

Serratula oligocephala DC. (Asteraceae), a New Record for the Flora of Lebanon

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Abstract: *Serratula oligocephala* DC. is currently reported as an endemic species of Turkey, where it has limited distribution in east and south Anatolia. Specimens collected from the continental humid slopes beneath the northern summits of the Mount Lebanon Range in the eastern Mediterranean confirm the occurrence of the species in Lebanon.

Key Words: Biodiversity, endemic, flora, Mount Lebanon, Mediterranean

Introduction

The genus *Serratula* L. is represented in Lebanon by 3 species (Post, 1932; Feinbrun-Donthan, 1978; Mouterde, 1983). *S. cerinthifolia* (Sm.) Boissier demonstrates a wide distribution range (Lebanon, Syria, Palestine, Jordan, Turkey, Iran, and Iraq). *S. pusilla* (Lab.) Dittrich occurs in Lebanon, Cyprus, Syria, and Palestine, while *S. mouterdei* (Arènes) Dittrich is endemic to Lebanon. On the other hand, 14 species of *Serratula* are defined within the Flora of Turkey and *S. oligocephala* DC. is ascribed the status of being endemic to Turkey (Davis & Kupicha, 1975). Its natural distribution is quite limited; it is reported from east and south Anatolia.

The ongoing field research in the "Wild Flora Project", initiated 25 years ago, has already resulted in the discovery of several new species and many described taxa previously unaccounted for among the flora of Lebanon (Haber & Haber, 1993; Semaan & Haber, 1996; Haber & Semaan, 2002, 2004; Semaan & Haber, 2004). Visiting the elevated eastern slopes of the Mount Lebanon range permitted the collection of plant specimens of the genus *Serratula* L. that were different from the related taxa already described from Lebanon. Upon close inspection of the pertinent literature of several floras (Post, 1932; Davis & Kupicha, 1975; Cannon & Marshall, 1976; Feinbrun-Donthan, 1978), the specimens proved

to be of the species *Serratula oligocephala* DC., already described as endemic to the region of Anatolia in Turkey. Consultation of herbarium specimens of *Serratula oligocephala* DC. collected by Post in Kurd-Dagh and deposited in the Post Herbarium at the American University of Beirut confirmed the taxonomic identity of the specimens collected in Lebanon.

Results and Discussion

Serratula oligocephala DC., Prodr. 6:669 (1838).
Synonym: *S. oligocephala* var. *glaberrima* Post in Bull. Herb. Boiss. 7: 155 (1899). Figure 1.

Examined specimens: Lebanon: North Lebanon Province: Col de Ainata, 2120 m, 34°11'45.2" N, 36°03'56.7" E, 19 May 2002, R. Haber and M. Semaan 2002, no. 3155 (MO; K); Col de Ainata, 1970 m, 34°12'36.8" N, 36°04'43.7" E, 7 June 2002, R. Haber and M. Semaan 2002, no. 3245 (MO).

Perennial rhizomatous herb, 50-100 cm high, multi-branched at base; stems simple, striate, stout, and purplish at base, with purple tint on venation, lanate-arachnoid, floccose. Leaves coriaceous, lanate-arachnoid, blue-green above, bright green below; basal leaves 15-34 x 9-13 cm, petiolate; petiole 5-9(-15) cm long, decreasing upwards, purplish at base; lamina lyrate with

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(A)



(B)

Figure 1. *Serratula oligocephala* DC., photos of the type collection taken by the authors A: capitulum; B: Habit of plant.

2 to 4 lobes on each side, the lowest lobe highly reduced, 0.5-0.8 x 0.4-0.5 cm, distant, entire, sometimes toothed; lateral lobes obovate-elliptic to oblong, irregular- and shallow-toothed, sinuate, sometimes lobed; terminal lobe 7-10 x 8-11 cm, orbicular-roundish, shallow-toothed, sinuate, sometimes undulate; teeth mostly with a deep purple tip; cauline leaves 1-3, 13-25 (-31) x 7-10 cm differ from basal leaves by smaller roundish-ovate terminal lobe and shorter petiole; floral leaves 5.0-22.0 x 3.5-11.0 cm, shortly petiolate to sessile, lanate, the lower more lacerate than cauline leaves, lyrate to rhomboid-triangular, with sinuate irregularly-toothed lobes and reduced ovate-triangular terminal lobe; the upper 1.5-3.0 cm, simple, linear-lanceolate, entire or 1 to 2 toothed, acute. Inflorescence 35-57 cm long, striated, lanate-villous, with 5-8(-14)

capitula; peduncles 3-29 cm long with 0 to 4 (6) leaves in its upper half; leaves sessile, 1.5-3.0 x 0.5-1.2 cm, with acute lobes mainly on lower peduncles. Capitula 3.0-4.0 x 3.5-6.0 cm in flower, 2.5-3.5 x 3.0-3.5 cm in fruit; phyllaries coriaceous, lanate, scabrous, margin scarious, about 1 mm hyaline, white to purple, dark purple tip extending into an appendage; lower phyllaries 4-5 x 3 mm; median phyllaries 11-17 x 4 mm; inner phyllaries 20-25 x 2-4 mm; appendage distinct, simple, without lateral or basal cilia, foliaceous, entire, pungent, recurved, scabrous on both sides, dark brown-purple and lanate at the centre part, pale brown at margin and inside; receptacle paleaceous; palea 2-13 mm long, white; flowers 3.0-3.5 cm long, pink-purple, marginal flowers not radiant; corolla 2.6-2.8 cm long, lobes 6 mm long, obtuse, barbate at tip when young; anthers tinted faintly

purple; filaments white, papillate; stigma bilobed, lobes unequal; pistil with annulus of hairs coinciding with the tips of stamens. Achenes glabrous; marginal 5 x 2 mm, terete, rounded on back, winged inside, corrugate; inner 7-10 x 4-5 mm, obovate, flattened or rounded on back with compressed sides, not winged, dark brown with fainter maculation, parallel striation and sometimes venation; pappus up to 1.2 cm long, pluriseriata; hairs on a ring, simple, unequal, the innermost series not differentiated.

Distribution and habitat. The species is abundant, but quite localised, thriving in a narrow strip at an altitude of 1900-2200 m on the continental humid steep slopes beneath the northern summits of the Mount Lebanon Range. The substrate is of Terra Rosa type, rich in organic matter topped with a layer of stones and scanty vegetative cover. Winter is marked with harsh climatic conditions of strong winds, low temperatures (-3 to 4 °C), 90 days of frost, and a thick snow cover resulting from about 40 days of annual snowfall (Service Météorologique, 1966, 1967). Grazing pressure in the

spring-summer period constitutes the most threatening disturbance. It is notable that most plants lose their flowering heads to goats before maturation. *S. oligocephala* puts out its basal leaves after the snow thaw. Its flowering period extends from mid May to mid July, as observed by the authors.

The habitat of the species in Lebanon is similar to that described in Turkey (Davis & Kupicha, 1975). In both locations, *S. oligocephala* grows on rocky limestone slopes and shaly slopes. In Lebanon, the species does not extend down to altitudes as low as it does in Turkey (760-2400 m) and is confined to higher altitudes (1900-2200 m). Its altitudinal zone falls within the *Juniperus* range, albeit it is currently deforested. In Turkey, the growth zone corresponds with *Quercus* scrub.

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