КРАТКИЕ СООБЩЕНИЯ
SHORT COMMUNICATIONS

LEPTURA AURULENTA (COLEOPTERA, CERAMBYCIDAE), A NEW RECORD OF A VERY RARE SPECIES IN RUSSIA

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The paper presents data on a new record of a very rare insect, *Leptura aurulenta* (Coleoptera, Cerambycidae), in the Mordovia State Nature Reserve (Russia). This is a third reliable registration of this species within Russia. It expands the range of this beetle to 600 km to the east. We have presented an original biotope description, data on distribution and biology of *L. aurulenta*.

Key words: Coleoptera, *Leptura aurulenta*, Mordovia State Nature Reserve, new record

Introduction

The Mordovia State Nature Reserve is located in the Temnikov district of the Republic of Mordovia. It belongs to the Central Russian subprovince of the Eastern European province of the European broad-leaved forest region on the wooded right-bank of the River Moksha (Gribova et al., 1980). The forest-steppe naturally marks the boundary of the protected area from the south. The climate of the Mordovia Reserve is related to the Atlantic-continental region of the temperate zone (Gafferberg, 2015). Intensive entomological studies of recent years have shown many new and interesting findings of Coleoptera species in the Mordovia Reserve area (Legalov et al., 2014; Egorov et al., 2015, 2016, 2017; Egorov & Shapovalov, 2017; Ruchin & Egorov, 2017; Semenov, 2017).

The family of longicorn beetles (Cerambycidae) belongs to one of the most interesting taxonomic groups of Coleoptera. In ecosystems, the species of this family participate, first of all, in the wood biodegradation (at larval stage) and pollination of flowering plants (imago). The longicorn beetles' research is also important for biodiversity study. However, some species of longicorns are very rare and listed in the Red Data Books on federal and regional level. The present report contains information about the discovery of the rarest longicorn beetle in Russia – *Leptura aurulenta* Fabricius, 1793 in the Mordovia State Nature Reserve.

Material

The Republic of Mordovia, Temnikov district, 17 km NW from the city of Temnikov, Mordovia State Nature Reserve, forest square 324, 15.07.2017, 1 specimen, A.B. Ruchin (Fig. 1). The specimen was transferred to the collection of the Zoological Institute of the Russian Academy of Sciences (St. Petersburg, Russia).

Description of the biotope

The female *L. aurulenta* was caught on the western narrow clearing of forest square 324 of the Mordovia State Nature Reserve. The beetle sat on the inflorescence of a plant of the Apiaceae family. This quarter has a developed forest and meadow vegetation. In the south-western and north-western corners of this quarter there are small areas of ripening and ripe lime trees, in the stand of which occur sparsely *Quercus robur* L., *Ulmus laevis* Pall. and *U. glabra* Huds. The undergrowth includes *Euonymus verrucosa* Scop. and *Padus avium* Mill. The herbaceous level is formed mainly by *Aegopodium podagraria* L., *Dryopteris filix-mas* (L.) Schott, *Lamium maculatum* (L.) L., in damp places *Urtica dioica* L. and *Humulus lupulus* L. occur. There is a lot of leaf litter. Next to the lime (*Tilia cordata* Mill.) trees there is a small area of ripening oak (*Quercus robur*) forest with a similar species composition of the flora. It is located in the south-western part of the quarter along the southern clearing. Oak forests occupy

small areas in the central, eastern and southeastern parts of the forest quarter (Fig. 2). The eastern half of the quarter and part of the western half are occupied by swampy alder (*Alnus glutinosa*) forest with *Padus avium* and *Humulus lupulus* in the undergrowth, and *Glyceria maxima* (C. Hartm.) Holmb., *Carex acuta* L., *C. riparia* Curt. and *C. vesicaria* L., *Scirpus sylvaticus* L., and *Filipendula ulmaria* (L.) Maxim. in the herb layer. Most of the western half is occupied by flood meadows situated along the River Pushta. Their species composition includes the following Gramineae species: *Glyceria maxima*, *Phalaroides arundinaceae* (L.) Rausch., *Poa palustris* L., *P. pratensis* L., *Bromopsis inermis* (Leyss.) Holub . Common sedges here are *Carex acuta*, *C. vesicaria*, *C. riparia*, *C. vulpina* L. The forb vegetation is presented mostly by the following hygrophytes: *Filipendula ulmaria*, *Symphytum officinale* L., *Lythrum salicaria* L., *Lysimachia vulgaris* L.

Distribution

According to the latest report on longicorn beetles of Russia (Danilevsky, 2014), in Russia *Leptura aurulenta* is extremely rare, reliably known only from the Tellerman Forest near Voronezh; (Odoyev district, forest 3–4 km south of Odoyev) (Mamontov & Nikitsky, 2007). The rest of the findings are either questionable or not confirmed. There are also unreliable data on this species in the westernmost region of Russia – the Kaliningrad region (Alekseev, 2007).

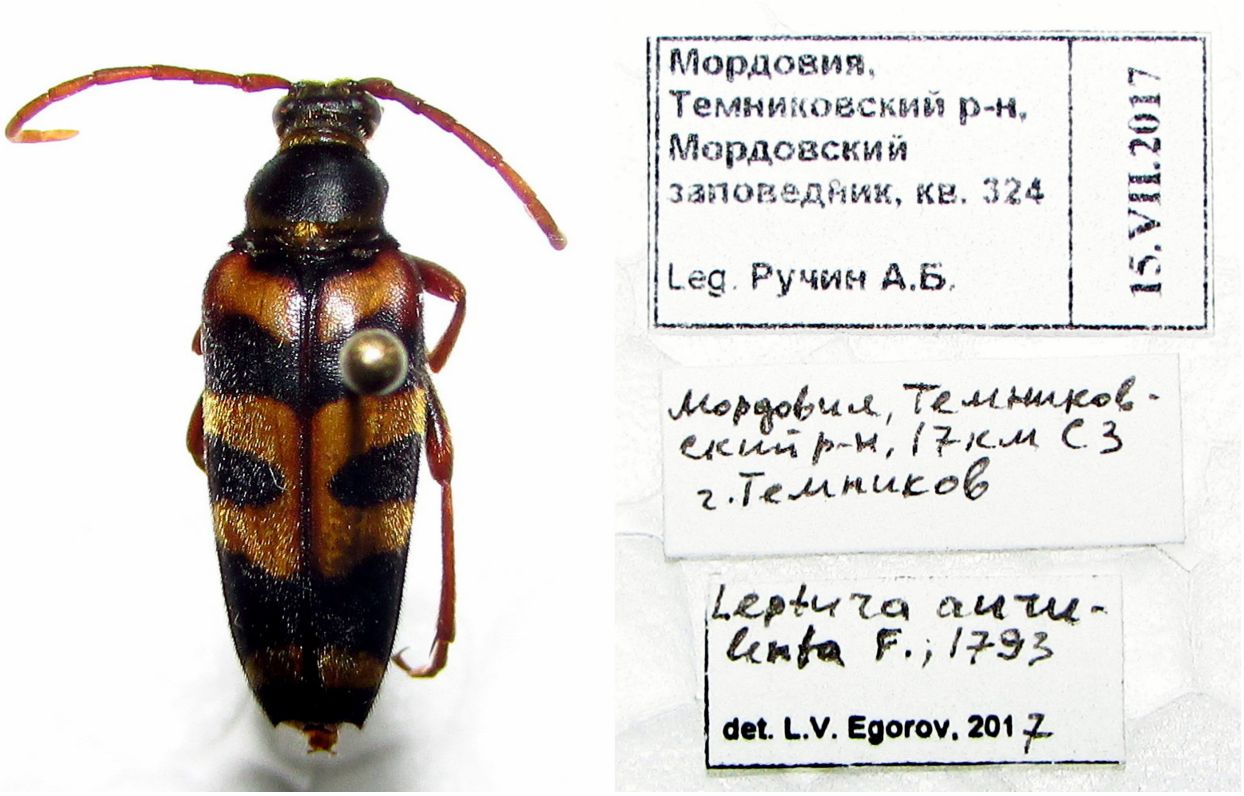

Fig. 1. *Leptura aurulenta*, a female and the label of the collected specimen.

Fig. 2. Biotopes in the forest square 324 of the Mordovia State Nature Reserve (Photos: A.B. Ruchin).

Outside Russia, *Leptura aurulenta* extends much wider to the west: from northern Spain and Portugal to the east across France, it lives in the south of Great Britain and Ireland, in Italy, in the north of Greece, in Bulgaria, Belgium, Romania, Hungary, Austria, Germany, Serbia, Slovakia, the European part of Turkey, it is also reliably known from Algeria (Kovács, 1993; Holzinger et al., 1999; Twinn & Harding, 1999; Adlbauer, 2001; Martínez de Murguía et al., 2004; Pil & Stojanović, 2007; Özdikmen, 2010; Turgut et al., 2010; Sama & Rapuzzi, 2011; Alexander & Anderson, 2012; Smets et al., 2013; Danilevsky, 2014; Holzinger et al., 2014; Stefanelli et al., 2014; Majzlan, 2015). *Leptura aurulenta* is known from central Moldova (Neculiseanu & Baban, 2005; Chyubchik, 2010), in Ukraine in Kharkiv, Chernihiv region, in the southwest and in the Carpathians (Bartenev, 2004). The finding for Lithuania (Löbl & Smetana, 2010) is invalid (Tamutis et al., 2011).

Biology

The females of this species are usually found on the trunks of hardwood trees (*Quercus*, *Ulmus*, *Salix*, *Populus*, *Betula*, *Alnus*, *Prunus*), while males often occur on flowers (Holzinger et al., 1999; Alexander & Anderson, 2012; Giovagnoli et al., 2012; Smets et al., 2013). Larvae develop in the dry wood of old stumps and roots of the above-mentioned hardwood trees, as well as in fallen trunks and branches and in dead parts of living trees. The life cycle lasts for several years (Smets et al., 2013).

Thus, the discovery of *L. aurulenta* in the Mordovia State Nature Reserve is the third reliable finding of this rare beetle species in Russia. And this is the most eastern finding of *L. aurulenta* within its range. Due to the extreme rarity of *L. aurulenta* in Russia its inclusion in the Red Data Book of the Russian Federation is needed and recommended.

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НОВАЯ НАХОДКА ОЧЕНЬ РЕДКОГО ДЛЯ РОССИИ ВИДА *LEPTURA AURULENTA* (COLEOPTERA, CERAMBYCIDAE)

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Приведены сведения о находке в Мордовском заповеднике (Республика Мордовия) крайне редкого вида усачей *Leptura aurulenta* (Coleoptera, Cerambycidae). Это третья достоверная регистрация вида в пределах России. Она расширяет ареал вида на 600 км на восток. Даются оригинальное описание биотопа, сведения о распространении и биологии вида.

Ключевые слова: Coleoptera, *Leptura aurulenta*, Мордовский государственный заповедник, новое местонахождение