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A new species of *Helianthemum (Cistaceae)* from the Sultanate of Oman

Abstract

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Helianthemum citrinum is described as a species new to science and illustrated. The species occurs in Dhofar, the southern province of Oman, and is found in the relatively dry *Acacia-Commiphora* scrubland.

There are several plant collections made during the last two decades from Oman, which contain plant material new to science. During the preparation of the "Flora of Oman" (Ghazanfar 2002 & in prep.) the following species is identified and here described. Specimens of this taxon have been collected from Oman several times over the last 20 years.

Helianthemum citrinum Ghaz., **sp. nova**
Holotype: Oman, Dhofar, Jabal Qamar, 5 km NW of Janook, rocky plain with *Commiphora,* c. 850 m, 9.10.1979, *A. G. Miller 2619* (E; isotype: K) – Fig. 1.

Helianthemo kahirico affinis, a quo foliis latioribus et pedicellis longioribus differt; a *H. lippii* floribus pedicellatis discedit.

Low subshrub, with a white-pubescent *indumentum* (on branches, petioles, pedicels, leaves, bracts and sepals) of numerous stellate hairs interspersed with distinctly longer simple hairs. *Stems* up to 20 cm tall, branching from the base, erect to ascending, spreading, young branches densely pubescent. *Stipules* 5-7 mm long, lanceolate. *Leaves* opposite to sub-opposite, simple, grey-green, petiolate; petiole 2-4 mm long; lamina 11-20 × 4-8 mm, elliptic to ovate-elliptic, apex acute, base shortly cuneate, margin entire, sometimes revolute, nerves depressed above, mid-rib and lateral nerves prominent on the lower face; leaf fascicles often present in the leaf-axils. *Inflorescence* 6-8-flowered, in a one-sided, bracteate, terminal raceme. *Flowers* bisexual, pedicellate, pedicel up to 8 mm long at anthesis, elongating and recurved in fruit. *Bracts* c. 2 mm long, linear-lanceolate. *Sepals* 5, unequal; outer 2 sepals 2-3 mm long, linear-lanceolate, the 3 inner ones

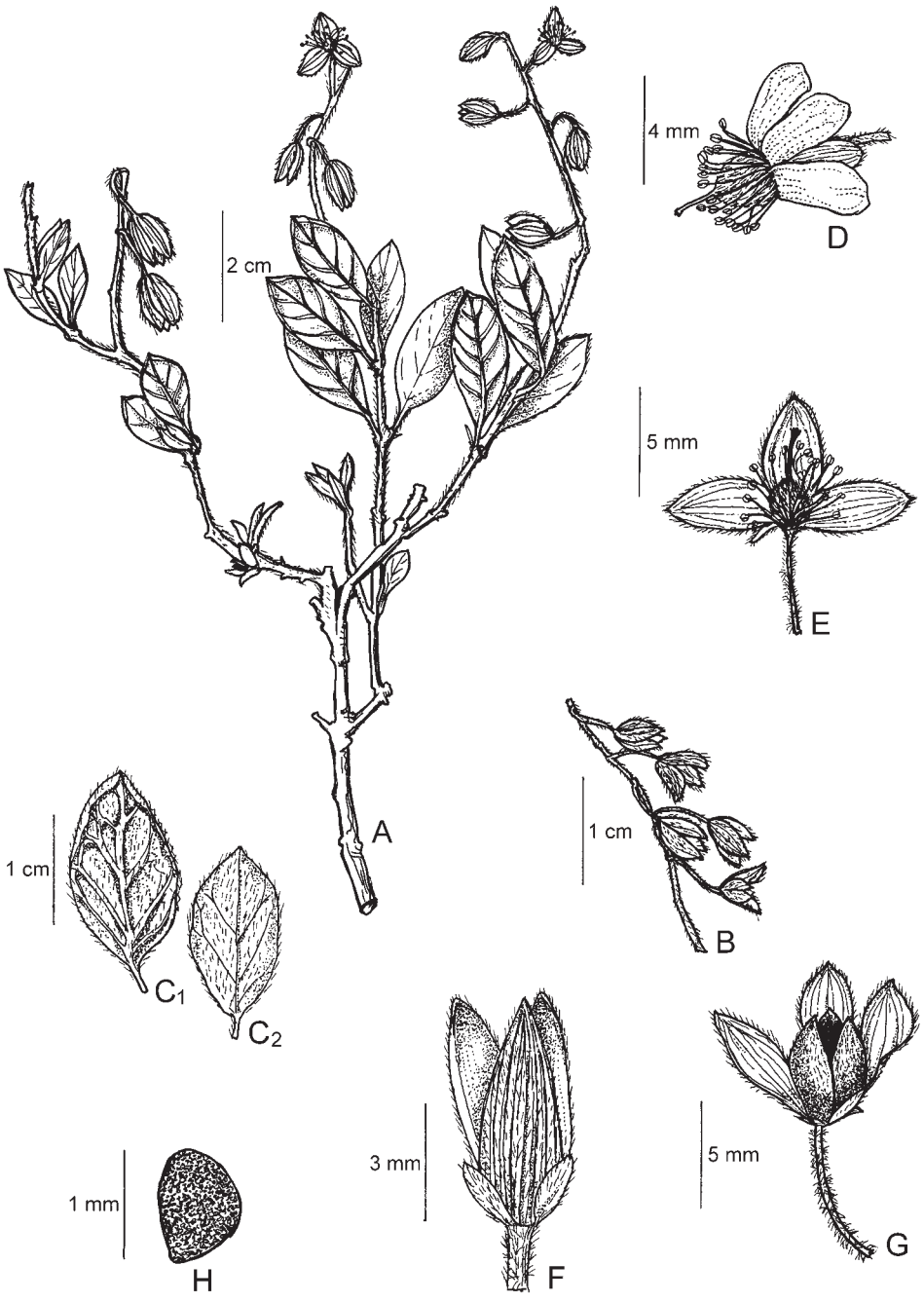

Fig. 1. *Helianthemum citrinum* – A: habit; B: inflorescence showing the pendulous mature flowers; C: leaves showing the lower (C1) and upper (C2) faces; D: single flower; E: calyx with ovary and stamens; F: calyx; G: capsule and calyx; H: seed. – Drawn by S. A. Ghazanfar; A-C, E from *Miller 2619,* D, F-H from *Radcliffe-Smith 5142.*

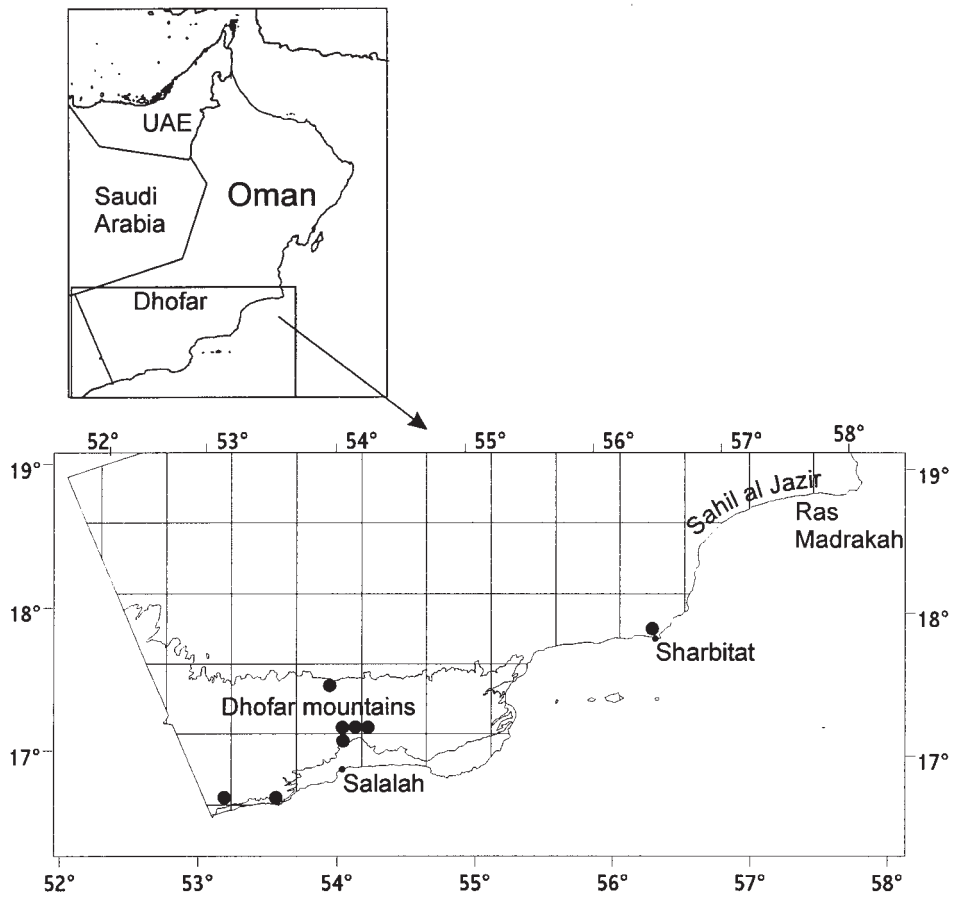

Fig. 2. Distribution of *Helianthemum citrinum* (●) in Dhofar, Oman. Filled circles represent distribution in grids of 10 km^2; map grid = 50 km^2; contours of the Dhofar mountains = 500 m altitude.

4.5-6.5 mm long, ovate-lanceolate, enlarging in fruit, purple-tinged, with dark brown-purple veins. *Petals* 5, clear yellow, 3-4 mm long, obovate, early deciduous. *Stamens* many; filaments c. 1.5 mm long, free, glabrous. *Style* simple, bent near the base; stigma crenate. *Ovary* pubescent. *Capsule* 4.5-5 mm long, ovoid, 3-valved, pubescent. *Seed* c. 1 mm in diam., angular, minutely granulate, glabrous, brown.

Distribution and ecology. – The new species is endemic to the central south coast of the Arabian Peninsula (Fig. 2). It occurs in the drier areas of Dhofar at an altitude of 100-850 m, in the *Commiphora-Acacia* scrubland, on open, rocky and stony ground, and on rocky plains. So far it is not known from central or northern Oman. Flowering and fruiting: September to October.

Additional specimens seen. – OMAN: DHOFAR: 43 km N of Salalah on the Thumrait rd., 17°19'N, 54°05'E, 600 m, 21.9.1977, *A. Radcliffe-Smith 5142* (K, ON); Jebel Qamar, Sarfait, 150 m, 11.9.1989, *A. G. Miller & J. A. Nyberg M9286* (E, K); nr. Sarfait, by roadside, 2.10.1993, *Collenette 8938* (E); main Salalah to Thamrait rd., nr. Aqabat al Hatab, c. 700 m, 4.10.1979, *A. G. Miller 2533* (E, K); Jebal Qara, Zik, c. 800 m, 26.9.1979, *A. G. Miller 2255* (E, K); limestone

cliffs above Sharbitat, 18°00'N, 56°27'E, 100 m, 29.9.1984, *A. G. Miller 6452* (E, K); s.loc., *McLeish 782* (E, ON); near police post at Thumrait, in gorge, 2.200 ft., 6.10.1993, *Collenette 8409* (E); Jebal Qamar, 1 km east of radio station, rocky limestone slopes and cliffs, with an open *Dracaena* woodland,16°50'N, 53°39'E, 1000 m, 6.10.1998, *P. Hein & N. Kilian PH5399, NK5466* (B, ON).

Relationship. – *Helianthemum citrinum* is similar to *H. kahiricum* Delile but differs in its consistently larger, elliptic to elliptic-ovate leaves (11-20 × 4-8 mm in *H. citrinum* as opposed to 3-12 × 1-3 mm and linear to linear-lanceolate in *H. kahiricum*) and longer pedicels (up to 8 mm in *H. citrinum* as opposed to 4 mm in *H. kahiricum*). From *H. lippii* Pers. it can be separated on its pedicellate flowers. The new species also resembles *H. argyreum* Baker, based on a single collection from Hadhramout, southern Yemen (Baker in Kew Bull. 1894: 239. 1894, illustrated in Hooker's Icon. Pl.: t. 2360. 1895). *H. argyreum* comes closest to *H. kahiricum,* resembling it in its small, narrow leaves and pedicellate flowers. I have seen the type and a few other collections from the Hadhramout (*Thulin & al. 8384 & 8321,* K, UPS), both showing the typical leaf and pedicel characters of *H. kahiricum* (almost sessile, narrow-lanceolate leaves, and short pedicels up to 3 mm). With more collections from Yemen, the taxonomic status of *H. argyreum* can be resolved and may found to be conspecific with *H. kahiricum*.

The new species' closest allies lie in Somalia, where four endemic species occur (Thulin 1999). The first is *H. somalense* Gillett (holotype K!), restricted to NE Somalia, which is a subshrub with densely tomentose, larger leaves (11-35 × 4-12 mm) with strongly revolute margins. It also has bigger flowers than the new species, with the inner sepals 6-7(-9) mm and the petals 6-7 mm long, and many stamens (c. 100). The second species to which *H. citrinum* is related is *H. hadedense* Thulin (isotype K!), also confined to NE Somalia. This, however, is a slender shrublet, with overall smaller and wider leaves (5-19 × 3-11 mm) and a 2-4-flowered inflorescence. The flowers are smaller than in the new species (inner sepals c. 4.5 mm long), the inflorescence is more compact and the pedicels are shorter.

It is clear that *H. citrinum* belongs to a group of related species comprising *H. lippii, H. kahiricum, H. argyreum* (if treated as a separate species), *H. somalense* and *H. hadedense,* distributed in S Oman, S Yemen and NE Somalia.

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References

Ghazanfar, S. A. 2002: Flora of the Sultanate of Oman **1. –** Meise (in press).
Thulin, M. 1999: *Helianthemum*. – Pp. 207-208 in: Thulin, M. (ed.), Flora of Somalia **1.** – Kew.

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