

BRACHYSTEMELMA RICHARDSII, A NEW SPECIES FROM ZIMBABWE

by Ralph Peckover

This species was originally found at the beginning of 1986 by the late Alan Lancaster near Kadoma, where it grows in association with a number of other asclepiads, namely *Ceropegia stanantha*, *C. nilotica*, *C. bonafouxii*, *C. fortuita*, an unidentified *Ceropegia* species, *Brachystelma gymnopodum*, *B. gracile*, *B. buchananii* and three *Raphionacme* species. The soil was a greyish brown, loamy sand, with a very sparse grass cover. The area is an open miombo woodland and flat. The concentration of asclepiad plants was overwhelming, as was their diversity. The absence of asclepiad parasites has probably led to the high species diversity, as no damaged plants were observed. This area is an asclepiad enthusiasts goldmine with a good probability of other new species being present in the surrounding area.

Overgrazing in the area may even increase the numbers of these various species, as competition, especially from grass, is minimised. Grass is probably the asclepiadaceae's greatest competitor for light, and has been observed in other areas of South Africa to restrict growth and seed formation in good rainy seasons.

The distribution of this species was not studied in detail, due to a lack of time, but it probably extends towards the Kariba Dam.

Diagnosis: *Brachystelma richardsii* Peckover sp. nov., *B. dinteri* Schltr., affinis sed structura florali differt lobis corollae longis tenuibus coronaque structura cupulari incrassata pilisque interioribus.

Description: *Plant* a perennial herb. *Tuber* 25–75 mm in diameter and up to 20 mm thick, somewhat depressed above. *Stem* simple, unbranched, up to 300 mm long and 3,0 mm broad at the base, finely pilose, internodes 10–20 mm apart. *Leaves* arranged on opposite sides of the stem, lanceolate 30–100 mm × 6–18 mm, pilose, margin entire or also wavy. *Petiole* 2 mm × 1 mm light green and pilose. *Flowers* lateral at the nodes, multiple to 8 flowers with no noticeable scent. *Pedicels* 2–3 mm × 1,0 mm sparingly pilose, single basal bract. *Bracts* at base of each flower cluster, 0,5 mm linear. *Calyx lobes* 1,5–2 mm × 0,75 mm at base, pilose. *Corolla* before anthesis forming a terete tip from the inflated basal corolla bulb; *bulb* 4 mm diameter, green on outside, reddish or greenish mottled red on inside; *lobes* 8–15 mm long glabrous and red to yellowish-red mottled on inside, outside green, inner surface at base of corolla covered with straight fine white hairs, up to 1,0 mm long, *Corona*, purplish red, 3,0 mm × 1 mm high. *Outer Corona* appendages forming a glabrous purplish red raised cupulate structure containing the five nectar pouches, inside yellow dotted red. *Inner Corona appendages* purplish red, reaching the top of the staminal column. *Follicles* paired, upright divergent 30 degrees at base, 45–75 mm × 4 mm green mottled red; follicular walls thin each containing 20–30 seeds. *Seed*, dark brown with a slightly lighter margin 10 mm × 4 mm; *tuft* 15–20 mm.

Type: Zimbabwe: 1829 BA, Kadoma, R. G. Peckover 257 (holotypus, PRE). The plant is named for, Dave Richards, a friend of the discoverer of the plant.

The nearest relative to *B. richardsii* is *B. dinteri* which grows nearby. The major difference between the two lies in the floral structure with *B. richardsii* having long thin corolla lobes, a raised cupulate outer corona and white hairs at the base of the inside of the corolla lobes, whilst in *B. dinteri* the corolla lobes are short, the outer corona forms only projections from the nectar pouch walls and the flowers are glabrous on the inside. The vegetative growth is similar in that both species are upright and single stemmed but *B. dinteri* is more pilose.

The distinctive floral differences between the two species are depicted in the close-up photos of the corona in Figures 3(a) and (b).



Fig. 1(a) *B. richardsii* growing in habitat in Zimbabwe in a greyish brown, loamy sandy soil



Fig. 1(b) *B. dinteri* growing in habitat near Harare in a sandy soil



Fig. 2(a) *B. richardsii* plant in flower depicting the pilose flower, long corolla lobes and distinctive outer corona appendages

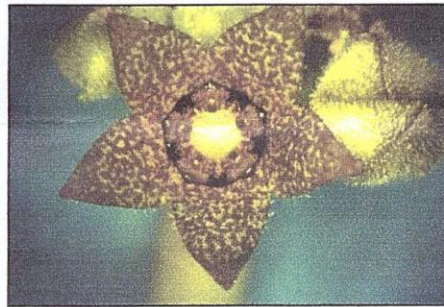


Fig. 2(b) *B. dinteri* flower depicting the shorter corolla lobes



Fig. 3(a) Close-up photo depicting corona of *B. richardsii*

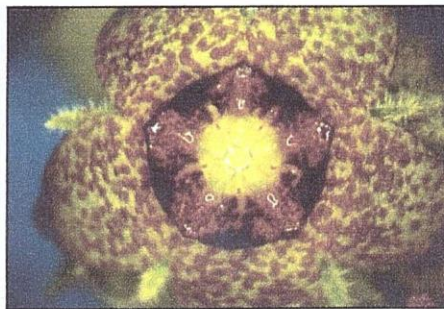


Fig. 3(b) Close-up photo depicting corona of *B. dinteri*. The five drops of liquid from the inner corona appendages are distinctive

Differences between *B. richardsii* and *B. dinteri*

	<i>B. richardsii</i>	<i>B. dinteri</i>
Corolla lobes	Short and with obtuse tips	Long and thin
Corona	<ul style="list-style-type: none"> i. Inner corona appendages reaching top of staminal column, glabrous ii. Edges of nectar pockets form a glabrous raised cupular structure with inward facing hairs 	<ul style="list-style-type: none"> i. Inner corona appendages reduced, not reaching top of staminal column, exude nectar-like substance ii. Edges of nectar pockets together form low bifid lobules

References

- Anon., 1989. Photograph "*Brachystelma* species nova". *Excelsa* 14, 50.
 Percy-Lancaster, A., 1988. *Brachystelma* in Zimbabwe. *Excelsa* 13, 63-77.

Acknowledgements

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