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Research article

Eupithecia gratiosata Herrich-Schäffer, 1861 and *Metachrostis dardouini* (Boisduval, 1840) new for the Republic of Macedonia

Stoyan Beshkov[1], Nikola Micevski[2]

1 National Museum of Natural History, Bulgarian Academy of Sciences, 1 Tsar Osvoboditel Blvd, 1000 Sofia, Bulgaria, stoyan.beshkov@gmail.com
2 Macedonian Entomological Society (ENTOMAK), Blvd ASNOM 58, 2-4, 1000 Skopje, Macedonia, nikom.entomak@gmail.com

Abstract: *Eupithecia gratiosata* Herrich-Schäffer, 1861 and *Metachrostis dardouini* (Boisduval, 1840) are reported here as new for the Republic of Macedonia, collected at light from the Suva Planina Mountain, Kozjak. Some other syntopic and synchronic species are also reported here.

Keywords: Lepidoptera, Macedonia, moths, faunistic

Introduction

The Macedonian butterfly fauna is relatively well-explored, but moths are less studied. This can be demonstrated by the fact that for a single night of collecting by lamp light it is still possible to find a couple of new species for this country. We were surprised that even such a common species as *Sphinx pinastri* Linnaeus has never been published for the Republic of Macedonia with exact localities. The primary reason for this is the absence of active native moth researchers, even of amateur collectors, both in the past and at present, and especially the lack of institutional research. The Macedonian moth fauna is studied mostly by Bulgarian and West European researchers. During the night of 1 June 2018 the authors spent a night collecting in the district of Skopje, at Suva Planina Mountain, Kozjak, Venec, 41°53′27″ N, 21°13′26″ E, 1070 m above sea level, using two portable light traps with an 8 W actinic (368 nm) and 8 W "Blacklight", both powered by 12 V batteries, as well as a Finnish "tent trap" with a 160 W mercury-vapour bulb at the top of the pole and a 20 W (368 nm) black light over the catching pot below, powered by a generator. An additional 20 W (368 nm) lamp was also positioned about 70 m from the tent trap. All lights ran throughout the night.

Results

The habitat at the trap site is a warm and dry limestone rocky area with calcareous vegetation including *Artemisia, Asphodeline, Buxus, Juniperus, Fraxinus ornus, Quercus, Pinus* (Fig. 1). Two female specimens of *Eupithecia gratiosata* Herrich-Schäffer were collected in the traps (Fig. 2). *Eupithecia gratiosata* is a large and very distinctive species from the big and difficult genus *Eupithecia* Curtis, 1825, which can be identified in the field with unarmed eye. There are no similar species and investigation of the genitalia is not necessary. The range of *E. gratiosata* is "West-Palaearctic Southern Europe" (Mironov, 2003). From the neighbouring countries it is known from a single locality in Albania: Vrisera [near Kakavia], Gjirokastër County (Beshkov & Misja, 1995). For Bulgaria there is a single report only: Slanchev Bryag near Nesebar [South Black Sea Coast] (Levy, 1968). Nesebar is also mentioned in Hubenov et al. (1993); repeated

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Fig. 1. Collecting locality: Republic of Macedonia, Suva Planina, Kozjak, Venec, 1070 m.

in Hubenov et al. (1998). In Nestorova (1998), it is incorrectly cited from Arkutino, the source being the article by Levy (1968) quoted above. In Greece, *E. gratiosata* is known from several localities (Mironov, 2003). Locality "Kozjak" is more than 100 km away from previously known localities and represents the most inland locality on the Balkan Peninsula.

Other interesting syntopic and synchronic species with *E. gratiosata* are: *Sphingonaepiopsis gorgoniades* (Hübner, [1819]) (Fig. 3), *Sphinx pinastri* Linnaeus, 1758, *Celonoptera mirificaria paradoxaria* (Staudinger, 1862), *Dyscia raunaria* (Freyer, 1851), *Meganola gigantula* (Staudinger, 1879), *Ocneria terebinthi* (Freyer, [1838]), *Metachrostis dardouini* (Boisduval, 1840) (Fig. 4), *Caradrina wullschlegeli* Püngeler, 1903, *Charanyca apfelbecki* (Rebel, 1901), *Enterpia laudeti* (Boisduval, 1840), *Dichagyris renigera renigera* (Hübner, [1808]). The same species were also collected on the same night by Colin W. Plant and Andrew King (England) with Predrag Jakšić (Serbia) about 1 km away from our collecting place and from a similar habitat, but away from the vertical rocks (41°53′32.16″ N, 21°13′48.89″ E, 1046 m above sea level). While checking the literature for the country's fauna, we found out that *Metachrostis dardouini* (Boisduval, 1840) is also new species for the Republic of Macedonia. *Sphinx pinastri* is reported here for the first time for the Republic of Macedonia with exact localities. Krpac et al. (2016) have previously reported *Sphinx pinastri* for the Republic of Macedonia but without providing specific localities. However, it seems to be well distributed in the country, since the first author has collected it from two other localities – at Pelister and Demir Kapija, as well as again in Kozjak but in July. More interesting is the finding of *Sphingonaepiopsis gorgoniades*,

Fig. 2. *Eupithecia gratiosata*, ♀.

Fig. 3. *Sphingonaepiopsis gorgoniades*, ♀.

Fig. 4. *Metachrostes dardouini*, ♀.

known from the Republic of Macedonia only from the Treska Gorge (Daniel, 1964), the Raec Gorge [between Prilep and Kavadarci] (Hassler et al., 1988) and the Demir Kapija Gorge, collected there by the first author, in coll. Dr Ulf Eitschberger, Marktleuthen, Germany. For *Dyscia raunaria*, Kozjak is only the second locality in the country; before it was known only from "Galchitsa Mt., below Bulgarska Tchuka summit, 1640 m" (Beshkov, 2017: 12). *Metachrostis dardouini* is known from all neighbouring countries, although its occurrence in Bulgaria is not confirmed.

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