

NOVITATES FROM THE FLORA OF THE SULTANATE OF OMAN

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In this paper I present new taxa, new records and new locations of two biogeographically important species collected from 1990 to 1993 in the Sultanate of Oman. Holotypes are present at ON and duplicates of new records are at E, ON and at the Herbarium, Sultan Qaboos University (abbreviated in this paper as SQUH; not in Index Herbariorum).

***Polygala dispar* sp. nov.** Fig. 1, A–D.

Polygala dispar sp. nov. differt a *P. abyssinica* R. Br. ex Fresen. caule herbaceo, racemis etque foliis longioribus, foliis haud recurvis, capsulae alis disparibus. A *P. irregularis* Boiss. caule, sepalis et capsulae glabris, foliis brevis et angustus et capsulae alis disparibus differt.

Type: Sultanate of Oman, western Hajar, Ruwi Hills, by track road to Yitti, 23°37'N 58°32'E, 200m, steep limestone hills with stones and gravel, 27 iii 1992, S.A. Ghazanfar 1828 (holo. ON; iso. SQUH).

Annual herb, up to 35cm tall. Stems herbaceous, branching from the base, glabrous. Leaves alternate, glabrous, 13–37 × 0.5–1.5mm, linear to subulate, exstipulate, sessile, margins entire, apex acute. Flowers in terminal racemes, not congested on the inflorescence axis; racemes up to 20cm long. Flowers hermaphrodite, bracteate. Bracts c.0.5mm, ovate, glabrous, deciduous. Pedicel 2–2.5mm, filiform, glabrous. Sepals 5, glabrous, free, unequal, pale green, tinged purple, persistent; outer 3 sepals 3.0–4.5mm, obovate with a hyaline margin, retuse at the apex, inner 2 sepals 6–7 × 3.5–4.5mm, obovate to ovate, obtuse, distinctly 3-nerved at the base with 4–5 lateral nerves arising from the two lateral central nerves; nerves green, eventually anastomosing. Petals 3, purple, the median petal keel-like, crested at the apex; the two lateral petals smaller than the keel; lateral petals 3.5mm, obovate; keel 5mm, crest 1–1.5mm, purple. Stamens 8, joined below to form a staminal tube c.2mm long, adnate to the petals and enclosing the style; filaments c.1.5mm. Capsule glabrous, 5–5.5 × 2–2.5mm, obovate, compressed, emarginate, excluding the wings; wings unequal, surrounding the capsule, broadest at the apex; longer wing 1.5–2.0mm, smaller c.0.5–0.8mm, glabrous. Seeds 2, glabrous, strophiolate. Flowering and fruiting: March–April, after the winter rains.

The specific epithet '*dispar*' refers to the unequal wings of the capsule of this new species.

Additional specimens examined:

SULTANATE OF OMAN. Hamriya to Yitti, telecom. trail, 23 iii 1992, *Collenette* 8036 (E, ON); Jabal above Wadi Kabir, 23°34'N 58°34'E, 310m, on top of limestone hill, after rains, 27 iii 1992, *Gallagher* 8485/43 (ON).

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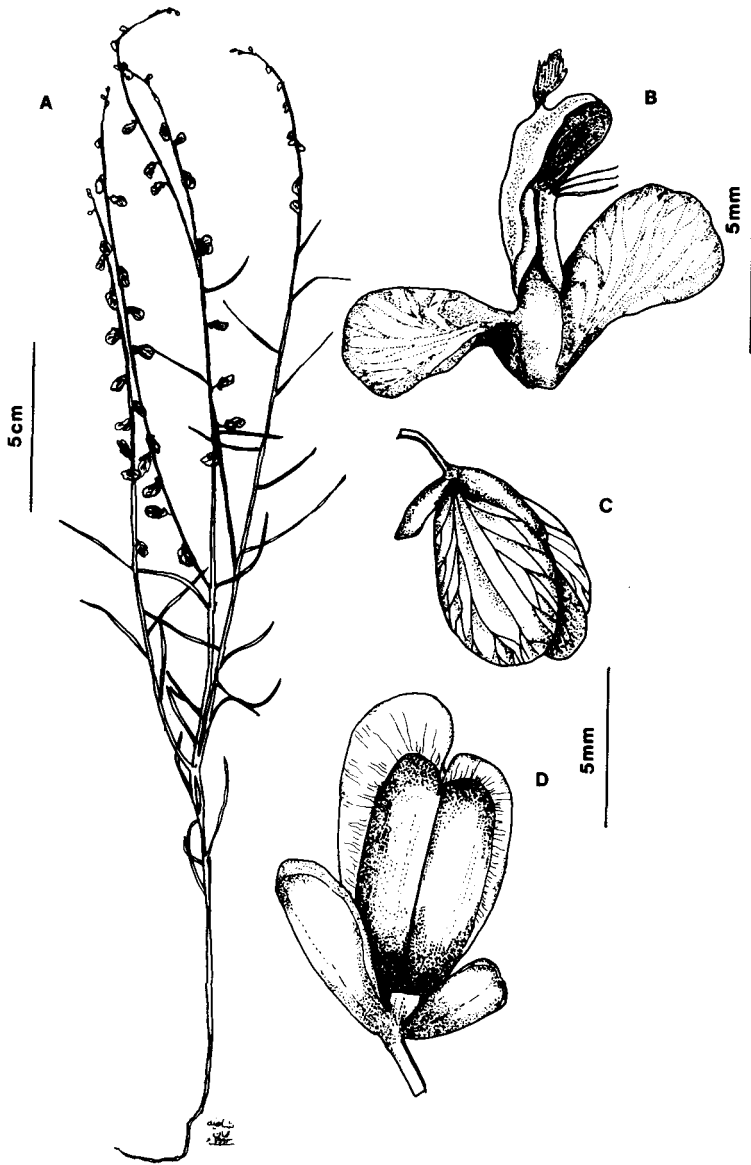


FIG. 1. *Polygala dispar*. A, habit; B, dissected flower showing the lateral petals, keel and fused stamens; C, flower with sepals; D, capsule with the front sepal removed.

Polygala dispar is an annual species similar to the perennial *P. abyssinica*, but is distinguished in its herbaceous stems, longer racemes, longer, straight leaves and the unequally winged capsule. From the annual *P. erioptera* DC. it is distinguished in its stems, sepals and capsule being glabrous. *P. dispar* is most similar to *P. irregularis* Boiss. However, *P. irregularis* is a perennial and is pubescent throughout, including the sepals and capsule; the leaves are smaller (5–13 × 1–1.5mm) and have an obtuse apex. The inner sepals are smaller (4–5mm) and have very distinct

greenish-purple nerves. The size of the capsule is also smaller being c.4mm with the wings only slightly unequal. Both *P. dispar* and *P. irregularis* are sympatric in their distribution.

Polygala dispar has been collected in the foothills of the western Hajar mountains. It is quite distinct in habit from the other annual species of *Polygala* which occur in Oman, being taller and more robust in habit. I have recorded six species from Oman (Ghazanfar 1992a); two other species, *P. irregularis* (Gallagher 8479/7, E, ON; Radcliffe-Smith 3727, E, K, ON) and *P. thurmanniana* Paiva (Miller 2032, E), are now also recorded, both from northern Oman.

NEW RECORDS

Caralluma edulis (Edgew.) Benth. & Hook.f., Fl. Brit. Ind. 4: 76 (1883).

Syn.: *Boucerosia edulis* Edgew. in J. Linn. Soc. 6: 205 t.l. (1862).

Specimens examined:

SULTANATE OF OMAN. Dhofar, cliffs above Khawr Mughsayl, c.180m, 28 ix 1992, Ghazanfar 2036 (SQUH, spirit & cult. Hortus SQU); near Mughsayl, base of rocky hillside, 4 x 1992, Collette 8388 (E, ON).

Caralluma edulis is distributed from Mauritania to India (Bruyns, 1989). In the Arabian Peninsula it occurs in the southwest lowlands of Saudi Arabia (Collette, 1985) and in N Yemen. Its presence in Dhofar links its previously known disjunct distribution. In Dhofar, it is so far known and collected from a single locality: the steep limestone coastal cliffs at Mughsayl where it grows amongst rocks and stones. At the time of collection *C. edulis* was not flowering, although flowering is reported to be in September in SW Pakistan where the species also occurs (Ali, 1983).

Otostegia persica (Burm. f.) Boiss., Fl. Or. 4: 777 (1879).

Syn.: *Moluccella persica* Burm. f., Fl. Ind. 128 (1768).

Otostegia persica has been previously recorded from southern Iran and SW Pakistan (Hedge, 1990). Its presence in the northern mountains is well expected, reflecting the close floristic links between these areas (Ghazanfar, 1991, 1992b). The cited collections are the first for the Arabian Peninsula.

Specimen examined:

SULTANATE OF OMAN. Eastern Hajar, Jabal Bani Jabir (c.20km from Sumayah), 22°50'E 59°06'N, 1680m, leeward side of steep hill, 6 xi 1992, Ghazanfar 2386 (SQUH); ibid., 16 iv 1993, Ghazanfar 2460 (E, ON, SQUH).

NEW LOCATIONS

Rubia infundibularis Hemsl. & Lace in J. Linn. Soc. 28: 324 (1891).

This species was first recorded by J.R. Maconochie from northern Oman (Maconochie 3493, ON) and later by A.G. Miller & J. Nyberg (9582, 9574, E, ON) from Jabal Akhdar and had been placed as *Rubia* sp. Recently I have collected several specimens of it, from both the western and the eastern Hajar mountains. In the western Hajar it occurs above 2000m on Jabal Shams; in the eastern Hajar it occurs on Jabal Bani Jabir from 1500m to 1660m, often climbing on *Prunus arabicus*

(Oliv.) Meikle trees. So far it has not been recorded from Musandam mountains, but it is likely to be present there.

Rubia infundibularis is described from Baluchistan where it is widespread in the hilly areas growing amongst rocks and stones. It also occurs in Afghanistan where it ascends up to 2500m. Its presence on the Hajar mountains (northern mountains) of Oman reaffirms the similarity of flora between SW Pakistan, Afghanistan and SW Iran (see Ghazanfar, 1991, 1992b). In Oman it flowers and fruits from October to April.

Specimens examined:

SULTANATE OF OMAN. N Oman, Shurayjah, 18 v 1982, *Maconochie* 3493 (E, ON); Jabal Shams, iv 1989, *Miller & Nyberg* (9582, 9574, E, ON); Jabal Bani Jabir, 22°50'N 59°06'E, 1650m, 6 xi 1992, *Ghazanfar* 2375 (SQUH); Jabal Shams, 2km N of Hail Juwari, c.2500m, 23 x 1992, *Fisher & Gardner* s.n. (SQUH).

Ceratonia oreothauma Hillcoat, Lewis & Verdcourt, subsp. ***oreothauma***, *Kew Bull.* 35: 261, 263 (1980).

Ceratonia oreothauma subsp. *oreothauma* (Arabic: tiyu) is an Omani endemic described from Jabal Aswad in the eastern Hajar mountains (Hillcoat et al., 1980). The two subspecies, *C. oreothauma* subsp. *oreothauma* and subsp. *somalensis*, are not sympatric but show a disjunct distribution, being present in northern Oman and Somalia respectively. Previously, subsp. *oreothauma* was known only from the type locality which is Jabal Aswad in the eastern Hajar mountains. It is now recorded from Jabal Bani Jabir and Jabal Khader, also in the eastern Hajar. There is a sizeable population of this endemic in both locations; the trees occur from 1330m to c.2000m on unsheltered rocks and gullies. At Jabal Bani Jabir, in the gullies, subsp. *oreothauma* often occurs with *Prunus arabicus* which is a SW Iranian species, also not previously recorded from Jabal Bani Jabir. *Prunus arabicus* does not occur on Jabal Khader.

Ceratonia oreothauma subsp. *oreothauma* grows to a height of about 4m (generally smaller than the trees on Jabal Aswad) and is normally non-gregarious. It is well known to the local inhabitants who use the pods as feed for their goats.

Specimens examined:

SULTANATE OF OMAN. Eastern Hajar, Jabal Bani Jabir, 22°50'N 59°06'E, 1660m, 30 x 1992, *Ghazanfar* 2358 (SQUH); *ibid.*, 16 iv 1993, *Ghazanfar* 2483 (SQUH); Jabal Khader, *Fisher & Gardner* s.n. (SQUH).

ACKNOWLEDGEMENTS

I am grateful to the Biology Department, Sultan Qaboos University, for providing research facilities and to Robin Brereton for helping with the Latin diagnosis.

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