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First country record of *Sphindus dubius* (Gyllenhal, 1808) (Coleoptera: Sphindidae) from Sakar Mountains, Bulgaria

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Abstract. Single female of *Sphindus dubius* (Gyllenhal, 1808) (Coleoptera: Sphindidae) was collected at light in the vicinity of Ustrem Village, Sakar Mountains. The mentioned species, as well as the genus *Sphindus* Dejean, 1821, are reported for the first time in Bulgaria.

Key words: *Sphindus dubius*, distribution, Bulgaria, Sakar Mountains.

Introduction

Sphindidae (Coleoptera: Cucujoidea) is a small beetle family with four extant subfamilies, nine genera, and 69 species, distributed worldwide (Forrester & McHugh 2010). In Europe, the family is represented by five species of the genera *Sphindus* Dejean, 1821 (one species), *Odontosphindus* LeConte, 1878 (one species) and *Aspidiphorus* Dejean, 1821 (three species) (Jelínek 2007).

Sphindidae is the only family of Coleoptera in which all known species are myxomycophagous – both larvae and adults feed exclusively on slime molds (Myxomycetes) and can be found on or inside slime mold sporocarps (McHugh 2002, Forrester & McHugh 2010). Adult beetles can also be accidentally caught with flight interception traps, ultraviolet light traps or by Berlese funnel extraction (McHugh 2002).

Two species of the genus *Aspidiphorus* are known in Bulgaria so far – *Aspidiphorus lareyniei* Jacquelin du Val, 1859 has reported from Maleshevska Planina Mts and Belasitsa Mts (Guéorguiev 2006, 2011, Guéorguiev & Ljubomirov 2009) and *Aspidiphorus orbiculatus* (Gyllenhal, 1808) – from Eastern Stara Planina Mts and Belasitsa Mts (Guéorguiev 2006, 2011).

In the present work, a third species of the family Sphindidae is reported for Bulgaria from the Sakar Mountains – *Sphindus dubius* (Gyllenhal, 1808).

Material and Methods

The material was collected by the author near Manastirska Reka River in the vicinity of Ustrem Village, Sakar Mountains (SE Bulgaria) in July 2020 (Fig. 1). The riparian vegetation at the collection site consists mainly of black alder (*Alnus glutinosa* (L.)), black poplar (*Populus nigra* L.), walnut (*Juglans regia* L.) and willows (*Salix* spp.), as well as black pine (*Pinus nigra* Arnold) on the opposite bank of the river. Small riparian swamps are also present near the site. The only specimen was collected by light trapping (portable lamps with 8W black and white tubes, powered by 12V battery).

The picture of the habitat Fig. 1 was taken with digital camera Canon PowerShot SX420 IS. The picture of the female beetle in Fig. 2 was taken with a Canon EOS R50 digital

camera with Laowa 25mm f/2.8 2.5-5X Ultra Macro lens mounted on a WeMacro rail (Wemacro, Shanghai, China). The collected specimen is preserved in the Zoological Collection of Sofia University, Faculty of Biology (BFUS).

Fig. 1. Collection site of *Sphindus dubius* in the vicinity of Ustrem Village, 14.vii.2020.

Results and Discussion

Sphindidae Jacquelin du Val, 1860
Sphindinae Jacquelin du Val, 1860
***Sphindus* Dejean, 1821**

***Sphindus dubius* (Gyllenhal, 1808)**

Material examined: BULGARIA: Sakar Mts, W of Ustrem Vill., near Manastirska Reka River, 42°01.452'N 26°27.094'E, 103 m a.s.l., riverine vegetation, small swamp (Fig. 1), 12.vii.2020, 1 ♀ (BFUS-COL000012) (Fig. 2), at light (white & UV), Denis Gradinarov leg.

Sphindus dubius is the only species from the genus *Sphindus*, found in Europe (Jelínek 2007). This species is widely distributed throughout the continent and is also known from Algeria and Canary Islands (North Africa) (Jelínek 2007). Among the neighbouring countries of Bulgaria *S. dubius* has been recorded for Romania and Greece (Jelínek 2007). The species has also recently been reported from Anatolia (Harman & Avcı 2023). *Sphindus dubius* can be distinguished from the similar in habitus *Odontosphindus grandis* Hampe, 1861, reported from a number of European countries (Jelínek 2007, Freeman *et al.* 2003), in particular by its 10-segmented antennae (11-segmented in species of the genus *Odontosphindus*) (Freeman *et al.* 2003). Only single female of the species was collected in the study habitat, despite intensive light trapping in the period 2020 – 2023, which can be attributed to the relatively poor suitability of the method used for collecting adults of the family Sphindidae (McHugh 2002).

Fig. 2. Female of *Sphindus dubius*, collected in the vicinity of Ustrem Village, 12.vii.2020. Scale bar: 1 mm.

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