

# Heteroceridae (Coleoptera) from Mongolia with description of *Heterocerus kaszabi* n.sp. and *H. interspidulus* n.sp.

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Charpentier, R.: Heteroceridae (Coleoptera) from Mongolia with description of *Heterocerus kaszabi* n.sp. and *H. interspidulus* n.sp. (Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. Nr. 443).

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The following species of *Heterocerus* (Coleoptera, Heteroceridae) are recorded from Mongolia for the first time: *parallelus* Gebl., *flexuosus* Steph., *kaszabi* n.sp., *fenestratus* Thbg., *obsoletus* Curtis, *interspidulus* n.sp., *intermedius* Kiesw. and *marmota* Kiesw. *H. fausti* Reitter and *H. heydeni* Reitter are synonymized with *H. flexuosus* Steph., whereas *H. tonkinensis* Grouv., *H. latus* Grouv. and *H. asiaticus* Nomura are synonymized with *H. fenestratus* Thbg.

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Dr Z. Kaszab, Director of the Hungarian Natural History Museum in Budapest, has been kind enough to let me study the Heteroceridae, collected during his six expeditions to Mongolia (1963-1968). Out of a total of 1335 specimens, 8 species are represented, all of which are now recorded for the first time from Mongolia. Two of the species are new to science.

Table 1. List of collecting sites in Mongolia.

- No. 41. Eastgobi aimak, 3 km E Zuun-Bajan, alt. 750 m, 27.VI.1963.
- No. 119. Central aimak, 12 km SE Ulan-Baator, Nucht i. Bogdo ul, alt. 1500 m, 12.VI.1964.
- No. 186. Bajanchongor aimak, SE end of Lake Orog nuur, alt. 1200 m, 24.VI.1964.
- No. 200. Bajanchongor aimak, 4 km S Somon Žinst, Tujn gol, alt. 1480 m, 26.VI.1964.
- No. 220. Uburchangaj aimak, Changai mountains, Ongijn gol, 10 km ENE Arbajcher, alt. 1800 m, 29.VI.1964.
- No. 303. Central aimak, Kerulen, 45 km E Somon Bajandelger, alt. 1340 m, 26.VII.1965.
- No. 324. Chentej aimak, 7 km NE Somon Mörön, alt. 1200 m, 28.VII.1965.
- No. 325. Chentej aimak, 15 km E Öndörchaan, 1 km S Kerulen, alt. 1000 m, 29.VII.1965.
- No. 370. Sucheabaator aimak, Molcog elis, 2 km S Somon Dariganga, alt. 1150 m, 6.VIII.1965.
- No. 396. Čojbalsan aimak, SW corner of Lake Bujr nuur, alt. 585 m, 11.VIII.1965.
- No. 399. Čojbalsan aimak, Chamardavaa uul, 80 km SE Somon Chalchingol, alt. 600 m, 12.VIII.1965.
- No. 409. Čojbalsan aimak, Somon Chalchingol, alt. 600 m, 13.VIII.1965.
- No. 415. Čojbalsan aimak, Menengijn valley, 80 km WSW of SW corner of Lake Bujr nuur, alt. 600 m, 14.VIII.1965.

- No. 442. Čojbalsan aimak, 32 km SE Somon Bajan-uul, alt. 750 m, 18.VIII.1965.
- No. 475. Chentej aimak, 10 km N Somon Delgerchaan, alt. 1250 m, 23.VIII.1965.
- No. 501. Central aimak, Ulan-Baator, Zaisan in Bogdo uul, alt. 1600 m, 6.VI.1966.
- Nos. 502-503. Central aimak, Songino, 24 km SW Ulan-Baator, alt. 1300 m, 7.VI.1966.
- No. 528. Central aimak, 2-7 km W Somon Lun, alt. 1200 m, 17.VI.1966.
- No. 530. Bulgan aimak, about 20 km W Somon Bajannuur, alt. 1100 m, 17.VI.1966.
- No. 619. Chovd aimak, 3 km N Somon Uenč in the valley Uenč gol, alt. 1450 m, 3.VIII.1966.
- No. 629. Chovd aimak, 10 km SSW Somon Bulgan, alt. 1200 m, 4.VII.1966.
- No. 640. Chovd aimak, at River Bulgan gol, about 15 km N Somon Bulgan, alt. 1300 m, 7.VII.1966.
- No. 673. Chovd aimak, Jamatin Dolon, about 40 km N Somon Manchan at the SW corner of Char us nuur, alt. 1200 m, 11.VII.1966.
- No. 674. Same locality.
- No. 742. Central aimak, Tola valley between Somon Altanbulag and Somon Tariat, 30 km ENE Tariat, alt. 1200 m, 24.VII.1966.
- No. 1000. Chövsgöl aimak, 7 km WSW Somon Cecerleg at River Tesijn gol, alt. 1820 m, 22.VI.1968.
- No. 1012. Uvs aimak, at River Baruunturuun gol, down-stream of Somon Baruunturuun, alt. 1280 m, 25.VI.1968.
- No. 1116. Chövsgöl aimak, 8 km N Somon Burenchaan, at River Delger mörön, alt. 1450 m, 16.VII.1968.
- No. 1144. Bulgan aimak, 11 km W Somon Bajannuur at Lake Bajan nuur, alt. 1000 m, 24.VII.1968.
- No. 1145. Bulgan aimak, 11 km W Somon Bajannuur at Lake Bajan nuur, alt. 1000 m, 24.VII.1968.
- No. 1148. Central aimak, 25 km E Somon Lun, alt. 1200 m, 25.VII.1968.

1. **Heterocerus parallelus** Gebler, 1830  
Fig. 6

*H. parallelus* Gebler, 1830:102.  
*H. salinus* Kiesenwetter, 1843:204.  
*H. maxillosus* Motschulsky, 1854:15.  
*H. cornutus* Motschulsky, 1854:15.

**Distribution:** Central Europe, Siberia.

**Material studied/Loc. No. (Exx.):** 324 (1), 325 (1), 370 (7), 396 (82), 399 (6), 409 (2), 415 (2), 475 (2), 530 (3), 629 (1), 673 (23), 742 (1), 1144 (8), 1148 (1), Čojbalsan aimak, Čojbalsan, IX–X.1968, leg. G. Márton, 1 ♂, 1 ♀.

The species seems to be widely distributed in Mongolia. It has been found in fifteen localities – all of them sandy. Sometimes it occurs together with *H. flexuosus* or *H. kaszabi*, sometimes with *H. fenestratus*. Most often it has been collected at light near lakes or rivers, but there are also records from *Stipa*-, *Calamagrostis*- and *Artemisia*-steppes, without permanent water. *H. parallelus* is considered to be halobiontic (Urban 1933), but there are no Mongolian records from the regions around the salt lakes or salt marshes.

2. **Heterocerus flexuosus** Stephens, 1828  
Fig. 8

*H. flexuosus* Stephens, 1828:101.  
*H. marginatus* Gyllenhal, 1808:137.  
*H. femoralis* Krynický, 1832:115.  
*H. arenarius* Kiesenwetter, 1851:284.  
*H. fausti* Reitter, 1880 (nec 1879):545, *syn. nov.*  
*H. dentifasciatus* Kuwert, 1890:525, 542.  
*H. damryi* Kuwert, 1890:525, 542.  
*H. heydeni* Kuwert, 1890:526, 543, *syn. nov.*  
*H. apfelbeki* Kuwert, 1890:527, 543.  
*H. corsicus* Rey, 1890:163.  
*H. hauseri* Kuwert, 1893:17.  
*H. senegalensis* Fairmaire, 1894:652.

**Distribution:** Europe, N Africa, Turkestan.

**Material studied:** 396 (81), 399 (2), 673–674 (13).

*H. flexuosus* has been found together with *H. parallelus* at lakes or rivers with sandy shores. Like *parallelus* it is halobiontic, at least in Europe (Larsen 1936, Clarke 1973), and in N Africa (Charpentier 1965).

I have examined the holotype and three paratypes of *H. fausti* in the Budapest Museum, and found them identical with pale specimens of *H. flexuosus*. The paratypes are all females, whereas the holotype probably is a male, but without the genitalia, which have been eaten by

museum beetles. One of the paratypes is marked “Vielleicht ab von *parallelus*” (Reitter’s handwriting?). In the Institut Royal in Brussels, there are four additional specimens (and in the Paris museum one specimen), all of which originate from Faust’s collection in the Caucasus and clearly identical with the type specimens (also identified as *fausti* by Reitter and by Mamitza). One of the specimens is a male with an aedeagus typical of *flexuosus*.

Concerning *H. heydeni*, I have not been able to find the type specimens (not in Paris), but the original description fits exactly to *H. flexuosus* in its most common colour form (with yellow legs) in Mongolia, Turkestan and N Africa. Specimens from Tashkent, now preserved in the Leningrad Museum, have been identified by Zaitzev as “*H. parallelus* Gebler, subsp. *heydeni* Kuwert.”. Their male genitalia, however, are identical with *flexuosus*.

An additional pale form of *H. flexuosus* from Ireland was described as *H. arenarius* by Kiesenwetter (synonymized by Zaitzev 1910:57).

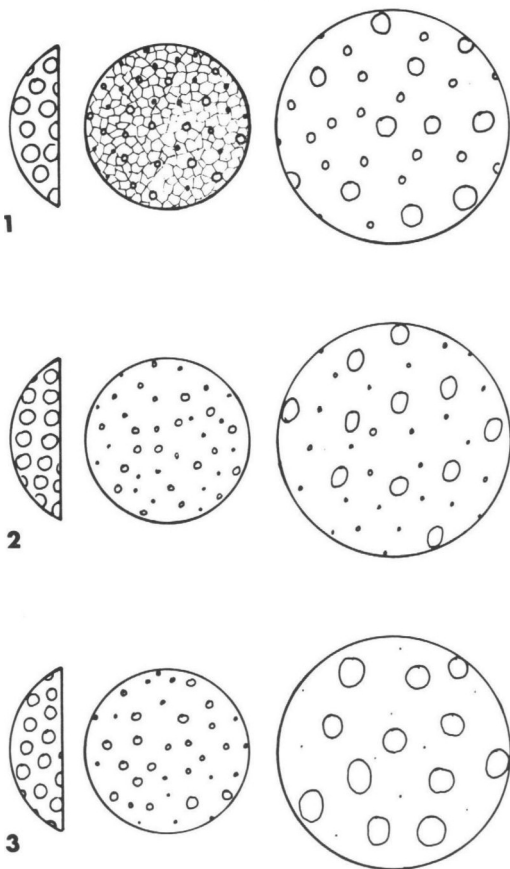
Like in N Africa (Charpentier loc. cit.), Asian *flexuosus* almost always have yellowish legs, a condition which is much rarer in Europe. A further difference between Asian and European populations concerns the post-mesocoxal line. Although very faint, and scarcely visible in certain specimens, it seems to be always present in European and N African specimens, whereas it is most often completely absent in Asia. As neither the leg colour nor the post-mesocoxal line constitutes absolutely consistent distinguishing characters, there is no reason for establishing different geographical races of *flexuosus*.

3. **Heterocerus kaszabi** n.sp.

Figs 1, 4, 7

**Type locality:** Mongolia, Čojbalsan aimak at Lake Bujr nur.

**Type material:** Holotype, ♂ Mongolia, Čojbalsan aimak, SW corner of Lake Bujr nur, alt. 585 m 11.VIII.1965. Loc. 396, leg. Kaszab, in coll. Budapest Mus. Paratypes: Same data, 1 ♀ (allotype), 614 exx. – Eastgobi aimak, 3 km E Zuun-Bajan, alt. 750 m, 27.VI.1963. Loc. 41, 75 exx (pale specimens). – Bajanchongor aimak, SE corner of Lake Orog nur, alt. 1200 m, 24.VI.1964. Loc. 186, 1 ex. – Čojbalsan aimak, Menengijn valley, 80 km WSW the SW end of Lake Bujr nur, alt. 600 m, 14.VIII.1965. Loc. 415, 1 ex.



Figs 1-3. Punctuation of a central part of pronotum (middle) and elytron (right), compared with the size of the eye facets (left). - 1. *Heterocerus kaszabi* n.sp. - 2-3. Two extremes of *H. interspidulus* n.sp.

**Diagnosis:** *H. kaszabi* is easily confused with *H. flexuosus*. The male aedeagus, however, is much more like *parallelus*: its elongate form, and the deep separation of the two parameres (even deeper than *parallelus*) are distinct from *flexuosus*. Externally, the species can be distinguished from *flexuosus* by its elytral pubescence. This is more whitish than in *flexuosus*, and the recumbent pubescence is slightly denser and constituted by slightly thicker hairs. Furthermore, scutellum is slightly below elytral plane, in contrast to *flexuosus*, and the lateral node of the mandibulae is usually somewhat more protruding. Also the presence of diffuse post-mesocoxal lines on metasternum distinguishes *H. kaszabi* (absent in most Mongolian *flexuosus*). The above-mentioned external characters can only be used to separate *H. kaszabi* from Mongolian specimens of *flexuosus*. In other parts of its area, *flexuosus* occur with exactly the same external characters as *kaszabi*: concerning pubes-

cence, scutellum, mandibular nodes and post-mesocoxal lines.

### Description

Length (both sexes): 3.5-5.2 mm; breadth (across shoulders): 1.45-2.00 mm.

**Head** black or brownish-black, fairly flat, densely, shallowly and very diffusely punctate and rugose; punctures of varying size, much smaller than eye facets; interspaces bulbous. Pubescence white or yellowish-white, dense and rather short; recumbent or semi-recumbent hairs about half as long as semi-erect, slightly more frequent. Male clypeus without frontal teeth or median node. Labrum somewhat transverse or (more seldom) slightly oblong; apex usually protruding. Mandibulae fairly short and curved; with a more or less protrusive lateral node (more so in most males), dorsal lobe absent; prostheca fairly small, its median edge very densely and finely haired. Antennae 11-jointed with 7-segmented club, yellowish to brownish; the apical joints often gradually darker.

**Pronotum** black or black-brown, sides more or less widely and distinctly reddish-yellow or yellow, widest at anterior and posterior angles; front margin and a longitudinal mid-line often narrowly and diffusely reddish-yellow. Uniformly convex, in females usually slightly narrower than elytra across the shoulders, in males often about the same width. Breadth: length = 1.6-1.8. Sides slightly convex, especially in females; converging anteriorly, most so in females. No basal ridge at posterior angles. Surface fairly distinctly punctate (fig. 1); punctures of two sizes, large punctures about half as wide as eye facets, separated by two to three diameters; small punctures about one-third as wide as the large, of about same frequency. Interspaces not bulbous, usually with an exceedingly fine isodiametric mesh-like microsculpture, meshes about twice as wide as large punctures. Dorsal pubescence of same colour as on head; thick, recumbent hairs usually at least half as long as thinner, semi-erect hairs, much more abundant than these. At a point about one-third pronotal length from basal line certain specimens have a small, diffuse depression on each side of the longitudinal mid-line.

**Elytra** moderately convex, 1.5-1.7 times longer than broad across the shoulders, in both sexes usually widest slightly behind middle.

Humeral depression wide and shallow, anteriorly in rare cases very obscurely and incompletely prolonged along base towards scutellum; lateral depression shallow; discal depression absent. Elytra sometimes very obscurely substriate throughout their length, except for apical fifth. Base, shoulders and sides even. Epipleura without ridge. Punctuation rather rough (fig. 1); large punctures 1.5 times larger than eye facets, roundish and fairly deep, separated by 1.5–2.5 diameters; small punctures round and of about one-third the size of the latter; interspaces slightly bulbous. Pubescence conspicuously white or whitish-yellow, moderately dense, double. Recumbent hairs somewhat thicker and more numerous than semi-erect hairs, one-third to a half as long. Colour brownish-black to black, sometimes lightly brownish-yellow (especially in loc. 41: a salt lake in Eastgobi aimak), with more or less distinct yellowish spots or bands, arranged as in *flexuosus*: one band close to entire side margin, confluent with a wide posthumeral mark, and with a wide mark in the postero-lateral region of elytra. In its frontal end the latter is confluent with a triangular discal spot, and in its inner end the posthumeral mark is often confluent with an elongate postscutellar spot. The latter is sometimes prolonged forwards and confluent with a band at elytral front margin. This band is usually narrow, but always slightly wider at about one scutellar length from scutellum. Finally, there is one apical spot near the suture, roundish or slightly elongate, sometimes narrowly confluent with the marginal band. Sometimes the elytral suture is diffusely and narrowly paler. Epipleura yellow. The colour of the elytra is considerably variable, and the spots and marks are sometimes completely fused together. In other cases, the extension of the spots is reduced, and the posthumeral and the postscutellar marks may be absent.

*Scutellum* slightly below elytral plane, flat, yellowish-brown to black-brown; its apex pointed.

*Ventral surface* black-brown to black, with sides of abdomen and apical three-fourths of fifth sternite reddish-yellow to yellow. Pubescence long and fairly thick, yellowish-white and of varying length; shortest, densest and most recumbent on metasternum. Sternites usually roughly and rugosely punctate; punctures usually diffuse, anteriorly sparse, posteriorly denser. Interspaces more or less bulbous. Postmesocoxal lines of metasternum present, but

exceedingly diffuse. The transverse ridge of mesosternum is elevated in all of its roof-shaped length. Ridges of first sternite distinct, incomplete.

*Legs* with tarsi yellow to reddish-yellow, sometimes the basal parts and lower margin of the tibiae dark-brown to black; anterior tibiae darkest, their outer edge with 8–10 fairly slender spurs.

*Aedeagus* (fig. 4) weakly sclerotized, elongate; basal piece and parameres completely fused together; parameres widely and deeply separated to more than a half of the length of tegmen. Median lobe situated ventrally to tegmen (aedeagus turned 180°) or dexterio to tegmen (aedeagus turned 90°); at some distance from its apex furnished with a long, narrow, projectable flagellum. Length: 1.00–1.05 mm.

*Distribution*: Hitherto only known from five localities in eastern and southern Mongolia.

The species has been found together with *parallelus* and at light-traps together with *flexuosus* and *fenestratus*. Its presence in locality nr. 41 (on the shores of a salt lake) indicates that it is a halobiontic species.

As earlier pointed out (Charpentier loc. cit.), the aedeagus in *H. flexuosus* (and other members of the *flexuosus*-group) has turned 180° round its longitudinal axis so that the median lobe is situated ventrally to the tegmen; in other groups it lies dorsal to the tegmen. In Mongolia both *H. kaszabi* and, more seldom, *H. flexuosus* and *H. parallelus* occur with the aedeagus turned only half-way, so that the median lobe is situated to the right side of the tegmen.

#### 4. *Heterocerus fenestratus* Thunberg, 1784 Fig. 9

*H. fenestratus* Thunberg, 1784:3.

*H. laevigatus* Panzer, 1794:12.

*H. marshami* Stephens, 1828:101.

*H. pusillus* Waltl, 1839:221.

*H. multimaculatus* Motschulsky, 1854:18.

*H. croaticus* Kuwert, 1890:538.

*H. corsicus* Kuwert, loc. cit.

*H. tonkinensis* Grouvelle, 1896:5, *syn. nov.*

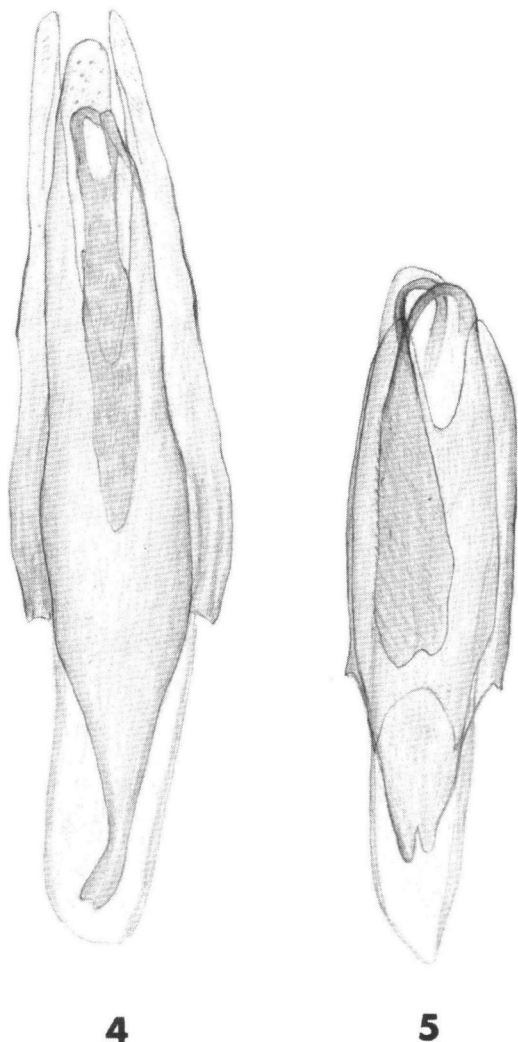
*H. latus* Grouvelle, 1915:134, *syn. nov.*

*H. asiaticus* Nomura, 1958:58, *syn. nov.*

*Distribution*: Palearctics, Philippine Islands.

*Material studied*: 325 (1), 409 (2), 442 (3), 1000 (46), 1144 (1).

The species has most often been collected at



Figs 4-5. 4. Aedeagus of *Heterocerus kaszabi* n.sp., ventral view. Length 1.00 mm. - 5. Aedeagus of *H. interspidulus* n.sp., dorsal view. Length 0.80 mm.

light near water on sandy localities together with *parallelus* and/or *kaszabi* and *intermedius*.

*H. tonkinensis* was described by Grouvelle from "Tonkin, Collection Fleutiaux et Grouvelle". There are two type specimens of *H. tonkinensis* in existence, both of which are females. One is preserved in the Paris museum and has no locality label. It has been slightly damaged by museum beetles. The other is in the British Museum, and is labelled "Siam". Both specimens are clearly identical with *H. fenestratus*, and *H. tonkinensis* must therefore

be synonymized with *fenestratus*. I have selected the French specimen as the lectotype.

*H. latus* was described from Luzon in the Philippines. I have examined the two type specimens in the Paris Museum and selected the male as the lectotype. The appearance of the aedeagus and the external morphology are characteristic of *H. fenestratus*. There are no teeth on the male clypeus (see below). In the original description, the species is said to have 10-segmented antennae. This is not true; the antennae have 11 distinct segments as in *H. fenestratus*. *H. latus* is no doubt a synonym to *H. fenestratus*, a fact which extends the distribution of *H. fenestratus* to the Oriental Region.

*H. asiaticus* was described by Nomura, who considered it distinct from *H. fenestratus* because of the absence of teeth on front margin of the male clypeus, and because of certain differences in the elytral markings. Dr Nomura has kindly sent me East Asian specimens of what he considers as *H. asiaticus* and *H. fenestratus*. In my opinion, they are all *H. fenestratus*. The variation of the widely distributed *H. fenestratus* is great, and even in Europe it is often coloured exactly as *H. asiaticus*. In Europe males without teeth on the clypeal front margin are very rare but do occur; in E Europe and all of Asia the teeth are usually very small, if present. In Central Asia it is more rare to find specimens with teeth (in all the Mongolian specimens the teeth are absent), whereas in China, Korea and Japan two small teeth are more often present in the males. *H. asiaticus* is to be considered as a junior synonym to *H. fenestratus*.

#### 5. *Heterocerus obsoletus* Curtis, 1828 Fig. 9

*H. obsoletus* Curtis, 1828:224.

*H. marginatus* Marsham, 1802:400.

**Distribution:** Europe, southern Siberia, northern Turkestan. The species is most often found near salt-water, but there are also records from fresh water shores.

**Material studied:** 528 (2), 673-674 (198).

#### 6. *Heterocerus interspidulus* n.sp. Figs 2, 3, 5, 7

**Type locality:** Mongolia, Central aimak, Songino, 24 km SW of Ulan-Baator.

**Type material:** *Holotype*, ♂ Mongolia, Central aimak, Songino, 24 km SW of Ulan-Baator, alt. 1300 m,

7.VI.1966. Loc. 502–503, leg. Kaszab, in coll. Budapest Mus. *Paratypes*: Same data as holotype, 1 ♀ (allotype), 50 exx. – Bajanchongor aimak, 4 km S of Somon Žinst, Tujn gol, alt. 1480 m, 26.VI.1964. Loc. 200, 7 exx. – Central aimak, Kerulen, 45 km E of Somon Bajandelger, alt. 1340 m, 26.VII.1965. Loc. 303, 1 ex. – Central aimak, Ulan-Baator, Zaisan in Bogdo uul, alt. 1600 m, 6.VI.1966. Loc. 501, 2 exx. – Chovd aimak, at river Bulgan gol, ca 15 km N of Somon Bulgan, alt. 1300 m, 7.VII.1966. Loc. 640, 15 exx. – Uvs aimak, at river Baruunturuun gol, downstreams Somon Baruunturuun, alt. 1280 m, 25.VI.1968. Loc. 1012, 54 exx. – Chövsgöl aimak, 8 km N of Somon Burenchaan at river Delger mörön, alt. 1450 m, 16.VII.1968. Loc. 1116, 4 exx.

*Diagnosis*: *H. interspidulus* is very closely related to the European *H. hispidulus* Kiesw., and it can be extremely similar to that species. The presence of a small ridge at the epipleural base seems to be the sole character, always distinguishing *interspidulus* from *hispidulus*. Such a ridge also exists in *H. intermedius* Kiesw. *H. interspidulus* is a much more variable species than *hispidulus*, and the elytral pubescence has sometimes the same appearance as in *H. intermedius*. The small teeth on the male clypeus are sometimes absent in *interspidulus* (never so in *hispidulus*), as is always the case in *intermedius*. However, the elytral shape, the morphology of the aedeagus and the number of segments in the antennae are always different from *intermedius*.

### Description

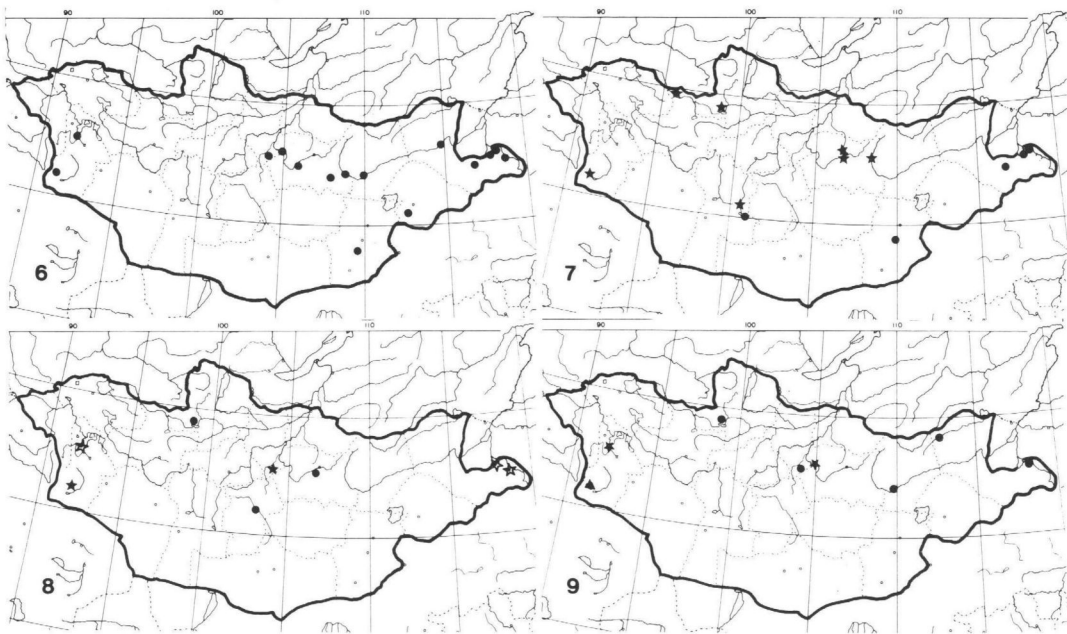
Length: 3.5–4.4 mm, males usually smaller than females; breadth (across shoulders): 1.40–1.70 mm.

*Head* black or brownish-black, fairly flat, densely, shallowly and diffusely punctate and rugose; punctures of varying size, much smaller than eye facets; interspaces more or less bulbous. Pubescence yellowish-white to brownish-yellow, dense and fairly long; recumbent hairs much shorter than semi-erect to erect hairs, of about same frequency. Length of semi-erect and erect hairs varying; longest and most erect hairs about as long as antennal club. Male clypeus sometimes (not always) with two small frontal teeth. Labrum usually slightly transverse, with apical part protruding. Mandibulae rather short and curved; with a more or less protrusive lateral node (most so in males), dorsal lobe absent; prostheca fairly small, its median edge with some sparse and rough bristles or teeth. Antennae 10-jointed with 6-segmented club, uniformly reddish-brown to black-brown.

*Pronotum* black or black-brown, anterior angles often diffusely reddish-yellow to reddish-

brown; this colour is sometimes prolonged backwards along sides and even along the curved basal ridge at posterior angles. Front margin usually diffusely and narrowly reddish-brown, as is also the basal half of the longitudinal midline. Disc moderately convex, or slightly flattened in longitudinal direction; in both sexes slightly narrower than elytra across the shoulders; breadth : length = 1.7–1.9. Sides slightly convex, converging anteriorly in all their length in females, in their frontal half in males. Basal ridge reaching lateral edges, slightly curved at posterior angles of pronotum. Surface distinctly punctate (figs. 2, 3), size of punctures varying from about one-sixth to about half the width of eye facets; all punctures separated from each other by at least two diameters. Interspaces not bulbous. Dorsal pubescence of same colour as on head, double; recumbent hairs as thin as erect hairs, usually denser than the latter, and most often one-fourth to one-third as long. In many specimens there is a small depression on each side of the longitudinal midline, at a point about one-third pronotal length from basal line.

*Elytra* moderately convex, parallel-sided, 1.6–1.7 times longer than broad across the shoulders. Humeral and lateral depressions usually slightly deeper than *kaszabi*, discal depression absent or exceedingly shallow. Elytra sometimes very obscurely substriate as *kaszabi*. Side edges (and shoulders) smooth or often very finely and sparsely dentate, especially in anterior two-thirds. Punctuation rough, distinct, and extremely variable (figs. 2, 3); sometimes simple, with large punctures almost three times wider than eye facets and separated by one to two diameters; most often double, with large punctures at most twice as wide as eye facets, surrounded by four to six times smaller punctures; interspaces shining, not bulbous or only slightly so. Pubescence varying; thin to very thin, yellowish-white to brownish-yellow; recumbent hairs most often about one-third as long as erect, of same thickness, usually somewhat more numerous. Colour brownish-black to black, with reddish-yellow spots and bands, usually distinct, and generally arranged as in *kaszabi*. They are, however, never extended and fused together as completely as in *kaszabi*; instead, they are often reduced to small, isolated spots. The postscutellar spot is more often free than in *kaszabi*, whereas the apical spot usually is much more widely confluent with the marginal band. The latter is sometimes absent in anterior half of elytra. Epi-



Figs 6-9. Mongolian distribution of *Heterocerus* spp. - 6. *H. parallelus* Gebl. - 7. *H. kaszabi* n.sp. (●), *H. interspidulus* n.sp. (★). - 8. *H. intermedius* Kiesw. (●), *H. marmota* Kiesw. (★), *H. flexuosus* Steph. (☆). - 9. *H. fenestratus* Thbg. (●), *H. obsoletus* Curt. (★).

pleura yellowish to brownish-black, their base with an oblique ridge, most often shorter and thinner than *intermedius*.

*Scutellum* almost as in *kaszabi*, but often black.

*Ventral surface* black-brown to black, with sides of abdomen, or at least those of sternites II-V, more or less reddish-yellow to reddish-brown. Pubescence long and thin, yellowish, of varying length, shortest, densest and most recumbent on metasternum, recumbent hairs slightly shorter and thinner than *kaszabi*. Punctuation as in *kaszabi*, but less dense; interspaces more shining. Post-mesocoxal ridges of metasternum distinct. The curved ridge of mesosternum almost as in *kaszabi*, but less elevated in its median parts. Ridges of first sternite distinct, complete; fairly gently curved.

*Legs* reddish-yellow or reddish-brown to black, tibiae conspicuously dark; tarsi and ends of tibiae and of femora usually lighter; outer edge of front tibiae with 8-10 fairly short spurs.

*Aedeagus* (fig. 5) weakly sclerotized, parallel-sided, basal piece and parameres completely fused together; parameres widely separated to about one-fourth of the length of tegmen. Me-

dian lobe situated dorsally to tegmen, near apex with a fairly wide, projectable flagellum. Length: 0.80 mm.

*Distribution*: *H. interspidulus* is only found in Mongolia, where it seems to be a common species on river banks. It has never been collected together with other species of *Heterocerus*.

#### 7. *Heterocerus intermedius* Kiesenwetter, 1843 Fig. 8

*H. intermedius* Kiesenwetter, 1843:209.

*H. maritimus* Motschulsky, 1845:353.

*H. motschulskyi* Reiche, 1879:239.

*Distribution*: The species is a northern element in Mongolia, being Holarctic, with most records from N Europe, Siberia and N Canada.

*Material studied*: 119 (1), 220 (1), 1000 (9).

*H. intermedius* has been found in three Mongolian localities. Like *H. interspidulus* it seems to prefer river banks.

## 8. ? *Heterocerus marmota* Kiesenwetter, 1850

? *H. marmota* Kiesenwetter, 1850:224.

? *H. nanus* Gené, 1836:183.

? *H. unicolor* Dufour, 1851:333.

? *H. funebris* Schaufuss, 1862:48; Mamitza: 1935:27.

*H. maritimus* Kuwert, 1890:536.

**Distribution:** *H. marmota* is known as a South European species. The following records from Mongolia (sandy localities) are therefore very remarkable.

**Material studied:** 619 (2), 1145 (2).

All the Mongolian specimens are females, and they are quite indistinguishable from European *marmota*. For the moment there is therefore no reason to describe them as a new species. For a final identification additional material is required, and preferably males for the necessary examination of the aedeagus.

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