

Recent occurrence of *Phaleria cadaverina* (Fabricius, 1792) (Coleoptera: Tenebrionidae) on the Baltic coast of Poland

Radim Gabriš

Gabriš R. 2013. Recent occurrence of *Phaleria cadaverina* (Fabricius, 1792) (Coleoptera: Tenebrionidae) on the Baltic coast of Poland. *Baltic J. Coleopterol.*, 13(2): 121 – 124.

The article presents a record of *Phaleria cadaverina* (Fabricius, 1792) (Coleoptera: Tenebrionidae) on the Baltic coast of Poland in the area of Bay of Puck. The species has been collected on sandy coast under rotting plant remains. The presented record is the first confirmation of the recent presence of *Phaleria cadaverina* on the territory of Poland.

Key words: *Phaleria cadaverina*, Coleoptera, Tenebrionidae, faunistics, Poland

Department of Ecology & Environmental Sciences, Faculty of Science, Palacký University, 771 46 Olomouc, Czech Republic, e-mail: gabris.radim@gmail.com

INTRODUCTION

Phaleria cadaverina (Fabricius, 1792) is 5–6,5 mm long darkling beetle of pale yellowish-brown body colour (Fig. 1). According to the recent palaeartic check-list (Löbl et al. 2008) the species is distributed in Belgium, Denmark, Netherlands, France, Great Britain, Ireland, Germany, Poland, Sweden, Portugal including Azores, Spain including Canary islands and Morocco (ssp. *marocanna* Pic, 1923). Another species inhabiting Atlantic coast of Europe is *Phaleria atlantica* Fauvel, 1899, distributed in Portugal, Spain and France (Löbl et al. 2008). The remaining seven European species of the genus occur exclusively in the Mediterranean area and on the Black Sea coast (Löbl et al. 2008).

Occurrence of *Phaleria cadaverina* (F.) in Poland was always considered as doubtful (Burakowski et al. 1987, Novák 2007, Bunalski et al. 2010) only based on old data lacking precise localization. As there was no evidence confirm-

ing historical or recent occurrence of the species in Poland (Iwan et al. 2010), it was excluded from the polish beetle fauna (Iwan et al. 2012).

The present article provides information on the recent record of *Phaleria cadaverina* (F.) in Poland.

MATERIAL AND METHODS

Specimens obtained by individual collecting under plant remains and wooden debris on sandy beaches are deposited in author's personal collection. Label data: [1 specimen]: „PL: Baltic Coast; Hel, 16.VI.2013; N54°36'18" E18°49'36"; R. Gabriš leg.”; [31 specimens]: „PL: Baltic Coast; Hel – Bay of Puck, 22.VI.2012; N54°37'26" E18°46'33"; R. Gabriš leg.”

Geographical coordinates were obtained using Garmin Dakota 10 GPS device. Imagines were identified according to available keys (Reitter

1916, Español 1968) using a Zeiss Discovery.V12 stereomicroscope. Photos of the specimen and habitat were taken using a Panasonic DMC-FZ30 digital camera.

RESULTS AND DISCUSSION

During my field work on the sandy coast of Baltic Sea in the vicinity of Hel in Poland, a single specimen of the darkling beetle *Phaleria cadaverina* (F.) was found under wooden debris approximately 20 meters from the coastline. The locality was situated on a public sandy beach very frequently visited by tourists. Despite much effort, no other specimen has been found on this beach. After some time my beetle research continued on other locations including an almost undisturbed beach on the coast of Bay of Puck (Fig. 2), where a big population of *Phaleria cadaverina* (F.) was found living near the coastline in wet sand under rotting clusters of eelgrass (*Zostera marina* L.) together with abundant sandhopper *Talitrus saltator* (Montagu, 1808) (Crustacea: Amphipoda). At this location there was no problem finding dozens of individuals including larvae.

Collected specimens vary in size (5–6,2 mm) and the colour pattern includes beetles both uniformly pale or with a distinct dark spot in the middle of each elytron.

The data presented here are the first confirmed records of *Phaleria cadaverina* (F.) in Poland. The record from Sopot (approximately 25 km from Hel), mentioned by Bercio & Folwaczny (1979) as very doubtful, could now be considered as reliable also, proving historical distribution of the species in the area of Bay of Puck. It is interesting that the species has not yet been found in NW Poland (vicinity of Szczecin) where its presence was expected (Iwan et al. 2012). On the other hand it seems that *Phaleria cadaverina* (F.) requires sandy beaches with a minimum of recreational activities, where all the rotting plant remains may stay undisturbed as habitat for successful larval development. As such beaches are

not so easy to find in these days, records of *Phaleria cadaverina* (F.) are rather accidental. Negative impact of increased touristic activity was discussed in the case of rapid decline of the sandhopper *Talitrus saltator* (Mont.) (Węśławski et al. 2000), which occurs in almost identical habitats to *Phaleria cadaverina* (F.). The beach with plentiful population of *Phaleria cadaverina* (F.) mentioned above used to be part of a military area for a long period of time and in these days it is still not so easy to access, what brings an opportunity for beetles to survive there. The species will most likely be found also in other places in Poland which offer suitable habitats.

Recording of the second Atlantic species *Phaleria atlantica* Fauv. in northern parts of the European coast is highly unlikely because of its quite restricted known distribution on the northern coast of the Iberian peninsula (Español 1968). Despite that, a key for identification of both European species inhabiting Atlantic coast is given, constructed according to keys of Reitter (1916) and Español (1968):

Body larger (length 7–8 mm). Third antennomere almost twice as long as the second; sides of pronotum rounded, widest in the middle; elytral epipleura covered with long setae; elytral intervals with strong and coarse punctuation; fore tibiae strongly widened at the tip; fore tarsi of males strongly dilated; first segment of hind tarsi much longer than last one. Aedeagus robust, tapering, but not sharpened at the tip.....
.....*Phaleria atlantica* Fauvel, 1899

Body smaller (length 5–6,5 mm). Third antennomere slightly longer than the second; sides of pronotum parallel, less rounded; elytral epipleura with less developed setae; punctuation of elytral intervals finer; fore tibiae less strongly widened at the tip; fore tarsi of males just slightly dilated; first segment of hind tarsi slightly longer than last one. Aedeagus narrower and sharpened at the tip.....
.....*Phaleria cadaverina* (Fabricius, 1792)



Fig. 1. Imago of *Phaleria cadaverina* (F.).



Fig. 2. Habitat of *Phaleria cadaverina* (F.) near Hel, Poland. Beetles were found under clusters of rotting plant matter on the coastline.

ACKNOWLEDGEMENTS

I am very thankful to Dr. Miłosz A. Mazur (University of Opole, Poland) for providing me with some literature. My visit to Poland was financially supported from the project Nr. CZ.1.07/2.2.00/28.0149.

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Received: 12.10.2013.

Accepted: 26.11.2013.