

## ASCLEPIADACEAE

### NEW RECORDS OF *BRACHYSTELMA*

***Brachystelma dimorphum*** R. A. Dyer, sp. nov., affine *B. circinato* E. Mey., coronae lobis exterioribus multo minoribus, corolla extra  $\pm$  glabra, intra pilosa differt.

subsp. ***dimorphum***.

Herba perennis, tuberosa. *Tuber* 50–70 mm diam. *Caulis* 1 (2), basin versus ramosus; rami  $\pm$  erecti vel patentes, 100–200 mm alti, puberuli. *Folia* breviter petiolata; lamina ovato-elliptica, 5–20 mm longa, 4–14 mm lata, sursum plicata, infra pilosa, supra glabra. *Flores* 1 vel pauci, extra axillas, singulares

producti; pedicelli  $\pm$  1 mm longi. *Sepala*  $\pm$  lanceolata,  $\pm$  0,75 mm longa, pilosa. *Corolla* 5–7 mm longa, extra  $\pm$  glabra, intra puberula; lobi ovato-lineares, basin versus breviter connati, apicibus connatis. *Corona* 1,5–2 mm diam., 0,5–1 mm alta; lobi exteriores minuti, bidentati; lobi interiores  $\pm$  oblongi, incumbentes,  $\pm$  emarginati.

TYPE.—Cape, 2824 (Kimberley): 16 km NW of Kimberley on Barkly West road (–DA), red sandy loam in depression; tuber bell-shaped; corolla dirty cream with purple touches, rare; tuber pleasant eating, Dec. 1961, O. A. Leistner 2935 (PRE, holo.).

Perennial herb producing a tuber. *Tuber* 50–70 mm diam., bell-shaped (Leistner) or somewhat depressed. *Stem* single (2), annual, sparingly branched, with branches more or less erect or somewhat spreading, up to 200 mm high, puberulous. *Leaves* shortly petiolate; lamina ovate-elliptic (when flattened), normally folded upwards, 5–20 mm long, 4–14 mm broad, pilose on back, glabrous on inner surface. *Flowers* 1–few, extra-axillary, opening singly; pedicels 1–2 mm long. *Sepals* lanceolate,  $\pm 0.75$  mm long, pilose. *Corolla* with cylindric beak in bud, 5–7 mm long, divided nearly to base; lobes linear from an ovate base with recurved margins, united at tips into a cage-like structure,  $\pm$  glabrous on outer surface, puberulous on inner surface. *Corona* shortly united at base, 1.5–2 mm diam. across base, 0.75–1 mm high; outer lobes minute, 2-dentate, confluent with base of inner lobes; inner lobes unevenly oblong, incumbent, slightly emarginate at tip. *Pollinia* somewhat pear-shaped with short connectives. *Follicles* 70–100 mm long, spreading more or less at right-angles to stalk.

CAPE.—2624 (Vryburg) *Hutchinson in PRE 57572*; 48 km N of Vryburg, deep sandy soil, flowers pale green, tuber flattened, Nov., *Hardy & Bayliss 1226*. 2824 (Kimberley): 16 km NW of Kimberley on Barkly West Rd. (–DA) Dec. 1961, *O. A. Leistner 2935*; between Kimberley and Warrenton, *Wilkins in PRE 57573*; in alluvium soil at Klipdrift on south bank of Riet River Dec., *Acocks 2593*.

O.F.S.—2926 (Bloemfontein): near Quaggafontein, Jan. 1912, *Burt Davy 12378*.

The above recorded specimens have in the past been associated with *B. circinatum* and the synonymous epithets *B. galpinii* and *B. filiforme*. It is only on dissection that the distinction of the outer corona-lobes becomes evident: those of *B. circinatum* overtop the staminal column and are deeply bilobed, whereas in *B. dimorphum* they are rudimentary. The pubescence within the corolla is also distinctive.

subsp. *gratum* *R. A. Dyer* subsp. nov., corollae lobis apicibus libris, coronae lobis interioribus subquadratis distinguitur.

TYPE.—O.F.S., 2726 (Odendaalsrus): near Welkom airport, Jan. 1978, *Rawlinson in PRE 57440* (PRE, holo.).

The subspecies *gratum* is distinguished from subspecies *dimorphum* in that the lobes of the corolla are free at the tips allowing the corolla to expand star-shaped instead of remaining cage-like when the tips of the lobes remain fused.

It is known only from the single collection by Mr S. I. Rawlinson near Welkom airport. It was this discovery which led to the separation of *B. dimorphum* from *B. circinatum* with which it had been previously confused. The epithet *gratum* (welcome) seemed appropriate because of the habitat near Welkom.

*Brachystelma gemmeum* *R. A. Dyer*, sp. nov., affine *B. circinato* E. Mey., sed pilis paucis angusticylindricis purpureis vibratilis 3,5 mm longis intra corollae orem instructis differt.

*Tuber* 50–60 mm diam., 30–35 mm altus. *Caules* 4–5, annui, erecti, 50–70 mm alti, minute pubescentes, dense foliati. *Folia* breviter petiolata; lamina linearis, 30–40 mm longa, 3–4 mm lata, puberula. *Flores* fasciculati, extra axillas producti; pedicelli 2–3 mm longi, puberuli. *Sepala* linearia, acuminata, 2 mm longa. *Corolla* 15–16 mm longa, glabra; tubus campanulatus, 2 mm longus, intra orem pilis paucis, angusticylindricis, purpureis, vibratilis, 3,5 mm longis instructus; lobi e basi ovato, lineares, 13–14 mm longi,

replicati, glabri, ad extremum connati. *Corona* lobis exterioribus 5, profunde bifidis; lobi interiores oblongi, incumbentes.

TYPE.—Transvaal, 2331 (Phalaborwa): Gravelotte Emerald Mine (–CD), sandveld, Mopani woodland, 510 m, *Lancaster 199* (PRE, holo.).

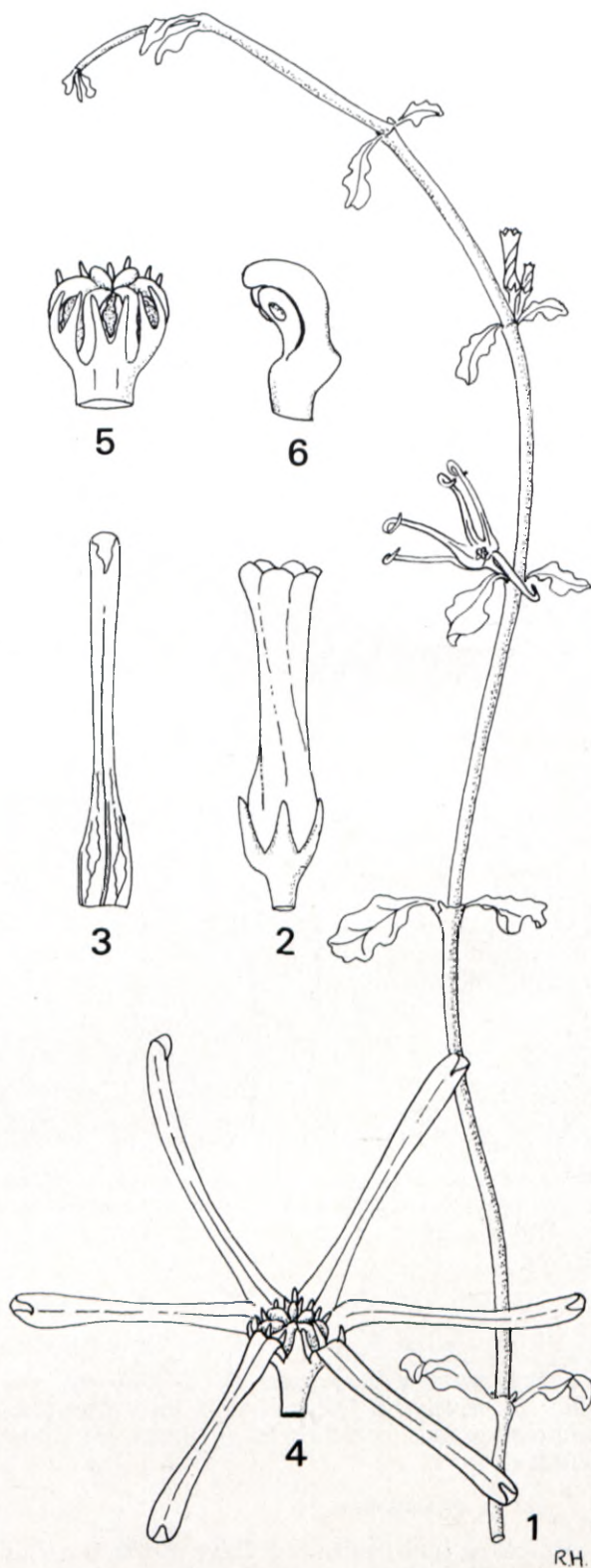


FIG. 2.—*Brachystelma tabularium*. 1, flowering stem, X 1; 2, bud with inflexed tips, X 3; 3, single corolla-lobe with inflexed tip, X 3; 4, flower with corolla opened out, X 3; 5, corona, X 15; 6, inner corona-lobe incumbent on anther (Rosemary Holcroft after A. C. Dawson in BOL).



Rootstock producing a tuber. *Tuber*  $\pm 55$  mm diam., depressed,  $\pm 30$  mm high. *Stems* 4–5 together from the base, annual, 50–70 mm tall, minutely pubescent, densely leafy. *Leaves* dense, shortly petiolate; petiole 3–5 mm long; lamina linear, 30–40 mm long, 3–4 mm broad, tapering slightly to each end, minutely pubescent. *Flowers* numerous, in extra-axillary fascicles, few—several together, developed successively. *Pedicels* 2–3 mm long, minutely puberulous. *Sepals* linear, acuminate, 2 mm long, puberulous. *Corolla* 15–16 mm long, glabrous, purple; tube  $\pm 2$  mm long, campanulate, with slightly prominent sinuses, with few, purple, narrowly-cylindric, vibratile hairs 3, 5 mm long on the inner surface at the base of the lobes, readily falling; lobes linear from an ovate base, 13–14 mm long, replicate, glabrous, united at tips and forming a cage. *Corona* arising  $\pm 0,5$  mm above base of staminal column, producing 5 spreading outer lobes divided to about  $\frac{1}{2}$  way into linear teeth or lobules, with few long hairs from tips; inner lobes oblong, incumbent on backs of anthers but not meeting over centre.

TRANSVAAL.—2330 (Phalaborwa): Gravelotte Emerald Mine, sandveld, Mopani woodland, 510 m, *Lancaster* 199.

This dwarf species is remarkable for the long, purple, narrowly-cylindric, vibratile hairs within the mouth of the corolla-tube. The specific epithet was chosen because of the association with an Emerald Mine.

***Brachystelma tabularium* R. A. Dyer, sp. nov.**, corolla  $\pm 12$  mm longa, fere ad basin lobata, lobis linearibus apicibus inflexis libris, coronae lobis exterioribus profunde bilobulatis, lobis interioribus incumbentibus distinguitur.

Herba perennis tuberosa, basi 2–3-ramosa. *Caules* erecti, tenses,  $\pm 200$  mm alti, breviter pubescentes, internodiis 25–70 mm longis. *Folia* breviter petiolata; lamina  $\pm$  oblonga,  $\pm 10$  mm longa,  $\pm 5$  mm lata, sparse pubescens, margine leviter undulata. *Flores* 1–2, breviter pedicellati, extra axillas producti; sepala anguste lanceolata,  $\pm 1,5$  mm longa. *Corolla* alabastro cylindrica, circiter 12 mm longa, glabra, fere ad basin lobata; lobi lineares, apice inflexi, libris,  $\pm 12$  mm longi, ad medium versus  $\pm 0,5$  mm lati, basin versus 1,25 mm. *Corona* biseriata; lobi exteriores 1 mm alti, profunde bilobulati; lobi interiores incumbentes.

TYPE.—Cape, 3325 (Port Elizabeth): near Redhouse, *F. Paterson* s.n. (BOL, holo.).

Perennial herb producing a tuber, 2–3-branched from the base. *Stems* slender, erect, about 200 mm tall, with internodes 25–70 mm long, shortly pubescent. *Leaves* shortly petiolate, oblong,  $\pm 10$  mm long,  $\pm 5$  mm broad, sparsely pubescent, somewhat undulate at the margin. *Flowers* 1–2 or more together; extra axillary, opening in succession; sepals narrowly lanceolate,  $\pm 1,5$  mm long. *Corolla* cylindric in bud, about 12 mm long, glabrous, divided almost to the base; lobes linear, inflexed at the apex, free,  $\pm 12$  mm long, about 0,5 mm broad at the middle and  $\pm 1,25$  mm at base. *Corona* arising slightly above the base of the staminal column, producing 5 outer lobes about 1 mm high and deeply bilobed; inner corona-lobes incumbent on the anthers. FIG. 2.

The distribution of the species is not further known than the type from near Redhouse in the eastern Cape Province.

The description is based largely on an excellent drawing of the type with dissections brought to light from the archives of the Bolus Herbarium by kind favour of Prof. E. A. Schelpe. The rôle of the drawing in the description of the species prompted the choice of the specific epithet. The type specimen, which is rather poor, has been preserved in the Bolus Herbarium, undetermined, since its incorporation in 1915. The original tuber was sent by Mrs Florence Paterson from Redhouse near Port Elizabeth in 1913 and flowered at the Bolus Herbarium in 1915, when the drawing was made by A. C. Dawson, and the tuber transferred to the National Botanic Gardens, Kirstenbosch.

The free, inflexed tips of the corolla-lobes are unique in the genus.

***Brachystelma duplicatum* R. A. Dyer, nom. nov.**

*B. floribundum* R. A. Dyer in Flower. Pl. Afr. 31: t. 1224 (1956) non Turrill in Kew Bull. 1922: 197 (1922).

The epithet *floribundum* was first used by Turrill for a Rhodesian species and my use of it was a duplication thereof for a distinct species.

***Brachystelma pygmaeum* (Schltr.) N.E. Br. subsp. flavidum (Schltr.) R. A. Dyer, comb. et stat. nov.**

*Brachystelma flavidum* Schltr. in Bot. Jb. 40: 94 (1907). N.E. Br. in F.C. 4,1: 1: 846 (1908); Medley Wood, Natal Plants 6,4: t. 586 (1912); R. A. Dyer in Flower. Pl. Afr. 27: t. 1067 (1949).

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