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Sphenoptera (*Sphenoptera) cuprina cuprina* Motschulsky (Coleoptera: Buprestidae), a New Species to the Fauna of Macedonia

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ABSTRACT

Sphenoptera (Sphenoptera) cuprina cuprina Motschulsky, 1860 (Coleoptera: Buprestidae) was established as a new species for Macedonia. It is Eurasian steppe element of the fauna of Balkan Peninsula. This is third report of this taxon in Balkans. With represented new record, the total number of known Macedonian *Sphenoptera* species and subspecies increases up to 10.

Key words: Coleoptera, Buprestidae, Balkan Peninsula, Macedonia, new record.

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INTRODUCTION

The genus *Sphenoptera* Dejean, 1833 is one of the most difficult for studying jewel beetles taxa because of the lack of enough good morphological characters for distinguishing species, and the high level of species variation (Kalashian & Sakalian, 2007). In addition, some species are very rare in Balkan Peninsula or they are difficult for collection.

Determination key to the *Sphenoptera* taxa of the Balkan Peninsula has been published by Kalashian & Sakalian (2007). According to Kalashian (2016), the total number of known *Sphenoptera* species and subspecies in the region is 21 separated in 4 subgenera. The total number of Macedonian *Sphenoptera* taxa is 9, distributed in the follow subgenera: *Chilostetha* (4 taxa); *Deudora* (2); *Sphenoptera* s. str. (2); *Tropeopeltis* (1).

This note reports *Sphenoptera* (*Sphenoptera*) *cuprina cuprina* Motschulsky, 1860 as a new record for Macedonian fauna, which is one of the rarest taxa with only two known localities in Balkans (Bulgaria and Greece: Crete).

MATERIAL AND METHODS

Vladimir Sakalian received some Macedonian Buprestidae specimens for determination from Slavčo Hristovski. Among them, one specimen was identified as *Sphenoptera (Sphenoptera) cuprina cuprina*.

RESULTS AND DISCUSSION

The locality of *Sphenoptera (Sphenoptera) cuprina cuprina* specimen is: 'Macedonia, Krivolak, Orlov Rid, 41.550758°N, 22.136764°E, 220 m a.s.l., dry shrub land, 20.03.2004, leg. S. Hristovski', one female specimen (Fig. 1).

Fig. 1. Orlov Rid, the locality of *Sphenoptera (Sphenoptera) cuprina cuprina* Motschulsky in Macedonia. Photo: Slavčo Hristovski

According to Matevski et al (2008), the Orlov Rid (Brdo) is one of the six most important floristically steppe areas in Macedonia.

The only known locality of *S. (S.) cuprina cuprina* in Bulgaria is near Ognyanovo village in Pazardzhik region (Sakalian, 2003), in which one female specimen was also found. The nature environs of the village are covered by dry xerothermic grass and shrubs vegetation.

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The protected area 'Ognyanovo-Sinitevski Rid' as a part of Bessapara hills belongs to South Bulgarian Sub-Mediterranen petrophilic steppe areas (Tzonev, Dimitrov, & Gussev 2015).

According to Kalashian (2016), the most recent data about distribution of the nominative subspecies are Azerbaijan, Armenia, Bulgaria, Central and South European Territory of Russia, Greece (Crete), Italy (Sicily), Kazakhstan, Northwest China and Ukraine. The existence of this taxon on Crete and Sicily islands is doubtful and needs confirmation. *S. (S.) cuprina cuprina* has been characterized as Eurasian steppe areographical element by Sakalian & Langourov (2007).

The information about synonyms of this subspecies can be found in Sakalian (2003) and Kalashian (2016).

Another subspecies, *Sphenoptera (Sphenoptera) cuprina agnoscenda* Obenberger, 1927, is distributed in Kazakhstan.

According to Tleppaeva, Kadirbekov, Kolov, & Zlatanov (2017) in Kazakhstan *S. (S.) cuprina cuprina* is distributed mainly in the semidesert and shrubs steppe zones. Obviously, this taxon has penetrated in Balkan Peninsula through the steppe habitat types. Tleppaeva et al (2017) also note that the buprestid larvae develop in the roots of *Caragana* and *Onobrychis* species (Fabaceae). The adults can be found on the soil where they copulate. There is no information about the exact host plants of *S. (S.) cuprina cuprina* on the Balkans.

Among the Balkan representatives of *Sphenoptera* s.str., there are two species which have similar pronotal depressions: *Sphenoptera (Sphenoptera) cuprina cuprina* and *Sphenoptera (Sphenoptera) lapidaria* (Brulle,1832). This character differs them from the rest ones belonging to this subgenera (Kalashian & Sakalian 2007). *S.* (*S.*) *lapidaria* is very possible to be found in Macedonia as well. In Balkan Peninsula, this species is established for Albania, Bulgaria, Croatia and Greece.

The mentioned two taxa can be easy separated based on their main morphological characters, as follow: *S. (S.) cuprina* has body larger and more robust (Fig. 2A), while the body of *S. (S.) lapidaria* is thinner and elongate (Fig. 2C); pronotum of the first taxa bears less deep and wide depressions; puncture of pronotum is deeper, denser cover larger part of surface (Fig. 2B); the depressions of the second one are deeper and rather narrow; puncture of pronotum is located mainly in the depresions (Fig. 2D). In *S. (S.) cuprina* elytral interstriae are nearly homogenously sculptured, sometimes odd interstries are very weakly convex (Fig. 2A) while in *S. (S.) lapidaria* elytral interstriae are more convex, with few punctures and shiny (Fig. 2C).

With represented new record, the total number of known Macedonian *Sphenoptera* species and subspecies increases up to 10 as well as these of subgenera *Sphenoptera* s. str. - up to 3.

The new data about distribution of *S. (S.) cuprina cuprina* in Macedonia mirrors the specific geographical position, diversity and richness of Balkan fauna where it is possible to find the representatives of many areographic elements as Boreal, European, Mediterranean, Southwest Asian, etc. and in this case - Eurasian steppe, together with endemics.

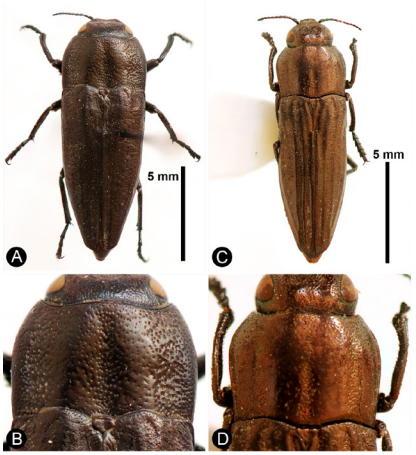

Fig. 2. *Sphenoptera (S.) cuprina cuprina*: A - habitus; B - pronotum; *Sphenoptera (S.) lapidaria*: C - habitus; D - pronotum

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