

New records of ground beetles (Coleoptera: Carabidae) from the Western Rhodope Mountains in Bulgaria

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Abstract. This paper presents new data on the ground beetle (Coleoptera: Carabidae) fauna of one of Bulgaria's well-studied mountains, including 12 new species records.

Key words: carabids, new data, Western Rhodopes.

Introduction

The Western Rhodopes are the larger and the higher part of the Rhodope Mountains, which are one of the most faunistically significant areas in Europe. Their ground beetle (Coleoptera: Carabidae) fauna is rich and relatively well-studied, along with its habitats, as research began in the early XX century and continues to this day (for a detailed bibliographic reference, see Teofilova 2018, 2022). However, the last comprehensive review is from 2006 (Guéorguiev & Lobo 2006), so new records are to be expected.

The goal of the present communication is to add new data to the list of species known so far from this region and/or to widen their ranges with new localities.

Material and Methods

The material and data were collected in 2013 – 2024, during various field trips, manually or in pitfall traps. Some random observations are also included. The majority of the beetles were collected near the village of Vetren Dol and the hamlet of Grashtitsa.

Abbreviations of collectors' names: BV – Boyan Vagalinski, GH – Georgi Hristov, NK – Nikolay Kodzhabashev, TL – Toshko Ljubomirov, TT – T. Teofilova, VG – Vasil Genchev.

Specimens were determined by the author and are stored in IBER – BAS.

Results and Discussion

A total of 43 species were collected. They represent 14% of all 310 species known for the Western Rhodopes (Teofilova 2018). Some of them are widespread, and here, just some new localities are presented. However, twelve species are reported for the first time in the Western Rhodope Mts. (marked with *), as four of them are new for both parts of the mountain (Eastern and Western) (marked with **). These records are presented below:

***Cicindela (Cicindela) campestris campestris* Linnaeus, 1758**

Material: near Batashki Snezhnik Peak, 2000 m, 1 ex., 20.06.2020, obs. N. Kolev.

***Notiophilus biguttatus* (Fabricius, 1779)**

Material: S Grashtitsa, 41°38'16"N, 24°37'04"E, 1345 m, spruce forest, 1♂, and 41°38'34"N, 24°37'11"E, 1316 m, river bed in spruce forest (**Fig. 1A**), 1♂, 27.VIII.2024, leg. TT, GH.

***Carabus (Pachystus) hortensis hortensis* Linnaeus, 1758**

Material: SE shore of the Golyam Beglik Dam, 41°47'48"N, 24°07'31"E, 1560 m, *Picea abies*, *Pinus sylvestris*, 1♀, 6.IX.2024, leg. BV.

***Carabus (Procerus) scabrosus bureschianus* Breuning, 1928**

Material: Dolen vill., 41°37'26"N, 23°55'53"E, 1060 m, 1 ex., 9.11.2013, obs. V. Peneva; Chervenata Stena Reserve, 41°55'02"N, 24°51'58"E, 920 m, 1♂, 26.06.2014, leg. TL; Asenovgrad, 1 ex., 12.05.2019, obs. B. Genova; Dobrostan vill., about 1250 m, 1 ex., 22.08.2022, obs. R. Boyadzhieva; Lilkovo vill., about 1400 m, 1 ex., 31.08.2022, obs. K. Dieva; Fotinovo vill., about 1100 m, 1 ex., 4.09.2022, obs. R. Tsenkov; Grashtitsa, house yard, 1 larva, 24.III.2024, leg TT.

Bembidion (Bembidionetolitzkya) tibiale (Duftschmid, 1812)

Material: W Smolyan, 41°34'58"N, 24°39'20"E, 1075 m, stony river bed (**Fig. 1B**), 1♀2♂, 29.VIII.2024, leg. TT, GH; S Grashtitsa, 41°38'34"N, 24°37'11"E, 1316 m, stony river bed in spruce forest, under stone, 2♀1♂, 27.VIII.2024, leg. TT, GH.

*****Bembidion (Ocydromus) atlanticum atlanticum Wollaston, 1854***

Material: S Borino vill., 41°39'05.5"N, 24°18'50.7"E, 1080 m, riverbank, 1♀, 12.05.2022, leg. GH; S Grashtitsa, 41°38'34"N, 24°37'11"E, 1316 m, 1♀, 27.VIII.2024, leg. TT, GH.

Bembidion (Ocyturanus) balcanicum Apfelbeck, 1899

Material: W Smolyan, 41°34'58"N, 24°39'20"E, 1075 m, river bed, 1♂, 29.VIII.2024, leg. TT.

Bembidion (Peryphanes) dalmatinum dalmatinum Dejean, 1831

Material: Grashtitsa, 41°39'04"N, 24°37'13"E, 1377 m, spruce forest, 1♂, 6.IX.2024, leg TT.

Bembidion (Peryphanes) stephensii stephensii Crotch, 1866

Material: S Grashtitsa, 41°38'16"N, 24°37'04"E, 1345 m, forest, 1♂, 3.IX.2024, leg TT.

Sinechostictus (Sinechostictus) millerianus (Heyden, 1883)

Material: W Smolyan, 41°35'05"N, 24°38'46"E, 1165 m, stony river bed in deciduous forest, 1♀1♂, 29.VIII.2024, leg. TT, GH.

Xenion ignitum (Kraatz, 1875)

Material: SE shore of the Golyam Beglik Dam, 41°47'48"N, 24°07'31"E, 1560 m, *Picea abies*, *Pinus sylvestris*, 1♂, 6.IX.2024, leg. BV.

Myas (Myas) chalybaeus (Palliard, 1825)

Material: W Asenovgrad, 42°00'42"N, 24°51'34"N, 307 m, 1♂, 7.10.2000, leg. VG.

Pterostichus (Bothriopterus) oblongopunctatus (Fabricius, 1787)

Material: Grashtitsa, 1340 m, house yard, 1♂, 30.VIII.2024, SE Grashtitsa, 41°38'29"N, 24°37'23"E, 1360 m, spruce forest, 1♀1♂, 1.IX.2024, leg. TT; S Grashtitsa, 41°38'34"N, 24°37'11"E, 1316 m, stony river bed in spruce forest, 2♀1♂, 27.VIII.2024, leg. TT, GH.

Pterostichus (Platysma) niger niger (Schaller, 1783)

Material: Grashtitsa, 1340 m, house yard, 1♂, 25.III.2024, SE Grashtitsa, 41°38'25"N, 24°37'28"E, 1370 m, spruce forest, under log, 1♀, 26.VIII.2024, S Grashtitsa, 41°38'16"N, 24°37'04"E, 1345 m, spruce forest, in a log, 1♂, 27.VIII.2024, leg TT, GH.

Abax (Abacopercus) carinatus carinatus (Duftschmid, 1812)

Material: SE Grashtitsa, 41°38'30"N, 24°37'55"E, 1390 m, 1♀, 28.VIII.2024, leg TT.

Abax (Abax) ovalis (Duftschmid, 1812)

Material: SE Grashtitsa, 41°38'29"N, 24°37'18"E, 1375 m, spruce forest, in dead wood, 2♂, 3.IX.2024, S Grashtitsa, 41°38'16"N, 24°37'04"E, 1345 m, spruce, 1♀, 27.VIII.2024, leg TT.

Calathus (Calathus) distinguendus Chaudoir, 1846

Material: N Draginovo vill., 42°05'37"N, 23°59'55"E, 1006 m, 3♀, 7.09.2023, leg. TL.

Calathus (Calathus) fuscipes fuscipes (Goeze, 1777)

Material: N Draginovo vill., 42°05'37"N, 23°59'55"E, 1006 m, 1♂, 7.09.2023, leg. TL.

****Calathus (Neocalathus) cinctus Motschulsky, 1850***

Material: many localities S and SE Vetren Dol (Golak Hill (**Fig. 1C**) and Karkariya Ridge), between 300 and 770 m, 91 ex., 24.03.2023–21.06.2024, pitfall traps, leg. TT, NK, GH.

Calathus (Neocalathus) melanocephalus melanocephalus (Linnaeus, 1758)

Material: S Grashtitsa, 41°38'34"N, 24°37'11"E, 1316 m, on the bank of a stony river bed in spruce forest, 1♀, 27.VIII.2024, leg. TT, GH.

Calathus (Neocalathus) metallicus Dejean, 1828

Material: SE shore of the Golyam Beglik Dam, 41°47'48"N, 24°07'31"E, 1560 m, *Picea abies*, *Pinus sylvestris*, 1♂, 6.IX.2024, leg. BV.

***Laemostenus (Actenipus) plasoni plasoni* (Reitter, 1885)**

Material: Grashitsa, 41°39'05"N, 24°37'04"E, 1340 m, house yard, 1♀, 8.IX.2024, leg. TT.

****Laemostenus (Laemostenus) venustus* (Dejean, 1828)**

Material: S Vetren Dol, about 42°07'19"N, 24°09'07"E, 870 m, near brook in beech forest, 1♂, 24.III–14.VI.2023, 1♀1♂, 23.II–21.VI.2024, leg. TT, NK, GH.

***Limodromus assimilis* (Paykull, 1790)**

Material: W Smolyan, 41°35'05"N, 24°38'46"E, 1165 m, river, 1♀, 29.VIII.2024, leg. TT, GH.

***Platynus scrobiculatus purkynei* Obenberger, 1917**

Material: S Grashitsa, 41°38'05"N, 24°37'05"E, 1380 m, stony river bed in spruce forest, 1♀1♂, 3.IX.2024 and 41°38'34"N, 24°37'11"E, 1316 m, under stone, 1♀, 13.VII.2024, leg. TT; same, 1♀1♂, 27.VIII.2024, leg. TT, GH; W Smolyan, near river, 41°34'58"N, 24°39'20"E, 1075 m, 1♀, and 41°35'05"N, 24°38'46"E, 1165 m, 1♀1♂, 29.VIII.2024, leg. TT, GH.

***Amara (Amara) communis* (Panzer, 1797)**

Material: SE Krastava vill., 41°56'25"N, 23°51'49"E, 1193 m, 1♂, 27.07–27.08.2015, pitfall trap, leg. TL.

***Amara (Amara) curta* Dejean, 1828**

Material: N Hvoyna vill., 41°53'04"N, 24°41'00"E, 1080 m, 1♂, 17.05.2016, leg. TT; N Smolyan, Nevyastata Peak, 1479 m, 41°36'00"N, 24°41'52"E, m, 1♂, 18.05.2016, leg. TT.

***Amara (Amara) montivaga* Sturm, 1825**

Material: Grashitsa, 41°39'05"N, 24°37'04"E, 1340 m, 1♂, 30.VIII.2024, leg. TT.

***Amara (Amara) nigricornis* C. G. Thompson, 1857**

Material: SE Krastava vill., 41°56'25"N, 23°51'49"E, 1193 m, 1♀, 27.06–27.07.2015, pitfall trap, leg. TL.

****Zabrus (Zabrus) tenebrioides* (Goeze, 1777)**

Material: Golak Hill, SE Vetren Dol, 42°08'46.3"N, 24°10'33.1"E, 330 m, dry stony slope with single bushes, 1♂, 24.III–14.VI.2023, leg. TT, NK, GH. **Notes:** The species has been reported for the "Rhodopes" as a whole (see Guéorguiev & Lobo 2006).

***Bradycellus (Bradycellus) caucasicus* (Chaudoir, 1846)**

Material: S Grashitsa, 41°38'34"N, 24°37'11"E, 1316 m, 1♂, 27.VIII.2024, leg. TT, GH.

*****Acupalpus (Ancylostria) interstitialis* Reitter, 1884**

Material: S Vetren Dol, 42°07'09.3"N, 24°09'07.8"E, 888 m, 1♀, 15.VI.20233, leg. GH.

****Parophonus (Parophonus) maculicornis* (Duftschmid, 1812)**

Material: S Vetren Dol, 42°08'36"N, 24°09'19"E, 413 m, evergreen glade, 3♂, 24.III–14.VI.2023, pitfall traps, leg. TT, NK, GH.

*****Parophonus (Parophonus) mendax* (P. Rossi, 1790)**

Material: same as above, 1♀, 24.III–14.VI.2023, 2♀, 6.X.2023–23.II.2024, leg. TT, NK, GH.

***Harpalus (Harpalus) affinis* (Schrank, 1781)**

Material: W Smolyan, 41°34'58"N, 24°39'20"E, 1075 m, forest near stony river bed, 2♂, 29.VIII.2024, leg. TT, GH.

*****Harpalus (Harpalus) taciturnus* Dejean, 1829**

Material: Golak Hill, SE Vetren Dol village., 42°08'46"N, 24°10'33"E, 330 m, dry stony slope with single bushes, 1♂, 24.03.2023, leg. TT, NK, GH. **Notes:** This species is very rare in Bulgaria and it is known from just a few localities (see Teofilova et al. 2020).

****Harpalus (Harpalus) picipennis* (Duftschmid, 1812)**

Material: Karkariya Ridge, S Vetren Dol vill., 42°08'34"N, 24°09'39"E, 525 m, dry hornbeam scrub, pitfall traps, 1♀, 23.II–21.VI.2024, leg. TT, NK, GH. **Notes:** The species has been reported for the "Rhodopes" as a whole, with the remark that it inhabits open sites at low and middle altitudes (see Guéorguiev & Lobo 2006).

****Harpalus (Harpalus) pygmaeus* Dejean, 1829**

Material: near Vetren Dol, 42°07'57"N, 24°09'46"E, 775 m, oak forest, 1♀, 23.II–21.VI.2024 and 42°08'37"N, 24°09'54"E, 490 m, shrubs, 1♀, 24.III–14.VI.2023, traps, leg. TT, NK, GH.

***Harpalus (Harpalus) rubripes* (Duftschmid, 1812)**

Material: Grashtitsa, 1340 m, house yard, 1♀, 16.VII.2024, 1♀, 4.IX.2024, leg. TT.

***Harpalus (Pseudoophonus) rufipes* (De Geer, 1774)**

Material: W Smolyan, 41°34'58"N, 24°39'20"E, 1075 m, glade between a river and country road, under stone, 1♀, 29.VIII.2024, leg. TT, GH.

****Harpalus (Semiophonus) signaticornis* (Duftschmid, 1812)**

Material: three localities S and SE Vetren Dol vill., between 300 and 415 m, 6 ex., 24.03.2023–21.06.2024, pitfall traps, leg. TT, NK, GH.

***Ophonus (Metoponus) laticollis* Mannerheim, 1825**

Material: Grashtitsa, 1340 m, house yard, 1♀, 15.VII.2024, leg TT.

****Brachinus (Brachynidius) brevicollis* Motschulsky, 1844**

Material: four localities S and SE Vetren Dol, between 300 and 415 m, 26 ex., 24.03.2023–21.06.2024, pitfall traps, leg. TT, NK, GH.

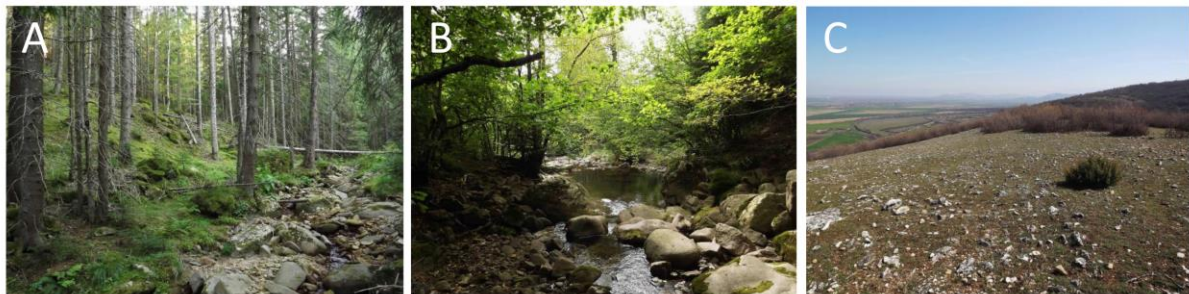


Fig. 1. Some of the habitats where beetles were collected: A – Grashtitsa, stony river bed in spruce forest; B – Smolyan, river in deciduous forest; C – Golak Hill near Vetren Dol

It is known that the Western Rhodopes have great importance for the ground beetles and treasures specific habitats, assemblages and species with conservation significance (Guéorguiev & Lobo 2006, Teofilova 2018, 2022). Even though the region is relatively well studied, the new findings reported here emphasise the variety of the carabid complex and point to the need for further research, including various biotopes, elevations, sampling efforts and methods.

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