

Accumulation of errors regarding *Euphorbia crassipes* Marloth

By Gerhard Marx

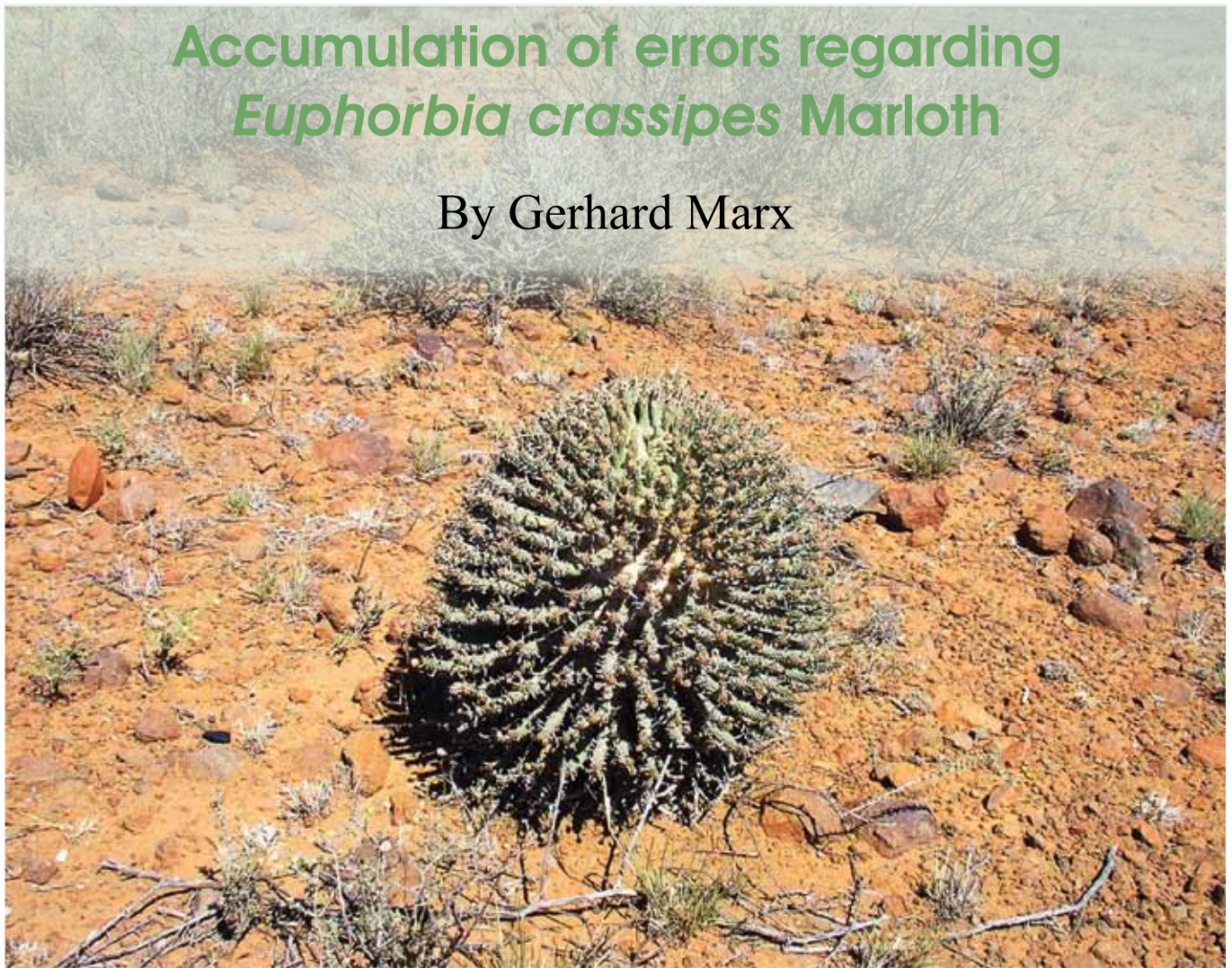


Fig 1: Typical *Euphorbia fusca* in habitat south of Britstown. Plants can be as large as 40 cm wide and high.

In P. V. Bruyns' article titled "*Nomenclature and typification of southern African species of Euphorbia*" published in *Bothalia* 42(2): 217–245 (2012), *Euphorbia crassipes* Marloth is somewhat surprisingly considered to be the name with priority and preference for the well-known *Euphorbia fusca* Marloth. Additionally, in the article the type locality is given as "Biesiespoort". This is also quite perplexing as there are no plants known from the Biesiespoort area matching any interpretation of the descriptions of either *E. crassipes* or *E. fusca* and no evidence in any literature mentioning Biesiespoort as locality of either. The original 1912 description of *E. fusca* (Marloth 4682) mentioned the distribution areas as 'Kimberley, Steynsburg, Britstown' while White, Dyer & Sloane (1941) cited Britstown as type locality and added Hopetown, Prieska, Kuruman and Gordonia districts for further Cape Province distribution.

Euphorbia crassipes (Marloth 4397) was described in 1909 from 'Beaufort West and Prince Albert' areas although already in 1915 N. E. Brown pointed out the

obvious error regarding Marloth's collection number 4397 as it involved two clearly different plants, a small cylindrical medusoid from Prince Albert area (later described as *E. albertensis* by N. E. Brown) and a larger more globose-bodied one from Beaufort West, matching the description for *E. crassipes* more closely.

In Volume 1 of *The Succulent Euphorbieae (Southern Africa)* (1941) the authors White, Dyer & Sloane had no picture material of the type to illustrate *Euphorbia crassipes* and unfortunately went ahead and published pictures of plants from the Calitzdorp area which they defined as "somewhat intermediate between *E. crassipes* and *E. fusca*" and which they could not place specifically. The Calitzdorp plants are well-known today as the quite distinct *Euphorbia gamkensis* Marx and the similarities to *E. crassipes* and *E. fusca* are all significantly superficial. It is a much smaller plant than *E. fusca* and although its main stem also has a small open branchless central area above, it never develops the "cristate-like" grooved apex so characteristic of *E. fusca*. The flowers of *E. gamkensis* differ significantly



Fig. 2: An average-sized adult plant of *Euphorbia fusca* in habitat near Britstown. Note the 'cristate-like' grooved apex which is typically present in all mature plants of this species.



Fig. 3: Old mature plants of *Euphorbia crassipes* on the Karoo flats to the west of Beaufort West with the Nuweveld Mountains in the far distance

from both *E. crassipes* and *E. fusca* in numerous features with the most obvious difference the lack of finger-like processes along the margins of the glands.

It was very unfortunate that plants of *E. gamkensis* were used to illustrate *E. crassipes*, particularly in addition to Marloth's above-mentioned original confusion regarding the collection number and locality data accompanying the type specimen of *E. crassipes*.

Since then the confusion regarding *E. crassipes* seems to have gradually snowballed to such an extent that even such a prominently different plant as *E. fusca* has now ended up being swallowed into synonymy and somehow the irrelevant desolate railway siding of Biesiespoort has got mysteriously dragged into the equation.

The situation surrounding *E. crassipes* has therefore developed into a rather complicated puzzle which demands more than just superficial inquisitiveness to unravel. To the average unconcerned person who mainly looks at pictures without reading the accompanying texts carefully, the visual image of *E. crassipes* probably still remains as those pictures of *E. gamkensis* on pages 431 and 432 in White, Dyer and Sloane's Volume 1. At the other end of the scale are such approaches as the above-mentioned article that appear to envision it as more erudite to base deductions mainly upon the interpretation of century-old and rather fragmentary original published texts and with little evidence of close and current investigation of the plants themselves.



Fig. 4: A plant of *Euphorbia crassipes* with a cylindrical main stem standing about 15 cm above ground, but thickness of the stem in this case is less than 10 cm.



Fig. 5: An attractive globose-shaped plant of *Euphorbia crassipes* with above-ground main stem about as thick as high, growing on the outskirts of Beaufort West.



Fig. 6: A natural hybrid between *Euphorbia braunsii* and *Euphorbia crassipes* growing near Beaufort West. Branches of this hybrid are considerably thicker and closer spaced than the ones on normal plants of *Euphorbia crassipes*.

Therefore, in an effort to break this cycle of ongoing confusion, let me list the facts as known to me through investigation of live plants as well as original scientific texts:

- There is indeed a medusoid *Euphorbia* with subglobose above-ground main stem and general features matching the description of *E. crassipes* in the immediate vicinity of the town of Beaufort West.

In terms of the size of the main stem the Beaufort West plants do rarely, but occasionally, reach the maximum size of 15 cm (6 inches) in diameter but the thickness of the branches given by Marloth as “5 to 7 lin.” (10 to 15 mm) is considerably thicker than generally encountered in these plants. In fact, very few medusoid species have branches as thick as 15 mm and even in the much larger-growing *Euphorbia fusca* the branches are generally less than 10 mm thick. Therefore, it could be assumed that Marloth made an additional error in terms of the measurements given for the thickness of the branches.

There is another vague possibility that might have caused Marloth’s “error” and which may be worth mentioning: in one small area west of Beaufort West *Euphorbia braunsii* N.E.Br. occurs together with *E. crassipes* and some natural hybrids between the two were observed (Fig. 6). *E. braunsii* has branches that can be as thick as 30 mm and consequently some of the natural hybrids do also have rather thick branches like the one illustrated herewith.

- The only picture published with the original description of *E. crassipes* was a drawing of the flowering top of a branch. The details of the cyathium in the drawing match perfectly with the flowers of the currently-known Beaufort West plants.

There are however no detailed comparisons in the above-mentioned article between the flowers of *E. crassipes* and the flowers of *E. fusca* and its close relatives (including *E. inornata* N.E.Br.) and to dismiss these differences as merely natural inconsistency of a “widely distributed and quite variable species” as Bruyns proposed, seem to reflect lack of detailed familiarity with these plants.

The flower of *E. fusca* is characterised by a very shallow involucre (less than 2 mm deep), surrounded by semi-deflexed and elliptically oblong glands that are characteristically brick-red to maroon above and with 5 to 7 distinct, 1.5 mm long and light yellowish processes that are frequently forked at the tips. In addition, the ovary is thickly covered with hairs and the very short style column is divided above into free spreading stigmas.

In contrast, the cyathium of *E. crassipes* has a quite deep cup-shaped involucre (to 4.5 mm deep), surrounded by horizontally spreading elliptic and much more fleshy glands, green above and slightly concave and with 3 to 5 very short processes only 0.5 mm in length. The ovary is mostly totally glabrous and the styles united into a long column of up to 3 mm in length.

Euphorbia decepta N.E.Br.

The closest in comparison to the flowers of *E. crassipes* are those of *E. decepta*. In fact, considering the almost identical plant features in addition, the differences are so few and minor that it urges a re-evaluation of *Euphorbia decepta* as a separate species. The only differences between the flowers of *E. crassipes* and *E. decepta* are the more convex glands in *E. decepta* that are often semi-deflexed and the occasional few sparse hairs on the ovary of *E. crassipes*. Also the general shape and appearance of the plant stems and branches are the same but the main stem is generally considerably smaller in *E. decepta*.

The sensible solution would therefore be to formally consider *E. decepta* simply as a smaller variety of *E. crassipes*. This is of course in ironical contrast to the rather extreme merging arrangement by Bruyns (2012) in which he considers *E. decepta* a widespread “flagship” species and includes such varying elements such as *E. albertensis* N.E.Br., *E. gamkensis* Marx, *E. suppressa* Marx



Fig. 7: An average-sized plant of *Euphorbia gamkensis* in habitat, south east of Calitzdorp.



Fig. 8: A 25 year old plant of *Euphorbia gamkensis* in cultivation (1989 seedling) to illustrate the full mature size and shape of *E. gamkensis*.



Fig. 9: A rather bristly mature plant of *Euphorbia decepta* growing to the west of Aberdeen.



Fig. 10: The branches of *Euphorbia decepta* in the Willowmore area have the tendency to be less "spiny" than the ones further north near Aberdeen and the plants are often deeper sunken into the soil in the Willowmore and Rietbron areas.



Fig. 11: An attractive specimen of *Euphorbia decepta* with unusually short branches on the farm Kruidfontein north-west of Willowmore.

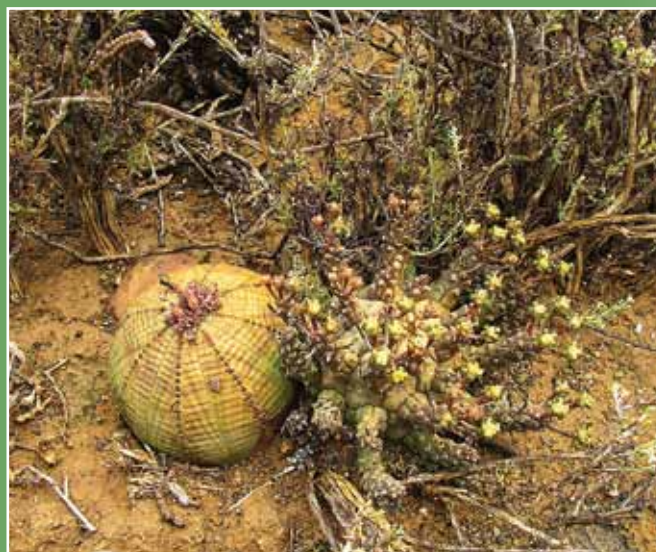


Fig. 12: *Euphorbia decepta* and *Euphorbia symmetrica* growing close together on Kruidfontein farm near Willowmore.

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