

New record of ground beetle *Calathus rotundicollis* Dejean, 1828 (Coleoptera, Carabidae) from Russia

Первая находка жужелицы *Calathus rotundicollis* Dejean, 1828 (Coleoptera, Carabidae) в России

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Ключевые слова: Carabidae, Coleoptera, Калининградская область, новая находка, фаунистика.

Abstract. A ground beetle *Calathus rotundicollis* Dejean, 1828 was newly collected in Kaliningradskaya Oblast in August 2023. This is a first record for Russia of the West European species spread eastward during the last decade.

Резюме. В августе 2023 года в Калининградской области впервые для России обнаружен вид жужелицы *Calathus rotundicollis* Dejean, 1828. Этот западноевропейский вид в последнее десятилетие расселяется на восток.

22 species of the genus *Calathus* Bonelli, 1810 are known in Holarctic, of which 10 are distributed in Eastern Europe [Putchkov, Aleksandrowicz, 2020].

There are 25 species and subspecies of this genus known in Russia. Of these, 4 species are in the subgenus *Calathus* s.str.: *distinguendus distinguendus* Chaudoir, 1846; *fuscipes fuscipes* (Goeze, 1777), *longicollis* Motschulsky, 1865; *syriacus* Chaudoir, 1863, 8 species in the subgenus *Neocalathus* Ball & Negre, 1972: *ambiguus ambiguus* (Paykull, 1790); *anistschenkoi* Berlov & Ippolitova, 2005; *cinctus* Motschulsky, 1850; *erratus erratus* (Sahlberg, 1827); *melanocephalus melanocephalus* (Linnaeus, 1758); *micropterus* (Duftschmid, 1812); *mollis mollis* (Marsham, 1802); *peltatus* Kolenati, 1845 and 13 Caucasian species and subspecies in the subgenus *Lindrothius* Kurnakov, 1961: *aequistriatus* Kurnakov, 1961; *caucasicus caucasicus* Chaudoir, 1846; *caucasicus orbicollis* Motschulsky, 1865; *grandiceps grandiceps* Kurnakov, 1961; *grandiceps schtschukini* Kurnakov, 1961; *horsti* Reitter, 1888; *laticaudis* Kurnakov, 1961; *praestans* Heyden, 1885; *pseudopraestans* Kurnakov, 1961; *recticaudis* Kurnakov, 1961; *robustus* Kurnakov, 1961; *sotshiensis* Zamotajlov, 1997; *sub-*

praestans Kurnakov, 1961 [Hovorka, Sciaky, 2017]. Besides, for the Altai-Sayan mountain system, *Calathus (Neocalathus) sibiricus* Gebler, 1841 is also indicated as an independent species [Luzyanin et al., 2015; Luzyanin, Efimov, Dudko, 2022].

In the summer, 2023, E.V. Zinoviev has collected a species of the subgenus *Calathus (Amphiginus)* Haliday, 1841, *C.(A.) rotundicollis* Dejean, 1828 (Fig. 1).

Representatives of this subgenus are clearly distinguished from species of other subgenera by their transverse pronotum with hind-angles completely rounded and protruding backward beyond its base. The base of the pronotum is significantly much narrower than elytra over shoulders. Male pro-tarsi not modified.

The species is distributed from Western Europe and Portugal to Poland, north to Sweden and Ireland, south to northern Italy. According to J. Schmidt [2010], in Central Europe this species is a recent immigrant from the southwest.

In Poland, it was considered as rare species relatively recently; the eastern border of its range was the Vistula [Burakowski et al., 1974]. Currently, it is common in Pomerania and the Pomeranian Lake District (Fig. 2).

It had not been previously recorded in the well-studied East Prussia [Horion, 1941; Bercio, Folwaczny, 1979].

According to Koch [1989], it is a weakly hygrophilous silvicol. *Calathus rotundicollis* inhabits deciduous and sparse coniferous forests, city parks, but is also found in open biocenoses on heavy soils (arable lands, pastures). Beetles are found under leaves, tufts of grass and straw; under loose bark [Koch, 1989]. Reproduction occurs in summer and autumn; larvae and beetles overwintering. Populations are dominated by macropteroid individuals [Schmidt, 2010].

Included in the German Red List [Schmidt, 2016].

A plausible reason for the expansion of the range may be climate change: almost frost-free winters in the last decades.

The material studied is deposited in the zoological collections in the Museum of Institute of Plant and Animal Ecology, Ural Branch of RAS, Ekaterinburg, Russia and Institute of Systematics and Ecology of Animals, Siberian Branch of RAS, Novosibirsk, Russia.

The present work is registered in ZooBank (www.zoobank.org) under LSID urn:lsid:zoobank.org:pub:24BEF80A-663B-4F40-8CA1-1B0C842899F8.

Calathus (Amphiginus) rotundicollis Dejean, 1828

Figs 1, 2.

Material. Russia, Kaliningradskaya Oblast, *Svetlogorskii Raion*: Otradnoye settlement, Broad-leaved forest, under a snag near a forest path, by hand, 54°56'24.0" N, 20°07'31.7" E, 22.VIII.2023 — 1 spm., idem, Broad-leaved forest, under a snag near a forest path, by hand, 54°56'24.0" N, 20°07'31.7" E, 26.VIII.2023 — 1 spm. (Fig. 1); Donskoye settlement, Baltic Sea coast, at the foot of the cliff, by hand, 13.VIII.2023, 54°55'52.80" N, 19°57'09.2" E — 1 spm., idem, Baltic Sea coast, at the foot of the cliff, under the *Cakile baltica* Jord. ex Pobed. curtain, by hand, 54°55'52.80" N, 19°57'09.2" E, 29.VIII.2023 — 1 spm., idem, Maple forest near the settlement, pitfall traps, 54°56'22.6" N, 19°57'49.2" E, 29.VIII.2023 — 1 spm.

Distribution. The species ranged From West Europe and Portugal to Poland, to the North from South Sweden and Ireland to north Italy in the south.

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Fig. 1. External appearance of *Calathus (Amphiginus) rotundicollis* Dejean, 1828 from Kaliningradskaya Oblast of Russia. Scale bar 1 mm. Photo by E.V. Zinovieva.

Рис. 1. Внешний вид жука *Calathus (Amphiginus) rotundicollis* Дежан, 1828 из Калининградской области России. Масштаб: 1 мм. Фото Е.В. Зиновьева.

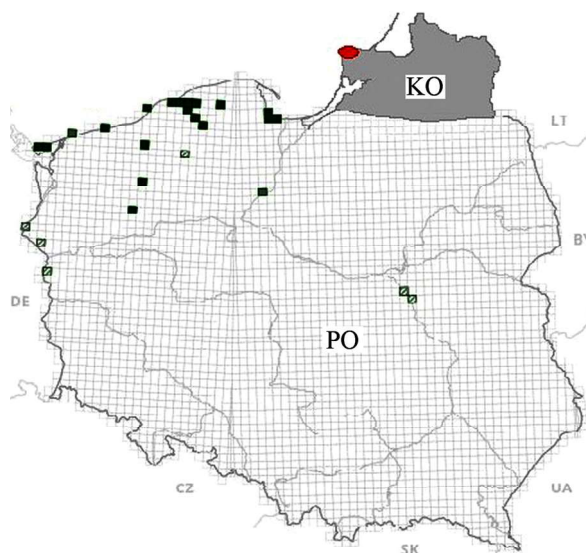


Fig. 2. Map of *Calathus (Amphiginus) rotundicollis* Dejean, 1828 distribution in Poland (PO) and Kaliningradskaya Oblast of Russia (KO). Data on Poland after https://baza.biomap.pl/pl/taxon/species-calathus_rotundicollis/mapb.

Рис. 2. Карта распространения *Calathus (Amphiginus) rotundicollis* Дежан, 1828 в Польше (PO) и в Калининградской области России (KO). Данные по Польше даны согласно https://baza.biomap.pl/pl/taxon/species-calathus_rotundicollis/mapb.

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