

**An unusual
Brachystelma,
B. setosum Peckover sp. nov.
(Asclepiadaceae)
from the Dullstroom area,
Eastern Transvaal**

Ralph Peckover

This species was first brought to my attention when two plants were shown to me by a dealer in Germany when I was visiting there during June 1993. The typical hairy leaves and unusual compact stem together with the distinctive black corona led me to investigate these plants further. After determining the origin of the plants, a visit was paid to the area which is a series of rocky outcrops near the road between Dullstroom and Lydenburg in the Eastern Transvaal Province. Plants were observed growing in a shallow greyish humic soil in very rocky areas among grass. The plants blend in well with the greyish green grass but are easily distinguished by their leaf arrangement. On this hill, the plants were relatively rare but this distribution is typical for a mountain species. The rainfall in this area is approximately 800 mm per year which falls mainly during the summer months. The climate is temperate with very cold winters and snow is known to fall occasionally in the area. During this same visit, the species was also found on a mountain above the Strydom Tunnel (a distance of 120 km away to the northeast). These plants displayed lighter-coloured flowers but were otherwise identical. As similar rocky hills are found in the whole Dullstroom area, the species is probably not rare.

The nearest relative to *B. setosum* is *B. circinatum* which occurs throughout South Africa.

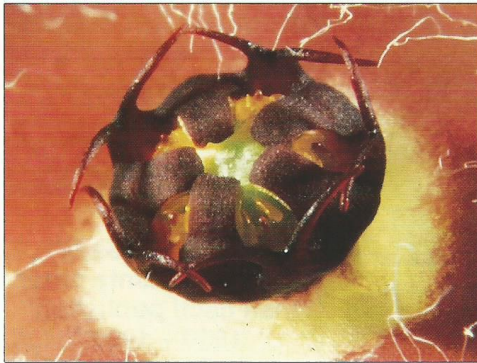
The major differences between *B. setosum* and *B. circinatum* lie in the floral structure and growth form of the plants. In the floral structure, *B. setosum* has the outer corona appendages overlapping with the adjacent sets of either side (as is also distinctive in *B. amotii* from the Kalahari) whereas in *B. circinatum* this does not occur. The black corona is also not observed in the many forms of *B. circinatum*. The single compact stem of *B. setosum* and the long leaves without petioles contrast with the branching, longer stems and shorter leaves with petioles of *B. circinatum*. The hairiness of *B. setosum* is also not observed to the same degree in the various forms of *B. circinatum*. The major differences are illustrated in the figures.

Diagnosis

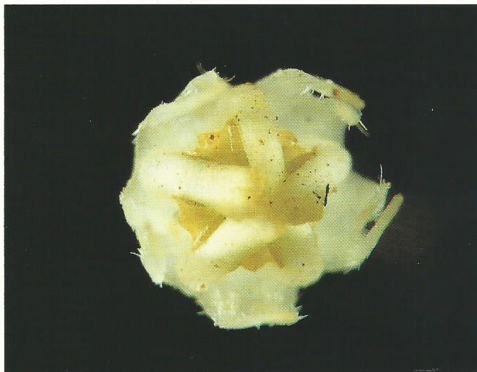
Brachystelma setosum Peckover sp. nov., *B. circinatum* E. Mey. affinis, sed coronae appendicibus exterioribus seriebus contiguus superpositis, caule singulari compacto, foliis longioribus et planta tota valde hirsuta differt.

Description

Perennial herb. *Tuber* 50-90 mm in diameter and up to 30 mm thick. *Stem* single, upright, 30-50 mm long, up to 3 mm in diameter at base, very hirsute, light green, internodes 3-4 mm apart. *Leaves* arranged on opposite sides of the stem, linear 50-70 mm x 6 mm, sharply V-shaped in the horizontal



Major differences between the corone of *Brachystelma setosum* (upper) and *B. circinatum* (lower). *B. setosum*: note reflexed outer lobes. *B. circinatum*: note straight outer lobes.



plane whereas the lamina is usually curved gracefully downwards. Sets of alternate leaves lie above the previous set, forming a distinctive leaf orientation, very hirsute on upper and lower surfaces, hairs being up to 2 mm in length and white, margin entire, both surfaces light greyish green. Petiole cannot be distinguished from the leaf. Flowers borne in pairs at the nodes axillary on opposite sides of the stem. Bracts 2 mm long, linear. Pedicels 5-6 mm long and 1 mm in diameter, very hirsute. Calyx lobes 4 mm long, green, linear-lanceolate and very hirsute. Corolla 10-13 mm long, lobes 10-13 x 1 mm, greenish yellow outside, hirsute; inside purplish brown, forming a cage with tips joined; bulb 5-6 mm diameter and flat with margin reflexed, purplish brown with a few whitish hairs present. Corona 2 mm in diameter and 1.5 mm high, black. Outer corona appendages black, forming the outer wall of the nectar pouch and then sets of two thin bifid reflexed lobes which overlap the adjacent sets on each side. Inner corona appendages black, lying on top of the staminal

Figure 2. The flower of *Brachystelma setosum*.





Top: *Brachystelma setosum* near Dullstroom in its habitat,
Bottom *B. circinatum* near Pretoria in its habitat.

column and enclosing the backs of the anthers. *Seed* follicles two, upright, light green 60-70 mm x 34 mm, surface smooth. Seed greyish 5-6 x 34 mm tufted with 20 mm long hairs, 20-30 seeds per follicle.

Name

The name refers to the hairy character of the whole plant.

Type

Eastern Transvaal: Dullstroom
2530AC R.G. Peckover 186
(holotypus, PRE)

Acknowledgements

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