

UNEXPECTED RECORD OF *DIODONTUS BREVILABRIS* (HYMENOPTERA: CRABRONIDAE) IN LITHUANIA

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Introduction

Diodontus Curtis, 1834 is a genus of ground-nesting solitary wasps, widespread in Holarctic and Afrotropical regions, with the highest species diversity in Palearctic deserts and semideserts (Pulawski, 2017).

Diodontus brevilabris de Beaumont, 1967 has been described from Turkey and seems to be lacking in Western Europe (Dollfuss *et al.*, 2001). However, the species is present in the South East of the continent, ranging from the Czech Republic to Turkmenia and from the European part of Russia to Israel (Budrys, 1998). The species has been recently recorded in Vladimir, Nizhny Novgorod provinces and the Chuvash Republic of Russia at the latitude of 55–56°N (Mokrousov, 2017). On the other hand, it has not yet been found in Poland, Belarus and other neighbouring countries of Lithuania.

Material and Methods

The specimen of *D. brevilabris* was collected in a garden on inflorescences of *Anethum graveolens* using entomological net. The specimen is preserved in ethanol in the collection of Nature Research Centre, Vilnius.

List of species

CRABRONIDAE

Diodontus brevilabris de Beaumont, 1967

Kaunas city, Žaliakalnis, N54.90 E23.90 (54°54'N 23°54'E), 01 08 2017, 1♂ (leg. E. Budrys).

Discussion

Diodontus brevilabris is a small wasp, similar to *D. minutus* (Fabricius, 1793) and to the species complex of *D. insidiosus* Spooner, 1938 by usually pale yellow pronotal lobes and mandibles of both sexes (though in the southern part of the distribution range, specimens of *D. brevilabris* with dark mandibles are also common). The female can be recognised by transverse, trapezoidal labrum with broad, weakly concave apical margin (see Fig. 2 in Budrys, 1998), while the labrum of *D. minutus* and *D. insidiosus* females is semicircular to subtriangular with a narrow notch at the apex. Another character to distinguish the female of *D. brevilabris* from *D. minutus*, *D. insidiosus* and, additionally, from *D. luperus* Shuckard, 1837, is narrow and nearly flat frontal gland (the latter is wide and distinctly convex in the listed other *Diodontus* species).

The male of *D. brevilabris* can be separated from the other European species by the shape of penial valves (see Fig. 6 in Budrys, 1998), which have broad and smooth apex; the latter is acute or finely denticulate, or bears a denticulate dorsal lobe in the other *Diodontus* species (see Fig. 14 in Dollfuss *et al.*, 2001). The other diagnostic characters are as follows: narrow and straight pro- and mesobasitarsi, which are bent and widened in *D. minutus* (Figs. 26, 28 in Olszewski *et al.*, 2016); dark, thin and relatively short (usually $3FL : LSC < 1.15$; morphometric measurements: see Budrys, 1996) flagellum (Fig. 1); posterior ocelli rather close to each other ($POD : OOD < 0.72$). Flagellum is relatively longer in the other European species with pale mandibles and pronotal lobes; it is considerably thicker, with flagellomeres as long as wide in *D. insidiosus*, or it has bright yellow spots on the underside of the apical flagellomeres in *D. minutus* (Figs. 30–31 in Olszewski *et al.*, 2016); in the latter two species, the posterior ocelli usually are slightly more distant from each other ($POD : OOD > 0.72$).

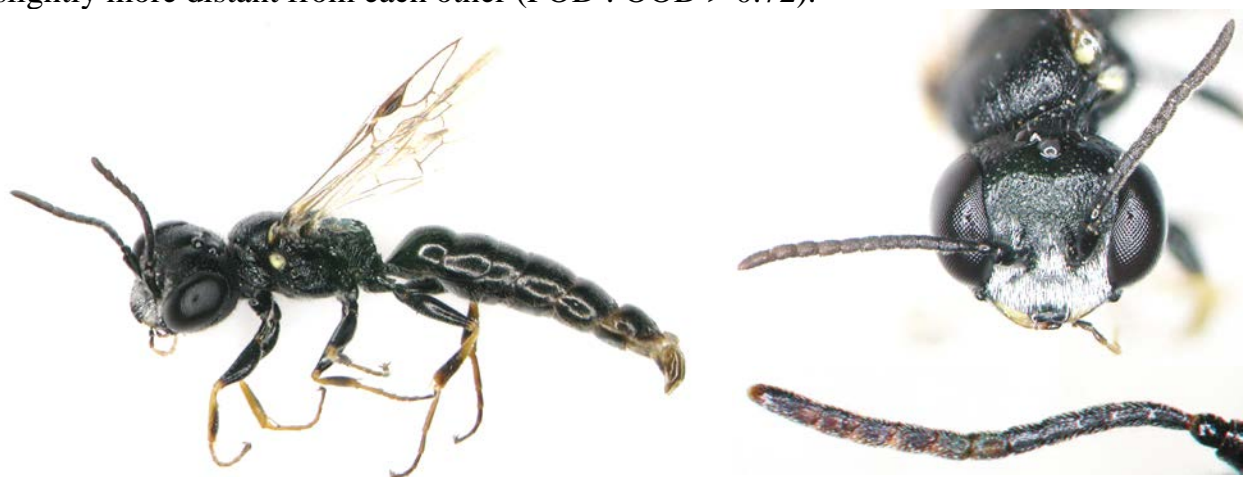


Figure 1. Male of *Diodontus brevilabris*: general view, face, and flagellum (photo E. Budrys).

The record of *D. brevilabris* in Lithuania is unexpected, because the collection site is far from the earlier known distribution range of the species. However, recent records of *D. brevilabris* in the eastern part of the European Russia at similar latitude imply that the species can survive in rather harsh winter conditions and it may have been overlooked in the northern part of the distribution area, or it has been recently spreading to the north. The reasons of such presumable range extension may be the climate warming and/or anthropogenic landscape/habitat change, as well as possible synanthropisation of the species. The latter assumption is supported by the fact that in Lithuania the species is recorded in urban environments, namely in one of the green areas of Kaunas city centre.

The national IUCN category of the species is considered as data deficient (DD) (IUCN, 2017).

Acknowledgements

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Netikėtas žiedvapsvės *Diodontus brevilabris* (Hymenoptera: Crabronidae) stebėjimas Lietuvoje

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Santrauka

Pirmą kartą Lietuvoje, Kauno mieste aptikta pietrytinėje Europoje ir Artimuosiuose rytuose paplitusi žiedvapsvė *Diodontus brevilabris* Beaumont, 1967. Pateikti stebėjimo duomenys ir rūšies skiriamieji bruožai. Ši rūšis iki šiol arčiausiai Lietuvos buvo žinoma Čekijoje, Vengrijoje, Ukrainoje ir Rusijos europinėje dalyje: Belgorodo, Vladimiro, Žemutinio Naugardo srityse bei Čiuvašijos respublikoje. Baltarusijoje, Lenkijoje ir kitose kaimyninėse šalyse ši rūšis nėra rasta. Rūšies aptikimas Lietuvoje galimai susijęs su jos plitimu į šiaurę, nulemtu klimato kaitos arba prisitaikymo antropogeninei aplinkai. Rūšies nacionalinė Raudonosios knygos kategorija vertintina kaip stokojanti duomenų (DD).

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