A key to Rhagonycha (Coleoptera, Cantharidae) East of the Ural Mountains with a description of a new subgenus

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A key to Rhagonycha (Coleoptera, Cantharidae) East of the Ural Mountains with a description of a new subgenus

by **S. Kazantsev**

Abstract: A new subgenus – *Ussurycha* n.subgen. – is described in *Rhagonycha* Eschscholtz. A key to all species and subspecies of *Rhagonycha* occurring in the Asian part of Russia (from the Ural mountains to the Pacific Coast) and adjacent territories (East Kazakhstan, Mongolia, North-East China) with a distribution data is given.

Key words: Coleoptera, Cantharidae – *Rhagonycha* – systematics – zoogeography – new subgenus – keys.

The genus *Rhagonycha* Eschscholtz, 1830, of the vast territory lying from the Ural mountains to the Pacific Coast of Northern Asia in general had been little explored until recently. This situation started to change with appearance of a valuable work on Mongolian and Ussurian fauna by WITTMER (1971) and a recent publication of a review of *Rhagonycha* species of the Asian part of Russia (KAZANTSEV, 1994). A further contribution to the knowledge of this genus including new considerations on the systematic status of *Rh. lederi* Pic and new data on distribution is presented below.

Rhagonycha comprising relatively small (4 to 8 mm long) soldier-beetles has been characterized by bifid claws of all tarsi in both sexes or at least in male. This however appeared to be unfit for some representatives of the genus from the Russian Far East. Morphological peculiarities of *Rh. lederi* Pic seem to be solid enough to introduce a new subgenus.

Rhagonycha Ussurycha n.subgen.

Type-species: *Rhagonycha lederi* Pic, 1909.

Male: Characters of *Rhagonycha* s.str., except structure of the claws: inner claws of male middle and hind tarsi simple, provided with a tooth at base, whereas the outer ones bifid at apex (Figs 1–3).

Body narrow, elytra 3.75 times longer than wide at humeri (Fig. 6).

Parameres wide, only twice as long as wide (Fig. 15, *e**).

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Female: Both inner and outer claws of all tarsi similarly provided with a short blunt basal tooth (Figs 4–5). Otherwise like *Rhagonycha* s.str.

Ussurycha n.subgen. though closely related to *Rhagonycha* s.str. is definitely different in the structure of the claws. Characters separating the new subgenus from *Rhagonycha* s.str. are of no less importance than those of *Armidia* Mulsant, 1862, generally recognized as a valid genus. Yet other morphological characters and the habitus of *Ussurycha* n.subgen. witness in favour of its taxonomic position within *Rhagonycha* s.lato.

A key to Rhagonycha species East of the Ural Mountains

1. Middle and hind inner tarsal claws in male simple, provided with a tooth at base, whereas the outer ones bifid at apex (Figs 1–3). Claws in female simple, with a short blunt basal tooth (Figs 4–5). Body narrow, elytra in male 3.75 times longer than wide at humeri. Parameres wide, only twice as long as wide (Fig. 15, *e**) (Maritime Terr., Amur) **Rh. (Ussurycha) lederi** Pic
– Both inner and outer claws of all tarsi in both sexes similarly split or prominently toothed at apex. Elytra not more than 3.5 times longer than wide humerally. Parameres as a rule considerably longer than wide **(Rhagonycha** s.str.) 2
2. Elytra yellow (sometimes yellowish brown) 3
– Elytra black or dark brown 7
3. Legs uniformly yellow. Aedeagus Figs 9, *a–c** (Middle Urals, Orenburg, Evenkia) **testacea** Linné
– At least femora darkened 4
4. Parameres parallel sided (Fig. 10, *e**). Body length over 7 mm (Tuva, Yakutia, Mongolia) **stusaki** Švihla
– Parameres widened in the middle and narrowed towards apex. Body length less than 7 mm 5
5. Parameres considerably widened near apex (Fig. 9, *e**) **(nigriventris** Motschulsky) 6
– Parameres inconspicuously widened near apex (Fig. 10, *b**). The upperside sometimes infuscated (Altai, Tuva, South-East Kazakstan, Kirghizia) **alpicola** Barovskij

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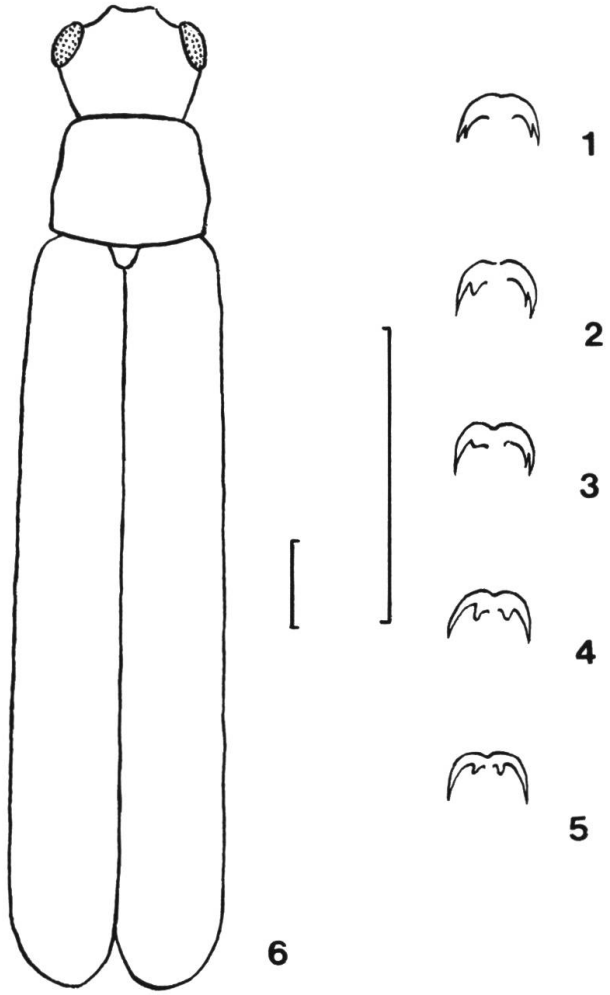

Figs 1–6: *Rhagonycha* (*Ussurycha* n.subgen.) *lederi* Pic: 1–3: male tarsal claws 1, front, 2, middle, 3, hind. 4–5: female tarsal claws: 4, front, 5, hind 6, general upperside view. Scale 0.5 mm.

6. At least hind tibiae darkened. (Transbaikal, Magadan, Kamchatka) **nigriventris nigriventris** Motschulsky
– All tibiae yellow (West and Middle Siberia) **nigriventris limbata** Thomson
7. Pronotum red, sometimes with a infuscated disk 8
– Pronotum black 11
8. Dorsal plate of aedeagus transverse, with a little notch (Fig. 1, *a**) (China: Inner Mongolia) **przewalskii** Barovskij
– Dorsal plate of aedeagus elongate, rather deeply excised . . . 9

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9. Parameres narrow (Fig. 11, *b**) (Altai, Tuva, Transbaikal, Yakutia, Mongolia) **transbaikalica** Pic
– Parameres wide 10
10. Parameres wide, more or less parallel sided (Fig. 11, *e**). Disk of pronotum blackened (Tuva) **uralensis** Dahlgren
– Parameres widened in the middle and narrowed apically (Fig. 1, *b**). Pronotum uniformly red (Mongolia) **oboensis** Kazantsev
11. Claws provided with a developed tooth at base (Figs 2, *d, e, f**) 12
– Basal part of claws without a tooth (Fig. 12, *d**). 14
12. Distance between the dorsal blades in the middle exceeds the width of the blades at the same level; parameres cylindrical (Figs 3, *a–c**) (Maritime Terr.) **sihotana** Kazantsev
– Distance between the dorsal blades several times less than the blades' width in the middle; parameres flattened 13
13. Dorsal blades of aedeagus separately rounded at the apex (Fig. 2, *a**). Basal tarsal tooth acute (Fig. 2, *d* *) (Maritime Terr., Magadan) **sibirica** Wittmer
– Dorsal blades of aedeagus rounded together apically, parameres long and relatively narrow (Figs 2, *f–h**). Basal tarsal tooth blunt (Fig. 2, *i**) (Maritime Terr.) **kurbatovi** Kazantsev
14. Parameres rounded in the profile, thickened apically . . . 15
– Parameres flattened, at least before apex, or narrow, sharpened apically 17
15. Pronotum flattened, without conspicuous discal turbercles; parameres of aedeagus relatively long, laterally bent inside in the apical half (Fig. 4, *b**) (Transbaikal, Magadan, Kurils) **planicollis** Kazantsev
– Pronotum not flattened, with normally developed discal tubercles; parameres relatively short, straight in the apical half 16
16. Body short and broad (elytra only 4.1 times longer than pronotum); parameres of aedeagus (laterally) bent at base (Fig. 3, *e**) (Amur) **flavotibialias** L. Medvedev et Ryvkin
– Body elongate (elytra 5 times longer than pronotum); Parameres of aedeagus straight (Fig. 4, *e**) (Yakutia) **angulosa** Kazantsev

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17. Dorsal plate of aedeagus moderately excised, excision not exceeding 1/4 of its length 18
– Excision exceeds 1/4 of the dorsal plate's length 21
18. Dorsal plate of aedeagus widened towards base 19
– Dorsal plate of aedeagus not widened towards base . . . 20
19. Dorsal plate with a broad feeble excision; parameres rounded apically (Figs 12, *a–b**) (Transbaikal, Maritime Terr., Magadan, Kamchatka, Kurils, Mongolia) **geniculata** Gebler
– Dorsal plate with a narrow excision; parameres sharpened apically (Figs 12, *e–f**) (China: Manchuria) **mandchurica** Pic
20. Parameres tapering to apex, bent outwards (Fig. 5, *b**) (Maritime Terr.) **asiatica** Wittmer
– Parameres wide, parallel sided, bent inwards (Figs 5, *e, f**) (Transbaikal, Mongolia) **ulaensis** Kazantsev
21. Inner sides of dorsal blades almost parallel, at least the angle between them less than 30°; distance between the blades in the middle less than maximum width of a blade. 22
– Inner sides of dorsal blades diverging at more than 45°, distance between them in the middle exceeding maximum width of a blade 28
22. Dorsal excision reaches the base of the dorsal plate. In case it hardly reaches the base its apex is widely rounded 23
– Dorsal excision does not reach over the middle of the dorsal plate. In case it reaches a little over the middle its apex is acute 25
23. Parameres narrow and cylindrical (Figs 14, *b–c**) (Maritime Terr. Korea) **coreana** Pic
– Parameres conspicuously flattened 24
24. Excision of dorsal plate hardly reaches the base of the dorsal plate (Fig. 13, *a**). Parameres slightly widened in the middle (Fig. 13, *b**) (Middle and South Urals) **atra** Linné
– Dorsal plate excised to the base (Fig. 6, *a**). Parameres gradually tapering from base to apex (Fig. 6, *b**) (Kurils, South Sakhalin) **pacifica** Kazantsev
25. Dorsal blades blunt at apex. Parameres conspicuously widened in the middle 26
– Dorsal blades rounded at apex. Parameres not widened in the middle 27

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26. Dorsal incision deeper (Fig. 14, *d**). Parameres sharpened apically (Fig. 14, *e**) (Tuva, Maritime Terr., South Sakhalin, Mongolia) **mongolica** Wittmer
– Dorsal incision shorter (Fig. 15, *a**). Parameres rounded apically (Fig. 15, *b**) (Amur, Maritime Terr.) **mimica** L. Medvedev et Ryvkin
27. Parameres relatively wide and abruptly narrowed near apex (in lateral view) (Fig. 15, *e**) (Transbaikal, Amur, Maritime Terr., Magadan, Kamchatka) **indistincta** L. Medvedev et Ryvkin
– Parameres narrow, rounded apically (in lateral view) (Fig. 6, *e**) (South Kurils) **kabakovi** Kazantsev
28. Dorsal incision semicircular (Figs 16, *d**, 18, *a**). 29
– Dorsal incision of a different shape 31
29. Dorsal blades of aedeagus sharpened apically (Fig. 18, *a**) (**nopporensis** Wittmer) 30
– Dorsal blades of aedeagus bluntly cut at apex and slightly bent inward (Fig. 16, *d**) (Transbaikal, Yakutia, Maritime Terr., Magadan, Kamchatka, Kurils, Mongolia) **cembricola** Eschscholtz
30. Parameres sharpened at apex (in ventral view) (Fig. 18, *c**) (South Kurils) **nopporensis nopporensis** Wittmer
– Parameres rounded at apex (in ventral view) (Fig. 18, *d**) (South Sakhalin) **nopporensis basarukini** Kazantsev
31. Parameres widened in the middle and tapering toward apex (in lateral view). 32
– Parameres not widened in the middle (in lateral view) . . 36
32. Parameres rather wide, smoothly bent inward and infuscated (Figs 17, *e, f**) (Magadan, Kamchatka) **mandibularis siberiana** Kazantsev
– Parameres of a different form 33
33. Parameres only slightly more than twice as long as wide (Fig. 19, *b**) (Kurils) **kurilica** Wittmer
– Parameres considerably longer than wide 34
34. Parameres first bent outward, then near apex inward (Fig. 20, *b**). 35
– Parameres straight 37
35. Dorsal plate widened basally (Fig. 7, *a**) (South-east Kazakstan) **saurica** Kazantsev

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– Dorsal plate not widened basally (Figs 20, *a, d**)
(**atrovaria** Wittmer) 36

36. Dorsal plate not narrowed basally (Fig. 20, *a**) (Tuva, Maritime Terr.) **atrovaria atrovaria** Wittmer
– Dorsal plate conspicuously narrowed basally (Fig. 20, *d**) (South Urals) **atrovaria iremelica** Kazantsev
37. Parameres longer than dorsal plate (Fig. 8, *b**) (Magadan)
hyperborea Kazantsev
– Parameres shorter than dorsal plate 38
38. Pronotum not more than 1.3 times wider than long. Parameres inconspicuously flattened, trihedral at base, approaching dorsal plate (Fig. 19, *e**) (Amur, Maritime Terr.)
transita Wittmer
– Pronotum 1.45 times wider than long. Parameres (in lateral view) distant from dorsal plate and flattened throughout (Fig. 8, *e**) (Magadan) **matisi** Kazantsev
39. Parameres (in lateral view) widened apically (Fig. 16, *b**) (Polar and Middle Urals, Altai) **elongata** Fallen
– Parameres (in lateral view) tapering apically 40
40. Male eyes relatively small (eye's width 3.3 times shorter than interocular distance). Dorsal blades of aedeagus rather wide, usually bent inward apically; parameres flattened throughout (Figs 17, *a–c**) (Altai, Sayan, Transbaikal, Central and North Siberia, Magadan, Kamchatka, Kurils, Mongolia)
latiuscula Sahlberg
– Male eyes relatively large (eye's width only 2.3 times shorter that interocular distance). Dorsal blades rather narrow, not bent inward apically; parameres trihedral in basal half (Figs 7, *d–f**) (Magadan, Kamchatka, Sakhalin, Kurils)
fonticola Kazantsev

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