

SHORT COMMUNICATION

Studies in the Flora of Arabia: XXIX. Two new species from Yemen

Recent collecting on the mainland of Yemen and the island of Socotra has led to the discovery of several new taxa. The following two new species are described before publication of the forthcoming first volume of the *Flora of the Arabian Peninsula and Socotra*.

*Moraceae****Dorstenia socotrana* A.G. Mill., sp. nov.**

A *D. foetida* (Forssk.) Schweinf. caulibus aeriis nullis, foliis cordatis et appendiculis receptacularibus brevioribus differt; a *D. barnimiana* Schweinf. receptaculis circularibus recedit.

Perennial herb with a globose to ovoid underground tuber, 0.5–1 cm across, without aerial stems but the leaves arising from a short shoot on the upper part of the tuber. *Leaves* dark glossy green, simple, cordate to reniform in outline, 0.8–2.5 × 0.8–2.8 cm, with rounded or obtuse tip, entire or irregularly denticulate margin, and cordate base, minutely puberulous above and glabrous beneath, except on the veins which are minutely puberulous; petioles 1–8 cm, minutely puberulous; stipules minute, subulate. *Inflorescences* solitary in the leaf axils; receptacles pale green or orange, somewhat cup-shaped, circular in outline, 3–5 mm in diameter (excluding the appendages), the margin fringed with short boss-like projections and longer linear appendages; appendages 3–8, ± evenly distributed around the margin, linear, 1–5 × 0.6–1 mm; peduncles 1–3 cm, similar in width but shorter than the petioles. *Male flowers* numerous, with 2 perianth lobes and 2 stamens; anthers c. 0.2 × 0.15 mm. *Female flowers* fewer than the male, scattered, the ovary with a simple c. 1 mm style and unbranched stigma. *Endocarp* globose-tetrahedral, 1.3–1.4 mm long, minutely verrucose, whitish brown.

Type: Yemen, Socotra, Hamaderoh, escarpment above Hala, 12°37'N 54°17'E; semi-deciduous woodland on seaward-facing cliffs, with *Boswellia* spp., *Carphalea obovata*, *Lannea transulta* etc.; stems tuberous, leaves dark green, inflorescences orange; growing in cracks in limestone boulders, 160 m, 3 xi 1993, Miller 12647 (holo. E).

This distinctive new species is known only from an area of steep, seaward-facing limestone cliffs in NE Socotra where it grows in shade, on large limestone boulders.

The previous paper in the *Studies in the Flora of Arabia* series was: Chamberlain, D. F., Clement, R. A. & Lamond, J. (1994). *Studies in the Flora of Arabia: XXVIII. Some new taxa from the Arabian Peninsula*. *Edinb. J. Bot.* 51: 49–58.

Its single style, verrucose endocarp and underground tuber place it in *Dorstenia* sect. *Kosaria* (Forssk.) Engl. Amongst the members of sect. *Kosaria* it most closely resembles *D. barnimiana* Schweinf. in habit and leaf shape but differs by its circular rather than oblong or triangular receptacles. Its receptacles most closely resemble those of the highly variable *D. foetida* (Forssk.) Schweinf. However, in *D. foetida* the receptacular appendages are normally longer (up to 30mm) and the receptacles larger (0.6–1.5cm in diameter, excluding the appendages). The only other species recorded from Socotra is *D. gigas* Schweinf. This is immediately distinguished by its narrowly obovate leaves and massive, bottle-shaped stems which are typically 0.5m to 1m tall and 0.5m to 0.7m in diameter but can reach up to 2.5m tall and 1.25m across.

An illustration of *D. socotrana* will appear in the forthcoming *Ethnoflora of Socotra* by A. G. Miller, D. Alexander and M. Morris, which is due to be published in 1997.

Caryophyllaceae

***Polycarpaea haufensis* A.G. Mill., sp. nov.**

A *P. kuriensi* R. Wagner foliis caulinis spathulatis vel suborbicularibus non anguste spathulatis differt; a *P. jazirensi* R.A. Clement foliis longioribus clare viridis haud glaucis, et sepalis majoribus recedit.

Perennial, woody-based herb, all parts glabrous; old stems woody, covered with persistent leaf bases; young stems ascending to 12cm. *Leaves* bright green; basal leaves tufted, spathulate, 2.5–5 × 0.3–0.8cm, long-attenuate at base into an indistinct petiole, obtuse to rounded at tip; cauline leaves in dense whorls, broadly spathulate or orbicular, 3–15 × 3–5mm, rounded or obtuse at tip and abruptly attenuate into an indistinct petiole below. *Stipules* triangular-ovate, c.1.5 × 0.5mm, scarious with a brown midrib and fimbriate margin. *Flowers* in dense cymes; cymes 5–12mm long, 2–4 in capitate heads, mainly terminal but sometimes also from uppermost axils; cyme-axis fleshy; peduncle 1.5–5cm. *Bracts* appressed, ± overlapping, broadly ovate, c.1–2 × 1–2mm, scarious with a narrow brown midrib. *Sepals* oblong-ovate, the outer 2 shorter than the inner 3, 2.5–3.1 × 1–1.5mm, reddish brown with a green midrib and narrow hyaline margin. *Petals* c.2 × 0.75mm, the margin fimbriate towards the base, entire above. *Capsule* ovoid, c.2.5 × 1mm, the valves opening in top half only; seeds numerous, ± ovoid, c.0.5 × 0.3mm, minutely rugose, translucent, pale reddish brown.

Type: Yemen, Mahra Governorate, Damqawt, 16°35'N 52°50'E, tufted perennial, flowers white, on limestone boulders at sea level, 5 x 1993, *Miller & Cameron* 12176 (holo. E).

Other specimen seen. Yemen, Mahra Governorate, E of Damqawt, 16°35'N 52°53'E, dry limestone wadi, sea level, 5 x 1993, *Miller & Cameron* 12177 (E).

P. haufensis is known only from a small area along the coast between Al Fatk and Hauf in the extreme east of the Mahra Governorate of Yemen. It grows at low

altitudes (from sea level to about 20m) on limestone cliffs and large boulders near the sea. This part of Yemen is at the extreme western end of the part of southern Arabia which catches the rains and mists of the SW monsoon.

P. haufensis is most closely related to *P. kuriensis* R. Wagner (from the islands of Abd al-Kuri and Socotra), which differs in having narrowly spatulate not spatulate or suborbicular cauline leaves, and *P. jazirensis* R.A. Clement (from central Oman), which is generally smaller and has glaucous, somewhat fleshy leaves.

The discovery of *P. haufensis* brings the number of species of *Polycarpaea* covered by the *Flora of the Arabian Peninsula and Socotra* to 13, of which eight are endemic: *P. balfourii* Briq., *P. caespitosa* Balf.f., *P. hassalensis* D.F. Chamb., *P. hayoides* D.F. Chamb., *P. kuriensis* R. Wagner and *P. paulayana* R. Wagner to the Socotran archipelago; *P. haufensis* A.G. Mill. to mainland Yemen; and *P. jazirensis* R.A. Clement to Oman.

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