and might be altered as follows. Eliminate the first four words "For the first time" and substitute "The name." Also, add the word "here" after the word "is." Resulting in the sentence "The name *Homalocephala* is here treated as a subgenus of *Echinocactus*, . . ."

I regret this error, and hope it will not distract from the point of the article, which is to emphasize the relationship of the four species discussed.

Submitted by David J. Ferguson, September 24, 1992