

## A new alien record for the flora of Turkey: *Sigesbeckia pubescens* (Compositae)

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**Abstract:** An Asian species, *Sigesbeckia pubescens* (Makino) Makino (Compositae), is recorded as an alien for the flora of Turkey. The specimens were collected from A8 Artvin and a distribution map for the species is provided.

**Key words:** Compositae, new record, *Sigesbeckia*, Turkey

*Sigesbeckia pubescens* (Makino) Makino, J. Jap. Bot. 1(7): 24 (1917).

Basionym: *Sigesbeckia orientalis* L. f. *pubescens* Makino, Bot. Mag. (Tokyo) 18: 100 (1904).

≡ *Sigesbeckia orientalis* L. subsp. *pubescens* (Makino) H.Koyama, Fl. Jap. (Iwatsuki et al., eds.) 3b: 32 (1995).

This species was collected during an expedition in A8 Artvin Province as part of an ongoing project entitled Long-term Development Plan of Hatila Vadisi National Park. We came across *Sigesbeckia* L. individuals with regularly toothed leaves (Figure 1). The genus found occurring as an alien taxon in Anatolia has been identified as *S. orientalis* L., which is widely distributed in the warmer countries of the world. At first glance it is quite normal to suppose that it is *S. orientalis*. We were not able to identify these specimens using the *Flora of Turkey* (Kupicha, 1975). These specimens seemed to be similar to *S. pubescens* according to the *Flora of China* (Shu, 2011). We considered that these specimens belong to *S. pubescens* (Makino) Makino (Figure 1), which is a new alien record for the flora of Turkey. Some taxa have already been newly recorded in areas close to this region in Turkey (Hamzaoğlu, 2012; Terzioğlu et al., 2012). The identification was confirmed by comparison with herbarium specimens of *S. orientalis* in KATO and OMUB. Furthermore, the study in KATO shows that some of the specimens from A7 and A8 Trabzon are this species. The number of *Sigesbeckia* species occurring in Turkey is 2 at the moment. The identification key of the 2 species for

the *Flora of Turkey* and the description adopted from the *Flora of China* are given.

1. Branches forked in upper part; leaves ovate-triangular, chartaceous, irregularly lobulate; capitula ca. 5–7 mm wide ..... *S. orientalis*

1. Branches not forked; leaves deltoid-ovate, thinly membranous, usually toothed; capitula ca. 10–12 mm wide ..... *S. pubescens*

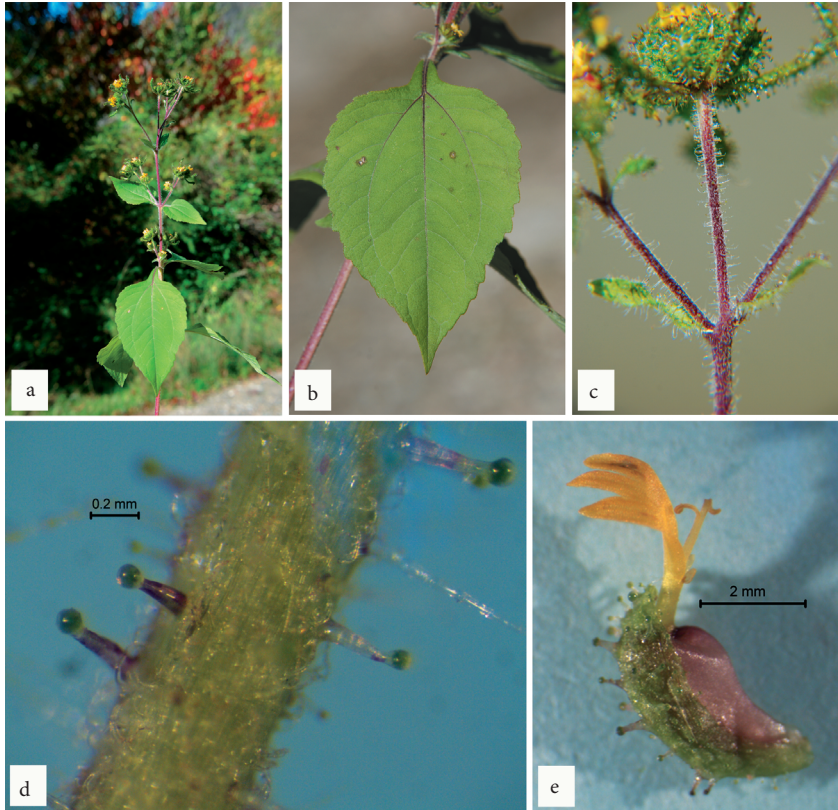
While *S. pubescens* is closely related to *S. glabrescens* (Makino) Makino, it clearly differs from its counterparts by having stalked glands on the peduncle (Figure 1) and a ray tube length of ca. 1–1.5 mm compared to that of ca. 0.5–1 mm in *S. glabrescens* (Figure 1).

This new record belongs to the tribe *Heliantheae* and is distributed naturally in China, India, Japan, Korea, and Taiwan (Shu, 2011). In Turkey, it is distributed in A8 Artvin and Trabzon and A7 Trabzon (Figure 2); it grows in forest clearings, forest margins, and fields, between 450 and 1200 m.

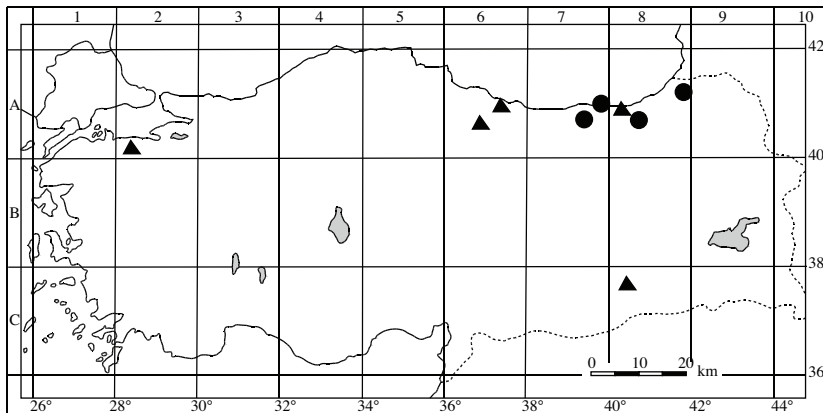
### Specimens examined

— *Sigesbeckia pubescens*: A7 Trabzon: Maçka, 1000 m, 29.08.1974 (KATO 1548); A8 Trabzon: Çaykara, 420 m, 18.09.1995 (KATO 12718); A8 Trabzon: Of, 10 m, 16.08.1997 (KATO 12720); A8 Artvin: Hatila Vadisi National Park, around Taşlıca village, edge of forest, wet places, roadsides, 594 m, 22.10.2011, UTM: 0730231, 4561777 F.Karaer 22503, (KATO 18784); A7 Trabzon: Arsin, Çardaklı village, 561 m, 01.10.2011, UTM: 0575829, 4526794 (KATO 18912).

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**Figure 1.** a- General view of *S. pubescens*, b- leaf, c- capitula and peduncle, d- glandular hairs on peduncle, e- ray flower.



**Figure 2.** Distribution map of *Sigesbeckia pubescens* (●) and *S. orientalis* (▲) in Turkey.

— *Sigesbeckia orientalis*: A6 Tokat: Niksar, banks of Ilıcak stream, 350 m, 19.09.1992, *F.Karaer* 3053 (OMUB); A6 Ordu: Naneli village, 450 m, 04.08.1980 (KATO 5586); A8 Trabzon: Dernekpazarı, 80 m, 23.08.1995 (KATO 12717).

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