

# ONOSMA HAWRAMANENSIS (BORAGINACEAE), A NEW SPECIES FROM KURDISTAN, IRAQ

SAMAN A. AHMAD<sup>1</sup>

**Abstract.** *Onosma hawramanensis* from Kurdistan, Iraq, is described and illustrated. Its relationship and distinguishing characters from nearest relatives in southwestern Asia are discussed. It is easily distinguished by the combination of setae with basal tubercles sparsely pubescent with small simple trichomes, and the non-accrecent fruiting calyx; the yellow corolla, pubescent outside and glabrous inside, the sparsely pubescent nectar annulus at the base of the corolla tube; the linear anthers, free at the base and bidentate at the apex; and glabrous, glossy, broadly ovoid fruits with the surface slightly reticulate.

**Keywords:** Boraginaceae, Iraq, Kurdistan, *Onosma*

The author conducted extensive floristic fieldwork in Hawraman Mountains (Kurdistan, Iraq) as part of his Ph.D. research during the years 2011–2013. This mountain series is part of the Zagros Range, located along the Iraqi-Iranian borders some 50 km E of Sulaimani City. Several novelties, such as *Ferula shehbaziana* S.A.Ahmad (Ahmad, 2013), *Petrorhagia sarbaghiae* S.A.Ahmad (Ahmad, 2014a), *Scrophularia sulaimanica* S.A.Ahmad (Ahmad, 2014b), and the novelty described below, as well as 18 species new to the flora of Iraq (Ahmad, 2014c), were discovered while conducting this fieldwork.

***Onosma hawramanensis* S.A.Ahmad, sp. nov.** TYPE: IRAQ. Kurdistan, Sulaimani Province, Rangin Mt., subalpine rocky grassland, 2004 m, 35°21'20"N, 46°05'10"E, 8 June 2012, Saman A. Ahmad 12-997 (Holotype: SUFA; Isotype: SUFA). Fig. 1.

Herbs perennial, canescent, woody at base. Stems 20–30 cm, several branched at base, few branched distally, hispid, with spreading white trichomes 1–2 mm, dark brown after bark peeling off. Basal leaves and lowermost cauline ones soon withered; middle leaves broadly elliptic, 3–4 × 1.5–2 cm, sessile, base cuneate, margin entire, apex subacute, densely pubescent with ascending trichomes to 2 mm and with sparsely pubescent tuberculate base with simple trichomes; uppermost leaves elliptic-ob lanceolate, smaller. Inflorescence dense, scorpioid, 5–10-flowered; bracts lanceolate, 10–20 × 2–5 mm; flowering pedicels 1–2 mm, slightly elongated and 3–4 mm in fruit. Calyx ca. 10 mm in flower, 12–15 mm in

fruit, not accrecent, united at base, densely white pubescent with trichomes to 2 mm; corolla yellow, tubular, 13–15 mm, slightly expanded at apex, pubescent outside, glabrous inside; teeth broadly triangular, ca. 1.5 × 1.5 mm; nectar annulus poorly developed, sparsely pubescent; filaments ca. 4 mm, inserted at middle of corolla tube, not expanded at base; anthers free, linear, 6–7 mm, sagittate at base, sterile apex bidentate, to 1.5 mm. Fruits 5–5.5 × 3.5–4 mm, broadly ovoid, glossy, slightly reticulate, straight, glabrous, carinate adaxially, slightly so abaxially, apex straight, flattened.

*Onosma* L. is a large and complex genus represented in Turkey by 88 species (Riedl, 1978) and Southwest Asia, especially the Flora Iranica area by 58 species (Riedl, 1967). The genus is represented in Kurdistan Iraq by 32 species, including the novelty described above.

*Onosma hawramanensis* is known only from the type gathering collected in the Rangin Mountain, a range that has never been explored botanically before. It is easily distinguished from related species in Iraq and neighboring countries by a the perennial habit, the broadly elliptic cauline leaves, leaves with setae, the setae with basal tubercles sparsely pubescent with small simple trichomes, the basally united calyx not accrecent after flowering; yellow corolla pubescent outside and glabrous inside, broadly triangular corolla lobes, and sparsely pubescent nectar annulus at base of corolla tube; filaments inserted at middle of corolla tube, linear anthers free at base and bidentate at apex; and broadly ovoid, glabrous and glossy fruits 5–5.5 × 3.5–4 mm, with an slightly reticulate surface.

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<sup>1</sup> Department of Field Crops, Faculty of Agricultural Sciences, Sulaimani University, Sulaimani, Kurdistan, Iraq; samanchnaraye@gmail.com

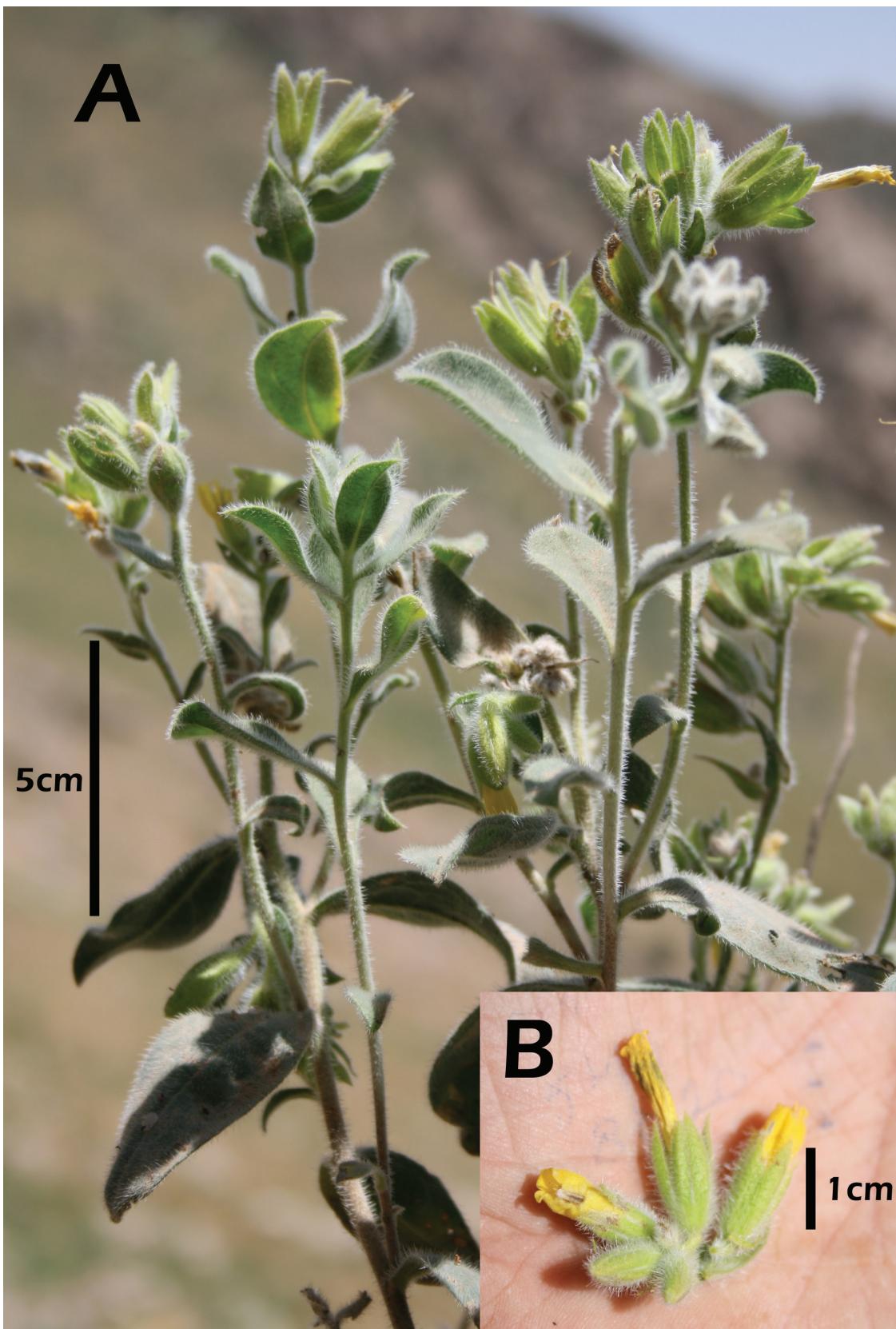


FIGURE 1. *Onosma hawramanensis*. A, plant; B, part of inflorescence.