

Crassula ausensis

Studies in the Crassulaceae

1. *Crassula ausensis* P. C. Hutchison, sp. nov.

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FIG. 60. *Crassula ausensis* P. C. Hutchison, sp. nov. Plant in the collection of Dr. Meredith Morgan, Sr. Photo by author.

Some ten years ago a plant labeled *Crassula Hofmeyeriana* was observed in the collection of succulent plants cultivated by Dr. Meredith Morgan, Sr., of Richmond, California, who had obtained it from Wilhelm Triebner of Windhoek, Southwest Africa. It was a plant of unusually attractive form and was of special interest to me because it had been used as a parent in a series of hybridizations which Dr. Morgan had undertaken to improve the bloom and foliage of several of the more compact dwarf species of *Crassulas*. Subsequently I attempted to find the original description of this species in order to check its identity, only to discover that the name was a "nomen nudum" created by Dinter. Dinter's comments about *C. Hofmeyeriana* were very fragmentary** it grew in white quartz with *Anacampseros Dielsiana* Dtr. in the "Aus-Gububer Granitmassiv" ; it was a small plant with short, white-haired rosettes and white flowers. The Morgan specimen corresponded in floral and vegetative details with Dinter's remarks, and, although no locality data were given by him, the fact that it had come from Triebner seemed a favorable indication of its having been collected at or near Aus, which was not a prohibitive distance from Windhoek for such an energetic collector as Triebner. Without further data or material, however, the identity of the Morgan plant with the meagre description of Dinter could not be determined conclusively.

*University of California Botanical Garden (Berkeley) Contribution No. 123.

**"Ein neues *Anacampseros* (*A. Dielsiana* Dtr. mss.) fanden wir nicht selten in den Spalten weisser Quarzgänge, fast stets zusammen mit den kleinen kurzweichhaarigen weissblühenden Rosetten der *Crassula Hofmeyeriana* Dtr. mss."-in *Repert. Sp. Nov.* 23:19. 1923.

In 1950 in a shipment of *Crassulaceae* from Mr. H. Herre, Curator of the Stellenbosch Botanical Garden, South Africa, a plant was received at the University of California Botanical Garden (Berkeley) under the name *Crassula Hofmeyeriana* which resembled the Morgan plant in many respects. It had been collected by Dr. A. L. Geyer in the Warmbad District of Southwest Africa in 1948. I wrote to Dr. Louisa Bolus, Curator of the Bolus Herbarium at Cape Town, asking for information about the Dinter collections and inquiring whether they had sheets of his which carried this name. Dr. Bolus kindly forwarded three sheets, two of them containing collections of Dinter, with the name *Crassula Hofmeyeriana* Dtr. on the sheets in Dinter's handwriting. The plant which

we had in cultivation from Dr. Morgan was obviously the same species. Since the name *Crassula Hofmeyeriana* has not been validly published, this plant is described here as a new species. The name chosen by Dinter was probably in honour of the late Administrator of Southwest Africa, who was in office when Dinter was collecting there, but since Mr. Hofmeyer is not known to have been connected with this plant in any way, the more appropriate name *Crassula ausiensis* [*Crassula ausensis*] has been chosen.

Crassula ausiensis P. C. Hutchison, sp. nov. [*nom. invalid.* Art.61.1. The true name is *Crassula ausensis*]

Crassula Hofmeyeriana Dinter, nom. nud., in Reprert. Sp. Nov. 23:19. 1923. in obs.

Planta densa nana succulenta usque ad 9 cm. alta caulibus cortice fusco squamoso obtectis foliis subrosulatis vel decussatis obovatis vel maturatis oblongis 9-17 mm. longis 3-8 mm. latis marginibus ciliis crebris retrorsis dealbatis paginis eodem modo floccis ciliorum retrorsorum dealbatis inflorescentia terminali pedunculis gracilibus 2.5-8 cm. altis glomerulos floriferos subcapitados vel subpaniculatos gerentibus ciliis brevissimis retrorsis (ut apud bracteos calycemque) obtectis sepalis deltoideo-lanceolatis concavis ca. 2 mm. longis basi 1.3 mm. latis marginibus dorsisque (lacinia angusta subglabra marginibus parallela adjectaque tantum excepta) dense ciliatis petalis albis erectis patentibus vel apice recurvatis ca. 6 mm. longis ad apicem versus ca. 2 mm. latis carpellis ca. 2 mm. longis stylis brevibus recurvatis squamis luteis late obovatis concavisque 5 mm. longis apice truncate 5 mm. latis.

A dwarf, compact, freely branching succulent to 9 cm. high, forming densely clustered rosettes of leaves ; stems stout, knotty, covered with a scaly brown bark which usually splits in age to reveal the naked stem. Leaves closely approximate, subrosulate or, especially in younger plants, decussate, obovate to oblong when mature, 9 to 17 mm. long. 3 to 8 mm. wide, usually somewhat wider than thick, barely concave on inner face, convex on outer, the margins whitened by dense retrorse cilia, the surface whitened by tufts of retrorse cilia. Inflorescence terminal on peduncles arising from center of leaf rosettes. Peduncles slender, erect to somewhat lax, 2.5 to 8 cm. tall with 1 to 3 pairs of small lanceolate bracts and bearing a subcapitate to subpaniculate cluster of flowers. Peduncle, bracts and calyx covered with minute retrorse cilia. Calyx green or reddish-brown-tinged, the sepals erect, united at base, deltoid-lanceolate, ca. 2 mm. long, ca. 1.3 mm. broad at base, concave, the margins and back densely ciliate except for a narrow, longitudinal, subglabrous strip adjacent to margins. Corolla white, the petals oblanceolate-oblong, ca. 6 mm. long, ca. 2 mm. wide towards apex, united at base, erect, spreading or slightly recurved at apex. Stamens with filaments as long as petals. Carpels ca. 2 mm. long with short recurved styles, the squamae broadly obovate and concave, 5 mm. long and 5 mm. broad across truncate tip, yellow.

Known from a limited area in the vicinity of Aus, South West Africa, in crevices of white quartz outcrops at 1400 meters altitude, usually associated with *Anacampteros Dielsiana* Dieter. Flowering at least from March to June. Chromosome number: 7 pairs.

Aus, Dinter 3584 (BOL-type; UC-fragm.) ; Aus, Dinter 6165 (BOL) ; locality unknown, from Dr. Meredith Morgan, filed as voucher for chromosome count, Univ. Calif. Bot. Gdn. (Berkeley) No. 49. 2030 (BOL, US).

The type sheet bears three additional specimens of horticultural origin.* They are annotated "Stell, Univ. Gdns. No. 6231, for. April, Anno 1933," "Aus, Flor. March-April, 1930, petals 2½ lin. long, white, N. B. G. 1841/27, S. W. A, exped," and "B. H. 24047, Namaqualand, e hort Stell. Univ. Gdns. Flur. 17th April. 1947." Another sheet at the Bolus Herbarium (No. 24585) is labeled "South-West Africa: Warmbad, e hort Stellenbosch University Gardens."

Warmbad and Aus are some 300 kilometers apart by air. Until material is filed which is not of

horticultural origin, the citation of Warmbad as a locality for this species needs further confirmation.

All of the horticultural material cited above agrees with the type in every respect, however living material from Warmbad collected (?) by Geyer, 1948, differs from the type in many respects: the petals are shorter; the sepals longer; the bracts larger and more conspicuous; the leaves longer, thinner, often somewhat obliquely twisted, often somewhat convex on the surface, and the surface cilia less conspicuous and more evenly distributed. Until additional field material and data are available, the Geyer collection from Warmbad cannot be definitely placed with *C. ausiensis*. It may represent a form intermediate to another species or an extreme variation on the outskirts of the range of *C. ausiensis*. It is even possible that this plant may prove to be a hybrid originating in cultivation.

*Not shown in Fig. 62.

The species is unique for its stout, contorted stem covered with a scaly bark. It is evidently very slow-growing since the Morgan plant, which is at least 20 years old, is no more than 12 cm. in diameter and 8 cm. tall. The stout scaly stem is most conspicuous on this cultivated plant, but is evident also in the portions of plants which Dinter collected and dried. Peduncle length is somewhat greater in the cultivated material, as is usual in this genus; the Dinter collections have peduncles 2 to 5.5 cm. long. Also the peduncles are more spreading in the cultivated material - in the Dinter material the flowers are subcapitate. Young plants in cultivation at the University of California Botanical Garden (Berkeley) commonly have larger leaves and rosettes and the leaves are inclined to be obovate and less compactly arranged. In older plants, the decussate leaf arrangement becomes less apparent and the leaves become smaller and more oblong. Leaf shape and size are extremely variable on the same plant. The bracts may be basal (and larger), sub-basal, or inserted even 2/3 the distance up the peduncle, or in any combination of these positions.

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FIG. 61. *Crassula ausiensis* P. C. Hutchison. 1, habit; 2, flower; 3, flower with 2 sepals and petals removed; 4, petal; 5, sepal; 6 squamae. 1, nat. size; 2-6, x 5.



Fig 62. Holotype of *Crassula ausiense* P. C. Hutchison, at the Bolus Herb., Capetown, South Africa (Bol.). The central specimen is now deposited at the Univ. of Calif. Herb., Berkeley, California (U.C.).