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The water scavenger beetles of Mongolia with new records from the Selenge River Basin (Coleoptera: Hydrophilidae)

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ABSTRACT.— Species of the water beetle family Hydrophilidae (Coleoptera) occurring in Mongolia are summarized. Detailed locality records and comments on habitat preferences from species collected during the 2004 Selenge River Basin Expeditions are provided. *Enochrus quadripunctatus* (Herbst) is recorded from Mongolia for the first time, with new locality records for eight additional species. The total number of species recorded from Mongolia now stands at 24.

INTRODUCTION

Recent aquatic insect surveys in central Asia have enabled the production of robust species lists and distribution records for water beetles, including the Hydrophilidae. Most notably, the Chinese Water Beetle Survey (1993-1998) sponsored by the Naturhistorisches Museum Wien reviewed a large portion of the aquatic beetle fauna of China and neighboring regions (e.g. Gentili et al. 1995). Ongoing expeditions of the Selenge River Basin in northwestern Mongolia have resulted in the collection of thousands of additional specimens of aquatic beetles. Here, we present an updated checklist of the hydrophilid fauna known to occur in Mongolia and incorporate the results of the 2004 Selenge River Basin expedition (SRBE). A total of 24 species in 9 genera are known from Mongolia, with *Enochrus quadripunctatus* (Herbst) here recorded for the first time.

Identification of several of the commonly encountered genera were made fairly easily as they have been recently treated in regional or generic revisions (e.g. *Laccobius*, Gentili 1995, 2003; *Berosus*, Schödl 1991, 1993; *Enochrus*, Schödl 1998). Distributional data are summarized from Hansen (1999, 2004).

Specimens are deposited in the collections of the Mongolian Academy of Sciences, Ulaan Baatar (B. Namkhaidorj), the Academy of Natural Sciences of Philadelphia (J. K. Gelhaus) and the senior author. Representative specimens will also be deposited in the National Museum of Natural History, Washington, DC (W. E. Steiner), the Naturhistorisches Museum Wien, Austria (M. A. Jäch, A. Komarek) and Cornell University, Ithaca, NY (J. K. Liebherr, R. Hoebeke)

COLLECTING LOCALITIES

- 71: MONGOLIA: Tov Aimag, Ondorshireet Soum, Tuul River ~1.5 km W of Tuul Ovoot bridge downstream of road to Arvayheer, N47.31096, E105.27119, 1042 m, 3-4.vii.2004, A. E. Z. Short, leg., AS-04-071/ SRP04070301
- 73: MONGOLIA: Bulgan Aimag, Rashaant Soum, Tarnin Gol at Millennial Road A0301 marker 283.7 km, N47.30766, E103.64377, 1255 m, 4.vii.2004, A. E. Z. Short, leg., AS-04-073/ SRP04070402
- 74: MONGOLIA: Ovorhangay Aimag, Esonzyil Soum, Zegst/Sarin Gol, 74 km NW of Arvayheer, N46.79062, E103.32486, 1665 m, 4-5.vii.2004, A. E. Z. Short, leg., AS-04-074/ SRP04070403
- 77: MONGOLIA: Ovorhangay Aimag, Olziyt Soum, Zegesteyn Gol at Millennial Road A0301, N46.70964, E103.29938, 1694, 5.vii.2004, A. E. Z. Short, leg., AS-04-077/ SRP04070503
- 78: MONGOLIA: Ovorhangay Aimag, Hujirt Soum, Khavtsaliin Gol valley, N46.76292, E103.02561, 1750 m, 5-6.vii.2004, A.E.Z. Short, leg., AS-04-078/ SRP04070504
- 79: MONGOLIA: Ovorhangay Aimag, Khujirt Soum, Kharzani Gol 12 km SE of Khujirt, N46.80020, E102.84406, 1706 m, 6.vii.2004, A.E.Z. Short, leg., AS-04-079/ SRP04070601
- 81: MONGOLIA: Ovorhangay Aimag, Bat-Olziy Soum, braid of Orkhon Gol ~40 km W of Khujirt, N46.88586, E102.34386, 1646 m, 6-7.vii.2004, A.E.Z. Short, leg., AS-04-081/ SRP04070603
- 83: MONGOLIA: Ovorhangay Aimag, Bat-Olziy Soum, Ulaan Gol ~93 km W of Khujirt, N46.73093, E101.88583, 1894 m, 7-8.vii.2004, A.E.Z. Short, leg., AS-04-083/ SRP04070702
- 84: MONGOLIA: Ovorhangay Aimag, Khujirt Soum, pools by springs 10 km W of Khujirt, N46.91520, E102.66273, 1651 m, 8.vii.2004, Coll. AEZ Short, AS-04-084/ SRP04070802

- 85: MONGOLIA: Ovorhangay Aimag, Kharkhorin Soum, Kharzani Gol 3.5 km NE of Shankh Brigade, N47.05722, E102.99191, 1519 m, 8.vii.2004, A.E.Z. Short, leg., AS-04-085/ SRP04070803
- 86: MONGOLIA: Ovorhangay Aimag, Kharkhorin Soum, Orkhon Gol 6 km W of Kharkhorin center, N47.20226, E102.80169, 1462 m, 08-09.vii.2004, A.E.Z. Short, leg., AS-04-086/ SRP04070901
- 87: MONGOLIA: Arkhangay Aimag, Khotont Soum, tributary of Tsagaan, Sumiin/Jarantain Gol, ~43 km SW of Khotont, N47.07888, E102.16608, 1699 m, 9-10.vii.2004, A.E.Z. Short, leg., AS-04-087/ SRP04070902
- 88: MONGOLIA: Arkhangay Aimag, Tsenkher Soum, Nuuriin Khooloi lake ~9km SW of, Tavanbulag, N47.33933, E101.82093, 1693 m, 10.vii.2004, A.E.Z. Short, leg., AS-04-088/ SRP04071001
- 89: MONGOLIA: Arkhangay Aimag, Tsenkher Soum, Uliin Gol in Budent valley, ~60 km SSW of Tavanbulag, N46.97927, E101.69877, 2075 m, 11.vii.2004, A.E.Z. Short, leg., AS-04-089/ SRP04071101
- 90: MONGOLIA: Arkhangay Aimag, Bulgan Soum, Urd Tamir Gol ~38 km SW of Tsetserleg, N47.28244, E101.18793, 1872 m, 12-13.vii.2004, A.E.Z. Short, leg., AS-04-090/ SRP04071201
- 91: MONGOLIA: Arkhangay Aimag, Bulgan Soum, Urd Tamir Gol braid upstream of bridge, ~63 km SW of Tsetserleg, N47.11192, E101.01048, 2066 m, 13-15.vii.2004, A., E. Z. Short, leg., AS-04-091/ SRP04071302
- 96: MONGOLIA: Arkhangay Aimag, Ikhtamir Soum, NW braid of Khoit Tamir Gol ~25 km SW of Ikhtamir, N47.50523, E100.93208, 1728 m, 14-15.vii.2004, A.E.Z. Short, leg., AS-04-096/ SRP04071402
- 97: MONGOLIA: Arkhangay Aimag, Ikhtamir Soum, Khoit Tamir Gol ~29 km SW of Ikhtamir, N47.48567, E100.87875, 1749 m, 15.vii.2004, A.E.Z. Short, leg., AS-04-097/ SRP04071501
- 98: MONGOLIA: Arkhangay Aimag, Chuluut Soum, Khanui Gol ~60 km SW of Ikhtamir, N47.50949, E100.57510, 1981 m, 15.vii.2004, A.E.Z. Short, leg., AS-04-098/ SRP04071502
- 100: MONGOLIA: Arkhangay Aimag, Chuluut Soum, ponds at Egiin Davaa ~47 km SW, of Chuluut/ Jargalant, N47.21198, E99.91114, 2582 m, 16.vii.2004, A.E.Z. Short, J.K. Gelhaus, Enkhnasan, leg., AS-04-100/ SRP04071601
- 101: MONGOLIA: Arkhangay Aimag, Chuluut Soum, Chuluutin Gol ~45 km SW of Chuluut/Jargalant, N47.21768, E99.92824, 2471 m, 16.vii.2004, A.E.Z. Short, leg., AS-04-101/ SRP04071602
- 102: MONGOLIA: Arkhangay Aimag, Chuluut Soum, Chuluutin Gol ~33 km SW of Chuluut/Jargalant, N47.29702, E100.03136, 2287 m, 16-17.vii.2004, A.E.Z. Short, leg., AS-04-102/ SRP04071603
- 103: MONGOLIA: Arkhangay Aimag, Chuluut Soum, Chuluutin Gol 40 km N of Chuluut/Jargalant, N47.890440, E100.31810, 1937 m, 17.vii.2004, A.E.Z. Short, leg., AS-04-103/ SRP04071701
- 105: MONGOLIA: Arkhangay Aimag, Tariat Soum, Terkhiin Tsagan Nuur ~8 km W of Khorgo/Tariat, N48.14404, E99.78300, 2057 m, 18.vii.2004, Selenge River Project Team, AS-04-105/ SRP04071801
- 106: MONGOLIA: Arkhangay Aimag, Tariat Soum, Khunt Nuur ~3 km SW of Tsagaan nuur Brigade, N48.07248, E99.52216, 2062 m, 18.vii.2004, Selenge River Project Team, AS-04-106/ SRP04071802
- 107: MONGOLIA: Arkhangay Aimag, Khangay Soum, Khoit Ekhni Gol ~13 km SW of Khunt, N47.75747, E99.35827, 2215 m, 18-19.vii.2004, Selenge River Project Team, AS-04-107/ SRP04071803
- 110: MONGOLIA: Zavkhan Aimag, Tosontsengel Soum, Delgarakhiin Gol ~16 km S of Tosontsengel, N48.61'518, E98.23096, 1761 m, 20-21.vii.2004, Selenge River Project Team, AS-04-110/ SRP04072001
- 111: MONGOLIA: Zavkhan Aimag, Tosontsengel Soum, oxbow of Ideriin Gol 9 km SW of Tosontsengel, N48.72943, E98.19552, 1714 m, 21.vii.2004, Selenge River Project Team, AS-04-111/ SRP04072101
- 112: MONGOLIA: Zavkhan Aimag, Tosontsengel Soum, Gunza Gol ~38 km SW of Tosontsengel, N48.62624, E97.89617, 1831 m, 21-22.vii.2004, Selenge River Project Team, AS-04-112/ SRP04072102
- 113: MONGOLIA: Zavkhan Aimag, Tosontsengel Soum, unnamed reed lake and marsh by Tegshiin Gol, ~70 km SW of Tosontsengel, N48°19'52.6", E97°51'52.2", 22.vii.2004, A.E.Z. Short, J.K. Gelhaus, Enkhnasan, leg., AS-04-113/ SRP04072202
- 115: MONGOLIA: Zavkhan Aimag, Ider Soum, ponds by Ideriin Gol at Darkhjan Uul Brigade, ~12 km SE of Zuunmod/Ider, N48.13246, E97.48425, 2025 m, 23.vii.2004, A.E.Z. Short, leg., AS-04-115/ SRP04072301
- 116: MONGOLIA: Zavkhan Aimag, Ider Soum, Ideriin Gol ~22 km SE of Zuunmod/Ider, N48.05989, E97.55073, 2053 m, 23-24.vii.2004, A.E.Z. Short, leg., AS-04-116/ SRP04072303
- 118: MONGOLIA: Zavkhan Aimag, Ider Soum, Zagastain Gol ~11 km NNE of Zagastain Davaa, N48.15779, E97.21441, 2108 m, 24.vii.2004, A.E.Z. Short, leg., AS-04-118/ SRP04072401
- 119: MONGOLIA: Zavkhan Aimag, Telmen Soum, Ideriin Gol ~15 km SSW of Telmen/Ovogdii, N48.53255, E97.52093, 1823 m, 24-25.vii.2004, A.E.Z. Short, leg., AS-04-119/ SRP04072402
- 120: MONGOLIA: Zavkhan Aimag, Tosontsengel Soum, Ar Teeliin Gol ~24 km SW of Tosontsengel, N48.65028, E98.36208, 1803 m, 25.vii.2004, A.E.Z. Short, leg., AS-04-120/ SRP04072501
- 121: MONGOLIA: Zavkhan Aimag, Ikh-Uul Soum, Deed Tsutsuukhiin Gol ~10 km NW of Solongotiin Davaa, N48.36436, E98.92737, 2072 m, 25.vii.2004, A.E.Z. Short, leg., AS-04-121/ SRP04072502

123: MONGOLIA: Arkhangay Aimag, Battsengel Soum, Tamirin/Shandinam Gol ~25 km WNW of Zegstei, N47.73941, E102.23811, 1377 m, 26-27.vii.2004, A.E.Z. Short, leg., AS-04-123/ SRP04072601

HYDROPHILINAE

- Berosus (Enoplorus) fischeri** Schödl, 1993
SRBE Records.— 71, 74, 77, 79, 85, 87, 88.
Distribution.— China, Mongolia, Russia (Schödl 1993).
- Berosus (Enoplorus) fulvus** Kuwert, 1888
SRBE Records.— 71, 77, 78, 87, 88, 95.
Distribution.— Austria, Britain, Denmark, France, Germany, Hungary, Iran, Kazakhstan, Mongolia, Netherlands, Russia, Spain, Sweden, Turkey, Turkmenistan (Hansen 1999)
- Berosus (Enoplorus) lewisii** Sharp, 1873
SRBE Records.— None.
Distribution.— China, Japan, Mongolia, North Korea, Russia, South Korea, Vietnam (Hansen 1999).
- Berosus (s. str.) punctipennis** Harold, 1878
SRBE Records.— 71.
Distribution.— China, Japan, Mongolia, Russia, South Korea (Hansen 1999).
- Enochrus (Lumetus) bicolor** (Fabricius, 1792)
SRBE Records.— 71, 73, 74, 77, 79.
Distribution.— Widespread in the Palearctic region (Hansen 1999)
- Enochrus (Lumetus) quadripunctatus** (Herbst, 1797)
SRBE Records.— 71, 73, 74, 77, 79, 83, 85, 87, 88, 89, 95, 111, 113, 119.
Remarks.— Most specimens were collected in grassy marshes or isolated, shallow vegetated oxbow ponds.
Distribution.— Austria, Bosnia-Herzegovina, Britain, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Germany, Hungary, Iran, Israel, Italy, Lithuania, Mongolia, Netherlands, Norway, Russia, Slovenia, Sweden (Hansen 1999). Records for additional countries need confirmation.
- Enochrus (Lumetus) segmentinotatus** (Kuwert, 1888)
SRBE Records.— None.
Distribution.— Albania, Algeria, Bulgaria, Croatia, Cyprus, Egypt, France, Greece, Iran, Iraq, Israel, Italy, Jordan, Kazakhstan, Kuwait, Libya, Mongolia, Portugal, Romania, Russia, Saudi Arabia, Slovenia, Tajikistan, Tunisia, Turkey, Turkmenistan, Uzbekistan, Yugoslavia, Gambia (Hansen 1999)
- Hydrobius fuscipes** (Linnaeus, 1758)
SRBE Records.— 74, 79, 83, 85, 87, 100, 107, 110, 116, 120, 121.
Remarks.— Most specimens collected in shallow, grassy pools; sometimes extremely abundant.
Distribution.— Widespread in the Palearctic and Nearctic regions.

- Hydrochara affinis** (Sharp, 1873)
SRBE Records.— None.
Distribution.— China, Japan, Mongolia, Russia, South Korea (Hansen 1999)
- Laccobius (s. str.) cinereus** Motschulsky, 1860
SRBE Records.— 71, 73, 74, 77, 79, 84, 85, 87, 88, 100, 105, 108, 111, 113, 115, 119.
Remarks.— Frequently collected in the gravel or sandy margins of streams and rivers.
Distribution.— Kyrgyzstan, Mongolia, Russia, Uzbekistan (Hansen, 1999).
- Laccobius (s. str.) colon** (Stephens, 1829)
SRBE Records.— None.
Distribution.— Austria, Belgium, Bosnia-Herzegovina, Britain, China, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Kazakhstan, Luxembourg, Mongolia, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Uzbekistan, Yugoslavia (Hansen, 1999).
- Laccobius (Compsolaccobius) decorus** (Linnaeus, 1758)
SRBE Records.— None.
Distribution.— Afghanistan, Estonia, Finland, Georgia, Kazakhstan, Latvia, Mongolia, Russia, Sweden, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (Hansen 1999).
- Laccobius (s. str.) minutus** (Linnaeus, 1758)
SRBE Records.— 71, 73, 77, 79, 81, 83, 85, 86, 88, 89, 90, 91, 96, 97, 98, 102, 103, 110, 111, 112, 115, 119, 123.
Remarks.— Frequently collected in the gravel or sandy margins of streams and rivers.
Distribution.— Austria, Belgium, Bosnia-Herzegovina, Britain, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Kyrgyzstan, Latvia, Lithuania, Macedonia, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Slovenia, Sweden, Switzerland, Turkey, Ukraine, Yugoslavia (Hansen 1999).
- Paracymus aeneus** (Germar, 1824)
SRBE Records.— None.
Distribution.— Albania, Austria, Britain, Bulgaria, Croatia, Czech Republic, Denmark, Egypt, France, Germany, Greece, Ireland, Israel, Italy, Kazakhstan, Mongolia, Netherlands, Norway, Portugal, Romania, Russia, Spain, Sweden, Turkey (Hansen 1999).

SPHAERIDIINAE

- Cercyon (s. str.) bifenestratus** (Küster, 1851)
SRBE Records.— None.
Distribution.— Armenia, Austria, Britain, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Mongolia, Netherlands, Poland, Russia, Sweden, Switzerland (Hansen 1999, Ryndevich 2003)

Cercyon* (s. str.) *marinus (Thomson, 1853)*SRBE Records*.— 106.*Distribution*.— Austria, Britain, Canada, China, 'Czechoslovakia', Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Japan, Kazakhstan, Latvia, Lithuania, Netherlands, Norway, Poland, Russia, Switzerland, Turkey, United States (Hansen 1999, Hansen 2004).***Cercyon* (s. str.) *ovillus*** Motschulsky, 1860*SRBE Records*.— None.*Distribution*.— Japan, Mongolia, Russia (Hansen 1999).***Cercyon* (s. str.) *quisquilius*** (Linnaeus, 1761)*SRBE Records*.— None.*Distribution*.— Widespread in the Palearctic region, and introduced to the Nearctic, Neotropical and Australian regions (Hansen 1999).***Cercyon* (s. str.) *terminatus*** (Marshall, 1802)*SRBE Records*.— None.*Distribution*.— Algeria, Armenia, Austria, Britain, Canary Islands, Croatia, 'Czechoslovakia', Denmark, Egypt, Estonia, Finland, France, Germany, Hungary, Israel, Italy, Kazakhstan, Latvia, Lithuania, Madeira, Mongolia, Netherlands, Norway, Poland, Russia, Sweden, Switzerland, Tunisia, 'Yugoslavia'. Also introduced to the Nearctic (Hansen 1999).***Cercyon* (s. str.) *tristis*** (Illiger, 1801)*SRBE Records*.— None.*Distribution*.— Austria, Britain, 'Czechoslovakia', Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, Mongolia, Netherlands, Norway, Poland, Portugal, Russia, Sweden, Switzerland (Hansen 1999, Ryndevich 2003).***Pachysternum* (s. str.) *haemorrhoum*** (Motschulsky, 1866)*SRBE Records*.— None.*Distribution*.— China, Japan, Korea, Mongolia, Philippines, Russia (Hansen, 1999).***Sphaeridium* *bipustulatum*** Fabricius, 1781*SRBE Records*.— None.*Distribution*.— Widespread in the Palearctic region; Introduced to the Nearctic region (Hansen 2004).***Sphaeridium* *lunatum*** Fabricius, 1792*SRBE Records*.— None.*Distribution*.— Widespread in the Palearctic region; Introduced to the Nearctic region (Hansen 2004).***Sphaeridium* *substriatum*** Faldermann, 1838*SRBE Records*.— None.*Distribution*.— Armenia, Austria, Bosnia-Herzegovina, China, Croatia, 'Czechoslovakia', Denmark, Egypt, ?Germany, Greece, Hungary, India, Israel, Italy, Kazakhstan, Lithuania, Poland, Russia, Tunisia, Turkey, Yugoslavia (Hansen 1999, 2004).

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