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Palearctic species of the genus *Tephritis* (Diptera, Tephritidae) associated with plants of the tribe Senecioneae (Asteraceae)

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Abstract

Tephritis arnicae (Linnaeus, 1758) from Europe was the hitherto only Palearctic species of the genus *Tephritis* known to infest flowerheads of asteraceous plants of the tribe Senecioneae. An additional species with similar biology, *Tephritis arsenii*, new species, recently discovered in Iran and Armenia is described. It is very similar to *T. arnicae* in the shape of the aculeus and spermathecae, as well as the wing with darkened anal lobe and abdominal tergites with black setulae, but differs from it by the white posterior orbital and notopleural setae, and also by details of the wing pattern. Larvae of *T. arsenii* feed in flowerheads of *Doronicum dolichotrichum* Cavill of the tribe Senecioneae (Asteraceae).

Key words: Tephritidae, *Tephritis*, new species, Iran, Armenia, *Doronicum*, Senecioneae, Asteraceae

Introduction

The genus *Tephritis* Latreille, 1804 includes over 160 described species occurring mostly in the Holarctic Region and, to a lesser degree, in the Afrotropical, Oriental, and Australasian Regions (Norrbom *et al*. 1999). Flies of this genus inhabit most climatic zones and altitudes, from dry and hot semi-desert to cold circumpolar tundra and subnivial belt in mountains. Larvae of *Tephritis* species usually feed in flowerheads of asteraceous plants of the tribes Anthemideae, Astereae, Cardueae, Cichorieae, Inuleae, and Senecioneae.

While revising the western Palaearctic species of *Tephritis,* a previously unknown species, *T. arsenii*, n. sp., from Armenia was found by the first author, and later it was collected in numbers in Iran by all authors of this paper. Detailed analysis of literature data, morphological structures and host plants showed that this species is closely related to *Tephritis arnicae* (Linnaeus, 1758), which is a common European boreal-mountainous species, occurring in most European countries (Hendel 1927, Merz & Korneyev 2004). *Arnica montana* L., *Doronicum grandiflorum* Lam., and *D. austriacum* Jacq. are known host plants of its larvae (Merz, 1994). *Arnica montana* is a medicinal crop and can be used as a counterirritant hydroacloholic extract to reduce the inflammation and pain from bruises, sprains and aches (Small and Catling 1999). *Tephritis arnicae* is considered a serious pest of this crop. *Doronicum dolichotrichum* Cavill., the host plant of *T. arsenii*, occurs from northeastern Turkey and the Caucasus to the regions of Iran south of the Caspian Sea. *Tephritis arnicae* and *T. arsenii* are the only known Palearctic species of *Tephritis* whose larvae develop in host plants of the tribe Senecioneae. White (1988) considered records for *T. cometa* from *Arnica montana* and *Doronicum* sp., and *T. praecox* from *Senecio* sp. doubtful, they are very probably are based on misidentifications.

The new species of *Tephritis* is described and figured below, along with new collection data and an illustrated rediscription of *T. arnicae*.

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