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A re-evaluation of *Crassula*
obvallata L.

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A re-evaluation of *Crassula obvallata* L.

Summary: *Crassula obvallata* was described by Linnaeus, but without citing any original material. A neotype was designated in 1993 which is not in any serious conflict with the protologue and represents the element on which Schönland (1929) based his concept of *C. obvallata*.

Illustrations by the author.

Synopsis

Crassula obvallata L., *Mantissa plantarum* 1: 61. 1767; *Systema Naturae*, ed. 12, 2: 226. 1767. Simultaneous publication.

Globulea obvallata (L.) Haw., *Synopsis plantarum succulentarum*: 60. 1812.

Etym: A Latin adjective meaning fortified or surrounded by a wall or rampart. The meaning was not explained by Linnaeus, but possibly refers to the manner in which the calyx lobes surround the perianth, like a palisade.

T: Cape of Good Hope. No protologue cited illustrations or specimens.

NT(design. Heath in *Calyx* 3(4): 145. 1993) South Africa, E Cape, Stockenstrom District, Amatola mountain range, up the Katberg on the S side, on a dry, rocky bank, in shade, 3500-4000ft.; Oct 1925, R. A. DYER 108 (GRA). The specimen has leaves that are glabrous but minutely ciliate near their bases, fleshy, and somewhat leathery, with white flowers. It was preserved from a plant in cultivation at Grahamstown. (Fig. 1)

First description of Linnaeus (1767)

"*Crassula* foliis [with leaves] oppositis [opposite] sublanceolatis [more or less lanceolate] cultratis [of the form of knife-blades] sessilibus [without petioles] approximatis [very near to each other but not touching]."

Simillima est *C. cultratae*, & crassioribus maxime affinis ob flores, cuius petala alba spatulata, apice aristata globo, ut in *cultrata*, nec umquam explicanda; sed differt *Caule* palmari, brevioris patente. *Foliis* duplo longioribus majoribusque minime basi contractis, oppositoribus confertissimis nec spatio remotis, marginibus, imprimis recentiorum, tenuissime crenulatis, minime obliquis ut in illa.

A current interpretation of this is:

Most resembles *C. cultrata*, & most allied to the thicker ones on account of the flowers, the petals of which are white and spatulate, awned at the top with a globe,

as in *cultrata*, and never expanding; but it differs in having a shorter stem, the size of a palm [3 inches], and spreading. Leaves twice as long and larger, less narrowed at the base, more opposite and crowded, not spaced out, with margins very finely crenulated, especially when young, less oblique than in that [*cultrata*].

The phrase "awned at the top with a globe" is believed to refer to a tiny glandular waxy appendage attached just below the dorsal side of the petal tips of species of *Crassula* that were subsequently placed in section *Globulea* (Haw.) Harv.

It was known to Aiton (1811: 192) and Haworth (1812: 60) as the "Houseleek-leaved *Crassula*", and they recorded its introduction to cultivation in England as being in 1795.

The illustration of Trew (1779) is of a plant that resembles the neotype, but the many-branched inflorescence looks wrong (Fig. 2). De Candolle's illustration (1801) is a better match (Fig. 3).

Whilst the neotype plant has some differences from the Linnaean protologue, with leaves hardly cultrate, for instance, it is as close as any and helps to stabilise the application of the name in line with current usage.

Taxonomic status

The gathering *DYER 108* was referred by Tölken (1977: 552) to *Crassula nudicaulis* var. *nudicaulis*, but it does not have the subulate leaves which distinguish the typical form of that species. Apart from this gathering by Dyer, no live plants of this provenance are known to be in cultivation from the Amatola mountain range. Schönland seems to have drawn up his description from the herbarium sheet alone.

Schönland (1929) considered the species to be variable but distinct from *C. nudicaulis*. He chose the *DYER 108* gathering as representative: "a fair average type" as he called it. He also considered it to be the same as his own earlier described *C. subacaulis* Schönland & Baker f. (1898: 370). However, that is geographically remote from *DYER 108* in the Northern Cape at Steinkopf and considered by Tölken to be just a glabrous form of *C. erosula*.

The very broad concept of *C. nudicaulis* held by Tölken was justified by him because of apparent intermediates which he interpreted as natural variation as clines between populations, and, in the case of *C. obvallata*, he said that narrow-leaved and broad-leaved forms occur together. Whether these are truly a result of natural variation or the result of boundaries being blurred by hybridisation will only be resolved eventually by DNA studies. However, the diversity of this super-species seems unlikely to be a result of natural variation alone, so there will probably become a need to recognise a number of other taxa at some rank. *C. obvallata* is the oldest name apart from *C. nudicaulis* itself, so in any fragmentation of the presently accepted circumscription of *C. nudicaulis*, it must become adopted as the correct name for one of the segregates. Tölken's placement under *C. nudicaulis* ssp. *nudicaulis* was at a time when *C. obvallata* had no type. Now that it has, that

placement needs to be re-evaluated when live material from the type locality is available for examination.

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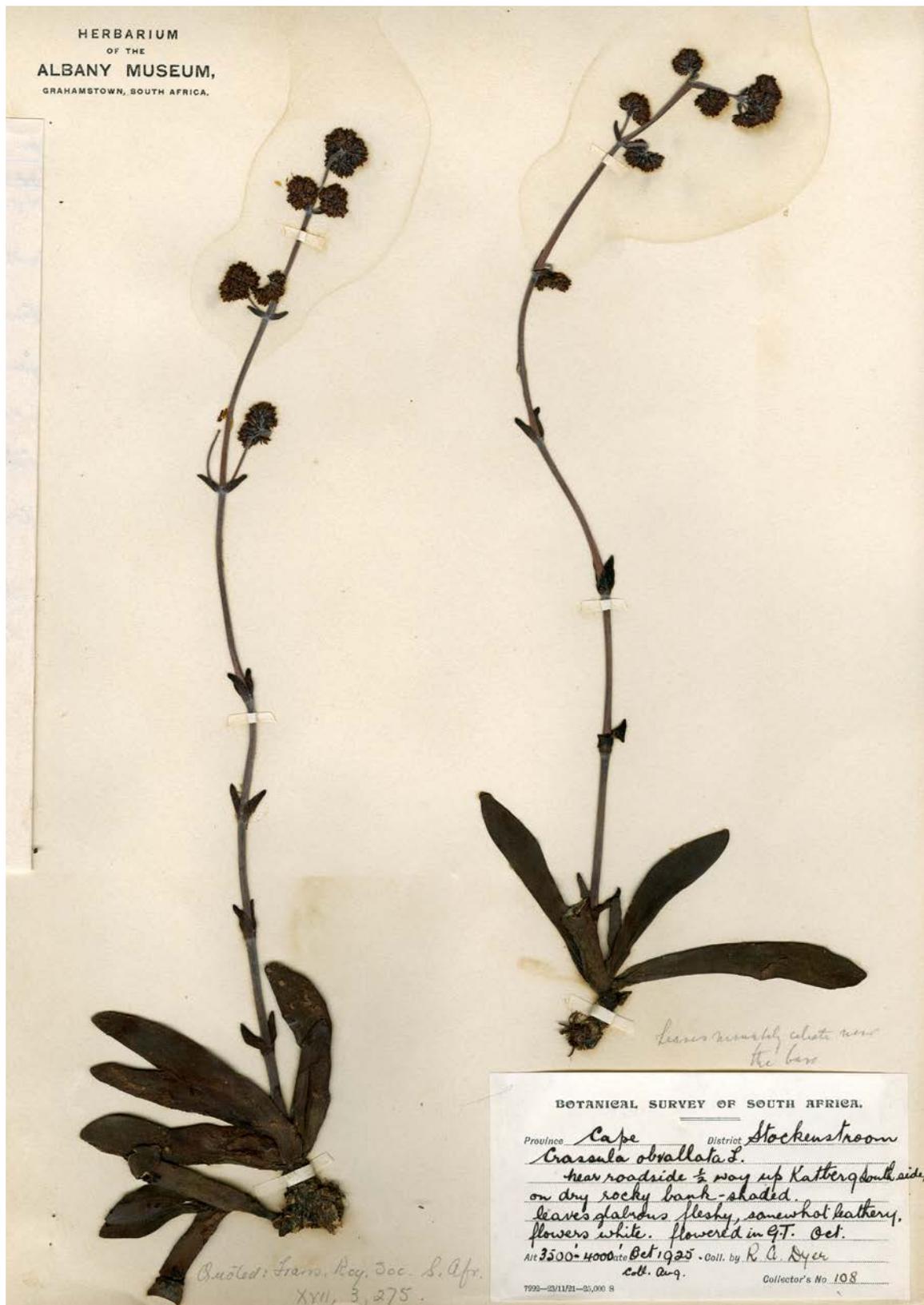


Fig. 1 *Crassula obvallata* L. (E Cape, Stockenström District, nr. roadside half way up the Katberg on the S side, on dry rocky bank, shaded, 3500-4000ft; Oct 1925, R. A. Dyer 108) NT specimen at GRA.



Fig. 2 Trew, *Plantae rariores 2*: t.11. 1779



Fig. 3 Redouté plate of *Crassula obvallata* from De Candolle, *Plantarum historia succulentarum* 2(11): t.21. 1801

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