Acta Entomologica Serbica, 2025, 30(1): 27-32

UDC: 595.768.4(497.11)
DOI: 10.5281/zenodo.15389074

COLYDIUM NOBLECOURTI PARMAIN, ECKELT & SCHUH, 2024 (COLEOPTERA: ZOPHERIDAE): NEW BEETLE SPECIES FOR THE FAUNA OF SERBIA AND NEW RECORDS OF THE GENUS *COLYDIUM* FABRICIUS, 1792 IN SERBIA

DAWID MARCZAK and DANUTA PEPŁOWSKA-MARCZAK

Faculty of Engineering and Management, University of Technology and Arts in Applied Science in Warsaw, Olszewska 12, 00-792 Warsaw, Poland
E-mail: danuta.peplowska-marczak@wseiz.edu.pl
*E-mail: dawid.marczak@gmail.com (corresponding author)

Abstract

The study presents the first data on *Colydium noblecourti* in Serbia. Specimens of *Colydium* from the authors' collection, originating from southeastern, southern, and southwestern Serbia, were reexamined, identifying all three European *Colydium* species in the region. All records of *Colydium* in Serbia need to be revised.

KEYWORDS: Balkan Peninsula, Tenebrionoidea, distribution, saproxylic beetles

Introduction

The genus *Colydium* Fabricius, 1792 (Coleoptera: Zopheridae) includes 33 species globally (Węgrzynowicz, 1999; Parmain *et al.,* 2024), three of which occur in the Palaearctic: *Colydium elongatum* Fabricius, 1787, *C. filiforme* Fabricius, 1792, and the recently described *C. noblecourti* Parmain, Eckelt & Schuh, 2024. In Serbia, only *C. elongatum* and *C. filiforme* have been recorded so far (Węgrzynowicz, 1999; Parmain *et al.,* 2024). The newly described species, *C. noblecourti*, has been reported in several countries, including Andorra, Austria, Bosnia and Herzegovina, Croatia, the Czech Republic, France, Germany, Iran, Italy, Poland, Slovenia, Slovakia, Spain, Turkey, (Parmain *et al.,* 2024, Ruta *et al.,* 2025).

Beetles of the genus *Colydium* are associated with various tree species, both deciduous and coniferous, where they inhabit wood-boring beetle galleries, such as those of the Curculionidae (Scolytinae), Bostrichidae, Eucnemidae, and Lymexylidae (Burakowski & Ślipiński, 1986; Węgrzynowicz, 1999). They are most commonly found in living trees with necrotic areas or dying trees. *Colydium* species are facultative predators that also consume fungi and decomposed organic matter (Węgrzynowicz, 1999; Ślipiński & Lawrence, 2010).

An examination of specimens from the authors' collections confirmed the presence of all three European species of the genus in Serbia.

Materials and Methods

The examined beetles are deposited in the authors' collections. The photographs were taken with Nikon D5100 and Nikon FTZ II cameras mounted on a Nikon SMZ1500 stereomicroscope and a Nikon Eclipse Ni microscope, respectively.

Results

Colydium noblecourti Parmain, Eckelt & Schuh, 2024

Material examined: Gornja Studena, surroundings of Niška Banja, Mt. Suva Planina, southeastern Serbia, 43.1318° N, 22.0642° E, 1 105 m a.s.l., 08.05.2018, 2 ex. adults, under the bark of a dead, standing *Fagus sylvatica* L. (Fig. 1).

Remark: The species is new for Serbia. According to Parmain *et al.* (2024), *C. noblecourti* prefers coniferous trees – *Pinus* spp., *Abies alba* Mill. and *Picea abies* (L.) H. Karst., although it has been found on deciduous trees such as *Fagus sylvatica* L. and *Carpinus betulus* L. This is confirmed by the present record, where the species was found on *Fagus sylvatica* L.

Colydium elongatum (Fabricius, 1787)

Material examined: Donja Trnica, surroundings of Trgovište, southern Serbia, 43.2253° N, 22.0303° E, 591 m a.s.l., 29.04.2019, 1 ex. adult, under the bark of a dying *Juglans* sp.; Gornja Studena, surroundings of Niška Banja, Mt. Suva Planina, southeastern Serbia, 43.1318° N, 22.0642° E, 1 105 m a.s.l., 08.05.2018, 1 ex. adult, under the bark of a dead and broken *Fagus sylvatica* L.; Marina Kutina, surroundings of Gadžin Han, southeastern Serbia, 43.1239° N, 22.0052° E, 330 m a.s.l., 28.05.2021, 1 ex. adult, under the bark of a dying *Quercus petraea* (Mattuschka) Liebl.

Remark: *Colydium elongatum* prefers deciduous trees such as oaks (*Quercus* spp.), beeches (*Fagus sylvatica* L.) and walnuts (*Juglans regia* L.), although it has also been found on firs (*Abies* spp.) in southern Europe (Parmain *et al.,* 2024).

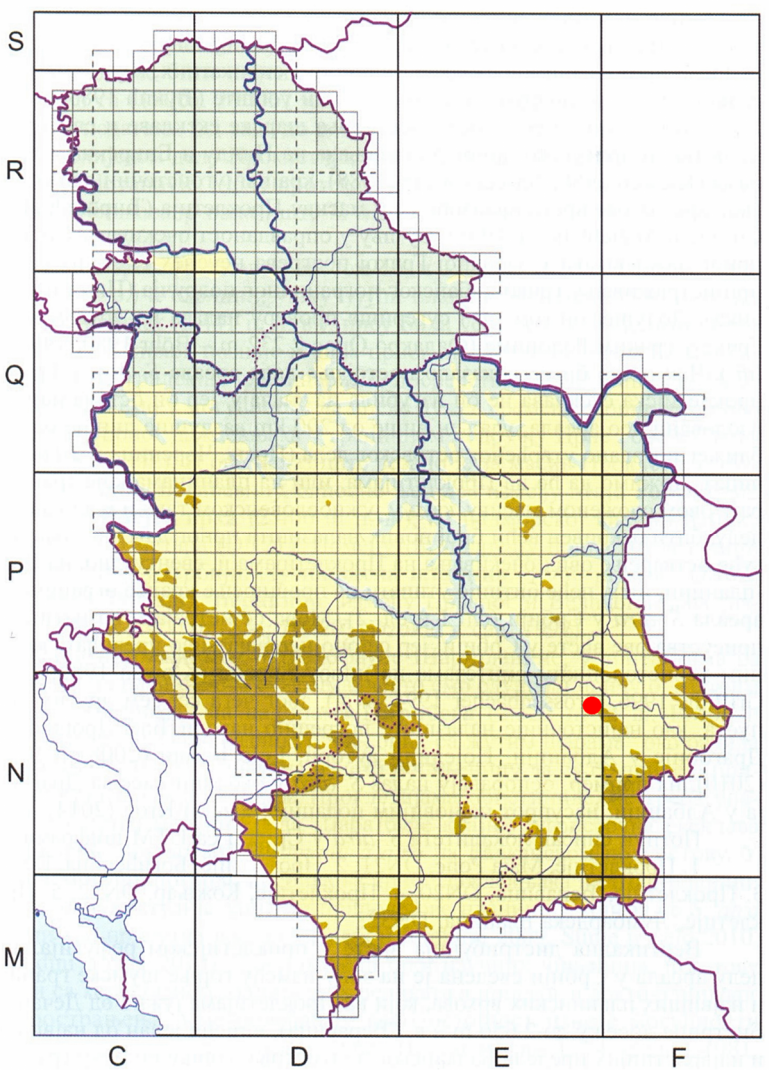


Figure 1. Occurrence of *Colydium noblecourti* Parmain, Eckelt & Schuh, 2024 in Serbia.

Colydium filiforme Fabricius, 1792

Material examined: Družiniće, surroundings of Sjenica, Uvac Special Nature Reserve, southwestern Serbia, 43.2129° N, 19.5703° E, 1 141 m a.s.l., 01.07.2019, 1 ex. adult, under the bark of a dead *Quercus* sp.; Slavinja, surroundings of Pirot, southeastern Serbia, 43.0907° N, 22.5118° E, 800 m a.s.l., 26.05.2021, 1 ex. adult, under the bark of a dying *Fagus sylvatica* L.

Remark: *Colydium filiforme* is a species that prefers oaks, especially those with large trunk diameters, although it has also been observed on beeches in France (Bouget *et al.,* 2019, Parmain *et al.,* 2024). *Colydium filiforme* is considered a primeval forest relict in Central Europe (Eckelt *et al.,* 2018).

Discussion

Adults of the three European *Colydium* species can be easily identified using the key of Parmain *et al.* (2024). The lateral grooves on the pronotum, which are shallow and faint in *C. noblecourti* but distinct in the remaining species (Fig. 2), seem to be very helpful in taxonomy. The apex of the apical ventrite is angled in *C. noblecourti*, whereas it is rounded in the other two species. The coloration may serve as an additional distinguishing feature – *C. noblecourti* always has entirely black elytra, while *C. elongatum* has relatively lighter elytra at the basal part, and *C. filiforme* has a distinctly lighter, brown basal part (Ruta *et al.,* 2025). In doubtful cases, the male copulatory organs provide reliable diagnostic features. In *C. noblecourti*, the apex of the penis is rounded, with the lateral margins remaining parallel over a relatively longer portion. In contrast, in *C. elongatum*, the penis apex is distinctly pointed, and the lateral margins are more curved. (Fig. 3).
All records of the presence of *Colydium* in Serbia need to be re-evaluated, with particular attention to the potential confusion between *C. elongatum* and the newly described *C. noblecourti*.

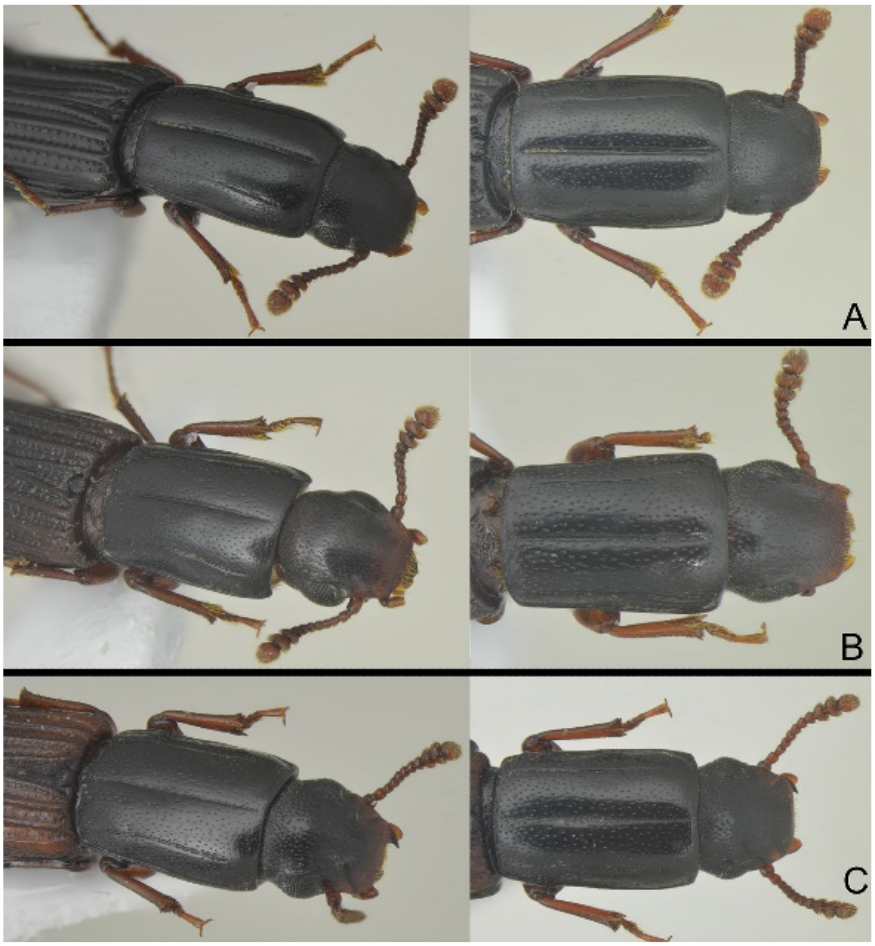


Figure 2. *Colydium* spp., head and pronotum (left – dorsolateral aspect, right – dorsal aspect): A – *C. noblecourti*, B – *C. elongatum*, C – *C. filiforme* (photo R. Ruta).

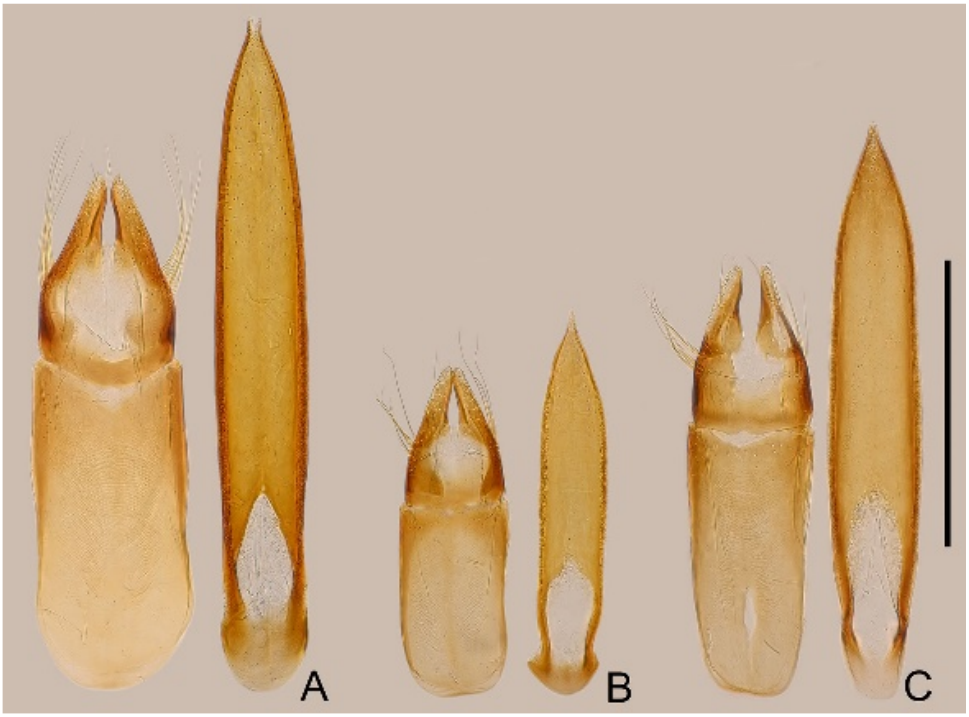


Figure 3. *Colydium* spp., tegmen (left) and penis (right): A – *C. noblecourti*, B – *C. elongatum*, C – *C. filiforme*. Scale bar = 0.5 mm (photo R. Ruta).

Acknowledgment

Our heartfelt thanks go to Rafał Ruta for photographing the specimens of *Colydium spp.* and Radosław Mroczyński for proofreading the English version.

References

Bouget, C., Brustel, H., Noblecourt, T., & Zagatti, P. (2019). Les Coléoptères saproxyliques de France. Catalogue écologique illustré. Muséum national d'Histoire naturelle, Paris, 744 pp. [in French]

Burakowski, B., & Ślipiński, S. A. (1986). Gwozdnikowate – Colydiidae, Bothrideridae, Cerylidae, Anommatidae. *Klucze do Oznaczania Owadów Polski, 19*(59), 1-86. [in Polish]

Eckelt, A., Müller, J., Bense, U., Brustel, H., Bussler, H., Chittaro, Y., Cizek, L., Frei, A., Holer, E., Kadej, M., Kahlen, M., Köhler, F., Möller, G., Mühle, H., Sanchez, A., Schaffrath, U., Schmidl, J., Smolis, A., Szallies, A., Németh, T., Wurst, C., Thorn, S., Christensen, R. H. B., & Seibold, S. (2018). "Primeval forest relict beetles" of Central Europe: a set of 168 umbrella species for the protection of primeval forest remnants. *Journal of Insect Conservation, 22*, 15-28. DOI: 10.1007/s10841-017-0028-6

Parmain, G., Eckelt, A., & Schuh, R. (2024). The genus *Colydium* Fabricius in Europe (Coleoptera, Zopheridae, Colydiinae) with description of a new species, *Colydium noblecourti* sp. nov. *Deutsche Entomologische Zeitschrift, 71*(2), 289-301. DOI 10.3897/dez.71.121389

Ruta, R., Marczak, D., Mroczyński, R., & Kwiatkowski, A. (2025). *Colydium noblecourti* Parmain, Eckelt & Schuh, 2024 (Coleoptera: Zopheridae) – nowy dla fauny Polski gatunek chrząszcza. *Acta entomologica silesiana, 33* (online 004), 1-7. DOI 10.5281/zenodo.14799923 [in Polish]

Ślipiński, A., & Lawrence, J. F. (2010). 11.9. Zopheridae Solier, 1834. In: Leschen, R. A. B., Beutel, R. G., Lawrence, J. F., Ślipiński, S. A., (Eds.) Coleoptera, Beetles. Volume 2: Morphology and Systematics (Elateroidea, Bostrichiformia, Cucujiformia partim). De Gruyter, Berlin-New York, 548-559.

Węgrzynowicz, P. (1999). A revision of the genus *Colydium* Fabricius, 1792 (Coleoptera: Zopheridae: Colydiinae). *Annales Zoologici, 49*(3), 265-328.

COLYDIUM NOBLECOURTI PARMAIN, ECKELT & SCHUH, 2024 (COLEOPTERA: ZOPHERIDAE) – НОВА ВРСТА ТВРДОКРИЛЦА ЗА ФАУНУ СРБИЈЕ И НОВИ НАЛАЗИ РОДА *COLYDIUM* FABRICIUS, 1792 У СРБИЈИ

DAWID MARCZAK и DANUTA PEPŁOWSKA-MARCZAK

Извод

У раду је наведен први податак о налазу *Colydium noblecourti* у Србији. Такође, анализирани су примерци рода *Colydium* из збирке аутора, који потичу из југоисточне, јужне и југозападне Србије. То је омогућило утврђивање присуства све три европске врсте *Colydium* на овом подручју. Све податке о присуству *Colydium* у Србији је потребно верификовати.

Received: February 13th, 2025
Accepted: April 24th, 2025