

**NEW RECORD OF *BEMBIDION LUNULATUM* (GEOFFROY, 1785)  
(COLEOPTERA, CARABIDAE) FROM THE BALTIC SEA SOUTH  
COAST (NORTHERN POLAND)**Dariusz Konopko<sup>1</sup>, Oleg Aleksandrowicz<sup>2</sup>, Mikalay Halinowsky<sup>3</sup><sup>1</sup> *ul. Dedala 8/2/9, 81-197 Gdynia, Poland**e-mail: darkon27@wp.pl*<sup>2</sup> *Department of Zoology,**Institute of Biology and Earth Sciences,**Pomeranian University in Słupsk,**ul. Arciszewskiego 22b, 76-200 Słupsk, Poland**e-mail: oleg.aleksandrowicz@apsl.edu.pl*<sup>3</sup> *Francisk Skaryna Gomel State University,**104 Sovetskaya str., 296019, Gomel, Belarus**e-mail: carabus@tut.by***Abstract**

A new record of rare ground beetle *Bembidion lunulatum* (Geoffroy, 1785) is presented from the Baltic Sea south coast.

**Key words:** Coleoptera, Carabidae, new record, the Baltic Sea coast, Northern Poland

**INTRODUCTION**

According to Müller-Motzfeld (2004) genus *Bembidion* Latreille, 1802, includes more than 1300 species, living mainly in the northern hemisphere. In Europe more than 150 species have been recorded so far, with more than 100 species known from Central Europe. According to Pawłowski (1974) Polish fauna contains 77 species. *Bembidion lunulatum* is presented in subgenus *Philochthus* Stephens, 1828. In Palearctic this subgenus is presented by 39 species (Marggi et al. 2017), in Poland – by 5 (Pawłowski 1974).

The beetles from subgenus *Philochthus* are small (3-9 mm) and are collected sporadically, especially with pitfall traps. Most records of *Bembidion lunulatum* in Poland are old (19<sup>th</sup> century), mainly the south South Poland (Burakowski et al. 1973,

Pawłowski 1974). The last record from the Baltic coast (vicinity of Wejherowo) comes from 1942 (Bercio and Folwaczny 1979).

## MATERIAL AND METHODS

The Baltic coast: Gdynia – Babie Doły, (UTM CF45), 54°35'08"N, 18°32'16"E, the Baltic coast, under dry fragments of *Zostera marina* (Linnaeus, 1753), on the sea shore, 07.04.2019, 1 ex., collected by hand, leg. Dariusz Konopko, det. Oleg Aleksandrowicz. The collected specimen has been deposited in the collection of the first author.

## RESULTS AND DISCUSSION

*Bembidion lunulatum* is an Euro-Mediterranean species. According to Marggi et al. (2017) it is known in West, Central, South and South-East Europe, South-West Asia and North Africa. In the countries closest to Poland this species is known from Germany, Lithuania, Latvia, the Czech Republic, Slovakia and Ukraine. In Belarus it has not been recorded so far (Aleksandrowicz et al. 2016).

Koch (1989) describes the ecological preferences of this species as eurytop, hygrophilous and halotolerant. Preferred habitats are muddy, loamy banks of streams and ponds, inland salt meadows, clay pits, loams. Pollet et Desender (1987) found that this species is mainly a predator of Collembola and Nematoda.

In northern Germany it was rare and very scattered and it was included in the regional Red List of districts: Rostock, Schwerin, Neubrandenburg (Müller-Motzfeld 1983) and Brandenburg (Scheffler et al. 1999) as endangered species. However, in the last Red List of Germany, this species is considered as moderately common (Schmidt et al. 2016).

*Bembidion lunulatum* occurs rarely and sporadically in Poland (Burakowski et al. 1973, Bercio and Folwaczny 1979, Kubisz et al. 1998) and it prefers cohesive moist soils or even saline soils in moist areas and on the waterfronts (Pawłowski 1974).

According to Kubisz et al. (1998) *B. lunulatum* is rare species in Poland and it is vulnerable to extinction in Upper Silesia. Last time it was collected in north Poland in 1942 in the vicinity of Wejherowo (Bercio and Folwaczny 1979). Last records come from 1973 (Burakowski et al. 1973) from Southern Poland. Information of Twardowski and Kornalewicz (2004) and Twardowski and Pastuszko (2008) on the occurrence of *B. lunulatum* in oak forest and arable fields are doubtful, the species was most probably misidentified. Some other data from these publications may also be erroneous and require verification. The following species should not be present in the area and habitats studied by the authors: *Abax ovalis* (Duft.), *Abax paralellus* (Duft.), *Carabus ullrichi* (Germ.), *Harpalus cupreus* (Faldermann), *Harpalus dimidiatus* (Rossi), *Brachinus crepitans* (Linnaeus).

The main challenges in assessing the population status of *B. lunulatum* are the difficulties in species identification and the fact that only single specimens occur in collections. Probably this rarity is due to the fact that the beetles are very seldom caught in traps. New data are needed for establishing whether *B. lunulatum* populations are endangered.

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NOWE DANE O WYSTĘPOWANIU *BEMBIDION LUNULATUM* (GEOFFROY, 1785),  
(COLEOPTERA, CARABIDAE) NA BRZEGU MORZA BAŁTYCKIEGO  
NA POMORZU

**Streszczenie**

Przedstawiono nowe dane o występowaniu rzadkiego gatunku *Bembidion lunulatum* (Geoffroy, 1785) z rodziny biegaczowatych (Carabidae) na wybrzeżu Bałtyku. Jednego osobnika z tego gatunku stwierdzono na plaży w okolicach Gdyni, w Babich Dołach. Wcześniej obecność *Bembidion lunulatum* została odnotowana w Polsce niżowej tylko na jednym stanowisku, w latach 40. XX wieku.