

## ASCLEPIADACEAE

### A NEW SPECIES OF *CARALLUMA* FROM THE CAPE

***Caralluma multiflora*** R. A. Dyer sp. nov., *C. mammillari* (L.f.) N.E. Br. affinis, corolla alabastro plusminusve oblonga, obtusa; corollae lobis replicatis carinatis, plusminusve oblongis, apicem versus incurvis, carina infra medium et fauce dense papillosis distinguitur.

Planta carnosae ramosa, usque ad 15 cm alta; caules 4-5-angulati, circiter 2 cm crassi, tuberculati; tubercula triangulata, 6-7 mm prominentia, apicem versus indurata, acuta. *Flores* multi, fasciculati. *Corolla* alabastro plusminusve oblonga, obtusa, 5-angulata, circiter 1,5 cm longa, glabra, atropurpurea, breviter tubulata; tubus campanulatus, circiter 4 mm longus, intus pallidus, sparse pubescens et maculatus; faux dense papillosa; lobi plusminusve oblongi, erectopatentes, apicem versus incurvi, replicati, carinati; carina infra medium papillosa. *Corona* breviter campanulata; lobi exteriores suberecti, profunde bifidi, dentibus 0,5 mm longis; lobi anteriores incumbenti-erecti, basi in lobulum sub-

quadratum vel ovatum producti. *Pollinia* circiter 0,25 mm longa. *Folliculi* 2 (1), 13-14 cm longi, 7-8 mm diam, longistrorsum maculati.

TYPE.—Cape, 3119 (Calvinia): Kareeboomfontein, west of Rebutie (-DA) 17th October 1975, W. J. Hanekom 2475 (PRE, holo.).

Succulent plant up to about 15 cm tall, freely branching and rooting from the basal branches; branches 4-5-angled, prominently tuberculate along the angles, with a spread of 2,5-2,75 cm, bluish-green to purplish red-brown; tubercles triangular in side view, spreading 6-7 mm, with a sharp hard apex. *Flowers* mainly from flowering eyes towards the apex of branches between or along the angles, in fascicles of up to 12 flowers together, opening more or less together; pedicels 4-5 mm long. *Sepals* linear-lanceolate, about 3 mm long. *Corolla* in bud more or less oblong in outline, but broadest slightly above middle, 5-angled, 1,5 cm long, glabrous outside, dark maroon to black with short yellowish-green to light

coloured tube; tube campanulate, about 4 mm long, with scattered hairs within and maroon-marked, densely papillate round mouth of tube; papillae with acute apex bent at right-angles; lobes more or less oblong in outline, suberect, with incurving tips and recurving margins, obtusely keeled down inner face, with few papillae down keel towards base. *Corona* shortly cup-shaped or campanulate at base; outer lobes deeply bifid and alternating with spreading basal lobule of inner corona-lobes, teeth of outer lobes about 0,5 mm long, suberect; inner corona-lobes about 2 mm long, incumbent-erect into a cone-shaped apex above the staminal column, with a spreading ovate or subquadrate basal lobe (variable) alternating with the outer corona-lobes and about the same length. *Pollinia* about 0,25 mm long with very short weak connectives; carrier very shortly winged. *Follicles*

(1) 2 on a separate plant without flowers, towards base of branches, upright, 13–14 cm long, 7–8 mm thick, longitudinally striped and mottled. FIG. 4.

CAPE.—3119 (Calvinia): Kareeboomfontein, west of Rebniekop (–DA), rocky ground with some protection from shrublets, 24/8/74, *Hanekom 2335*; 17/10/75, *Hanekom 2475*.

This is a relatively robust succulent which, like so many members of the Stapelieae, is found on rocky slopes in the half-shade of shrublets. Under favourable conditions in the field it may be so floriferous that the flowers almost obscure the branches. Up to 12 flowers are produced in fascicles from each flowering eye, all developing together. It is presumed that under normal conditions of warmth and sunshine, all flowers would be open together, but this has not actually been observed. The first plants collected by Mr W. J. Hanekom flowered after a short period in cultivation at the Botanical Research Institute in Pretoria and were not considered to be entirely normal. In 1975 Mr Hanekom brought two specimens direct from the veld, one in the initial stages of flowering and the other with several follicles. A few flowers were open with the lobes erect-spreading, whereas those not open showed a tendency for the corolla-lobes to remain slightly cohering at the tips. The papillae-like hairs on the inside of the corolla have an unusual shape, being bent approximately at right angles about the middle and acuminate. The corolla is dark maroon to black.

In spite of enquiries among Cape collectors, no record of the species other than the present one seems to have been made. One wonders how it happens that such an interesting species should remain unheralded for so long.

The fruiting specimen brought by Mr Hanekom showed the follicles arising from flowering eyes towards the base of the branches, whereas the flowers on the other specimen were from younger flowering eyes towards the tips of the branches. This illustrates a feature of Stapelieae, where the fertilized ovary undergoes a protracted resting period, after which the follicles elongate fairly rapidly to maturity. The number of follicles is usually very small by comparison with the large number of flowers. This is a result of the highly specialized and frequently unsuccessful mechanism for insect pollination. But nature has introduced compensations by providing an abundance of seeds in each follicle: each seed is attached to a very light and delicate cluster of hairs, which act as parachutes for wide seed dispersal.

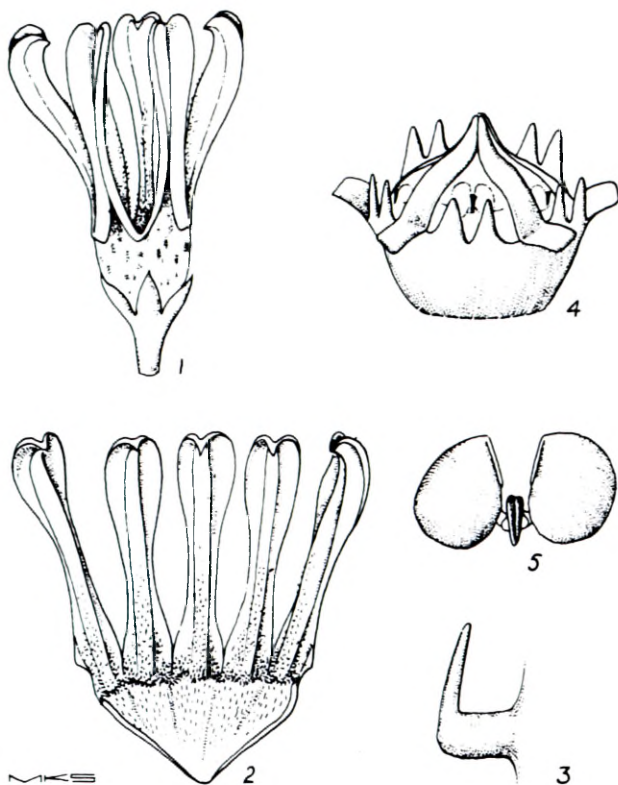


FIG. 4.—*Caralluma multiflora*. 1, open flower,  $\times 3$ ; 2, corolla opened out,  $\times 3$ ; 3, papilla with sharp tip turning at right-angles,  $\times 100$ ; 4, corona,  $\times 15$ ; 5, pollinia and carrier,  $\times 60$ . (*Hanekom 2335*).