

REVIEW OF THE PALAEARCTIC AND ORIENTAL
SPECIES OF THE SUBGENUS *HALIPLUS* S.STR.
(COLEOPTERA: HALIPLIDAE: *HALIPLUS*) WITH
DESCRIPTIONS OF THREE NEW SPECIES

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The species considered to belong to the subgenus *Haliplus* Latreille, 1802 and known to occur in the Palaearctic region are reviewed. Latreille's selection of *Dytiscus impressus* Fabricius, 1787 as [misidentified] type species, is amended in the sense of the nominal species and not the misidentified identity, following ICZN article 70.3.1. *Dytiscus impressus* is here formally selected as type species for *Cnemidotus* Illiger, 1802 and *Hoplitus* Clairville, 1806. Three new species are described: *Haliplus* (*Haliplus*) *fuscicornis* Holmen, Van Vondel & Petrov sp.n., *H. kirgisiensis* Holmen & Van Vondel sp.n. and *H. turkemicus* Van Vondel sp.n.. Lectotypes are designated for *H. ruficollis* var. *pedemontanus* Fiori, *H. lineolatus* Mannerheim, *H. brevis* Wehncke, *H. fluviatilis* var. *maculatus* Seidlitz and *H. minutus* Takizawa. Three new synonymies are established: *H. brevior* Nakane, junior synonym of *H. japonicus* Sharp, *H. fluviatilis* var. *maculatus* Seidlitz, junior synonym of *H. ruficollis* (De Geer) and *H. minutus* Takizawa, junior synonym of *H. simplex* Clark. All species are described and figured. A key to the species is presented. Distributional data are included.

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The genus *Haliplus* Latreille, 1802 is divided into the subgenera: *Haliplus* s. str., *Neohaliplus* Netolitzky, 1911, *Haliplidius* Guignot, 1928, *Liaphus* Guignot, 1928, *Paraliaphus* Guignot, 1930 and *Phalilus* Guignot, 1935. The species assigned to the so-called *ruficollis* group are placed in the subgenus *Haliplus* s.str, because *Dytiscus impressus* Fabricius, 1787 [a junior objective synonym of *Haliplus ruficollis* (De Geer, 1774)] is here selected as type species for the genus *Haliplus* Latreille, following Holmen (1987).

By this action the subgenus *Haliplinus* Guignot, 1939, previously often applied to the *ruficollis* group, has become a junior synonym of *Haliplus*. It may be

possible that the subgenus *Haliplus* s.str. as well as the other subgenera do not represent monophyletic groups. For practical reasons the present division in subgenera, as given by Van Vondel (2005) is maintained until further phylogenetic research proves otherwise.

As treated below, *Haliplus* s.str. comprises a group of rather similar small adaphagan water beetles, found in the Palaearctic, Nearctic and minor parts of the Oriental regions. Several species inhabit the temperate climate zone, where they are often very common in stagnant waters and slowly running streams.

The present paper reviews the Palaearctic and Oriental species and their synonymies, whereas a few

comments are made on some North American species as well.

Many of the species presently assigned to this subgenus were described during the 19th century. At the beginning of the 20th century, the shape of male genitalia was shown to be often very characteristic for the species (Edwards 1911). The study of these and other characters showed that quite a number of the previously named species were conspecific. In some cases there have been disagreements which specimens would qualify as type material. Following different opinions, some names were long afterwards generally applied to different species in different European countries. It added well to the confusion, that syntypes or likely syntypes of a species sometimes comprised a fair number of different species, sometimes deposited in several collections.

In addition, new species have been included into the subgenus during the 20th century. They resembled the existing species of the subgenus, but sometimes the new species showed characters different from those previously used to define the subgenus. Some synonymies were recently evaluated by Holmen (1987) and Van Vondel (1995b). There is now a need to review the group, as well as to produce updated keys for identifying its species.

In the present paper, we recognise 22 Palaearctic species in the subgenus *Haliplus*, including three species known (also) from the oriental region and three species described here as new. Over the years, no less than 54-58 valid species group names have been applied to these species. Only one, *H. apicalis* Thomson, 1868, is known to have a Holarctic distribution as *H. strigatus* Roberts, 1913, based on North American type material, appeared to be a synonym (Holmen 1987). Van Vondel (1986) suggests, based on larval characters, that *Haliplus laminatus* (Schaller, 1783) might belong to the subgenus *Haliplus* s. str. instead of the subgenus *Liaphlus*. This view is not followed here as we prefer to wait for a phylogenetic study of the family. In North America, *Haliplus* s.str. comprises eight additional species, including the single Holarctic *H. apicalis* and 13 valid species-group names (Van Vondel 2005).

Species synonymies of the remaining Haliplidae of the Palaearctic, Oriental and Australian regions were recently revised by Van Vondel (1991, 1992, 1993, 1995a, 1995b, 2005).

MATERIAL AND METHODS

Specimens used for this study are deposited in a large number of collections. For the codens used for the collections we refer to the website of Evenhuis & Samuelson (2004). Codens not given by them are explained here:

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| AIH | Agricultural Institute Helsinki, Finland |
| CN | Collection Nakane in Hokkaido University Museum, Japan |
| CNU | Collection Nilsson, Umeå, Sweden |
| CV | Collection Van Vondel, Hendrik-Ido-Ambacht, The Netherlands |
| MPSU | Moscow Pedagogical State University, Russia |
| SWNU | South West Normal University, Dep. of Life Sc., Beibei, Chongqing, China |
| ZMT | Zoological Museum, Turku, Finland |

We refrained from listing all the specimens examined during our research, except for species with a limited distribution or with a very low density.

The methods and terminology follow Van Vondel (1991). The orientation of the male parameres is according Van Vondel (1997). The subdivision of Russia follows the standards of Löbl & Smetana (2003).

TAXONOMIC PART

Checklist of the Palaearctic and Oriental species of *Haliplus* (*Haliplus*)

Haliplus Latreille, 1802

Type species *Dytiscus impressus* Fabricius, 1787 [subsequent designation by Latreille (1810), here fixed as the nominal species previously cited and not the misidentified identity by Latreille (ICZN Code article 70.3.1)]

Cnemidotus Illiger, 1802

Type species *Dytiscus impressus* Fabricius, 1787 [designated here]

Hoplilus Clairville, 1806

Type species *Dytiscus impressus* Fabricius, 1787 [designated here]

Haliplinus Guignot, 1939 [as subgenus of *Haliplus*]

Type species *Dytiscus ruficollis* De Geer, 1774 [original designation]

aliae Van Vondel, 2003a

apicalis Thomson, 1868

? *brevis* Stephens, 1828

striatus Sharp, 1869

strigatus Roberts, 1913

fluviatilis Aubé, 1836

fluviatilis var. *maculatus* Gozis, 1915

fluviatilis var. *mannerheimi* Gozis, 1915

fulvicollis Erichson, 1837

jakowlewi Semenov, 1898

furcatus Seidlitz, 1887

fluviatilis var. *mannerheimii* Seidlitz, 1887

fuscicornis Holmen, Van Vondel & Petrov sp.n.

harminae Van Vondel, 1990

heydeni Wehncke, 1875
multipunctatus Wehncke, 1875
foveostriatus Thomson, 1884
ruficollis var. *pedemontanus* Fiori, 1904
fulvicollis var. *romanus* Fiori, 1904
immaculatus Gerhardt, 1877a
interjectus Lindberg, 1937
japonicus Sharp, 1873
japonicus Sharp, 1873
hummeli Falkenström, 1932
brevior Nakane, 1963. **Syn. n.**
rishwani Makhan, 1999
kamiyai Nakane, 1963
kirgisiensis Holmen & Van Vondel **sp.n.**
lineolatus Mannerheim, 1844
schaumi Solsky, 1867
transversus Thomson, 1870
nomax F. Balfour–Browne, 1911
brownei Sharp, 1913a
browneanus Sharp, 1913b
nomax var. *laevigatus* Falkenström, 1936
regimbarti Zaitzev, 1908
brevis Wehncke, 1880
sauteri Zimmermann, 1924
ruficollis (De Geer, 1774)
impressus Fabricius, 1787 (*Dytiscus*)
marginipunctatus Panzer, 1793 (*Dytiscus*)
affinis Stephens, 1828
rubicundus Babington, 1836
fluviatilis var. *maculatus* Seidlitz, 1887. **Syn. n.**
fluviatilis ab. *seidlitzii* Csiki, 1946
samojedorum J. Sahlberg, 1880
sibiricus Motschulsky, 1860
borealis Gerhardt, 1877a
wehnckeii Gerhardt, 1877b
alsaticus Scriba, 1905
holsaticus Reitter, 1908
lindbergi Falkenström, 1939
sahlbergi Falkenström, 1939
simplex Clark, 1863
minutus Takizawa, 1931. **Syn. n.**
medvedevi Gramma, 1980
steppensis Guignot, 1954
turkmenicus Van Vondel **sp.n.**
zacharenkoi Gramma & Prisnyi, 1973

Checklist of the Nearctic species of *Halilplus* (*Halilplus*)

apicalis Thomson, 1868 (also Palaearctic!)
blanchardi Roberts, 1913
distinctus Wallis, 1933
dorsomaculatus Zimmermann, 1924
allisonae Brigham, 1977
falli Mank, 1940
immaculicollis Harris, 1828

americanus Aubé, 1838
pallidus Roberts, 1913
robertsi Zimmermann, 1924
longulus LeConte, 1850
hoppingi Wallis, 1933
stagninus Leech, 1949

The nearctic species are given to complete the global list of *Halilplus* s.str., but they will not be treated here.

Identity of the genus *Halilplus*

Latreille (1802) created the genus *Halilplus* for two species: *Dytiscus obliquus* Fabricius, 1787 and *Dytiscus impressus* Fabricius, 1787 [Latreille's own interpretation of *impressus* was based at least on the species we now know as *H. fulvus* (Fabricius, 1801), according to Holmen (1987)]. Subsequently, Latreille (1810) designated *D. impressus* Fabricius, 1787 as type species of his genus *Halilplus*. Early authors applied the name *impressus* to quite a number of different European haliplid species, apart from *H. obliquus* (Fabricius, 1787) and *Brychius elevatus* (Panzer, 1793).

According to Holmen (1987), *impressus* in Fabricius' collection (ZMUC) does comprise *H. ruficollis* (De Geer, 1774), *H. immaculatus* Gerhardt, 1877, *H. flavicollis* Sturm, 1834 and *H. lineatocollis* (Marsham, 1802). A lectotype of *D. impressus* Fabricius, 1787 [= *H. ruficollis* (De Geer, 1774)] was designated by Holmen (1987). By this action Latreille's (1802, 1810) concept of *impressus* changed into a misidentification, and thus *Halilplus* was based on a misidentified type species. Holmen (1987) recommended that the type species of *Halilplus* should be *Dytiscus impressus* Fabricius, 1787 in the original sense and not the misidentified sense, to support stability of the present generic nomenclature. At that time, changing of the type fixation based on a misidentified type-species was only possible through an application to the International Commission on Zoological Nomenclature. Such an application has not yet been made. Since 2000, the 4th edition of the code (International Commission on Zoological Nomenclature 1999), article 70.3, allows authors to choose between the nominal species involved or the species involved in the misidentification. Following article 70.3.1, we fix hereby the nominal species *Dytiscus impressus* Fabricius, 1787 [= *H. ruficollis* (De Geer, 1774)] as the type species of the genus *Halilplus* Latreille, 1802.

Also in 1802, Illiger created the genus *Cnemidotus* for three species: *D. impressus* Fabricius, 1787, *D. obliquus* Fabricius, 1787 [= *H. obliquus* (Fabricius, 1787)] and *D. elevatus* Panzer, 1793 [= *Brychius elevatus* (Panzer, 1794)]. Illiger (1798, 1802)

undoubtedly identified his *obliquus* and *elevatus* correctly, but probably interpreted all his other Haliplidae as *impressus*. The suggestion of *Dytiscus caesus* Duftschmid, 1805 [= *Pelodytes caesus* (Duftschmid, 1805)] as type species (Hope 1838) is not valid, as this species name was not originally included in the genus. Several early authors used *Cnemidotus* as the generic name for the species later included in genus *Pelodytes*, following Panzer's (1793) interpretation of *impressus* [= *P. caesus* (Duftschmid, 1805)]. Later, *Cnemidotus* has generally been considered as a junior synonym of *Haliplus*.

Dytiscus impressus Fabricius, 1787 [= *H. ruficollis* (De Geer, 1774)] is here fixed as the type species of the genus *Cnemidotus*.

Clairville (1806) named the genus *Hoplitus* for four species, viz., *Dytiscus fulvus* Fabricius, 1801, *D. impressus* Fabricius, 1787, *D. obliquus* Fabricius 1787 and *D. marginepunctatus* Panzer, 1793. The identity of Clairville's species appears uncertain (Holmen 1987). *Hoplitus* has generally been considered a junior synonym of *Haliplus*.

Dytiscus impressus Fabricius, 1787 [= *H. ruficollis* (De Geer, 1774)] is here fixed as the type species of the genus *Hoplitus*.

Delimitation of the subgenus *Haliplus*

The genus *Haliplus* has been subdivided into species groups or subgenera by several authors. As treated here, the subgenus *Haliplus* comprises species of the following groups and subgenera, apart from differences due to their application to geographically varying faunas and to the discovery of additional species: The *ruficollis* group of *Haliplus* e.g. by Zimmermann (1919) in his work on the Haliplidae of the Berlin-Dahlem Museum.

Group III of *Haliplus* by Zimmermann (1924) in his monograph on the Haliplidae of the world, except for *H. bistriatus* Wehncke, 1880.

Subgenus *Haliplus* s. str. by Guignot (1928) in his division of European species of *Haliplus* into subgenera. According to Guignot (1928), this name of the subgenus was based on its inclusion of the first described species of the genus: *Haliplus ruficollis* (De Geer, 1774).

Subgenus *Haliplinus* Guignot, 1939: 176. Type species *Dytiscus ruficollis* De Geer, 1774, by original designation.

Subgenus *Haliplus* s. str. by Holmen (1987) in his work on the Fennoscandian Haliplidae.

The renaming of the subgenus by Guignot (1939) followed the invalid suggestion by Balfour-Browne (1938) that *Dytiscus obliquus* Fabricius, 1787 is the type species of the genus *Haliplus* and the fact, that this species had been placed in a different subgenus.

In the following years, the name *Haliplinus* was widely used, mainly in Palaearctic works on the group, whereas the subgenus *Haliplus* s. str. consequently replaced the subgenus *Haliplidius* (Guignot, 1928) for *H. obliquus*, two other Palaearctic and one South American species. The species of *Haliplinus* were further subdivided into the *ruficollis* and *fulvicollis* groups by Guignot (1955a).

Holmen (1987) suggested *Haliplus* s. str. as the best available alternative to support stability of the present subgeneric nomenclature.

Description of *Haliplus* s. str.

According to Van Vondel (1991, 1995a), much more study is needed to elucidate the phylogenetic relationships of Haliplidae at and below the subgeneric level. It appears doubtful in several cases, whether the present use of subgenera and their subgroups reflects such relationships, as is also apparent from the phylogenetic analysis of the present haliplid genera and subgenera by Beutel & Ruhnau (1990) and Beutel, Balke & Steiner (2006).

Such future work is no doubt also needed with respect to the species presently treated as the subgenus *Haliplus*, often referred to as the *ruficollis* group. This group comprises morphologically often very similar species, but their phylogenetic relationships are poorly known. The Palaearctic species share the following combination of characters, which even applies to the North American species:

Length about 2-3.5 mm. Dorsal body surface with coarse punctures of varying sizes. Without additional dorsal punctation of more numerous and evenly dispersed finer punctures, apart from the very fine punctation present on elytra (and rarely on pronotum and head) of mainly females of some species. Pronotal basal plicae confined to posterior pronotal half or less, sometimes absent. Pronotal posterior angles not strongly protruding. Elytral coarse punctures in longitudinal rows. Lateral elytral edge not serrate. Two fine, vertical grooves on side of head behind each eye (genal lines). Penultimate segment of labial palps wide, with distal angle on inner edge. Prosternal process of 'medium haliplid width', more or less narrowed between procoxae, continued well delimited over basal part of prosternum. Male pro- and mesotarsomeres 1-3 with ventral sucker hairs. Metacoxal plates not margined. Metatibial upper face without striae of setiferous punctures. Outer metatibial edge with one lower regular row of spines and one upper more or less distinctly forked into two distally. Inner edges of metatibial spurs very finely serrate. Sternum 7 without medial ridge. Aedeagus composed of penis and two parameres. Male right paramere (as defined by Van Vondel 1997!) without distinct apical

digitus. Most of female ovipositor slender, with long and narrow sclerotized tergal 9 halves and basal struts of gonocoxae. Studied larvae with a distal angular dilation of inner protibial edge and antennomere 3 much longer than 1 or 2.

Among the species of the subgenus, two far eastern species share additional characters: Prosternal process with fine transverse border at base (also seen in at least one other species of this subgenus and in many other Haliplidae). Lateral elytral margin not widened until very near apex. Male left (as defined by Van Vondel 1997!) paramere abbreviated, broadly truncate apically. Female tergal 9 halves with weakly sclerotized distal widening.

Since Zimmermann (1924), the species group has often been divided into two subgroups: one with two lateral impressions on the metasternal process (as e.g. in *H. fulvicollis*) and one with a medial or no impression (as in e.g. *H. ruficollis*).

Several of the above mentioned characters are shared with other species of *Haliphus* or Haliplidae. Actually, adults of the North American *H. borealis* LeConte, 1850 seems to fit them all. Possible relationships with the Palaearctic *H. varius* Nicolai, 1820 based on larval morphology has already been mentioned by Van Vondel (1996).

Among the *Haliphus* species, the present *ruficollis* group species as well as at least *H. borealis*, *H. varius*, *H. confinis* and *H. obliquus* possess a mostly slender female ovipositor, with long and narrow sclerotized tergal 9 halves and basal struts of gonocoxae.

Key to the Palaearctic and Oriental species of

Haliphus s. str.

1. Prosternal process with transverse rim basally (fig. 122) 2
 - Prosternal process without transverse rim basally 5
2. Male protarsal claws wider, of different width (fig. 179). Female elytra strongly punctured. Length 2.9-3.0 mm *samojedorum* (part)
 - Male protarsal claws of equal width. Female elytra without micropunctuation 3
3. Prosternal process with distinct ridge medially (fig. 122). Elytral dark pattern strongly developed. Length 3.1 mm *kamiyai*
 - Prosternal process somewhat elevated medially, but without a distinct ridge. Elytral dark pattern more reduced 4
4. Metasternal process almost flat, with at most a weak depression on each side (fig. 111). Length 2.6-3.5 mm *japonicus*
 - Metasternal process with a deep depression on each side (fig. 154). Length 2.4-3.0 mm *regimbarti*
5. Metasternal process with an impression on each

- side (fig. 18) 6
 - Metasternal process usually with medial impression or about flat (fig. 29) 12
6. Prosternal process very narrow between front coxae, not clearly furrowed along the sides or basally (fig. 40). Male with apex of penis very narrowly rounded. Female elytra never micropunctured. Length 2.4-3.1 mm *fulvicollis*
 - Prosternal process wider between front coxae, at least weakly furrowed basally and often also along the sides. Apex of penis obliquely truncate. Female elytra sometimes micropunctured 7
7. Shape of body narrow, sometimes with sides parallel in the middle 8
 - Shape of body rather wide, not parallel sided. Penis as figured (females not found yet). Length 3.0 mm *kirgisiensis* sp. n.
8. Elytral dark lines more or less confluent into a common elytral spot behind the middle, connected to the suture, otherwise maculation hardly developed (fig. 171). Prosternal process less constricted between front coxae. Penis as figured (fig. 180-182). Female elytra completely and strongly micropunctured. Length 2.9-3.0 mm *samojedorum* (part)
 - Elytral dark pattern different. Prosternal process more constricted between front coxae. Penis different. Female elytra with strong or weak or absent micropunctuation 9
9. Elytra with strongly interrupted dark lines, often strongly maculated. Penis as figured (fig. 56). Female elytra at most weakly micropunctured. Length 2.2-3.0 mm *furcatus*
 - Elytra with more or less interrupted or continuous dark lines without maculation 10
10. Elytral dark lines continuous and strong. Female elytra strongly micropunctured. Length 2.5-3.0 mm *apicalis*
 - Elytral dark lines not continuous. Elytra not strongly micropunctured 11
11. Primary puncture rows not or vaguely darkened. Metasternal process with strong impression on each side (fig. 7). Female elytra without micropunctures. Length 2.7-3.0 mm *aliae*
 - Elytral puncture rows with interrupted although not strong lines. Metasternal process with weak impression on each side (fig. 205). Female elytra completely but weakly micropunctured. Length 2.7-3.0 mm *steppensis*
12. First three tarsal segments of fore- and midlegs widened and ventrally provided with closely set sucker-hairs: males 13
 - First three tarsal segments of fore- and midlegs not widened, ventrally at most with few hairs, in most cases elytra with micropunctuation: females: 27

13. First tarsal segment of midlegs strongly excised (fig. 147). Length 2.3-3.3 mm *lineolatus*
 – First tarsal segment of midlegs not strongly excised, at most slightly concave 14
14. Pronotum without basal plicae or at most with one or two punctures suggesting a plica. Antennae not darkened in apical half 15
 – Pronotum with clear basal plicae or antennae darkened in apical half 18
15. Elytral puncture rows with dark lines 16
 – Elytra with vague dark marks, or with discal mark behind the middle, dark lines hardly developed 17
16. Sutural row of secondary punctures sparse and regular. Dark lines on primary puncture rows only interrupted in basal third. Length 2.5-2.9 mm *zacharenkoi*
 – Sutural row of secondary punctures irregular and more dense. Dark lines on primary puncture rows interrupted in apical half and often with connecting marks. Length 2.4-3.1 mm *simplex*
17. Body oblong, sides parallel. Usually one central mark behind the middle connected to the suture. Length 2.9-3.0 mm *samojedorum (part)*
 – Body wide, vague dark marks on elytra (expectation, but males not yet known). Length 2.6 mm *harminae*
18. First tarsal segment of forelegs ventrally dilated (fig. 93) 19
 – First tarsal segments of forelegs ventrally simple, not specifically modified 21
19. First tarsal segment of forelegs ventrally with a longitudinal row of short spines (fig. 104), black elytral stripes widely interrupted. Length 2.4-2.8 mm *interjectus*
 – First tarsal segment of forelegs ventrally with a sharp ridge, black elytral stripes hardly interrupted 20
20. Claws of forelegs almost equal in length (fig. 65). Antennae darkened apically (fig. 59). Length 2.7-2.9 mm *fusicornis* sp.n.
 – Claws of forelegs clearly unequal in length and curvature (fig. 93). Length 2.4-3.1 mm *immaculatus*
21. Claws of forelegs clearly unequal in length and shape 22
 – Claws of forelegs equal or subequal in length and shape 25
22. Body rather wide. Pronotal plicae short and usually curved 23
 – Body rather narrow. Pronotal plicae longer and usually straight. Elytral dark lines usually hardly interrupted in the apical half, not confluent, no spotted appearance. Transverse row of punctures on abdominal sternite VI usually widely interrupted in the middle. Length 2.8-3.3 mm *sibiricus*
23. Sutural secondary punctures dense and in two irregular rows in basal part. Aedaeagus as in figs. 199-201. Length 2.4-3.1 mm *simplex*
 – Sutural secondary punctures sparse in basal part 24
24. Dark lines on elytral primary puncture rows interrupted, not confluent, no spotted appearance. Transverse row of punctures on abdominal sternite VI very weak in the middle. Length 2.7-2.9 mm *turkmenicus* sp.n.
 – Dark lines on elytral primary puncture rows interrupted and partly confluent, giving the elytra a pronouncedly spotted appearance. Transverse row of punctures on abdominal sternite VI not widely interrupted in the middle. Length 2.3-3.0 mm *ruficollis*
25. Pronotal plicae very short, at most consisting of one or two punctures suggesting a plica. Elytral dark lines more or less continuous in apical half. Length 2.5-2.9 mm *zacharenkoi*
 – Pronotal plicae clearly developed 26
26. Prosternal process clearly grooved in the anterior part. Body usually widest near the shoulders, strongly tapering backwards. Elytral dark lines widely interrupted and often connected by blotches of which the largest one is situated on the middle of the suture. Basal primary punctures on elytra groove-like connected. Length 2.2-2.8 mm *beydeni*
 – Prosternal process usually flat or slightly convex, sometimes slightly grooved. Body slender, shoulders less pronounced, tapering backwards less strongly. Elytral dark lines not connected by blotches, but locally widened. Generally light yellow or yellow. Length 2.5-3.2 mm *fluviatilis*
27. Pronotum without plicae. Antennae not darkened in apical half 28
 – Pronotum with plicae or antennae darkened in apical half 30
28. Elytra with with dark blotches, no clear dark lines. Female elytra without micropunctures. Length 2.6 mm *harminae*
 – Elytra with more or less interrupted dark lines, no dark blotches 29
29. Sutural row of secondary punctures sparse and regular. Dark lines on primary puncture rows only interrupted in basal third. Length 2.5-2.9 mm *zacharenkoi*
 – Sutural row of secondary punctures irregular and more dense. Dark lines on primary puncture rows interrupted in apical half and often with connecting marks. Length 2.4-3.1 mm *simplex*
30. Elytra with micropunctuation, sometimes restricted to the apex (if there are only few micropunctures in the apical area) 31

- Elytra without micropunctuation 39
- 31. Elytral apex broadly rounded or truncate, lateral border wide posteriorly. Micropunctuation usually also visible on the anterior half of the elytra. Elytral dark lines usually narrow, interrupted in the basal part, often continuous in the apical half, no connecting blotches. Body rather wide, subparallel. Length 2.3-3.3 mm *lineolatus*
- Elytral apex more narrowly rounded or truncate, lateral border rather narrow posteriorly 32
- 32. Segment 5 of front tarsi usually with 3 ventral spines, segment 5 of mid tarsi usually with 4 ventral spines, the spines are rather long and the proximal ones are more closely set than the distal ones. Body fairly short, with rather evenly rounded sides. Elytral dark lines usually strongly interrupted, giving the elytra a pale, spotted appearance. Length 2.4-2.8 mm *interjectus*
- Segment 5 of front and mid tarsi usually with more spines, these are rather evenly dispersed and usually shorter 33
- 33. Antennae darkened apically. Length 2.7-2.9 mm *fusicornis* sp. n.
- Antennae not clearly darkened apically 34
- 34. Metasternal process usually flat in anterior part. Prosternal process usually flat or slightly convex, but sometimes weakly grooved 35
- Metasternal process usually grooved in anterior part. Prosternal process usually grooved 36
- 35. Body oblong, shoulders not pronounced. Usually light yellow to yellow. Dark elytral lines not connected by blotches, but locally widened, usually causing a double V-pattern. 2.5-3.2 mm *fluviatilis*
- Body wide, not parallel. Dark elytral lines not confluent, not showing a clear double V-pattern. Length 2.7-2.9 mm *turkmenicus* sp. n.
- 36. First elytral puncture row with 30-35 punctures 37
- First elytral puncture row usually with 40 or more punctures 38
- 37. Sutural secondary punctures sparse in basal part. Elytral dark lines more or less continuous in apical half. Length 2.5-2.9 mm *zacharenkoi*
- Sutural secondary punctures dense and in two irregular rows in basal part. Elytral dark lines interrupted in basal and in apical part *simplex*
- 38. Body usually with pronounced shoulders, widest before the middle. Pronotal plicae short and usually curved. Prosternal process only weakly grooved in the anterior half. Dark elytral lines often interrupted and confluent. Transverse row of punctures on the sixth abdominal sternite not widely interrupted in the middle. Length 2.3-3.0 mm *ruficollis*
- Body widest in the middle. Pronotal plicae

- long, usually more than $\frac{1}{3} \times$ the length of the pronotum, and straight. Dark elytral lines interrupted in the basal half, often almost continuous in the apical half, usually not confluent. Prosternal process usually grooved completely. Transverse row of punctures on the sixth abdominal sternite widely interrupted in the middle. Basal punctures on elytra sometimes connected to form transverse grooves. Length 2.8-3.3 mm *sibiricus*
- 39. Dark elytral lines mostly continuous, not confluent. Shoulders not pronounced. Body subparallel. Transverse row of punctures on the sixth abdominal sternite usually widely interrupted. Length 2.4-3.1 mm *immaculatus*
- Dark elytral lines often interrupted and confluent. Shoulders pronounced, body widest before the middle. Transverse row of punctures on the sixth abdominal sternite not widely interrupted. First elytral primary puncture row usually with less than 40 punctures. Basal punctures on elytra connected groove-like. Length 2.2-2.8 mm .. *heydeni*

Halilpus (Halilpus) aliae Van Vondel
(figs. 1-12)

Halilpus aliae Van Vondel, 2003a: 292. Holotype ♂: CHINA: 'Tientsin [Tianjin], Ross. commut.; *Halilpus sauteri* var. oder nov. sp.? Zimm., det. A. Zimmermann' (DEI) [examined].

Additional material examined: CHINA: 2 paratypes (♂, ♀): same labels as holotype (DEI, CV).

Description

Length 2.7-3.0 mm, width 1.6-1.8 mm. Body oval, widest just before the middle (fig. 1).

Head. – Yellow-brown to red-brown, moderately and on vertex sparsely punctate. Distance between eyes 1.4-1.6 times width of one eye. Antennae yellow, third segment nearly twice the length of the fourth segment (fig. 2). Palpi yellow to yellow-brown, penultimate segment of labial palpus strongly widened apically (fig. 3, 4).

Pronotum. – Yellow-brown to brown-red. Lateral borders almost straight to slightly convex and finely margined. Opposite fifth elytral puncture row with short basal plicae, between plicae weakly impressed. Moderately, along base a little more strongly punctured (fig. 1).

Elytra. – Yellow-brown to brown-red, no clear lines or dark marks present. Primary puncture rows moderately strong, weakened apically, basal punctures sometimes widened or connected to other punctures, about 30 punctures in first row. Secondary punctures relatively strong, dense in sutural row, more sparse in other intervals. All punctures darkened (fig. 1, 5).

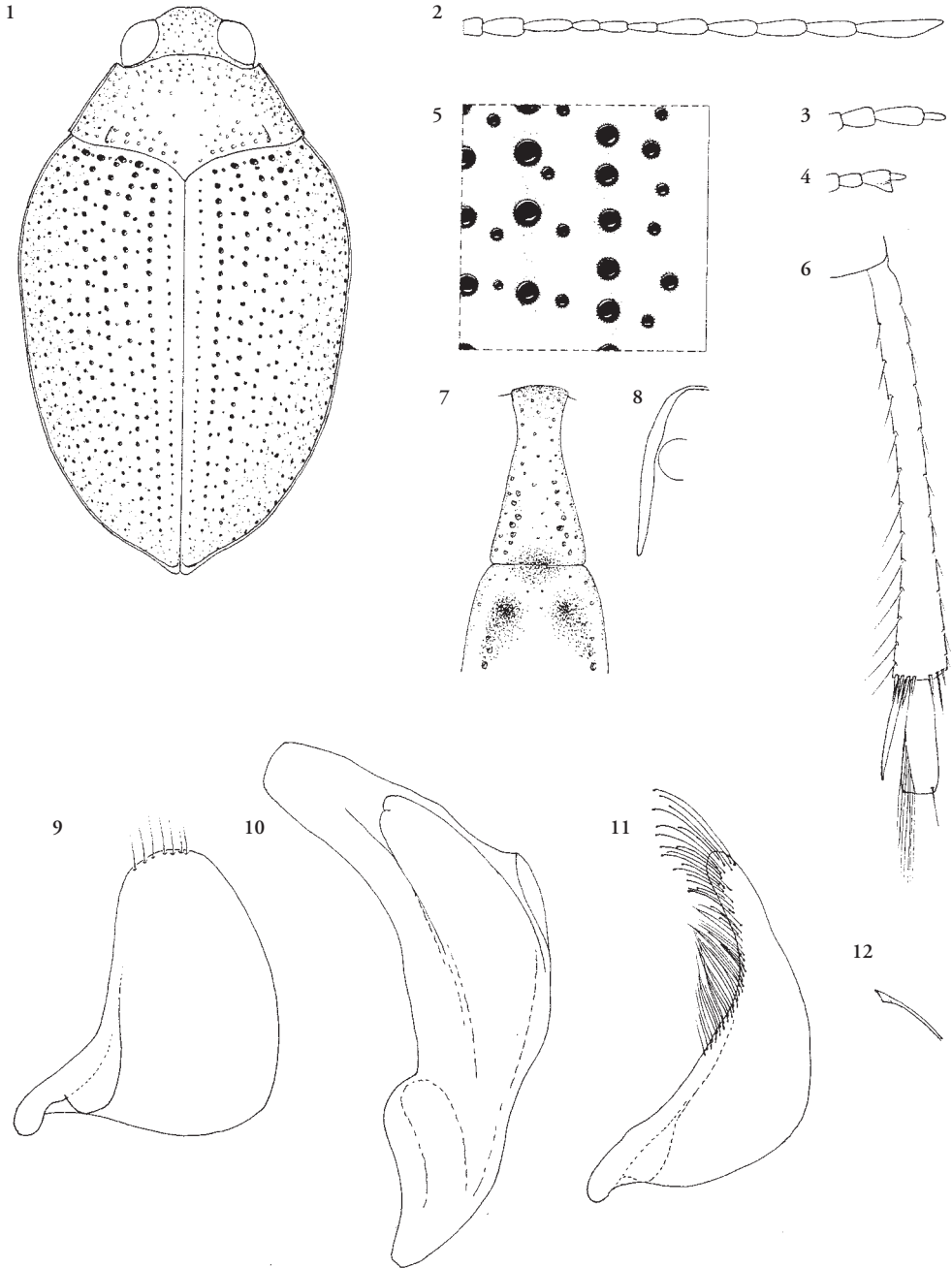


Fig. 1-12. *Haliplus aliae* male. – 1, Habitus; 2, antenna; 3, maxillar palpus; 4, labial palpus; 5, punctures near elytral base and suture; 6, hind tibia; 7, prosternal and metasternal process; 8, prosternal process in lateral view; 9, left paramere; 10, penis; 11, right paramere; 12, end of bristle of right paramere.

Ventral side. – Yellow to yellow-brown, elytral epipleura yellow with uncoloured punctures. Legs yellow to yellow-brown, claws of forelegs in both sexes about equal in length. Prosternal process flat, narrowed near coxae, moderately punctured (fig. 7), lateral plica complete (fig. 8). Metasternal process strongly impressed on each side, sparsely punctured (fig. 7). Metacoxal plate strongly and densely, near suture weaker punctured. No setiferous striole on dorsal face of hind tibia, longest of the two tibial spurs $\frac{3}{4} \times$ length of first tarsal segment (fig. 6).

Male: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Penis and parameres as in figs. 9-11, end of bristles towards top of right paramere trumpet-like (fig. 12).

Female: Elytra without micropunctuation.

Similar species

This species is closely related to *H. steppensis*. The latter has more or less interrupted dark lines on the elytral puncture rows, while in this species at most vague traces of lines can be detected. The impressions of the metasternal process of *H. steppensis* are weak, while in this species these are strong. The males differ in the shape of the aedeagus. The female of this species has elytra without micropunctures, while the elytra of female *H. steppensis* are clearly completely micropunctate.

Biology

No details are known.

Distribution

East Palaearctic: China: Tianjin.

Halilpus (Halilpus) apicalis Thomson (figs. 13-23)

? *Halilpus brevis* Stephens, 1828: 43 Holotype: ENGLAND: London (depository unknown) [not examined].

Halilpus apicalis Thomson, 1868: 293. Syntypes: SCANDINAVIA (MZLU) [examined].

Halilpus striatus Sharp, 1869: 81. Syntypes: ENGLAND: Dumfries (BMNH); Synonymised by Zimmermann 1920: 303 [not examined].

Halilpus strigatus Roberts, 1913: 110; Syntypes: CANADA: Manitoba, Treesbank (AMNH); Synonymised by Holmen 1987: 122 [examined].

Halilpus immaculatus auct. (misident. vide Edwards 1911: 8).

Halilpus samojedorum ab. *inornatus* Zaitzev, 1910: 26 (Unavailable name; infrasubspecific).

Halilpus seidlitzi Reitter (pro parte) (Unavailable name; nomen mus. in HNHM, NMW, SMFD and ZSM).

Additional material examined: About 500 specimens from Europe and about 300 specimens from North America.

Description

Length 2.5-3.0 mm, width 1.5-1.7 mm. Body oval to subparallel, widest in the middle (fig. 13). Underside of the body often with very fine micropunctuation.

Head. – Yellow to yellow-brown, vertex darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes $2.0 \times$ width of one eye. Antennae yellow to yellow-red, first segment a little darker (fig. 14). Palpi yellow to yellow-red (fig. 16-17).

Pronotum. – Yellow to yellow-brown. Basal plicae opposite fifth elytral puncture row about $\frac{1}{3} \times$ length of pronotum, weakly impressed between plicae. Sparsely punctured. Lateral sides margined, margin narrowed anteriorly, about straight (fig. 13).

Elytra. – Yellow with continuous black stripes on suture and primary puncture rows, black stripes interrupted on marginal rows. Completely margined. Primary puncture rows dense and moderately strong, about 40-45 punctures in first row. Secondary punctures sparse, but most of them as strong as primary punctures. All punctures darkened (figs. 13, 15).

Ventral side. – Yellow-brown, legs yellow-brown, elytral epipleura yellow to yellow-brown with uncoloured punctures, reaching to sixth sternite. Prosternal process strongly narrowed near coxae, posteriorly flat or weakly impressed on each side, anterior edge distinctly margined, strongly punctured (figs. 18, 19). Metasternal process flat, posteriorly with a weak impression on each side, moderately strongly punctured (fig. 18). Metacoxal plates with an almost square medial apical corner, reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Last sternite strongly punctured, fifth and sixth sternite hardly punctured. No setiferous striole on dorsal face of hind tibia. Longer apical spur of hind tibia $\frac{3}{4} \times$ length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs equal in length (fig. 20). Penis and parameres as in figs. 21-23.

Females: Elytra covered with a dense distinct micropunctuation.

Similar species: This species is easily distinguished from the other species in the '*fulvicollis*'-group by the continuous dark elytral lines and in the females by the strong micropunctuation.

Biology

Living among filamentous algae in stagnant and slowly running, brackish (sometimes in coastal areas), but also fresh water in pools, ponds, ditches and streamlets.

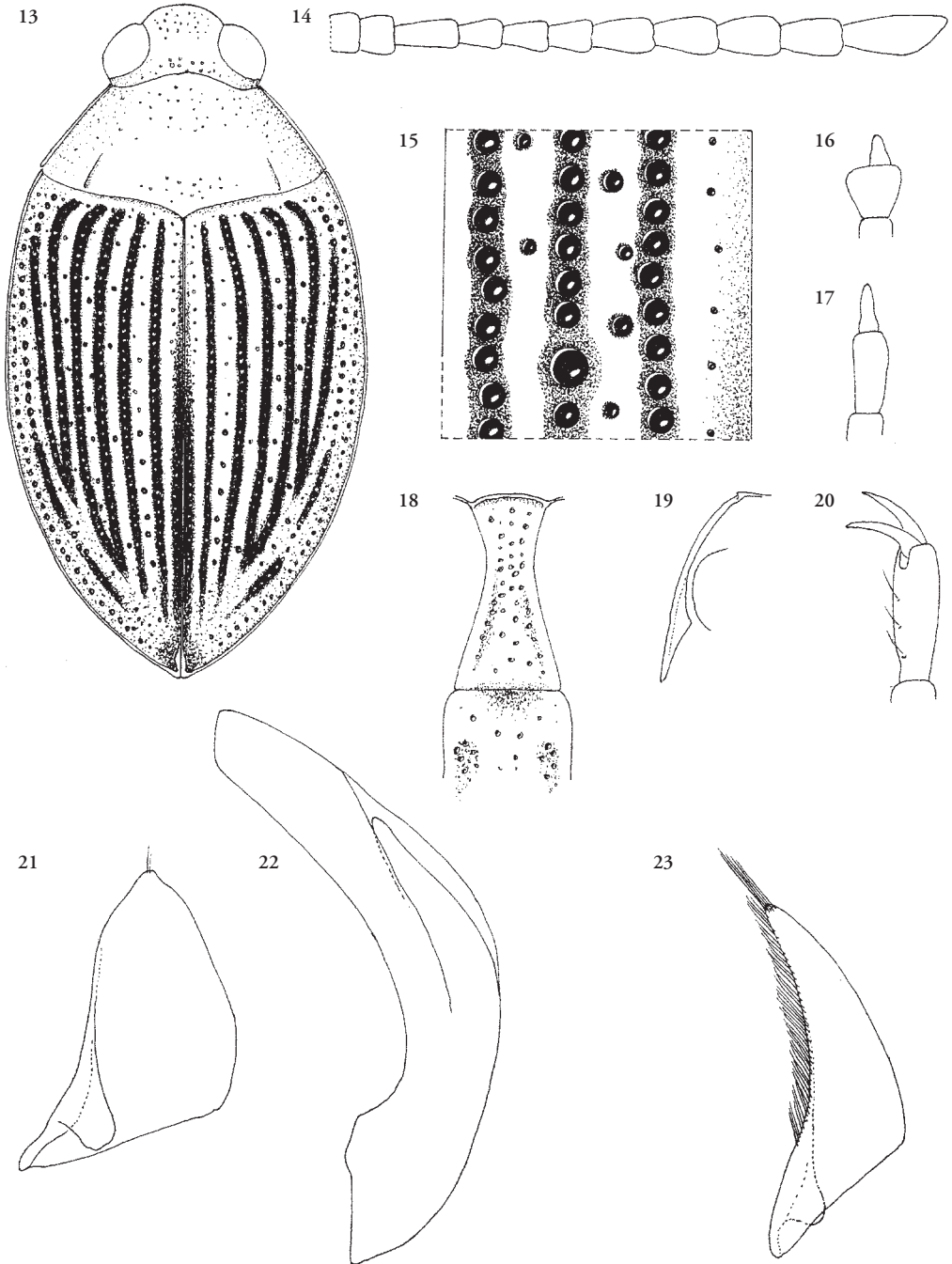


Fig. 13-23. *Haliphus apicalis* male. – 13, Habitus; 14, antenna; 15, punctures near elytral base and suture; 16, labial palpus; 17, maxillar palpus; 18, prosternal and metasternal process; 19, prosternal process in lateral view; 20, claws of forelegs; 21, left paramere; 22, penis; 23, right paramere.

Distribution

Holarctic: From Central Europe to Mongolia, in Canada and the United States restricted to the western (mountainous) half of the region: Belgium, Denmark, Germany, Great Britain, Hungary, Ireland, ?Mongolia, Norway, Poland, Russia (North and Central European Territory, West Siberia), Sweden, The Netherlands.

Canada: Alberta, British Columbia, Manitoba, Northwest Territories, Saskatchewan, Yukon, Territory; USA: Alaska, Colorado, Minnesota, New Mexico, North Dakota, South Dakota, Utah, Washington, Wyoming.

Halilpus (Halilpus) fluviatilis Aubé

(figs. 24-34)

Halilpus fluviatilis Aubé, 1836: 33. Syntypes: FRANCE: Seine river (probably in IRSNB) [not examined].

Halilpus fluviatilis var. *maculatus* Gozis, 1915: 211; Type locality and depository of syntypes not known. [not examined].

Halilpus fluviatilis var. *mannerheimi* Gozis, 1915: 212; Type locality and depository of syntypes not known. [not examined].

Halilpus desertus Motschulsky, 1853: 3 (Unavailable name, Desert des Kirguises, Synonymised by Zaitzev 1915: 244).

Halilpus punctatostriatus Motschulsky 1853: 3 (Unavailable name, Desert des Kirguises, Synonymised by Zaitzev 1915: 244).

Halilpus marginicollis Motschulsky 1853: 4 (Unavailable name, Siberia, South Russia, Synonymised by Zaitzev 1915: 244).

Halilpus impressus auct. (misident.)

Material examined: About 1200 specimens from most of its area of distribution.

Description

Length 2.5-3.2 mm, width 1.3-1.6 mm. Body oval, widest in the middle (fig. 24).

Head. – Yellow to yellow-brown, vertex usually darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.6-1.7 × width of one eye. Antennae yellow (fig. 25). Palpi yellow (figs. 27-28).

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{5}$ × length of pronotum, base between plicae slightly impressed. Moderately, in the middle more sparsely punctured. Lateral sides margined, straight to slightly convex (fig. 24).

Elytra. – Yellow to yellow-brown, suture darkened, interrupted dark stripes on primary puncture rows, dark stripes sometimes nearly continuous. Completely margined. Primary puncture rows moderately strong, denser in first rows, 38-42 punctures in first row. Secondary punctures strong, but sparse. All

punctures darkened (figs. 24, 26).

Ventral side. – Yellow to yellow-brown, legs yellow to yellow-brown, coxae brown, elytral epipleura yellow with uncoloured punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, usually flat, at most slightly channeled in anterior part, anterior edge not margined, strongly punctured (figs. 29-30). Metasternal process flat or with a weak impression in the middle, moderately strongly and densely punctured (fig. 29). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite weakly punctured, last sternite moderately punctured. No setiferous striole on dorsal face of hind tibia, longer spur of hind tibia $\frac{3}{4}$ × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs subequal, inner claw a little shorter (fig. 31). Penis and parameres as in 32-34.

Females: Elytra completely or at least in posterior half covered with a distinct micropunctuation.

Similar species: Often confused with other species of the '*ruficollis*'-group. In the males the aedeagus and the subequal claws of the forelegs are reliable characters. Females are sometimes difficult to identify; usually they have a fairly strong micropunctuation.

Biology

Among vegetation in streams, rivers, but also in lakes with sandy or stony bottoms. Attracted to light.

Distribution

Widespread in Europe and the neighbouring Asian countries: Afghanistan, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, Croatia, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Kazakhstan, Kyrgyzia, Latvia, Luxembourg, Macedonia, Poland, Romania, Russia (Central, North and South European Territory, West and East Siberia), Slovakia, Spain, Sweden, The Netherlands, 'Transcaucasia', Turkey, Ukraine, Yugoslavia.

Halilpus (Halilpus) fulvicollis Erichson

(figs. 35-46)

Halilpus fulvicollis Erichson, 1837: 186. Syntypes: GERMANY: Mark Brandenburg (ZMHB) [1 syntype examined].

Halilpus jakowlewi Semenov, 1898: 545; Syntypes: RUSSIA: Jaroslawensis, Berditzino (ZIN); Synonymised by Zimmermann 1920a: 307 [1 syntype examined].

Halilpus petropolitanus Motschulsky, 1853: 3 (Unavailable name, European Russia, Synonymised by Zaitzev 1915: 244).

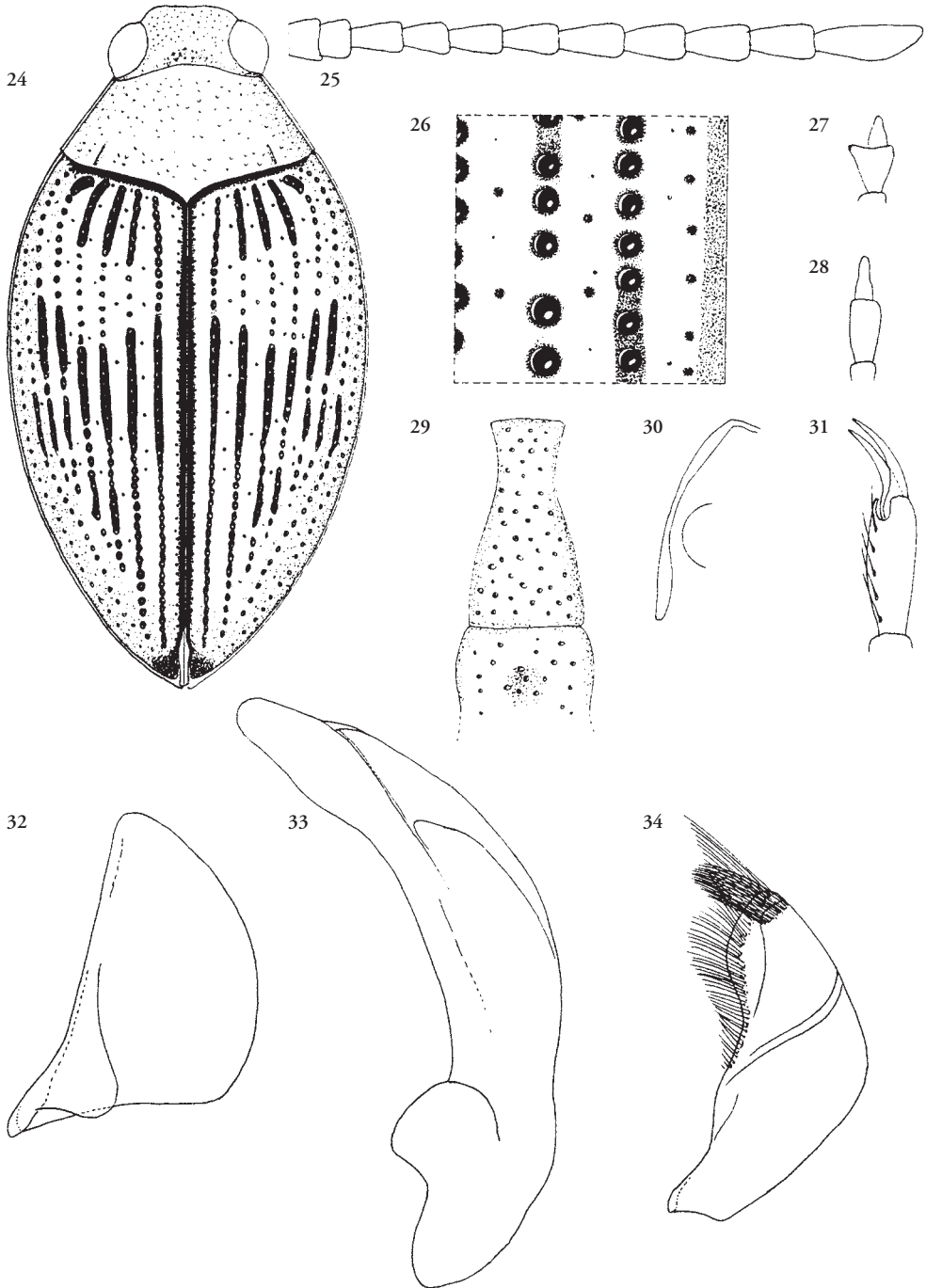


Fig. 24-34. *Haliphus fluviatilis* male. – 24, Habitus; 25, antenna; 26, punctures near elytral base and suture; 27, labial palpus; 28, maxillar palpus; 29, prosternal and metasternal process; 30, prosternal process in lateral view; 31, claws of forelegs; 32, left paramere; 33, penis; 34, right paramere.

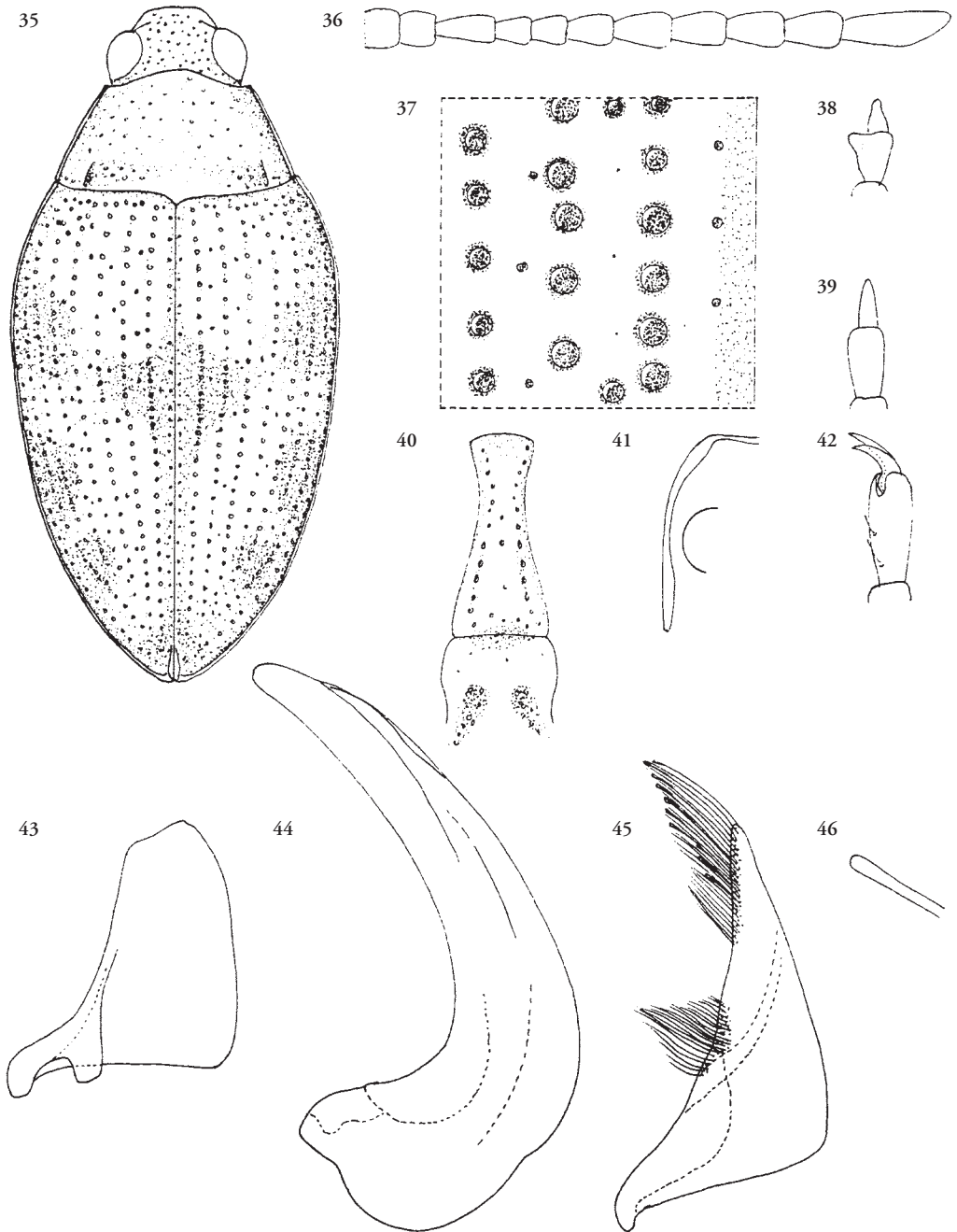


Fig. 35-46. *Halilpus fulvicollis* male. – 35, Habitus; 36, antenna; 37, punctures near elytral base and suture; 38, labial palpus; 39, maxillar palpus; 40, prosternal and metasternal process; 41, prosternal process in lateral view; 42, claws of forelegs; 43, left paramere; 44, penis; 45, right paramere; 46, end of bristle of right paramere.

Additional material examined: About 220 specimens from Europe and West Siberia.

Description

Length 2.6-3.1 mm, width 1.4-1.7 mm. Body oval to subparallel, widest in the middle (fig. 35).

Head. – Brown-red, moderately strongly punctured, vertex darkened. Distance between eyes 1.9-2.1 × width of one eye. Antennae yellow-brown (fig. 36). Palpi yellow-brown (figs. 38, 39).

Pronotum. – Yellow to yellow-red, weakly darkened along anterior margin. Plicae opposite fifth elytral puncture row $\frac{1}{4}$ - $\frac{1}{3}$ × length of pronotum, between plicae weakly impressed. Sparsely punctured. Lateral sides margined, about straight (fig. 35).

Elytra. – Yellow to yellow-red or yellow-brown, vague maculation: a crosslike mark on the disc and a row of large marks on the sides, sometimes maculation restricted to parts of primary puncture rows. Completely margined. Primary puncture rows moderately strong and dense, about 35 punctures in first row. Secondary punctures strong and sparse. All punctures darkened (fig. 35, 37).

Ventral side. – Yellow-red to brown, legs yellow-red, darkened towards coxae, elytral epipleura yellow-red with uncoloured punctures. Prosternal process strongly narrowed near coxae, posteriorly sometimes slightly impressed or with a weak groove on each side, strongly but sparsely punctured, anterior edge not margined (figs. 40-41). Metasternal process posteriorly with a strongly punctured impression on each side, else weakly punctured (fig. 40). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Last sternite sparsely punctured. No setiferous striae on dorsal face of hind tibia. Longer tibial spur of hind legs $\frac{3}{4}$ - $\frac{4}{5}$ × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs unequal, inner claw shorter and more curved (fig. 42). Penis and parameres as in figs. 43-45, setae on top of right paramere partly rounded at the top (fig. 46).

Females: Elytra without micropunctuation.

Similar species: This species can be distinguished from the other species in the '*fulvicollis*'-group by the vague elytral maculation.

Biology

Living in marshes, peat bogs and pools. In fresh, usually acid, temporary waters.

Distribution

Central Europe and in the east to neighbouring Asian countries: Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, 'Caucasus', Croatia, Czech

Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Kazakhstan, Norway, Poland, Russia (Central, North and South European Territory, West Siberia), Slovakia, Sweden, The Netherlands, 'Transcaucasia', Ukraine, Yugoslavia.

Haliplus (Haliplus) furcatus Seidlitz (figs. 47-57)

Haliplus furcatus Seidlitz, 1887: 33. Syntypes: ESTONIA, GERMANY, POLAND (ZSM and probably else) [1 syntype examined]

Haliplus fluvialtilis var. *mannerheimii* Seidlitz, 1887: 33. Holotype: RUSSIA (probably in ZSM); Synonymised by Zimmermann 1920a: 308 [not examined].

Haliplus tesselatus Motschulsky, 1853: 3 (Unavailable name, Caucasus); (ex. parte in BMNH).

Haliplus ruficollis ab. *confluens* Fiori, 1904: 199. Syntypes: ITALY (ZMHB) (Unavailable name, infrasubspecific, Synonymised by Zimmermann 1924: 80) [examined].

Additional material examined: About 140 specimens from most of its area of distribution.

Description

Length 2.4-3.0 mm, width 1.3-1.5 mm. Body oval to subparallel, widest in the middle (fig. 47).

Head. – Yellow-brown, vertex darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.5-1.6 × width of one eye. Antennae yellow to yellow-brown (fig. 48). Palpi yellow to yellow-brown (figs. 50-51).

Pronotum. – Yellow to yellow-brown, anteriorly slightly darkened. Base with plicae opposite fifth elytral puncture row, plicae about $\frac{1}{3}$ × length of pronotum. Weakly impressed between plicae. Sparsely punctured. Lateral sides straight to weakly concave in posterior half, weakly convex in anterior half, distinctly margined (fig. 47).

Elytra. – Yellow to yellow-brown, dark stripe along suture and dark strongly interrupted stripes on primary puncture rows, these striped parts often connected by a dark maculation, which leaves a yellow spot on posterior half and a large yellow area on anterior half. Completely margined. Primary puncture rows moderately strong and dense, about 35 punctures in first row. Secondary punctures strong and dense along suture and sparse on intervals. All punctures darkened (figs. 47, 49).

Ventral side. – Yellow-red to brown, legs yellow-red to brown, darkened towards coxae, elytral epipleura yellow-brown with uncoloured punctures, reaching to fifth sternite. Prosternal process narrowed near coxae, groove on each side formed by connected punctures, anterior edge not margined, sparsely punctured (figs. 52-53). Metasternal process flat, posteriorly with a strongly punctured impression on each side, else sparsely punctured (fig. 52). Metacoxal

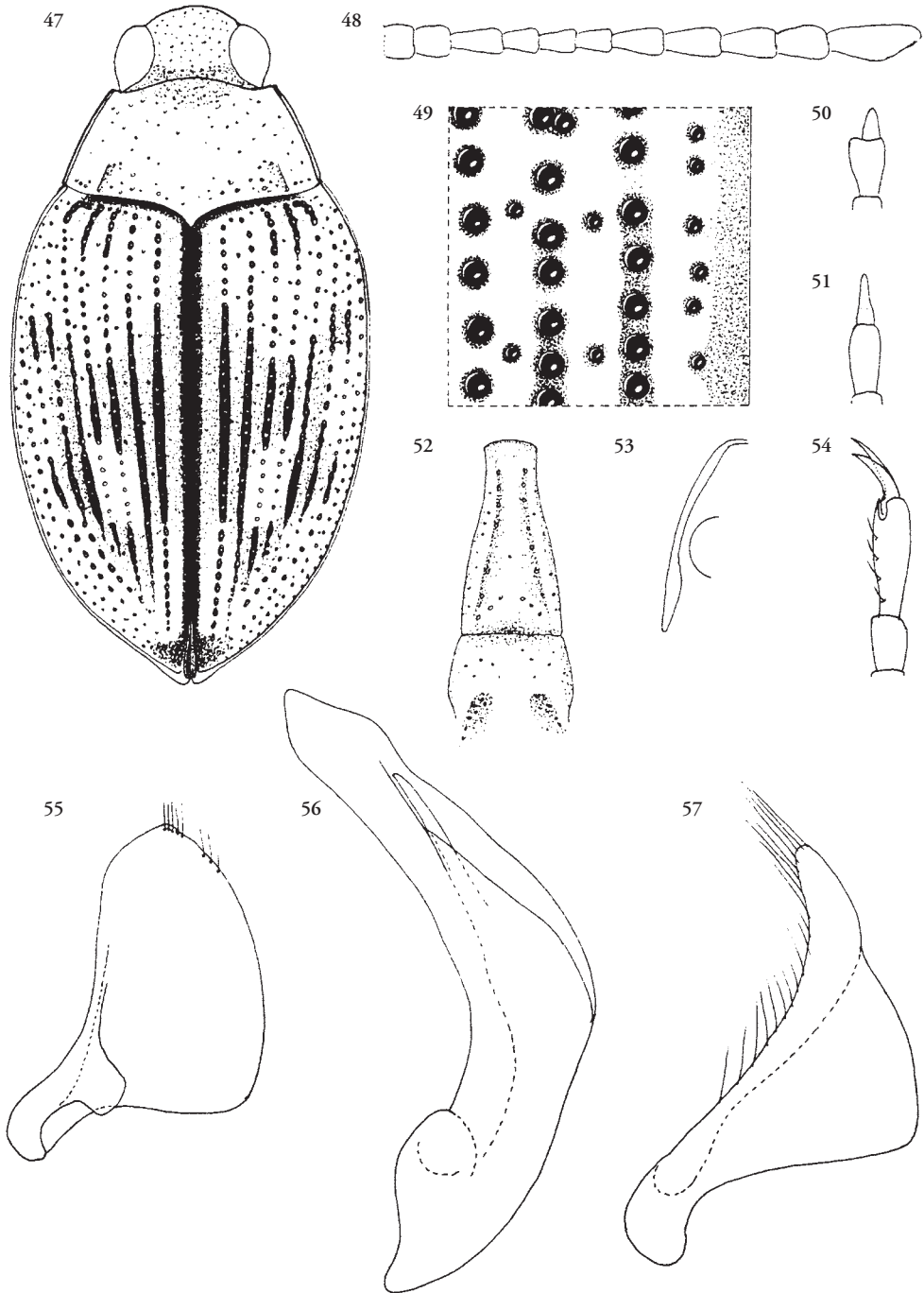


Fig. 47-57. *Halilpus furcatus* male. – 47, Habitus; 48, antenna; 49, punctures near elytral base and suture; 50, labial palpus; 51, maxillar palpus; 52, prosternal and metasternal process; 53, prosternal process in lateral view; 54, claws of forelegs; 55, left paramere; 56, penis; 57, right paramere.

plates, reaching to fifth sternite, moderately strongly punctured, medially weakly punctured. Last sternite strongly punctured, fifth and sixth sternite with complete transverse puncture row. No setiferous striole on dorsal face of hind tibia. Longer spur of hind tibia $\frac{2}{3} \times$ length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs unequal, inner one shorter and more curved (fig. 54). Penis and parameres as in figs. 55-57.

Females: Elytra completely covered by a distinct micropunctuation.

Similar species

Distinguished from the other species of the '*fulvicollis*'-group by the prosternal process, being grooved on each side and the dark elytral lines, being clearly interrupted.

Biology

Living in undisturbed shallow, often temporary, pools and marshes with a rich vegetation. In fresh and also in brackish water in coastal areas.

Distribution

From Central Europe to northern China: Armenia, Austria, Belgium, Byelorussia, China (Heilongjiang), Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Hungary, Italy, Kazakhstan, Latvia, Poland, Romania, Russia (South European Territory, West Siberia), Slovakia, Sweden, The Netherlands, Ukraine.

Haliplus (Haliplus) fuscicornis Holmen, Van Vondel & Petrov sp. n. (figs. 58-69)

Type material: – Holotype ♂: RUSSIA (EAST SIBERIA): [partly in Russian] r. Chona, Vil. okr., raion y. r. Nykyn., 4.vii.1926, Tkachenko; [red label] holotype ♂, *Haliplus fuscicornis* n.sp., det. Holmen 1984 (ZIN). Paratypes [red label] (11 ♂, 6 ♀): RUSSIA (EAST SIBERIA): ♂, Worog. Selo; No. 37, Worogowa Selo, Vide infra; ♂, Agrafena, Lena infer., B. Poppius; ♀, Agrafena, Lena infer., B. Poppius; ♀, Agrafena, Lena infer., B. Poppius; ♀, Ytyk-haja, Fl. Lena m., B. Poppius, 6176, [unreadable label]; ♂, [partly in Russian] okr. g. Yakutska, -1915-16, Yurinskij, Zool. Inst., Acad. Sci USSR Leningrad [overlined]; ♂, [partly in Russian] 2 Nyoryuteisk. nasleg, Yakut. okr., 5.vii.1925, Bianki, Yakutskaya Eksped AN, *H. sibiricus* (Motsch.) Linn., Zaitsev det., Coll. Lindberg; ♂, Jakutsk, B. Poppius, 1198; *H. fuscicornis* n.sp., J. Sahlb. det. (FMNH); 2 ♀, [partly in Russian] okr. g. Yakutska, 1915-16, Yurinskij (ZIN); ♂, [partly in Russian] *ruficollis*, opr.

Regimbart, k. A. Yakovleva (cv); ♂, Jakutsk, B. Poppius (AИH); ♂, Sibirien, Bestjach, Gouv. Jakutsk, 20-26.vi.1905, Naumoff S., Pfizenmayer V., *Haliplus sibiricus* Motsch. det. A. Zimmermann; ♂, Sibirien, Bestjach, Gouv. Jakutsk, 4-6.vi.1905, Naumoff S., Pfizenmayer V., *Haliplus sibiricus* Motsch. det. A. Zimmermann (ZMHB). – KAZAKHSTAN: 2 ♂, 1 ♀, [in Russian] Pavlodarskaya oblast [NE Kazakhstan], village Kyzylzhar, 25.iii.1975, leg. V. Zolotikhin, from coll. V.V. Zolotikhin, (MPSU, ZIN, ZMUM).

Description

Length 2.7-2.9 mm, width 1.5 mm. Body subparallel, widest in the middle (fig. 58).

Head. – Yellow-red to yellow-brown, moderately punctured (fig. 58). Distance between the eyes about $1.9 \times$ eyewidth. Antennae yellow, darkened in apical half (fig. 59). Palpi yellow (figs. 61-62).

Pronotum. – Yellow to yellow-brown, weakly punctured. Basal plicae short, about $\frac{1}{5} \times$ length of pronotum, sometimes very short. Lateral borders about straight, finely margined.

Elytra. – Yellow to yellow-brown. Interrupted dark lines on most of primary puncturerows without connecting marks, suture narrowly darkened (fig. 58). Primary puncture rows moderately strong, about 40 punctures in first row. Secondary punctures sparse and moderately strong. All punctures darkened (figs. 58, 60)

Ventral side. – Yellow-brown, legs yellow to yellow-brown towards the coxae. Prosternal process flat, channelled in anterior part, moderately punctured and micropunctured, narrowed before coxae (fig. 63-64). Metasternal process impressed in the middle, weakly punctured (fig. 63). Metacoxal plates sparsely punctured. No setiferous striole on dorsal side of hind tibia. Longer metatibial spur about $\frac{2}{3} \times$ length of first tarsal segment. Transverse puncture row on fifth and sixth sternite strongly interrupted in the middle. Seventh sternite moderately punctured.

Male: First three segments of fore- and midlegs widened and provided with sucker hairs. First tarsal segment of forelegs with ventral ridge (fig. 65). First tarsal segment of midlegs ventrally extended (fig. 66). Penis and parameres as in figs. 67-69.

Female: Elytra completely micropunctured.

Biology

No details are known.

Distribution

Russia (East Siberia), Kazakhstan

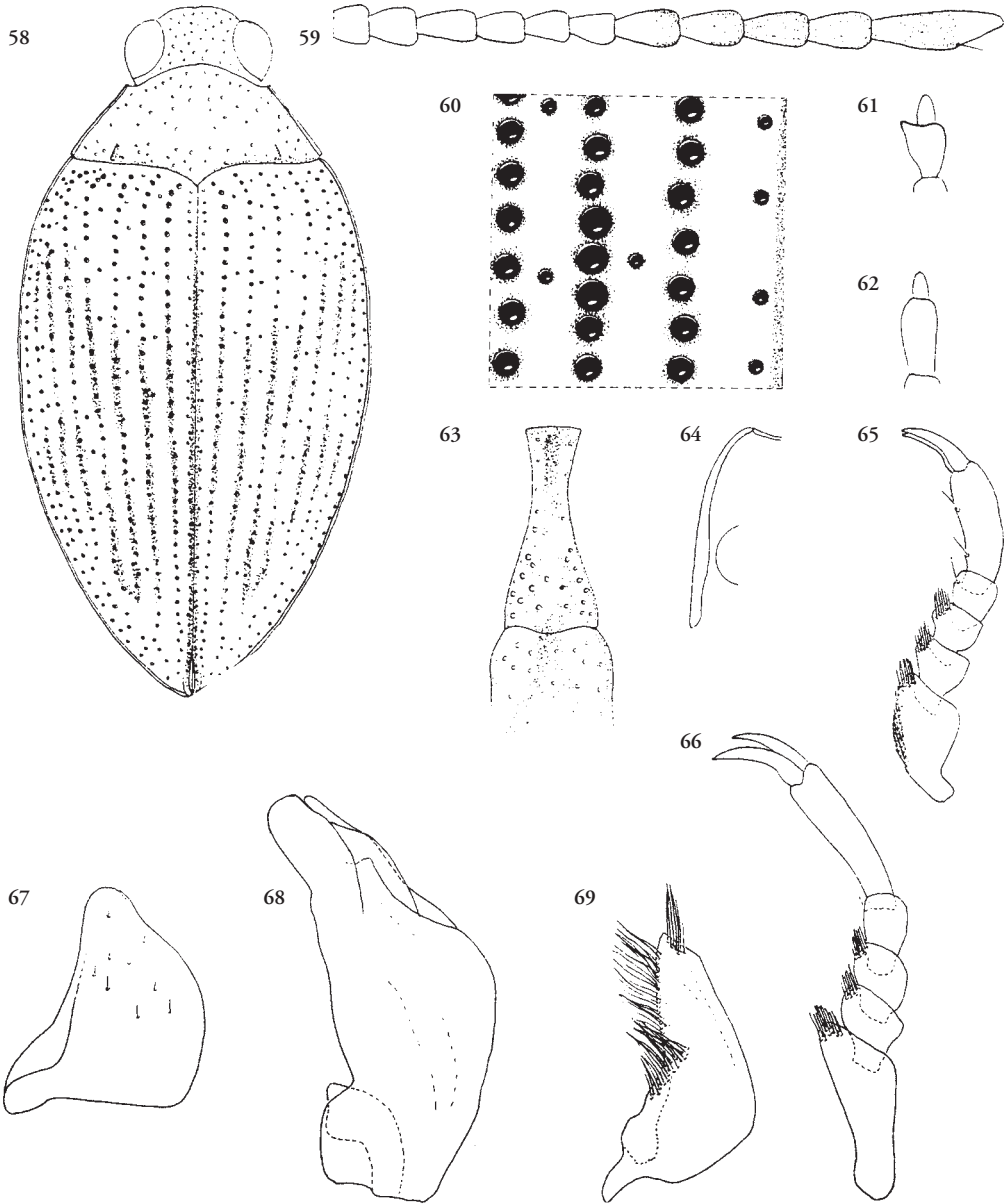
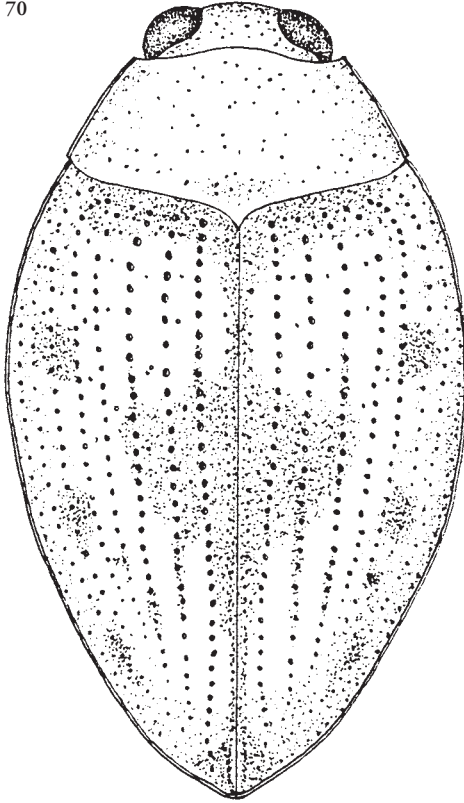


Fig. 58-69. *Halilpus fuscicornis* male. – 58, Habitus; 59, antenna; 60, punctures near elytral base and suture; 61, labial palpus; 62, maxillar palpus; 63, prosternal and metasternal process; 64, prosternal process in lateral view; 65, tarsal segments of forelegs; 66, tarsal segment of midlegs; 67, left paramere; 68, penis; 69, right paramere.

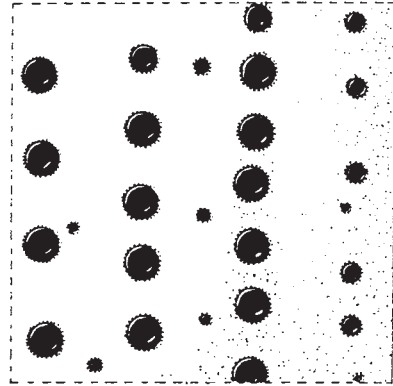
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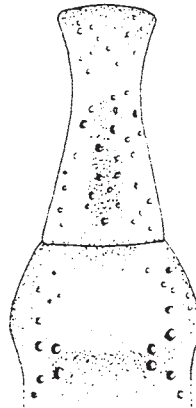
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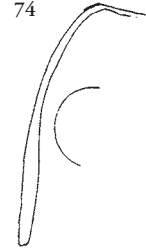


Fig. 70-74. *Haliplus harminae* female. – 70, Habitus; 71, labial palpus; 72, punctures near elytral base and suture 73, prosternal and metasternal process; 74, prosternal process in lateral view.

Haliplus (Haliplus) harminae Van Vondel (figs. 70-74)

Haliplus harminae Van Vondel, 1990: 22. Holotype ♀: CHINA: Hubei, Wu-schan mountains (IRSNB) [examined].

Additional material examined: 3 paratypes ♀ with same labels as holotype (CV, IRSNB, SMF).

Description

Length 2.6 mm, width 1.5 mm. Body oval, tapering backwards, widest just before the middle (fig. 70).

Head. – Brown, fairly strongly and densely punctured, between the eyes more sparsely punctured.

Distance between eyes 1.7-1.8 times width of one eye. Antennae and palpi yellow (fig. 71).

Pronotum. – Yellow-brown. Lateral borders slightly convex in anterior half, finely margined. Rather sparsely punctured with an almost unpunctured area on the disk, anterior margin more densely punctured, most punctures weakly darkened. No basal plicae present (fig. 70).

Elytra. – Yellow-brown with an extended brown maculation on disk and along suture, a vaguely indicated band along base and some marginal blotches. Primary punctures moderately strong, about 36 punctures in first row. Scattered secondary punctures relatively strong. All punctures darkened, but except in the blotches hardly connected forming dark lines.

No micropunctuation recognisable (fig. 70, 72).

Ventral side. – Yellow to brown. Legs yellow to yellow-brown, coxae hardly darkened. Prosternal process narrowed before coxae, diverging apically, weakly to fairly strongly grooved in the middle, anteriorly without ridge, moderately punctured (figs. 73-74). Metasternal process flat or even convex in the middle, besides the sparse punctures at the base with strong punctures on both sides and on posterior part (fig. 73). Metacoxal plates reaching to anterior margin of fifth sternite, strongly punctured except on weakly punctured zone along suture, no spines on hind edge. Fifth and sixth sternite with a row of punctures, seventh (last) sternite strongly punctured. No setiferous striole on dorsal side of hind tibia, longest of the two tibial spurs about as long as first tarsal segment.

Female: Elytra not with micropunctuation.

Male: Unknown.

Biology

No details are known.

Distribution

China (Hubei).

Halilpus (Halilpus) heydeni Wehncke (figs. 75-85)

Halilpus heydeni Wehncke, 1875: 122. Lectotype (selected by Van Vondel 1988: 147): GERMANY: Hamburg district, Harburg (MNHN) [examined].

Halilpus multipunctatus Wehncke, 1875: 122. Lectotype (selected by Van Vondel 1988: 147): FRANCE: Alsace (Holsatia) (MNHN); Synonymised by Van Vondel 1988: 147 [examined].

Halilpus foveostriatus Thomson, 1884: 1030. Syntypes: SWEDEN: Lomma, Lund (MZLU); Synonymised by Zimmermann 1920a: 309 [not examined].

Halilpus ruficollis var. *pedemontanus* Fiori, 1904: 200. Lectotype (selected by Holmen and designated here): ITALY: Piemonte (ZMHB); Synonymised by Zimmermann 1920a: 309 [examined].

Halilpus fulvicollis var. *romanus* Fiori, 1904: 201. Holotype: ITALY: Venice (ZMHB); Synonymised by Franciscolo 1979: 106 [examined].

Haliplinus transversus sensu Ádám 1996: 54 (Hungary) (misident.).

Additional material examined: About 1800 specimens from most of its area of distribution.

Description

Length 2.2-2.8 mm, width 1.2-1.6 mm. Body shortly oval, usually widest in front of the middle and tapering strongly behind the middle (fig. 75).

Head. – Yellow-brown to rust-coloured with brown to almost black vertex, sparsely and finely to densely punctured. Distance between eyes about $2.0 \times$ width of one eye. Antennae yellow-brown (fig. 76). Palpi

yellow-brown (figs. 78-79).

Pronotum. – Yellow to yellow-red. Plicae opposite fourth elytral puncture rows short, mostly curved, $\frac{1}{4} \times$ length of pronotum, slightly impressed between plicae. Weakly and sparsely punctured, between plicae more strongly and densely punctured. Lateral sides margined, straight to slightly convex (fig. 75).

Elytra. – Yellow to yellow-red, dark interrupted lines on primary puncture rows often confluent, base and suture narrowly darkened. Completely margined. Primary puncture rows fairly strong and moderately dense to fairly sparse, about 35-40 punctures in first row, basal punctures of third to fifth row groove-like or at least widened. Secondary punctures fairly strong, dense along suture, sparse on intervals. All punctures darkened (figs. 75, 77).

Ventral side. – Yellow to yellow-red, legs yellow-brown to brown, darkened towards coxae, elytral epipleura yellow with uncoloured punctures. Prosternal process narrowed near coxae, channelled in anterior $\frac{2}{3}$, anterior edge not margined, moderately strongly punctured (figs. 80-81). Metasternal process usually strongly impressed in the middle, rarely almost flat, strongly punctured (fig. 80). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with transverse puncture row, last sternite sparsely punctured, on apex more densely punctured. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs about $\frac{4}{5} \times$ length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs equal in length (fig. 82). Penis and parameres as in figs. 83-85.

Females: Elytra usually without micropunctuation, rarely a small area on apex micropunctured.

Similar species: This species is often confused with *H. ruficollis*, with which it is often living in the same locality. Males have a different aedeagus and equal claws on forelegs. Females are usually not micropunctured. In most cases the enlarged basal elytral punctures are useful to distinguish *H. heydeni* from *H. ruficollis* and other related species.

Biology

Living among filamentous algae in lakes, pools, ponds, marshes, stagnant and slow parts of rivers, brooks and streamlets. In fresh and even brackish or acid water.

Distribution

Widespread in Europe and neighbouring Asian countries: Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, 'Caucasus', Croatia, Czech Republic, Denmark, Finland, France,

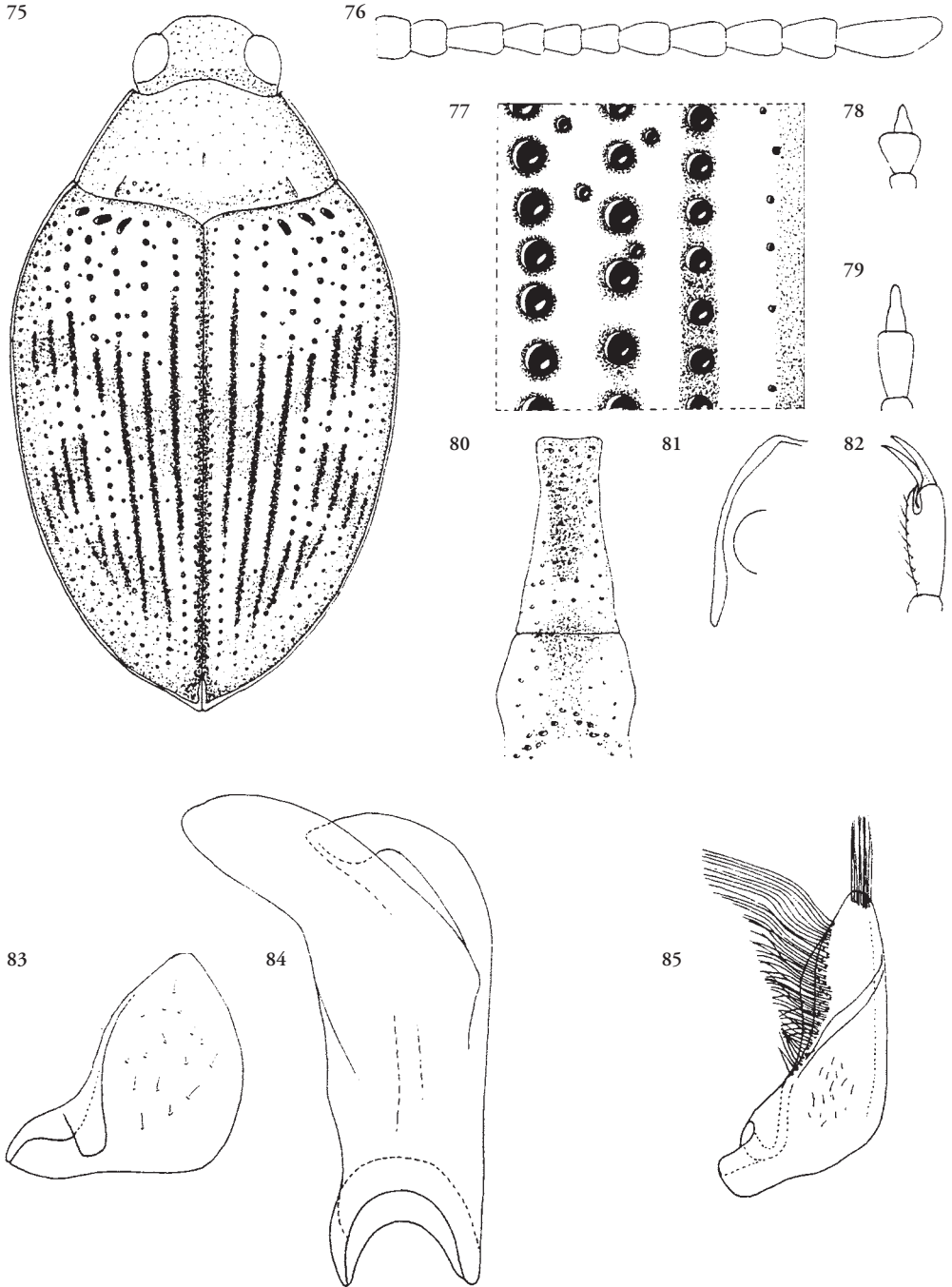


Fig. 75-85. *Haliphus beydeni* male. – 75, Habitus; 76, antenna; 77, punctures near elytral base and suture; 78, labial palpus; 79, maxillar palpus; 80, prosternal and metasternal process; 81, prosternal process in lateral view; 82, claws of forelegs; 83, left paramere; 84, penis; 85, right paramere.

Germany, Great Britain, Greece, Hungary, Iran, Italy, Latvia, Liechtenstein, Kazakhstan, Macedonia, Norway, Poland, Romania, Russia (Central, North and South European Territory, West and East Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, The Netherlands, 'Transcaucasia', 'Turkestan', Turkey, Ukraine.

Haliplus (Haliplus) immaculatus Gerhardt (figs. 86-96)

Haliplus immaculatus Gerhardt, 1877a: 38. Syn- types: POLAND: Legnica (depository unknown) [not examined].

Haliplus fluviatilis ab. *flavus* Everts, 1918: 44. Holotype: THE NETHERLANDS: (RMNH) (Unavailable name, infrasubspecific, synonymised by Zaitzev 1953: 63) [examined].

Haliplinus affinis sensu Ádám 1996: 54 (Hungary) (misident.)

Additional material examined: About 2300 specimens from most of its area of distribution.

Description

Length 2.4-3.1 mm, width 1.3-1.7 mm. Body oval, sometimes subparallel, widest in the middle (fig. 86).

Head. – Yellow to yellow-brown, vertex darkened, densely and moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.9-2.0 × width of one eye. Antennae yellow to yellow-brown (fig. 87). Palpi yellow to yellow-brown (figs. 89-90).

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about ¼ × length of pronotum, weakly impressed between plicae. Fairly weakly and sparsely punctured. Lateral sides margined, straight to slightly convex (fig. 86).

Elytra. – Yellow to yellow-brown, black stripes on primary puncture rows, of which first four are at most weakly interrupted near base, while lateral rows are more strongly interrupted, along suture distinctly darkened, along base weakly darkened. Completely margined. Primary puncture rows dense and fairly strong, about 35-45 punctures in first row, basal punctures sometimes a little widened. Secondary punctures dense and moderately strong along suture, strong and sparse and usually confluent with dark stripes on primary rows. All punctures darkened (figs. 86, 88).

Ventral side. – Yellow to yellow-brown, legs yellow to yellow-brown, slightly darkened towards coxae, elytral epipleura yellow with uncoloured punctures. Prosternal process narrowed near coxae, slightly channelled, coarsely punctured, anterior edge not distinctly margined (figs. 91-92). Metasternal process

flat to weakly impressed in the middle, moderately strongly punctured (fig. 91). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternites usually with strongly interrupted transverse puncture row, last sternite moderately punctured in apical half. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs ¾ × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs unequal in length, first tarsal segment of forelegs ventrally provided with a longitudinal sharp ridge (fig. 93). Penis and parameres as in figs. 94-96.

Females: Elytra without micropunctuation.

Similar species: Males can be distinguished from related species by the ventral ridge on the first tarsal segment of the foreleg. Females can be distinguished from related species with continuous dark elytral lines by the complete lack of elytral micropunctuation.

Biology

Living among filamentous algae in fresh water in lakes, pools, ponds, marshes, slowly running brooks and streamlets. Also recorded from brackish water. Observed flying.

Distribution

Europe except the East Mediterranean to the Russian Far East: Austria, Belgium, Byelorussia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Latvia, Luxembourg, Norway, Poland, Romania, Russia (Central and North European Territory, West and East Siberia, Far East), Slovakia, Spain, Sweden, The Netherlands, Ukraine.

Haliplus (Haliplus) interjectus Lindberg (figs. 97-107)

Haliplus interjectus Lindberg, 1937: 487. Lectotype (selected by Holmen 1987: 130): RUSSIA: St. Petersburg province, Vyborg (FMNH) [examined].

Haliplus robertsi sensu Zaitzev 1953: 53 (Kamchatka) (misident.).

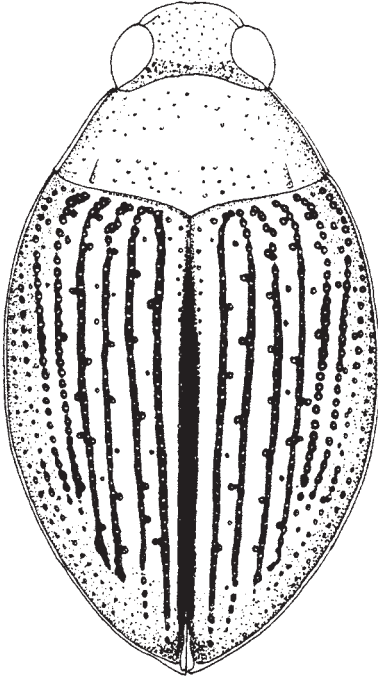
Additional material examined: About 100 specimens from its area of distribution.

Description

Length 2.4-2.8 mm, width 1.4-1.6 mm. Body oval, widest in the middle (fig. 97).

Head. – Yellow-brown, vertex weakly darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes

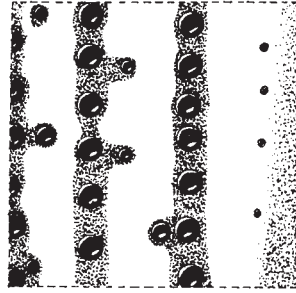
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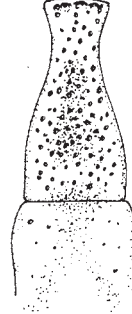
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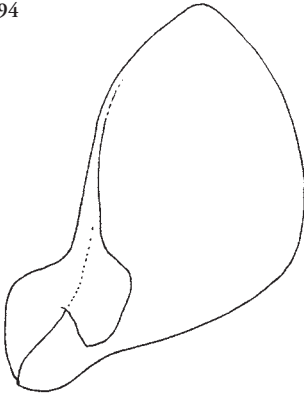
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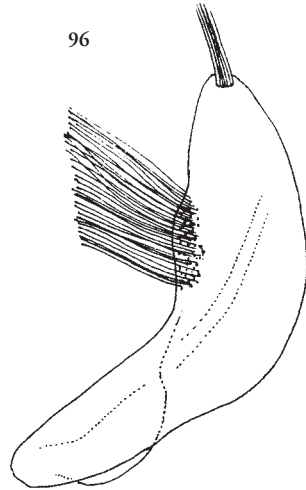


Fig. 86-96. *Haliphus immaculatus* male. – 86, Habitus; 87, antenna; 88, punctures near elytral base and suture; 89, labial palpus; 90, maxillar palpus; 91, prosternal and metasternal process; 92, prosternal process in lateral view; 93, tarsal segments of forelegs; 94, left paramere; 95, penis; 96, right paramere.

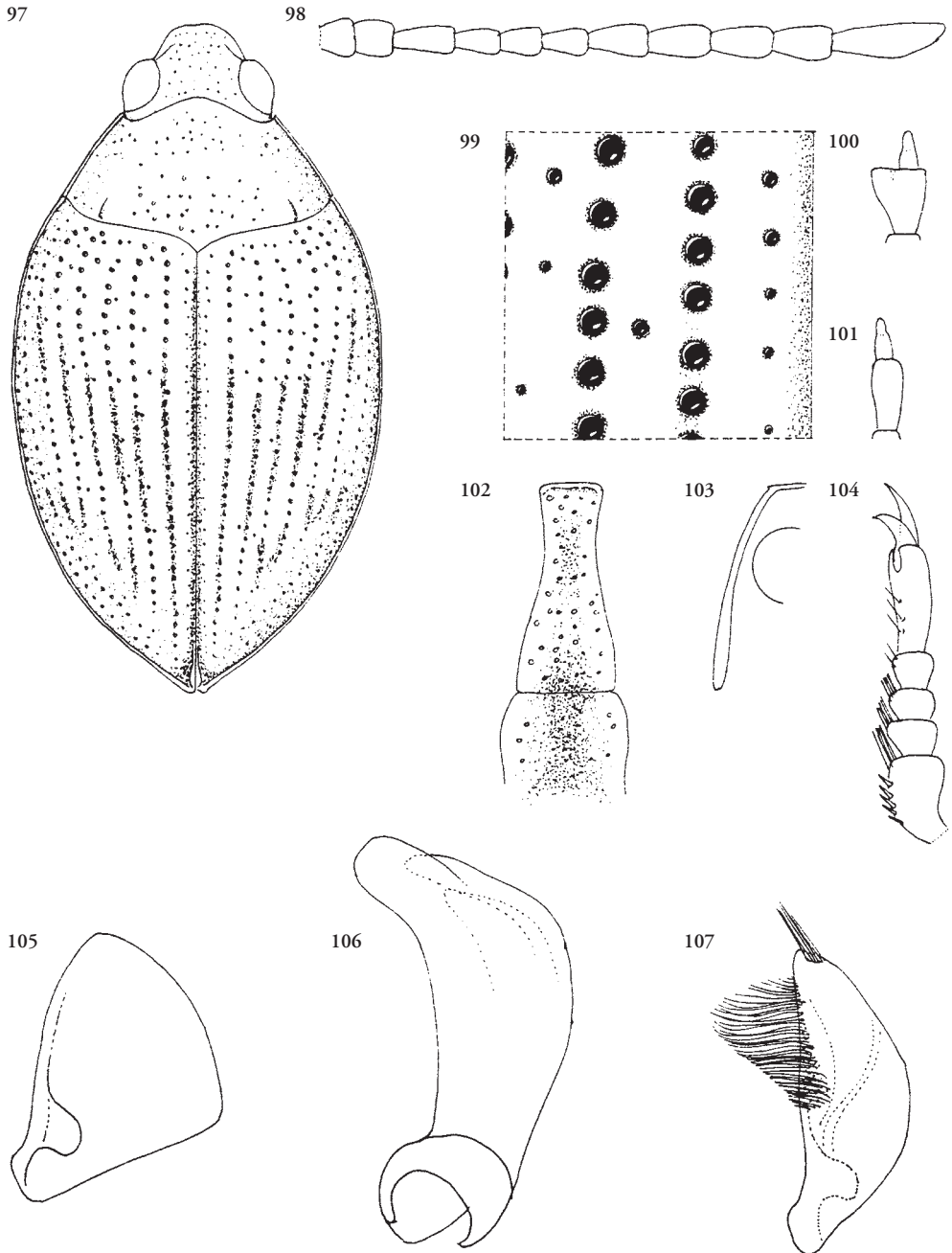


Fig. 97-107. *Halilpus interjectus* male. – 97, Habitus; 98, antenna; 99, punctures near elytral base and suture; 100, labial palpus; 101, maxillar palpus; 102, prosternal and metasternal process; 103, prosternal process in lateral view; 104, tarsal segments of forelegs; 105, left paramere; 106, penis; 107, right paramere.

1.8-2.1 × width of one eye. Antennae yellow to yellow-brown (fig. 98). Palpi yellow to yellow-brown (figs. 100-101).

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{4}$ × length of pronotum, weakly impressed between plicae. Moderately strongly, between plicae a little more strongly punctured. Lateral sides margined, straight to slightly convex (fig. 97).

Elytra. – Yellow to yellow-brown, vague dark interrupted lines on primary puncture rows, darkened along suture. Completely margined. Primary puncture rows moderately strong, dense in first rows, about 38 punctures in first row. Secondary punctures moderately strong and dense along suture, strong and sparse on intervals. All punctures darkened (figs. 97, 99).

Ventral side. – Yellow-brown to brown-red, legs yellow-brown, slightly darkened towards coxae, elytral epipleura yellow-brown with uncoloured punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, channelled in the middle, anterior edge weakly margined, moderately strongly punctured (figs. 102-103). Metasternal process with strong impression in the middle, moderately strongly punctured (fig. 102). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with distinct complete transverse puncture row, last sternite almost completely moderately strongly punctured. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs $\frac{3}{4}$ × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs, claws of forelegs clearly unequal, inner one $\frac{2}{3}$ length of outer one and more curved, first tarsal segment of forelegs ventrally provided with a row of about five short spines (fig. 104), first tarsal segment of mid leg ventrally concave. Penis and parameres as in figs. 105-107.

Females: Elytra sometimes, for at most posterior $\frac{2}{3}$, covered with micropunctuation.

Similar species: This species is often confused with related species like *H. lineolatus* or *H. sibiricus*. Males can be distinguished by the row of strong spines on ventral side of first tarsal segment of forelegs.

Biology

Living in lakes, streams and even found in a hot spring.

Distribution

North Palaearctic: Finland, Latvia, Russia (North European Territory, West and East Siberia, Far East).

Haliplus (Haliplus) japonicus Sharp (figs. 108-116)

Haliplus japonicus Sharp, 1873: 55. Syntypes: JAPAN, Nagasaki (BMNH) [1 ♀ syntype examined].

Haliplus hummeli Falkenström, 1932: 191. Syntypes: CHINA: Sichuan, NE part (NHRS); Synonymised by Van Vondel 1995b: 114 [examined].

Haliplus brevior Nakane, 1963: 25. Holotype: JAPAN: Honshu, Nagoya, Sikatumura, Owari, 9.iv.1946 (CN) [examined]. syn. n.

Haliplus rishwani Makhan, 1999: 271. Holotype: CHINA: Beibei, Chongqing (SWNU); Synonymised by Van Vondel 2003b: 285 [not examined].

Additional material examined: About 250 specimens from Japan, China and Russia.

Description

Length 2.6-3.5 mm, width 1.5-1.8 mm. Body oval, tapering backwards, widest before the middle (fig. 108).

Head. – Dark brown, strongly and densely punctured, labrum yellow with dark spot in the middle. Distance between eyes 1.4-1.5 × width of one eye. Antennae yellow to yellow-brown (fig. 109). Palpi yellow to yellow-brown.

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{3}$ × length of pronotum. Moderately strongly, between plicae a little more strongly punctured. Lateral sides margined, straight to slightly convex (fig. 108).

Elytra. – Yellow to yellow-brown, dark interrupted lines on primary puncture rows, darkened along suture, sometime vague marks connecting primary puncturerows. Completely margined. Primary puncture rows moderately strong, dense in first rows, about 38 punctures in first row. Secondary punctures moderately strong and dense along suture, moderately strong and sparse on intervals. All punctures darkened (figs. 108, 110).

Ventral side. – Yellow-brown to Brown-red, legs yellow-brown, slightly darkened towards coxae, elytral epipleura yellow-brown with strong darkened punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, grooved along each side, anterior edge weakly margined, moderately strongly punctured (111-112). Metasternal process flat or even slightly bulbous with a row of strong punctures on each side, else moderately punctured (fig. 111). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured, row of setae on posterior edge (fig. 113). Fifth and sixth sternite with sparse transverse puncture row, last sternite weakly punctured in apical part. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs $\frac{2}{3}$ × length of first tarsal segment.

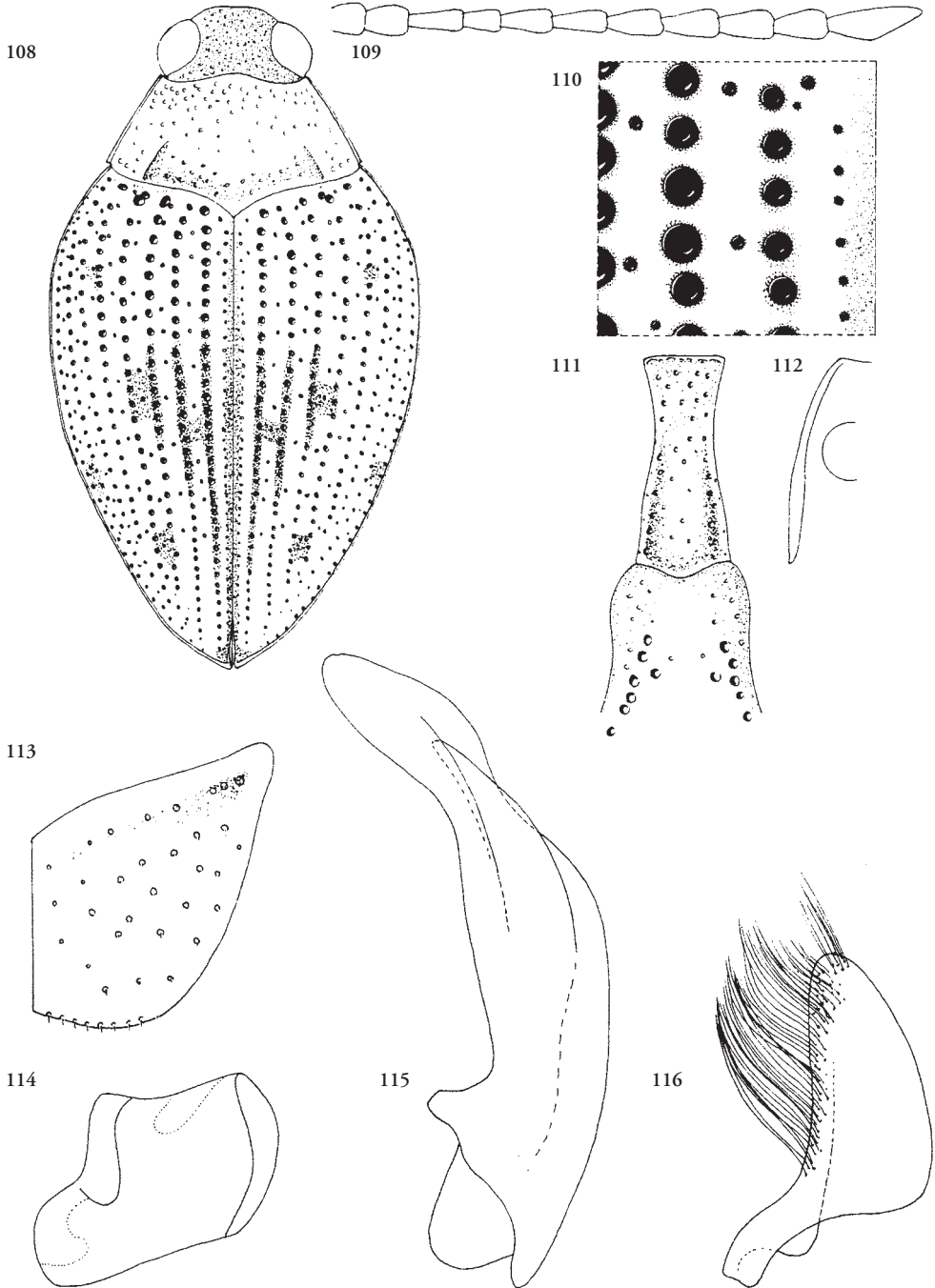


Fig. 108-116. *Halilpus japonicus* male. – 108, Habitus; 109, antenna; 110, punctures near elytral base and suture; 111, prosternal and metasternal process; 112, prosternal process in lateral view; 113, metacoxal plate; 114, left paramere; 115, penis; 116, right paramere.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs, claws of forelegs about equal in length. Penis and parameres as in figs. 114-116.

Females: Elytra usually not covered with micro-punctuation.

Similar species: This species may be confused with *H. regimbarti*, but the latter has an impression on each side of the metasternal process.

Biology

In rivers, streams, ponds and lakes. Up to altitudes of 2500 m.

Distribution

East Palaearctic: China (Beijing, Guizhou, Jiangsu, Sichuan, Shanghai, Yunnan), Japan (Hokkaido, Honshu, Kyushu), Russia (Far East).

Haliplus (Haliplus) kamiyai Nakane (figs. 117-127)

Haliplus kamiyai Nakane, 1963: 25. **Holotype** ♂: JAPAN: Honshu, Tokyo, Syakuyi, 30.iv.1938 (CN) [examined]

Additional material examined: JAPAN: Paratype ♂: as holotype (CN); 1 ♀, Japan, leg. Matsumura (EIHU).

Description

Length 3.1 mm, width 1.6 mm. Body subparallel, widest in the middle (fig. 117).

Head. – Dark-brown, labrum yellow. Moderately punctured. Distance between the eyes about 2.0 × eyewidth. Antennae (fig. 118) and palpi yellow-brown (figs. 120, 121).

Pronotum. – Yellow-brown, base narrowly darkened. Moderately punctured all over, most punctures more or less darkened. Basal plica well developed. Lateral borders about straight, finely margined (fig. 117).

Elytra. – Yellow-brown with extensive dark maculation: large central sutural mark and several smaller marks around (fig. 117). Sometimes dark interrupted lines on puncture rows. Primary puncture rows moderately strong and dense, about 35 punctures in first row. Secondary punctures moderately strong, dense in sutural row and sparse on other intervals. All punctures darkened (figs. 117, 119).

Ventral side. – Red-brown to dark brown, elytral epipleura yellow-brown with darkened punctures, legs yellow-brown to brown near the coxae. Prosternal process narrowed near coxae, strongly punctured lateral groove on each side leaving an almost unpunctured elevated ridge in the middle, on anterior edge a transverse rim (fig. 122, 123). Metasternal process flat, strongly punctured (fig. 122). Metacoxal plates

reaching to fifth sternite, moderately punctured, punctures only occasionally with a clearly visible hair. Fifth and sixth sternite with weak, in the middle hardly visible, transverse puncture row. Seventh (last) sternite moderately punctured in apical two thirds. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs about $\frac{2}{3}$ × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs about equal in length and curvature (fig. 124). Penis and parameres as in figs. 125-127.

Biology

No details are known.

Distribution

Japan (Honshu).

Haliplus (Haliplus) kirgisiensis Holmen & Van Vondel sp. n. (figs. 128-138)

Type material: Holotype ♂: KYRGYZIA: Issyk kul; J. Sahlb.; 977; **Holotype**, *Haliplus kirgisiensis* n.sp., M.Holmen, 1987 (FMNH); Paratype ♂: Issyk Kul; J. Sahlb.; 978; coll. Sahlb.; Paratype, *Haliplus kirgisiensis* n.sp., M.Holmen, 1987 (ZMT).

Description

Length 3.0 mm, width 1.5 mm. Body oblong, widest in the middle (fig. 128).

Head. – Yellow-brown, moderately punctured. Distance between eyes 1.8-1.9 × eyewidth. Antennae yellow to yellow-brown (fig. 129). Palpi yellow to yellow-brown (figs. 131-132).

Pronotum. – Yellow-brown, base narrowly darkened, moderately punctured. Basal plicae straight, about $\frac{1}{4}$ × length of pronotum. Lateral borders straight, finely margined. Surface weakly micropunctured completely.

Elytra. – Yellow-brown, vague dark stripes on primary puncture rows widely interrupted, suture darkened (fig. 128). Completely margined. Primary puncture rows moderately strong, about 36 punctures in first row. Secondary punctures moderately strong. All punctures darkened. Surface weakly micropunctured completely (male, female unknown) (figs. 128, 130).

Ventral side. – Yellow-brown to brown, legs yellow-brown, slightly darkened towards coxae, elytral epipleura yellow with strong not darkened punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, strongly punctured groove on each side, anterior edge not margined (figs. 133, 134). Metasternal process medially impressed in

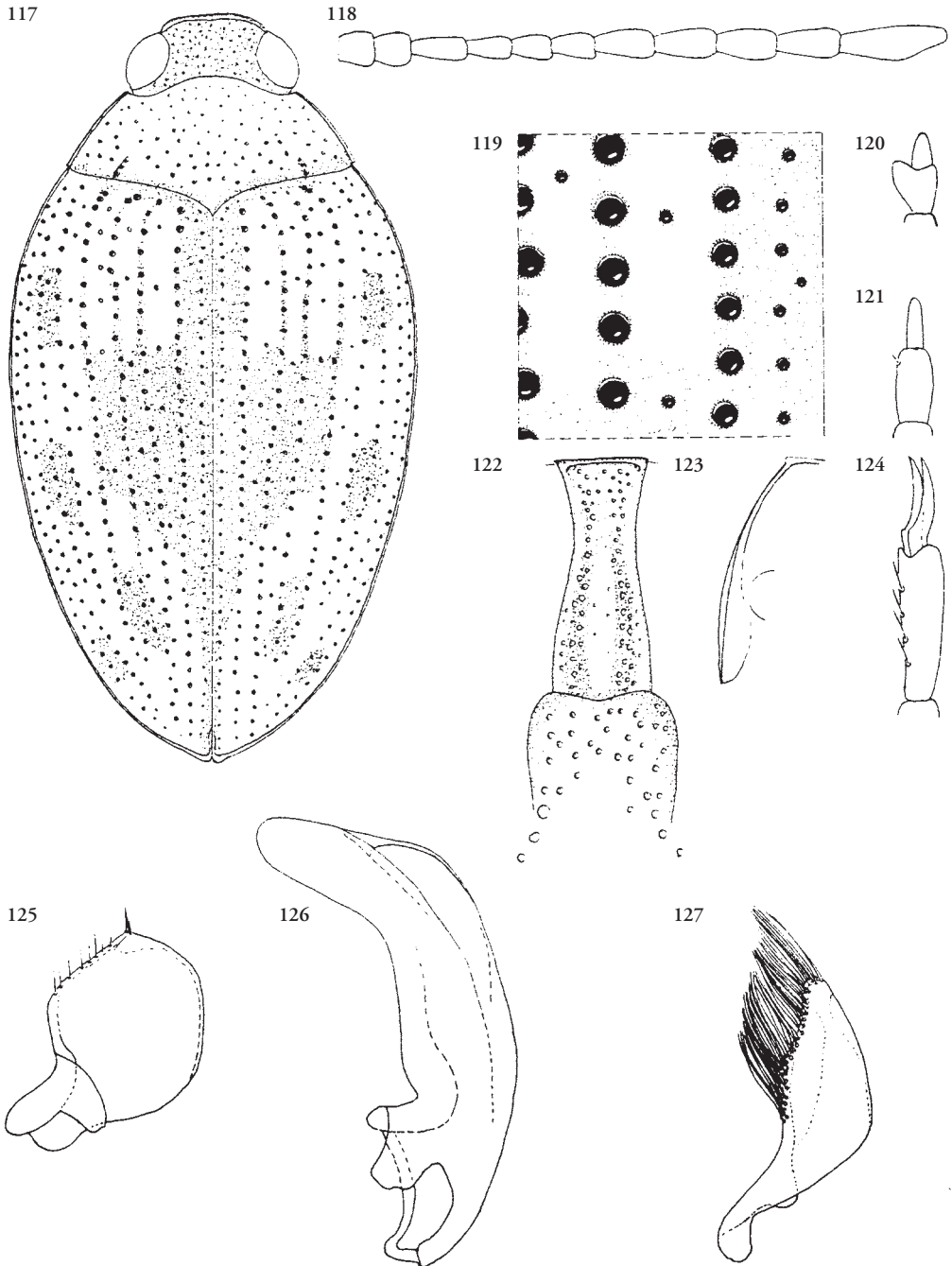


Fig. 117-127. *Halilpus kamiyai* male. – 117, Habitus; 118, antenna; 119, punctures near elytral base and suture; 120, labial palpus; 121, maxillar palpus; 122, prosternal and metasternal process; 123, prosternal process in lateral view; 124, claws of forelegs; 125, left paramere; 126, penis; 127, right paramere.

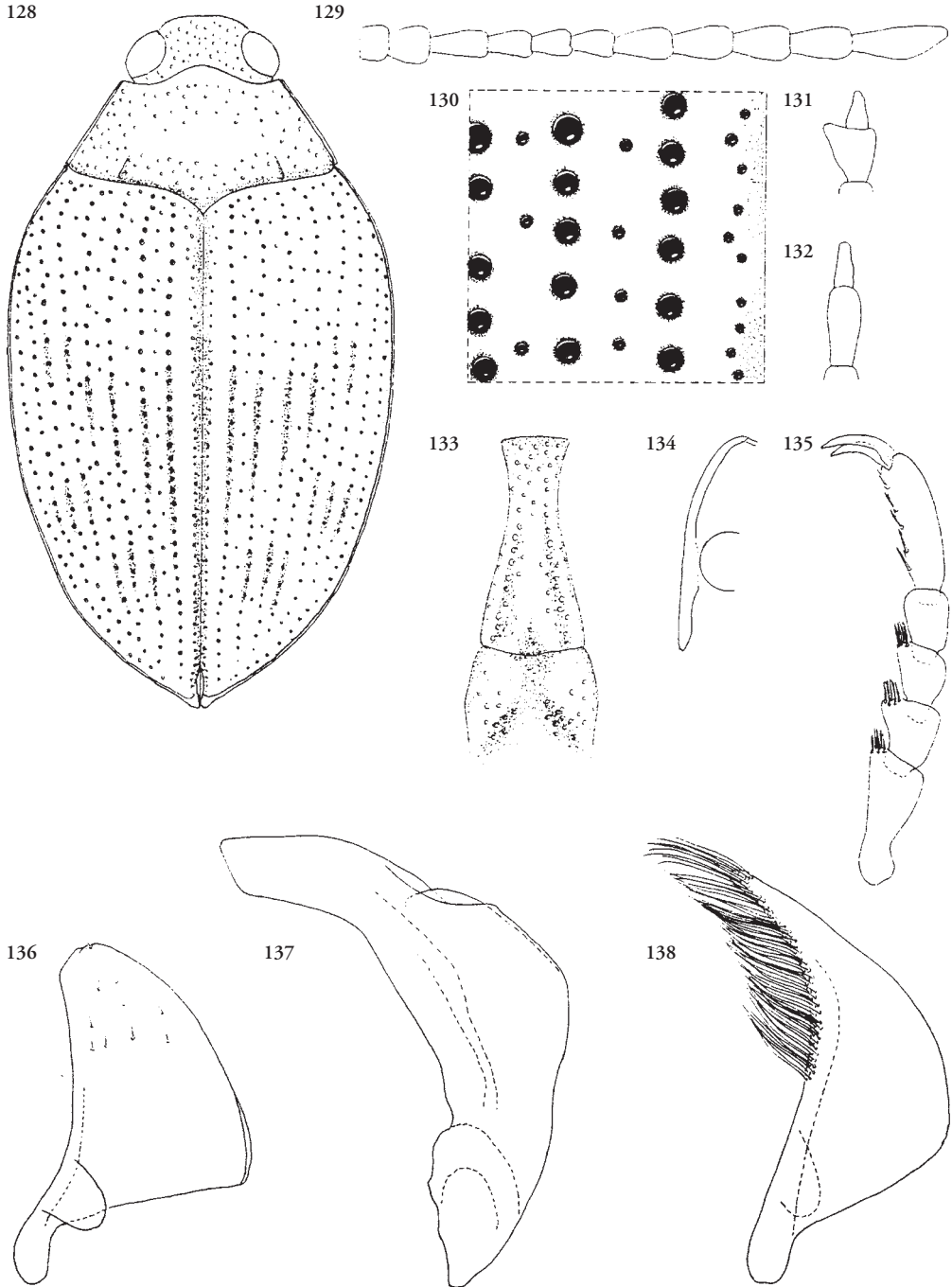


Fig. 128-138. *Haliphus kirgisiensis* male. – 128, Habitus; 129, antenna; 130, punctures near elytral base and suture; 131, labial palpus; 132, maxillar palpus; 133, prosternal and metasternal process; 134, prosternal process in lateral view; 135, tarsal segments of forelegs; 136, left paramere; 137, penis; 138, right paramere.

anterior part and on both sides impressed in posterior part, strongly punctured (fig. 133). Metacoxal plates reaching to fifth sternite, strongly punctured in anterior part but towards posterior end more sparsely and weakly punctured. Transverse puncture row on fifth and sixth sternite weak and widely interrupted in the middle. Seventh sternite moderately punctured. No setiferous striole on dorsal face of hind tibia. Longer spur of hind tibia about $\frac{2}{3}$ × length of first tarsal segment.

Male: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs about equal in length and curvature (fig. 135). Penis and parameres as in figs. 136-138.

Female: unknown.

Biology

No details known.

Distribution

Only known from the type-locality in Kyrgyzia.

Halilpus (Halilpus) lineolatus Mannerheim (figs. 139-150)

Halilpus lineolatus Mannerheim, 1844: 190: Lectotype ♀ (selected by Holmen in 1987 and designated here): RUSSIA [formerly Finland]: Viburg [Vyborg], 3009-7, (C.G.Mannerh.) (ZIN) [examined].

Halilpus schaumii Solsky, 1867: 29. Lectotype ♂ (selected by Holmen 1987:128): UKRAINE OR RUSSIA: 'Kosloff, 3275-3' [Yevpatoria (Crimea) or Michurinsk (Russia), it is not absolutely sure which locality Solsky ment with 'Kosloff'] (ZIN) [examined]; Synonymised by Holmen 1987: 127.

Halilpus transversus Thomson, 1870: 124. Syntypes: SWEDEN: Lund (probably in MZLU) [not examined]; Synonymised by F. Balfour-Browne 1940: 138.

Halilpus nomax F. Balfour-Browne, 1911: 153. Lectotype ♂ (selected by Holmen 1987: 129): GREAT BRITAIN: Northern Ireland, County Down, Carrickmannan Lough, 18.v.1911 (RSMNH) [examined]; Synonymised by F. Balfour-Browne 1940: 138.

Halilpus brownei Sharp, 1913a: 75. Lectotype ♂ (selected by Holmen 1987: 129): ENGLAND: Stony Stratford, Ouse river, 1167, 7.ix.1868 (BMNH) [examined]; Synonymised by Zimmermann 1920a: 312.

Halilpus browneanus Sharp, 1913b: 108, as unjustified emendation of *Halilpus brownei*.

Halilpus nomax var. *laevigatus* Falkenström, 1936: 252. Syntypes: SWEDEN: Mälaren lake (MZLU) [not examined]; Synonymised by Holmen 1987: 127.

Halilpus striatus sensu Newberry 1907: 5. (misident.).

Halilpus wehnckeii sensu Edwards 1911: 9. (misident.).

Halilpus seidlitzii Reitter (pro parte) (Unavailable, name nomen mus. in HNHM, NMW, ZSM).

Additional material examined: About 650 specimens from its area of distribution.

Description

Length 2.5-2.8 mm, width 1.4-1.5 mm. Body short oval, widest in the middle (fig. 139).

Head. – Yellow-brown, vertex darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.6-1.9 × width of one eye. Antennae yellow (fig. 140). Palpi yellow (fig. 142-143).

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{4}$ × the length of pronotum, slightly impressed between plicae. Weakly and sparsely to moderately densely punctured, between plicae more strongly punctured. Lateral sides margined, straight to slightly convex (fig. 139).

Elytra. – Yellow to yellow-brown, on primary puncture rows black stripes, which are usually interrupted in basal and in lateral part, base and suture narrowly darkened, at most vague marks between dark stripes. Completely margined. Primary puncture rows moderately strong and dense, first rows more dense, 35-40 punctures in first row. Secondary punctures strong, dense along suture, sparse on intervals. All punctures darkened (figs. 139, 141).

Ventral side. – Yellow to yellow-brown, legs yellow to yellow-brown, coxae brown, elytral epipleura reaching to fifth sternite, yellow with uncoloured punctures. Prosternal process narrowed near coxae, channeled in the middle, anterior edge not margined, weakly punctured (figs. 144-145). Metasternal process channeled in the middle, posteriorly with strong impression in the middle (fig. 144). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with weak transverse puncture row, last sternite sparsely punctured. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs nearly as long as first tarsal segment.

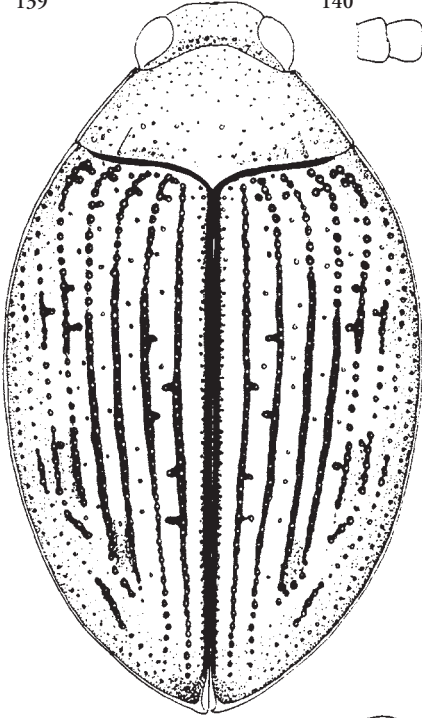
Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs, claws of forelegs nearly equal in length (fig. 146), first tarsal segment of midlegs ventrally distinctly concave (fig. 147). Penis and parameres as in figs. 148-150.

Females: Elytra usually completely covered with distinct micropunctuation.

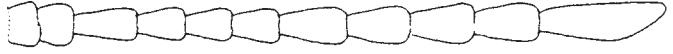
Similar species: Males can easily be distinguished from related species by the ventrally strongly incised first tarsal segment of midlegs. Characteristic females have a short wide body, narrow dark lines on elytra and a strong micropunctuation on the entire elytra. Less characteristic females are often hard to distinguish from related species.

In the past there has been much confusion about the right name of this species. Falkenström (1939) and Holmen (1987) spent much time to solve this case.

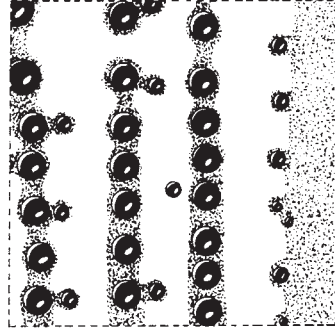
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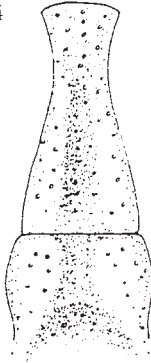
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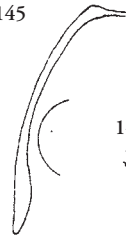
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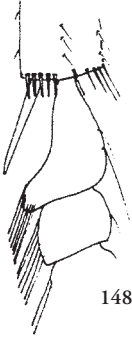
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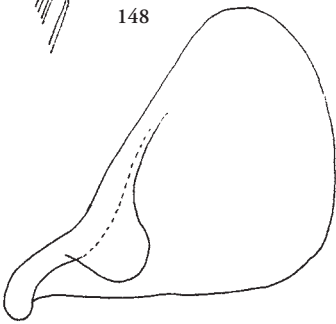
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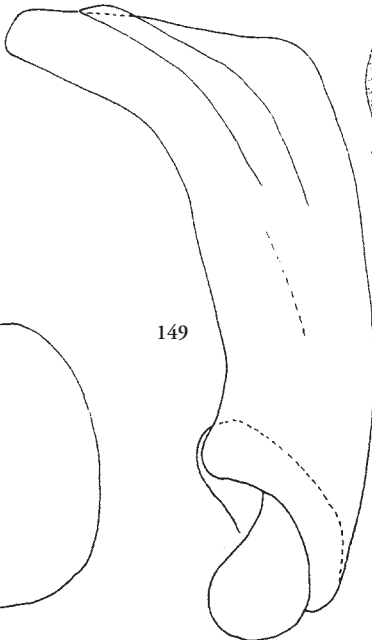
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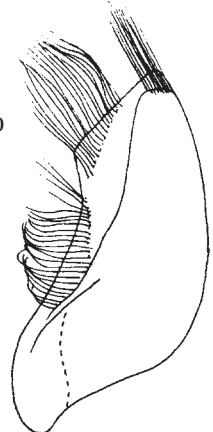


Fig. 139-150. *Haliplus lineolatus* male. – 139, Habitus; 140, antenna; 141, punctures near elytral base and suture; 142, labial palpus; 143, maxillar palpus; 144, prosternal and metasternal process; 145, prosternal process in lateral view; 146, claws of forelegs; 147, first tarsal segment of midleg; 148, left paramere; 149, penis; 150, right paramere.

Biology

Living among filamentous algae and in *Elodea*-beds in clear oxygen rich fresh, but also brackish waters of lakes, slowly running waters, ditches. The adults feed on Hydrozoans. Up to altitudes of 2200 m. Observed flying.

Distribution

From Central and North Europe to East Siberia and Mongolia: Austria, Belgium, Bulgaria, Byelorussia, Denmark, Finland, France, Germany, Great Britain, ?Iraq, Ireland, Italy, Kazakhstan, Latvia, Mongolia, Norway, Poland, Russia (Central and North European Territory, West and East Siberia), Sweden, Switzerland, The Netherlands, 'Transcaucasia', Ukraine.

Halilampus (Halilampus) regimbarti Zaitzev (figs. 151-159)

Halilampus brevis Wehncke, 1880: 75, preoccupied by Stephens 1828. Lectotype (selected by Van Vondel, designated here): CHINA: Jiangxi, Kia-Kiang (MNHN) [examined].

Halilampus regimbarti Zaitzev, 1908: 122, as replacement name for *Halilampus brevis* Wehncke.

Halilampus sauteri Zimmermann, 1924: 130. **Syntypes:** TAIWAN: S. Formosa, Auping, iv.1910, leg. H. Sauter S.V., Type (ZSM, ZMHB); Synonymised by Van Vondel 1995b: 122 [1 ♂, 2 ♀ examined].

Additional material examined: About 120 specimens from China and Taiwan.

Description

Length 2.4-3.0 mm, width 1.4-1.7 mm. Body oval, strongly tapering backwards, widest before the middle (fig. 151).

Head. – Brown to dark brown on vertex, moderately strongly punctured, labrum yellow with dark mark in the middle. Distance between eyes 1.2-1.4 × width of one eye. Antennae yellow to yellow-brown (fig. 152). Palpi yellow to yellow-brown.

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about 1/3 × length of pronotum, weakly impressed between plicae. Moderately strongly, between plicae a little more strongly punctured. Lateral sides margined, straight to slightly convex (fig. 151).

Elytra. – Yellow to yellow-brown, interrupted lines on primary puncture rows, often forming small dark marks. Completely margined. Primary puncture rows very strong in anterior half, dense in first rows, about 30 punctures in first row. Secondary punctures weak and dense along suture, weak and sparse on intervals. All punctures darkened (figs. 151, 153).

Ventral side. – Yellow-brown to Brown-red, legs yellow-brown, slightly darkened towards coxae, elytral epipleura yellow-brown with strong dark punctures,

reaching to sixth sternite. Prosternal process narrowed near coxae, grooved on each side, anterior edge weakly margined, moderately strongly punctured (figs. 154-155). Metasternal process with strong impression on each side, moderately strongly punctured (fig. 154). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured, row of setae on anterior edge (fig. 156). Fifth and sixth sternite with distinct complete transverse puncture row, last sternite almost completely moderately strongly punctured. No stiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs 2/3 × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs, claws of forelegs about equal in length. Penis and parameres as in figs. 157-159.

Females: Elytra usually not covered with micro-punctuation.

Similar species: This species may be confused with *H. japonicus*, but the latter has no impressions on each side of the metaternal process.

Biology

In streams and rivers.

Distribution

East Palaearctic: China (Anhui, Fujian, Guangdong, Guizhou, Henan, Hunan, Jiangsu, Jiangxi, Shandong, Zhejiang), Taiwan.

Halilampus (Halilampus) ruficollis (De Geer) (figs. 160-170)

Dytiscus ruficollis De Geer, 1774: 404. **Syntypes:** SWEDEN: [by indication] (probably in NHRS) [not examined].

Dytiscus impressus Fabricius, 1787: 193, preoccupied by O.F.Müller 1776. Lectotype (selected by Holmen 1987: 133): EUROPE (ZMUC) [examined]; Synonymised by Gemminger & Harold 1868: 426.

Dytiscus marginepunctatus Panzer, 1793: t.10. **Syntypes:** GERMANY (depository unknown) [not examined]; Synonymised by Gemminger & Harold 1868: 426.

Halilampus affinis Stephens, 1828: 42. Lectotype (selected by Holmen 1987: 133): ENGLAND: London, Swaffham fen (BMNH) [examined]; Synonymised by Branden 1885: 9.

Halilampus rubicundus Babington, 1836: 178. **Syntypes:** ENGLAND: Cambridge (CUMZ) [not examined]; Synonymised by Gemminger & Harold 1868: 426.

Halilampus fluviatilis var. *maculatus* Seidlitz, 1887: 33, preoccupied by Motschulsky 1860. Lectotype (selected by Holmen in 1987, designated here): FINLAND: 'Nurmis, J. Sahlb., 1060, 253[pink], *H. fluviatilis* Er. var. *maculata* J. Sahlb' (ZMT) [examined]. syn. n.

Halilampus fluviatilis ab. *seidlitzii* Csiki, 1946: 563 (repl. name for *maculatus* Seidlitz 1887).

Dytiscus minutus sensu Donovan 1793: t.69 (misident.).

Halilampus desertus Motschulsky, 1853: 3 (Unavailable name, Desert des Kirguises, Synonymised by Zaitzev 1915: 244 ex. parte).

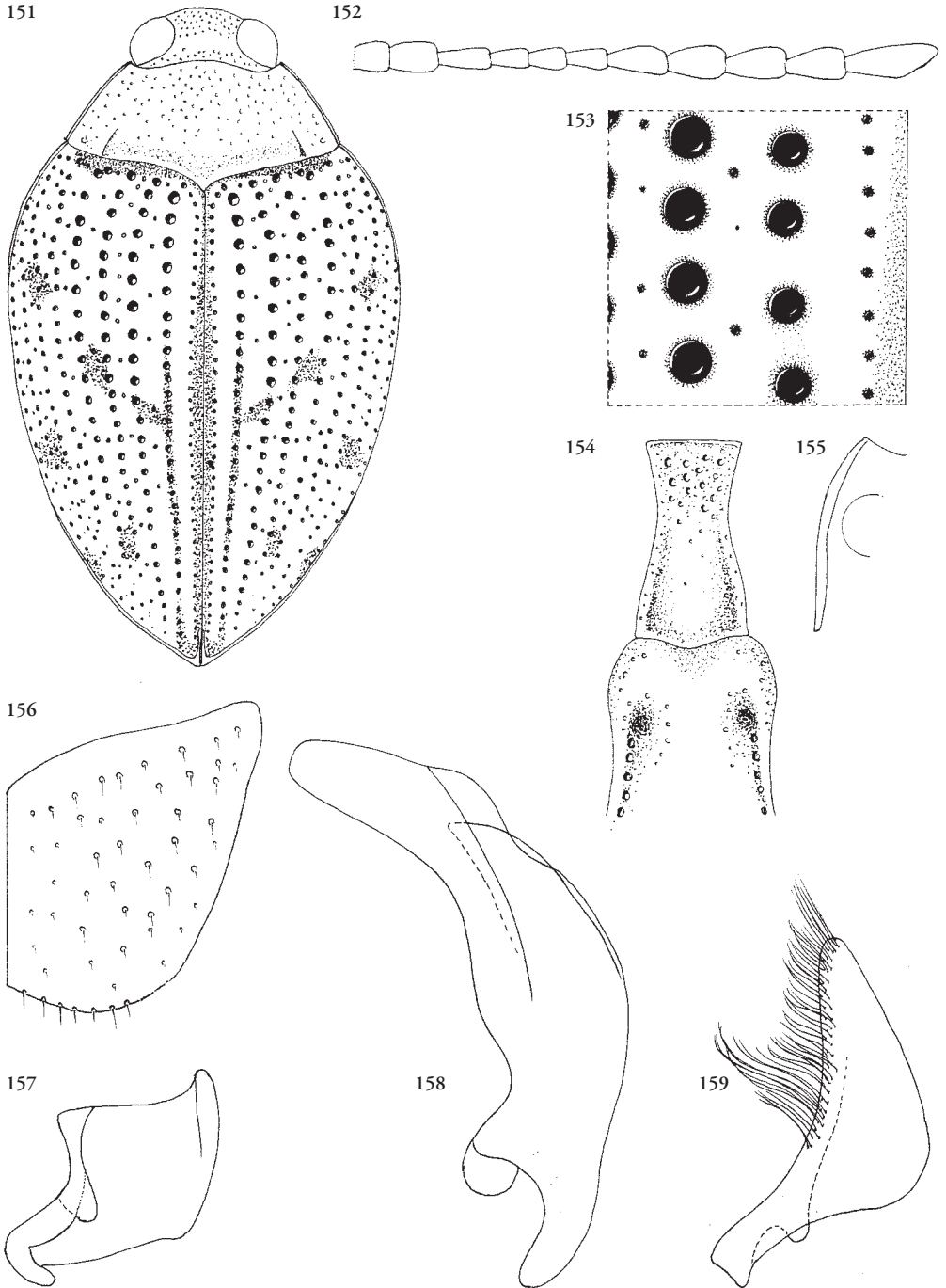


Fig. 151-159. *Haliphus regimbarti* male. – 151, Habitus; 152, antenna; 153, punctures near elytral base and suture; 154, prosternal and metasternal process; 155, prosternal process in lateral view; 156, metacoxal plate; 157, left paramere; 158, penis; 159, right paramere

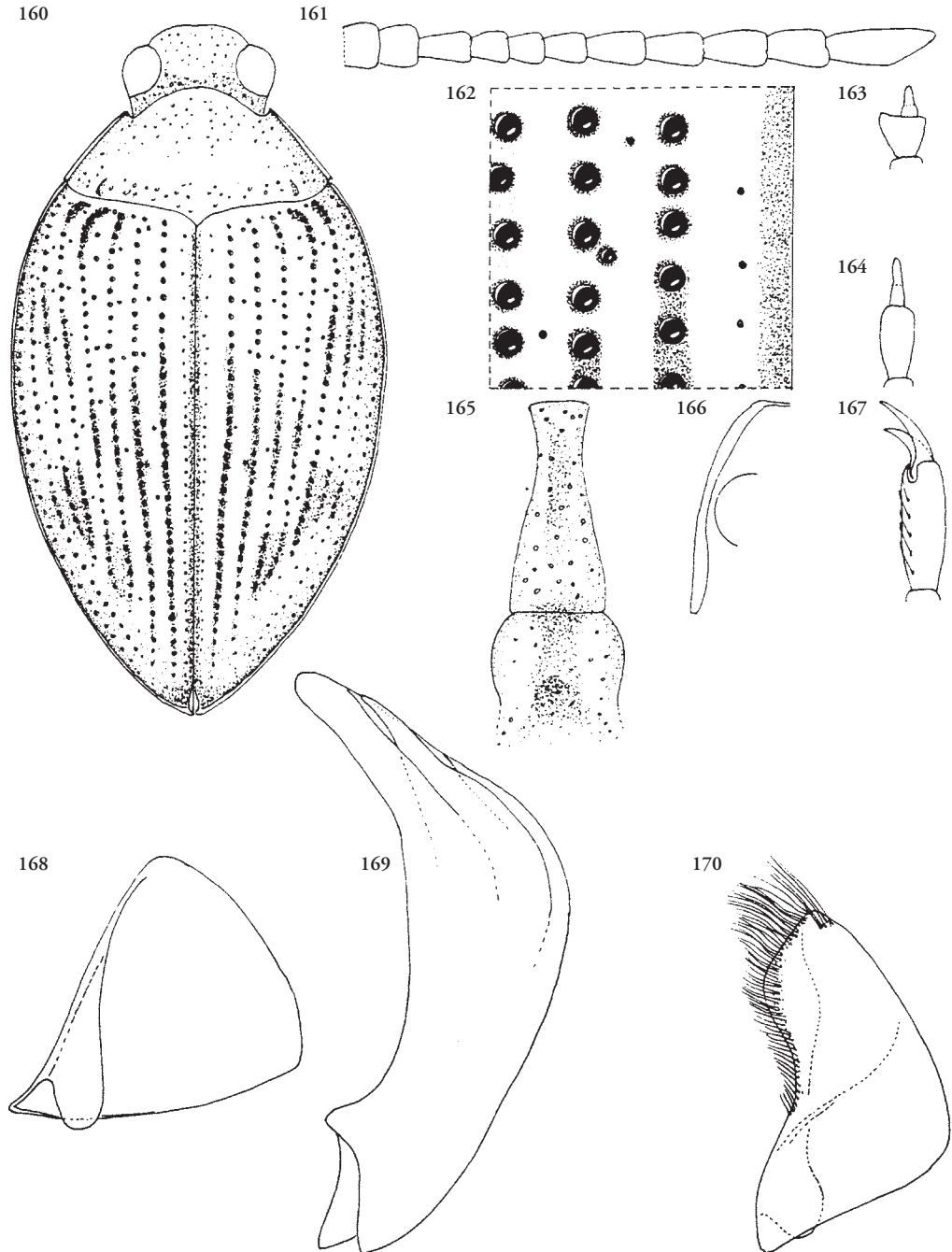


Fig. 160-170. *Halilpus ruficollis* male. – 160, Habitus; 161, antenna; 162, punctures near elytral base and suture; 163, labial palpus; 164, maxillar palpus; 165, prosternal and metasternal process; 166, prosternal process in lateral view; 167, claws of forelegs; 168, left paramere; 169, penis; 170, right paramere.

Haliphus granulum Motschulsky, 1853: 3 (Unavailable name, Caucasus, Synonymised by Zaitzev 1915: 244).
Haliphus tessellatus Motschulsky, 1853: 3 (Unavailable name, Caucasus, Synonymised by Zaitzev 1915: 244 ex. parte).
Haliphus immaculicollis sensu Luigioni, 1929: 149 (given as synonym, Italy).
Haliphus ruficollis forma *fortioripunctata* Horion, 1941: 359 (Unavailable name, infrasubspecific, Germany).

Additional material examined: About 6300 specimens from most of its area of distribution.

Description

Length 2.5-3.0 mm, width 1.3-1.6 mm. Body oval, widest in or just before the middle (fig. 160).

Head. – Yellow-brown, vertex darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.6-1.9 × width of one eye. Antennae yellow to yellow-brown (fig. 161). Palpi yellow to yellow-brown (figs. 163-164).

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture row usually short and curved, 1/5-1/4 × length of pronotum, weakly impressed between plicae. Moderately strongly punctured, between plicae more strongly punctured. Lateral sides margined, straight to slightly convex (fig. 160).

Elytra. – Yellow to yellow-brown, base and suture narrowly darkened, dark interrupted lines on primary puncture rows, dark marks on the end and often in the middle of fourth and sixth interval and on apex. Completely margined. Primary puncture rows moderately strong and dense, more dense in first rows, about 40-45 punctures in first row, basal punctures sometimes widened. Secondary punctures weak to moderately strong and dense along suture, strong and sparse on intervals. All punctures darkened (figs. 160, 162).

Ventral side. – Yellow to yellow-brown, legs yellow to yellow-brown, slightly darkened towards coxae, elytral epipleura yellow with weakly darkened or uncoloured punctures. Prosternal process narrowed near coxae, weakly channelled in anterior part, anterior edge not margined, moderately strongly punctured (figs. 165-166). Metasternal process channelled in the middle, posteriorly strongly impressed in the middle, moderately strongly punctured (fig. 165). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with weak transverse puncture row, last sternite moderately punctured. No setiferous striae on dorsal face of hind tibia, longer tibial spur of hind legs about 4/5 × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs unequal in length, inner one shorter and more curved (fig. 167). Penis and parameres as in figs. 168-170.

Females: Elytra with micropunctuation on posterior 2/3 or in some cases only on apical point.

Similar species: This species is very variable in shape and maculation and thus it can easily be confused with other species in the ‘*ruficollis*’-group.

Biology

Living among filamentous algae in lakes, pools, ponds, rivers, marshes, brooks, streamlets. Preferably in stagnant water. Observed flying. Attracted to light.

Distribution

Widespread in Europe and neighbouring Asian countries: Afghanistan, Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, ‘Caucasus’, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Greece, Hungary, Iran, Iraq, Ireland, Italy, Kazakhstan, Latvia, Luxembourg, Macedonia, Norway, Poland, Portugal, Romania, Russia (North and South European Territory, West and East Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Tadzhikistan, The Netherlands, ‘Transcaucasia’, ‘Turkestan’, Turkey, Ukraine, Uzbekistan, Yugoslavia.

Haliphus (Haliphus) samojedorum J.Sahlberg (figs. 171-182)

Haliphus samojedorum J.Sahlberg, 1880: 45. Syntypes: RUSSIA (WEST SIBERIA): Siberia, Dudinka, Nikandrovski island, Tolstoinos (FMNH, IRSNB, NMW & NHRS) [2 ♀ examined].

Additional material examined: RUSSIA (EAST SIBERIA): 2 ♂, 2 ♀: Yakutia, river Chona at Vilyuy, above river Delinday, 24.vi.1926 (2 ♀) and 4.vii.1926 (2 ♂), leg. Tkačenko (ZIN). – RUSSIA (FAR EAST): 1 ♂, 1 ♀: Chukotka Peninsula, lower course of the Amguema River, vi.1989, leg. G. Atrashkevich (cv); 1 ♀: Chukotka, 15.vi.1940, leg. Semenov (ZIN).

Description

Length 2.9-3.0 mm, width 1.4-1.5 mm. Body subparallel to parallel, widest in the middle (fig. 171).

Head. – Yellow-red, vertex darker, sparsely punctured. Distance between the eyes 2.2 × eyewidth. Antennae (fig. 172) and palpi yellow, antennae apically slightly darkened (174, 175).

Pronotum. – Yellow to yellow-brown, base between plicae with narrow darkened edge. Lateral borders nearly straight, finely margined. Weakly and sparsely punctured. Basal plicae straight (fig. 171).

Elytra. – Yellow, central dark mark connected to the suture behind the middle. Short interrupted vague lines on puncture rows in apical half. Primary puncture rows weak, punctures darkened, about 40 punctures in first row. Secondary puncture rows very weak and sparse.

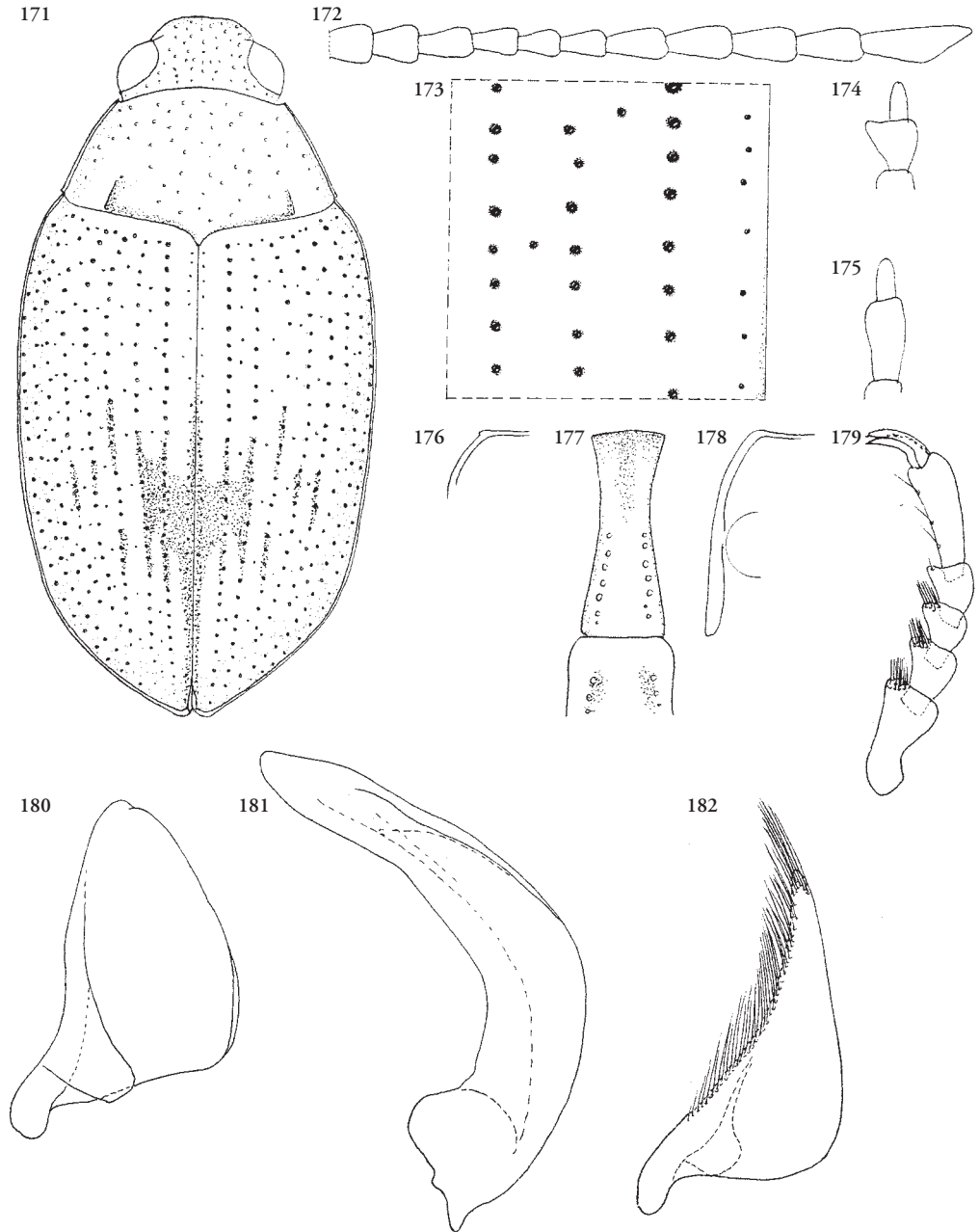


Fig. 171-182. *Halilpus samojedorum* male. – 171, Habitus; 172, antenna; 173, punctures near elytral base and suture; 174, labial palpus; 175, maxillar palpus; 176, transverse ridge on posterior edge of prosternal process; 177, prosternal and metasternal process; 178, prosternal process in lateral view; 179, tarsal segments of forelegs; 180, left paramere; 181, penis; 182, right paramere.

Ventral side. – Body yellow to brown, elytral epipleura yellow, legs yellow to yellow-brown. Prosternal process narrow and flat, narrowed near coxae, row of punctures on each side, apically without or with weak transverse rim, usually slightly impressed in anterior part (figs. 176-178). Metasternal process, nearly flat, slightly impressed on each side, hardly punctured (fig. 176). Metacoxal plates sparsely punctured. No setiferous striole on dorsal face of hind tibia, longer of the two tibial spurs about $\frac{2}{3} \times$ the length of the first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened laterally, scaly hairs on ventral side. Foreclaws about equal in strength and curvature (179). Penis and parameres as in figs. 180-182.

Females: Elytra completely and clearly micro-punctured.

Biology

In rivers.

Distribution

Restricted to the northern part of Siberia: Russia (West and East Siberia, Far East).

Haliphus (Haliphus) sibiricus Motschulsky (figs. 183-193)

Haliphus sibiricus Motschulsky, 1860: 99. Lectotype (selected by Holmen 1987: 131): RUSSIA: Tobolsk province, Bileika (ZIN) [examined].

Haliphus borealis Gerhardt, 1877a: 40, preoccupied by LeConte 1850; replaced by *Haliphus wehnckeii* Gerhardt. Syntypes: 'LAPPONIA' (depository unknown) [not examined].

Haliphus wehnckeii Gerhardt, 1877b: 448, as replacement name for *Haliphus borealis* Gerhardt; Synonymised by Lundmark et al. 2001: 241.

Haliphus alsaticus Scriba, 1905: 337. Syntypes: FRANCE: Hochwald near Barr i/Els (DEI) [not examined]; Synonymised by Van Vondel 1997: 44.

Haliphus bolsaticus Reitter, 1908: 204, as unjustified emendation of *Haliphus alsaticus* Scriba.

Haliphus sahlbergii Falkenström, 1939: 32. Syntypes: RUSSIA: Siberia, Dudinka, Krasnojarsk, Soastrov (NHRS) [not examined]; Synonymised by Zaitzev 1953: 62.

Haliphus lindbergii Falkenström, 1939: 38. Syntypes: SWEDEN: Muonio river (FMNH); Synonymised by Holmen 1987: 130. [not examines]

Haliphus lineolatus auct. (misident)

Haliphus mongolicus Motschulsky (Unavailable name, nomen mus. in BMNH).

Haliphus seidlitzi Reitter (pro parte) (Unavailable name, nomen mus. in HNHM, NMW, ZSM; Mongolia).

Additional material examined: About 950 specimens from most of its area of distribution.

Description

Length 2.8-3.1 mm, width 1.5-1.6 mm. Body oval, widest in the middle (fig. 183).

Head. – Yellow-brown, vertex darkened, rather weakly punctured, on vertex with stronger darkened punctures. Distance between eyes $2.0 \times$ width of one eye. Antennae yellow-brown (fig. 184). Palpi yellow-brown (figs. 186-187).

Pronotum. – Yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{4} \times$ length of pronotum, between plicae slightly impressed. Lateral sides margined, straight to slightly convex. Rather weakly punctured, along base more densely punctured (fig. 183).

Elytra. – Yellow to yellow-brown, vague dark lines along suture and on primary puncture rows, the last ones often strongly interrupted or reduced. Completely margined. Primary puncture rows moderately strong, about 40 punctures in first row, basal punctures of fourth and fifth row usually widened. Secondary punctures moderately strong and dense along suture, strong and sparse on intervals. All punctures darkened (figs. 183, 185).

Ventral side. – Yellow to yellow-brown, legs yellow to yellow-brown, darkened towards coxae. Elytral epipleura yellow with slightly darkened punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, channelled in the middle, anterior edge not margined, moderately strongly punctured (figs. 188-189). Metasternal process strongly channelled in the middle, moderately strongly punctured (fig. 188). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with weak transverse puncture rows, last sternite moderately strongly punctured. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs $\frac{3}{4} \times$ length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs unequal in length (fig. 190). Penis and parameres as in figs. 191-193.

Females: Elytra sometimes with fine micropunctuation on at most posterior $\frac{2}{3}$.

Similar species: This species may easily be confused with some other species in the *ruficollis*-group, but males can be recognised by their penis. Because only recently *H. wehnckeii* is synonymised with *H. sibiricus* most West European material is known under the first name.

Biology

Living among filamentous algae in slowly running waters, brooks, streamlets, ditches, pools and lakes with clear water.

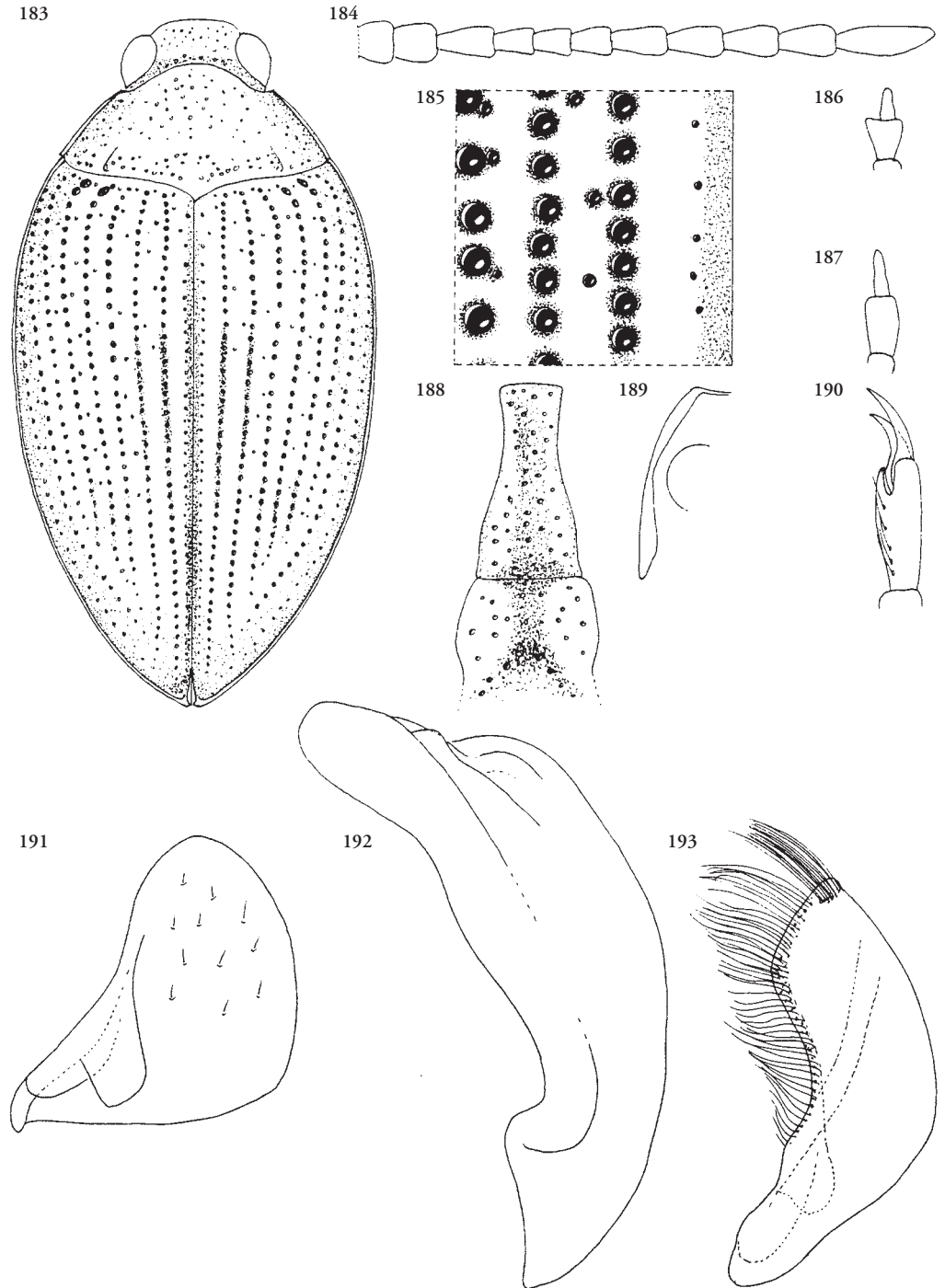
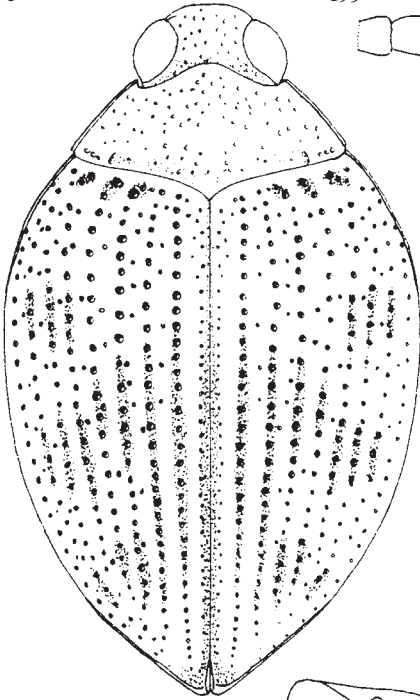


Fig. 183-193. *Halilpus sibiricus* male. – 183, Habitus; 184, antenna; 185, punctures near elytral base and suture; 186, labial palpus; 187, maxillar palpus; 188, prosternal and metasternal process; 189, prosternal process in lateral view; 190, claws of forelegs; 191, left paramere; 192, penis; 193, right paramere.

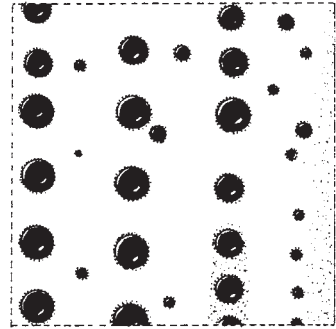
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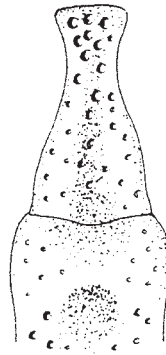
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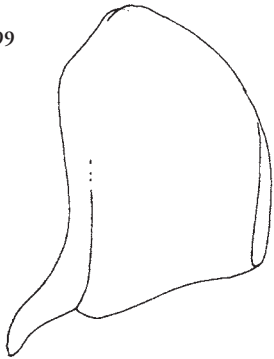
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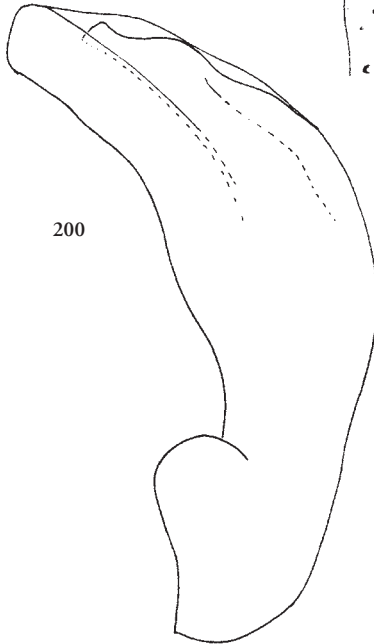
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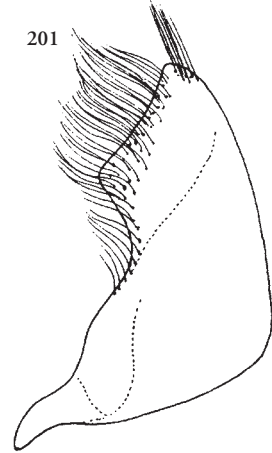


Fig. 194-201. *Haliplus simplex* male. – 194, Habitus; 195, antenna; 196, punctures near elytral base and suture; 197, prosternal and metasternal process; 198, prosternal process in lateral view; 199, left paramere; 200, penis; 201, right paramere.

Distribution

Widespread in the northern and central part of the Palaearctic region: Andorra, Austria, Belgium, Bulgaria, Byelorussia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, Kazakhstan, Kyrgyzia, Latvia, Liechtenstein, Macedonia, Mongolia, Norway, Poland, Romania, Russia (North, Central and South European Territory, West and East Siberia, Far East), Sweden, The Netherlands, 'Transcaucasia', Turkey, Uzbekistan.

Haliplus (Haliplus) simplex Clark (figs. 194-201)

Haliplus simplex Clark, 1863: 419. Syntypes: KOREA: Tsau-li-an, Deer Island (BMNH) [1 probable syntype examined]

Haliplus minutus Takizawa, 1931: 140. Lectotype ♂ (selected by Holmen in 1985 but designated here): JAPAN: Sapporo, 13.V.1903, S. Matsumura (EIHU) [examined]. syn. n.

Haliplus medvedevi Gramma, 1980: 294. Syntypes: RUSSIA: Primorye, Amur region (ZIN) [2 syntypes examined]; Synonymised by Van Vondel 1995b: 114.

Haliplus sahlbergi sensu Brinck 1946: 147 (Nei Mongol). (misident.)

Additional material examined: 1 paralectotype of *minutus*. About 630 specimens from China, Japan, North Korea and Russia (Far East).

Description

Length 2.4-3.1 mm, width 1.3-1.6 mm. Body oval, widest in the middle (fig. 194).

Head. – Yellow-brown, vertex weakly darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.7-2.0 × width of one eye. Antennae yellow to yellow-brown (fig. 195). Palpi yellow to yellow-brown.

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{5}$ × length of pronotum to hardly visible or restricted to a single puncture. Moderately strongly punctured. Lateral sides margined, straight to slightly convex (fig. 194).

Elytra. – Yellow to yellow-brown, variable dark interrupted lines on primary puncture rows, often connected by dark marks, darkened along suture. Completely margined. Primary puncture rows moderately strong, dense in first rows, about 38 punctures in first row. Secondary punctures moderately strong and dense along suture, strong and sparse on intervals. All punctures darkened (figs. 194, 196).

Ventral side. – Yellow-brown, legs yellow-brown, slightly darkened towards coxae, elytral epipleura yellow with uncoloured punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, channelled in the middle, anterior edge not margined,

moderately strongly punctured (figs. 197-198). Metasternal process with strong impression in the middle, moderately strongly punctured (fig. 197). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with weak often interrupted transverse puncture row, last sternite almost completely but sparsely punctured. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs $\frac{3}{4}$ × length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs, claws of forelegs clearly unequal, inner one $\frac{2}{3}$ × length of outer one and more curved. Penis and parameres as in figs. 199-201.

Females: Elytra covered with micropunctuation.

Similar species: The very short or even absent pronotal plicae should distinguish this species from most others, while *H. zacharenkoi* has the elytral lines more continuous in apical $\frac{2}{3}$.

Biology

No details are known.

Distribution

East Palaearctic: China (Anhui, Beijing, Guangdong, Heilongjiang, Jiangsu, Jilin, Liaoning, Nei Mongol, Shandong, Zhejiang), Japan (Hokkaido, Honshu), North Korea, Russia (Far East).

Haliplus (Haliplus) steppensis Guignot (figs. 202-209)

Haliplus steppensis Guignot, 1954a: 108. Holotype ♂: CHINA: Heilongjiang, Harbin, 20.vii.1949 (NHMB) [examined].

Additional material examined: CHINA: Heilongjiang, Harbin, 2.x.1952 (2♂, 3♀), 10.vii.1966 (1♂) (BMNH). – MONGOLIA: 2♀: Mongolia bor. Reitter; 1♂: Mongolia mer., Bon Cagan nur, 19.vii.1988, leg. O. Majzlan (NMW); 1♂: Mongolia bor. Shangai, leg. A. Weis (SMF). – RUSSIA (WEST SIBERIA): 1♀: Omsk, 6.vii.1938, leg. Telishev (ZMUM).

Description

Length 2.7-3.0 mm, width 1.5-1.6 mm. Body oval, widest in the middle (fig. 202).

Head. – Yellow to yellow-brown, moderately strongly punctured. Distance between eyes 1.9-2.1 × width of one eye. Antennae yellow to yellow-brown (fig. 203). Palpi yellow to yellow-brown.

Pronotum. – Yellow to yellow-brown. Plicae opposite fifth elytral puncture rows about $\frac{1}{4}$ to $\frac{1}{3}$ × length of pronotum. Moderately strongly, between plicae a little more strongly punctured. Lateral sides margined, straight to slightly convex (fig. 202).

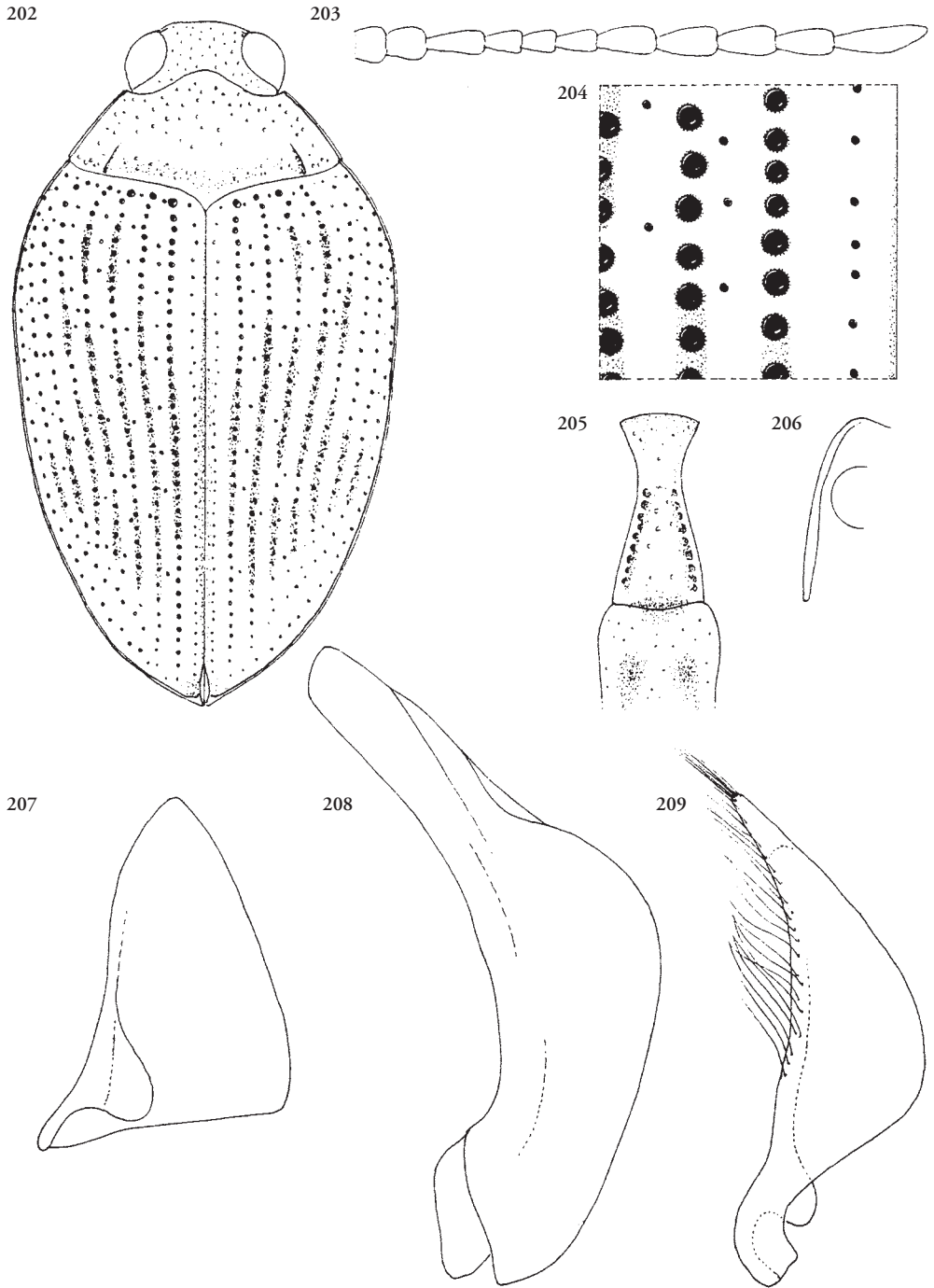


Fig. 202-209. *Haliphus steppensis* male. – 202, Habitus; 203, antenna; 204, punctures near elytral base and suture; 205, prosternal and metasternal process; 206, prosternal process in lateral view; 207, left paramere; 208, penis; 209, right paramere.

Elytra. – Yellow to yellow-brown, dark hardly interrupted lines on primary puncture rows, darkened along suture. Completely margined. Primary puncture rows moderately strong, dense in first rows, about 40 punctures in first row. Secondary punctures moderately strong and dense along suture, strong and sparse on intervals. All punctures darkened (figs. 202, 204).

Ventral side. – Yellow-brown to brown-red, legs yellow-brown, slightly darkened towards coxae, elytral epipleura yellow with uncoloured punctures, reaching to sixth sternite. Prosternal process narrowed near coxae, strongly punctured groove on each side, anterior edge not margined, moderately strongly punctured (figs. 205-206). Metasternal process with clear impression on each side, moderately strongly punctured (fig. 205). Metacoxal plates reaching to fifth sternite, moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with weak transverse puncture row, last sternite almost completely moderately strongly punctured. No setiferous striole on dorsal face of hind tibia, longer tibial spur of hind legs $\frac{2}{3} \times$ length of first tarsal segment.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Penis and parameres as in figs. 207-209.

Females: Elytra covered with micropunctuation.

Similar species: The combination of the weak elytral lines without forming spots and the weak metasternal impressions, the shape of the penis in the males and the presence of elytral micropunctuation in the females should distinguish this species from related species.

Biology

No details are known.

Distribution

East Palaearctic: China (Heilongjiang), Mongolia, Russia (West Siberia).

Halilplus (Halilplus) turkmenicus Van Vondel sp. n. (figs. 210-220)

Type material: Holotype ♂ and 4 paratypes (1 ♂, 3 ♀): TURKMENIA: Kara-Kala, 600 m., Tschaadij Gebirge, Anplokea, 16.x.1989; USSR, Turkmenien, V. G. Dolin (NHMB).

Description

Length 2.7-2.9 mm, width 1.5-1.6 mm. Body wide, widest just before the middle (fig. 210).

Head. – Yellow-brown, moderately punctured. Distance between the eyes about $2.0 \times$ eyewidth. Antennae (fig. 211) and palpi yellow-brown (figs. 213, 214).

Pronotum. – Yellow to yellow-brown, moderately punctured, punctures not darkened. Basal pliae short. Lateral borders straight, finely margined (fig. 210).

Elytra. – Yellow-brown, short dark lines on puncture rows behind the middle, suture with fine dark line. Primary punctures moderately strong, about 40 punctures in first row. Secondary punctures moderately strong, sparse. All punctures darkened (figs. 210, 212).

Ventral side. – Yellow-brown to brown, elytral epipleura yellow-brown with strong not darkened punctures, legs yellow-brown to brown near the coxae. Prosternal process flat, narrowed near coxae, strongly punctured, usually slightly channelled in posterior part (fig. 215, 216). Metasternal process flat or slightly channelled in anterior part and strongly depressed behind coxae, weakly and sparsely punctured (fig. 215). Metacoxal plates moderately punctured, reaching to fifth sternite. No setiferous striole on dorsal face of hindtibia, longer of the two tibial spurs nearly as long as first tarsal segment. Transverse puncture row on fifth and sixth sternite weak and sparse. Seventh sternite moderately punctured.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Protarsal claws unequal in length and curvature (fig. 217). Penis and parameres as in figs. 218-220, penis strongly twisted from base to top.

Females: Weakly micropunctured in apical part.

Similar species

Differs from *H. ruficollis* in the very reduced elytral lines and the different penis in the males.

Biology

No details known.

Distribution

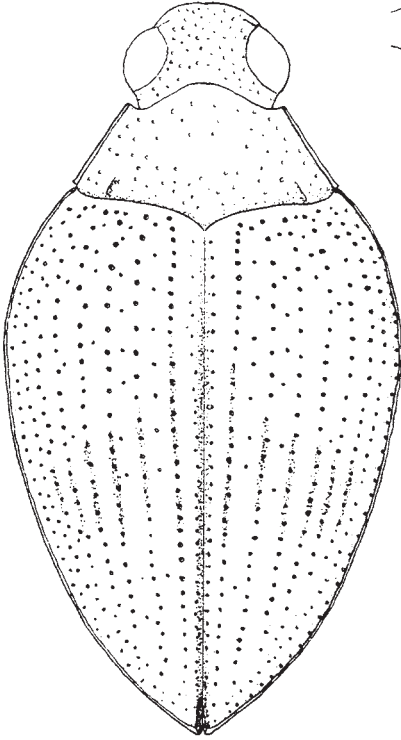
Only known from the typelocality.

Halilplus (Halilplus) zacharenkoi Gramma & Prisnyi (figs. 221-231)

Halilplus zacharenkoi Gramma & Prisnyi, 1973: 637. Holotype ♂: UKRAINE: Kharkov region, Zanki station, 11.xii.1972, Hypnum bog 'Sukhoj Liman' (ZIN). The holotype being part of a series of 50 ♂♂ seems not to be indicated well as such, so probably a lectotype has to be designated [not examined].

Additional material examined: UKRAINE: Paratypes (4 ♂, 1 ♀): labelled as holotype (cv, ZIN); 2 ♂: Black Sea reserve, Solenoozernny section, fresh water depressions, 5.v.1972 (cv). – RUSSIA (SOUTH EUROPEAN TERRITORY): 3 ♂: Volgograd, Lesobasa Stn. [Sarepta], salt lakes and margins, 9.v.2001, leg. Bergsten & Nilsson (CNU, cv).

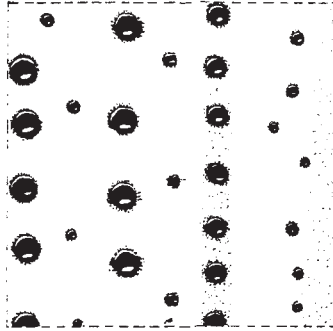
210



211



212



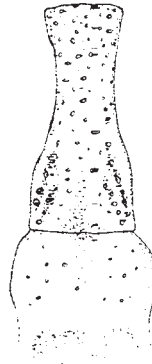
213



214



215



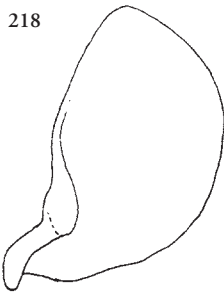
216



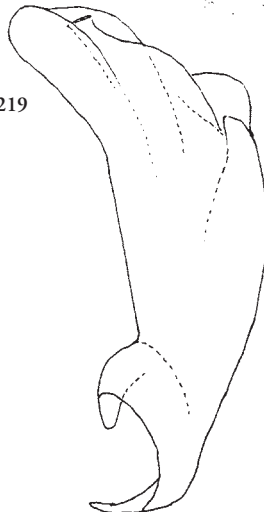
217



218



219



220

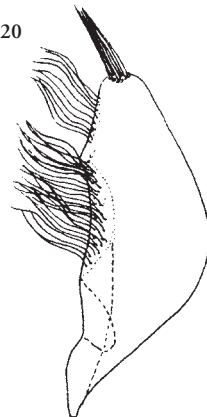


Fig. 210-220. *Haliplus turkmenicus* male. – 210, Habitus; 211, antenna; 212, punctures near elytral base and suture; 213, labial palpus; 214, maxillar palpus; 215, prosternal and metasternal process; 216, prosternal process in lateral view; 217, claws of forelegs; 218, left paramere; 219, penis; 220, right paramere.

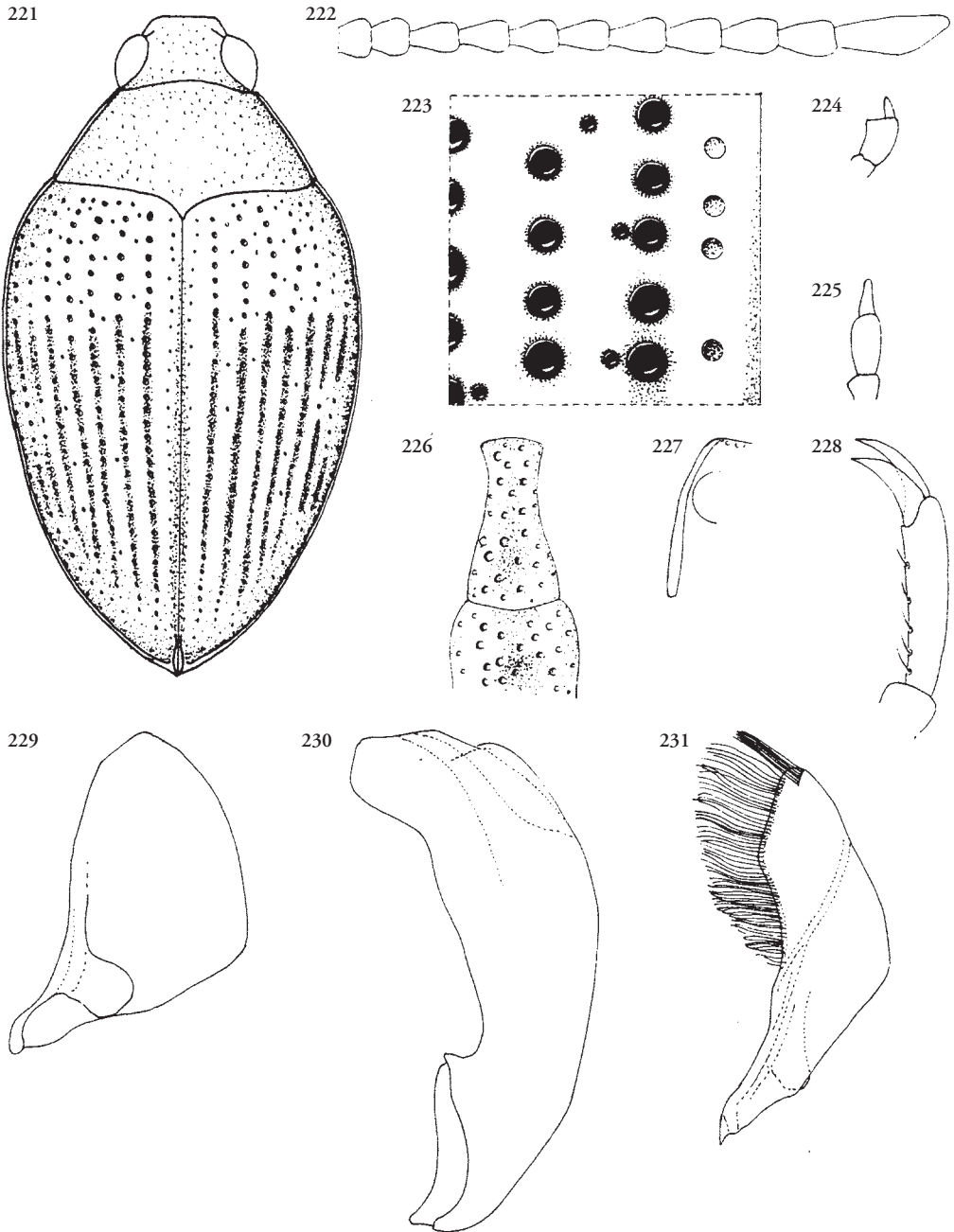


Fig. 221-231. *Halilpus zacharenkoi* male. – 221, Habitus; 222, antenna; 223, punctures near elytral base and suture; 224, labial palpus; 225, maxillar palpus; 226, prosternal and metasternal process; 227, prosternal process in lateral view; 228, claws of forelegs; 229, left paramere; 230, penis; 231, right paramere.

Description

Length 2.5-2.9 mm, width 1.4-1.6 mm. Body oval, widest in or just before the middle, shoulders weakly pronounced (fig. 221).

Head. – Yellow, vertex slightly darkened, moderately strongly punctured, on vertex with stronger darkened punctures. Distance between eyes 1.7-2.0 × width of one eye. Antennae yellow (fig. 222). Palpi yellow, penultimate segment with tooth on the inside (figs. 224-225).

Pronotum. – Yellow, slightly darkened on the disc and along anterior and posterior margin. No basal plicae or at most vague impressions in their place. Lateral sides margined, slightly convex. Moderately punctured, more dense along anterior and posterior margin (fig. 221).

Elytra. – Yellow to yellow-red, black lines on posterior $\frac{2}{3}$ of primary puncture rows, black lines on lateral rows also interrupted in the middle, often with vague dark marks on intervals, connecting black lines. Primary puncture rows fairly strong, about 40 punctures in first row. Secondary punctures moderately strong and dense along suture, strong and sparse on intervals. All punctures darkened, except in most lateral rows. Completely margined (figs. 221, 223).

Ventral side. – Yellow to yellow-red, legs yellow to yellow-red, darkened towards coxae, elytral epipleura yellow with uncoloured punctures. Prosternal process narrowed near coxae, slightly impressed in anterior part, on the sides with a rather narrow low brownish ridge, moderately punctured (fig. 226-227). Metasternal process flat with a central impression, weakly punctured (fig. 226). Metacoxal plates moderately strongly punctured, near suture weakly punctured. Fifth and sixth sternite with sparse transverse puncture row, last sternite moderately punctured. No setiferous striole on dorsal face of hind tibia.

Males: First three tarsal segments of fore- and midlegs widened and provided with sucker hairs. Claws of forelegs subequal in length, inner one thicker and a little more curved (fig. 228). Penis and parameres as in figs. 229-231.

Females: Usually elytra with fine micropunctuation on posterior $\frac{2}{3}$.

Similar species: In Europe this is the only species in the subgenus *Haliphus* s. str. without basal pronotal plicae.

Although this species is characterized by the lack of basal pronotal plicae some specimens have one or two punctures suggesting basal plicae.

Biology

In salt lakes.

Distribution

Russia (South European Territory), Ukraine.

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