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Revision of species of the genus *Tephritis* Latreille 1804 (Diptera: Tephritidae) with entire apical spot

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Abstract

Eleven species of the genus *Tephritis* with an uncommon banded wing pattern and/or solid apical crossband/spot instead of apical fork, mainly from the Palaearctic Middle East, are described and keyed, including *Tephritis afrostriata* **new species**, *T. cameo* **new species**, *T. gladius* **new species**, *T. ochroptera* **new species**, and *T. robusta* **new species**. The following synonymy is established: *Tephritis admissa* Hering 1961 = *T. conflata* Dirlbek & Dirlbek 1995 **new synonym.** Lectotypes for *T. angulatofasciata* Portschinsky 1892 and *T. tatarica* Portschinsky 1892 are designated. New distribution records are reported. *Tephritis tatarica* is recorded to be reared *Alfredia nivea* Kar. et Kir.; *T. admissa*, *T. cameo*, *T. gladius*, and *T. ochroptera* were swept from *Cousinia* spp., which very probably are their host plants.

Key words: Diptera, Tephritidae, Tephritinae, *Tephritis*

Introduction

The genus *Tephritis* Latreille 1804 includes over 150 species occurring mostly in the Holarctic Region and to the lesser degree in the Afrotropical and Oriental Regions (Norrbom *et al.* 1999). Flies inhabit almost all the climatic zones and altitudes, from dry and hot semidesert to circumpolar tundra and subnival belt in mountainous regions. Larvae of *Tephritis* species feed in flower heads of a wide range of asteraceous plants of the tribes Anthemideae, Astreae, Cardueae, Cichorieae, and Senecioneae, occasionally inducing non-lignified galls in flower heads, shoots and rosettes. *Tephritis* species of the North American, European and Far East Asian regions have been recently revised and keyed (Foote *et al.* 1993; Merz 1994; Korneyev & Ovchinnikova 2004). About 50 undescribed species from the Middle East and Central Asia are recognized in collections (S. Korneyev, unpublished data); no comprehensive keys to the species occurring in the central part of the Palaearctic Region exist.

The Middle East *Tephritis* species were studied rather intensively in the last ten years (Korneyev & Dirlbek 2002; Kütük 2005, 2008 a, 2008 b, Mohamadzade *et al.* 2010; Zarghani *et al.* 2010 a, 2010 b; Kütük *et al.* 2012), and more than 10 new species have been described from Iran, Iraq, Turkey and bordering countries.

Most species of *Tephritis* have reticulate wing pattern with 3 large subtriangilar hyaline spots at apex with a Y-like dark "fork" or 2 isolated dark spots between them. There have been a few exceptions to this rule, for instance, the western European *T. vespertina* (Loew) with the small apical hyaline spot, and the "fork" modified into a mushroom-shaped apical spot.

A few species of *Tephritis* with entirely different dark apical spot, such as *T. admissa* Hering, *T. angulatofasciata* Portschinsky and *T. tatarica* Portschinsky, remained poorly known and were even transferred to *Paroxyna* (Hendel 1927). More recently, some additional species with such an apical spot were either described in *Tephritis* or assigned to other genera because of their banded wing pattern, which is quite uncommon for this genus (Wang 1990; Richter 1995; Khaganinia *et al.* 2011).

When starting a revision of the western and central Palaearctic *Tephritis* (S. Korneyev, in prep.), I recognized several undescribed species in collections with an odd wing pattern type as described above. This made necessary a comprehensive taxonomic treatment of all known species with banded pattern or with entire apical spot forming a short apical crossband. As a result, eleven species are recognized in this group, five of them are new.

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