

Water beetles (Insecta: Coleoptera) in Sakar Mountains, Bulgaria

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Abstract. A list of 50 species of the beetle families Hydroscaphidae (one species), Haliplidae (one species), Noteridae (one species), Hygrobiidae (one species), Dytiscidae (14 species), Helophoridae (four species), Hydrochidae (one species), Hydrophilidae (19 species), Hydraenidae (two species), Elmidae (two species), Dryopidae (two species) and Heteroceridae (two species) from the Bulgarian part of Sakar Mountains (SE Bulgaria) was prepared based on published and new data. Thirty-seven species were identified after the field studies, conducted by the authors in the period 2020 – 2025. Of these 31 are reported for the first time to the study region and for another six species new data from the territory of the mountains are presented. The cosmopolitan species *Cercyon nigriceps* (Marsham, 1802) and the rare Western Palaearctic *Stenelmis consobrina consobrina* Dufour, 1835 are reported for the first time from Bulgaria. The distribution of the species *Cercyon laminatus* Sharp, 1873 and *Ochthebius viridis viridis* Peyron, 1858 is confirmed for the territory of the country. Original photographs of all newly recorded species are provided.

Key words: water beetles, Coleoptera, distribution, Bulgaria, Sakar Mountains.

Introduction

Water beetles comprise aquatic representatives of diverse families from the suborders Myxophaga, Adephaga and Polyphaga of the order Coleoptera (Jäch & Balke 2008). Special studies of the water beetles from the Bulgarian part of the Sakar Mountains have not been carried out so far, with the exception of a single targeted collection of aquatic Coleoptera carried out by Greñ & Lubecki (2017) from a pond in the area of Cherepovo Village. The cited authors reported 16 species from five beetle families (Noteridae, Hygrobiidae, Dytiscidae, Helophoridae and Hydrophilidae) from the studied pond. Several species records can also be found in some hydrobiological studies concerning benthic macroinvertebrate communities in the Maritsa and Tundzha rivers and their tributaries (Uzunov *et al.* 1981, Borisova *et al.* 2013).

In the present work we compile a list of water beetle species from the Bulgarian part of Sakar Mountains, based on literature records and new data obtained by us during the identification of newly collected material. Coprophilous species from the family Hydrophilidae, as well as shore beetles from the family Heteroceridae are also included in the list.

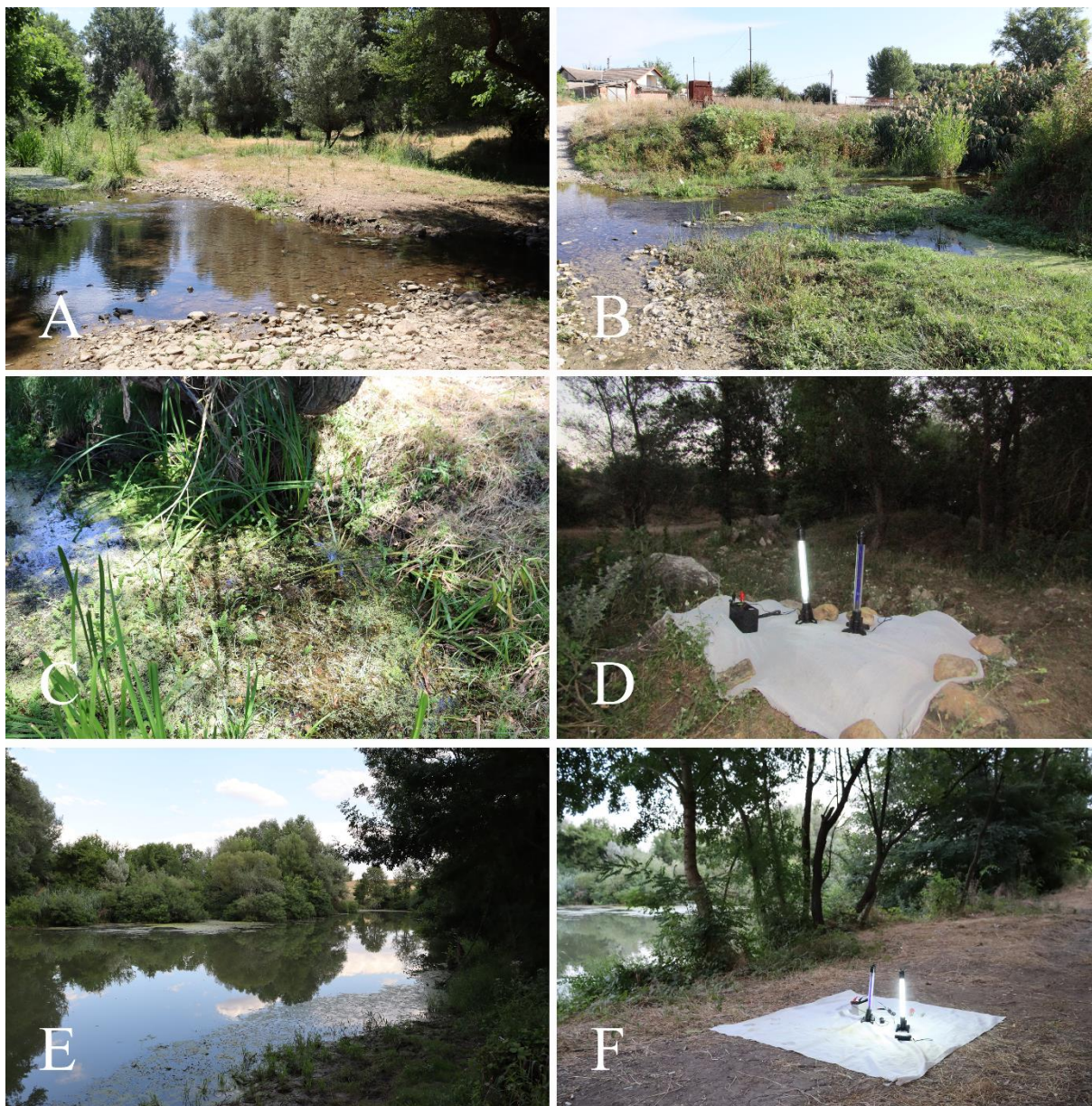


Fig. 1. Habitats of some water beetle species in Sakar Mts. A – Manastirska Reka river west of Ustrem Village, 11.vii.2025, habitat of *Platambus maculatus* and *Laccobius aegaeus*; B – Manastirska Reka river in Ustrem Village, 14.ix.2025, habitat of *Laccobius aegaeus*; C – small riverside swamp west of Ustrem Village, 11.vii.2025, habitat of *Hydroporus palustris*, *Laccobius aegaeus* and *Anacaena limbata*; D – riverine vegetation on the right bank of Manastirska Reka river west of Ustrem Village with trapping lamps, 13.vii.2020, collection site of *Rhantus suturalis*, *Scarodytes halensis*, *Laccophilus minutus*, *Berosus frontifoveatus*, *Enochrus fuscipennis*, *Cercyon laminatus*, *Heterocerus fenestratus*, *H. fuscus fuscus* e.g.; E – Tundzha river east of Srem Village, 11.vii.2025; F – riverine vegetation on the left bank of Tundzha river east of Srem Village with trapping lamps, 11.vii.2025, collection site of *Peltodytes caesus*, *Hydroglyphus geminus*, *Berosus affinis*, *Laccobius aegaeus*, *Anacaena limbata*, *Coelostoma orbiculare*, *Heterocerus fenestratus* and *H. fuscus fuscus*.

Materials and Methods

The material for the present study was collected by the authors from several closely situated localities along Tundzha and Manastirska Reka rivers in the vicinity of the villages of Srem and Ustrem respectively, in the period 2020 – 2025 (Fig. 1). The beetles were

collected mainly by light trapping (portable lamps with 8W UV and white tubes, or only UV tubes, powered by 12V battery, Fig. 1 D, F), and less often also by using an aquatic net or by direct examination of submerged in water stones. Coprophilous species of Hydrophilidae were collected directly from animal dung pats as well.

Habitat photographs were taken with digital cameras Canon PowerShot SX420 IS or Canon EOS 250D. The photographs of prepared specimens were taken with a Canon EOS R50 digital camera with Laowa 25mm f/2.8 2.5-5X Ultra Macro or Laowa 90mm f/2.8 2x Ultra Macro APO lens mounted on a WeMacro rail (Wemacro, Shanghai, China). The photographs of the genital structures were taken with Olympus BX41 microscope, equipped with Canon EOS 2000D digital camera.

The higher classification of Coleoptera, used in the preparation of the species list, follows that in the Catalogue of Palaearctic Coleoptera (Fikáček *et al.* 2015, Jäch & Skale 2015, Jäch *et al.* 2016, Mascagni 2016, Hájek 2017). The species new to the study area are indicated with an asterisk (*), the new country records – with double asterisk (**) in the species list. The examined specimens are preserved in the Zoological Collection of Sofia University, Faculty of Biology (BFUS) and the label data were digitized in the collection database.

Results and Discussion

List of species:

Coleoptera Linnaeus, 1758

Myxophaga Crowson, 1955

Hydroscaphidae LeConte, 1874

****Hydroscapha granulum* (Motschulsky, 1855) (Plate I, 1)**

New data: Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 09.ix.2024, 1 ♂ (BFUS-COL000013), 5 sex indet. (BFUS-COL000014 – BFUS-COL000018), at light (UV), D. Gradinarov & Y. Petrova leg.

Notes: In Bulgaria, the species has so far been found in an unnamed small stream in the vicinity of Kostenets (Hinton 1969) and in the Maritsa River near Pazardzhik (Joost 1979).

Adephaga Schellenberg, 1806

Haliplidae Aubé, 1836

***Peltodytes caesus* (Duftschmid, 1805) (Plate I, 2)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 24.vii.2021, 1 ♂ (BFUS-COL000019), at light (UV), D. Gradinarov leg.; the same locality, 21.viii.2021, 1 ♀ (BFUS-COL000020), at light (white & UV), D. Gradinarov leg.; W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 1 ♂ (BFUS-COL000021), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Noteridae C. G. Thomson, 1860

Noterinae C. G. Thomson, 1860

Noterini C. G. Thomson, 1860

***Noterus clavicornis* (De Geer, 1774)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

Hygrobiidae Régimbart, 1879

***Hygrobia hermanni* (Fabricius, 1775)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

Notes: Rare species in Bulgaria, reported except from Cherepovo, only from Sofia (Guéorguiev 1987, Guéorguiev *et al.* 1998, as *H. tarda* (Herbst, 1779)).

Dytiscidae Leach, 1815

Agabinae C. G. Thomson, 1867

Agabini C. G. Thomson, 1867

****Platambus maculatus* (Linnaeus, 1758) (Plate I, 3)**

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.449'N 26°27.083'E, 95 m a.s.l., riverine vegetation, small swamp, 08.vi.2020, 1 ♂ (BFUS-COL000022), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 1 ♂ (BFUS-COL000023); W of Ustrem Vill., near Manastirska Reka River, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 2 ♂♂ (BFUS-COL000024, BFUS-COL000025), 1 ♀ (BFUS-COL000026), at light (white & UV), D. Gradinarov leg.; W of Ustrem Vill., Manastirska Reka River, 42°01.404'N 26°26.962'E, 99 m a.s.l., 24.v.2023, 1 ♂ (BFUS-COL000027), 7 ♀♀ (BFUS-COL000028 – BFUS-COL000034), under submerged stones, D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 1 ♀ (BFUS-COL000035), at light (white & UV), D. Gradinarov leg.

Colymbetinae Erichson, 1837

Colymbetini Erichson, 1837

***Colymbetes fuscus* (Linnaeus, 1758)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

****Rhantus (Rhantus) suturalis* (W. S. Macleay, 1825) (Plate I, 4)**

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.083'E, 100 m a.s.l., riverine vegetation, small swamp, 13.vii.2020, 1 ♂ (BFUS-COL000036), 1 ♀ (BFUS-COL000037), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., 29.vi.2022, 1 ♂ (BFUS-COL000038).

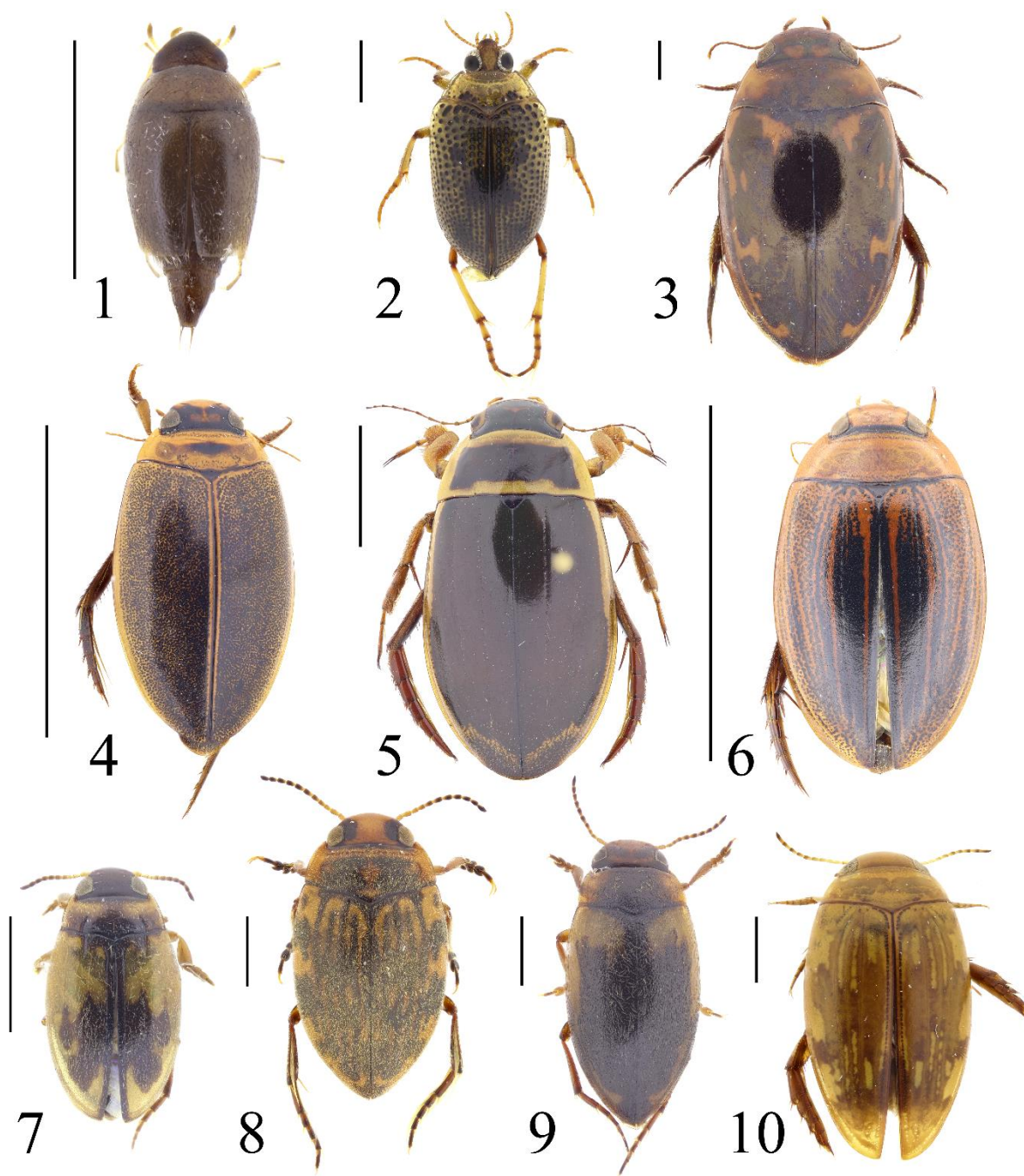


Plate I. Hydroscaphidae, Haliplidae and Dytiscidae from Sakar Mts. 1 – *Hydroscapha granulum*, Ustrem, 09.ix.2024 (BFUS-COL000014); 2 – *Peltodytes caesus*, Srem, 11.vii.2025, male (BFUS-COL000021); 3 – *Platambus maculatus*, Ustrem, 24.v.2023, male (BFUS-COL000027); 4 – *Rhantus suturalis*, Ustrem, 29.vi.2022, male (BFUS-COL000038); 5 – *Dytiscus marginalis marginalis*, Ustrem, 24.vii.2021, male (BFUS-COL000039); 6 – *Hydaticus grammicus*, Srem, 07.vi.2020, male (BFUS-COL000040); 7 – *Hydroglyphus geminus*, Ustrem, 08.vi.2020 (BFUS-COL000065); 8 – *Scarodytes halensis*, Ustrem, 29.vi.2022, male (BFUS-COL000182); 9 – *Hydroporus palustris*, Ustrem, 11.vii.2025, male (BFUS-COL000187); 10 – *Laccophilus minutus*, Ustrem, 13.vii.2020, male (BFUS-COL000197). Scale bars: 1 mm (1 – 3, 7 – 10); 10 mm (4 – 6).

Dytiscinae Leach, 1815
Aciliini C. G. Thomson, 1867

***Acilius (Acilius) sulcatus* (Linnaeus, 1758)**

Literature data: Cherepovo [Village] (Greń & Lubecki 2017) .

Cybistrini Sharp, 1880

***Cybister (Cybister) lateralimarginalis lateralimarginalis* (De Geer, 1774)**

Literature data: Cherepovo [Village] (Greń & Lubecki 2017, as *Cybister lateralimarginalis* (De Geer, 1774)).

Dytiscini Leach, 1815

****Dytiscus marginalis marginalis* Linnaeus, 1758** (Plate I, 5)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 24.vii.2021, 1 ♂ (BFUS-COL000039), at light (UV), D. Gradinarov leg.

Hydaticini Sharp, 1882

****Hydaticus (Prodaticus) grammicus* (Germar, 1827)** (Plate I, 6)

New data: W of Srem Vill., about 100 m from Tundzha River, 42°02.996'N 26°28.272'E, 84 m a.s.l., meadows, 07.vi.2020, 1 ♂ (BFUS-COL000040), at light (white & UV), Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.449'N 26°27.083'E, 95 m a.s.l., riverine vegetation, small swamp, 08.vi.2020, 1 ♀ (BFUS-COL000041), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 1 ♀ (BFUS-COL000042).

Hydroporinae Aubé, 1836

Bidessini Sharp, 1882

****Hydroglyphus geminus* (Fabricius, 1792)** (Plate I, 7)

New data: W of Srem Vill., about 100 m from Tundzha River, 42°02.996'N 26°28.272'E, 84 m a.s.l., meadows, 07.vi.2020, 22 sex indet. (BFUS-COL000043 – BFUS-COL000064), at light (white & UV), Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 3 sex indet. (BFUS-COL000065 – BFUS-COL000067), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.449'N 26°27.084'E, 101 m a.s.l., riverine vegetation, small swamp, 12.vii.2020, 1 sex indet. (BFUS-COL000068); Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 15.vii.2020, 1 sex indet. (BFUS-COL000069), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same locality, 25.v.2023, 2 sex indet. (BFUS-COL000070, BFUS-COL000071), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same locality, 24.vi.2023, 1 sex indet. (BFUS-COL000072), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same locality, 29.vii.2024, 3 sex indet. (BFUS-COL000073 – BFUS-COL000075), at light (UV), D. Gradinarov & Y. Petrova leg.; the same locality, 08.ix.2024, 2 sex indet. (BFUS-COL000076, BFUS-COL000077), at light (UV), D. Gradinarov & Y. Petrova leg.; W of Srem Vill., about 50 m from Tundzha River, 42°02.890'N 26°28.360'E, 87 m a.s.l., dirt road, agricultural fields, 16.vii.2020, 7 sex indet. (BFUS-COL000078 – BFUS-COL000084), at light (white & UV), Y. Petrova leg.; W of Srem Vill., right bank of Tundzha River, 42°02.890'N 26°28.438'E, 85 m a.s.l., riverside meadows,

16.vii.2020, 47 sex indet. (BFUS-COL000085 – BFUS-COL000131), at light (white & UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 22.vii.2021, 2 sex indet. (BFUS-COL000132, BFUS-COL000133), at light (white & UV), D. Gradinarov leg.; the same locality, 24.vii.2021, 1 sex indet. (BFUS-COL000134), at light (UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 1 sex indet. (BFUS-COL000135), at light (UV), D. Gradinarov leg.; the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 1 sex indet. (BFUS-COL000136), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 7 sex indet. (BFUS-COL000137 – BFUS-COL000143), at light (white & UV), D. Gradinarov leg.; W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 19 sex indet. (BFUS-COL000144 – BFUS-COL000162), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same data, 42°02.923'N 26°28.347'E, 92 m a.s.l., riverside meadows, 8 sex indet. (BFUS-COL000163 – BFUS-COL000170).

Hydroporini Aubé, 1836 **Deronectina Galewski, 1994**

****Scarodytes halensis* (Fabricius, 1787) (Plate I, 8)**

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.083'E, 100 m a.s.l., riverine vegetation, small swamp, 13.vii.2020, 1 ♂ (BFUS-COL000171), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 2 ♀♀ (BFUS-COL000172, BFUS-COL000173); W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 22.vii.2021, 1 ♂ (BFUS-COL000174), 2 ♀♀ (BFUS-COL000175, BFUS-COL000176), at light (white & UV), D. Gradinarov leg.; the same locality, 24.vii.2021, 3 ♀♀ (BFUS-COL000177, BFUS-COL000179), at light (UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 1 ♂ (BFUS-COL000180), 1 ♀ (BFUS-COL000181), at light (UV), D. Gradinarov leg.; the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 1 ♂ (BFUS-COL000182), at light (white & UV); Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 25.v.2023, 3 ♀♀ (BFUS-COL000183 – BFUS-COL000185), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Hydroporina Aubé, 1836

***Hydroporus palustris* (Linnaeus, 1760) (Plate I, 9)**

Literature data: Cherepovo [Village] (Greń & Lubecki 2017).

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 27.vi.2022, 1 ♀ (BFUS-COL000186), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.445'N 26°27.098'E, 105 m a.s.l., riverine forest, small swamp, 11.vii.2025, 5 ♂♂ (BFUS-COL000187 – BFUS-COL000191), 4 ♀♀ (BFUS-COL000192 – BFUS-COL000195), collected with aquatic net, D. Gradinarov & Y. Petrova leg.; the same data, 42°01.442'N 26°27.102'E, 92 m a.s.l., small swamp, 14.ix.2025, 1 ♂ (BFUS-COL000196), collected with aquatic net, D. Gradinarov & Y. Petrova leg.

Hyphydrini Gistel, 1848

***Hyphydrus ovatus* (Linnaeus, 1760)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

Laccophilinae Gistel, 1848

***Laccophilus hyalinus* (De Geer, 1774)**

Literature data: Maritsa River near Lyubimets (Uzunov *et al.* 1981).

***Laccophilus minutus* (Linnaeus, 1758) (Plate I, 10)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.083'E, 100 m a.s.l., riverine vegetation, small swamp, 13.vii.2020, 1 ♂ (BFUS-COL000197), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., 29.vi.2022, 1 ♂ (BFUS-COL000198), 1 ♀ (BFUS-COL000199); the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 2 ♀♀ (BFUS-COL000200 – BFUS-COL000201); Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 24.vi.2023, 1 ♂ (BFUS-COL000202), at light (white & UV), D. Gradinarov & Y. Petrova leg.

***Laccophilus poecilus* Klug, 1834**

Literature data: Maritsa River near Lyubimets; Maritsa River above Svilengrad (Uzunov *et al.* 1981, as *Laccophilus variegatus* (Germ.)).

Polyphaga Emery, 1886

Hydrophiloidea Latreille, 1802

Helophoridae Leach, 1815

***Helophorus (Rhopalohelophorus) brevipalpis brevipalpis* Bedel, 1881**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017, as *Helophorus brevipalpis* Bedel, 1881).

***Helophorus (Rhopalohelophorus) flavipes* Fabricius, 1792**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

****Helophorus (Rhopalohelophorus) griseus* Herbst, 1793 (Plate II, 11, 12)**

New data: W of Srem Vill., about 100 m from Tundzha River, 42°02.996'N 26°28.272'E, 84 m a.s.l., meadows, 07.vi.2020, 1 ♂ (BFUS-COL000203), at light (white & UV), Y. Petrova leg.

***Helophorus (Rhopalohelophorus) montenegrinus* Kuwert, 1885**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

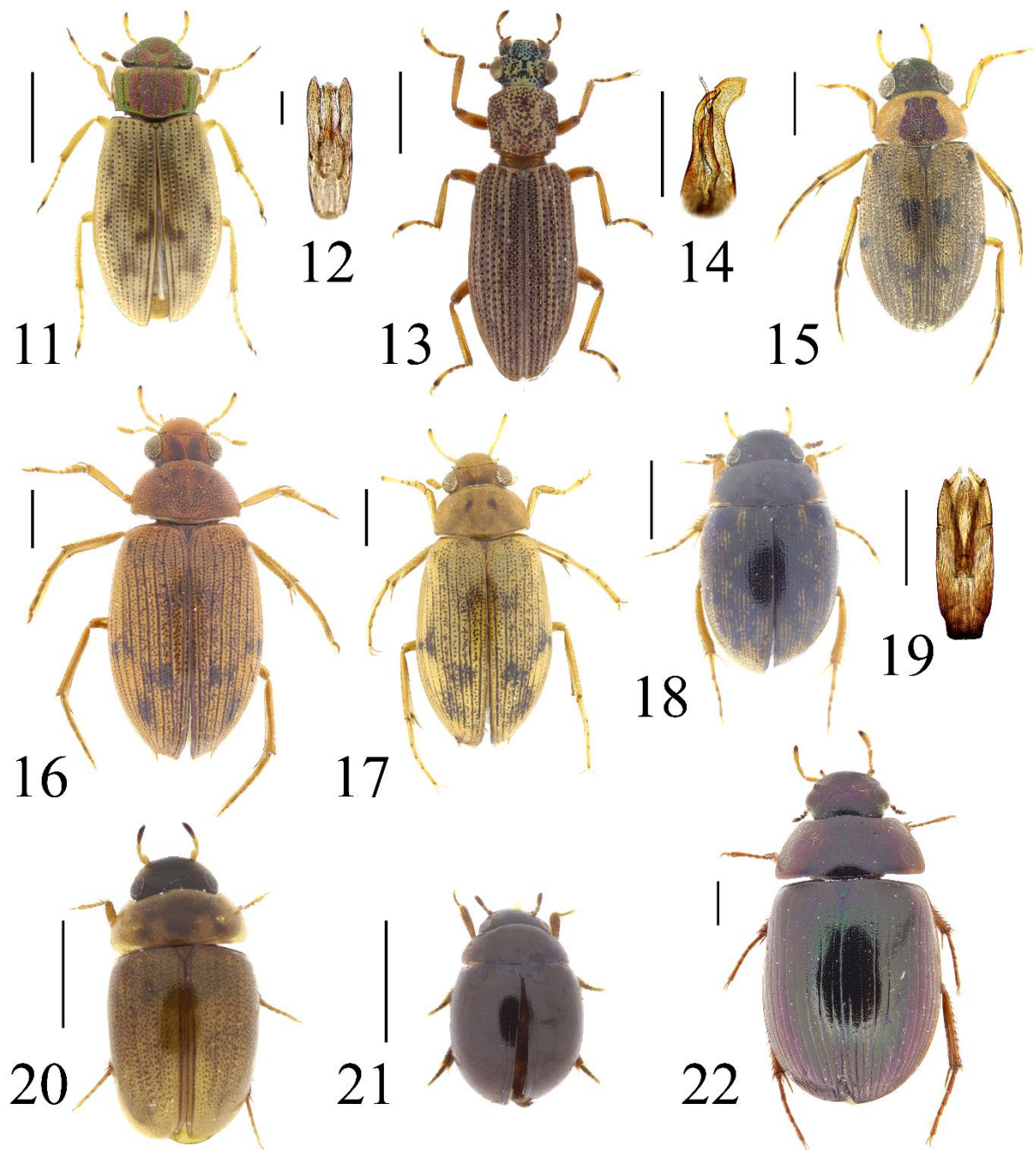


Plate II. Helophoridae, Hydrochidae and Hydrophilidae from Sakar Mts. 11 – *Helophorus griseus*, Srem, 07.vi.2020, male (BFUS-COL000203); 12 – idem, aedeagus; 13 – *Hydrochus elongatus*, Ustrem, 29.vi.2022, male (BFUS-COL000207); 14 – idem, aedeagus; 15 – *Berosus affinis*, Srem, 11.vii.2025, male (BFUS-COL000217); 16 – *B. frontifoveatus*, Ustrem, 13.vii.2020, male (BFUS-COL000231); 17 – *B. spinosus*, Ustrem, 07.v.2024, male (BFUS-COL000233); 18 – *Laccobius aegaeus*, Ustrem, 20.vii.2021, male (BFUS-COL000240); 19 – idem, aedeagus; 20 – *Anacaena limbata*, Srem, 16.vii.2020, male (BFUS-COL000274); 21 – *Chaetarthria seminulum*, Ustrem, 23.vii.2021, male (BFUS-COL000315); 22 – *Hydrobius fuscipes*, Ustrem, 08.vi.2020 (BFUS-COL000263). Scale bars: 1 mm (11, 13, 15, 16 – 18, 20 – 22); 0.5 mm (14, 19); 0.1 mm (12).

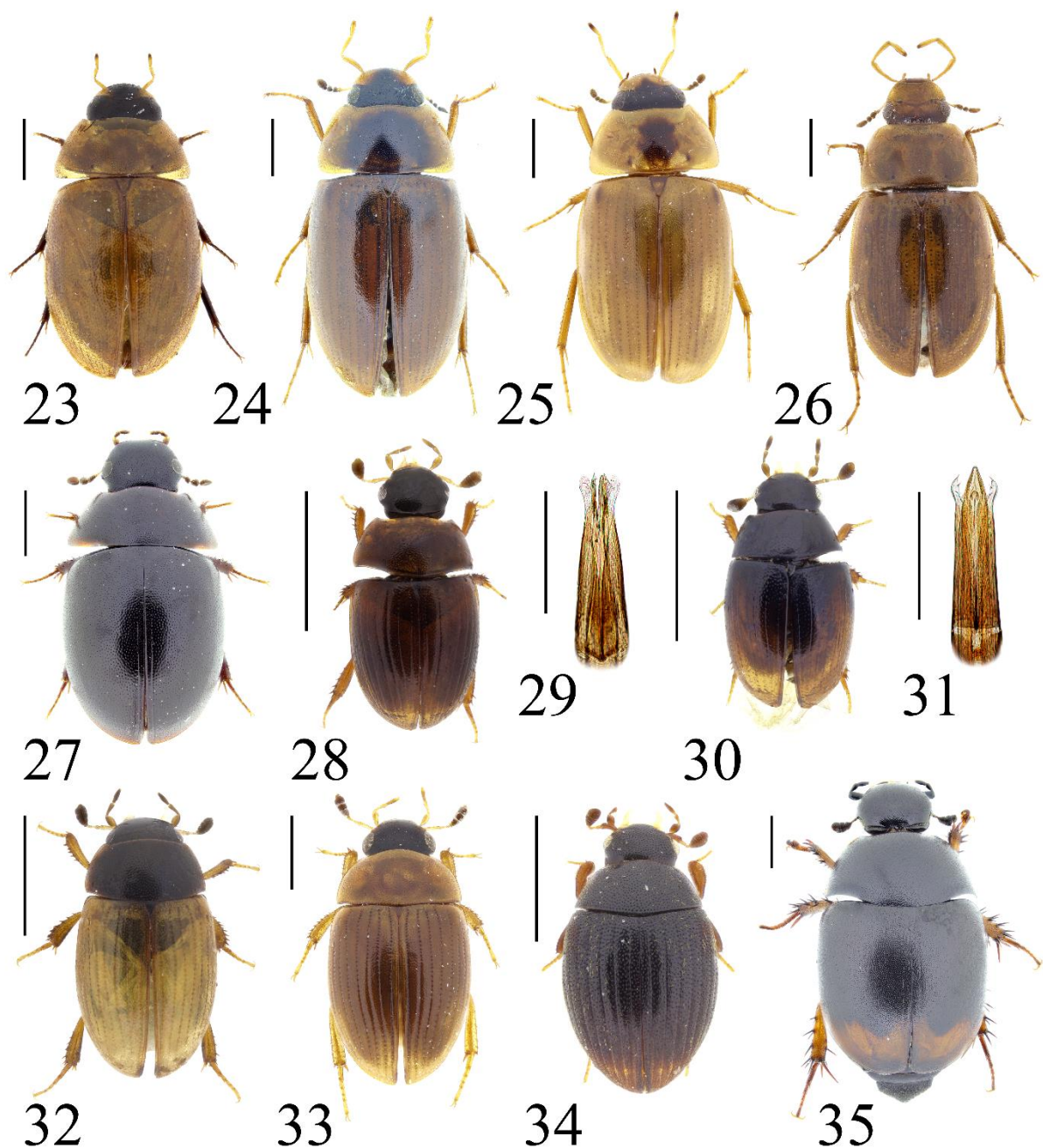


Plate III. Hydrophilidae from Sakar Mts. 23 – *Enochrus melanocephalus*, Srem, 16.vii.2020, female (BFUS-COL000319); 24 – *E. fuscipennis*, Ustrem, 29.vi.2022, male (BFUS-COL000327); 25 – *E. quadripunctatus*, Ustrem, 08.vi.2020, male (BFUS-COL000322); 26 – *Helochares lividus*, Ustrem, 20.vii.2021, male (BFUS-COL000329); 27 – *Coelostoma orbiculare*, Ustrem, 08.vi.2020, male (BFUS-COL000330); 28 – *Cercyon nigriceps*, Ustrem, 11.vii.2025, male (BFUS-COL000347); 29 – idem, aedeagus; 30 – *C. pygmaeus*, Ustrem, 11.vii.2025, male (BFUS-COL000348); 31 – idem, aedeagus; 32 – *C. quisquilius*, Ustrem, 14.ix.2025, male (BFUS-COL000353); 33 – *C. laminatus*, Ustrem, 12.vii.2020, male (BFUS-COL000338); 34 – *Cryptopleurum minutum*, Ustrem, 12.vii.2020, male (BFUS-COL000354); 35 – *Sphaeridium bipustulatum*, Ustrem, 14.ix.2025, male (BFUS-COL000360). Scale bars: 1 mm (23 – 28, 30, 32 – 35); 0.5 mm (29, 31).

Hydrochidae Thomson, 1859

****Hydrochus elongatus* (Schaller, 1783)** (Plate II, 13, 14)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 1 ♂ (BFUS-COL000204), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.449'N 26°27.084'E, 101 m a.s.l., riverine vegetation, small swamp, 12.vii.2020, 1 ♂ (BFUS-COL000205); the same data, 42°01.450'N 26°27.093'E, 101 m a.s.l., 24.vii.2021, 1 ♂ (BFUS-COL000206), at light (UV); the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., 29.vi.2022, 1 ♂ (BFUS-COL000207), at light (white & UV); the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 1 ♂ (BFUS-COL000208).

Notes: Greñ & Lubecki (2017) reported this species from Tsarevo (Black Sea coast) as a new species to Bulgaria. In fact, *H. elongatus* was previously recorded from Sofia (Joakimov 1904).

Hydrophilidae Latreille, 1802

Hydrophilinae Latreille, 1802

Berosini Mulsant, 1844

***Berosus (Berosus) affinis* Brullé, 1835** (Plate II, 15)

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

New data: Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 15.vii.2020, 1 ♀ (BFUS-COL000209), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same locality, 13.ix.2022, 1 ♂ (BFUS-COL000210), at light (UV), D. Gradinarov & Y. Petrova leg.; the same locality, 08.ix.2024, 1 ♀ (BFUS-COL000211), at light (UV), D. Gradinarov & Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 24.vii.2021, 1 ♀ (BFUS-COL000212), at light (UV), D. Gradinarov leg.; the same locality, 21.viii.2021, 1 ♀ (BFUS-COL000213), at light (white & UV), D. Gradinarov leg.; W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 1 ♂ (BFUS-COL000214), 2 ♀♀ (BFUS-COL000215, BFUS-COL000216), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same data, 42°02.923'N 26°28.347'E, 92 m a.s.l., riverside meadows, 8 ♂♂ (BFUS-COL000217 – BFUS-COL000224), 6 ♀♀ (BFUS-COL000225 – BFUS-COL000230).

****Berosus (Enoplurus) frontifoveatus* Kuwert, 1888** (Plate II, 16)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.083'E, 100 m a.s.l., riverine vegetation, small swamp, 13.vii.2020, 1 ♂ (BFUS-COL000231), 1 ♀ (BFUS-COL000232), at light (white & UV), D. Gradinarov leg.

****Berosus (Enoplurus) spinosus* (Steven, 1808)** (Plate II, 17)

New data: Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 07.v.2024, 3 ♂♂ (BFUS-COL000233 – BFUS-COL000235), 3 ♀♀ (BFUS-COL000236 – BFUS-COL000238), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same locality, 26.vii.2024, 1 ♀ (BFUS-COL000239), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Laccobiini Houlbert, 1922

****Laccobius (Dimorpholaccobius) aegaeus* Gentili, 1974** (Plate II, 18, 19)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000240), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 1 ♂ (BFUS-COL000241); W of Ustrem Vill., Manastirska Reka River, 42°01.407'N 26°26.957'E, 96 m a.s.l., under submerged stones, 11.vii.2025, 6 ♂♂ (BFUS-COL000242 – BFUS-COL000247), 9 ♀♀ (BFUS-COL000248 – BFUS-COL000256), under submerged stones, D. Gradinarov & Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.445'N 26°27.098'E, 105 m a.s.l., riverine forest, small swamp, 11.vii.2025, 2 ♀♀ (BFUS-COL000257, BFUS-COL000258), collected with aquatic net, D. Gradinarov & Y. Petrova leg.; W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 1 ♂ (BFUS-COL000259), at light (white & UV), D. Gradinarov & Y. Petrova leg.; Ustrem Vill., Manastirska Reka River, 42°01.415'N 26°27.385'E, 95 m a.s.l., under submerged stones, 14.ix.2025, 3 ♂♂ (BFUS-COL000260 – BFUS-COL000262), under submerged stones, D. Gradinarov leg.

Notes: In the Revised and Updated Edition of the Catalogue of Palaearctic Coleoptera (Fikáček *et al.* 2015) this taxon is listed as subspecies of *L. obscuratus* Rottenberg, 1874. However, Gentili & Shaverdo (2016) consider *Laccobius aegaeus* Gentili, 1974 a discrete species, and herein we follow this treatment. Greñ & Lubecki (2017) reported *L. aegaeus* as new to Bulgaria from a number of localities, mainly along the Black Sea coast.

Hydrobiusini Mulsant, 1844

****Hydrobius fuscipes* (Linnaeus, 1758)** (Plate II, 22)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 1 ♂ (BFUS-COL000263), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.446'N 26°27.082'E, 107 m a.s.l., riverine vegetation, small swamp, 20.vii.2021, 1 ♂ (BFUS-COL000264); the same data, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, 22.vii.2021, 1 ♂ (BFUS-COL000265); the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 2 ♀♀ (BFUS-COL000266, BFUS-COL000267); the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 3 ♂♂ (BFUS-COL000268 – BFUS-COL000270), 2 ♀♀ (BFUS-COL000271, BFUS-COL000272); Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 24.vi.2023, 1 ♀ (BFUS-COL000273), at light (white & UV), D. Gradinarov & Y. Petrova leg.

***Limnoxenus niger* (Gmelin, 1790)**

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

Chaetarthriinae Bedel, 1881

Anacaenini M. Hansen, 1991

***Anacaena limbata* (Fabricius, 1792)** (Plate II, 20)

Literature data: Cherepovo [Village] (Greñ & Lubecki 2017).

New data: W of Srem Vill., about 50 m from Tundzha River, 42°02.890'N 26°28.360'E, 87 m a.s.l., dirt road, agricultural fields, 16.vii.2020, 1 ♂ (BFUS-COL000274), at light (white & UV), Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000275), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.445'N

26°27.098'E, 105 m a.s.l., riverine forest, small swamp, 11.vii.2025, 2 ♂♂ (BFUS-COL000276, BFUS-COL000277), 1 ♀ (BFUS-COL000278), collected with aquatic net, D. Gradinarov & Y. Petrova leg.; W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 6 ♂♂ (BFUS-COL000279 – BFUS-COL000284), 7 ♀♀ (BFUS-COL000285 – BFUS-COL000291), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same data, 42°02.923'N 26°28.347'E, 92 m a.s.l., riverside meadows, 6 ♂♂ (BFUS-COL000292 – BFUS-COL000297), 13 ♀♀ (BFUS-COL000298 – BFUS-COL000310).

Chaetarthriini Bedel, 1881

****Chaetarthria seminulum* (Herbst, 1797)** (Plate II, 21)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000311), 1 ♀ (BFUS-COL000312), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 22.vii.2021, 1 sex indet. (BFUS-COL000313); the same locality, 24.vii.2021, 1 sex indet. (BFUS-COL000314), at light (UV); the same data, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 1 ♂ (BFUS-COL000315), 2 ♀♀ (BFUS-COL000316, BFUS-COL000317), at light (white & UV); the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 1 ♀ (BFUS-COL000318).

Notes: Greñ & Lubecki (2017) reported *Ch. seminulum* from Tsarevo and Rezovo (Black Sea coast) as a new species to Bulgaria. But in fact, earlier Netolitzky (1912) recorded this species from Trnovo [= Veliko Tarnovo].

Enochrinae Short & Fikáček, 2013

****Enochrus (Enochrus) melanocephalus* (Olivier, 1793)** (Plate III, 23)

New data: W of Srem Vill., about 50 m from Tundzha River, 42°02.890'N 26°28.360'E, 87 m a.s.l., dirt road, agricultural fields, 16.vii.2020, 1 ♀ (BFUS-COL000319), at light (white & UV), Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, 22.vii.2021, 1 ♀ (BFUS-COL000320), at light (white & UV), D. Gradinarov leg.

****Enochrus (Lumetus) fuscipennis* (Thomson, 1884)** (Plate III, 24)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 1 ♀ (BFUS-COL000325), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.448'N 26°27.083'E, 100 m a.s.l., riverine vegetation, small swamp, 13.vii.2020, 1 ♂ (BFUS-COL000326); the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., 29.vi.2022, 1 ♂ (BFUS-COL000327); the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 1 ♂ (BFUS-COL000328).

Notes: According to Litovkin *et al.* (2021), *E. fuscipennis* and *E. quadripunctatus* may co-occur in the same water body and be often captured together in light traps, which is consistent with our data.

****Enochrus (Lumetus) quadripunctatus* (Herbst, 1797)** (Plate III, 25)

New data: W of Srem Vill., about 100 m from Tundzha River, 42°02.996'N 26°28.272'E, 84 m a.s.l., meadows, 07.vi.2020, 1 ♂ (BFUS-COL000321), at light (white & UV), Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 1 ♂ (BFUS-COL000322), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l.,

riverine vegetation, meadows, 21.vi.2023, 1 ♀ (BFUS-COL000323); Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 22.vi.2023, 1 ♀ (BFUS-COL000324), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Acidocerinae Zaitzev, 1908

***Helochares (Helochares) lividus (Forster, 1771)* (Plate III, 26)**

Literature data: Cherepovo [Village] (Greń & Lubecki 2017).

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000329), at light (white & UV), D. Gradinarov leg.

Sphaeridiinae Latreille, 1802 **Coelostomatini L. Heyden, 1891**

****Coelostoma (Coelostoma) orbiculare (Fabricius, 1775)* (Plate III, 27)**

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 2 ♂♂ (BFUS-COL000330, BFUS-COL000331), 1 ♀ (BFUS-COL000332), at light (white & UV), D. Gradinarov leg.; W of Srem Vill., right bank of Tundzha River, 42°02.890'N 26°28.438'E, 85 m a.s.l., riverside meadows, 16.vii.2020, 1 ♂ (BFUS-COL000333), at light (white & UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000334), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.446'N 26°27.082'E, 107 m a.s.l., riverine vegetation, small swamp, 20.vii.2021, 1 ♀ (BFUS-COL000335); W of Ustrem Vill., Manastirska Reka River, 42°01.404'N 26°26.962'E, 99 m a.s.l., 24.v.2023, 1 ♂ (BFUS-COL000336), under submerged stones, D. Gradinarov leg.; W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 1 ♀ (BFUS-COL000337), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Megasternini Mulsant, 1844

*****Cercyon (Cercyon) nigriceps (Marsham, 1802)* (Plate III, 28, 29)**

New data: W of Ustrem Vill., 42°01.383'N 26°27.192'E, 100 m a.s.l., riverside meadows, 11.vii.2025, 1 ♂ (BFUS-COL000347), in horse dung, D. Gradinarov leg.

Notes: Cosmopolitan species with unknown origin (Fikáček 2009, Ryndevich & Hebauer 2010, Fikáček *et al.* 2015), which can be found in decaying plant materials and animal dung (Fikáček 2009, Ryndevich & Hebauer 2010). First record of the species from Bulgaria.

****Cercyon (Cercyon) pygmaeus (Illiger, 1801)* (Plate III, 30, 31)**

New data: W of Ustrem Vill., 42°01.383'N 26°27.192'E, 100 m a.s.l., riverside meadows, 11.vii.2025, 1 ♂ (BFUS-COL000348), in horse dung, D. Gradinarov leg.

Notes: Second record for Bulgaria. The species was firstly reported from the country by Greń & Lubecki (2017) from Varvara, Black Sea coast.

****Cercyon (Cercyon) quisquilius (Linnaeus, 1760)* (Plate III, 32)**

New data: W of Ustrem Vill., 42°01.383'N 26°27.192'E, 100 m a.s.l., riverside meadows, 11.vii.2025, 2 ♂♂ (BFUS-COL000349, BFUS-COL000350), 2 ♀♀ (BFUS-COL000351, BFUS-COL000352), in horse dung, D. Gradinarov leg.; the same data,

42°01.385'N 26°27.188'E, 96 m a.s.l., 14.ix.2025, 1 ♂ (BFUS-COL000353), D. Gradinarov & Y. Petrova leg.

****Cercyon (Paracycreon) laminatus* Sharp, 1873** (Plate III, 33)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.452'N 26°27.094'E, 103 m a.s.l., riverine vegetation, small swamp, 12.vii.2020, 1 ♂ (BFUS-COL000338), 1 ♀ (BFUS-COL000339), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.449'N 26°27.084'E, 101 m a.s.l., 1 ♂ (BFUS-COL000340), 1 ♀ (BFUS-COL000341); the same data, 42°01.448'N 26°27.083'E, 100 m a.s.l., 13.vii.2020, 1 ♂ (BFUS-COL000342), 1 ♀ (BFUS-COL000343); W of Srem Vill., about 50 m from Tundzha River, 42°02.890'N 26°28.360'E, 87 m a.s.l., dirt road, agricultural fields, 16.vii.2020, 1 ♀ (BFUS-COL000344), at light (white & UV), Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.446'N 26°27.082'E, 107 m a.s.l., riverine vegetation, small swamp, 20.vii.2021, 1 ♀ (BFUS-COL000345), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., 29.vi.2022, 1 ♂ (BFUS-COL000346).

Notes: Eastern Palaearctic species, introduced to the West and Central Palaearctic, Hawaiian Islands, Australia and Neotropical Region (Ryndevich 2008, Fikáček 2009, Fikáček *et al.* 2015). The species is listed for Bulgaria in both editions of the Catalogue of Palaearctic Coleoptera (Hansen 2004, Fikáček *et al.* 2015), but Bulgaria is not mentioned in the distribution list of the species by Ryndevich (2008). We confirm the presence of the species in the country.

****Cryptopleurum minutum* (Fabricius, 1775)** (Plate III, 34)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.449'N 26°27.084'E, 101 m a.s.l., riverine vegetation, small swamp, 12.vii.2020, 1 ♂ (BFUS-COL000354), 2 ♀♀ (BFUS-COL000355, BFUS-COL000356), at light (white & UV), D. Gradinarov leg.; W of Ustrem Vill., 42°01.383'N 26°27.192'E, 100 m a.s.l., riverside meadows, 11.vii.2025, 1 ♀ (BFUS-COL000357), 1 sex indet. (BFUS-COL000358), in horse dung, D. Gradinarov leg.; the same data, 42°01.385'N 26°27.188'E, 96 m a.s.l., 14.ix.2025, 1 ♀ (BFUS-COL000359), D. Gradinarov & Y. Petrova leg.

Sphaeridiini Latreille, 1802

****Sphaeridium bipustulatum* Fabricius, 1781** (Plate III, 35)

New data: W of Ustrem Vill., 42°01.385'N 26°27.188'E, 96 m a.s.l., riverside meadows, 14.ix.2025, 5 ♂♂ (BFUS-COL000360 – BFUS-COL000364), 1 ♀ (BFUS-COL000365), in horse dung, D. Gradinarov & Y. Petrova leg.

Staphylinioidea Latreille, 1802

Hydraenidae Mulsant, 1844

Ochthebiinae Thomson, 1859

****Ochthebius (Ochthebius) lividipennis* Peyron, 1858** (Plate IV, 36, 37)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 1 sex indet. (BFUS-COL000366), at light (UV), D. Gradinarov leg.; Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 04.ix.2021, 4 ♂♂ (BFUS-COL000367 – BFUS-COL000370), 12 ♀♀ (BFUS-COL000371 – BFUS-COL000382), at light (white & UV), D. Gradinarov & Y. Petrova leg.

****Ochthebius (Ochthebius) viridis viridis* Peyron, 1858** (Plate IV, 38, 39)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 3 ♂♂ (BFUS-COL000383 – BFUS-COL000385), 6 ♀♀ (BFUS-COL000386 – BFUS-COL000391), 16 sex indet. (BFUS-COL000392 – BFUS-COL000407), at light (UV), D. Gradinarov leg.; Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 04.ix.2021, 2 ♂♂ (BFUS-COL000408, BFUS-COL000409), 2 ♀♀ (BFUS-COL000410, BFUS-COL000411), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Notes: The species is firstly reported from Bulgaria by Netolitzky (1912) with locality Trnovo [= Veliko Tarnovo] (as *Ochthebius viridis*). The species is listed for Bulgaria in the first edition of the Catalogue of Palaearctic Coleoptera (Jäch 2004), but according to Jäch & Delgado (2008), the presence of the species in Bulgaria needs confirmation. Bulgaria is excluded from the distributional list of the species in the second edition of the Catalogue (Jäch & Skale 2015). Herein we confirm the presence of the species in Bulgaria.

Byrrhoidea Latreille, 1804

Elmidae Curtis, 1830

Elminae Curtis, 1830

Elmini Curtis, 1830

Elmina Curtis, 1830

***Elmis aenea* (P. W. J. Müller, 1806)**

Literature data: Mamastirska [Reka] river (Borisova *et al.* 2013)

Stenelmina Mulsant & Rey, 1872

*****Stenelmis consobrina consobrina* Dufour, 1835** (Plate IV, 41)

New data: Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 15.vii.2020, 2 ♀♀ (BFUS-COL000412, BFUS-COL000413), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Notes: The nominotypical subspecies of *S. consobrina* is distributed in Europe (Bosnia and Herzegovina, Croatia, Czech Republic, France, Germany, Greece, Italy, Spain, South European Territory of Russia, Switzerland), South Caucasus (Armenia, Georgia), North Africa (Algeria, Morocco, Tunisia), Iran, Israel, Syria, Turkmenistan and Asian Turkey (Jäch *et al.* 2016). According to Boukal *et al.* (2007), *S. c. consobrina* is rare throughout most of its range and in Central Europe is extinct or critically endangered. First record of the species from Bulgaria.

Dryopidae Billberg, 1820 (1817)

****Dryops lutulentus* (Erichson, 1847)** (Plate IV, 40)

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.064'E, 98 m a.s.l., riverside meadows, 08.vi.2020, 3 ♀♀ (BFUS-COL000414 – BFUS-COL000416), at light (white & UV), D. Gradinarov leg.; Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 15.vii.2020, 1 ♀ (BFUS-COL000417), at light (white & UV), D. Gradinarov & Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000418), at light (white & UV), D. Gradinarov leg.

****Pomatinus substriatus* (P. W. J. Müller, 1806)** (Plate IV, 42)

New data: W of Ustrem Vill., Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, riverbank, 23.vii.2021, 1 ♀ (BFUS-COL000419), under submerged stones, D. Gradinarov leg.

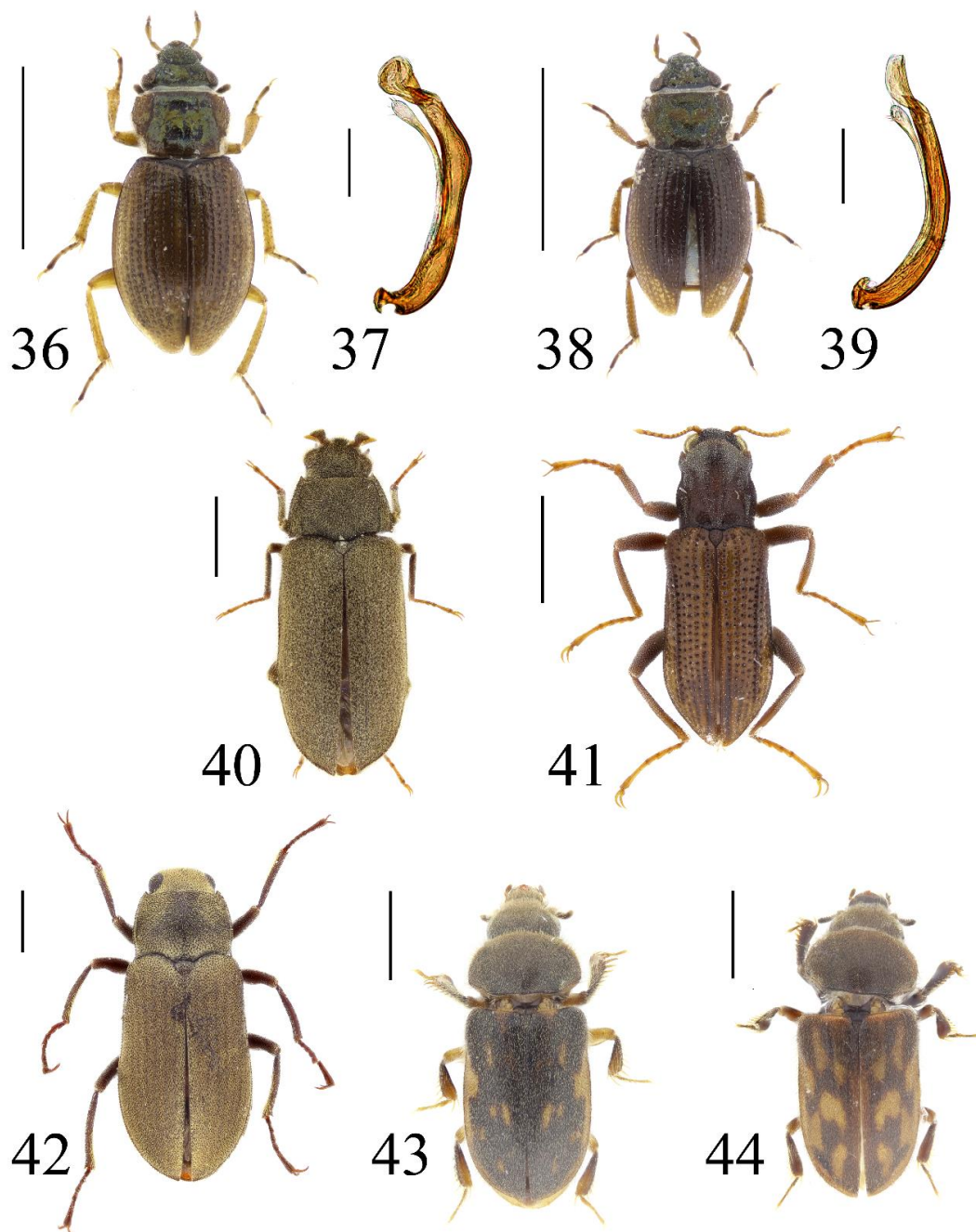


Plate IV. Hydraenidae, Elmidae, Dryopidae and Heteroceridae from Sakar Mts. 36 – *Ochethebius lividipennis*, Ustrem, 04.ix.2021, male (BFUS-COL000367); 37 – idem, aedeagus; 38 – *O. viridis viridis*, Ustrem, 04.ix.2021, male (BFUS-COL000408); 39 – idem, aedeagus; 40 – *Dryops lutulentus*, Ustrem, 20.vii.2021, male (BFUS-COL000418); 41 – *Stenelmis consobrina consobrina*, Ustrem, 15.vii.2020, female (BFUS-COL000412); 42 – *Pomatinus substriatus*, Ustrem, 23.vii.2021, female (BFUS-COL000419); 43 – *Heterocerus fenestratus*, Ustrem, 13.vii.2020, male (BFUS-COL000440); 44 – *H. fuscus fuscus*, Ustrem, 29.vi.2022, male (BFUS-COL000565). Scale bars: 1 mm (36, 38, 40 – 44); 0.1 mm (37, 39).

Heterocerinae W. S. Macleay, 1825
Heterocerinae W.S. Macleay, 1825
Heterocerini MacLeay 1825

****Heterocerus fenestratus* (Thunberg, 1784) (Plate IV, 43)**

New data: W of Srem Vill., about 100 m from Tundzha River, 42°02.996'N 26°28.272'E, 84 m a.s.l., meadows, 07.vi.2020, 3 ♂♂ (BFUS-COL000420 – BFUS-COL000422), 4 ♀♀ (BFUS-COL000423 – BFUS-COL000426), at light (white & UV), Y. Petrova leg.; Ustrem Vill., about 150 m from Manastirska Reka River, 42°01.332'N 26°27.381'E, 100 m a.s.l., house yard, 11.vii.2020, 1 sex indet. (BFUS-COL000427), at light (UV), D. Gradinarov & Y. Petrova leg.; the same locality, 15.vii.2020, 1 ♀ (BFUS-COL000428), at light (white & UV), D. Gradinarov & Y. Petrova leg.; the same locality, 05.ix.2021, 1 ♂ (BFUS-COL000429), at light (UV), D. Gradinarov & Y. Petrova leg.; the same locality, 28.vi.2022, 2 ♀♀ (BFUS-COL000430, BFUS-COL000431), at light (UV), D. Gradinarov & Y. Petrova leg.; the same locality, 09.ix.2024, 1 sex indet. (BFUS-COL000432), at light (UV), D. Gradinarov & Y. Petrova leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.452'N 26°27.094'E, 103 m a.s.l., riverine vegetation, small swamp, 12.vii.2020, 2 ♀♀ (BFUS-COL000433, BFUS-COL000434), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.449'N 26°27.084'E, 101 m a.s.l., 2 ♂♂ (BFUS-COL000435, BFUS-COL000436), 3 ♀♀ (BFUS-COL000437 – BFUS-COL000439); the same data, 42°01.448'N 26°27.083'E, 100 m a.s.l., 13.vii.2020, 5 ♂♂ (BFUS-COL000440 – BFUS-COL000444), 8 ♀♀ (BFUS-COL000445 – BFUS-COL000452), 5 sex indet. (BFUS-COL000453 – BFUS-COL000457); W of Srem Vill., about 50 m from Tundzha River, 42°02.890'N 26°28.360'E, 87 m a.s.l., dirt road, agricultural fields, 16.vii.2020, 1 ♂ (BFUS-COL000458), 3 sex indet. (BFUS-COL000459 – BFUS-COL000461), at light (white & UV), Y. Petrova leg.; W of Srem Vill., right bank of Tundzha River, 42°02.890'N 26°28.438'E, 85 m a.s.l., riverside meadows, 16.vii.2020, 3 ♂♂ (BFUS-COL000462 – BFUS-COL000464), 4 ♀♀ (BFUS-COL000465 – BFUS-COL000468), 5 sex indet. (BFUS-COL000469 – BFUS-COL000473), at light (white & UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.451'N 26°27.060'E, 98 m a.s.l., riverside meadows, 20.vii.2021, 1 ♂ (BFUS-COL000474), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 22.vii.2021, 2 ♂♂ (BFUS-COL000475, BFUS-COL000476); the same locality, 24.vii.2021, 2 ♂♂ (BFUS-COL000477, BFUS-COL000478), 3 ♀♀ (BFUS-COL000479 – BFUS-COL000481), 10 sex indet. (BFUS-COL000482 – BFUS-COL000491), at light (UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 4 ♂♂ (BFUS-COL000492 – BFUS-COL000495), 3 ♀♀ (BFUS-COL000496 – BFUS-COL000498), 5 sex indet. (BFUS-COL000499 – BFUS-COL000503), at light (UV), D. Gradinarov leg.; the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 1 ♀ (BFUS-COL000504), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.406'N 26°27.161'E, 97 m a.s.l., riverine vegetation, meadows, 21.vi.2023, 1 ♂ (BFUS-COL000505), 1 ♀ (BFUS-COL000506); W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 7 ♂♂ (BFUS-COL000507 – BFUS-COL000513), 5 ♀♀ (BFUS-COL000514 – BFUS-COL000518), at light (white & UV), D. Gradinarov & Y. Petrova leg.

****Heterocerus fuscus fuscus* Kiesenwetter, 1843 (Plate IV, 44)**

New data: W of Ustrem Vill., near Manastirska Reka River, 42°01.449'N 26°27.084'E, 101 m a.s.l., riverine vegetation, small swamp, 12.vii.2020, 1 ♂ (BFUS-COL000519), 6 ♀♀ (BFUS-COL000520 – BFUS-COL000525), at light (white & UV), D. Gradinarov leg.; the same data, 42°01.452'N 26°27.094'E, 103 m a.s.l., 4 ♀♀ (BFUS-COL000526 – BFUS-COL000529); the same data, 42°01.448'N 26°27.083'E, 100 m a.s.l., 13.vii.2020, 1 ♂ (BFUS-COL000530),

1 ♀ (BFUS-COL000531); W of Srem Vill., about 50 m from Tundzha River, 42°02.890'N 26°28.360'E, 87 m a.s.l., dirt road, agricultural fields, 16.vii.2020, 1 ♂ (BFUS-COL000532), 2 ♀♀ (BFUS-COL000533, BFUS-COL000534), at light (white & UV), Y. Petrova leg.; W of Srem Vill., right bank of Tundzha River, 42°02.890'N 26°28.438'E, 85 m a.s.l., riverside meadows, 16.vii.2020, 4 ♂♂ (BFUS-COL000535 – BFUS-COL000538), 2 ♀♀ (BFUS-COL000539, BFUS-COL000540), at light (white & UV), D. Gradinarov leg.; W of Ustrem Vill., near Manastirska Reka River, 42°01.450'N 26°27.093'E, 101 m a.s.l., riverine vegetation, small swamp, 22.vii.2021, 1 ♂ (BFUS-COL000541), 1 ♀ (BFUS-COL000542), at light (white & UV), D. Gradinarov leg.; the same locality, 24.vii.2021, 5 ♂♂ (BFUS-COL000543 – BFUS-COL000547), 1 ♀ (BFUS-COL000548), 1 sex indet. (BFUS-COL000549), at light (UV), D. Gradinarov leg.; the same data, 42°01.448'N 26°27.022'E, 98 m a.s.l., riverside meadows, 23.vii.2021, 4 ♂♂ (BFUS-COL000550 – BFUS-COL000553), 4 ♀♀ (BFUS-COL000554 – BFUS-COL000557), 7 sex indet. (BFUS-COL000558 – BFUS-COL000564); the same data, 42°01.417'N 26°27.140'E, 102 m a.s.l., riverine vegetation, small swamp, 29.vi.2022, 1 ♂ (BFUS-COL000565), 1 ♀ (BFUS-COL000566), at light (white & UV); W of Srem Vill., right bank of Tundzha River, 42°02.935'N 26°28.359'E, 80 m a.s.l., riverine vegetation, 11.vii.2025, 2 ♂♂ (BFUS-COL000567, BFUS-COL000568), 2 ♀♀ (BFUS-COL000569, BFUS-COL000570), at light (white & UV), D. Gradinarov & Y. Petrova leg.

Notes: The species is not listed for Bulgaria in both editions of the Catalogue of Palaearctic Coleoptera (Mascagni 2006, 2016). Greń & Lubecki (2017) reported this species from Primorsko, Black Sea coast (as *Heterocerus fuscus* Kiesenwetter, 1843).

A total of 50 beetle species from 12 families from the Bulgarian part of the Sakar Mountain are included in the prepared list. Representatives of all three suborders of Coleoptera with aquatic species (Myxophaga, Adephaga and Polyphaga) are found in the area of the mountain. Despite the observed species diversity, the water beetles of the Sakar Mountain are still insufficiently studied. Special attention in future research should be paid to the species inhabiting permanent and temporary ponds, as well as those from the Tundzha and Maritsa rivers. It is also desirable to study the habitat preferences of the water beetles found in the territory of the mountain.

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References

- Borisova, P., Varadinova, E. & Uzunov, Y. (2013) Contemporary state of the bottom invertebrate communities of the Tundzha River basin (south-East Bulgaria). *Acta zoologica bulgarica*, 65 (1): 75-87.
- Boukal, D. S., Boukal, M., Fikáček, M., Hájek, J., Klečka, J., Skalický, S., Štastný, J., & Trávníček, D. (2007) Catalogue of water beetles of the Czech Republic (Coleoptera: Sphaeriidae, Gyrinidae, Halplidae, Noteridae, Hygrobiidae, Dytiscidae, Helophoridae, Georissidae, Hydrochidae, Spercheidae, Hydrophilidae, Hydraenidae, Scirtidae, Elmidae, Dryopidae, Limnichidae, Heteroceridae, Psephenidae). *Klapalekiana*, 43 (Supplement): 1-289.
- Fikáček, M. (2009) Occurrence of introduced species of the genus *Cercyon* (Coleoptera: Hydrophilidae) in the Neotropical Region. *Revista de la Sociedad Entomológica Argentina* 68 (3-4): 351-357.
- Fikáček, M., Angus, R. B., Gentili, E., Jia, F., Minoshima, Y. N., Prokin, A., Przewoźny, M. & Ryndevich, S. K. (2015) Helophoridae, Hydrochidae, Hydrophilidae. In: Löbl, I. & Löbl, D. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 1/2. Hydrophiloidea –*

- Staphylinoidea. Revised and Updated Edition*. Brill, Leiden, Boston, pp. 25-33, 35-36, 37-76.
- Gentili, E. & Shaverdo, H. (2016) Review of the genus *Laccobius* Erichson, 1837 from Armenia, Azerbaijan, and Georgia, with description of a new species. *Koleopterologische Rundschau*, 86:171-198.
- Greñ, C. & Lubecki, K. (2017) Water beetles (Coleoptera: Adephaga, Hydrophiloidea, Byrrhoidea) in Bulgaria: new records. *Annals of the Upper Silesian Museum in Bytom, Entomology*, 26: 1-20.
- Guéorguiev, V. B. (1987) *Fauna Bulgarica*. 17. *Coleoptera, Hydrocanthares*. In *Aedibus Academiae Scientiarum Bulgaricae*, Sofia, 161 pp. (In Bulgarian).
- Guéorguiev, V. B., Beshovski, V. L., Russev, B. K., Kumanski, K. P., Josifov, M. V. & Sakalian, V. P. (1998) Insects of Bulgaria, Part 1: Odonata, Ephemeroptera, Plecoptera, Homoptera (Auchenorrhyncha), Heteroptera, Coleoptera. In: Meme, C. (Ed.), *Bulgaria's Biological Diversity: Conservation Status and Needs Assessment. Biodiversity Support Program*. Washington, DC., pp. 163-209.
- Hájek, J. (2017) Family Hydroscaphidae LeConte, 1874. In: Löbl, I. & Löbl, D. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 1. Archostemata – Myxophaga – Adephaga. Revised and updated edition*. Brill, Leiden, Boston, p. 22.
- Hansen, M. (2004) Family Hydrophilidae Latreille, 1802. In: Löbl, I. & Smetana, A. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea*. Apollo Books, Stenstrup, Denmark, pp. 44-68.
- Hinton, H. E. (1969) Discovery of *Hydroscapha* in Bulgaria (Coleoptera, Myxophaga). *Bulletin de l'Institut de Zoologie et Musée (Sofia)*, 30: 153-157.
- Jäch, M. A. (2004) Family Hydraenidae Mulsant, 1844. In: Löbl, I. & Smetana, A. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea*. Apollo Books, Stenstrup, Denmark, pp. 102-122.
- Jäch, M. A. & Balke, M. (2008) Global diversity of water beetles (Coleoptera) in freshwater. *Hydrobiologia*, 595: 419-442.
- Jäch, M. A. & Delgado, J. A. (2008) Revision of the Palearctic species of the genus *Ochthebius* Leach XXV. The superspecies *O. (s. str.) viridis* Peyron and its allies (Coleoptera: Hydraenidae). *Koleopterologische Rundschau*, 78: 199-231.
- Jäch, M. A. & Skale, A. (2015) Family Hydraenidae Mulsant, 1844. In: Löbl, I. & Löbl, D. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 1/2. Hydrophiloidea – Staphylinoidea. Revised and Updated Edition*. Brill, Leiden, Boston, pp. 130-162.
- Jäch, M. A., Kodada, J. & Čiampor, F. (2016) Family Elmidae Curtis, 1830. In: Löbl, I. & Löbl, D. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 3. Scarabaeoidea – Scirtoidea – Dascilloidea – Buprestoidea – Byrrhoidea. Revised and Updated Edition*. Brill, Leiden, Boston, pp. 591-603.
- Joakimov, D. (1904) Prinosa kam balgarskata fauna na nasekomite - Insecta. I. Coleoptera (Contribution to the Bulgarian Insect Fauna - Insecta. I. Coleoptera). *Sbomik za Narodni Umotvorenia, Nauka i Knizhnina (Collection of Folklore, Science and Literature)*, 20: 1-43 (In Bulgarian).
- Joost, W. (1979) Ein weiteres Vorkommen von *Hydroscapha granulum* (Motschulsky, 1855) in Bulgarien (Col., Hydroscaphidae). *Entomologische Nachrichten*, 4: 60-61.
- Litovkin, S. V., Sazhnev, A. S. & Prokin, A. A. (2021) Species of the subgenus *Lumetus* Zaitzev (Coleoptera, Hydrophilidae: *Enochrus* Thomson) of the fauna of Russia and adjacent Countries. *Entomological Review*, 101 (5): 677-699.
- Mascagni, A. (2006) Family Heteroceridae MacLeay, 1825. In: Löbl, I. & Smetana, A. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 3. Scarabaeoidea – Scirtoidea – Dascilloidea – Buprestoidea – Byrrhoidea*. Apollo Books, Stenstrup, Denmark, pp. 446-449.

- Mascagni, A. (2016) Family Heteroceridae MacLeay, 1825. In: Löbl, I. & Löbl, D. (Eds), *Catalogue of Palaearctic Coleoptera, Volume 3. Scarabaeoidea – Scirtoidea – Dascilloidea – Buprestoidea – Byrrhoidea. Revised and Updated Edition*. Brill, Leiden, Boston, pp. 610-616.
- Netolitzky, F. (1912) Eine Sammelreise nach Bulgarien. *Koleopterologische Rundschau*, 1: 156-161.
- Ryndevich, S. K. (2008) Review of species of the genus *Cercyon* Leach, 1817 of Russia and adjacent regions. IV. The subgenera *Paracycreon* Orchymont, 1942 and *Dicyrtocercyon* Ganglbauer, 1904 (Coleoptera: Hydrophilidae). *Zoosystematica Rossica*, 17 (2): 89-97.
- Ryndevich, S. K. & Hebauer, F. (2010) Review of species of the genus *Cercyon* Leach, 1817 of Russia and adjacent regions. V. Subgenus *Cercyon* Leach, 1817. *Cercyon nigriceps*-group (Coleoptera: Hydrophilidae). *Zoosystematica Rossica*, 19 (2): 330-340.
- Uzunov, J. I., Russev, B. K., Kovachev, S. G. & Yaneva, I. J. (1981) Species composition and distribution of the macrozoobenthos of the Maritsa River. *Hydrobiology (Sofia)*, 14: 3-15. (In Bulgarian, English summary).