

New faunistic data and notes on Mongolian diving beetles (Coleoptera: Dytiscidae)

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Abstract

Faunistic data on 32 species of Dytiscidae collected at 26 sampling sites in the north-western and central-southern parts of Mongolia are reported. *Agabus conspersus* (MARSHAM, 1802) is recorded for the first time from this country. The occurrence of *Oreodytes alpinus* (PAYKULL, 1798) in Mongolia is here confirmed. First province records of 13 species are presented. Finally, the occurrence of *Hygrotus chinensis* (SHARP, 1882) in Mongolia is discussed, and the species is excluded from the Mongolian fauna.

Key words: Coleoptera, Dytiscidae, faunistics, first records, taxonomy, Mongolia.

Introduction

The Mongolian dytiscid fauna is considered as relatively well-studied. Scattered Mongolian records of diving beetle species were published in numerous historical and modern works (MOTSCHULSKY 1853, JAKOWLEW 1896, 1899, JACOBSON 1908, ZAITZEV 1908, 1910, ZIMMERMANN 1930, 1931, 1934, FENG 1932, 1933, WU 1937, ZAITZEV 1953, FERY 1992, 2003, NILSSON 1994, SHAVERDO & FERY 2001, 2006, SHAVERDO 2004, FERY & PETROV 2006, ENKHNASAN 2006, 2008, PROKIN & ZHAVORONKOVA 2015, PALATOV & MARYINSKIY 2017), and a number of studies focused mainly on the Mongolian water beetles including Dytiscidae (BRINCK 1943, GUÉORGUIEV 1965, 1968a–b, 1969, 1972, BRANCUCCI 1982, BELLSTEDT 1985). The first comprehensive study on the Mongolian diving beetles was published by SHAVERDO et al. (2008). ENKHNASAN & BOLDGIV (2019a–b, 2020) dealt with the biogeography of Mongolian Dytiscidae, endemic and sub-endemic water beetles of Mongolia and ecological aspects of Dytiscidae in the central and western country regions, respectively. Furthermore, faunistic data provided in a doctoral thesis (ENKHNASAN 2020) are also taken into account. PROKIN et al. (2020, 2022) presented new faunistic data on the Mongolian water beetles, including Dytiscidae, and provided comprehensive summaries of other water beetle families of Mongolia.

The aim of the present paper is to report new findings of Dytiscidae, which mainly originate from two recent expeditions, supplemented by a few older data. Altogether, new country and new province records are provided for 14 species. Finally, the occurrence of *Hygrotus chinensis* (SHARP, 1882) in Mongolia is discussed.

The present work is based on specimens deposited in the private collection of Daniel Rolke (Landsberg, Germany) and in the Naturhistorisches Museum Wien (Natural History Museum Vienna, Austria).

Description of sampling sites

Two field trips to Mongolia were carried out during August 6–27, 2022 by D. Rolke and P.H. & F. Schnitter (Sites 5–16), as well as on June 16, 2024 and July 8, 2024 by D. Rolke, P.H. & F. Schnitter, and A. Vollmer (Sites 17–26). During these trips through mainly (semi-)arid areas of Mongolia (high steppes, semi-deserts, deserts), 22 sampling sites yielding Dytiscidae were

examined. Either exclusively terrestrial sampling sites or aquatic sites lacking Dytiscidae are not listed here. In addition, four samples of diving beetles collected by A. Stubbe in 2002 and 2014 (Sites 1–4) were analysed.

The data originate from nine Mongolian provinces (= Aimags). The Selenge River basin, which was extensively surveyed on earlier expeditions (SHAVERDO et al. 2008), was only marginally touched upon. Most of these localities are in the north-western (Altai) or central-southern (Gobi Desert) parts of the country.

All 26 sampling sites (Fig. 1) are listed below in chronological order. A diverse set of habitats including lentic and stagnant water bodies (Figs. 2–13) were examined using a larger hand net or a smaller metal sieve. At five locations (17, 20, 21, 24, 25), light traps with a broadband UV LED light were used.

The material was identified by H. Shaverdo and D. Rolke and is based exclusively on adults.

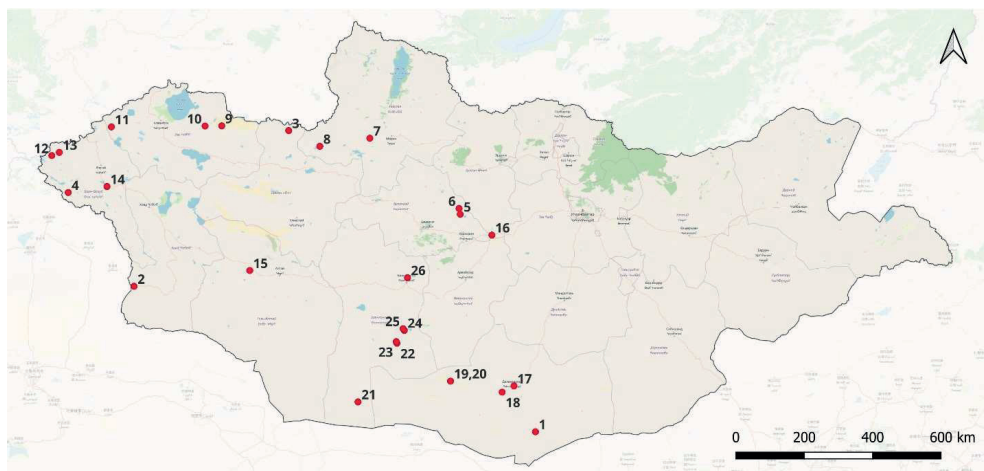


Fig. 1: Map of Mongolia showing sampling sites 1–26. Map basis: © OpenStreetMap contributors. Available under the Open Database Licence from: openstreetmap.org.

- 1 Ömnögovi Aimag, Borzongijn-Gobi, 42°28'57"N 105°15'10"E, 1145 m a.s.l., 6.VII.2002, field number: 11 MG 2002.
- 2 Khovd Aimag, Bulgan-gol River, 46°6'43"N 91°7'26"E, 1140 m a.s.l., 8.–18.VIII.2002, field number: 19 MG 2002 and 21 MG 2002, wetland with *Juncus* sp. and *Butomus* sp.
- 3 Zavkhan Aimag, Tes-gol River, 49°44'56"N 96°34'4"E, 1450 m a.s.l., 29.VIII.–3.IX.2002, field numbers: 46 MG 2002, 48 MG 2002, river bank, spring area and main river.
- 4 Bayan-Ölgii Aimag, Dajan-nuur Lake, Tumlia-gol River, 48°20'0"N 88°48'30"E, 2240 m a.s.l., 5.VIII.2014, field number: 11 MG 2014, river bank.
- 5 Arkhangai Aimag, Orchon-gol River, 47°49'36"N 102°36'11"E, 1330 m a.s.l., 7.VIII.2022, field number: 03 MG 2022, gravel banks and small wet depressions alongside the river.
- 6 Arkhangai Aimag, Orchon-gol River, 47°57'40"N 102°33'48"E, 1310 m a.s.l., 8.VIII.2022, field number: 04 MG 2022, high steppe, small temporary pools.

- 7 Khövsgöl Aimag, Delger Mörön-gol River, W Bayantoktok, 49°34'33"N 99°25'21"E, 1360 m a.s.l., 9.VIII.2022, field number: 07 MG 2022, river bank.
- 8 Khövsgöl Aimag, Tesijn-gol River, NE Hara Boomiin Örtöö, 49°28'56"N 97°17'24"E, 1630 m a.s.l., 10.VIII.2022, field number: 09 MG 2022, sandy river bank and small pools alongside the river covered with algae (Fig. 2).
- 9 Uvs Aimag, E Züüngovi, 49°51'18"N 94°12'39"E, 1095 m a.s.l., 11.VIII.2022, field number: 11 MG 2022, small wetlands on sand dunes.
- 10 Uvs Aimag, WSW Züüngovi, 49°51'7"N 93°37'28"E, 1030 m a.s.l., 12.VIII.2022, field number: 12 MG 2022, small sandy stream in semi-desert.
- 11 Uvs Aimag, Ortaa-Schegetej-gol River, N Böchmörön, 49°49'57"N 90°19'44"E, 1575 m a.s.l., 14.VIII.2022, field number: 18 MG 2022, small stream with sand/gravel (Fig. 3).
- 12 Bayan-Ölgii Aimag, Tawan Bogd, 49°10'56"N 88°13'52"E, 2590 m a.s.l., 16.VIII.2022, field number: 22 MG 2022, meltwater lake (Fig. 4).
- 13 Bayan-Ölgii Aimag, Tsagaan-gol River, E Zagastnuur, 49°15'18"N 88°29'42"E, 2380 m a.s.l., 17.VIII.2022, field number: 25 MG 2022, river bank with gravel (Fig. 5).
- 14 Bayan-Ölgii Aimag, Tolbo-nuur Lake, Narijn-gol River, 48°28'16"N 90°10'22"E (coordinates were taken at the southern edge of the sampled area), 2090 m a.s.l., 18.VIII.2022, field number: 29 MG 2022, spring pools, small watercourses, marshy terrain in high steppe (Fig. 6).
- 15 Govi-Altai Aimag, N Sharga, 46°29'32"N 95°11'49"E, 1235 m a.s.l., 22.VIII.2022, field number: 34 MG 2022, oasis, sand/salt mud banks.
- 16 Bulgan Aimag, E Elsen Tasarkhai, 47°20'7"N 103°43'5"E, 1260 m a.s.l., 25.VIII.2022, field number: 42 MG 2022, high steppe/overstowed pasture.
- 17 Ömnögovi Aimag, N Dalandsadgad, 43°39'1"N 104°29'49"E, 1390 m a.s.l., 19.VI.2024, field number: 05 MG 2024, semi-desert, salt lake (dry), light trap.
- 18 Ömnögovi Aimag, Gurvan Saykhan, Yolyn Am Canyon, 43°29'32"N 104°4'49"E, 2330 m a.s.l., 20.VI.2024, field number: 06 MG 2024, small stream with gravel bank (Fig. 7).
- 19 Ömnögovi Aimag, Bayan Techemiin-nuur Lake, W Bayan-dalai, 43°45'57"N 102°15'35"E, 1430 m a.s.l., 22.VI.2024, field number: 10 MG 2024, spring bog, dry salt lake (Fig. 8).
- 20 Ömnögovi Aimag, Khongoryn Els, Seruun-bulag, 43°46'17"N 102°15'44"E, 1360 m a.s.l., 23.VI.2024, field number: 12 MG 2024, sandy river bank, light trap (Fig. 9).
- 21 Bayankhongor Aimag, Ekhiin-gol Oasis, 43°14'44"N 99°0'25"E (coordinates were taken in the settlement of the oasis; the sampling took place in the area adjacent to the west), 975 m a.s.l., 26.VI.2024, field number: 15 MG 2024, oasis surrounded by desert with rainwater retention basin, wet depressions, cool swelling area with small rivulet, light trap (Fig. 10).
- 22 Bayankhongor Aimag, Bajangov/Urgun, Sadgai-gol River, 44°43'5"N 100°22'34"E, 1550 m a.s.l., 28.VI.2024, field number: 19 MG 2024, sandy bank.
- 23 Bayankhongor Aimag, Bajangov/Urgun, Sadgai-gol River, 44°45'26"N 100°21'8"E, 1580 m a.s.l., 28.VI.2024, field number: 20 MG 2024, current-calmed marginal areas of a small sandy stream (Fig. 11).
- 24 Bayankhongor Aimag, Orog-nuur Lake, southern margin, 45°2'6"N 100°38'9"E, 1220 m a.s.l., 30.VI.2024, field number: 23 MG 2024, desert/spring pot/reed, light trap (Fig. 12).
- 25 Bayankhongor Aimag, Orog-nuur Lake, northern margin, 45°4'56"N 100°35'1"E, 2.VII.2024, 1225 m a.s.l., field number: 25 MG 2024, spring pot/salt, light trap (Fig. 13).
- 26 Bayankhongor Aimag, N Bajankhongor, Tuin-gol River, 46°19'5"N 100°44'55"E, 1970 m a.s.l., 3.VII.2024, field number: 27 MG 2024, gravel bank.



Figs. 2–13: Habitats, 2) Khövsgöl Aimag, Tesijn-gol (Site 8), 3) Uvs Aimag, Ortaa-Schegetej-gol (Site 11), 4) Bayan-Ölgii Aimag, Tawan Bogd, meltwater lake (Site 12), 5) Bayan-Ölgii Aimag, Tsagaan-gol (Site 13), 6) Bayan-Ölgii Aimag, Tolbo-nuur, Narijn-gol (Site 14), 7) Ömnögovii Aimag, Gurvan Saykhan, Yolyn Am Canyon (Site 18), 8) Ömnögovii Aimag, Bayan Techemiin-nuur (Site 19), 9) Ömnögovii Aimag, Khongoryn Els, Seruun-bulag (Site 20), 10) Bayankhongor Aimag, Oasis Ekhiin-gol, rainwater retention basin (Site 21), 11) Bayankhongor Aimag, Bajangov/Urgun, Sadgai-gol (Site 23), 12) Bayankhongor Aimag, Orog-nuur, southern bank (Site 24), 13) Bayankhongor Aimag, Orog-nuur, northern bank, spring pot (Site 25).

Results

In total, 32 species of Dytiscidae have been collected, which is almost 30% of the 112 species recorded from Mongolia so far (ENKHNASAN & BOLDGIV 2019a, PROKIN et al. 2020, 2022). First province records are provided for 13 species (Tab. 1). *Agabus conspersus* (MARSHAM, 1802) is recorded from this country for the first time, and the occurrence of *Oreodytes alpinus* (PAYKULL, 1798) in Mongolia is confirmed, while *Hygrotus chinensis* is excluded from the Mongolian fauna. The number of the Mongolian diving beetle species is now 113.

Table 1: Dytiscidae collected in the 26 Mongolian sampling sites listed above. First province records are marked with an asterisk (*); the double asterisk (**) indicates the first record from Mongolia. The species are listed according to NILSSON & HÁJEK (2025).

Species	Sampling sites (in brackets: number of specimens)	First province records
<i>Agabus (Acatodes) arcticus alpinus</i> (MOTSCHULSKY, 1860)	4 (3 ♂♂, 1 ♀)	
<i>Agabus (Acatodes) coxalis</i> SHARP, 1882	4 (3 ♂♂, 1 ♀), 12 (1 ♀)	
<i>Agabus (Acatodes) lapponicus</i> THOMSON, 1867	3 (1 ♂)	
<i>Agabus (Agabus) pallens</i> POPPIUS, 1905	8 (1 ♂)	
<i>Agabus (Gaurodytes) adpressus</i> AUBÉ, 1837	4 (1 ♀), 13 (1 ♂, 1 ♀), 26 (1 ♂)	
* <i>Agabus (Gaurodytes) blatta</i> JAKOWLEW, 1897	18 (19)	Ömnögovi
** <i>Agabus (Gaurodytes) conspersus</i> (MARSHAM, 1802)	19 (1 ♂)	Ömnögovi
<i>Agabus (Gaurodytes) dichrous</i> SHARP, 1878	14 (10 ♂♂, 9 ♀♀), 23 (1 ♂)	
<i>Ilybius lateralis</i> (GEBLER, 1832)	5 (1 ♂, 1 ♀)	
<i>Ilybius poppiusi</i> (ZAITZEV, 1907)	5 (1 ♂), 8 (1 ♂, 1 ♀)	
* <i>Colymbetes dolabratus</i> (PAYKULL, 1798)	13 (1 ♂, 1 ♀), 24 (3 ♂♂), 25 (1 ♀)	Bayankhongor
* <i>Rhantus frontalis</i> (MARSHAM, 1802)	2 (1 ♂), 8 (2 ♀♀), 10 (1 ♂, 1 ♀)	Khövsgöl
* <i>Dytiscus latro</i> SHARP, 1882	2 (1 ♂, 1 ♀)	Khovd
* <i>Hydroglyphus geminus</i> (FABRICIUS, 1792)	5 (5), 6 (2), 9 (1), 10 (1), 15 (1)	Govi-Altai
<i>Boreonectes</i> aff. <i>emmerichi</i> (FALKENSTRÖM, 1936)	13 (2 ♂♂)	

<i>Nebrioporus airumulus</i> (KOLENATI, 1845)	1 (8), 7 (4), 10 (8)	
<i>Nectoporus sanmarkii</i> (SAHLBERG, 1826)	11 (4)	
* <i>Oreodytes alpinus</i> (PAYKULL, 1798)	3 (5 ♀ ♀), 8 (2 ♂ ♂)	Zavkhan
<i>Oreodytes septentrionalis</i> (GYLLENHAL, 1826)	8 (4), 11 (8)	
* <i>Hydroporus geniculatus</i> THOMSON, 1865	8 (3 ♂ ♂, 2 ♀ ♀)	Khövsgöl
<i>Hydroporus goldschmidti</i> GSCHWENDTNER, 1923	21 (1 ♂)	
<i>Hydroporus uenoi</i> NAKANE, 1963	3 (1 ♂)	
* <i>Hygrotus (Coelambus) caspius</i> (WEHNCKE, 1875)	1 (12), 6 (4), 15 (5 ♂ ♂, 1 ♀, 9), 19 (1 ♂, 18), 21 (4), 22 (1 ♂)	Bayan-Ölgii, Govi-Altai
<i>Hygrotus (Coelambus) enneagrammus</i> (AHRENS, 1833)	20 (1 ♂)	
* <i>Hygrotus (Coelambus) flaviventris</i> (MOTSCHULSKY, 1860)	15 (2 ♂ ♂, 1 ♀, 2), 17 (16), 20 (2), 24 (1 ♂, 17), 25 (1 ♂, 23)	Bayankhongor, Govi-Altai
* <i>Hygrotus (Coelambus) nigrolineatus</i> (STEVEN, 1808)	20 (1 ♂, 1), 24 (1 ♂), 25 (2)	Bayankhongor
<i>Hygrotus (Leptolambus)</i> <i>impressopunctatus</i> (SCHALLER, 1783)	5 (4 ♂ ♂, 2 ♀ ♀), 8 (1 ♀), 16 (1 ♂), 19 (2 ♀ ♀), 23 (2)	
* <i>Hygrotus (Leptolambus) marklini</i> (GYLLENHAL, 1813)	5 (1 ♂, 1 ♀), 6 (1 ♂), 13 (1 ♂), 19 (2), 20 (1), 23 (1 ♀), 24 (1 ♂, 2 ♀ ♀)	Bayankhongor
<i>Hygrotus (Leptolambus) parallelo-</i> <i>grammus</i> (AHRENS, 1812)	25 (2 ♂ ♂, 6)	
<i>Hygrotus (Leptolambus) unguicularis</i> (CROTCH, 1834)	10 (1 ♀), 13 (1 ♀), 14 (1 ♀)	
* <i>Hygrotus (Leptolambus) urgensis</i> (JAKOWLEW, 1899)	5 (1 ♂, 1 ♀), 16 (2 ♂ ♂)	Bulgan
* <i>Laccophilus biguttatus</i> KIRBY, 1837	5 (1 ♂, 1), 14 (1 ♀), 19 (1 ♀)	Ömnögovi

Comments on selected species

Agabus blatta JAKOWLEW, 1897

First record for Ömnögovii. This species has been previously recorded from Govi-Altai, Övörkhangai, Uvs, and Zavkhan (PROKIN et al. 2020).

Agabus coxalis SHARP, 1882

Confirmed for Bayan-Ölgii. This species has been previously recorded from Arkhangai, Dornod, Govisumber, Khentii, Övörkhangai, Selenge, Sükhbaatar, Töv, Uvs, and Zavkhan (GUÉORGUEV 1965, 1968a, 1969, 1972, ENKHNASAN 2006, SHAVERDO et al. 2008, PROKIN et al. 2020). Records from Bayan-Ölgii were provided in a doctoral thesis by ENKHNASAN (2020).

Agabus conspersus (MARSHAM, 1802)

First record from Mongolia (Ömnögovii). This is a widespread Palearctic species, which is known from neighboring territories (NILSSON & HÁJEK 2025): Russia (West Siberia), Kazakhstan, China (Xinjiang, Qinghai, Tibet).

So far, two species of the *Agabus nebulosus* group were recorded from Mongolia: *A. dichrous* (GUÉORGUEV 1968b, 1969, 1972, SHAVERDO et al. 2008, PROKIN et al. 2020) and *A. nebulosus* (FORSTER, 1771), which was reported by ENKHNASAN & BOLDGIV (2019a, 2020) without detailed locality information.

We consider the single immature male from Ömnögovii (site 19) as belonging to *A. conspersus* since it has a more rounded body shape and a thicker pronotal bead (Figs. 14–15) than all Mongolian specimens of *A. dichrous* examined by us. In addition, the anterior proclaws of this specimen possess a distinct medioventral tooth, and the median lobe is evenly curved (Figs. 15–16).

We also assume that the record of *A. nebulosus* by ENKHNASAN & BOLDGIV (2019a, 2020) most likely refers to *A. conspersus* since the former has a more western distribution, obviously not occurring east of Iran and Turkmenistan (NILSSON & HÁJEK 2025), while the latter is known from territories adjacent to Mongolia. Generally, the Central and East Asian representatives of the *A. nebulosus* group need a thorough taxonomic revision, which should include numerous specimens from different regions and will hopefully clarify the taxonomy of the *A. nebulosus* group in Mongolia.

Colymbetes dolabratus (PAYKULL, 1798)

First record from Bayankhongor. This species has previously been recorded from Bayan-Ölgii, Khovd, and Ömnögovii (GUÉORGUEV 1965, 1968a, 1969, 1972, BELLSTEDT 1985, PROKIN et al. 2020).

Rhantus frontalis (MARSHAM, 1802)

First record from Khövsgöl. This species has been previously recorded from Arkhangai, Bayan-Ölgii, Bulgan, Dornod, Govisumber, Khentii, Khovd, Övörkhangai, Selenge, Ulaanbaatar, Uvs, and Zavkhan (GUÉORGUEV 1965, 1968a, 1969, 1972, BELLSTEDT 1985, PROKIN et al. 2020).



Fig. 14: *Agabus conspersus*, habitus of specimen from Ömnögovi (site 19).



Figs. 15–16: *Agabus conspersus*, specimen from Ömnögovi (site 19): 15) Pronotal bead and left pro-tarsus, 16) aedeagus in lateral view.

***Dytiscus latro* SHARP, 1882**

First record from Khovd. This species has been previously recorded from Arkhangai and Övörkhangai (SHAVERDO et al. 2008).

***Hydroglyphus geminus* (FABRICIUS, 1792)**

First record from Govi-Altai. This species has been previously recorded from Arkhangai, Khovd, Ömnögovi, Övörkhangai, Selenge, Töv, Uvs, and Zavkhan (GUÉORGUEV 1965, 1972, BELLSTEDT 1985, ENKHNASAN 2006, SHAVERDO et al. 2008, PROKIN et al. 2020).

***Hydroporus geniculatus* THOMSON, 1865**

First record from Khövsgöl. This species has been recorded previously from Arkhangai and Zavkhan (ENKHNASAN 2006, SHAVERDO et al. 2008).

***Oreodytes alpinus* (PAYKULL, 1798)**

First record from Zavkhan and confirmed for Khövsgöl. This widespread species is known from Great Britain, Scandinavia, the northern and central parts of European Russia to the Russian Far East (NILSSON & HÁJEK 2025).

Oreodytes alpinus was reported from Mongolia by ZAITZEV (1953) from Ulaanbaatar and by GUÉORGUEV (1972) from Khövsgöl. However, SHAVERDO & FERY (2006) assessed the occurrence of *O. alpinus* in Mongolia as doubtful and assumed that all literature records might refer to *O. mongolicus* BRINCK, 1943. The latter was originally described as a subspecies of *O. alpinus* from “Kemtchik” and “Sistikem” (BRINCK 1943), probably referring to Khemchik and Systyg-Khem in the Republic of Tuva (Russia). *Oreodytes a. mongolicus* was elevated to species rank by GUÉORGUEV (1965).

Males of *O. mongolicus* possess a distinctly hooked apex (lateral view) of the median lobe (Fig. 19) and longer protarsal claws (Fig. 17), while in *O. alpinus*, the apex of the median lobe is only hardly noticeably hooked (Fig. 20), and the protarsal claws are distinctly shorter (Fig. 18); in the females of *O. mongolicus*, the widened elytral apices are weakly rounded posteriorly (Fig. 21), while in *O. alpinus* they are concave instead (Fig. 22).

The distinguishing characters of the median lobe and the female elytral apices were already described in the original description of *O. mongolicus* (BRINCK 1943: figs. 1–2), but, by mistake, the female characters have been mixed up with each other. The difference in the male protarsal claws was first noted by GUÉORGUEV (1965).

Both species can be easily distinguished from *O. shorti* SHAVERDO & FERY, 2006, described from Mongolia, by the posterior pronotal angles being not strongly produced, and by the completely different shape of the median lobe (see SHAVERDO & FERY 2006: figs. 1–2).

Oreodytes mongolicus is definitely known from Arkhangai, Khövsgöl, Övörkhangai, Töv, and Zavkhan (SHAVERDO et al. 2008). Records from Bayankhongor, Bayan-Ölgii, Khentii, Khovd, Ulaanbaatar, and Uvs (GUÉORGUEV 1965, 1968a–b, 1972, BELLSTEDT 1985, ENKHNASAN & BOLDGIV 2019b) need to be checked because they might be partly based on specimens of *O. alpinus*. For example, the line drawing of a median lobe (in lateral view) of a specimen identified as *O. mongolicus* by ENKHNASAN & BOLDGIV (2019b: fig. 2c), who reported this species from Arkhangai, Bayan-Ölgii, Khövsgöl, Övörkhangai, Töv, Uvs, and Zavkhan, obviously shows an aedeagus of *O. alpinus*.



Figs. 17–20: Male habitus (17–18) and median lobe, in lateral view (19–20) of 17, 19) *Oreodytes mongolicus* and 18, 20) *O. alpinus*.



Figs. 21–22: Female habitus of 21) *Oreodytes mongolicus* and 22) *O. alpinus*.

***Hygrotus caspius* (WEHNCKE, 1875)**

First records from Bayan-Ölgii and Govi-Altai. This species has been previously recorded from ‘North Mongolia’ (ZAITZEV 1908), Arkhangai, Bayankhongor, Bulgan, Dornod, Khentii, Ömnögovii, Övörkhangaï, Selenge, Töv, Ulaanbaatar/Baganuur district, and Uvs (GUÉORGUIEV 1965, 1968a, 1972, ENKHNASAN 2006, SHAVERDO et al. 2008).

***Hygrotus flaviventris* (MOTSCHULSKY, 1860)**

First records from Bayankhongor and Govi-Altai. This species has been previously recorded from Arkhangai, Bulgan, Dornod, Dornogovi, Dundgovi, Govisüumber, Khentii, Khovd, Ömnögovii, Övörkhangaï, Sükhbaatar, Ulaanbaatar/Baganuur district, and Uvs (GUÉORGUIEV 1965, 1968a–b, 1969, ENKHNASAN 2006, SHAVERDO et al. 2008, PROKIN et al. 2020, 2022).

***Hygrotus marklini* (GYLLENHAL, 1813)**

First record from Bayankhongor. This species has been previously recorded from Arkhangai, Bayan-Ölgii, Bulgan, Dornod, Dornogovi, Dundgovi, Govi-Altai, Govisumber, Khentii, Khövsgöl, Ömnögovi, Övörkhongai, Selenge, Sükhbaatar, Ulaanbaatar, Ulaanbaatar/Baganuur district, and Zavkhan (GUÉORGUEV 1965, 1968a–b, 1969, 1972, BRANCUCCI 1982, BELLSTEDT 1985, ENKHNASAN 2006, SHAVERDO et al. 2008, PROKIN et al. 2020).

***Hygrotus nigrolineatus* (STEVEN, 1808)**

First record from Bayankhongor. This species has been previously recorded from Arkhangai, Bulgan, Dornod, Khovd, Ömnögovi, and Övörkhongai (ZAITZEV 1953, GUÉORGUEV 1968b, SHAVERDO et al. 2008, PROKIN et al. 2020).

***Hygrotus parallelogrammus* (AHRENS, 1812)**

Additional record from Bayankhongor. Previously, this species was recorded from the Bayankhongor Province only by FERY (2003). It is also known from Khövsgöl, Övörkhongai, Selenge, and Uvs (FERY 2003, PROKIN et al. 2020, 2022).

***Hygrotus unguicularis* (CROTCH, 1834)**

Confirmed for Bayan-Ölgii. This species has been previously recorded from Arkhangai, Bulgan, Govi-Altai, Govisumber, Khovd, Khövsgöl, Övörkhongai, Ulaanbaatar, Ulaanbaatar/Baganuur district, Uvs, and Zavkhan (JAKOWLEW 1899, GUÉORGUEV 1968a–b, 1969, 1972, BELLSTEDT 1985, ENKHNASAN 2006, SHAVERDO et al. 2008, PROKIN et al. 2020). Records from Bayan-Ölgii were provided in a doctoral thesis by ENKHNASAN (2020).

***Hygrotus urgensis* (JAKOWLEW, 1899)**

First record from Bulgan. This species was described from Changai (ca. 500 km W Ulaanbaatar) in north-western Mongolia (JAKOWLEW 1899, FERY 2003) and reported from the country by ZIMMERMANN (1930), FENG (1933), WU (1937), ZAITZEV (1953), GUIGNOT (1956), GUÉORGUEV (1969, 1972 (as *Coelambus chinensis*)). It is definitely known from Arkhangai, Govi-Altai, Khentii, Sükhbaatar, Selenge, and Töv (GUÉORGUEV 1965, 1968a (as *Coelambus chinensis*), FERY 1992, 2003, SHAVERDO et al. 2008).

***Laccophilus biguttatus* KIRBY, 1837**

First records from Ömnögovi and confirmed for Bayan-Ölgii. This species has been previously recorded from Arkhangai, Bayankhongor, Bulgan, Dornod, Govisumber, Khentii, Khövsgöl, Övörkhongai, Töv, Ulaanbaatar, Ulaanbaatar/Baganuur district, and Zavkhan (GUÉORGUEV 1965, 1968a, 1969, BRANCUCCI 1982, BELLSTEDT 1985, ENKHNASAN 2006, SHAVERDO et al. 2008, PROKIN et al. 2020). Records from Bayan-Ölgii were provided in a doctoral thesis by ENKHNASAN (2020).

Comments on the occurrence of *Hygrotus chinensis* (Sharp, 1882) in Mongolia

The occurrence of this species in Mongolia is currently regarded as accepted (NILSSON & HÁJEK 2025). However, it has repeatedly been reported from that country based on wrong records.

FALKENSTRÖM (1932) described *Coelambus chinensis* var. ♀ *opacus* from “S. Mongoliet”. Study of a type specimen showed that it belongs in fact to *Hygrotus impressopunctatus* (SCHALLER, 1783) (see FERY 1995).

A few years later, WU (1937) recorded *Coelambus chinensis* from “..., S. Mongolia”. FERY (2003) argued that “S. Mongolia” might actually refer to the autonomous region of Nei Mongol (= Inner Mongolia, China); in our opinion, it is most likely that this record just refers to Falkenström’s record of *Coelambus chinensis* var. ♀ *opacus* [= *Hygrotus impressopunctatus*] and therefore needs not to be considered.

Finally, GUÉORGUIEV (1965, 1968a, 1969, 1972) published several misidentified Mongolian *H. urgensis* under the name *Coelambus chinensis* (see FERY 2003).

According to D. Enkhnasan (pers. comm., 18.IX.2025), the Mongolian records of *Hygrotus chinensis* from three river basins by ENKHNASAN & BOLDGIV (2019a: 107) refer to GUÉORGUIEV (1965, 1968a, 1969, 1972), who erroneously confused *H. urgensis* with *H. chinensis*. Therefore, we exclude this species from the Mongolian fauna.

Conclusions

Although the diving beetle fauna of Mongolia was subject to a series of studies and expeditions, additional field trips are still necessary to improve the knowledge of the distribution of the dytiscids. This applies mainly to poorly explored provinces, e.g., in the southern and eastern parts of the country.

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References

- BELLSTEDT, R. 1985: Wasserkäfer (Coleoptera: Hydradephaga & Palpicornia) aus der Mongolischen Volksrepublik. Ergebnisse der Mongolisch-Deutschen Biologischen Expeditionen seit 1962, Nr.140. – Mitteilungen aus dem Zoologischen Museum in Berlin 61 (1): 137–141.
- BRANCUCCI, M. 1982: Beitrag zur Kenntnis der Dytiscidae und der Haliplidae der Mongolei. Ergebnisse der mongolischen Gemeinschaftsreise von Ornithologen aus der DDR 1979. XVII. – Abhandlungen und Berichte des Museums der Natur, Gotha 11: 69–70.
- BRINCK, P. 1943: Insecta, ex Sibiria meridionali et Mongolia, in itinere Orjan Olsen 1914 collecta. A. Coleoptera, a Fritz Jensen lecta. VIII. Haliplidae, Dytiscidae, Gyrinidae. – Norsk Entomologisk Tidsskrift 6 (4): 154–161.
- ENKHNASAN, D. 2006: Species composition of predaceous diving beetle[s] of Arctic Ocean Basin in Mongolia. – Proceedings of the Institute of Biology 26: 74–77. [in Mongolian]

- ENKHNASAN, D. 2008: Distribution and ecology of *Agabus adpressus* (Coleoptera, Dytiscidae) in Mongolia. – Proceedings of the Institute of Biology 27: 89–91. [in Mongolian]
- ENKHNASAN, D. 2020: Species composition, distribution, and ecology of Mongolian diving beetles (Insecta: Coleoptera, Dytiscidae). – Ulaanbaatar: National University of Mongolia (doctoral thesis), vi + 187 pp. [in Mongolian]
- ENKHNASAN, D. & BOLDGIV, B. 2019a: Biogeography of predaceous diving beetles (Coleoptera, Dytiscidae) of Mongolia. – ZooKeys 853: 87–108.
- ENKHNASAN, D. & BOLDGIV, B. 2019b: Endemic and sub-endemic water beetles of Mongolia and their distribution ranges. – Journal of Species Research 8 (4): 395–406.
- ENKHNASAN, D. & BOLDGIV, B. 2020: Community and habitat analysis of predaceous diving beetles (Coleoptera, Dytiscidae) in central and western Mongolia. – Inland Waters 10 (3): 409–417.
- FALKENSTRÖM, G. 1932: Vorläufige Mitteilung über die neuen Halipliden und Dytisciden, von Dr. D. Hummel in den Jahren 1927–30 während Dr. Sven Hedins China-Expedition eingesammelt. – Entomologisk Tidskrift 53 (4): 191–192.
- FENG, H.T. 1932: Aquatic insects of China. Article II. Catalogue of Chinese Dytiscidae. – Peking Natural History Bulletin 7 (1) [1932–1933]: 17–37.
- FENG, H.T. 1933: Classification of Chinese Dytiscidae. – Peking Natural History Bulletin 8 (2) [1933–1934]: 81–146, pls. 1–2.
- FERY, H. 1992: Revision der *saginitus*-Gruppe der Gattung *Coelambus* Thomson (Coleoptera: Dytiscidae). – Linzer biologische Beiträge 24 (1): 339–358.
- FERY, H. 1995: Ergänzungen zur *saginitus*-Gruppe sowie Bemerkungen zu weiteren Arten der Gattung *Coelambus* Thomson (Coleoptera, Dytiscidae). – Linzer biologische Beiträge 27 (2): 1045–1061.
- FERY, H. 2003: Dytiscidae: V. Taxonomic and distributional notes on *Hygrotus* Stephens, with emphasis on the Chinese fauna and a key to the Palearctic species, pp. 133–193. – In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. III. – Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, VI + 572 pp.
- FERY, H. & PETROV, P. 2006: Two new species of the *planus*-group of *Hydroporus* Clairville, 1806 (Coleoptera: Dytiscidae), and notes on other species of the group. – Aquatic Insects 28 (2): 81–100.
- GUÉORGUIEV, V.B. 1965: 48. Haliplidae und Dytiscidae. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei (Coleoptera). – Reichenbachia 7 (15): 127–134.
- GUÉORGUIEV, V.B. 1968a: 82. Coleoptera: Haliplidae, Dytiscidae, Gyrinidae II. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. – Izvestija na Zoologitjeskija Institut s Musei Sofia 27: 23–29.
- GUÉORGUIEV, V.B. 1968b: 134. Haliplidae, Dytiscidae III. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei (Coleoptera). – Reichenbachia 9 (33): 287–289.
- GUÉORGUIEV, V.B. 1969: Dytiscidae et Gyrinidae (Coleoptera) de Mongolie. – Annales Zoologici 27 (4): 59–64.
- GUÉORGUIEV, V.B. 1972: Haliplidae, Dytiscidae, Gyrinidae IV. Ergebnisse der zoologischen Forschung von Dr. Z. Kaszab in der Mongolei (Coleoptera). – Faunistische Abhandlungen 4 (6): 31–44.
- GUIGNOT, F. 1956: Dytiscidae nouveaux ou intéressants du Musée National d'Histoire Naturelle de Budapest. – Annales Historico-naturales Musei nationalis hungarici (series nova) 7: 395–399.
- JACOBSON, G.G. 1908: Zhuki Rossii i zapadnoy Evropy. Vypusk 6. [The beetles of Russia, West Europe and adjacent countries. Fascicle 6.]. – St. Petersburg: A.F. Devrien, 401–480. [in Russian.]

- JAKOWLEW, A. 1896: Dytiscides nouveaux ou peu connus. – Horae Societatis Entomologicae Rossicae XXX [1897]: 175–183. [pp. 1–191 were issued in 1896]
- JAKOWLEW, A. 1899: Dytiscides nouveaux ou peu connus. – Horae Societatis Entomologicae Rossicae XXXII [1898]: 504–509. [pp. 291–662 were issued in 1899]
- MOTSCHULSKY, V. 1853: Hydrocanthares de la Russie. – Helsingfors: Société de Littérature Finnoise, 15 pp.
- NILSSON, A.N. 1994: Two new East Palearctic *Agabus* species of the *adpressus*- and *confinis*-groups (Coleoptera, Dytiscidae). – Entomologica Fennica 5: 169–175.
- NILSSON, A.N. & HÁJEK, J. 2025: Catalogue of Palearctic Dytiscidae (Coleoptera). Internet version, 2025-01-01, 92 pp. https://waterbeetles.eu/documents/PAL_CAT_Dytiscidae_2025.pdf
- PALATOV, D.M. & MARYINSKIY, V.V. 2017: Benthic macroinvertebrates of the watercourses of the South Khangai (Mongolia). – Ukrainian Journal of Ecology 7 (4): 644–648.
- PROKIN, A.A., CHULUUNBAATAR, G., ANGUS, R.B., JÄCH, M.A., PETROV, P.N., RYNDEVICH, S.K., BYAMBANYAM, E., SAZHNEV, A.S., HÁJEK, J. & SHAVERDO, H. 2020: New records of water beetles (Coleoptera: Gyrinidae, Haliplidae, Noteridae, Dytiscidae, Helophoridae, Hydrophilidae, Hydraenidae) and shore beetles (Coleoptera: Heteroceridae) of Mongolia. – Aquatic Insects 41 (1): 1–44.
- PROKIN, A.A., JÄCH, M.A., SAZHNEV, A.S., CHULUUNBAATAR, G., BYAMBANYAM, E., PETROV, P.N., RYNDEVICH, S.K., PRZHIBORO, A.A. & SHAVERDO, H. 2022: An update on the water beetle fauna of Mongolia (Coleoptera: Haliplidae, Dytiscidae, Helophoridae, Hydrophilidae, Hydraenidae, Dryopidae) with new and additional country records. – Aquatic Insects 43 (3): 281–296.
- PROKIN, A.A. & ZHAVORONKOVA, O.D. 2015: Water macroinvertebrates of Lakes Orog and Tatsyn-Tsagaan (Western Mongolia) in the beginning of water level stabilization period, pp. 90–93. – In Dorofeyuk, N.I. et al. (eds.): Proceedings of the International Conference on “Ecosystems of Central Asia under current conditions of socio-economic development”, Ulaanbaatar (Mongolia), September 8–11, 2015. Vol. 2. – Ulaanbaatar: Mongolian Academy of Sciences, 432 pp. [in Russian, with English abstract]
- SHAVERDO, H.V. 2004: New records and additional data on the distribution of some species of *Hydroporus* Clairville (Coleoptera: Dytiscidae). – Koleopterologische Rundschau 74: 143–146.
- SHAVERDO, H. & FERY, H. 2001: *Hydroporus crinitisternus* sp. nov. from South-Eastern Kazakhstan and Mongolia (Coleoptera: Dytiscidae). – Entomological Problems 32 (1): 33–36.
- SHAVERDO, H.V. & FERY, H. 2006: *Oreodytes shorti* sp.n. from Mongolia (Coleoptera: Dytiscidae). – Koleopterologische Rundschau 76: 35–42.
- SHAVERDO, H.V., SHORT, A.E.Z. & DAVAADORJ, E. [ENKHNASAN, D.] 2008: Diving beetles of Mongolia (Coleoptera: Dytiscidae). – Koleopterologische Rundschau 78: 43–53.
- WU, C.F. 1937: Catalogus Insectorum Sinensium, Volume 3. – Peiping: The Fan Memorial Institute of Biology, 1312 pp.
- ZAITZEV, P. 1908: Zwei neue sibirische Dytisciden (Coleoptera). – Russkoe Entomologicheskoe Obozrenie 7 (4) [1907]: 268–269.
- ZAITZEV, P. 1910: II. Beiträge zur Kenntnis der Wasserkäfer des Ostens von Nordsibirien. Haliplidae, Dytiscidae, Gyrinidae, Hydrophilidae, Georyssidae, Dryopidae und Heteroceridae. – Mémoires de l'Académie Impériale des Sciences de St.-Petersbourg (Ser. VIII) 18 (9): 11–52, pl. 1B.
- ZAITZEV, P.A. 1953: Coleoptera, IV. Amphizoidae, Hygrobiidae, Haliplidae, Dytiscidae, Gyrinidae. Fauna SSSR 58. – Moscow-Leningrad: Izdatel'stvo AN SSSR, 377 pp. [in Russian]
- ZIMMERMANN, A. 1930: Monographie der paläarktischen Dytisciden. I. Noterinae, Laccophilinae, Hydroporinae (1. Teil). – Koleopterologische Rundschau 16: 35–118.

ZIMMERMANN, A. 1931: Monographie der paläarktischen Dytisciden. II. Hydroporinae (2. Teil: Die Gattung *Hydroporus* Clairv.). – Koleopterologische Rundschau 17: 97–159.

ZIMMERMANN, A. 1934: Monographie der paläarktischen Dytisciden. V. Colymbetinae (1. Teil: Cope-latini, Agabini: Gattung *Gaurodytes* Thoms.). – Koleopterologische Rundschau 20: 138–214.

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