



A review of the European species of the genus *Tetragoneura* Winnertz (Diptera: Mycetophilidae)

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Abstract

Five European species of the genus *Tetragoneura* Winnertz (Diptera: Mycetophilidae) are reviewed. Male terminalia of all species as well as female terminalia of *T. ambigua* Grzegorzek, *T. sylvatica* Curtis and *T. ruuhijarvi* sp. n. are illustrated on the base of type and newly collected material. Two species: *T. ruuhijarvi* sp. n. and *T. pudogensis* sp. n. are described based on specimens collected in Finland and Russian Karelia. *T. sibirica* Maximova is found to be a junior synonym of *T. obirata* Plassmann. Key to European species is provided.

Key words: fungus gnats, new species, new synonym, Europe

Introduction

The genus *Tetragoneura* was originally established by Winnertz (1846) based on the type species, *T. distincta* (Winnertz) from Germany that was subsequently regarded by Johannsen (1909) as the junior synonym of *T. sylvatica* (Curtis).

The genus currently includes 119 extant species (Evenhuis *et al.* 2008) mainly confined to the Neotropical and Australasian regions. Seventy five species are presently known from South America (Papavero 1978; Duret 1980, 1989; Kerr 2007) and ten species are listed by ITIS (2011) for the Nearctic region. Twenty six species, mostly found in New Caledonia, are included in Australasian and Oceanian Diptera Catalog (Evenhuis 2007). Eight species were known from the Palaearctic region (Søli *et al.* 2000; Maximova 2001) and only three of them (*T. sylvatica*, *T. ambigua* (Grzegorzek) and *T. obirata* Plassmann) are recorded from Europe (Chandler 2011). Five species are known from the East Palaearctic. Four of them—*T. longicornis* (Okada), *T. matsutakei* (Sasaki), *T. otohimeana* Okada and *T. sasakawai* Oliveira & Amorim (= *T. tibialis* Sasakawa)—are recorded from Japan and Kuril islands (Sasaki 1935; Okada 1939; Sasakawa 1961; Zaitzev 1994; Oliveira & Amorim 2010). The fifth species, *T. sibirica* Maximova, described recently from Western Siberia (Maximova 2001), is here found to be a junior synonym of *T. obirata*.

Systematic position of the genus has been changed several times. Edwards (1925) placed *Tetragoneura* and closely related genus *Ectrepesthoneura* Enderlein in the tribe Leiini (that equals recent subfamily Leiinae) because of the characters of their wing venation, namely the shortness of R1 and Sc which were chosen as the chief characteristics of the Leiini. Väisänen (1986) however mentioned that most *Tetragoneura* and *Ectrepesthoneura* possess the "sciophilinae cell", i.e. the small cell delimited distally by R4 (Vockeroth 1980) which is always absent in the true Leiinae. This circumstance allowed Väisänen to consider these genera closer to Gnoristinae than Leiinae. In addition, he has made more comprehensive studies on the morphology of the known species of *Tetragoneura* and *Ectrepesthoneura* and tentatively suggested to include both genera to subfamily Gnoristinae. This point of view has been accepted by Bechev (2000) and is now used in the Fauna Europaea online database (Chandler 2011). Several authors, however continued to treat *Tetragoneura* as a part of subfamily Leiinae (Zaitzev 1994) or tribe Leiini (Søli 1997).