

## New and little-known species of Omaliinae from the Baikal-Transbaikal area (Coleoptera: Staphylinidae)

A.V. Shavrin

Shavrin, A.V. 2001. New and little-known species of Omaliinae from the Baikal-Transbaikal area (Coleoptera: Staphylinidae). *Zoosystematica Rossica*, 9(1), 2000: 189-193.

*Lesteva czerskyi* sp. n. from the Khamar-Daban Mts and *Coryphium nataliae* sp. n. from the Khamar-Daban and Eastern Sayan (Tunkun Mts.) are described and *Pycnoglypta baicalica* Motschulsky, 1860 and *Lesteva cordicollis* Motschulsky, 1860 redescribed. Data on distribution and habitats are given for all treated species.

A.V. Shavrin, Department of Invertebrate Zoology and Hydrobiology, Irkutsk State University, ul. Sukhe-Batora 5, 664003 Irkutsk, Russia.

Examination of Omaliinae from the collections of A.V. Anistshenko, L.N. Dubeshko and the author allows description of two new species from Baikal area: *Lesteva czerskyi* sp. n. from the Khamar-Daban and *Coryphium nataliae* sp. n. from the Khamar-Daban and Eastern Sayan. Redescriptions based on both sexes are provided for *Pycnoglypta baicalica* Motschulsky, 1860 and *Lesteva cordicollis* Motschulsky, 1860, both species from the Baikal-Transbaikal area.

Abbreviations used in this paper: CA – collection of A.V. Anistshenko, Irkutsk; CS – collection of A.V. Shavrin; ISU – Irkutsk State University; ZIN – Zoological Institute, St. Petersburg.

Body length is given in millimetres. Other measurements are made using a binocular microscope with an eyepiece linear micrometer, so that each unit is equal to 1/70 of millimetre (14 microns). The width of the head is measured in the area of its maximum, its length from the base of labrum to the neck constriction and the length of elytra from elytral base to elytral hind margin.

### ***Pycnoglypta baicalica* (Motschulsky, 1860)** (Figs 1-7)

*Omaliium baicalicum* Motschulsky, 1860: 544.

*Acidota baicalensis* Motschulsky, 1860: 549.

*Pycnoglypta baicalica*: Gusarov, 1991: 3; 1995: 240.

*Material examined.* Russia, Buryatia: 2 ♂, 3 ♀, Baikal Lake, isthmus of Svyatoi Nos peninsula, 9.VIII.1997, under dry *Carex* in swamp (Shavrin, Anistshenko) (CS, ZIN); 1 ♂, Khamar-Daban mountain

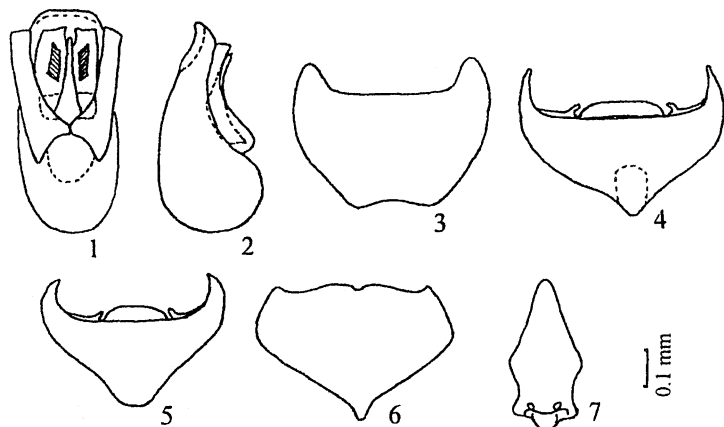
range, Osinovka Mishikhinskaya River, 1600 m, 25-31.VII.1995, at a snow field border under stone (Shavrin) (CS); 1 ♀, delta of Selenga River, 11.VIII.1982 (Dubeshko) (CS); *Irkutsk Prov.*: 3 ♀, Olkhon Distr., Baikal Lake, Urungoi Island, 27.VIII.1982 (Dubeshko) (CS, ISU); 2 ♀, environs of Irkutsk, 17th km of Baikal highway, 30.VI.1994, on wet ground at grassy shore of Angara Bay (Anistshenko) (CA, CS); 3 ♂, same locality but 7.VII.1994 (Shavrin, Anistshenko) (CA, CS); 1 ♀, Usolsky Distr., Kitoi valley, 40 km SW of Oktyabrskoye, 30.VII.1998, in swamp (Shavrin) (CS).

*Description.* Length 1.8-2.3 mm. Reddish brown or dark brown to black. Legs, antennae and mouthparts yellowish brown; antennae slightly darker from the 3rd segment on.

Head without microsculpture, with few fine punctures from base of clypeus to neck. Ocelli obsolete, with longitudinal striae along internal border. Eyes 5-6 times as long as temples (seen from above). Head width / length ratio 34 : 25. Three apical segments of antennae forming loose club. Length / width ratios of antennal segments as follows: I, 8 : 3; II, 4 : 3; III, 5 : 2; IV-VI, 4 : 2; VII, 4 : 3; VIII, 4 : 4; IX-X, 5 : 4.5; XI, 6.5 : 4.5.

Pronotum convex, transverse, broader than head, without microsculpture in its middle part, length / width ratio 35 : 44. Punctuation denser than on head (distance between punctures 1-1.5 times their diameter), coarser at base and on margins of pronotum.

Scutellum smooth, without microsculpture and punctuation. Elytra almost parallel-sided, without microsculpture, punctuation denser than on pronotum, interspaces as large as diameter of punctures. Wings reduced.



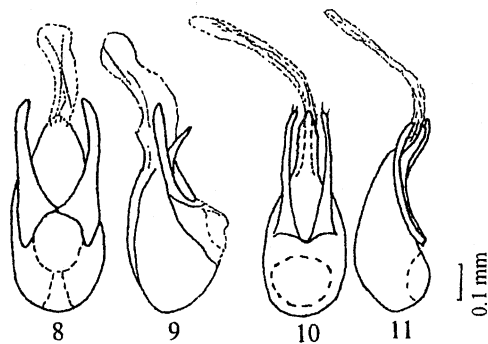
Figs 1-7. *Pycnoglypta baicalica* Motschulsky: 1-2, aedeagus in lateral (1) and ventral (2) view; 3, ♂, tergum VIII; 4, ♂, sternum VIII; 5, ♀, tergum VIII; 6, ♀, sternum VIII; 7, ♀, sternum IX.

Abdominal tergites without punctation, with dense reticulate microsculpture.

♂. Apical margin of sternite VI with broad, triangular, projecting postero-ventrally, of sternite VII with flat, triangular, of sternite VIII with flat, elongate median lobe. Tergite VIII as in Fig. 3. Sternite VIII as in Fig. 4. Aedeagus as in Figs 1-2.

♀. Tergite VIII as in Fig. 5. Sternites VIII and IX as in Figs 6-7 (see also Gusarov, 1995: 241).

*Comparison.* Based on the distinct median lobe of the male sternites VI-VIII, small, simple ventral plate of aedeagus and its shape, *P. baicalica* (Motsch.) is closely related to species of the *hurida* group (Gusarov, 1995). It is close to *P. maritima* Gusarov, 1995, but differs in the



Figs 8-11. 8-9, *Lesteva czerskyi* sp. n., aedeagus in lateral (8) and ventral (9) view; 10-11, *L. cordicollis* Motschulsky, aedeagus in lateral (10) and ventral (11) view.

ratios of body parts, shape of aedeagus and the male sternite VIII and tergite VIII, as well as the female accessory sclerite.

*Distribution.* Southern part of Irkutsk Province, the Khamar-Daban mountain range, territories of Buryatia adjacent to Baikal Lake.

*Note.* The record of *P. lurida* Gyllenhal, 1828 from Irkut valley by Eppelsheim (1893) was based on misidentification of *P. baicalica* Motschulsky, 1860 or *P. maritima* Gusarov, 1995. Both species were recently recorded from

Transbaikalia (Shavrin, 1998).

*Bionomics.* The species inhabits the banks of watercourses, it occurs under decaying matter, like dry grass, leaves, etc. It was collected at the borders of snow fields at high altitudes in the Khamar-Daban (Osinovka Mishikhinskaya).

#### *Lesteva czerskyi* sp. n.

(Figs 8-9, 19)

*Holotype.* ♂, Russia, Irkutsk Prov., Khamar-Daban, Upper Sludyanka River, 1900 m, 14.VI.1996, in wet moss on the bank of a stream (Shavrin) (ZIN).

*Paratype.* Russia, Irkutsk Prov.: ♀, Khamar-Daban, Upper Babkha River, 900 m, 8-14.V.1999, in wet moss (Shavrin) (CS).

*Description.* Length 4.0 mm. Dark brown; mouthparts and legs yellowish, antennae reddish brown. Glossy, evenly covered with short, whitish setae. Forebody as in Fig. 19.

Head elongate, without microsculpture, width / length ratio as 47 : 46. Eyes small, weakly prominent, twice as long as temples. Ocelli small, indistinct, without grooves. Punctuation dense and coarse (especially on vertex and frons), interspaces equal to diameter of punctures. Antennae relatively short, reaching the base of elytra. Antennal segments thick, length / width ratio as follows: I, 15 : 6; II, 9 : 4; III, 10 : 5; IV, 9 : 5; V-VI, 9 : 4; VII-VIII, 9 : 5; IX, 9 : 6; X, 8 : 6; XI, 15 : 8.

Pronotum convex, transverse, broader than head, with impressions; maximum / minimum width ratio 75 : 60. Punctuation coarser than on head, becoming less dense to the base of

pronotum. Distance between punctures 0.5-1 times their diameter.

Scutellum large, weakly punctured, without microsculpture. Elytra 1.5 times as long as pronotum, widening and curving to apex. Wings reduced to very small vestiges. Length of pronotum / length of elytra 56 : 90, length / width of elytra 105 : 55. Punctuation large, coarser and smaller on scutellum and elytral base; distance between punctures equal to their diameter.

Abdomen with dull glance, with visible punctuation (especially on tergites V and VI); punctuation of tergites VII and VIII sparser, smooth.

Hind tarsi with 1st segment as long as 5th, but half as long as 2nd.

♂. Aedeagus as in Figs 8-9. Hind margin of sternite VIII deeply semicircularly notched.

♀. Tergite VIII pointed at apex.

*Comparison.* The new species is close to the European *L. sicula* Er. in the absence of ocelli rows and circular impressions of pronotum, but differs in the body proportions, shape of head, pronotum, and aedeagus.

*Distribution.* Apparently, endemic of high mountains of the Khamar-Daban Range.

*Habitat.* This species was collected in alpine zone (h = 1900 m) among snow, on the bank of a mountain stream from wet moss.

*Etymology.* The new species is dedicated to the memory of the Russian scientist I.D. Czersky (1845-1892), who had investigated the geological structure of Transbaikalia.

## ***Lesteva cordicollis* Motschulsky, 1860**

(Figs 10-11, 20)

*Lesteva cordicollis* Motschulsky, 1860: 549.

*Material.* *Irkutsk Prov.*: 6 ♂, 4 ♀, Irkutsk Distr., Baikal Lake, Bolshie Koty, 17.VIII.1995 (Anistshenko) (CS, CA); 1 ♂, same locality, 4-6.VIII.1995 (Anistshenko) (CS); 3 ♂, 2 ♀, Ussolskiy Distr., Kitoi valley, 17.VII.1996, on wet ground in grass near the river (Shavrin) (CS, ZIN). *Buryatia*: 4 ♂, 6 ♀, Eastern Sayan, Tunkun Mts., upper course of Kingarga River, 1500 m, 18-23.VII.1996, in wet moss on the bank of a stream (Shavrin) (CS, ISU); 1 ♂, 1 ♀, Kurumkansky Distr., Barguzin mountain range, upper course of Shamanka River, 6.VIII.1997, in wet moss (Shavrin) (CS); 2 ♂, 4 ♀, Barguzin valley, 10 km N of Alla, Alla River, 8.VIII.1997, in wet moss near water (Shavrin) (CS).

*L. cordicollis* was described by V. Motschulsky from Dauria ("Daourie"). Then it was recorded by Eppelsheim (1893: 66) from the Eastern Sayan (Munku-Sardyk) and valley of

the Irkut River. Unfortunately, the type material of *L. cordicollis* deposited at the Zoological Museum of Moscow University has not been found. My redescription of this species is based on the newly collected material.

*Description.* Length 2.4-3.0 mm. Glossy, dark brown to black. Elytra paler, reddish brown to brown, sometimes with light yellow spots on shoulders. Mouthparts and legs paler, yellow. Antennae yellow, from 3rd antennal segment on darker, brown. Body densely covered with yellow setae. Forebody as in Fig. 20.

Head large (width / length ratio 40 : 35). Eyes large, prominent, shorter (from above) than temples. Ocelli pale brownish, very distinct on the darker background of head; grooves present. Punctuation dense, shallow, becoming coarser to the temples, on the neck combined with isodiametric microsculpture; on vertex, interspaces twice the diameter of punctures. Antennae long, reaching the middle of elytra. Length / width ratio of antennal segments as follows: I, 12 : 5; II, 9 : 4; III, 10 : 4; IV-X, 9 : 4; XI, 15 : 5.

Pronotum cordiform, convex, with right angles. Pronotum maximum / minimum width ratio 54 : 40. Punctuation coarser and denser than on head, without microsculpture; distance between punctures 0.5-1 times their diameter.

Scutellum glossy, with punctuation and isodiametric microsculpture. Elytra 1.8 times as long as pronotum, distinctly widened and rounded to apex; punctuation larger but smoother, distance between punctures equal to their diameter, punctures near scutellum and at the base as dense and shallow as on scutellum. Length / width of elytra 75 : 35; length of pronotum / length of elytra 45 : 62.

Abdomen with dull glance and extremely fine microsculpture.

Hind legs with 1st tarsal segment as long as 2nd and shorter than 5th.

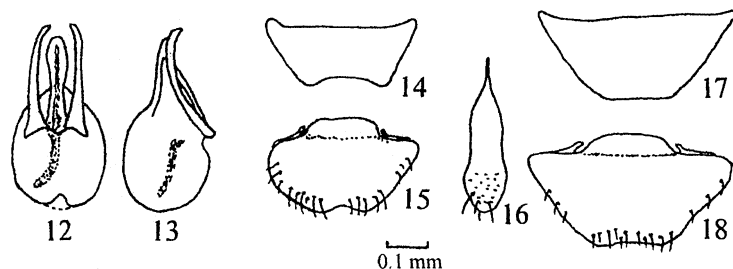
♂. Tergite VIII narrow, with semicircular emargination on apical margin. Aedeagus as in Figs 10-11.

♀. Tergite VIII wider, pointed at apex.

*Comparison.* This is one of the smallest Palearctic species of the genus. Based on the shape of body and relative size of the tarsal segments of the hind legs, *L. cordicollis* seems to be related to the European *L. longelytrata* (Goeze, 1777), but differs in the smaller body size and the shape of aedeagus.

*Distribution.* Southern part of Irkutsk Prov. and Buryatia.

*Habitat.* The species inhabits the banks of watercourses, occurring mainly in wet moss on the banks of mountain streams.



**Figs 12-18.** *Coryphium nataliae* sp. n.: 12-13, aedeagus in lateral (12) and ventral (13) view; 14, ♂, tergum VIII; 15, ♂, sternum VIII; 16, ♂, sternum IX; 17, ♀, tergum VIII; 18, ♀, sternum VIII.

***Coryphium nataliae* sp. n.**

(Figs 12-18, 21)

*Holotype.* ♂, **Russia, Irkutsk Prov.**, Khamar-Daban, upper course of Sludyanka River, Komarinsky Mts., locality Podkomarnaya, 1600 m, 10-14.VI.1996, in wet moss near streams (Shavrin) (ZIN).

*Paratypes.* **Russia, Irkutsk Prov.:** 1 ♂, 5 ♀, same data as holotype (ZIN, CS); *Buryatia:* 6 ♀, Khamar-Daban, upper Osinovka Mishikhinskaya river, 1500 m, 25-31.VII.1995, same habitat (Shavrin) (ISU, CS); 1 ♀, Eastern Sayan, Tunkun Mts., upper course of Kingarga River, 2000 m, 27-29.VI.1996, same habitat (Shavrin) (CS).

*Description.* Length 2.0-2.6 mm. Black, glossy; mouthparts, ocelli and legs (mainly tibiae) pale brown. Mandibles reddish brown. Pronotum and elytra densely covered with fine white setae. Habitus as in Fig. 21.

Head large and wide (width / length ratio 36 : 26), almost as wide as pronotum. Eyes large, convex, distinctly longer than temples. Head between eyes with a pair of deep impressions. Vertex and prominent frons with dense and coarse punctation, distance between punctures

almost equal to their diameter. Clypeus not punctured, glossy. Length / width ratio of antennal segments as follows: I, 6 : 4; II, 5 : 3; III-IV, 5 : 2.5; V, 5 : 3.5; VI-VII, 5 : 4; VIII-X, 4 : 4; XI, 8 : 5. Pronotum convex, transverse, slightly narrowed to the base, which is with a pair of impressions; length / width ratio 30 : 35.

Punctation coarser than on head; distance between punctures equal to their diameter. Head without distinct microsculpture.

Elytra long (length / width ratio 65 : 28), wider and longer than pronotum, practically parallel-sided, slightly widened to apex. Punctation coarser than on pronotum; distance between punctures equal to their diameter. Wings well developed.

Abdomen with dull glance, slightly widened to apex, without distinct punctation; tergite IV in the middle with a pair of silver spots.

♂. Aedeagus widened, almost circular at base, with narrow parameres (Figs 12-13). Apical border of tergite VIII broadly emarginated (Fig. 14). Sternites VIII and IX as in Figs 15-16.

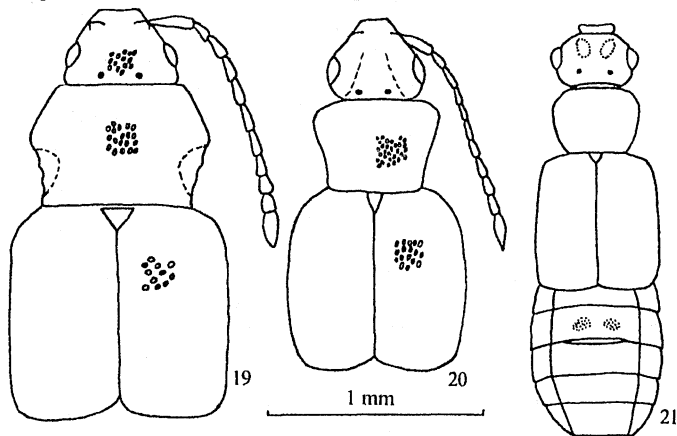
♀. Tergite VIII without emargination on the apical margin (Fig. 17). Apical border of sternite VIII emarginated, but lesser than in male (Fig. 18).

*Comparison.* Based on the size, proportions and colour of the body, as well as on the shape of the aedeagus, the new species belongs to the

*atratum* group of Zerche (1990). It is very similar to *C. atratum* Breit, 1911, but differs in the smaller size, details of the structure of aedeagus, form of terminalia in both sexes, form of labrum and maxillae.

*Distribution.* High mountains of the Khamar-Daban and Eastern Sayan (Tunkun Mts.).

*Habitats.* This species inhabits alpine zone (1500-2000 m), where it could be found on the banks of



**Figs 19-21.** 19, *Lesteva czerskyi* sp. n., forebody; 20, *L. cordicollis* Motschulsky, forebody; 21, *Coryphium nataliae* sp. n., body.

mountain streams and edges of snow fields in wet moss or under stones.

*Etymology.* The new species is dedicated to Miss Natalia Tumbusova.

#### Acknowledgements

I thank Mr. A.V. Anistshenko and Dr. L.N. Dubeshko for providing specimens for examination. Special thanks are due to Dr. V.G. Shilenkov and my colleague Dr. A.Yu. Solodovnikov for their assistance and the criticism of the manuscript.

#### References

- Eppelsheim, E. 1893. Beitrag zur Staphyliniden-Fauna des Südwestlichen Baikal-Gebietes. *Dt. entomol. Z.*, **37**(1/2): 17-67.
- Gusarov, V.I. 1991. New and little-known Palaearctic Staphylinidae (Coleoptera). 2nd communication. *Vestnik Leningrad. Univ.* (3), **3**(17): 3-12. (In Russian).
- Gusarov, V.I. 1995. Two new species of *Pycnoglypta* Thomson (Coleoptera, Staphylinidae) from North America and from Far East of Russia. *Entomol. mo. Mag.*, **131**: 229-242.
- Motschulsky, V. 1860. Enumeration des nouvelles espèces de Coléoptères rapportées de ses voyages. *Bull. Soc. imp. Nat. Moscou*, **33**(2): 539-588.
- Shavrin, A.V. 1998. To the knowledge of the staphylinid beetles fauna (Coleoptera, Staphylinidae) of Baikal Region. In: *Entomologicheskie problemy Baikalskoi Sibiri* [Entomological problems of Baikal Siberia]: 81-86. Novosibirsk: Nauka. (In Russian).
- Zerche, L. 1990. Monographie der palaearktischen Coryphiini (Coleoptera, Staphylinidae, Omaliinae): 1-413. Berlin: Akad. d. Landwirtschaftswiss.

Received 20 May 1999