

First record of sap beetles *Epuraea ocularis* and *Stelidota geminata* (Coleoptera: Nitidulidae) from Caucasus

Первая находка жуков-блестянок *Epuraea ocularis* and *Stelidota geminata* (Coleoptera: Nitidulidae) на Кавказе

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Two invasive species of the sap beetles, *Epuraea ocularis* Fairmaire, 1849 and *Stelidota geminata* (Say, 1825), are recorded from Caucasus for the first time: from Abkhazia and from Russia (Krasnodar Territory) and Abkhazia, respectively. *Stelidota geminata* is also a new species for the fauna of Russia.

Два инвазивных вида жуков-блестянок – *Epuraea ocularis* Fairmaire, 1849 и *Stelidota geminata* (Say, 1825) – впервые обнаружены на Кавказе: в Абхазии и в Краснодарском крае России соответственно. *Stelidota geminata* впервые указан также для фауны России.

Key words: sap beetles, alien species, Caucasus, Russia, Abkhazia, Coleoptera, Nitidulidae, *Epuraea*, *Stelidota*, new records

Ключевые слова: жуки-блестянки, инвазивные виды, Кавказ, Россия, Абхазия, Coleoptera, Nitidulidae, *Epuraea*, *Stelidota*, новые указания

In Europe, the beetles predominate among the terrestrial invasive arthropods. Twenty-six species of the alien sap beetles were recorded from Europe, and a few from them have economic importance (Denux & Zagatti, 2010). During the field studies in the northwestern part of the southern slope of the Greater Caucasus mountain range in 2013–2014, the junior author collected two invasive species of the sap beetles, *Epuraea ocularis* Fairmaire, 1849 and *Stelidota geminata* (Say, 1825), which are new for the Caucasian fauna; *S. geminata* is also a new species for Russia. The most beetles were caught in pitfall traps with nine-percent acetic acid. All the captured specimens are deposited in the collections of both authors. The photographs of general appearance of

E. ocularis and *S. geminata* can be found on the Internet (Benisch, 2014).

Epuraea ocularis (Fairmaire, 1849)

Material examined. Abkhazia, Gudauta Distr., Pitsunda, Riapshi Valley, 5–6 km SE from Ludzava Vill., 43°10'43.33''N 40°25'37.21''E, 2–14 May 2012, about 40 specimens, leg. I.A. Solodovnikov.

Remarks. Beetles were collected in the river valley overgrown with deciduous trees: walnut (*Juglans regia*), chestnut (*Castanea* sp.), boxtree (*Buxus colchica*), at elevations of 58–70 m (Fig. 1). Each elytron of all the captured specimens has dark maculae (oval at the base, trapezoid at the apex, and transverse at the middle).



Figs 1, 2. Abkhazia: 1, sample site of *Epuraea ocularis* and *Stelidota geminata*, 43°10'43.33''N 40°25'37.21''E; 2, sample site of *Stelidota geminata*, 43°12'35.07''N 40°31'30.60''E.

Epuraea ocularis belongs to the subgenus *Haptoncus* Murray, 1864. Species of this subgenus are rather common in tropical and subtropical regions. Two of them, *E. ocularis* and *E. luteola* Erichson, 1843, were introduced to Europe in the first half of the 20th century and now demonstrate very rapid expansion over the continent (Audisio, 1993; Kirejtshuk, 1998; Jelínek, 2007; Jelínek & Audisio, 2007). Both species are currently widely distributed over Europe: *E. luteola* is known from 19 countries (Jelínek & Audisio, 2007); *E. ocularis* is known from Austria, France, Germany, Italy, Malta, Portugal, Slovenia, Spain, Switzerland and Turkey (Jelínek & Audisio, 2007; Mifsud & Audisio, 2008), and was also recorded from Canary Islands, Israel, Hawai and the mainland of North America (Jelínek, 1997; Ewing & Cline, 2004; Cline & Audisio, 2011; Rittner & Nir, 2013). Nowadays both species are considered as cosmopolitan. *Epuraea ocularis* is recorded here from Caucasus (Abkhazia) for the first time.

Epuraea ocularis is associated with decaying fruits and other decomposing plant substrates; imagines frequently visit flowers of trees and bushes. Larvae were recorded on fermenting fruits (peach, apple, orange etc.), in fruit bodies of tree-fungi and similar substrates, as well as on decaying flowers. Imagines occur during a whole year in the tropical regions (Kirejtshuk, 1998; Audisio et al., 2000; Tsukada et al., 2005).

Stelidota geminata (Say, 1825)

Material examined. **Abkhazia**, *Gudauta Distr.*: 5–6 km SE of Ludzava Vill., 43°10'43.33''N 40°25'37.21''E, 2–14 May 2012, 9 specimens, leg. I. Solodovnikov; near Otkhara Vill., h = 180 m, 43°12'35.07''N 40°31'30.60''E, 13 May – 6 July 2013, 3 specimens, leg. I.A. Solodovnikov, S.V. Solodovnikova, V.M. Kotsur; near Mtsara Vill., Zashirbara Mountain Range, h = 680–690 m, Mtsara Valley, 43°16'7.50''N 40°8'46.0''E, 11 May – 5 July 2013, 2 specimens, leg. I.A. Solodovnikov, S.V. Solodovnikova, V.M. Kotsur, S.M. Pavluchuk, N.Yu. Pichugin. **Russia**, *Krasnodar Terr.*, *Khosta Distr.*: Alek Mountain Range, h = 650–670 m, head water (riverheads) of the Malaya Khosta River, 43°39'22.88''N 39°53'02.63''E, 3 May – 9 July 2013, 1 specimen, leg. I.A. Solodovnikov, S.V. Solodovnikova, V.M. Kotsur; Kraevo-Armianskoe Vill., Matsesta Valley, h = 110 m, 43°35'44.88''N 039°048'47.48''E, in flight and on grapes leaves, 11 July 2013, 4 specimens, leg. I.A. Solodovnikov.

Remarks. Beetles were collected on the plains and in the mountains. In the mountains, all the finds were made in the deciduous forests (hornbeam, beech, oak, and hazel) (Figs 2–3).

Stelidota geminata originates from the North American continent and is known under the name “strawberry sap beetle”. In 1980s it was firstly introduced to the Azores (Portugal) and later, to the continental Europe (Israelson, 1985; Jelínek,



Fig. 3. Sample site of *Stelidota geminata*, Krasnodar District (Russia): 43°39'22.88"N 039°53'02.63"E.

2007). Today, according to the literature, it was found in at least eleven countries: Austria, Belgium, France, Germany, Hungary, Italy, Portugal (Azores), Slovenia, Switzerland, and Turkey (Jelínek & Audisio, 2007; Köhler, 2009; Merkl et al., 2009). The species is recorded here from Caucasus and Russia for the first time. At the present time it is considered as subcosmopolitan species.

The strawberry sap beetle feeds on ripe, overripe and injured fruits of various species (apple, peach, citrus fruit and other), but only after fruit fall on the ground or when they are low-growing (Weber & Connell, 1975). In the Northeastern United States this species is reported to be one of the important strawberry pests. Larvae contaminate harvestable fruit and make them unmarketable (EPPO, 2010). The only registration in Europe was in strawberry plantations on ripe berries in Serbia in 2011 (Spasić et al., 2011). *Stelidota geminata* was found in European countries in forests, parks and gardens, in decaying fruit and in leaf litter.

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