First record of the tobacco flea beetle *Epitrix hirtipennis* Melsheimer [Coleoptera: Chrysomelidae: Alticinae] in Russia

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The invasive pest of tobacco *Epitrix hirtipennis* (Melsheimer, 1847) is recorded in Russia for the first time. In April 2013 two specimens were collected in Sochi and in May one specimen was collected in Tuapse (near the Black Sea shore, in the Northern Caucasus). *Epitrix hirtipennis* is native to North and Central America. It was first recorded in the EPPO region in 1983 in Italy. It was subsequently recorded in the Azores (Portugal), Greece, Turkey, FYR of Macedonia, Bulgaria, and Syria. *Epitrix hirtipennis* is the first known alien flea beetle in Russia.

Flea beetles of the genus *Epitrix* Foudras, 1860 (Coleoptera: Chrysomelidae: Alticinae) are tiny beetles that feed mainly on Solanaceae. Some of them are serious pests. The genus has a worldwide distribution and consists of nearly 180 species. Fourteen of them are native to the Palaearctic ecozone, and 12 to the Nearctic ecozone (Döberl, 2000). Four Nearctic species have been established in the EPPO region: *E. cucumeris* (Harris, 1851), *E. similis* Gennner, 1944, *E. fasciata* Blatchley, 1918, and *E. hirtipennis* (Melsheimer, 1847) (EPPO, 2011). The former two species are included in the EPPO A2 List of pests recommended for regulation as quarantine pests and are serious pests of potato and other vegetables, while the latter two, feeding mainly on tobacco, are not included (EPPO, 2011; Germain et al., 2013).

*Epitrix hirtipennis* was the first American species of this genus introduced to Europe. In 1983 this species, native to North and Central America, was found in Europe for the first time in Northern Italy (Sannino et al., 1984). It then quickly spread to South and Central Italy (Sannino & Balbiani, 1990) and was also found in Azores (Portugal) in 1985 (Israelsen, 1985), Greece in 1988 (Lykouressis, 1991), Turkey in 1993 (Döberl, 1994), FYR of Macedonia in 1996 (Krsteska et al., 2009), Bulgaria in 2000 (Trenchev & Tomov, 2000) and Syria in 2002 (Gruev & Döberl, 2005). Additionally, *E. hirtipennis* has been introduced to the Pacific region: to Tahiti (Gourves et al., 1979), Fiji (Waterhouse, 1997) and Hawaii (Nishida, 2002). Records from Spain, Sri Lanka, and the Philippines (Deseo et al., 1993) are not considered reliable, because no references on collected material or other details are given. Spread of *E. hirtipennis* may combine long-distance, human-mediated dispersal and natural spread by adult flights (Beenen & Roques, 2010).

Larvae of *E. hirtipennis* are root-feeding, while adults feed on leaves. In the native range *E. hirtipennis* is known mainly as a pest of tobacco, but can also feed on eggplant, potato, tomato and many other solanaceous plants (Capinera, 2001). In Europe *E. hirtipennis* causes severe damage on tobacco in Italy, Greece and Bulgaria (Deseo et al., 1993; Lykouressis et al., 1994; Deligeorgidis et al., 2007; Tomov et al., 2007). It also damages eggplant in Greece (Lykouressis, 1991). *Epitrix hirtipennis* is sometimes found on potato, but is not considered a serious pest of potato crops in the European countries (Boavida & Germain, 2009).

In spring 2013 three specimens of *E. hirtipennis* were collected by sweeping weeds in the Northern Caucasus near the Black Sea shore [Sochi, Krasnosel’skaya street (43.58°N, 39.76°E), 30.04.2013, two females; Tuapse, Kalarasha street (44.13°N, 39.08°E), 7.05.2013, one female] (Fig. 1). The specimens will be deposited in the collection of Zoological Institute of Russian Academy of Sciences (St.-Petersburg). The specimens have been identified by their external morphology and the structure of spermatheca (Fig. 2) (White & Barber, 1974; Döberl, 2000). *Epitrix hirtipennis* differs from most of the Palaearctic and Nearctic *Epitrix* species in colour: head and pronotum are rufous. Pronotal...
Fig. 2 Spermatheca of the female of Epitrix hirtipennis collected in Tuapse (Krasnodar Territory, Russia).

antebasal impression is weak. Elytra are yellow with dark brown suture and transverse stripe at midlength. Elytral intervals are covered with dense long white setae. Thickening at anterior angles of pronotum are short. Elytral scutellar row of punctures does not reach the midlength of elytra and consists of 14 punctures. Promont is covered with dense punctures, which are as large as those in elytral rows.

E. hirtipennis differs from E. fasciata (American species, introduced to Azores) in the shape of elytral transverse band, which is wider and more elongate body (2.05 mm long, 1.9 as long as wide) and in the shape of elytral suture and transverse stripe at midlength. Elytra are yellow with dark brown suture and transverse stripe at midlength. Elytral scutellar bow and consists of 14 punctures. Pronotum is covered with dense punctures, which are as large as those in elytral rows. Spermatheca is elongate, pear-shaped, without constriction.

Soon after the establishment of E. hirtipennis in Italy its quick expansion to the east was predicted (Döberl, 1994). Now this prognosis is being seen to occur. Only two alien species of leaf-beetles were recorded from Russia until recently: Zygozgramma saturalis (Fabricius, 1775), intentionally introduced for biological control of ragweed (Ambrosia spp.) (Reznik et al., 2008), and the Colorado potato beetle Leptinotarsa decemlineata (Say, 1824) (Biénkowski, 2011; Maslyakov & Izhevskii, 2011). Within last 2 years two more alien species have been found: Diabrotica virgifera LeConte, 1868 (All-Russian Plant Quarantine Center, 2011) and E. hirtipennis (present article). The appearance of new alien species corresponds to the general tendency: the rate of arrival of leaf beetles to Europe is increasing exponentially, and the ranges of new alien species expand (Beenen & Roques, 2010).

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Premier signalement de l’altise du tabac Epitrix hirtipennis Melsheimer [Coleoptères: Chrysomelidés: Alticinae] en Russie


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