

REICHENBACHIA

STAATLICHES MUSEUM FÜR TIERKUNDE IN DRESDEN

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Nr. 26

188. Cryptophagidae: Atomariinae Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei (Coleoptera)

mit 15 Figuren

COLIN JOHNSON
Manchester

Through the kindness of Dr. ZOLTÁN KASZAB of the Hungarian Natural History Museum, Budapest, the writer has had the privilege of studying all the *Cryptophagidae-Atomariinae* collected by Dr. KASZAB on his six expeditions to Mongolia, over the years 1963–1968.

The material consists of 1305 specimens, of which 1304 belong to the extensive genus *Atomaria* STEPHENS and comprise 18 species. Of these, four species are new to science and are described below under the names *trapeziformis*, *obscura*, *mongolica* and *kaszabi* spp. n. Three further species, probably also new, are not described due to being represented by insufficient material, a further species is doubtfully identified as *plicata* REITTER, and a little-known Siberian species, *lateralis* REITTER, is re-described, figured, and a lectotype and paralectotype designated for it. A single specimen of *Ephistemus globulus* (PAYKULL) is also represented amongst the material.

In listing the data of the specimens, the complete habitat data has been included in every case: this is not to be found on the actual data labels, but is indicated there by a number. The corresponding details were extracted from Dr. KASZAB's published lists of localities and habitats (KASZAB 1963, 1965a, 1965b, 1966, 1968a, 1968b).

References to the descriptions of the species are kept to a minimum in the present work. The ones listed (apart from the original description and the more well-known synonyms) are considered to be the more important ones. Hence these primarily include REITTER's key to the European species (1887) which, although very much out of date, is the only comprehensive work on the genus *Atomaria*, as well as SJÖBERG's valuable work (1947) in which he figures the genitalia of the Fennoscandian species plus those of a few others from neighbouring parts of Europe and Siberia.

Some specimens of all the species, other than those represented by a single specimen, will be deposited in the Manchester Museum, through the courtesy of Dr. KASZAB.

Genus *Atomaria* STEPHENS, 18301. *Atomaria* (s. str.) *fuscicollis* MANNERHEIM

Atomaria fuscicollis MANNERHEIM 1852, Bull. Moscou XXV: 338; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 41; SJÖBERG 1947, Entom. Tidskr. 68: 95, 118 (genitalia).

Central aimak Tosgoni ovoo, 6–10 km N von Ulan-Baator, 1700 m, 4.–8. VI. 1968, Nr. 936, „Im Birkenwald am Fuß der Bäume und aus faulendem Laub, sowie Graswurzeln gesiebt“, 1 ex. — Chovd aimak 3 km N von Somon uenč im Tal Uenč gol, 1450 m, 3. VII. 1966, Nr. 619, „Am Flußufer, von der steinigen, sandigen und grasigen Stelle ausgeschwemmt“, 1 ex.

Wider Distribution Europe, Caucasus and U. S. A.

2. *Atomaria* (s. str.) sp., indet.

Central aimak 12 km SO von Ulan-Baator, Nucht im Bogdo ul, 1500 m, 6. VII. 1964, Nr. 271, „Zwei Bodenfallen mit Ethylenglycol im Walde (eingegraben am 12. VI. 1964) auf der nördlichen Seite, eine in der Nähe des Baches, die zweite an der Bergseite“, 1 ex.

Remarks. This single specimen, a female, seems to be allied to the European species *bescidica* REITTER and *atrata* REITTER. It is larger and has proportionately longer elytra than in either of these two species, as well as possessing the following characters: antennal structure similar to that in *bescidica*, ie. segments 9 and 10 rather strongly transverse, but the club darkened; base of pronotum impressed as in *bescidica*, but puncturation somewhat intermediate between the two species; sides of the pronotum subparallel, the pronotum a little narrower than the elytra; body form rather convex, predominantly blackish as in *atrata*.

3. *Atomaria* (s. str.) *trapeziformis* sp. n. (Figs. 1–3)

Length 1.5–2.0 mm, elongate, 2.29–2.33 times as long as broad, strongly arched, covered with decumbent pale pubescence — the hairs moderate in length, approximately 0.04 mm.

Head and pronotum black; elytra dark brown, generally suffused with black on the disc, this extending to the base; antennae and legs yellowish-brown, darker in some specimens than in others, the femora often more-or-less darkened. Teneral specimens (of which there are a number in the type series) are entirely yellowish in colour.

Antennal structure as in fig. 1; segments 9 and 10 markedly transverse, the latter more so.

Pronotum transverse, broadest close to the base where it is 1.45–1.49 times as broad as long, and slightly narrower than the elytral base, and strongly narrowed towards the front; pronotal surface dull and uneven, due to it being closely covered with very shallow but large punctures which are less than half a diameter apart on an average, as well as being very strongly shagreened. Base of the pronotum without any obvious basal groove, but towards the obtuse hind angles it becomes somewhat flattened. Elytra strongly arched, the sides almost straight, broadest a little behind the middle, about 2.6 times as long as the pronotum, and 1.55–1.68 times as long as together broad. Surface strongly shagreened, shining, rather strongly punctured, the punctu-

res in the basal half smaller than the pronotal ones, and approximately one to one and a half diameters apart from their lateral neighbours. Humeral angle with a very well-developed and conspicuous projecting tooth. Hind wings fully developed.

Under surface and the basal half of the first visible abdominal sternite strongly and closely punctured and shagreened, the remainder of the sternites minutely and indistinctly punctured, although very strongly shagreened.

Aedeagus fig. 2, spermatheca fig. 3.

Remarks. This is an extremely distinctive species, which can be distinguished at once from all other members of the genus by the shape and sculpture of the pronotum and the projecting humeral tooth of the elytra. It thus occupies rather an isolated position in the genus.

Habitat. *A. trapeziformis* is the most interesting species found in Mongolia. It clearly lives and breeds in the nests of the vole *Microtus brandti*, and seems to be the first-known exclusive nidicole in the subgenus.

Holotype ♂ Mongolia — Central aimak 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 16. VII. 1967, Nr. 924, „2 *Microtus*-Neste ausgegraben und im Berlese-Apparat anlaufen lassen“

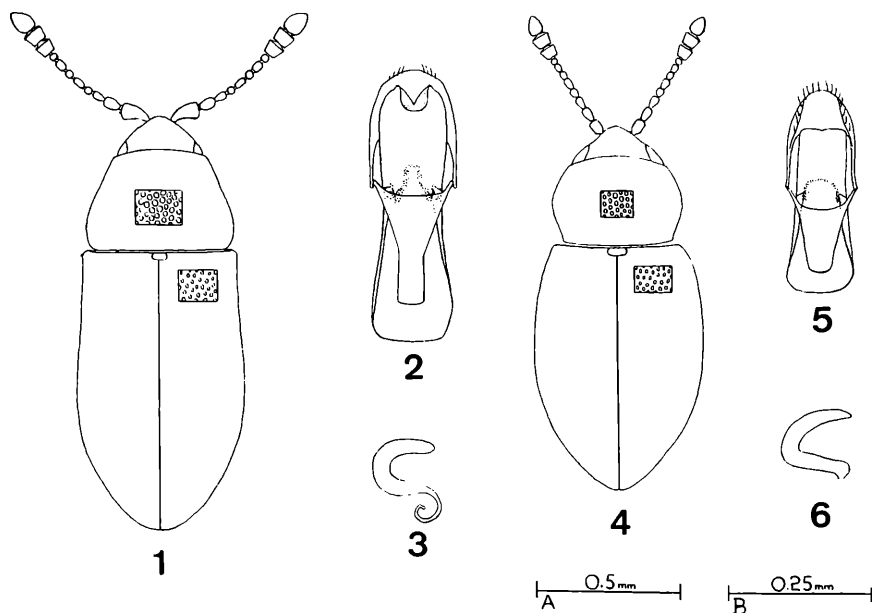
Paratypes: Mongolia — Central aimak Bogdo ul, Bugijn až achuj, 1650 m, 31. VI. 1967, Nr. 755, „Zwischen Pflanzenwurzeln und vom Fuß alter Bäume am Talgrund gesiebt“, 1 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 8. VI. 1967, Nr. 772, „2 Neste vom *Microtus brandti* ausgegraben und in Berlese-Apparate anlaufen lassen“, 22 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 15. VII. 1967, Nr. 921, „Gekötschert, vorwiegend in einem Wasserriß“, 1 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 16. VII. 1967, Nr. 924, „2 *Microtus*-Neste ausgegraben und im Berlese-Apparat anlaufen lassen“, 300 ex. — Chentej aimak 20 km SW von Somon Batnorov, 1000 m, 20. VIII. 1965, Nr. 454, „Trockene Steppe, flache Berge, breite Bergrücken, Nest eines *Microtus brandti* ausgegraben und im Berlese-Apparat ausgelaufen“, 2 ex. — Čojbalsan aimak 80 km NW von Čojbalsan, 700 m, 17. VIII. 1965, Nr. 431, „5 Neste von *Microtus brandti* ausgegraben und im Berlese-Apparate ausgelaufen“, 3 ex. — Uburchangaj aimak Changaj Gebirge, 21 km O von Somon Narijntee, 2080 m, 27. VI. 1964, Nr. 212, „Hochgebirgssteppenwiese. Ausgegraben und anlaufenlassen von 2 *Microtus*-Nestern in Berlese-Apparaten“, 2 ex. — Zavchan aimak 45 km WNW von Somon Nömörög, 1850 m, 13. VII. 1968, Nr. 1101, „*Microtus*-Nest ausgegraben und in Berlese-Apparaten anlaufen lassen“, 165 ex. Holotype and 395 paratypes in the Zoology Department of the Natural History Museum, Budapest, 100 paratypes in the Manchester Museum.

(4) *Atomaria* (s. str.) *prolixa* ERICHSON

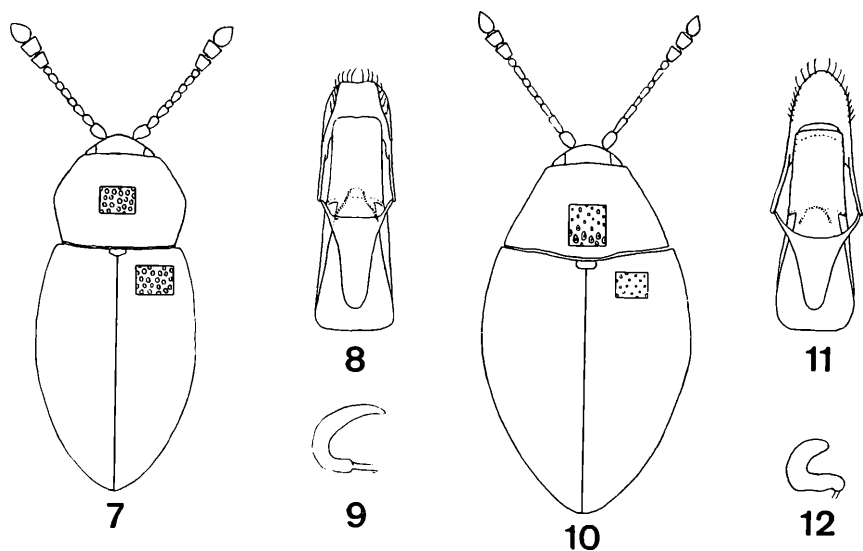
Atomaria prolixa ERICHSON 1846, Naturgesch. Ins. Deutschl. Col. III: 381; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 40; SJÖBERG 1947, Entom. Tidskr. 68: 96, 118 (genitalia); JOHNSON 1967, Entomologist 100: 41–44 (genitalia).

Bulgan aimak Namnan ul Gebirge, 23 km NW von Somon Chutag, 1150 m, 17. VI.–21. VII. 1968, Nr. 976, „10 Ethylenglycol-Bodenfallen, eingegraben am Birkenwald (aufgehoben am 21. VII. 1968)“, 1 ex.

Wider Distribution Europe and Siberia.



Figs. 1—3. *Atomaria (s. str.) trapeziformis* sp. n. 1: male — 2: aedeagus — 3: spermatheca — Figs. 4—6. *Atomaria (Anchicera) obscura* sp. n. 4: female — 5: aedeagus — 6: spermatheca. (Figs. 1 and 4 to scale A, figs. 2—3 and 5—6 to scale B).



Figs. 7—9. *Atomaria (Anchicera) mongolica* sp. n. 7: male — 8: aedeagus — 9: spermatheca — Figs. 10—12. *Atomaria (Anchicera) kaszabi* sp. n. 10: male — 11: aedeagus — 12: spermatheca. (Structures to the same scales as in Figs. 1—6).

(5) **Atomaria (Anchicera) kamtschatica** MOTSCHULSKY

Atomaria kamtschatica MOTSCHULSKY 1845, Bull. Moscou XVIII: 362.

Atomaria globicollis REITTER 1896, Wien. Ent. Zeit. XV: 69.

Atomaria kamtschatica; SJÖBERG 1947, Entom. Tidskr. 68: 98, 118 (genitalia).

Archangaj aimak Changaj Gebirge, zwischen Somon Ichtamir und Somon Čuluut, 20 km W von Ichtamir, 2150 m, 19. VI. 1966, Nr. 544, „typische Hochgebirgssteppe mit Nadelwäldern und im Tal mit sehr üppiger Vegetation, blühende Trollius-Wiesen, usw. 8 Bodenfallen mit Ethylenglycol (aufgenommen am 19. VII. 1966)“, 20 ex. — **Bulgan aimak** Namnan ul Gebirge, 23 km NW von Somon Chutag, 1150 m, 17. VI.—21. VII. 1968, Nr. 976, „10 Ethylenglycol-Bodenfallen, eingegraben am Birkenwald (aufgehoben am 21. VII. 1968)“, 2 ex.

Wider Distribution Eastern Siberia. The species is reputed to occur in north west U. S. A. (including Alaska), but none of the specimens originally identified as this species and subsequently examined by the writer were correctly identified, so that its presence in the Nearctic Region would appear to require confirmation.

HOLDHAUS (1903: 360–361) has previously recorded *kamtschatica* from Northern Mongolia — but without precise locality — on material collected by HANS LEDER.

(6) **Atomaria (Anchicera) peltata** KRAATZ

Atomaria peltata KRAATZ 1853, Stett. Ent. Zeit. XIV: 95; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 46; SJÖBERG 1947, Entom. Tidskr. 68: 98, 118 (genitalia).

Archangaj aimak Koschoo zaidam am Chogschin-Orchon, 35 km N von Somon Lun, 1490 m, 1. VII. 1964, Nr. 241, „*Milvus*-Nest am Rücken der steinernen Schildkröte des Denkmals. Probeentnahme aus dem Nest und dessen Anlaufenlassen in Berlese-Apparaten“, 1 ex. — **Bajanchongor aimak** Changaj Gebirge, Ulaan čolon, 18 km S vom Paß Egijn davaa, 2300 m, 21. VI. 1966, Nr. 552, „8 Bodenfallen mit Ethylenglycol (aufgenommen am 18. VII. 1966) an dem steinigen Talgrund neben dem Bach“, 19 ex. — **Bajan-Ölgij aimak** am Paß Schine davaa, 27 km S von Somon Cagannuur, 2690 m, 30. VI. 1968, Nr. 1045, „Hochgebirgssteppe, unter Steinen geeinzelt“, 1 ex. — **Bulgan aimak** 11 km W von Somon Bajannuur am See Bajan nuur, 1000 m, 14. VI.—24. VII. 1968, Nr. 958, „10 Ethylenglycol-Bodenfallen im Sand zwischen Caragana und Lasiagrostis eingegraben (aufgehoben am 24. VII. 1968)“, 2 ex. — **Central aimak** SO von Somon Bajancogt, 1600 m, 4. VII. 1964, Nr. 266, „Durchsieben des dünnen Laubes und Mooses vom Stamm der Bäume in Birkenwald und Anlaufen des Materials in Berlese-Apparaten“, 1 ex.; 12 km SO von Ulan-Baator, Nucht im Bogdo ul, 1500 m, 6. VII. 1964, Nr. 271, „Zwei Bodenfallen mit Ethylenglycol im Walde (eingegraben am 12. VI. 1964) auf der nördlichen Seite, eine in der Nähe des Baches, die zweite an der Bergseite“, 4 ex.; Ulan-Baator, Nucht im Bogdo ul, 1600–1700 m, 22. VII.—27. VII. 1965, Nr. 297b, „10 Bodenfallen mit Ethylenglycol im Walde, auf der nördlichen Bergseite, aufgenommen am 27. VIII. 1965, 1 ex.; SO von Somon Bajancogt, 1600 m, 11. VI. 1966, Nr. 520b, „5 Bodenfallen mit Ethylenglycol an einer südlich exponierten Bergsteppe, aufgenommen am 27. VII. 1966“, 3 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 7. VI. 1967, Nr. 768, „10 Ethylenglycol-Bodenfallen in dem steinigen Berghang, meist in der Nähe der Murmeltier-Bauten. Aufgenommen am 15. VII. 1967“, 6 ex.; Tosgoni ovoo, 6–10 km N von Ulan-Baator, 1700 m, 4.–8. VI. 1968, Nr. 936, „Im Birkenwald am Fuß der Bäume und aus faulendem Laub, sowie Graswurzeln gesiebt“, 2 ex.; Bugijn až achuj

im Geb. Bogdo ul, 36 km SW von Ulan-Baator, 1650 m, 10. VI. 1968, Nr. 941, „am Talgrund vor allem am Fuß alter Birken gesiebt“, 1 ex.; 11 km OSO von Somon Banzogt, 1600 m, 13. VI.—26. VII. 1968, Nr. 945, „10 Ethylenglycol-Bodenfallen im Wald eingegraben (aufgehoben am 26. VII. 1968)“, 1 ex. — *Chovd aimak* am Fluß Bulgan gol, ca. 15 km N von Somon Bulgan, 1300 m, 7. VII. 1966, Nr. 640, „Am Ufer geschwemmt“, 1 ex. — *Chövsgöl aimak* 6 km WNW von Somon Tosoncengel, 1480 m, 18. VI.—20. VII. 1968, Nr. 980, „10 Ethylenglycol-Bodenfallen, eingegraben am Rand eines trockenen Wasserrisses, neben einzeln stehenden Fichtenstämmen (aufgehoben am 20. VII. 1968)“, 2 ex.; 3 km SW von Somon Burenchaan, 1650 m, 21. VI.—16. VII. 1968, Nr. 993, „10 Ethylenglycol-Bodenfallen, eingegraben in einem breiten, steinigen, öden Gebirgstal neben einem Wasserriß (aufgehoben am 16. VII. 1968)“, 31 ex.; am See Tunamal nuur, 26 km SW von Somon Scharga, 1950 m, 21. VI.—15. VII. 1968, Nr. 996, „10 Ethylenglycol-Bodenfallen, eingegraben an der trockenen Gebirgssteppe (aufgehoben am 15. VII. 1968)“, 20 ex. — *Uvs aimak* am Fluß Chöndlön gol, 32 km NW von Stadt Ilaangom, 1200 m, 27. VI.—7. VII. 1968, Nr. 1028, „Sehr breit ausgedehntes Flußbett (derzeit ohne Wasser), mit Pappeln, an der Terrasse kurzrasige Steppe, hie und da Caragana. Neben dem Sajr 10 Ethylenglycol-Bodenfallen eingegraben (aufgehoben am 7. VII. 1968)“, 2 ex.

Wider Distribution Europe, Caucasus and Siberia.

Remarks. Mongolian and Siberian specimens seem to be smaller than those from Europe and to have the sides of the pronotum more weakly curved.

(7) ***Atomaria (Anchicera) lateralis* REITTER** (Figs. 13–15)

Atomaria lateralis REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 45. **Re-description** Length 1.3–1.71 mm, long-oval, 2.1–2.3 times as long as broad, moderately arched, covered with curved and somewhat outstanding pubescence, the hairs approximately 0.05 mm in length.

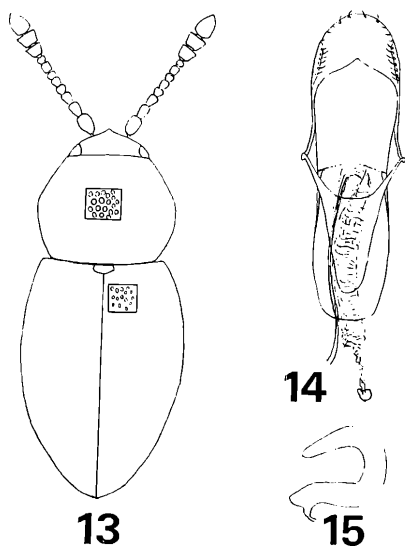
Body (apart from the slightly darker undersurface), legs and antennae unicolorous reddish-brown, lighter in some specimens.

Antennal structure as in fig. 13, segments 9 and 10 clearly transverse, the club therefore about 1.5 times as broad as the stem.

Pronotum transverse, broadest at the middle where it is 1.3–1.44 times as broad as long, strongly curved at the sides, and a little more contracted anteriorly than basally, where it is narrower than the base of the elytra; side borders only visible in the basal half, the edge rather finely crenulate in this region; pronotal surface feebly shining, closely covered with moderately large punctures which; on an average, are $\frac{1}{4}$ – $\frac{1}{2}$ a diameter apart from their lateral neighbours; surface not shagreened; hind angles very obtuse, but rounded off; pronotal disc convex; base of pronotum with a transverse depression.

Elytra moderately arched, weakly curved at the sides, broadest near the middle, 2.4–2.57 times as long as the pronotum, and about 1.5 times as long as together broad; surface weakly shining, strongly shagreened, rather closely punctured, the punctures in the basal half slightly smaller than those on the pronotum, and approximately $\frac{1}{2}$ –1 diameters apart from their lateral neighbours on an average. Hind wings partially developed, narrow, a little less than elytra in length.

Aedeagus fig. 14 (complete armature shown), spermatheca fig. 15.



Figs. 13–15. *Atomaria (Anchicera) lateralis* Reitter 13: male — 14: aedeagus — 15: spermatheca. (Structures to the same scales as in Figs. 1–6).

Central aimak Tosgoni ovoo, 6–10 km N von Ulan-Baator, 1700 m, Nr. 936, 4.–8. VI. 1968, „Im Birkenwald am Fuß der Bäume und aus faulendem Laub sowie Graswurzeln gesiebt“, 7 ex.

Wider Distribution Siberia (Vladivostok).

Type Material. REITTER's main collection in the Natural History Museum, Budapest, contains a single specimen of *lateralis* mounted on a triangular mount. This specimen is a female, and bears the label „*A. lateralis* m. Sibir. 1886“ (in REITTER's hand). It is herewith designated as the lectotype of *Atomaria lateralis* REITTER. In the Muséum National d'Histoire Naturelle, Paris, is conserved the collection of GROUVELLE, to whom a fairly complete collection of REITTER's Cryptophagidae went, and this collection contains a single specimen mounted in the same manner to the lectotype. It bears the following labels „Wladivostok, Sibiria“, „*A. lateralis* m. Wladivostok, Sib. or. type“ (both in REITTER's hand), „206“, „Coll. Reitter“ and „Type“ (these two latter without doubt affixed by GROUVELLE) and „*lateralis* Reitt.“ (apparently in GROUVELLE's hand). This specimen, from which the present writer has dissected out and mounted the genitalia (male), is herewith designated as a paralectotype.

Remarks. *A. lateralis* should be readily recognised by the following combination of characters: antennae somewhat thick, with segments 9 and 10 clearly transverse as in *peltata* KRAATZ, near which it may be placed; the reddish-brown colouration; strongly rounded sides and hind angles of the pronotum; and in the long, curved and somewhat outstanding elytral pubescence. Although the elytral pubescence is not quite so outstanding as in for example *lewisi* REITTER, it is much more so than in *peltata* and allied species.

(8) ***Atomaria (Anchicera) obscura* sp. n.** (Figs. 4–6)

Length 1.5–1.67 mm, about twice as long as broad, moderately arched, covered with decumbent pale pubescence, the hairs moderate in length, approximately 0.04 mm.

Head, pronotum and elytra dark brownish-black, the elytra occasionally lighter brown; antennae and legs brownish.

Antennal structure as in fig. 4, segments 9 and 10 clearly transverse, the club therefore about 1.5 times as broad as the stem.

Pronotum transverse, broadest at or just before the middle where it is 1.24–1.37 times as broad as long, thence contracted in a straight line towards the base, where it is much narrower than the base of the elytra; basal half of the side borders feebly crenulate; pronotal surface feebly shining, closely covered with moderately large punctures which, on an average, are slightly less than half a diameter apart from their lateral neighbours; surface not usually shagreened, except in a few specimens where shagreenation is present near the hind angles; hind angles distinct, slightly obtuse, somewhat projecting; pronotal disc convex; base of pronotum with a transverse depression.

Elytra moderately arched, rounded at the sides, broadest about the middle, 2.4–2.52 times as long as the pronotum, and about 1.5 times as long as together broad; surface feebly shining, weakly shagreened, rather closely punctured, the punctures in the basal third slightly smaller than those on the pronotum, and approximately one diameter apart on an average. Hind wings fully developed.

Aedeagus fig. 5, spermatheca fig. 6.

Remarks. This new species seems to come in the vicinity of *peltata* KRAATZ and the European *clavigera* GANGLBAUER. However, it is perhaps closer to the latter species, from which it differs in the more strongly and closely punctured elytra with their much more feeble shagreenation, the slightly narrower antennal club (which is nearer to that of *peltata*), the less black colouration, and in the elytra being slightly broader in proportion to the pronotum, as well as a little longer, although not as long as in *peltata*. It further differs from the last-named species by its broader form, the finer elytral puncturation, the less obtuse hind angles of the pronotum, its closer pronotal puncturation, slightly shorter first antennal segment, the lighter femora, and also by the elytral colouration: *obscura* does not seem to possess the light brown streak extending from the humeri to the disc of the elytra, which is almost invariably present in KRAATZ's species. The three species can be further distinguished by the primary sexual characters. Amongst the little-known species, *obscura* is very closely allied to the Siberian *subapicalis* REITTER, of which the present writer has examined two syntypical specimens. *A. subapicalis* differs however in its smaller size (1.1–1.2 mm), the uniform reddish-brown colouration, slightly shorter and thicker antennae (of which the club resembles that in *obscura*), slightly smaller and less close puncturation of the pronotum and elytra, as well as in the structure of the male genitalia.

Holotype ♂ Mongolia — U b u r c h a n g a j a i m a k Changaj Gebirge, Ongijn gol, 10 km ONO von Arbajcher, 1800 m, 29. VI. 1964, Nr. 220, „Am Flußufer an sandiger, schlammiger, kieseliger Stelle geeinzelt und mit Wasser ausgeschwemmt“.

Paratypes: Mongolia — Central aimak SO von Somon Bajancogt, 1600 m, 4. VII. 1964, Nr. 266, „Durchsieben des dürrn Laubes und Moooses vom Stamm der Bäume im Birkenwald und Anlaufen des Materials in Berlese-Apparaten“, 1 ex.; Kerulen, 45 km O von Somon Bajandelger, 1340 m, 24. VIII. 1965, Nr. 478, „Lager am Fluß Kerulen, Sammeln nachts bei Lampenlicht“, 1 ex.; SO von Somon Bajancogt, 1600 m, 11. VI. 1966, Nr. 520a, b, „4 Bodenfallen mit Ethylenglycol, in dem Wald, 5 Bodenfallen an einer südlich exponierten Bergsteppe, aufgenommen am 27. VII. 1966“, 2 ex.; Ulan-Baator, Nucht im Bogdo ul, 1650 m, 3. VI. 1967, Nr. 760, „Am Talgrund vom Fuß alter Bäume, zwischen Pflanzenwurzeln, von in Gruben angesammelten faulenden Pflanzen neben Birken und Nadelholz gesiebt“, 1 ex.; Ulan-Baator, Nucht im Bogdo ul, 1650 m, 3. VI. 1967, Nr. 762, „Am Talgrund neben dem Bach gekötschert, am Berghang vom blühenden Gebüsch“, 1 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 7. VI. 1967, Nr. 768, „10 Ethylenglycol-Bodenfallen in dem steinigen Berghang, meist in der Nähe der Marmeltier-Bauten. Aufgenommen am 15. VII. 1967“, 1 ex.; Tosgoni ovoo, 6—10 km N von Ulan-Baator, 1700 m, 4.—8. VI. 1968, Nr. 936, „Im Birkenwald am Fuß der Bäume und aus faulendem Laub sowie Graswurzeln gesiebt“, 1 ex. — Chövsgöl aimak 6 km WNW von Somon Tosoncengel, 1480 m, 18. VI.—20. VII. 1968, Nr. 980, „10 Ethylenglycol-Bodenfallen, eingegraben am Rand eines trockenen Wasserrisses, neben einzeln stehenden Fichtenstämmen (aufgehoben am 20. VII. 1968)“, 1 ex. — Uburchangaj aimak Changaj Gebirge, Ongijn gol, 10 km ONO von Arbajcher, 1800 m, 29. VI. 1964, Nr. 220, „Am Flußufer an sandiger, schlammiger, kieseliger Stelle geeinzelt und mit Wasser ausgeschwemmt“, 7 ex.

Holotype and 11 paratypes in the Zoology Department of the Natural History Museum, Budapest, 5 paratypes in the Manchester Museum.

(9) **Atomaria (Anchicera) pusilla** (PAYKULL)

Dermestes pusillus PAYKULL 1798, Faun. Suec. I: 295.

Atomaria pusilla; REITTER 1887, Verh. Nat. Ver. Brunn XXVI (Best.-Tab. 16): 46; SJÖBERG 1947, Entom. Tidskr. 68: 98, 118 (genitalia).

Central aimak 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 7. VI. 1967, Nr. 768, „10 Ethylenglycol-Bodenfallen in dem steinigen Berghang, meist in der Nähe der Marmeltier-Bauten“, 4 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 8. VI. 1967, Nr. 772, „2 Nester von *Microtus brandti* ausgegraben und in Berlese-Apparate anlaufen lassen“, 5 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 9. VI. 1967, Nr. 779, „Zwischen mit *Lasiagrostis* bedeckten sandigen Stellen, 10 Ethylenglycol-Bodenfallen. Aufgenommen am 13. VII. 1967“, 3 ex. — Chentej aimak zwischen Somon Zengermandal und Somon Zargaltchaan, 1400 m, 27. VII. 1965, Nr. 312, „10 Bodenfallen mit Ethylenglycol, aufgenommen am 22. VIII. 1965“, 1 ex.; 20 km SW von Somon Batnoroov, 1000 m, 20. VIII. 1965, Nr. 454, „Trockene Steppe, flache Berge, breite Bergrücken. Nest eines *Microtus brandti* ausgegraben und in Berlese-Apparaten ausgelaufen“, 1 ex. — Čojbalsan aimak 80 km NW von Čojbalsan, 700 m, 17. VIII. 1965, Nr. 431, „5 Nester von *Microtus brandti* ausgegraben und in Berlese-Apparate ausgelaufen“, 6 ex. — Mittelgobi aimak Choot bulag, zwischen Chuld und Delgerchangaj, 1480 m, 10. VI. 1967, Nr. 782, „10 Ethylenglycol-Bodenfallen, eingegraben zwischen Caragana. Aufgenommen am 12. VII. 1967“, 1 ex.

Wider Distribution Europe, Caucasus and U. S. A.

(10) *Atomaria (Anchicera) lewisi* REITTER

Atomaria lewisi REITTER 1877, Deutsche Ent. Zeitschr. XXI: 112; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 44.

Atomaria psallioticola HINTON 1941, Bull. Ent. Res. 32: 133–134.

Atomaria lewisi; LOHSE (in FREUDE, HARDE & LOHSE) 1967, Die Käfer Mitteleuropas 7: 145.

Central aimak Tosgoni ovoo, 10 km N von Ulan-Baator, 1700–1900 m, 23.–24. VII. 1967, Nr. 926a, „Gekötschert am Waldrand und in den Hochgebirgssteppen“, 1 ex. Wider Distribution Europe, China, Japan, Siberia, U.S.A. and South Africa. This species has spread rapidly to many parts of the world over the last forty or so years.

(11) *Atomaria (Anchicera) mongolica* sp. n. (Figs. 7–9)

Length 1.56–1.83 mm, about 2.2 times as long as broad, moderately arched, covered with decumbent pale pubescence of moderate length, each hair being approximately 0.04 mm.

Head, pronotum and elytra rather shining and predominantly blackish, occasionally a little diluted towards the elytral apex; antennae and legs brownish.

Antennal structure as in fig. 7; segments 9 and 10 each almost as long as broad, the club consequently rather narrow.

Pronotum transverse, broadest at or just before the middle where it is 1.29–1.33 times as broad as long, thence contracted towards the base where it is narrower than the base of the elytra; side borders only visible from above in the basal half; pronotal surface closely covered with moderately large punctures which on an average are between half and one diameter apart from their lateral neighbours; pronotum without shagreenation, except occasionally along the base near the hind angles; hind angles obtuse but not sharp; pronotal disc convex; base with a transverse depression, particularly well-defined about the middle third.

Elytra moderately arched, curved at the sides, broadest about the middle, 2.3–2.5 times as long as the pronotum and 1.45–1.48 times as long as together broad; surface clearly shagreened and closely punctured, the punctures on the basal third almost equal in size and distribution to those on the pronotum. Hind wings only partially developed, narrow, a little less than the elytra in length.

Aedeagus fig. 8, spermatheca fig. 9.

Remarks. This new species seems to be most nearly related perhaps to the European *berolinensis* KRAATZ, which also possesses only partially developed wings. Apart from its predominantly blacker colouration, *mongolica* further differs as follows: the antennae (excluding the clubs) are a little shorter and thicker, have the segments more curved at the sides and proportionately shorter, in particular segment 5 is about one and a third times as long as segment 4 (*berolinensis* has segment 5 nearly twice as long as 4); the pronotum is more transverse and more narrowed basally, and in addition the whole beetle has a more slender appearance, more so in the male. There are also differences in the genitalia.

Holotype ♂: Mongolia — Central aimak SO von Somon Bajancogt, 1600 m, 11. VI. 1966, Nr. 520b, „5 Bodenfallen mit Ethylenglycol, an einer südlich exponierten Bergsteppe, aufgenommen am 27. VII. 1966“.

Paratypes: Mongolia — Central aimak SO von Somon Bajancogt, 1600 m, 11. VI. 1966, Nr. 520b, „5 Bodenfallen mit Ethylenglycol, an einer südlich exponierten Bergsteppe, aufgenommen am 27. VII. 1966“, 35 ex.

Holotype and 23 paratypes in the Zoology Department of the Natural History Museum, Budapest, 12 paratypes in the Manchester Museum.

(12) **Atomaria (Anchicera) semitestacea** REITTER

Atomaria testacea v. *semitestacea* REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 50.

Atomaria semitestacea; SJÖBERG 1947, Entom. Tidskr. 68: 100, 115, 119 (genitalia).

Archangaj aimak Changaj Gebirge, zwischen Somon Ichtamir und Somon Čuluut, 20 km W von Ichtamir, 2150 m, 19. VI. 1966, Nr. 544, „Typische Hochgebirgssteppe mit Nadelwäldern und im Tal mit sehr üppiger Vegetation, blühende Trollius-Wiesen, usw. 8 Bodenfallen mit Ethylenglycol (aufgenommen am 19. VII. 1966)“, 3 ex. — Bulgan aimak zwischen Somon Chischig-Öndör und Somon Orchon, 23 km NNO von Chischig-Öndör, 1390 m, 15. VI. 1968, Nr. 961, „Bewaldetes Hügelland, ausgedehnte Birken- und Nadelholzwälder, an den Waldrändern Gebüsch, im Talgrund nasse Wiesen. Am Waldrand und an der Steppe gekötschert“, 1 ex.; zwischen Somon Chischig-Öndör und Somon Orchon, 23 km NNO von Chischig-Öndör, 1390 m, 15. VI. 1968, Nr. 965, „10 Ethylenglycol-Bodenfallen eingegraben: 5 im Nadelholzwald und 5 in der Steppenwiese längs neben einem nassen Tal (aufgehoben am 23. VII. 1968)“, 17 ex.; 7 km NW von Somon Chanžargalant, 1350 m, 16. VI. 1968, Nr. 970, „10 Ethylenglycol-Bodenfallen eingegraben: 5 am Nadelholz-Waldrand und 5 an einem kahlen, steilen Berghang (aufgehoben am 22. VII. 1968)“, 2 ex. — Central aimak 12 km SO von Ulan-Baator, Nucht im Bogdo ul, 1500 m, 12. VI. 1964, Nr. 123, „Am Waldrande, in Nähe des Baches gesiebt, in erster Reihe aus dürrern Birkenlaub und vom Stamm morscher Birkenbäume“, 3 ex.; SO von Somon Bajancogt, 1600 m, 4. VII. 1964, Nr. 264, „Im Walde und im Tal von den Pflanzen“, 49 ex.; SO von Somon Bajancogt, 1600 m, 4. VII. 1964, Nr. 266, „Durchsieben des dürrern Laubes und Moores vom Stamm der Bäume in Birkenwald und Anlaufen des Materials in Berlese-Apparaten“, 67 ex.; SO von Somon Bajancogt, 1600 m, 5. VII. 1964, Nr. 269, „Gesiebe im Birkenwald, Anlaufen des Materials in Moczarsky-Winkler-Apparate“, 44 ex.; 12 km SO von Ulan-Baator, Nucht im Bogdo ul, 1500 m, 6. VII. 1964, Nr. 271, „Zwei Bodenfallen mit Ethylenglycol im Walde (eingegraben am 12. VI. 1964) auf der nördlichen Seite, eine in der Nähe des Baches, die zweite an der Bergseite“, 2 ex.; 126 km N von Ulan-Baator, am Wege, 1100 m, 9. VII. 1964, Nr. 288, 290, „Am Fuße der Birkenbäume im dürrern Birkenlaub gesiebt und Anlaufen in Moczarsky-Winkler-Apparat. Durchsieben des Humus und dürrern Laubes unter dem Dachs-Kadaver und Anlaufen in Berlese-Apparaten“, 2 ex.; Ulan-Baator, Nucht im Bogdo ul, 1600–1700 m, 22. VIII. 1965, Nr. 297b, „10 Bodenfallen mit Ethylenglycol im Walde, auf der nördlichen Bergseite, aufgenommen am 27. VIII. 1965“, 3 ex.; Uubulan, am Fluß Tola, 60 km O von Ulan-Baator, 1370 m, 25. VIII. 1965, Nr. 481, „Überschwemmungsgebiet des Flusses Tola, am Auwald gesiebt“, 1 ex.; Ulan-Baator, Nucht im Bogdo ul, 1950 m, 4. VI. 1966, Nr. 497, „Am Rand des Plateaus, in einer größeren Waldlichtung, aus feuchten Graswurzeln und Carex-Bülten gesiebt“, 6 ex.; SO von Somon Bajancogt, 1600 m, 11. VI. 1966, Nr. 520a, b, „4 Bodenfallen mit Ethylenglycol in dem Walde, 5 Bodenfallen an einer südlich exponierten Bergsteppe, aufgenommen am 27. VII. 1966“, 75 ex.; Bogdo ul, Bugijn až achuj, 1650 m, 31. V 1967, Nr. 755, „Zwischen Pflan-

zenwurzeln und vom Fuß alter Bäume am Talgrund gesiebt“, 5 ex.; Ulan-Baator, Nucht im Bogdo ul, 1650 m, 3. VI. 1967, Nr. 760, „Am Talgrund vom Fuß alter Bäume, zwischen Pflanzenwurzeln, von in Gruben angesammelten faulenden Pflanzen neben Birken und Nadelholz gesiebt“, 4 ex.; Tosgoni ovoo, 10 km N von Ulan-Baator, 1700–1900 m, 23.–24. VII. 1967, Nr. 926a, „Gekötschert am Waldrand und in den Hochgebirgssteppen“, 1 ex.; Tosgoni ovoo, 6–10 km N von Ulan-Baator, 1700 m, 4. VI. 1968, Nr. 934, „Am Nordhang der Gebirge in einem kleinen Birkenwald und am Waldrand gekötschert. Die Vegetation ist noch sehr frühzeitig“, 1 ex.; Tosgoni ovoo, 6–10 km N von Ulan-Baator, 1700 m, 4. VI. 1968, Nr. 935, „Ein Nest von *Corvus corvus* von einem 4–5 m hohen Baum ausgesiebt und in Berlese-Apparat anlaufen lassen. Das Nest war von kleinen Vögeln bewohnt“, 1 ex.; Tosgoni ovoo, 6–10 km N von Ulan-Baator, 1700 m, 4.–8. VI. 1968, Nr. 936, „Im Birkenwald am Fuß der Bäume und aus faulendem Laub, sowie Graswurzeln gesiebt“, 8 ex.; Bogdo ul, Bugijn až achuj, 1650 m, 10. VI. 1968, „Am Talgrund vor allem am Fuß alter Birken gesiebt“, 3 ex.; 11 km OSO von Somon Bajanzogt, 1600 m, 13. VI. 1968, Nr. 945, „10 Ethylenglycol-Bodenfallen im Wald eingegraben (aufgehoben am 26. VII. 1968)“, 292 ex.; 11 km OSO von Somon Bajanzogt, 1600 m, 13. VI. 1968, Nr. 947, „Im Birkenwald am Fuß alter Bäume und aus faulendem Laub vom Boden gesiebt“, 26 ex.; 11 km OSO von Somon Bajanzogt, 1600–1700 m, 26. VII. 1968, Nr. 1150, „Gekötschert“, 1 ex. — Chövsgöl aimak 6 km WNW von Somon Tosoncengel, 1480 m, 18. VI. 1968, „10 Ethylenglycol-Bodenfallen, eingegraben am Rand eines trockenen Wasserrisses, neben einzeln stehenden Fichtenstämmen (aufgehoben am 20. VII. 1968; 4 Fallen waren unberührt, 2 ohne Deckel voll mit Wasser und 4 nicht wiedergefunden)“, 1 ex.; Alag Mort, 42 km NO vom Paß Chaldzan Sogotyń davaa, am Fluß Tesijn gol, 1900 m, 14. VII. 1968, Nr. 1107, „An den Nordhängen Nadelholzwälder, sonst Gebirgssteppe, an den Waldrändern und in Wasserrissen üppige Vegetation und blühende Pflanzen, in den Hängen trockene Steppe. Gekötschert im Wald und in den Waldrändern“, 1 ex. — Zavchan aimak 24 km O von Somon Songino, 2000 m, 12. VII. 1968, Nr. 1095, „Hochgebirgssteppe, mit sehr üppiger Vegetation, blühenden Labiaten, Leguminosen, Galium, Dianthus, usw., im Talgrund nasse Wiesen (mit Carex), in den Nordhängen Nadelholzwald. Gekötschert (nach Regen, von nasser Vegetation)“, 1 ex.

Wider Distribution Northern Fennoscandia and Siberia.

In the National Museum of Natural History, Prague, there is a single specimen of *semitestacea* with the label „Mongolia bor., REITTER“, but without a precise locality; the specimen was originally erroneously identified as *fuscata* SCHOENHERR.

(13) *Atomaria (Anchicera) ruficornis* (MARSHAM)

Silpha ruficornis MARSHAM 1802, Ent. Brit. I: 125.

Atomaria ruficornis; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 46; SJÖBERG 1947, Entom. Tidskr. 68: 101, 119 (genitalia).

Central aimak Kerulen, 45 km O von Somon Bajandelger, 1400 m, 26. VII. 1965, Nr. 304, „10 Bodenfallen mit Ethylenglycol, eingegraben in einer sehr steinig, öden, südlichen Bergsteppe. Aufgenommen am 24. VIII. 1965“, 1 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 16. VII. 1967, Nr. 924, „2 *Microtus*-Neste ausgegraben und im Berlese-Apparat anlaufen lassen“, 4 ex. — Chentej aimak 7 km NO von Somon Mörön, 1200 m, 28. VII. 1965, Nr. 323, „10 Bodenfallen mit Ethylenglycol, am Fuß der Berghänge, aufgenommen am 21. VIII. 1965“, 1 ex. — Cojbalsan aimak 80 km NW von Cojbalsan, 700 m, 17. VIII. 1965, Nr. 431,

„5 Neste von *Microtus brandti* ausgegraben und in Berlese-Apparat ausgelaufen“, 8 ex. — **Mittelgobi aimak** 20 km S von Somon Delgerzagt, 1480 m, 9. VI. 1967, Nr. 779, „Zwischen mit *Lasiagrostis* bedeckten sandigen Stellen, 10 Ethylenglycol-Bodenfallen. Aufgenommen am 13. VII. 1967“, 2 ex.

Remarks. It is very difficult to decide satisfactorily on the exact status of the Mongolian specimens. Compared with material from western Europe, they have the antennae slightly but distinctly more slender, the elytra broader, the pronotum more thickly punctured and a little dilated towards the base, as well as being less distinctly shagreened, the elytra not quite so predominantly blackish, and there are slight but apparently useful differences in the genitalia of the male: the paramere plate has two distinct oval areas of granules just before the apex, the extreme apex of the penis is more acuminate, and the internal u-shaped sclerite of the penis is very narrow and long. In normal *ruficornis* the oval areas of the paramere are much less obvious, the apex of the penis more blunt, and the u-shaped sclerite more open and shorter. On these grounds it is reasonable to consider the Mongolian specimens to represent a separate species. However, the writer has seen a Caucasian specimen („Swanetien, leg. Leder-Reitter“, in Zool. Mus., Berlin) which, although having the aedeagus precisely the same as that of the Mongolian specimens, as far as can be seen, has the antennae and body form of a normal *ruficornis*, even though the pronotum is rather more closely punctured. Also from the Caucasus, but without precise locality, I have seen a pair of typical *ruficornis*. A possible explanation of this state of affairs could be given by considering *ruficornis* to be represented in the more eastern parts of Asia by a different subspecies, both this and the nominotypical form perhaps overlapping in the Caucasian region. Whether this is the true explanation cannot, of course, be ascertained, so for the time being it seems prudent to recognise a wide range of variation in *ruficornis*, but to bear in mind the possibility that the far eastern form might be at least subspecifically distinct.

Wider Distribution Europe, North Africa, Caucasus and the U. S. A.

(14) *Atomaria*-(*Anchicera*) *apicalis* ERICHSON

Atomaria apicalis ERICHSON 1846, Naturgesch. Ins. Deutschl. Col. III: 395; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 49; SJÖBERG 1947, Entom. Tidskr. 68: 100, 119 (genitalia).

Archangaj aimak Koschoo zaidam am Chogschin-Orchon, 35 km N von Somon Lun, 1490 m, 2. VII. 1964, Nr. 247, „Völliges Aussieben eines *Milvus*-Nestes und Anlaufen in Berlese-Apparaten“, 34 ex. — **Central aimak** 126 km N von Ulan-Baator, am Wege, 1100 m, 9. VII. 1964, Nr. 290, „Durchsieben des Humus und dörren Laubes unter dem Dachs-Kadaver und Anlaufen in Berlese-Apparaten“, 4 ex.; **Tosgoni ovoo**, 6–10 km N von Ulan-Baator, 1700 m, Nr. 935, 4. VI. 1968, „Ein Nest von *Corvus corvus* von einem 4–5 m hohen Baum ausgesiebt und in Berlese-Apparat anlaufen lassen. Das Nest war von kleinen Vögeln bewohnt“, 6 ex.

Wider Distribution Europe, Caucasus, Siberia and North America.

(15) *Atomaria* (*Anchicera*) *kaszabi* sp. n. (Figs. 10–12)

Length 1.75–1.85 mm, ovate, about 1.8 times as long as the greatest breadth (which is in front of the middle of the elytra); pronotum and elytra covered with extremely

fine and short decumbent pubescence, the hairs approximately 0.02 mm in length; head with longer and more visible pubescence, the hairs being about 0.04 mm long. Head, pronotum and elytra shining, dark brownish-black, antennae and legs yellowish-brown, long and slender.

Antennal structure as in fig. 10; segments 9 and 10 about as broad as long, the club narrow.

Pronotum somewhat trapezoidal, broadest at the base where it is almost equal in breadth to the elytral base, the sides strongly narrowed towards the front; side borders not visible from above; base with a transverse but very shallow depression about the middle, the basal margin behind this being produced rearwards, resulting in the margin being somewhat bisinuate; pronotal surface finely shagreened and irregularly punctured, the punctures varying from being fine ones which are from one to three diameters apart on the anterior half of the pronotum, to much coarser umbilicate ones in the basal half, these latter much closer and often somewhat elongated; hind angles almost right-angles, but not sharp.

Elytra moderately arched in proportion to their width, broadest in the basal half, 2.72–2.77 times as long as the pronotum, and about 1.24 times as long as together broad; surface rather strongly shagreened and finely punctured, the punctures in the basal third similar in size to those on the front half of the pronotum, and on an average two diameters apart. Base of the elytra at the shoulders partially excavated to accommodate the base of the pronotum. Hind wings fully developed.

Aedeagus fig. 11, spermatheca fig. 12.

Dedication to Dr. ZOLTÁN KASZAB, for his excellent work in investigating the fauna of Mongolia.

Remarks. *A. kaszabi* is such a distinctive species that it hardly seems necessary to compare it with any other. It should be immediately recognised by the combined characters of its shape, puncturation, pubescence and antennal structure. The species, like *trapeziformis* sp. n., also seems to be a nidicole.

Holotype ♂: Mongolia — Central aimak 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 7. VI. 1967, Nr. 768, „10 Ethylenglycol-Bodenfallen in dem steinigen Berghang, meist in der Nähe der Murmeltier-Bauten. Aufgenommen am 15. VII. 1967“

Paratypes: Mongolia — Central aimak 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 7. VI. 1967, Nr. 768, „10 Ethylenglycol-Bodenfallen in dem steinigen Berghang, meist in der Nähe der Murmeltier-Bauten. Aufgenommen am 15. VII. 1967“, 1 ex.; 11 km S vom Paß Zosijn davaa, 90 km S von Ulan-Baator, 1650 m, 16. VII. 1967, Nr. 924, „2 *Microtus*-Neste ausgegraben und im Berlese-Apparat anlaufen lassen“, 5 ex. — Chövsgöl aimak 3 km SW von Somon Burenchaan, 1650 m, Nr. 993, 21. VI.—16. VII. 1968, „10 Ethylenglycol-Bodenfallen, eingegraben in einem breiten, steinigen, öden Gebirgstal neben einem Wasserriß (aufgehoben am 16. VII. 1968, eine Falle nicht wiedergefunden)“, 1 ex.; 26 km W vom See Tunamal nuur, 1970 m, Nr. 998, 22. VI. 1968, „Hochgebirgssteppe, breit ausgedehntes Plateau. Ein *Ochotona*-Nest ausgegraben und in Berlese-Apparat auslaufen lassen“, 5 ex. — Uburchangaj aimak Changaj Gebirge, 21 km O von Somon Narijnteel, 2080 m, 27. VI. 1964, Nr. 212, „Hochgebirgssteppenwiese; Ausgraben und Anlaufenlassen von 2 *Microtus*-Nestern in Berlese-Apparaten“, 1 ex.

Holotype and 8 paratypes in the Zoology Department of the Natural History Museum, Budapest, 5 paratypes in the Manchester Museum.

(16) **Atomaria (Anchicera) ? plicata** REITTER

Atomaria plicata REITTER 1875, Deutsche Ent. Zeitschr. XIX: 48, 60; SJÖBERG 1947, Entom. Tidskr. 68: 97, 118 (genitalia).

Chövsgöl aimak 8 km N von Somon Burenchaan, am Fluß Delger mörön, 1450 m, 20. VI. 1968, Nr. 990, „Gekötschert am Talgrund an den nassen Wiesen und im Pappeln-Auwald“, 2 ex.

Remarks. It would be most interesting to examine a male of this species from Mongolia, as this would greatly clarify the actual status of the Mongolian form. This is necessary because there are a few slight differences (which could well be of a specific nature) between these and the real *plicata*, which is a rare species only known to occur as yet in Central Europe (Austria, north Italy, Czechoslovakia etc.).

The Mongolian specimens exhibit the following differences from the few specimens of *plicata* possessed by the writer: dorsum more closely punctured, particularly the pronotum in which the punctures are about one diameter apart from their lateral neighbours; pubescence of the pronotum and elytra greyish, more conspicuous, the hairs a little more curved; body predominantly blackish, except for the major part of the elytra which are reddish-brown, thus leaving a large and blackish triangular mark in the basal quarter. The legs and antennae are predominantly brownish, except for the slightly infuscated antennal clubs, femora and the apical parts of the tibiae.

In one Mongolian specimen, the deepened groove in the middle of the base of the pronotum is less obvious than in the other specimen.

(17) **Atomaria (Anchicera) sp.**, indet.

Central aimak 126 km N von Ulan-Baator, am Wege, 1100 m, 9. VII. 1964, Nr. 290, „Durchsieben des Humus und dürrn Laubes unter dem Dachs-Kadaver und Anlaufen in Berlese-Apparaten“, 1 ♀

Remarks. This specimen is probably the female of a new species known to the writer from North Korea, on a unique male. It was collected by Dr. M. MROCZ-KOWSKI during an expedition organised by the Institute of Zoology, Polish Academy of Sciences, Warszawa. The species will be described in due course elsewhere.

(18) **Atomaria (Anchicera) sp.**, indet.

Bulgan aimak Namnan ul Gebirge, 23 km NW von Somon Chutag, 1150 m, 17. VI.—21. VII. 1968, Nr. 976, „10 Ethylenglycol-Bodenfallen, eingegraben am Birkenwald (aufgehoben am 21. VII. 1968)“, 2 ♀ ♀

Remarks. These specimens are a little reminescent in shape and structure of *semitestacea* REITTER. However, they possess the following characters: size smaller; colour almost entirely reddish-yellow; wings fully developed; elytral humeri toothed; pronotum proportionately smaller with slightly larger but more spaced puncturation; elytra broader across the middle, and with their pubescence a little longer. The

specimens also resemble the preceding species, but are more arched and shining, and have the pronotal puncturation sparser.

Genus **Ephistemus** STEPHENS, 1829

(19) **Ephistemus globulus** (PAYKULL)

Dermestes globulus PAYKULL 1798, Faun. Suec. I: 295.

Ephistemus globulus; REITTER 1887, Verh. Nat. Ver. Brünn XXVI (Best.-Tab. 16): 54.

Ephistemus apicalis Le CONTE 1863, New Spec. Col. I: 72.

Archangaj aimak Koschoo zaidam am Chogschin-Orchon, 35 km N von Somon Lun, 1490 m, 2. VII. 1964, Nr. 247, „Völliges Aussieben eines *Milvus*-Nestes und Anlaufen in Berlese-Apparaten“, 1 ♀

Wider Distribution Europe and the U. S. A.

Components of the *Atomaria* Fauna of Mongolia.

On the basis of the determined material dealt with in the present paper, it is possible to recognise three distribution types. These are Palaearctic, Boreal and East Palaearctic.

Palaearctic. This includes species which more-or-less range across the region: *fuscicollis*, *prolixa*, *apicalis*, *peltata*, *pusilla* and *ruficornis*. A further species might also be included here, *lewisi*, as this is now widely distributed in Europe and eastern Asia.

Boreal. Only one species comes into this category, *semitestacea*. It occurs in northern Fennoscandia and Siberia, and might perhaps be expected to have a circum-polar distribution, although it has not yet been recognised from North America.

East Palaearctic. Included here are the species apparently restricted to eastern Asia. These fall into two categories: a) species only known as yet from Mongolia — *trapeziformis*, *kaszabi*, *mongolica* and *obscura*, and b) species also known to occur in eastern Siberia — *kamtschatica* and *lateralis*. If we were also to include the undetermined species in our conclusions, then species with an East Palaearctic distribution would slightly outnumber those ranging more-or-less across the region.

Distribution of the Species
Mongolian aimaks

	Archangaj	Bajanchongor	Bajan-Ölgij	Bulgan	Central	Chentej	Chovd	Chövsgöl	Čojbalsan	Mittelgobi	Uburchangaj	Uvs	Zavchan	Europe	Caucasus	Siberia
<i>Atomaria</i>																
<i>fuscicollis</i>					×		×							×		
<i>prolixa</i>									×							
<i>trapeziformis</i>					×											
<i>apicalis</i>					×											
<i>kamtschatica</i>	×			×												
<i>kaszabi</i>					×											
<i>lateralis</i>					×											
<i>lewisii</i>					×											
<i>mongolica</i>					×											
<i>obscura</i>					×											
<i>peltata</i>	×	×	×	×	×		×	×				×		×		×
<i>pustilla</i>					×	×										
<i>ruficornis</i>				×	×	×		×		×			×	×		×
<i>semitestacea</i>	×															
<i>Ephistemus</i>																
<i>globulus</i>	×							×						×		

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