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NEW DATA ON THE DISTRIBUTION OF *LIMONIA BADIA* WALKER AND *GNOPHOMYIA ACHERON* ALEXANDER (DIPTERA, LIMONIIDAE) IN EASTERN FENNOSCANDIA

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First records of *Limonia badia* Walker and *Gnophomyia acheron* Alexander (Diptera, Limoniidae) in the Republic Karelia are reported. The biology and threat status are briefly discussed.

Key words: Limoniidae, distribution, Russia, Karelia, Fennoscandia.

А. Полевой, Ю. Салмела. НОВЫЕ ДАННЫЕ О РАСПРОСТРАНЕНИИ *LIMONIA BADIA* WALKER И *GNOPHOMYIA ACHERON* ALEXANDER (DIPTERA, LIMONIIDAE) В ВОСТОЧНОЙ ФЕННОСКАНДИИ

Приводятся данные о новых находках *Limonia badia* Walker и *Gnophomyia acheron* Alexander (Diptera, Limoniidae) в Восточной Фенноскандии (Республика Карелия). Оба вида впервые отмечаются на европейской части России. Кратко рассматриваются их биология и природоохранный статус.

Ключевые слова: Limoniidae, распространение, Россия, Карелия, Фенноскандия.

Introduction

Recent faunistic studies in Republic Karelia have revealed many remarkable species from different taxonomic groups of Diptera. These include not only new regional records [Grichanov, Polevoi, 2004; Humala, Polevoi, 2009], but also species new to Russia [Pilipenko, 2011] and new to science [Jakovlev, Polevoi, 2009; Jaschhof, Jaschhof, 2009; Polevoi, Jakovlev, 2011; Polevoi, 2013]. Among the others, two remarkable species of crane flies (family Limoniidae) have also been recognized. Both were lately discovered in Finland, but recorded for the first time from European part of Russia. Materials are stored in

Forest Research Institute, Petrozavodsk (FRIP) and private collection of Jukka Salmela (JES). Location coordinates are given according to WGS84 coordinate reference system (EPSG:4326).

Gnophomyia acheron Alexander 1950

Material. Russia, Karelia: 7♂♂, Kon: Kivach Nature Reserve (62,25°N 33,96°E), 7–8.VI.2011, A. Polevoi leg. (FRIP).

Remarks. This species was described and, until recently, known from the East Palaearctic [Savchenko, 1989; Pilipenko, Sidorenko, 2006; Krivosheina, 2008; Pilipenko, 2009]. First European record originates from Finland [Starý, Salmela, 2004]. Finnish records were discussed in more details by E. Hancock [2008], who also

provided genitalia figures and a key to European species of the genus *Gnophomyia*. Larval morphology was studied by M. Krivosheina [2008]. In Fennoscandian scale *G. acheron* is considered to be an eastern taiga species [Salmela, 2012] and that is also supported by the new findings.

Limonia badia (Walker 1848)

= *Limonia indigenoides* (Alexander 1920)

Material. Russia, Karelia: 5 ♂♂, 1 ♀, Kon: Tipinitsy (62,17°N 35,35°E), 27.VIII.2013, A.Polevoi leg. (FRIP). 1 ♂, Крос: Kostomuksha (64,59°N 30,31°E), 21–27.IX.2005 (*ex larva*, on aspen trunk, reared in a laboratory), G. Varkonyi leg. (JES). 1 ♂, Крос: Kostomuksha (64,57°N 30,27°E), 28.VIII.2006 (an adult, under bark of aspen trunk), G. Varkonyi leg. (JES).

Remarks. This poorly known species was described from North America. First European record (from Finland) was published by J. Starý and J. Salmela [2004], along with species redescription and male genitalia figures. Earlier Karelian record (from Kostomuksha) is mentioned in the Catalogue of Crane Flies of the World [Oosterbroek, 2013] but was not officially published.

Discussion

According to M. Krivosheina [2008], larvae of *G. acheron* develop in the phloem of dying trunks of different deciduous trees (*Populus*, *Maackia*, *Phellodendron*, *Juglans*). In Finland they were found under the bark of aspen [Hancock, 2008]. Finnish specimens of *L. badia* were initially collected with window traps, set on dead aspens and it was suggested that larvae may live in decaying aspen wood [Starý, Salmela, 2004]. Later this species was registered in emergence traps put on decaying aspen logs [Halme et al., 2013]. Karelian specimens of *G. acheron* and *L. badia* were collected in comparatively old (over 100 years old) herb-rich spruce forests with high ratio of aspen. Available data show that both species are obligate xylobionts, and probably specialists of old-growth forests. In Finland *G. acheron* estimated as "Vulnerable" and *L. badia* – as "Near Threatened" [Rassi et al., 2010]. Both species are evidently rather rare in Russian Karelia as well, however their threat status has not been estimated yet.

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