

First record of *Metcalfa pruinosa* (Homoptera: Fulgoroidea: Flatidae) from Russia

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Metcalfa pruinosa (Say, 1830) is firstly recorded from Russia. This is a first record of the family Flatidae for the Russian fauna. *Metcalfa pruinosa* is treated as a potential pest of agricultural and ornamental plants.

Key words: Russia, first record, Homoptera, Fulgoroidea, Flatidae, *Metcalfa pruinosa*

Superfamily FULGOROIDEA Kirkaldy, 1907

Family FLATIDAE Spinola, 1839

Metcalfa pruinosa (Say, 1830)

Material examined. 18 males, 5 females, 4 larvae of fifth instar; **Russia, Krasnodar Territory, Lazarevskoye**, on stems of sunflowers; 26 July 2009; E.S. Sugonyaev leg. The material is deposited in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg.

Metcalfa pruinosa (Say, 1830) belongs to the family Flatidae Spinola, 1839. This is a first record of the family Flatidae for the fauna of Russia. Totally the genus *Metcalfa* Caldwell & Martorell, 1951 includes six species and subspecies all known only from the Neotropics (Metcalf, 1957) except *M. pruinosa* which is authentically known from Canada, USA, and Bermuda (Wilson & McPherson, 1981; Wilson & Hilburn, 1991; Wilson & Lucchi, 2001). In Europe, this species was recorded for the first time from Northern Italy 30 years ago (Zangheri & Donadini, 1980). Later on it spread into Sicily and Sardinia in Italy, Austria, Bulgaria, Croatia, Czech Republic, Southern France and Corse, Greece, Hungary, Slovenia, Switzerland, and Turkey (see the reviews by Wilson & Lucchi, 2001; Gotlin Čuljak et al., 2007; Trenchev et al., 2007;

Györfy et al., 2009).

In late July 2009, the outbreak of *M. pruinosa* was observed in the Black Sea coast region of the Krasnodar Territory, around Lazarevskoye. The species infested various herbaceous and woody plants. The highest population density of *M. pruinosa* was registered on vegetables, particularly on eggplant and cucumber, and the plants were covered by honey dew and depressed. The number of adults of *M. pruinosa* on sunflower stem reached around 300 specimens per linear meter. A significant number of larvae of *M. pruinosa* was registered on persimmon (*Diospyros kaki*, Ebenaceae) and Lencoran acacia (*Albizzia julibrissin*, Mimosaceae). These trees have lost all its leaves and flowers. In the forest the larvae of *M. pruinosa* were registered in high number in the underwood.

It is rather probable that *M. pruinosa* has been recently introduced to the Krasnodar Territory with some shipment of cargo from Turkey or Bulgaria. We have no information about presence of the species in Abkhazia, but it is rather possible. According to Lucchi (1997), *M. pruinosa* starts its colonization of new territory from flat areas along main traffic arteries and later spread to the surrounding regions up to maximum altitude 400–500 m. So, it is rather possible

to expect further invasion of the species in piedmont areas of the Krasnodar Territory in the nearest future.

Metcalfa pruinosa has a high naturalization potential being polyphagous (it has been recorded on 330 plant species in 78 families in Europe) and having no specific natural enemies (Lucchi, 1997; Wilson & Lucchi, 2001). *Metcalfa pruinosa* has one generation per year (Wilson & Lucchi, 2001). According to data from literature (Lucchi & Santini, 1993; Wilson & Lucchi, 2001), during the late summer females insert eggs under the bark of twigs of host plants. The eggs overwinter and hatch in early May. Development of five nymphal instars takes place throughout the summer in about 42 days. In USA and Italy the first adults were found by early July. *Metcalfa pruinosa* is feeding on agricultural and ornamental plants sucking sap and causes it to slow down or to stop its growth (Lucchi, 1997). Larvae and imagoes of *M. pruinosa* produce honey dew which is a good substrate for blackish sooty mold and larvae produce wax that dirtifies the plants (Lucchi, 1997). Apparently large populations of *M. pruinosa* may cause economic damage.

In the Krasnodar Territory, *M. pruinosa* sometimes inhabits the same biotopes as *Ricania japonica* Melichar, 1898 (Ricanidae). The latter species was introduced to the Caucasus long time ago from Asia and it is also highly polyphagous. Another recent homopteran invasive species in Southern Russia is *Arboridia kakogawana* (Matsumura, 1932) (Cicadellidae), probably introduced from the Far East, which, during the last ten years, has spread to the Krasnodar and Stavropol Territories and the Rostov Province and become an important pest of grapevine (Gnezdilov et al., 2008).

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