First report of *Psyllopsis repens* Loginova, 1963 (Hemiptera: Psylloidea) from Isparta, Turkey

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**Abstract:** *Psyllopsis repens* Loginova, 1963 (Hemiptera: Psylloidea) has been recorded for the first time in Turkey (Isparta). This jumping plant-lice species is associated with ash trees (*Fraxinus angustifolia, F. excelsior, and F. ornus*) and induces galls on leaves and buds. Additionally, *Anthocoris nemoralis* (Fabricius, 1794) has been confirmed as a predator of *P. repens*.

**Key words:** Psyllids, *Psyllopsis*, *Fraxinus* spp., galls, faunistics, new record, Turkey

The jumping plant-lice or psyllids, with some 3850 described species worldwide (Li, 2011), are usually highly host-specific plant sap-sucking insects. *Psyllopsis* Löw, 1879 is a West Palearctic genus currently classified in the Liviidae: Euphylliurinae: Diaphorinini (Burckhardt and Ouvrard, 2012) and includes 10 species (*P. discrepans* (Flor, 1861); *P. distinguenda* Edwards, 1913; *P. dobreanuae* Loginova, 1971; *P. fraxini* (Linnaeus, 1758); *P. fraxinicola* (Foerster, 1848); *P. machinosus* Loginova, 1963; *P. meliphila* Löw, 1881; *P. narzykulovi* Bajeva, 1964; *P. repens* Loginova, 1963; and *P. securicola* Loginova, 1963) exclusively associated with various ash trees, *Fraxinus* spp. (Malenovský and Jerinić-Prodanović, 2011; http://www.hemiptera-databases.com/psyllist). The ash trees are ornamental species native to southern Europe and southwestern Asia (Rushforth, 1999). There are 3 *Fraxinus* species (*F. angustifolia* subsp. *oxycarpa*, *F. excelsior*, *F. ornus*) encountered in Turkey and frequently planted in cities and forests. Among them, *F. angustifolia* subsp. *oxycarpa* is the most economically important species in Turkey and Europe due to its rapid development capability and valuable wood (Davis, 1987; Fraxigen, 2005). Three *Psyllopsis* species have been found on ash trees in Turkey, namely *Psyllopsis fraxinicola, P. machinosus*, and *P. securicola* (Klimaszewski and Lodos, 1979; Burckhardt and Önuçar, 1993; Güçlü, 1996).

In 2012 and 2013, symptoms of growth abnormalities such as leaf-roll galls and malformations on *Fraxinus* spp. were surveyed in Isparta, Turkey. During this study, *Psyllopsis repens* was recorded for the first time in Turkey, being the fourth *Psyllopsis* species known in the country.

Previously, *P. repens* had been reported in Afghanistan, Armenia, Azerbaijan, Iran, Israel, and Serbia (Malenovský and Jerinić-Prodanović, 2011: http://www.hemiptera-databases.com/psyllist). The morphology of adults and fifth instar larvae of *P. repens* were described in detail by Loginova (1963) and Malenovský and Jerinić-Prodanović (2011). The body of adults is pale dirty yellow (in freshly emerged or alcohol-preserved specimens) to orange brown or ochreous with brown markings on the thorax and abdomen (Figures 1a and 1b). The adults can be reliably distinguished from related species especially by the structure of their male and female terminalia (illustrated in Loginova, 1963; Malenovský and Jerinić-Prodanović, 2011). Immature stages and adults of *P. repens* were found in Isparta inside bud proliferations with the characteristic cottony structures they produce. Güçlü (1996) also reported similar cottony structures for *P. machinosus* on the racemes of *Fraxinus* spp. in Erzurum, Turkey. We observed that immature specimens of *P. repens* use the cottony structures for nesting and hiding and the bud proliferations for feeding (Figures 2a–2c). As adults emerge, they start feeding on the leaves of *Fraxinus* spp. and induce leaf-roll galls. In the first year, the authors observed adults of *P. repens* only on *Fraxinus angustifolia* (a total of 250 specimens of *Fraxinus* spp. were examined) in Isparta, Süleyman Demirel University Campus, 16.viii.2012, 2♂♂ 4♀♀. In 2013, adults of *P. repens* were also found on *F.
excelsior and F. ornus (in total 50 specimens) in Isparta, Süleyman Demirel University Campus, 19.viii.2013, 8♂♂ 10♀♀; 24.viii.2013, 4♂♂ 5♀♀; 03.ix.2013, 3♂♂ 6♀♀; 13.viii.2013, 2♂♂ 4♀♀. We also found nymphs and adults of a common psyllid predator, Anthocoris nemoralis (Fabricius, 1794) (Heteroptera: Anthocoridae), cooccurring with P. repens inside the cottony structures; this species is known as a predator of immature and adult P. repens (Jerinić-Prodanović and Protić, 2013). Besides this psyllid species, the prey of A. nemoralis consists of various small arthropod species, especially psyllids, aphids, and scale insects (Önder, 1982).

To summarize, P. repens is a new species in the Turkish psyllid fauna and a potential pest of ash trees. Further studies are needed to reveal its distribution and economic importance in Turkey.

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References


