

## *Filago pertomentosa* (Asteraceae), a new species from Iran

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*Filago pertomentosa* F. Ghahremani. & Akhundzadeh *sp. nova* is described from Iran and illustrated. It is compared with the morphologically close *F. arvensis*.

Key words: Asteraceae, *Filago*, new species, taxonomy

*Filago* (Asteraceae) was classified in the tribe Gnaphalieae after a recent investigation by Anderberg (1994). Gnaphalieae is one of the largest tribes in the family, with more than 180 genera and 2000 species (Anderberg 1994).

*Filago* comprises nearly 35 species (Mabberley 1997) in north temperate areas. There are 12 species in the *Flora Iranica* region (Georgiadou *et al.* 1980), of which nine occur in Iran. The three species not occurring in Iran are *F. aberrans*, endemic to Afghanistan, *F. palaestina* is distributed in Middle East, and *F. anatolica* is distributed in Middle East and Transcaucasus (Georgiadou *et al.* 1980). With the addition of the new species described here the number of Iranian species thus rises to ten.

All measurements in the description are based on dried herbarium specimens.

***Filago pertomentosa*** F. Ghahremani. & Akhundzadeh, *sp. nova* (Fig. 1).

*Affinis* *Filago arvensis*, *sed folia* 2.5–5(–5.5) *lata*, *receptaculum oblongum et* 1.5–1.6 × 0.5 *mm diametro etc.*

TYPE: Iran. Kordestan province, 18 km on the road from Sardasht to Piranshahr (Khaneh), 1000 m, 26.V.1976 *Rune-mark & Foroughi 19900* (TARI).

Annuals, densely appressed white-greyish tomentose, 13–21 cm high, erect, usually branched from below with ascending branches, more rarely simple. Leaves oblong to oblong-lanceolate, widened below middle, nearly acuminate, 5–15 mm long, 2.5–5(5.5) mm wide, densely pubescent. Glomerules 8–10 mm long, 5–15 mm diameter, including 2–12 capitula in dense, sessile to subsessile, elliptical-globose heads arranged along whole of stem and shoots, denser at apices of stems; floral leaves longer than capitula. Involucre ovate, ca. 4 mm long, 5–5.5 mm wide, covered with long tomentose hairs. Phyllaries in three series, ca. 12 in number; outer phyllaries linear, plicate, acute, 2.5–3.5 mm long, 2–3 mm wide, ca. 3 in number, tomentose, and lanate on back, greenish at middle above, whitish below, including filiform female florets without pappus; middle phyllaries ovate-lanceolate, very plicate, acute, 5–5.5 mm long, 2–2.5 mm wide, 4–5 number, sometimes nearly



**Fig. 1.** *Filago pertomentosa* (A–J; from holotype) and *F. arvensis* (K; from A. Seyyedrezazadeh 45422, FAR). — A: Habit. — B: Involucre. — C: Outer phyllaries. — D: Median phyllaries. — E: Inner phyllaries. — F: Bisexual floret. — G: Female floret. — H: Female floret without pappus (in the axils of the phyllaries). — I: Stamens. — J and K: Receptacles.

tomentose, only greenish above middle, including filiform female florets without pappus; inner phyllaries linear-oblong, erect, obtuse, 3 mm long, 1 mm wide, ca. 5 in number, glabrous, whitish, green only in midrib. In center usually with four tubular, 4-lobed bisexual florets, with pappus, purple at apex, 2.2 mm long, including yellowish anther (0.6 mm long); and with two tubular, 2-dentate filiform female florets with pappus, 2.5–2.8 mm long, including style with yellowish forked stigma (0.5 mm long). Receptacle oblong, 1.5–1.6 mm long. Cypselas oblong, straight, light-brown, ca. 0.6 mm long, ca. 0.2 mm wide, covered with papillae. Pappus of bisexual and filiform florets as long as florets

tall, bisexual florets containing ca. 21–22 finely crenate hairs (2–2.2 mm long), female florets ca. 19–20 finely crenate hairs (2.3–2.4 mm long).

**ADDITIONAL SPECIMENS EXAMINED** (paratypes). — **Iran.** Kordestan province: 8 km N of Mirabad to Piranshahr near to the river, 1300–1400 m, 29.V.1978 *Runemark & Mozaffarian* 29183 (TARI); 2 km around of Marivan, 1330 m, 11.V.1986, *Fattahi & Khaledian* 626 (TARI).

**Ecology and phenology.** *Filago pertomentosa* thrives in a dry meadow at forest margin, and scrubwood forest areas (from the specimen labels) of northern Zagros Mountain Ranges. It was found between 1000 and 1400 m altitude. Flowering and fruiting in May–June.



Fig. 2. Distribution of *Filago pertomentosa*.

Distribution. *Filago pertomentosa* is, at present, known only from the type collections, in a small area in west Iran, near the frontier between Iran and Iraq (Fig. 2). It may have a wider distribution in other unexplored areas of Iran, and Iraq. The new species is apparently rare and geographically localized, since we have studied many specimens of the genus in the majority of Iranian herbaria, but could recognize only three specimens of it in TARI herbarium.

Taxonomic remarks. *Filago pertomentosa* resembles *F. arvensis* morphologically. It differs from *F. arvensis* by the wider leaves (2.5–5.0(–5.5) vs. 1–4 mm), receptacle shape (oblong vs. subglobose), receptacle diameter (1.5–1.6 × 0.5 vs. 0.5 × 0.7 mm), number of female florets in center (2 vs. 17–19(–23)), and indumentum of the phyllaries (very dense specially in lower part vs. dense).

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