# A revision of the genus *Selatosomus* STEPHENS, 1830 (*Coleoptera*: *Elateridae*: *Athoinae*: *Ctenicerini*)

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ABSTRACT. Holoarctic subgenera and species of the genus *Selatosomus* STEPH. are revised, keyed and figured. The following two new subgenera are proposed: *Warchalowskia* (type species: *Corymbites atratus* BALLION, 1878) and *Selatapteria* (type species: *Selatosomus messorobius* DOLIN, 1971). Three species, new to the science, are described: *S.* (s. str.) *graecus* (Greece), *S.* (*W.*) *theresae* (Kazakhstan) and *S.* (*W.*) *turkestanicus* (Middle Asia). *S.* (s. str.) *latus tauricus* DOLIN, 1975 is raised to the species rank. The following new synonyms are proposed: *S.* (*P.*) *punctatisimus* (MÉNÉTRIÉS, 1851): (= *Diacanthus spretus* MANNERHEIM, 1852); *S.* (s. str.) *aeneus* (LINNAEUS, 1758): (= *Corymbites mutator* REY, 1891, = *C. subrugosicollis* REY, 1891, = *Ludius superbus* DANIEL,1903, = *Selatosomus bescidicus* REITTER, 1910, = *S. submontanus* REITTER, 1910, = *S. subpuberulus* REITTER, 1910, = *S. bicolor* DEPOLI, 1913, = *S. vanrooni* EVERTS, 1922, = *S. viridescens* DEPOLI, 1928, = *S. violaceus* MARCU, 1933, = *S. marginatus* PAPP, 1943); *S.* (s. str.) *amplicollis* (GERMAR, 1843): (= *Selatosomus rufoabdominalis* XAMBEU, 1909, = *S. montenegrinus* REITTER, 1910, = *S. lugubricus* REITTER, 1910, = *S. buyssoni* SZOMBATHY, 1910); *S.* (s. str.) *latus* (FABRICIUS, 1801): (= *Corymbites sulcatus* CANDÈZE, 1881, = *Ludius subrubripes* PIC, 1909). *Eanoides puerilis* (CANDÈZE, 1873) is transferred to the subgenus *Selatosomus* (s. str.). The following new combinations are proposed: *S.* (*Pristolophus*) *punctatissimus* (MÉNÉTRIÉS, 1851), *S.* (*P.*) *pacatus* (LEWIS, 1894), *S.* (*Selatosomus*) *puerilis* (CANDÈZE, 1873), *S.* (*Warchalowskia*) *acceptus* GURYEVA,1989, *S.* (*W.*) *ampliformis* REITTER, 1910, *S.* (*W.*) *karabachensis* DOLIN, 1982, *S.* (*W.*) *logvinenkoae* DOLIN, 1982, *S.* (*W.*) *informis* (KRAATZ, 1879) *S.* (*W.*) *mirificus* GURYEVA, 1972, *S.* (*W.*) *mirus* GURYEVA, 1972, *S.* (*W.*) *persimilis* DOLIN, 1982, *S.* (*W.*) *atratus* (BALLION, 1878), *S.* (*W.*) *denisovae* GURYEVA, 1978, *S.* (*W.*) *lemniscatus* DENISOVA, 1948, *S.* (*W.*) *victor* GURYEVA, 1982, *S.* (*Selatapteria*) *jakobsoni* STEPANOV, 1930, *S.* (*S.*) *messorobius* DOLIN, 1971, *S.* (*Hadromorphus*) *callidus* (BROWN, 1936), *S.* (*H.*) *inutilis* (BROWN, 1936).

CONTENTS



## I. INTRODUCTION

Holartic genus *Selatosomus* STEPHENS, 1830 is the most speciose genus of the tribe *Ctenicerini*. It was separated from the genus *Ctenicera* LATREILLE (= *Corymbites* LATR., = *Ludius* ESCH.) and for a long time was treated as subgenus. Its range was not fully determined, hence some species, are only conditionally included by many authors. Subgenera *Metanomus* BUYSS. and *Poemnites* BUYSS., previously classified in the genus *Ludius* ESCH., were recently included in this genus (CHEREPANOV 1957; LESEIGNEUR, 1972; DOLIN 1972, 1982) but eventually excluded by GURYEVA (1985). Genus *Mosotalesus* KISHII was included in the genus *Selatosomus* STEPH. as a subgenus (GURYEVA 1985) and then quite recently also excluded. After the above mentioned corrections and changes the genus *Selatosomus* STEPH. comprises 62 species. One can expect, however, that some more North American species can be included yet (BROWN 1935 a, b, 1936 a, b, c).

Subgenera *Mosotalesus* KISHII, *Metanomus* BUYSS. and *Poemnites* BUYSS., previously included in the genus *Selatosomus* STEPH. are at present treated as separate genera (GURYEVA 1989) and so have been excluded from this revision.

Undetermined range of the genus and the resulting lack of a complex list of its diagnostic characters are stimuli to create new suggestions concerning intrageneric subdivisions. Separated groups of species are given various taxonomic ranks: group of species (LESEIGNEUR 1972), subgenus (CHEREPANOV 1957; KISHII 1977; DOLIN 1978, 1982) or genus (OHIRA 1970). As the type species of the genus *Selatosomus* STEPH. was erroneously re-designated (Hyslop, 1921), and even more misunderstandings in nomenclature arose.

This revision was based on the results of studies on type materials and possibly long series of other evidence materials. It includes descriptions of two new subgenera, three new species, eighteen synonym propositions at the species rank and twenty changes of taxonomic status.

The material under study came from the following collections:

AG = Andrzej GRUSZKA, Wrocław, Poland;
BER = Museum für Naturkunde der Humboldt-Universität, Berlin, Germany;
BRN = Moravske Museum, Brno, Czech Republic;
BRU = Koninklijk Belgisch Instituut Voor Natuurwetenschappen, Brussels, Belgium;
BUD = Termeszettudomanyi Muzeum, Budapest, Hungary;
DT = Dariusz TARNAWSKI, Wrocław, Poland;
EBW = Deutsche Entomologisches Institut, Eberswalde, Germany;
HAL = Martin Luter Universität, Halle, Germany;
HEL = Universitetes Zoologiska Museum, Helsinki, Finland;
KAW = Instytut Systematyki i Ewolucji Zwierząt PAN, Kraków, Poland;
KIW = Zooloigiceskij Institut Ukrainskoj Akademii Nauk USSR, Kiev, Ukraine;
KOP = Zoologisk Museum, Copenhagen, Danmark;
LED = Zoologiceskij Institut Akademii Nauk, St.-Petersburg, Russia;
LON = British Museum of Natural History, London, United Kingdom;
LP = Ljubomir PENEV, Sofia, Bulgaria;
MOS = Zoologiceskij Muzej Moskovskogo Universiteta, Moscow, Russia;
ODE = Zoologiceskij Muzej Odesskogo Universiteta, Odessa, Russia;
PAR = Museum national d'Histoire naturelle, Paris, France;
WAW = Muzeum i Instytut Zoologii PAN, Warsaw, Poland;
ZAK = Muzeum Tatrzańskiego Parku Narodowego, Zakopane, Poland;

Abbreviations:
M = male;
F = female.

In the recent decades morphological studies on preimaginal stages of elaterids were developed; as far as species of economical importance are concerned keys to larvae were produced (DOLIN 1964, 1978; GILAROV 1964; RUDOLPH 1974). However both descriptions of larvae and existing evidence materials are still incomplete and do not allow to verify taxonomic conclusions concerning imaginal stages of these insects. Thus in this paper either general characteristic of preimaginal stages or already known descriptions of larvae were omitted as their introduction to synthetic taxonomic study was estimated as premature. Only essential diagnostic characters of larvae were given together with subgeneric characteristics.

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## II. GENERAL DATA ON THE GENUS *SELATOSOMUS* STEPH.

### 1. EXTERNAL ANATOMY OF ADULT INSECTS

Dorsum glabrous or with poor vestiture. Head puncturation normal or lenticular; frons with triangular depression, with gibbosities or flat. Antennae from segment IV serrate or with elongate and terminally widened antennomeres. Pronotum usually with incised midline, occasionally with shiny or dull shallow depression running medially, seldom smooth; lateral edges straight; elevated ridge in posterior angles, from inside bordered by furrow or at least by a trace of it. Prosternal sutures straight, sometimes bordered by shiny edge. Posterior process of prosternum straight, i.e. parallel to body axis or from anterior coxae bent to mesosternum. Posterior edge of mesosternum with flattening. Elytra usually widest behind middle. Hind wings short or vestigial. Femoral plates of hind legs usually narrowed terminally. Anterior, medial and posterior coxae usually firmly astride. Tarsal claws with blunt denticle at base. Posterior edge of seventh abdominal tergite with a rather shallow medial incision.

Sexual dymorphism at the generic level

Male. The eighth abdominal sternite slightly widened terminally, with flattening along whole base, its posterior edge with sparse hairs; abdominal pleurites with bunches of long hairs on posterior edge. Pleurites of the nineth abdominal segment with parabolic incision and with short processes at base.

Female. Both, ovipositor structure and structure of the eighth abdominal sternite, variable. Ovipositor is usually of the following structure: spiculum ventrale short and spade-shaped; sternite transverse, bent downwards and with bent posterior edge, rarely with incisions. Spermatheca usually with chitinized spicles, forming stripes or without them.

Variation of genital organs and of terminal abdominal segments is presented in figures of particular species.

### 2. KEY TO SUBGENERA

1. Prosternal sutures not depressed anteriorly. ..... 2.
-. Prosternal sutures depressed anteriorly and indistinctly doubled.
..... 5. *Hadromorphus* MOTSCH.

2. Some terminal antennal segments situated medially on apical edge of previous segment (figs 116-119, 168-171, 485-487, 674, 675); segments V-X serrate, elongated or transverse, thier apices more or less rounded (figs 182, 536, 571, 572). Aedeagus with parameres shorter than penis. Walls of bursa copulatrix covered with more or less evenly and rather strongly sclerotized long spicles ..... 3.
-. Some terminal antennal segemnts situated asymmetrically (figs 51-57); segments V-X triangularly widened or elongated with almost parallel edges, their apices more or less sharp from inside (figs 51-57). Aedeagus with parameres longer than penis, or equal ; bursa copulatrix without sclerotized elements.
..... 1. *Pristilophus* LATR.
3. Hind wings normally developed or only slightly shortened.
..... 2. *Selatosomus* s. str.
-. Hind wings extremely shortened ..... 4.
4. Denticle on inner edge of mandibula sharp. Femoral plates of hind legs strongly narrowed terminally (fig. 531).
..... 3. *Warchalowskia* subg. nov.
-. Denticle on inner edge of mandibula not prominent, smoothed. Femoral plates of hind legs strongly narrowed posteriorly (fig. 601).
..... 4. *Selatapteria* subg. nov.

## III. SYSTEMATIC REVIEW

### 1. Subgenus *Pristilophus* LATREILLE

Adults. Antennal segments asymmetrically fixed to each other (figs 51-57), prosternal sutures not depressed anteriorly, posterior process of prosternum bent inwards (figs 26-29), and in aedaegus parameres usually longer than penis (figs 2-6, 17-19). Sexual dimorphism pronounced: besides bigger body size the female differs from the male in the length and structure of antennae, and also often in the shape of the last visible abdominal sternite.

Larva. Nasalia composed of three denticles. Setae in posterior part of abdominal tergites most often grouped in pairs. Surface of anal segment with two protuberances on lateral sides, incision of the segment more or less transverse.

Subgenus includes 13 species divided into three groups.

1. Terminal abdominal segment strongly swollen at tip or with ribbed fold covered with dense vestiture. Species uniformely coloured (bicoloured species extremely rare).
..... group II, p. 13
-. Terminal abdominal segment of typical structure, only at apex with denser vestiture. Colourful species. ..... 2.

2. Ridges on posterior angles of pronotum convex and tangentially running away from lateral edge. Terminal abdominal segment without dense vestiture at apex. Male antennal segments with single row of hairs on their outer edge.
..... group I, p. 6
-. Ridges on posterior angles of pronotum flattened, running parallelly to lateral edge. Terminal abdominal segment with dense vestiture on apex. Male antennal segments with double row of hairs.
..... group III, p. 20

GROUP I

Ridges on posterior angles of pronotum convex and positioned tangentially to edge; terminal abdominal segment of typical structure, without denser vestiture on tip. Male antennae with triangularly widened segments and single row of hairs on their outer edge. Five species belong to this group, all distinctly coloured; one of them widely distributed, inhabits Palearctic, while the others inhabit North America.

1. Apex of each elytron without additional gutter, rows at tip between third and nineth intervals not so strongly punched. Posterior angles of pronotum thin. Metasternum between medial coxae flat ..... 2.
-. Apex of each elytron with additional gutter connected with nineth row and rows at tip between third and nineth interval more strongly punched ..... 4.
2. Male antennae slender, segments V-X tiny, but each of them longer than wide. Pronotum poorly punctured, laterally punctures distinctly separated, medially interspaces equal double puncture diameter. Black tranverse patch on elytra never extends from sides to apex. Tip of elytron never black, black colour limited only to narrow stripe at suture.
..... *S. (P.) pulcher* (LEC.)
-. Male antennae thick, segments V-X of equal length and width. Pronotum densely punctured, laterally punctures contact each other, medially interspaces equal their diameter. Dark regions on elytra usually a bit longer, transverse patch often extends from lateral sides to apex. Tip of elytra always dark brown or in paler specimens with blurred yellow brown patch ..... 3.
3. Pronotum very densely punctured.
..... *S. (P.) cruciatus* (L.)
-. Pronotum poorly punctured especially at base.
..... *S. (P.) festivus* (LEC.)
4. Posterior half of pronotum moderately coarsely and densely punctured.
..... *S. (P.) edwardsi* (HORN)
-. Posterior half of pronotum very delicately and sparsely punctured.
..... *S. (P.) suckleyi* (LEC.)

## *Selatosomus (Pristilophus) cruciatus* (Linnaeus)

*Elater cruciatus* Linnaeus, 1758: 404.

Terra typica: Europe.

Description

Length of male: 9.0-12.0 mm, width: 3.5-4.2 mm; in female length up to 15.0 mm, width up to 6.0 mm. Body wide, black with yellow-brown or red-brown spots, shiny. Along lateral margins of pronotum runs a red-brown elongated band (fig. 1). Lateral margins of abdominal sternites and almost whole anal segment of the same colour. Elytra yellow-brown, only their suture, elongated humeral spot and transverse band behind half of elytra black and forming a characteristic cross. Antennae red-brown and legs rusty-red. Whole body with short, yellow-grey vestiture, only pronotum and elytra almost glabrous. Head almost flat, frons with shallow depression. Antennae do not reach terminals of posterior angles of pronotum; in male segment III shorter than IV, in female equal (fig. 53). Terminal segment of labial palp rounded (fig. 59), maxillary palp elongated, its apical edge with rounded angles (fig. 58). Pronotum flat (fig. 73), poorly transverse, with midline distinct along its whole length; posterior angles directed externally and with long ridge (fig. 69). Anterior margin of prosternal collar rounded, prominently sticks out beyond anterior angles of epipleura of pronotum (fig. 7). Posterior angle of pronotal epipleuron short (fig. 12). Posterior process of prosternum slightly bent to body and with characteristically truncate tip (fig. 26). Scutellum almost square (fig. 34). Elytra wider than pronotum (fig. 69), flat (fig. 73). Femoral plates of hind legs wide and terminally slightly narrowed (fig. 84). Legs normally developed (fig. 45-47). Male. Aedeagus (fig. 17); terminal abdominal segments: the tergites VIII, IX and X (figs 20, 21), sternite IX (fig. 22). Female. Ovipositor (fig. 89), spermatheca (fig. 90); terminal abdominal segments: tergite VIII (fig. 73) and sternite IX (fig. 72). Body larger, antennal segments narrower, posterior angles of pronotum shorter and wider in male. Larva was described by Rothenburg (1907), more precise descriptions were provided by Glen (1950) and Dolin (1964).

Distribution

Widely distributed in northern and central parts of Europe, reaching south to France, Switzerland, North Italy, Ukraina and Asia Minor and in the east to the basin of the Irtysz River in Western Syberia.

Bionomics, ecology

Inhabits lowland areas, piedmonts and wide mountain valleys. It occurs in light deciduous and mixed forests and adjoining areas, but omits swamps and peatbogs. Larvae develop in humid soil shaded by trees. Adults appear in May and can be collected on oak and beech trunks, on leaves of deciduous trees, on annual plants under the trees and on umbellifer flowers.

REMARKS

Species known in numerous colour forms, due to variable distribution of spots on elytra (ab. *bifenestratus* PIC, 1912: 33; ab. *quadrimaculatus* HELLÉN, 1921: 98).

MATERIAL

1 F ("Fennia, Kb, Joensuu, Ylämylly, Pärnävaara, 10-15 VII 1976, Ole MARTIN leg.") (KOP), 4 MM (West Ukraina, "Galicja Wsch., Lwów, B. KOTULA", "Coll. B. KOTULA, Zool. Inst. PAN Kraków, 35/57") (KAW), 1 F (Poland, "Zielonka, Oborniki Wkp., 14 VI 1974, T. DWORZYCKI"), 1 M (Poland, "XU-42, Zielonka, 28 V 77, J. GUTOWSKI"), 1 F (Poland,"Polonia, Lodz Upland, Rogów, 15 VI 1977, leg. M. WANAT") and 1 F (Poland, "Ruda Milicka, 6 V 1989, leg. D. TARNAWSKI, oak trunk, oak-linden forest") (DT).

## *Selatosomus* ( *Pristilophus*) *edwarsi* (HORN)

*Corymbites cruciatus Edwarsi* HORN, 1871: 324.
*Ludius cruciatus ater* VAN DYKE, 1932: 430 (nec *ater* CANDÈZE 1865: 55).
*Ludius edwarsi* HORN (BROWN 1935: 4).
*cruciatus edwarsi* = *cruciatus ater* = *edwarsi*: BROWN 1935: 4.

Terra typica: California, north Nevada.

DESCRIPTION

Length: 11.0-17.0 mm, width: 4.0-4.5 mm. Big specimens are usually female. Body colour variable. Antennae and legs always dark brown or red-brown; head, pronotum and abdomen always black; prothorax often completely black, then whole body always black (*ater* VAN DYKE); pronotum often black on both sides with wide red margins usually reaching anterior apices and rarely comprising also posterior angles, then propleura always red and elytra completely black or variously red-yellow spotted. Elytral spots consist of narrow spot or short stripe on lateral margin at base (typical *edwarsi* HORN), or of similar stripe and adapical spot on each elytron or of yellow areas comprising only sutural interval, longitudinal humeral spots, transverse stripes at apex of 2-5 intervals, and in extreme cases apex remains black. Male antennae reach exactly terminals of posterior angles of pronotum; their segment III as wide as and more or less twice longer than II, its width two-fifths smaller than length; segment IV one-third wider and slightly shorter than III; segments of the second half of antennae of the same length as V, segments V-X identical, usually two-thirds as narrow as long and terminal segment twice longer than wide, seldom slightly shorter. Female antennae do not reach terminal angles of pronotum for a distance of 2.5 segment length. Head closely and moderately punctate, frons flat. Puncturation of whole frons as in *S.* (*P.*) *festivus* (LEC.). Pronotum moderately, coarsely punctate, quite closely in midpart, densely on sides, more delicately and slightly more sparsely at base. Pucturation of elytral intervals

rather delicate, scattered. Puncturation of pronotum venter moderately coarse, dense on sternites, slightly denser on pleurites; metasternum and abdomen more delicately, densely punctate. Aedeagus (fig. 78) hardly differs from that of *S.* (*P.*) *suckleyi* (LEC.).

DISTRIBUTION

North America: California, West Nevada.

BIONOMICS, ECOLOGY

Mountain species occurring from 1000 to 3000 m.a.s.l.

REMARKS

Closely related to the remaining species of the group. By other authors treated as a subspecies (BROWN, 1935) or a variety (LESEIGNEUR, 1972) *S.* (*P.*) *cruciatus* (L.).

Material

5 specimens: "West Nevada, leg. et coll. HORN"; 1 spec.: "Red Mt., Nevada Co., California., leg. et coll. VAN DYKE"; 1 spec.: "Riverton, California (3000 ft.), coll. BROWN"; 2 spec.: (*edwarsi* and *ater*) ("Pacific, Eldorado Co., California, coll. BROWN") (Canadian National Collection, Ottawa). Besides Brown (1935) mentions 35 specimens from California collected in the following localities: Tulare Co., 6400 ft.; Nr. Whitehill, Eldorada Co.; Yosemite, 4000 ft.; Round Mdw., Giant Forest; Sequoia National Park, 9000 ft.; Tuilumne Co., 6400 ft.; Sand Flat, 5500 ft.; MEYERS, 6300 ft.

### *Selatosomus* (*Pristilophus*) *festivus* (LECONTE)

*Corymbites festivus* LECONTE, 1860: 46.
*Ludius cruciatus festivus* LECONTE (BROWN 1935: 3).
*cruciatus festivus* = *festivus*: GURYEVA 1989: 226.

Locus typicus: Steilacoom, Washington (Oregon).

DESCRIPTION

Length: 10.0-14.0 mm, width: 3.5-5.0 mm. Body moderately convex, poorly or delicately hairy. Colour variable, blood-red-yellow with black spots. Legs dark, antennae yellow with dark joints. Antennae in males do not reach terminal of posterior angles of pronotum at a distance of almost 1 or 2.5 segment length; segments V-X slightly wider than in *S.* (*P.*) *pulcher* (LEC.), of equal width and length; terminal segment thickened; in females antennal segments more delicate than in *S.* (*P.*) *pulcher* (LEC.). Pronotum square, moderately covex, with posterior angles a bit externally apart, blood-red, only borders of anterior margin and anterior spot of scutum black. Pronotum punctured exceptionally sparsely but denser than in

*S.* (*P.*) *pulcher* (LEC.); punctures in the middle separated by distance of their diameter, laterally denser almost contacting each other, posteriorly with finer and scattered. On elytra two black spots: one scapular, laterally elongated and medially widened, the other transverse, often extending from the begining of lateral margin to elytral apex, curved beyond midpart; specimens are encountered with reduced transverse spot or with transerse and scapular spots connected. Elytral rows with deep dots. Underside black; each propleuron with red, medial stripe; abdomen laterally blood-red, posterior red margin of abdominal sternites on consecutive segments gradually widened, so in this way the last sternite is red with wide black spot at base, each segment also edged in red. Remaining characters as in *S.* (*P.*) *pulcher* (LEC.).

DISTRIBUTION

The state Manitoba and more western regions of North America.

BIONOMICS, ECOLOGY

Similar to that of *S.* (*P.*) *cruciatus* (L.).

REMARKS

Closely related to the other species of this group. By other authors treated as a subspecies (BROWN, 1935) or as a variety (LESEIGNEUR, 1972) of *S.* (*P.*) *cruciatus* (L.).

MATERIAL

Holotype, M ("Steilacoon, Washington, Oregon, leg. George GIBBS, coll. LE CONTE", "Canadian National Collection, Ottawa"). BROWN (1935) mentions 23 specimen from the following localities: Treesbank, Aweme, and Wawanesa, Manitoba; Bulyea, Saskatchewan; Calgary, Waterton Lakes, Red Deer River, and Crow's Nest Pass, Alberta; Nicola, Vancouver, Victoria, Nanaimo, Salmon Arm, Mt. Cheam, Saanich, Muir Creek, Vernon, Similkameen River, and Merritt, British Columbia.

### *Selatosomus* (*Pristilophus*) *pulcher* (LECONTE)

*Corymbites pulcher* LECONTE, 1853: 140.
*Ludius cruciatus pulcher* LECONTE (BROWN 1935: 2).
*cruciatus pulcher* = *pulcher*: GURYEVA 1989: 226.

Locus typicus: New Hampshire.

DESCRIPTION

Length: 10.2-14.0 mm, width: 3.5-5.0 mm. Wider specimens are usually female. Body moderately convex. Hairs grey, very tiny and scattered; top almost glabrous, hairs longer, very thick and visible only on scutellum; underside more

distinctly hairy. Head black, margin of frons and antennal base red. Pronotum black with lateral red stripes extended from base to anterior angles, occasionally stripes as wide as black region on scutum or as half of it; rarely also head and scutum of pronotum red. Scutellum black. Elytra yellow with three black stripes; one at suture, another on scapulae and a third transverse behind the middle. The stripe on suture extends from base to elytral apex and comprises interval at suture, usually extends also to the next interval at the base of the fifth one; scapular stripe usually occupies three intervals and extends from the base to scapular gibbosity at the distance of 2/5 elytral length and is never connected with the transverse one; transverse stripe located at 2/5 length of elytra measuring from the apex, of the same size as the scapular one, archwise bent but not elongated along lateral margin, sometimes reduced and in rare cases visible only as small, middle spot. Underside black; each propleuron with red middle stripe, rarely intermittent, extended from base to apex; abdominal sternites usually widely bordered with red, in rare cases completely red. Legs red or red-brown. Head with closely and moderately thick puncturation; frons poorly flattened; antennae brown. In males antennae reach the terminals of posterior angles of pronotum; segment III twice longer than wide, slightly wider and twice longer than II, narrower by 1/3 and of the same length as IV; segments from IV to X triangular, segment IV just a bit longer than V; segments from V to X of the same length and narrower by 1/4 length; apical segment twice longer than wide. In females antennae shorter, do not reach the terminals of posterior angles of pronotum at the distance of two segments length. Pronotum in males square, in females slightly wider; posterior angles moderately developed and directed a little outwards, with keel; scutum with moderately coarse puncturation; laterally, punctures separated by the distance of their diameter, in the middle by the distance of two diameters and in the back of declivity a bit finer and scattered. Elytra with rows moderately impressed and rather finely punctured; intervals moderately convex, finely and sparsely punctured. Puncturation of prothorax at the underside of the same size but thicker than of pronotum; propleura usually very finely alutaceous. Prosternal sutures not depressed. Puncturation of metasternum and abdomen fine and moderately thick. Aedaegus (fig. 77) with lateral lobes thicker than in *S.* (*P.*) *edwarsi* (HORN) and with middle lobe not sticking out beyond apices of lateral lobes.

DISTRIBUTION

The state Ontario and more eastern regions of North America.

BIONOMICS , ECOLOGY

Similar to that of *S.* (*P.*) *cruciatus* (L.).

REMARKS

Closely related to the remaining species of this group. From *S.* (*P.*) *cruciatus* (L.) it differs also (besides key characters) in darker antennae and legs. By other authors it was treated as a subspecies (BROWN, 1935) or as a synonym (SCHENKLING 1927; LESEIGNEUR 1972; DOLIN 1982) of *S.* (*P.*) *cruciatus* (L.).

MATERIAL

Holotype, M ("New Hampshire, leg. Dr. HARRIS, coll. LE CONTE", "Canadian National Collection, Ottawa"). BROWN (1935) mentions 46 specimens from the following localities: Mt. Washington, New Hampshire; Cheticamp, Smith's Cove, Weymouth, Kings Co., and Hants Co., Nova Scotia.; Bathurst, Grand Manan, and French Lake, New Brunswick; Cascapedia, Knowlton, Wright, Ft. Coulonage, and Hemmingtonford, Quebec; Ottawa, Sudbury, Biscotasing, Miners Bay, Mer Bleue, and Hastings Co., Ontario (Canada).

### *Selatosomus (Pristilophus) suckleyi* (LECONTE)

*Corymbites Suckleyi* LECONTE, 1857: 46.
*Ludius suckleyi olympiae* VAN DYKE, 1932: 431.
*Ludius suckleyi suckleyi* LECONTE (BROWN 1935: 6).

Locus typicus: Steilacoom.

DESCRIPTION

Length: 13.0-19.0 mm, width: 4.0-4.5 mm. Body black and shiny, almost glabrous with grey hairs. Segment III of antennae not widened, segment IV widened at apex; segment III of antennae equal to or slightly longer than IV, the remaining segments triangular in shape. Pronotum almost square, posterior angles slightly directed outwards; close to apices and anterior margin moderately coarsely and densely punctured, in the middle puncturation becomes fine and sparse, in posterior part very fine, delicate and extremely thin. Elytron with single crescent spot situated in the middle, close to suture and extended from lateral margin to scapular gibbosity and also with another one more or less transverse yellow spot lying behind the middle of elytra and not reaching the margin; crescent spots never reach suture, occasionally intermittent at the sixth interval; spots usually big and only sporadically more reduced but even then quite distinct. Intervals of elytra convex, finely and thinly punctured, sometimes hardly noticeable. Scutellum widened, with grey hairs. Puncturation of the underside of the body slightly less dense than in *S. (P.) edwarsi* (HORN). Aedaegus hardly differs from that of *S. (P.) edwarsi* (HORN). Two main types of coloration of elytra exist which enables to distiguish two subspecies.

1. Each elytron with two yellow spots.
..... *S. (P.) s. suckleyi* (LEC.)
-. Elytra without spots.
..... *S. (P.) s. olympiae* (VAN DYKE)

DISTRIBUTION

From west British Columbia (Canada) to Willamette Valley, Oregon (U.S.A.).

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Closely related to *S.* (*P.*) *edwarsi* (HORN), from which it differs in thinner puncturation of posterior half of pronotum and of the underside of the body and also in colour.

MATERIAL

Holotype, M ("Steilacoom, leg. George GIBBS", "Canadian National Collection, Ottawa"). 70 specimen from the following localities of British Columbia (Canada): Saanich; Mt. Newton; Bear Hill, Vancouver Island; Pender Harbor; Goldstream; Victoria; Royal Oak; Sidney; Courtenay; Vancouver.

Subspecies *S.* (*P.*) *s. olympiae*: 1 specimen Olympia, Washington (U.S.A.), leg. VAN DYKE; 3 specimens Olympia, coll. ULKE; 1 specimen Oregon (U.S.A.), coll. BROWN (Canadian National Collection, Ottawa).

## GROUP II

This group includes beetles with uniformly coloured body, with ridges convex and situated tangentially to margins of posterior angles of pronotum. The last abdominal segment strongly terminally swollen or with intensely hairy ribbed fold. In males antennal segments significantly elongated, almost equilateral and with single row of hairs. Size, proportion and colour of the body as well as the length of antennae can significantly differ among the species of this group. The shape of aedeagus can also slightly differ.

Four species belong to this group; two of them occur in Palearctic and other two in North America.

1. Palaearctic species ..... 2.
-. American species ..... 3.
2. Femoral plates of hind legs poorly narrowed terminally (fig. 85). Pronotal epipleura wide (fig. 13). Scutellum elongate (fig. 35). Black or brown. Vestiture golden-yellow or yellow-grey.
..... *S.* (*P.*) *melancholicus* (F.)
-. Femoral plates of hind legs strongly narrowed terminally (fig. 86). Pronotal epipleura narrow (fig. 14). Scutellum oval (fig. 36). Brown-black. Vestiture grey (dorsally darker, ventrally lighter).
..... *S.* (*P.*) *punctatissimus* (MÉNÉTR.)
3. Length 11-16 mm; black or bicolour.
..... *S.* (*P.*) *morulus* (LEC.)
-. Length 7-8.3 mm; brown or red-brown.
..... *S.* (*P.*) *sexualis* (BROWN)

## *Selatosomus (Pristilophus) melancholicus* (FABRICIUS)

*Elater melancholicus* FABRICIUS, 1798: 139.
*Ludius profugus* FALDERMANN, 1835: 176.
*Selatosomus coerulescens* MOTSCHULSKY, 1860: 109.
*Selatosomus dauricus* CANDÈZE, 1863: 140 (nec MOTSCHULSKY 1859: 490).
*dauricus* = *melancholicus*: BUYSSON 1894: 93.
*profugus* = *melancholicus*: SCHENKLING 1927: 378.
*coerulescens* = *melancholicus*: GURYEVA 1985: 572.

Terra typica: Dalarna, Sweden.

DESCRIPTION

Length of male: 12.0-14.0 mm, width: 4.0-5.0 mm; in female length up to 16.0 mm, width up to 7.0 mm. Black or brown, elytra with brown, blue or green polish. Body dorsally almost glabrous, with poor, delicate and short vestiture, yellow-grey vestiture ventrally extremely dense and adherent. Head flattened; frons slightly depressed medially. Antennae long, in male they reach one segment beyond the terminals of posterior angles of pronotum, in female they do not reach base of pronotum; their segment III 1.5 times longer than II and almost twice shorter than IV (fig. 51). Terminal segment of labial (fig. 61) and maxillary (fig. 60) palps axe-shaped. In male pronotum elongate, in female almost square (fig. 70), strongly convex (fig. 74), with distinct midline at base, in the posterior part two elongated depressions occur; posterior angles sharp, large, directed slightly outwards, with strong ridge. Anterior edge of prosternal collar on the same level with anterior angles of pronotal epipleura (fig. 8). Posterior angle of pronotal epipleuron long (fig. 13). Posterior process of prosternum slightly bent to body (fig. 27). Scutellum almost rectangular, with slightly rounded sides (fig. 35). Elytra in male almost parallel and terminally strongly narrowed; in female somewhat widened just behind the middle and terminally slightly rounded. Femoral plates of hind legs wide, terminally poorly narrowed (fig. 85). Terminal abdominal segment significantly convex, with long and dense hairs. Male. Aedeagus (figs 2-6). Female. Ovipositor (fig. 93); VIII abdominal segment: tergite (fig. 95) and sternite (fig. 94). Larva was described by XAMBEU (1894), more precise description was provided by CHEREPANOV (1957).

DISTRIBUTION

Occurs in Europe (in the north known from Fennoscandia, in the south from the Pyrenees, Alps and Appenines), in Caucasus, Kazakhstan and Kirgizstan, and Siberia (to Kamtchatka).

BIONOMICS, ECOLOGY

A boreal-alpine species. In European mountains it occurs locally in subalpine-alpine zones up to 2600m. a. s. l. Larva lives in soil and litter in shady places, in

rotten wood, on meadows in grass soil and under the stones, very rarely on cultivated fields (most often in freshly cultivated areas). Polyphagous and very predacious (it feeds on larvae and pupae of beetles, mostly curculionids). Adults found everywhere sporadically, mostly singly; collected from May to July at forest edges, meadows and on insolated slopes.

REMARKS

Widely distributed species, rather variable, but only slight differences in structure of e.g aedeagus occur (fig. 2-6) Besides the nominate subspecies the following subspecies are known: *S. (P.) m. alpestris* (MÉNÉTRIÉS) (*Elater alpestris* MÉNÉTRIÉS, 1832: 155) from the Caucasus and *S. (P.) m. tianshanicus* DENISOVA (*Selatosomus* (s. str.) *melancholicus tianshanicus* DENISOVA, 1948: 42) from South Kazakhstan and Kirgizstan and the following varieties previously treated also as subspecies (GURYEVA, 1985): *S. (P.) m.* ab. *anxius* (GEBLER) (*Ludius anxius* GEBLER, 1843: 38) from Kazakhstan and *S. (P.) m.* ab. *scabricollis* (ESCHSCHOLTZ) (*Elater scabricollis* ESCHSCHOLTZ, 1823: 124) from Kamchatka (fig. 6-aedeagus) and also varieties mentioned by GURYEVA (1989): *S. (P.). m.* ab. *depressicornis* (MOTSCH.) (MOTSCHULSKY, 1860: 109, *Selatosomus coerulescens* var. *deprissicornis*) (SCHENKLING, 1927: 374 = *Selatosomus anxius*) from Buratskaja ASSR, *S. (P.) m.* ab. *robustus* (STIERLIN) (STIERLIN, 1886: 49, *Diacanthus melancholicus* var. *robustus*) from Middle Alps, *S. (P.) m.* ab. *cenisius* (PIC) (PIC, 1909: 105, *Ludius*) from France ("Mont-Cenis").

1. Prosternal sternite ( without collar and posterior process) of equal length and width. Posterior angles of pronotum longer than wide at base. In male antennae reach terminals of posterior angles of pronotum or are by half segment longer. Segments VI and VII 1.5-1.6 times as long as wide and segment X twice longer than wide. Length 10-12 mm. Aedeagus (fig. 5).
   ..... *S. (P.) melancholicus tianshanicus* DEN.
-. Prosternal sternite (witout collar and posterior process) distinctly elongate ..... 2.
2. Posterior angles of pronotum 1.8 times as long as wide at base. Prosternal sternite anteriorly even or with a faintly delimited swelling. In male antennae reach behind posterior angles of pronotum by length of 1.5-2 segments; segments VI and VII 1.8 times longer than wide and segment X 2-2.5 times as long as wide. Length 11-16 mm. Aedeagus (fig. 2).
   ..... *S. (P.) melancholicus melancholicus* (F.)
-. Posterior angles of pronotum 1.5 times as long as wide at base. Prosternal sternite anteriorly distinctly swollen and the swelling more or less distinctly delimited by transverse furrows. In male antennae reach posterior angles of pronotum or are longer by half length of apical segment; segments VI and VII 1.5-1.6 times as long as wide, segment X almost twice as long as wide. Length 11.5-15 mm. Aedeagus (fig. 3).
   ..... *S. (P.) melancholicus alpestris* (MÉN.)

MATERIAL

I have studied specimens labelled:

*anxius*, lectotype (M "M", "GEBLER", "SCHRENCK", "Stepp. Kirgis. austro. orient.", "Mus. Zool. Helsinki, Loan No. C 13 716", "Lectotypus *Ludius anxius* GEBLER, design. GURYEVA 1982", "Mus. Zool. Hirfors, Spec. typ. No. 15280 *Ludius anxius* GEBL.", "Zool. Mus. Helsinki Loan No. C-87 10 and 2 paralectotypes (1 F "F", "GEBLER", "SCHRENCK", "Stepp. Kirgis. austro. orient", "Mus. Zool. Helsinki, Loan No. C 13 717", "Paralectptypus *Ludius anxius* GEBLER, design. GURYEVA 1982", "Mus. Zool. H:fors, Spec. type No. 15 281", "*Ludius anxius* GEBL.", "Zool. Mus. Helsinki, Loan No. C-87 11" (HEL); 1 M, "Satr. Kirg." (LED) );

*scabricollis*, lectotype (M, "ESCHSCH.", "Kamtschatka", "Mus. Zool. Helsinki, Loan No. C 12 536", "Lectotypus *Elater scabricollis* ESCH., design. GURYEVA", "Mus. Zool. H:fors. Spec. typ. No. 15 264, *Elater scabricollis* ESCHTZ", "Zool. Mus. Helsinki, Loan No. c-87 9") (HEL) and paralectotype (M, "Kamtschatka", "var. *scabricollis* ESCHSCH.") (LED);

*tianshanicus*, lectotype (M, "per. Makbal, Syr-Darin. obl., KIRIČENKO, 4 VI 10") and 10 paralectotypes (1 M, label the same as in lectotype; 5 MM, labels the same as in the previous ones besides date, 8 VI 10; 1 M, "p. Chaj-Sandyk, Aleks. Chr. Cydr., KIRIČENKO, 19 VI 910"; 1 F, label the same as in the previous one besides date, 23 VI 910; 1 M, "Okr. Karakola, 11 VI 1931, gory, K. TITOV") (LED).

## *Selatosomus* (*Pristilophus*) *morulus* (LECONTE)

*Corymbites morulus* LECONTE, 1863: 85.
*Corymbites brunnipes* BLAND, 1864: 67.
*brunnipes* = *morulus* (SCHENKLING 1927: 396).

Locus typicus: North Red River.

DESCRIPTION

Length: 11.5-16.0 mm, width: 3.5-4.5 mm. Dorsal body side, antennae and legs blackish or dark brown; rarely pronotum from side view in anterior parts of posterior angles and whole propleura red; occasionally pronotum with margins of sides widely and completly pale red and elytra pale red-yellow and humeral calluses and sutural intervals brown, head, antennae, legs and venter (excluding propleura) remain black. In male antennae do not reach terminals of posterior angles of pronotum at distance of 2 and 1/3 segment; segment III twice as long as and equal in width to segment II, the latter twice longer than wide, 1/4 shorter and 1/4 narrower than segment IV; segment IV triangular slightly longer than segment V; Segments V-X of equal length, almost paralell, slightly broadened apically; segment VI 1/3 and apical segment 2/3 as narrow as long. In females antennae do not reach terminals of posterior angles of pronotum at distance of terminal segment; proportions of four basal segments as in male; segments V-X thin, poorly elongate and triangular,

segment V and III equal in length, VI 3/10 and apical 3/5 as narrow as long. Head very densly and moderately coarsely punctate, frons wide and moderately convex. Pronotum moderately coarsely punctate, closely in middle and at base, densely on sides. Elytra with convex intervals, rather delicately and sparsely punctate. Puncturation on prothoracic venter moderately coarse, rather close on sternites, close or dense on propleura (punctures not alutaceous). Metasternum and abdomen delicately, moderately densely punctate. Terminal abdominal segment very wide and poorly rounded at apex; in male tip of third segment equipped with arched furrow, this furrow on each side precisely subapically joins with margin, and is poorly elevated in middle and strongly on sides and then equipped with long and dense region of hairs; in female this segment with more delicate furrow, swelling equipped with some moderately long and closely arranged hairs. Aedeagus (fig. 80); its basal part very strongly concave. Larva described by BRITTAIN (1914).

DISTRIBUTION

North America: Canada: Hudson Bay, Alberta, British Columbia, Yokon, Ontario and USA: Alaska, Oregon, Washington, Montana.

BIONOMICS, ECOLOGY

Mountain species.

REMARKS

Close relative of *S.* (*P.*) *sexualis* (BROWN), from which, besides bigger body size, it differs in furrow more poorly elevated in middle on apical segment of abdomen. Similarily modified abdomen can be found in Siberian *S.* (*P.*) *punctatissimus* (MÉNÉTR.). Usually black, bicolour specimens are rarely encountered.

MATERIAL

Holotype, M ("North Red River, leg. Robert KENNICOTT, coll. LE CONTE", "Canadian National Collection, Ottawa"). BROWN (1935) mentions numerous (82) specimens from the following localities: Banff, Waterton Lakes, and Crow's Nest Pass, Alberta.; Copper Mt., Creston, Trinity Valley, Salmon Arm, Vernon, Summerland, Nicola, Cranbrook, Terrace, Sicamous, and Aspen Grove, British Columbia; Yukon Crossing and near Selkirk, Yukon; Eagle, Alaska; Mt. Hood, Oregon; 1 specimen, Nipigon, Ontario, coll. H.C. FALL.

### *Selatosomus* (*Pristilophus*) *punctatissimus* (MÉNÉTRIÉS) comb. nov.

*Diacanthus punctatissimus* MÉNÉTRIÉS, 1851: 53.
*Diacanthus spretus* MANNERHEIM, 1852: 285.
*Diacanthus nigrita* MANNERHEIM, 1852: 289.
*Ludius atriceps* J. SAHLBERG, 1902-1903: 24.

*atriceps* = *spretus*: CHEREPANOV 1957: 299.
*nigrita* = *spretus*: GURYEVA 1985: 573.
*spretus* = *punctatissimus*: **syn. nov.**

Locus typicus: Irkutsk.

DESCRIPTION

Length of male: 7.0-11.5 mm, width: 2.5-4.0 mm; in female length up to 13.0 mm, width up to 5.7 mm. Variably coloured. Body usually brown-black and shiny; elytra pitch-black, antennae and legs red-brown or dark red. Sometimes whole body together with elytra red or red-brown; scutellum and prosternum black; elytra yellow-red; pronotum red with elongated black central stripe; sometimes black colour disappears and pronotum is completely red. Whole body with tiny, delicate and poor vestiture, slightly lighter on venter. Head with big punctures; frons hill-like elevated above antennal base with central wide impression. Male antennae reach with 2-3 segments beyond the base of pronotum, female antennae do not reach it; their segment III distinctly longer than II and almost twice shorter than IV (fig. 55). Terminal segment of labial palp axe-shaped (fig. 63). Maxillary palp with distinctly elongated segments (fig. 62). Pronotum almost square (figs 71, 72), distinctly convex (figs 75, 76), central line conspicuous in posterior half; posterior angles directed outwards, with a long ridge. Prosternum wide, deeply punctate. Anterior margin of pronotal collar rounded, at equal level with anterior angles of pronotal epipleura (fig. 9). Pronotal epipleuron narrow and with posterior angle directed outwards (fig. 14). Posterior process of prosternum long, narrow and bent inwards (fig. 28). Scutellum widened from base to apex, apically widely rounded (fig. 36), delicately punctate and covered with cinereous hairs directed posteriorly. Elytra faintly convex (fig. 75), with deep, coarsely punctate rows. Femoral plates of hind legs wide, distinctly terminally narrowed (fig. 86). Male. Aedeagus (fig. 18); terminal segments of abdomen: tergites VIII, IX and X (fig. 23, 24), sternite X (fig. 25). Female. Ovipositor (fig. 96), spermatheca (fig. 97); VIII abdominal segment: tergite (fig. 99) and sternite (fig. 98). Larva described by MASAJTIS (1931).

DISTRIBUTION

North Mongolia and Siberia (forest-steppes, northern part of steppe, and southern part of forest zones and also piedmont areas up to 1000 m. a. s. l.).

BIONOMICS, ECOLOGY

The larva lives in soil of fallow and cultivated fields, at forest edges and glades, rarely in litter and in tree-shaded soil. The species is reported as one of the greatest pest of seeds and seedlings in Western Siberia. Larvae pupate in July, August or in the first half of September. Adults hibernate in pupal cells and, depending on temperature, leave them in May or June.

REMARKS

It can be well distinguished from the other species of the group by the structure of the fifth abdominal sternite, which in posterior part has a semioval, transverse and ribbed fold (male) or the fold is poorly developed and forms only a tiny cylinder (female).

MATERIAL

I have studied the specimens labelled:

*spretus*, lectotype (M, "SEDAKOFF., Sibir. or.", "Mus. Zool. Helsinki, Loan No. C 12 143", "Mus. Zool. Helsinki, Loan No. C 12 538", "Lectotypus *Diacanthus spretus* MNH., design. GURYEVA", "Mus. Zool. H:fors. Spec. typ. No. 15 266", "*Diacanthus spretus* MANNH.", "Lectotypus *Selatosomus spretus* MNH., design. GURYEVA 1982", "Zool. Mus. Helsinki, Loan No. C-87 7") and paralectotype (F, "SEDAKOFF., Sibir. or.", "Mus. Zool. Helsinki, Loan No. C 12 142", "Mus. Zool. Helsinki, Loan No. C 12 537", "Paralectotyp *Diacanthus spretus* MNH.", "Mus. Zool. H:fors. Spec. typ. No. 15 267, *Diacanthus spretus* MANNH.", "Paralectotypus *Selatosomus spretus* MNH., design. GURYEVA 1982", Zool. Mus. Helsinki, Loan No. C-87 8") (HEL);

*nigrita*, lectotype (M, "SEDAKOFF., Sibir. or.", "*D. longicollie* MANN. olim.", "Mus. Zool. Helsinki, Loan No. C 12 111", "Mus. Zool. Helsinki, Loan No. 12539", "Lectotypus *Diacanthus nigrita* MNH., design. GURYEVA", "Mus. Zool. H:fors. Spec. typ. No. 15 268 *Diacanthus nigrita* MANNH.", "Lectotypus *Selatosomus nigrita* MNH., design. GURYEVA 1982", "Zool. Mus. Helsinki, Loan No. C-87 5") and paralectotype (F, "SEDAKOFF., Sibir. or.", "Mus. Zool. Helsinki, Loan No. C 12 112", "Mus. Zool. Helsinki, Loan No. C 12 540", "Paralectotypus *nigrita* MNH.", "Mus. Zool. H:fors. Spec. typ. No. 15 269, *Diacanthus nigrita* MANNH.", "Paralectotypus *Selatosomus nigrita* MNH., design. GURYEVA 1982", "Zool. Mus. Helsinki, Loan No. C-87 6") (HEL).

### *Selatosomus* (*Pristilophus*) *sexualis* (BROWN)

*Ludius sexualis* BROWN, 1935: 8.

Locus typicus: Dundurn, Saskatchewan.

DESCRIPTION

Length: 7.2-8.5 mm, width: 3.0-3.5 mm. Male. Whole body and appendages red-brown. Antennae reach beyond posterior angles of pronotum for a distance of 2.5 segment; their segment II 2/3 longer and almost as wide as III; segment III 3/4 wider than long; segment IV 1/3 longer and 1/4 wider than III; segments IV-X of equal size; IV slightly triangular, almost parallel, segment VI 3/4 and the apical 2/5 width of II. Head 2/3 of pronotal width; moderately and closely punctate; frons

wide, slightly concave. Pronotum moderately coarsely punctate, punctures laterally dense and medially sparse; intervals on elytra fine, sparsely punctate. Puncturation ventrally dense, moderately coarse on prothorax, delicate on metasternum and on abdomen. Apical abdominal segment of similar structure as in *S. (P.) morulus* (LEC.), but with furrow more elevated medially. Aedeagus (fig. 79). Female. Body slightly bigger than in male. Antennae short, do not reach terminations of posterior angles of pronotum for a distance of five segments length; shape and proportion of four basal segments as in male; segments 5-10 shorter and more triangular, the fifth as long as the third, the sixth as long as wide, and apical 1/3 as narrow as long. Apical abdominal segment of similar structure as in *S. (P.) morulus* (LEC.), but with costal swelling better developed and more distinct and with intercostal area more distinctly swollen.

DISTRIBUTION

North America: U.S.A: Wyoming; Canada: Saskatchewan, Alberta.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Species closely related to *S. (P.) morulus* (LEC.), from which it differs in the furrow more elevated medially on apical abdominal segment. In collections it was often labelled as *Corymbites (Haplotarsus) fusculus* (LECONTE, 1963: 48) (SCHENKLING, 1927: 391).

MATERIAL

Holotype: M ("Dundurn, Saskatchewan, 23 IV 1923, leg. K. M. KING", "No. 3841, Canadian National Collection, Ottawa"); allotype: F, ("Dundurn, Saskatchewan, 23 IV 1923, leg. K. M. KING", "Canadian National Collection, Ottawa"); and 7 paratypes: 1 M, ("Dundurn, Saskatchewan, 23 IV 1923, leg. K. M. KING", "Canadian National Collection, Ottawa"), 4 FF ("Saskatchewan, 2 V 1924, 5 V 1925, 28 IV 1926, 27 XII 1928, leg. K. M. KING", "Canadian National Collection, Ottawa"), 1 M ("Medicine Hat, Alberta, 23 IV 1923, leg. F. S. CARR", "Canadian National Collection, Ottawa"), 1 M ("Laramie, Wyoming", "Canadian National Collection, Ottawa").

## GROUP III

Species of this group are characterized by relatively small colourful body. Posterior angles of pronotum flat, and ridges run paralelly to lateral margin (figs 30-33). Antennae in male with triangularly widened segments (figs 52, 54, 56) and with double row of prominent hairs on their outer edge, and terminal abdominal segment with dense vestiture on apex.

Of four species belonging to the group, three occur in Japan and one in North America.

1. Big beetle, 11-14 mm long (fig. 30). Scutellum elongate (fig. 37) ..... 2.
-. Beetle small, 6.5-9.5 long (figs 31-33). Scutellum oval (figs 38-40) ..... 3.
2. Body brown, hardly shiny, legs slightly lighter; elytra yellow-brown (spots brown). Vestiture yellow.
..... *S. (P.) semivittatus* (SAY)
-. Body dark brown, hardly shiny; legs black or dark brown; elytra dark brown with black spots (fig. 30). Vestiture red-yellow.
..... *S. (P.) onerosus* (LEWIS)
3. Midline present (fig. 31). Antennal segment III narrow, segment II wider than III (fig. 56). Black-brown, faintly shiny. Vestiture cinereous.
..... *S. (P.) pacatus* (LEWIS)
4. Midline absent (figs 32, 33). Antennal segment III as long as wide (figs 54, 57). Dark-brown, dull. Vestiture cinereous-yellow.
..... *S. (P.) vagepictus* (LEWIS)

### *Selatosomus (Pristilophus) onerosus* (LEWIS)

*Corymbites onerosus* LEWIS, 1894: 260.

Locus typicus: Nagasaki, Kiushiu, Japan.

DESCRIPTION

Length: 11.0-14.0 mm, width: 3.0-4.0 mm. Body dark brown, slightly shiny; antennae and legs dull-black or dark brown. Black stripe along suture on elytra comprises whole parasutural and almost half of neighbouring intervals; moreover two spots on each elytron: one elongate on humeri and one rounded in midpart (fig. 30). Whole body covered with red-yellow vestiture; supraantennal gibbosities elevated and smooth. Antennae long; their segment III 1.5 longer than II and almost twice shorter than IV (fig. 52). Terminal segment of the labial palp big (fig. 66), maxillary palp axe-shaped (fig. 67). Pronotum not too coarsely punctate, square (fig. 30), slightly convex (fig. 41), widest in middle; posterior angles not too sharp, directed slightly outwards, with distinct ridge. Anterior edge of prosternal collar gently rounded, situated at the level of anterior angles of pronotal epiplera (fig. 10). Posterior angle of pronotal epipluron narrow (fig. 16). Posterior process of prosternum bent inwards. Scutum almost square, with gibbosity in the middle of posterior edge (fig. 57). Elytra widest in the middle (fig. 30) slightly convex (fig. 41); punctures in rows very light or hardly noticeable. Femoral plates of hind legs narrow and becoming narrower along their whole length (fig. 87). Male. Aedeagus (fig. 19). Female. Body bigger, wider and more convex, antennae almost moniliform. Larva unknown.

DISTRIBUTION

Japan: Kiushiu (Nagasaki, Shimbara) and Honshiu (Tokyo, Oyama, Oyayama) islands.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Closely related to American *S.* (*Pristilophus*) *semivittatus* (SAY) (*Corymbites tristis* CANDÈZE, 1863: 173), and differs from the latter species, among other things, in the lack of midline, not so coarse puncturation and only faintly pronounced third row of elytra.

MATERIAL

Lectotype (M, "Syntype", "Japan G. LEWIS 1910-320", "Nagasaki, 22 V-3 VI 81", "Type H.T.", "*Corymbites onerosus* Type, M, LEWIS", "Yuyama Hb/81 on underside of CAND.", "397") and paralectotype (F, "Syntype", "Japan G. LEWIS 1910-320", "Shimabara", "Type H.T.", "*Corymbites onerosus* Type, F, LEWIS") have been designated (LON).

Two females have also been studied ("Japan", "JANSON coll.") (LON) previously misidentified as *Corymbites tristis* CAND.

### *Selatosomus* (*Pristilophus*) *pacatus* (LEWIS) comb. nov.

*Corymbites pacatus* LEWIS, 1894: 261.

Locus typicus: Tokyo, Honshiu, Japan.

DESCRIPTION

Male. Length: 6.5-9.5 mm, width: 2.5 mm-3.5 mm. Body black-brown, faintly shiny, almost dull, with grey vestiture. Antennae black, legs black or dark brown, only tibiae and tarsa red-brown. Characteristic patches on elytra (fig. 31). Head densely and coarsely punctured. Antennae long; their segment III narrow, longer than II and shorter than IV (fig. 56). Terminal segments of labial (fig. 65) and maxillary (fig. 64) palps wide and axe- shaped. Pronotum convex (fig. 42), almost square, with thin midline; posterior angles sharp, directed distinctly outwards with short ridge (fig. 31). Anterior edge of prosternal collar slightly rounded, hardly produced behind posterior angles of pronotal epipleura (fig. 11). Posterior angle of pronotal epipleuron very narrow (fig. 15). Posterior prosses of prosternum bent towards the body. Scutellum rounded and narrowed at base (fig. 38). Elytra widest close to the middle (fig. 31), poorly convex (fig. 42); rows punctured; intervals slightly wrinkled and poorly punctured. Femoral plates of hind legs straightly

posteriorly narrowed (fig. 88). Legs normally shaped (figs 48-50). Female unknown. Larva unknown.

DISTRIBUTION
Japan: Honshiu.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closely related to *S.* (*P.*) *onerosus* (LEWIS), from which it differs in the smaller body size, presence of midline on pronotum and different colour of elytra.

MATERIAL
Lectotype has been designated (M, "Syntype", "Japan G. LEWIS 1910-320", "FENTOU leg.", "Type H.T.", "*Corymbites pacatus*, Type, LEWIS") (LON). As it follows from the original discription the type series primarily consisted of three males; only one of them is still in the collection of the British Museum.

### *Selatosomus* (*Pristilophus*) *semivittatus* (SAY)

*Elater semivittatus* SAY, 1823: 174.

Terra typica: "Missouri" (eastern flanks of the Rocky Mounatins) (Colorado).

DESCRIPTION
Length: 9.5-11.5 mm, width: 3.0-3.5 mm. Body brown, slightly shiny; pronotum, except base, becoming laterally reddish; legs somewhat lighter and head darker; elytra dull yellow with sutural interval and humeral brown patch; humeral patch comprises three intervals on humeral gibbosity, farther slightly narrower and narrowly interrupted at the top of elytra (in shape of a small spot in the center of elytron), only occasionally the humeral patch missing. The whole body covered with dense vestiture, only on elytra vestiture somewhat sparser. Antennae reach exactly to the terminals of posterior angles of pronotum; their segment III 3/5 narrower than long and 2/5 narrower than IV; segment IV 1/6 shorter than III; segments IV to X of equal width and length, their external angles not developed; segment XI 1/3 narrower than long. Terminal abdominal segment with well developed brush of longer hairs at the top. Male. Aedeagus (fig. 81). Female. Body bigger, wider and more convex. Larva unknown.

DISTRIBUTION
USA: Colorado, Nebraska, Dakota, Oregon.

BIONOMICS, ECOLOGY
Most probably a mountain species.

REMARKS
Closely related to *S. (P.) onerosus* (LEWIS). It may also be related to American *Corymbites tristis* CANDÈZE, 1863: 172, recorded from Vancouver Island (Canada), and misinterpreted as a synonym of *S. (P.) semivittatus* (SAY) by SCHENKLING (1927).

MATERIAL
The species was originally described from "Missouri" and is evidently confined to the eastern flanks of the Rocky Mountains (Colorado). BROWN (1936a) lists the following localities: 1 spec. "Poudre River, Colorado"; 1 spec. "Nebraska", coll. LECONTE; 7 spec. "Nebraska", coll. ULKE; 1 spec. "Dacota", coll. ULKE.

### *Selatosomus (Pristilophus) vagepictus* (LEWIS)

*Corymbites vagepictus* LEWIS, 1894: 261.

Locus typicus: Kumamoto, Kiushiu, Japan.

DESCRIPTION
Male. Length: 7.0-8.5 mm, width: 2.5-3.0 mm. Body dark brown, mat; antennae brown, their segmentation lighter; elytra dull-brown, with three indistinct, lighter spots: the first at base on the third and fourth interval, the second close to the midlength on the third, fourth, fifth and seveth intervals, and the third at the apex; the mentioned spots are variable (wider or narrower) and sometimes lighter on the outer edge. The whole body with dense, grey vestiture. Head densely punctate and with dense vestiture; frons flat between the eyes. Antennae quite long, serrate; their segment III almost equal to II (fig. 54). Terminal segment of the maxillary palp axe-shaped (fig. 57). Pronotum with dense puncturation and dense vestiture, poorly convex (fig. 43), square, medially widest, anteriorly steeply narrowed; posterior angles not too sharp, directed slightly outwards, with short ridge (fig. 33). Posterior process of prosternum bent towards the body (fig. 29). Scutellum rounded and elongated (fig. 39). Elytra parallelsided (fig. 33), slightly convex (fig. 43). Female. Antennae shorter, almost moniliform (fig. 57), pronotum distinctly convex (fig. 44), transverse (fig. 32), scutellum round (fig. 40), elytra widest just behind the middle. Larva unknown.

DISTRIBUTION
Japan: Kiushiu.

BIONOMICS, ECOLOGY
Unknown.

REMARKS

Similar to *S. (P.) pacatus* (LEWIS), but differs from the latter, among other things, in shorter antennae, posterior angles of pronotum only slightly directed outwards and the lack of midline.

MATERIAL

Lectotype (M, "Syntype", "Japan G. LEWIS 1910-320", "Kumamoto, 23 IV-26 IV 81", "Type H.T.", "*Corymbites vagepictus* Type, M, LEWIS", "Kumamoto", "397") and paralectotype (F, "Syntype", "Japan G. LEWIS 1910-320", "Kumamoto, 23 IV-26 IV 81", "*Corymbites vagepictus* Type, F, LEWIS", "393") have been designated (LON). In the British Museum collection there are eight further syntypes (pers. comm. C.M.F. VON HAYEK), which have been designated as paralectotypes.

## 2. Subgenus *Selatosomus* s. str.

Adults. All antennal segments, counting from the fourth, or only terminal, are fixed medially to each other (figs 116-119, 168-171, 180-183, 274, 309, 398-403). Posterior process of prosternum horizontal (figs 127, 195, 197-202, 344-347, 467) or bent (figs 196, 348-351). In aedeagus parameres usually shorter than the penis (figs 131, 132, 215-223, 414-419).

Larva. Nasalia wedge-shaped. Posterior lobe of fronto-clypeal disc transverse. Setae in terminal part of abdominal segments most frequently grouped in pairs.

Based on morphological characters species of the subgenus *Selatosomus* s. str. have been divided into several provisional groups, which, moreover, differ from each other in details of ecology and distribution.

1. Multi-coloured species; body length from 15.0 to 22.0 mm. ..... group III, p. 44
-. Unicolour species ..... 2.
2. Elytra with very distinct transverse wrinkles. ..... group IV, p. 46
-. Elytra with no wrinkles ..... 3.
3. Antennal segment II long and narrow (figs 116-119, 168-171, 180-183) ..... 4.
-. Antennal segment II short and wide (figs 398-403, 466) ..... 5.
4. Posterior angle of pronotum long, directed outwards and obliquely truncate at the tip (figs 128-130). ..... group I, p. 26
-. Posterior angle of pronotum shorter and wider, directed posteriorly or slightly outwards and bluntly bordered at the tip (figs 192-194, 203-206). ..... group II, p. 30

5. Femoral plates of hind legs lightly and unevenly posteriorly narrowed (figs 360-365).
..... group VI, p. 62
-. Femoral plates of hind legs distinctly, posteriorly narrowed (fig. 468).
..... group V, p. 49

GROUP I

Species belonging to this group inhabit the eastern Asiatic part of the Palaearctic. They have flat body of metallic colour. Anterior edge of prosternal collar situated more or less at the level of anterior angles of prosternal epipleura. Antennae serrate (figs 116-119). Femoral plates of hind legs slightly and unevenly narrowed posteriorly (figs 108-110). Posterior angles of pronotum long, narrow and directed outwards (figs 100, 102, 104, 106) and the long, directed outwards and obliquely truncate at the tip posterior angles of epipleura (figs 128-130) constitute an outstanding character of the group.

1. Femoral plates of hind legs, from half length, slightly posteriorly narrowed (fig. 110). Black-bronze with red or green tint, shiny. Vestiture silver-grey.
..... *S.* (s. str.) *puberulus* (CAND.)
-. Femoral plates of hind legs, from half of their length, distinctly, posteriorly narrowed (figs 108, 109) ..... 2.
2. Elytra with rounded sides and slightly protruding humeri (figs 100, 103). Green-bronze, metallic shiny. Dorsal vestiture white, uneven (patchy), grey vestiture on venter.
..... *S.* (s. str.) *aeneomicans* (FAIRM.)
-. Elytra parallelsided with distinctly protruding humeri (fig. 114) Black with red or green polish. Vestiture silver-grey.
..... *S.* (s. str.) *albipubens* RTT.

### *Selatosomus* (s. str.) *aeneomicans* (FAIRMAIRE)

*Corymbites aeneamicans* FAIRMAIRE, 1889: 33.

Terra typica: province Kuejczou (=Gizhou), Middle China.

DESCRIPTION

Length of male: 13.0-16.0 mm, biggest width: 5.3-5.5 mm; in female length up to 19.0 mm, width up to 7.3 mm. Body elongated (figs 100, 102) and moderately convex (figs 101, 103). Head short and densely punctured; frons with slight depression. Antannae black, serrate, reach almost base of pronotum; their segment III somewhat longer than IV (figs 116, 117). Terminal segment of labial palp triangular

(fig. 120). Pronotum deeply and densely punctured, in male slightly elongated (fig. 100), in female square (fig. 102); midline long, thin but distinct; posterior angles strongly elongated with prominent ridge and almost truncate tips. Anterior edge of prosternal collar strongly rounded and protruding beyond anterior angles of pronotal epipleura (fig. 123). Posterior angle of pronotal epipleuron long, directed outwards and obliquely truncate at tip (fig. 128). Scutellum almost rectangular (fig. 125), convex in posterior part. Elytra widest in the middle (figs 100, 102); rows delicate, punctured longitudinally, strongly grooved at base; intervals flat, punctate, occasionally with wrinkles; sides with narrow edge. Femoral plates of hind legs, from half of their length smoothly narrowed with very thin outer end (fig. 108). Legs brown red, normally developed (fig. 111) Venter black, quite densely punctured, but puncturation poorer than on the top. Male. Aedeagus (fig. 131). Female. Ovipositor (fig. 136). Larva unknown.

DISTRIBUTION
Middle China.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Most closely related to *S.* (s. str.) *albipubens* RTT. Closely related to a species of the next group, *S.* (s. str.) *aeneus* (L.); it differs from the latter in bigger and more elongated body, stronger rounded sides of pronotum, especially at anterior angles, posterior angles longer and thinner, elytral rows poorly grooved and intervals strongly punctured.

MATERIAL
Lectotype (M, "Collection FAIRMAIRE", "Type", "*Corymbites aeneomicans* FAIRMAIRE", "Muséum Paris") and paralectotype (F, "China", "Syntype", "Muséum Paris", 1906, coll. Leon FAIRMAIRE") has been designated (PAR).

### *Selatosomus* (s. str.) *albipubens* REITTER

*Selatosomus albipubens* REITTER, 1910: 166.

Locus typicus: surroundings of the Kukunor lake (province Qinghai) (North-Central China).

DESCRIPTION
Male. Length 15.5 mm, width 4.5 mm. Moderately convex (fig. 115). Anennae and legs brown-red. Vestiture of elytra not completely adhering, hairs unevenly

protruding, what makes the surface appear more rough. Pronotum with distinct midline, centrally strongly punctured, lighter on sides, punctures small and free. Elytra parallelsided, smoothly narrowed posteriorly with protruding humeri (fig. 114); lateral edge narrow (fig. 115). Femoral plates of hind legs with two small processes on inner side, from half length posteriorly narrowed (fig. 109). Legs normally developed (figs 112, 113). Female. Length: 20.0-21.0 mm, maximal width: 7.5-7.8 mm. Head with quite deep, triangular depression, with deep and rounded punctures; space between punctures smaller than their diameter. Antennae do not reach the tips of posterior angles for a distance of five segments; segment IV 1.5-1.7 times longer than wide; segment III 2.5 times longer than II and 1.3-1.5 times longer than IV, 4 times as long as wide; segment IV 2.3-2.5 as long as wide; segments V-X 1.6-1.7 as long as wide. Pronotum flat, distinctly transverse, widest in the middle of its length; its sides more rounded and narrowed anteriorly than posteriorly; posterior angles long, narrow (nearly 2.5 as long as wide at base) directed laterally; midline smooth, without punctures, reaching almost to the anterior edge of pronotum, slightly depressed on posterior disc; punctures deep, dense and even, spaces between punctures everywhere smaller than their diameters. Prosternal sternite punctured usually as pronotum, or slightly more sparsely; posterior process mirror-smooth. Propleura with distinctly smaller punctures than those of pronotum, also densely distributed. Hardly noticeable scutellum narrows posteriorly reaching 1/5 of its length, with widely rounded tip; scutellum 1.5-1.7 as long as wide. Elytra almost 3 times longer and in their widest part hardly noticeably wider than pronotum, widest in their posterior part, from where they are anteriorly lightly and posteriorly strongly rounded and narrowed; rows not deep, pits in them deep, oval or puncture-shaped, slightly bigger than row width; intervals flat on scutum, slightly convex on sides and at apices, the fourth row on anterior scutum pressed in between the neighbouring rows, all of them with big and sparse punctures, occasionally thickly nodulous. Larva unknown.

DISTRIBUTION

North-Middle China (the Kukunor Lake in province Qinghai) and North Sichuan.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Most closely related to *S.* (s. str.) *aeneomicans* (FAIRM.). Very similar also to *S.* (s. str.) *puberulus* (CAND.) but differs from the latter among other things, in elytral vestiture, twice longer, white and not completely adhering.

MATERIAL

Holotype has been examined (M), but the specimen was significantly damaged; only pronotum, elytra and abdomen, the latter excavated (eaten up) by *Anthrenus*

*museorum* L., have been preserved (noted on a label by E. REITTER). ("Tibet, Kuku-noor, leg. GRUM. GRSCHIMAILO", "Kuku-noor, GRUM-GRSHIM", "ohne kopf und Halsschild", "Holotypus 1910, *Selatosomus albipubens* REITTER", "*S. albipubens* m. 1910, Coll. REITTER") (BUD). GURYEVA (1989) mentions also two females from northern Sichuan (Lunan'fu, 1500 m).

### *Selatosomus* (s. str.) *puberulus* (CANDÈZE)

*Corymbites puberulus* CANDÈZE, 1879: 282.

Terra typica: Amur estuaries.

DESCRIPTION

Length of male: 14.0-15.0 mm, maximal width: 5.5-6.3 mm; in female length up to 20.0 mm, maximal width up to 8.0 mm. Vestiture short and dense. Legs most often brown red with darker coxae. Head densely punctured. Antennae serrate; their segment III not much shorter than IV and significantly longer than II (figs 118, 119). Terminal segments of labial (fig. 121) and maxillary (fig. 122) palps triangular in outline and with rounded sides. Pronotum medially densely punctured and on sides additionally wrinkled; in male elongated (fig. 104), in female square (fig. 106), evenly flattened (figs 105, 107); posterior angles directed slightly outwards, with sharp and long ridge; vestiture short, delicate and dense. Smoothly rounded anterior edge of prosternal collar does not protrude beyond anterior angles of pronotal epipleura (fig. 124). Posterior angle of pronotal epipleuron long, straight and truncate at tip (figs 129, 130). Posterior process of prosternum straight, only the very tip truncate on both sides and tapered (fig. 127). Scutellum almost triangular (fig. 126). Male elytra almost parallelsided (fig. 104), in female widened just behind middle (fig. 106), finely punctured with quite short and adherent vestiture. Femoral plates of hind legs, from half length poorly narrowed, with wide tip (fig. 110). Male. Aedeagus (fig. 132); terminal abdominal segments: tergites VIII, IX and X (figs 133, 134), sternite IX (fig. 135). Female. Ovipositor (fig. 137), spermatheca (fig. 140); VIII abdominal segment: tergite (fig. 139) and sternite (fig. 138). Larva unknown.

DISTRIBUTION

Siberia: South of Chabarowsk Land (=Chabarovskij Kraj), Pomeranian Land (= Primorskij Kraj), north-east China, Corean Penisula.

BIONOMICS, ECOLOGY

Collected in June and July in river valleys covered by extensive deciduous forests.

REMARKS

Closely related to the two preceding species. The species has been discussed by REITTER (1910), but the description concerned most probably *S.* (s. str.) *reichardti* DEN. (DENISOVA, 1948).

MATERIAL

Lectotype (M, "Coll. R.I.Sc.N.B., U.R.S.S. Siberia", "Collection E. CANDÈZE", "*Corymbites puberulus* CAND., det. E. CANDÈZE") and 6 paralectotypes (1 M and 1 F, same label; 1 F, "Coll. R.I.Sc.N.B., U.R.S.S., Siberia", "Collection E. CANDÈZE", "*Puberulus* CDZ. Siberia"; 2 MM, Coll. R.I.Sc.N.B., U.R.S.S., locality illegible", "Collection E. CANDÈZE", "*Corymbites puberulus*, det. E. CANDÈZE"; 1 F, "Coll. R.I.Sc.N.B., Chabarowka", "Collection CANDÈZE", "*Corymbites puberulus*, det. E.CANDÈZE") have been designated (BRU).

GROUP II

Group distinct in its short and bluntly terminated posterior angles of pronotal epipleura (figs 192-194, 203-206) and posterior pronotal angles wide and directed posteriorly or only slightly outwards (figs 141-148, 150, 152). Characteristic are also wide ranges of variation, which concerns mainly the species with wide-spread distribution. The body size, coloration, sculpture of pronotum, epipleura and elytra vary strongly. These characters were formerly used to distinguish species (REITTER, 1910).

1. Pronotum with strongly incised midline, noticeable along its whole length (figs 142, 143,146,272) ..... 2.
-. Pronotum with poorly incised and short midline, ocassionally reaching anterior edge but then always centrally (figs 141, 144, 145, 147-150, 152) ..... 4.
2. Posterior process of prosternum straight (fig. 197). Femoral plates of hind legs evenly narrowed posteriorly (fig. 212). Dark green. Vestiture white.
..... *S.* (s. str.) *caucasicus* (MÉNÉTR.)
-. Posterior process of prosternum bent inwards (figs 196, 279). Femoral plates of hind legs terminally narrowed only from half length (figs 207, 281) ..... 3.
3. Posterior process of prosternum from anterior coxae smoothly and slightly bent inwards (fig. 196). Black with faint light green or light blue metallic polish. Vestiture white.
..... *S.* (s. str.) *amplicollis* (GERM.)
-. Posterior process of prosternum only in its terminal part bent inwards and truncated straight (fig. 279). Body dorsally dark brown, ventrally somewhat lighter. Whole body faintly shiny. Vestiture white.
..... *S.* (s. str.) *greacus* sp. nov.

4. Anterior edge of prosternal collar situated at the level of anterior angles of pronotal epipleura (figs 184, 187, 189-191) or only slightly protrudes beyond them (figs 185, 186) ..... 5.
-. Anterior edge of prosternal collar distinctly protrudes beyond anterior angles of pronotal epipleura (fig. 188). Dark bronze, faintly metallic shiny. Vestiture white. ..... *S.* (s. str.) *centralis* (CAND.)
5. Tip of posterior angle of pronotal epipleuron obliquely truncate and tapered (figs 194, 195, 206) ..... 6.
-. Tip of posterior angle of pronotal epipleuron rounded (figs 193, 205) ..... 8.
6. Scutellum transverse (fig. 270). Black; head and pronotum mat, elytra with blue and green metallic polish. Vestiture white. ..... *S.* (s. str.) *punctipennis* RTT.
-. Scutellum elongate (fig. 264) or square (fig. 265) ..... 7.
7. Anterior edge of prosternal collar situated at the level of anterior angles of pronotal epipleura (fig. 184). Scutellum semicircular, with flat base (fig. 265). Black with metallic green, livid or violet polish. Vestiture white. ..... *S.* (s. str.) *aeneus* (L.)
-. Anterior edge of prosternal collar slightly protrudes beyond anterior angles of pronotal epipleura (fig. 191). Scutellum elongate, round, with arched base (fig. 264). Copper red-brown with green polish. Vestiture light. ..... *S.* (s. str.) *songoricus* (KRAATZ)
8. Pronotum coarsely punctured ..... 9.
-. Pronotum finely and sparsely punctured. ..... *S.* (s. str.) *miyajimana* (OHIRA)
9. Pronotum slightly transverse (fig. 147). Femoral plates of hind legs from half of their length abruptly narrowed terminally (fig. 210). Black and shiny, elytra with green-bronze tint. Vestiture light. ..... *S.* (s. str.) *puncticollis* MOTSCH.
-. Pronotum slightly elongate (fig. 150). Femoral plates of hind legs in their terminal third strongly narrowed (fig. 213). Brown or bronze, dull, only elytra shiny. Vestiture yellow. ..... *S.* (s. str.) *reichardti* DEN.

### *Selatosomus* (s. str.) *aeneus* (LINNAEUS)

*Elater aeneus* LINNAEUS, 1758: 406.
*Elater germanus* LINNAEUS, 1761: 207.
*Elater Nitens* SCOPOLI, 1763: 91.
*Elater viridi nitens* VOET, 1769: 118.
*Elater aeneus-rufipes* DE GEER, 1774: 149.
*Elater Coeruleus* HERBST, 1784: 11.
*Elater impressus* MARSHAM, 1802: 387 (nec FABRICIUS, 1792: 223).
*Elater cyaneus* MARSHAM, 1802: 388.
*Corymbites mutator* REY, 1891: 85.
*Corymbites subrugosicollis* REY, 1891: 85.

*Ludius superbus* DANIEL, 1903: 252.
*Selatosomus bescidicus* REITTER, 1910: 166.
*Selatosomus submontanus* REITTER, 1910: 166.
*Selatosomus subpuberulus* REITTER, 1910: 166.
*Selatosomus hispanicus* REITTER, 1910: 167.
*Selatosomus viturati* PIC, 1910: 67.
*Selatosomus bicolor* DEPOLI, 1913: 22.
*Selatosomus vanrooni* EVERTS, 1922: 340.
*Selatosomus viridescens* DEPOLI, 1928: 229.
*Selatosomus violaceus* MARCU, 1933 (nec CANDÈZE, 1889: 115).
*Selatosomus marginatus* PAPP, 1943: 209.

*germanus* = *impressus* = *nitens* = *aeneus*: KIESENWETTER 1858: 294.
*cyaneus* = *coeruleus* = *aeneus*: KIESENWETTER 1858: 295.
*viridi nitens* = *aeneus-rufipes* = *aeneus*: BUYSSON 1894: 95.
*viturati* = *aeneus*: LESEIGNEUR 1972: 287.
*mutator* = *subrugosicollis* = *superbus* = *bescidicus* = *submontanus* = *subpuberulus* = *bicolor* = *vanrooni* = *viridescens* = *violaceus* = *marginatus* = *aeneus*: **syn. nov.**

Terra typica: Europe.

DESCRIPTION

Length of male: 10.0-15.0 mm, width: 4.7-5.0 mm; in female length up to 17.0 mm, width up to 7.0 mm. Legs dark or light brown. Vestiture white, delicate and very short. Head with delicate and dense puncturation; frons flat. Antennae short (fig. 168), in both sexes reach beyond half length of pronotum (in male for a distance of two and in female of one segment). Tip of terminal segment of labial palp rounded (fig. 161). Terminal segment of maxillary palp triangular (fig. 160). Mandible with sharp subterminal protrusion (fig, 255). Pronotum slightly transverse; midline usually short, with shiny stripe, occasionally reaching anterior edge, but then medially interrupted; posteriorly with two pits (fig. 141). Anterior edge of prosternal collar situated at the level of anterior angles of pronotal epileura (fig. 184). Prosternal collar slightly wrinkled, straight and delicately punctured in anterior half, stronger and more distinctly punctured in posterior half. Pronotal epipleuron with elongate wrinkle along lateral margin (fig. 193), pronotum punctured in a similar way, with mat and faintly wrinkled background. Posterior process of prosternum straight (fig. 195). Mesosternum between coxae with distinct gibbosity. Scutellum semioval, with straight base (fig. 265). Elytra twice longer and as wide as pronotum (fig. 141), slightly convex (fig. 156). Femoral plates of hind legs wide, in their terminal third part narrowed (fig. 211). Male. Aedaegus (figs 221, 222). Female. Ovipositor (fig. 239), spermatheca (fig. 245). Larva was described by SCHIÖDTE (1870).

DISTRIBUTION

A common Eurosiberian species, inhabits almost whole Europe (unknown only in the southern part of Iberian Penisula), in Fennoscandia it reaches the northern-most areas, in the east through Siberia to Vladivostok. Reported also from the Caucasus.

BIONOMICS, ECOLOGY

It occurs both in lowlands and mountains; inhabits mainly open areas, forest edges and glades. Larvae polyphagous, feed in superficial layers of soil of different types (mainly sandy), they are often pests in various field cultivations and forest nurseries. Pupation takes place in August or September. Imagines, after hibernation in pupal cells in soil, emerge in May and survive till July.

REMARKS

An extermely variable species, generating numerous geographical and individual, mainly colour forms (REITTER, 1910; JAGEMANN, 1955) displaying the whole range of morphological variation. They share, however, the structure of genitalia (fig. 221, 222).

MATERIAL

Holotype, M ("Moncayo, 5-7500 f.t., Spain, G.C.C.", "Holotypus 1910, *hispanicus* REITTER", "*hispanicus* m. 1910", "Coll. REITTER") and 4 paratypes, 2 MM, 2 FF ("Moncayo, 5-7500 f.t., Spain, G.C.C.", "Paratypus 1910, *Selatosomus hispanicus* REITTER", "Coll. REITTER") (BUD). About two hundred specimen from the whole distribution area have also been examined. A female labelled: "*Diacanthus dahuricus* MANNERHEIM" (nom. nud.), "HENNIG", "Nerlschinsk", "Zool. Mus. Helsinki, Loan No. C-87 17" (HEL) also belongs here.

## *Selatosomus* (s. str.) *amplicollis* (GERMAR)

*Diacanthus amplicollis* GERMAR, 1843: 80.
*Ludius pyrenaeus* LAPORTE DE CASTELNAU, 1840: 241 (nec CHARPENIER, 1825: 189).
*Selatosomus lugubris* DUFOUR, 1851: 326.
*Selatosomus rufoabdominalis* XAMBEU, 1909: 294.
*Selatosomus Paganettii* REITTER, 1910: 168.
*Selatosomus montenegrinus* REITTER, 1910: 168.
*Selatosomus lugubricus* REITTER, 1910: 169.
*Selatosomus buyssoni* SZOMBATHY, 1910: 579.
*pyrenaeus* = *amplicollis*: CANDÈZE 1863: 155.
*lugubris* = *amplicollis*: BUYSSON 1894: 93.
*paganettii* = *amplicollis*: GURYEVA 1985: 567.
*buyssoni* = *lugubricus* = *montenegrinus* = *rufoabdominalis* = *amplicollis* **syn. nov.**

Terra typica: Pyrenees (Europe).

DESCRIPTION

Length: 12.0-20.0 mm, width: 4.0-6.5 mm. Antennae and legs black-brown. Vestiture grey, very short. Head deeply and coarsely punctured; frons flat with slight depression. Antennae faintly serrate, do not reach pronotal base, their segment II spherical, III as long as IV and somewhat narrower (fig. 169). Inner apical edge of

labial palp arched and rounded (fig. 163). Segments II and III of maxillary palp of equal size (fig. 162). Pronotum square, coarsely and deeply punctured; moderately convex with strongly incised midline; posterior angles straight with distinct ridge (fig. 146). Anterior edge of prosternal collar slightly bent, rounded and distinctly protruding beyond anterior angles of pronotal epipleura (fig. 185). Posterior process of prosternum from anterior coxae smoothly and faintly bent inwards (fig. 196). Lateral edges of scutellum with narrowing at base (fig. 261). Elytra (fig. 146) with convex intervals, covered with puncturation and tiny transverse wrinkles. Femoral plates of hind legs convex before center and then terminally narrowed (fig. 207). Male. Aedeagus (fig.215). Female. Ovipositor (fig. 240), spermatheca (fig. 249); VIII abdominal segment: tergite (fig. 259) and sternite (fig. 250). Description of larva (XAMBEU 1896, 1912) most probably did not concern this species (GLEN, 1950; GURYEVA, 1989).

DISTRIBUTION

Pyrenees, Alps, Balkans (Bulgaria, Greece) and Asia Minor (Syria).

BIONOMICS, ECOLOGY

Piedmont and mountain species.

REMARKS

MARDZHANJAN (1987) erroneously regards this species as a synonym of *S.* (s. str.) *aeneus* (L.). Characters presented in this paper clearly distiguish both species.

MATERIAL

Lectotype (M, "16506", "Typus", "*amplicollis* GERM., *pyrenaeus* DEY., Pyren. DEJ.", "Zool. Mus. Berlin") and 5 paralectotypes (4 FF, "Pyrenaen DEJ. Nr. 16505", "Typus", "Zool. Mus. Berlin"; 1 F, "*pyrenaeus* DEJ.-Pyren", "*Pyrenaen* DEJ., Nr. 16506", "Typus", "Zool. Mus. Berlin") have been designated (BER).

### *Selatosomus* (s. str.) *caucasicus* (MÉNÉTRIÉS)

*Elater caucasicus* MÉNÉTRIÉS, 1832: 155.
*Corymbites plorator* CANDÈZE, 1889: 114.
*Corymbites violaceus* CANDÈZE, 1889: 115.
*Selatosomus amplicollis* subsp. *cirassicus* REITTER, 1910: 169.
*plorator* = *violaceus* = *caucasicus*: GURYEVA 1982: 544.
*amplicollis circassicus* = *caucasicus*: GURYEVA 1985: 567.

Locus typicus: Shachdag mountain, near Kuba town, Caucasus, Azerbaijan.

DESCIRPTION

Length of male: 12.0-15.5 mm, width: 4.5-6.2 mm, in female length up to 21.5 mm and width up to 7.0 mm. Slightly convex, dark green, only tarsi black. Vestiture

grey, very short. Head densely punctured; frons wide with triangular depression. Antennae short, their segment III somewhat longer than II and slightly shorter than IV (fig. 170). Terminal segment of labial palp relatively big (fig. 165), maxillary palp with sharp angle on the inner side (fig. 164). Pronotum slightly elongate, with distinct midline, posterior angles straight with ridges parallel to lateral margins (figs 142, 143). Anterior edge of prosternal collar slightly bent, rounded, distinctly protrudes beyond anterior angles of pronotal epipleura (fig. 186). Posterior prosternal process straight (fig. 186). Scutellum with rounded base (fig. 266). Elytra poorly convex, widest behind their middle (figs 143, 144). Femoral plates of hind legs narrow, gradually terminally narrowed (fig. 212). Male. Aedeagus (fig. 216); terminal abdominal segments: tergites VIII, IX and X (figs 224, 229), sternite IX (fig. 234). Female. Ovipositor (fig. 241); VIII abdominal segment: tergite (fig. 260) and sternite (fig. 251). Larva unknown.

DISTRIBUTION

Caucasus: Dagestan, Azerbaijan and Armenia.

BIONOMICS, ECOLOGY

The species occurs in mountains from 2000 up to 2800 m.a.s.l.

REMARKS

Very similar to *S.* (s. str.) *aeneus* (L.) but differs from the latter in: slightly shorter and more mat body and the presence of triangular depression on frons. MARDZHANJAN (1987) regards this species as a synonym of *S.* (s. str.) *aeneus* (L.), and *violaceus* as its subspecies.

MATERIAL

Lectotype (M, "Alp. Caucas.", "var. *caucasicus* MÉNÉTR.") and paralectotype have been designated (F, "MÉNÉTR.", "Caucasus", small copper rectangle, "*D. aeneus* var. sec. GERMAR", "Zool. Mus. Helsinki, Loan No C-87 15") (HEL).

I have also examined specimens labelled:

*Corymbites plorator* CAND. (1 F, "Coll. R.I.Sc.N.B., Alla Werby", "Collection E. CANDÈZE", "Type", "n. sp. *plorator* CDZ., Turkestan"; 1 F, "Coll. R.I.Sc.N.B., the name of locality illegible, "Collection E. CANDÈZE", "*Corymbites plorator* CAND., det. E. CANDÈZE"; 1 M and 1 F, "Coll. R.I.Sc.N.B., RAUBEK", "Collection E. CANDÈZE", "*Corymbites plorator*, det. E. CANDÈZE") (BRU);

*Corymbites violaceus* CAND. (1 F, "Coll. R.I.Sc.N.B., Alla Werby", "Collection E. CANDÈZE", "Type", "n. sp. *violaceus* CDZ., Armenie", "*Corymbites violaceus* CAND., det. E. CANDÈZE"; 1 M and 2 FF, "Coll. R.I.Sc.N.B., Alla Werby", "Collection E. CANDÈZE", "*Corymbites violaceus* CAND., det. E. CANDÈZE"; 1 M and 1 F, "Coll. R.I.Sc.N.B., U.R.S.S., Caucase", "Collection E. CANDÈZE", "*Corymbites violaceus* CAND., det. E. CANDÈZE"; 1 F, "Coll. R.I.Sc.N.B., Elelowka", "Collection E. CANDÈZE", "*Corymbites violaceus* CAND., det. E. CANDÈZE") (BRU). Moreover,

two males have been examined ("ZaCaucasuse, Arm. SSR, Chachkadzor, 1700 m, 14 VI 1962, V. DOLIN, R. ANDREJEVA") (DT).

### *Selatosomus* (s. str.) *centralis* (CANDÈZE)

*Corymbites centralis* CANDÈZE, 1881: 96.

Terra typica: province Sichuan, Mupin (="Moupin"), Middle China.

DESCRIPTION

Length: 8.0-15.0 mm, width: 3.5-6.0 mm. Vestiture yellow grey, short and dense. Head densely punctured. Antennae of medium length, distinctly serrate; their segment III almost twice longer than II and somewhat longer than IV (fig. 171). Terminal segment of labial palp (fig. 167) and segment II of maxillary palp (fig. 166) elongated. Male pronotum almost square (fig. 144) in female slightly transverse (fig. 145), with arched pits in posterior part, coarsely punctured; posterior angles directed slightly outwards with distinct ridge. Anterior edge of prosternal collar very strongly rounded and protruding beyond anterior angles of pronotal epipleura (fig. 188). Pronotal epipleuron narrow, with rounded tip of posterior angle (fig. 204). Posterior process of prosternum straight and only in its terminal part gently bent inwards (fig. 198). Scutellum elongate, with rounded base and upper angles protruding outwards (fig. 267). Elytra wide (figs 144, 145) faintly convex (figs 154, 155), finely punctured, with tiny pit on humeri. Femoral plates of hind legs on their whole length gently terminally narrowed (fig. 208). Male. Aedeagus (fig. 217); terminal abdominal segments: tergites VIII, IX and X (figs 225, 230), sternite IX (fig. 235). Female. Body wide, much wider in male (figs 145, 155). Larva unknown.

DISTRIBUTION

Middle and North-East China: North Sichuan, Daxing'anling; North-East Mongolia (ajmak Dornogov').

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Closely related to *S.* (s. str.) *aeneus* (L.), from which it differs , among other things, in slightly longer pronotum, body colour, longer prosternal collar and gently narrowed femoral plates of hind legs. Due to wide body sometimes erroneously included in *S. latus* group.

MATERIAL

Lectotype (F, "Coll. R.I.Sc.N.B., Chine, A. DAVID", "Type", "n. sp. *centralis* CDZ. c. mm.", "*Corymbites centralis* CAND., det. E. CANDÈZE") and 5 paralectotypes (1 M and 4 FF, "Coll. R.I.Sc.N.B.., Chine, A. DAVID", "Collection E. CANDÈZE", "*Corymbites centralis* CAND., det. E. CANDÈZE") have been designated (BRU).

## *Selatosomus* (s. str.) *graecus* sp. nov.

Locus typicus: Vardousia Mountains (Veluchi), Greece.

NAME DERIVATION

The name is derived from the presently known distribution area.

DESCRIPTION

Male unknown. Female. Length 14.0 mm, width 6.0 mm. Top of the body dark brown, venter and legs somewhat lighter, antennae brown red. Top almost glabrous, with very poor and short vestiture, faintly shiny. Head finely punctured, more poorly than pronotum; frons almost flat, with slight, medial depression. Antennae from segment IV serrate; their segment III twice longer than II and sligthly longer than IV (fig. 274). Terminal segments of labial (fig. 275) and maxillary (fig. 276) palps axe-shaped; their apical edge blunt. Pronotum thickly covered with big, almost contacting punctures; with short vestiture on sides, evenly convex (fig. 273), slightly transverse, widest behind middle; midline clearly noticeable only at base at one third of pronotum length; posterior angles quite sharp, directed posteriorly, with long ridge (fig. 272). Pronotal collar straight, slightly folded anteriorly; its anterior edge strongly rounded, sticks out far beyond anterior angles of pronotal epipleura (fig. 277). Epipleuron of pronotum finely and poorly punctured, with delicate and short vestiture; tip of its posterior angle smoothly rounded (fig. 278). Posterior process of prosternum in its posterior part bent inwards and straightly truncate (fig. 279). Scutellum square, with rounded base (fig. 280), finely and poorly punctured and also with short and delicate vestiture. Elytra distinctly convex (fig. 273), widest behind middle, with semicircular depression on humeri (fig. 272); rows conspicuous, with shallow punctures, distances between them slightly greater than twice their diameter; intervals convex, quite densely punctured and wrinkled, with very poor and short vestiture. Femoral plates of hind legs wide, from half length terminally narrowed (fig. 281). Legs with long tibiae and tarsi (figs 282-284), punctured and with thin and delicate vestiture. Ovipositor (fig. 285), spermatheca (fig. 286); VIII abdominal segment: tergite (fig. 287) sternite (fig. 288). Larva unknown.

DISTRIBUTION

Greece.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closely related to *S.* (s. str.) *amplicollis* (GERM.), from which it differs in shorter midline of pronotum, posterior angles straightly directed posteriorly, more noticeable pits on elytral humeri, blunt apical edge of terminal segment of palps (especially maxillary palp), wider pronotal epipleuron, different shape of posterior process of prosternum and scutellum, slightly wider femoral plates of hind legs and in ovipositor morphology.

MATERIAL
Holotype, F ("Veluchi, Graecia, Dr. KRUEPER", "ex coll. Sz. TENENBAUM, Mus. Zool. Polonicum, Warszawa, 38/47") (WAW).

### *Selatosomus* (s. str.) *miyajimana* (OHIRA)

*Aphotistus miyajimana* OHIRA, 1971: 39.

Terra typica: Honshiu (Japan).

DESCRIPTION
Male (holotype). Length 11.0 mm, breadth about 3,7 mm. Body robust, moderately elongate and more or less depressed above (fig. 289); surface glabrous and very shiny, black with brassy tint except antennae, legs and ventral surface of body black to blackish-brown. Head subquadrate, broadly and weakly impressed between eyes, almost flattened between antennae, moderately densely and rather coarsely punctate; clypeal margin obliterated at middle, but well ridged and oblique at antennal insertions; antennae short, not reaching posterior angles of pronotum, segment II short, subcylindrical and slightly longer than its breadth, segment III elongate, subclavate and almost twice as long as the second, segment IV also elongate and almost as long as the third, segments IV-X weakly serrate, and each gradually compressed towards apex. Pronotum slightly longer than broad, widest at posterior angles across; sides clearly sinuate before posterior angles, rounded at middle, thence gradually narrowing towards anterior angles; disc gently convex, weakly impressed along lateral margins, and having a shallow, longitudinal, median channel, which is seen only at base; surface moderately densely and almost uniformly clothed with punctures becoming denser and coarser laterally; posterior angle acutely projected behind and slightly turned outwardly, each bears a distinct carina above. Scutellum tongue-shaped, flattened, punctulate and finely pubescent. Elytra about 1.9 times as long as broadest width, widest at posterior third; sides weakly reflexed and gradually dilated from base to apical third, thence weakly

rounded and gradually tapering towards extremities which are normally rounded; striae clearly defined and the intervals elevated, finely punctate, obscurely and irregularly rugose. Aedeagus (figs 290, 291). Female unknown. Larva unknown.

DISTRIBUTION
Japan: Honshiu Island.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closely related to *S.* (s. str.) *puncticollis* MOTSCH., from which it differs in smaller size, copper tint of body cover, more shiny from behind, thin and sparse puncturation of pronotum and in aedeagus, in which parameres have narrower subapical process (figs 290, 291).

MATERIAL
Holotype, M ("Miya-jima, Hiroshima Pref., Honshiu, 29 VI 1970, T. KOSAKA") (coll. OHIRA).

### *Selatosomus* (s. str.) *puncticollis* MOTSCHULSKY

*Selatosomus puncticollis* MOTSCHULSKY, 1866: 167.
*Selatosomus reichardti* GUSEV, 1954: 34 (nec DENISOVA, 1948: 42).
*reichardti* = *puncticollis*: GURYEVA, KRIVOLYCHKAJA 1968: 46.

Terra typica: Japan.

DESCRIPTION
Length: 12.0-17.0 mm, width: 4.0-6.0 mm. Body wide, moderately convex. Vestiture extremely short and thin. Head coarsely punctured; frons slightly depressed. Antennae quite long; their segments III and IV of equal length and twice longer than II (fig. 180). Terminal segment of labial (fig. 173) and maxillary palps axe-shaped (fig. 172). Pronotum slightly transverse, densely punctured, with midline noticeable at base, anteriorly thin and interrupted, posterior angles directed slightly outwards and with long ridges (fig. 147). Prosternal collar with two interrupted wrinkles, with anterior edge rounded and also protruding beyond anterior angles of pronotal epipleura (fig. 189). Tip of posterior angle of pronotal epipleuron fairly truncate (fig. 205). Posterior process of prosternum straight (fig.199). Scutellum quite wide (fig. 269). Elytra elongated (fig. 147), with deeply guttered rows and punctured intervals. Femoral plates of hind legs abruptly narrowed terminally only from half length (fig. 210). Male. Aedeagus (fig. 218); terminal abdominal segments: tergite VIII, IX and X (figs 226, 231), sternite IX (fig. 236). Female.

Ovipositor (fig. 242), spermatheca (fig. 246); VIII abdominal segment: tergite (fig. 261) and sternite (fig. 252). Larva described by DOLIN (1978).

DISTRIBUTION

Japan, Kuryl Islands and Sakhalin.

BIONOMICS, ECOLOGY

Larva inhabits soil in shady places, usually in mixed and deciduous forests, less often on meadows and areas under cultivation. Polyphagous. Reported as pest in agriculture.

REMARKS

Closest related to *S.* (s. str.) *reichardti* DEN. In size and colour similar to *S.* (s. str.) *confluens* (GEBLER) and *S.* (s. str.) *gloriosus* (KISHII). It differs from both species mentioned above in that elytra are wrinkled.

MATERIAL

Holotype, M ("*Selatosomus puncticollis* MOTSCH., Japonia") (MOS). Moreover one male was examined ("Chiuzeji, Japan", "*Corymbites puncticollis* MOTSCH., det. G. LEWIS") and 1 F ("Sapporo, Japan", "*Corymbites puncticollis* MOTSCH., det. G. LEWIS") (LON).

### *Selatosomus* (s. str.) *punctipennis* REITTER

*Selatosomus punctipennis* REITTER, 1910: 169.

Locus typicus: Maden ("Bulghar-Maaden"), Ergani Daglari, Güneydogu Torosiar, Turkey.

DESCRIPTION

Length of male: 11.0-12.0 mm, width 4.5 mm; in female length up to 14.0 mm, width to 5.0 mm. Body relatively short and wide (fig. 148), black, head and pronotum mat (occasionally pronotum brown). Elytra bluish black or green black, with hardly noticeable metallic polish and with very short, distinct grey vestiture. Head very strongly and closely punctured; frons flat and wide. Antennae serrate, of medium length, do not reach pronotal base; their third segment twice longer than the second and slightly shorter than the fourth (fig. 181). Terminal segments of labial (fig. 175) and maxillary (fig. 174) palps axe-shaped. Pronotum square, medially punctured as much as head, finer on sides; midline marked only at base; posterior angles quite broad, lightly directed outwards and with distinct ridge (fig. 148). Anterior edge of prosternal collar hardly protrudes beyond anterior angles of pronotal epipleura (fig. 187). Prosternal collar poorly but deeply punctured.

Epipleuron wide, its posterior angle tangentially truncate at tip (fig. 206). Posterior process of prosternum straight (fig. 201). Scutellum very wide (fig. 270). Elytra short and wide (fig. 148), hardly convex (fig. 149); intervals between very fine microsculpture with strikingly strong and dense puncturation. Femoral plates of hind legs widest at one third of their length and narrowed terminally from half length (fig. 209). Male. Aedeagus (fig. 219); terminal abdominal segments: tergites VIII, IX and X (figs 227, 232), sternite IX (fig. 237). Female. Ovipositor (fig. 243), spermatheca (fig. 247); VIII abdominal segment: tergite (fig. 262) and sternite (fig. 254). Larva unknown.

DISTRIBUTION
Turkey, Minor Asia.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closely related to *S.* (s. str.) *centralis* (CAND.). Due to the short and wide body it used to be misplaced in the *S. latus* group.

MATERIAL
Holotype, M (male with black pronotum, "Asia minor, Bulghar Maaden, v, BODEMEYER", "Holotypus 1910", "*Selatosomus punctipennis* REITTER", "*Selatosomus punctipennis* m. 1910", "Coll. REITTER") and 2 paratypes: 1 M with brown pronotum and 1 F ("Asia minor, Bulghar Maaden, v. BODEMEYER", "Paratypus 1910", "*Selatosomus punctipennis* REITTER", "Coll. REITTER") (BUD).

Moreover, one male was examined ("Kilikisch. Taurus", "Nordseite", "v. BODEMEYER") and 1 F ("Asia-Minor, Sultan-Dagh, v. BODEMEYER", "*Selatosomus punctipennis* RTT., det. V. DOLIN - 2. 07. 68") (KIW).

GURYEVA (1989) reported one more paratype, F ("Klein Asien, Bulgar Maaden", "*Selatosomus punctipennis* RTT. (n.s. 1910)") (LED).

## *Selatosomus* (s. str.) *reichardti* DENISOVA

*Selatosomus* (s. str.) *reichardti* DENISOVA, 1948: 42.
*Selatosomus puberulus* REITTER, 1910: 166 (nec CANDÈZE, 1879: 282).
*puberulus* = *reichardti*: GURYEVA, 1989: 243.

Locus typicus: The Sichote-Alin Mountains (upper part of the "Ioldzyche" River), Pomeranian Province (Primorskij Kraj).

DESCRIPTION

Length of male: 12.0-15.0 mm, width: 4.0-5.0 mm; in female length to 17.5 mm, width up to 6.0 mm. Body color brown or bronze; head black; pronotum usually black, less often of body colour, without metallic polish, mat; elytra shiny; legs most often red, sometimes brown or black; antennae black or brown. Whole body covered with extremely delicate yellow hairs, somewhat more distinct on pronotum, but more adhering on ventral side. Head coarsely and densely punctured; frons flat with medial depression. Antennae of both sexes do not reach pronotal base; their segment III narrow (fig. 182). Apical edge of terminal segment of labial palp smoothed (fig. 177). Segments of maxillary palp big (fig. 176). Pronotum slightly elongated, densely and coarsely punctured, with wrinkles on sides, no midline or it is developed in posterior half; in posterior part two tiny pits and at a base transverse bracket-shaped depression occurs (fig. 150). Prosternum shiny, sparsely and coarsely punctured. Prosternal collar (fig. 190) and epipleura of pronotum (fig. 192) dull, much denser punctured than the rest of prosternum and pronotum. Posterior process of prosternum straight (fig. 202). Scutellum elongated, terminally tapered (fig. 271) and convex. Elytra parallel (fig. 150) almost flat (fig. 151), with punctured rows and with more or less convex, delicately and poorly punctured intervals. Femoral plates of hind legs more distinctly narrowed outwards in terminal third of their length (fig. 213). Male. Aedeagus (fig. 220); terminal abdominal segments: tergite VIII, IX and X (figs 228, 233), sternite IX (fig. 238). Female. Elytral tips more rounded (tapered in male). Larva described by CHEREPANOV (1957), and later also by DOLIN (1978).

DISTRIBUTION

Eastern Siberia (reaches the Jenisej River in the west): Irkutsk, Buryat-Mongol, North Mongolia, Jakutskaja ASSR, Nadmorskij and Chabarovskij Kraj, Manchuria; Sakhalin, North-East China, North Korea, Japan.

BIONOMICS, ECOLOGY

Larva inhabits soil of forest habitats and cultivated areas, in the vicinity of forestswher it is believed to exterminate larvae of *S.* (s. str.) *aeneus* (L.) and *S.* (s. str.) *latus* (F.) (DOLIN, 1978). Whereas CHEREPANOV (1957) includes it among agricultural pests, BASSOLICYNA (1974) reports that it is phytophagous and facultatively mycetophagous.

REMARKS

Very closely related to *S.* (s. str.) *aeneus* (L.), from which it differs in a more flattened, more elongated, mat and often black pronotum and also in the morphology of femoral plates of hind legs. The species in the Far East is gradually replacing *S.* (s. str.) *aeneus* (L.). REITTER (1910) desribed it under an erroneously used name of *S. puberulus* CAND.

MATERIAL

Lectotype, M ("vierch. r. Ioldzyche, Sich. Al. Uss. kr., FORMOZOV, 25 VI 928", "*Selatosomus reichardti* sp. n. DENISOVA det.") and 2 paralectotypes (1 M, "Wost. Sibir, Radde", "17749", "*Selatosomus reichardti* sp. n. DENISOVA det." and 1 F, "Wostochn. Sibir, Radde", "17749") (LED). Moreover, one male was examined ("Kierdovaja, Rad, 1-14 VI 1976") and 1 F ("Primorje, Buchta Opta, 10 VII 1977, M. GOPOVUSHKON") (KIW).

## *Selatosomus* (s. str.) *songoricus* (KRAATZ)

*Corymbites (Diacanthus) songoricus* KRAATZ, 1879: 283.

Locus typicus: Tarbagataj, Buyrat, Bur'atskaja ASSR.

DESCRIPTION

Length of male: 10.0-12.0 mm, width: 4.0-4.8 mm; in female length up to 14.0 mm, width up to 5.2 mm. Body copper red brown, with green polish on sides. Upper side glabrous, venter with extremely short, brown hairs. Antennae black, legs red brown. Head densely punctured. Antennae short, serrate; their segment III almost as long as IV (fig. 183). Segments of labial palp elongated (fig. 179). Apical edge of posterior segment of maxillary palp distinctly smoothed (fig. 178). Pronotum almost square, midline marked only posteriorly; posterior angles hardly directed outwards, with distinct ridge (fig. 152). Prosternum between anterior coxae and prosternal collar arch-shaped concave, not too strongly but deeply and sparsely punctured. Anterior edge of prosternal collar protrudes slightly beyond anterior angles of pronotal epipleura (fig. 191). Posterior angle of pronotal epipleuron truncate (fig. 194). Posterior process of prosternum straight (fig. 200). Scutellum almost round (fig. 264). Elytra convex (fig. 153), widest just behind middle, twice as long as wide (fig. 152). Femoral plates of hind legs straightly narrowed from half length terminally (fig. 214). Legs with no distinct details (figs 256-258). Male. Aedeagus (fig. 223). Female. Ovipositor (fig. 244), spermatheca (fig. 248); VIII abdominal segment: tergite (fig. 263) and sternite (fig. 253). Larva described by GURYEVA (1989).

DISTRIBUTION

Siberia: Chr. Tarbagataj, Chr. Saur, West Altaj (Chr. Kalbinskij); Mongolia: Mongol Altaj.

BIONOMICS, ECOLOGY

It inhabits steppes of mountain forelands and mountains. Larva lives in soil of meadows, occasionally on cultivated fields, where it is reported as a pest of corn and perennial grasses (GURYEVA, 1989).

REMARKS

CHEREPANOV (1957) considered it as a variety of *S.* (s. str.) *aeneus* (L.), but the characters listed above make it reasonable to treat it as a distinct species *S.* (s. str.) *songoricus* (KRAATZ). GURYEVA (1989) is of the same opinion.

MATERIAL

Lectotype, F ("Tarbagat, Coll. KRAATZ", "*Sel. puncticollis* MOTSCH. det. PEČIRKA", "DEI Eberswalde") and 2 paralectotypes (1 F, "19 Tarbagat, Coll. KRAATZ", "*Sel. puncticollis* MOTSCH. det. PEČIRKA", "DEI Eberswalde"; 1 F, "18, Coll. KRAATZ, *aeneus* L.", "*Sel. puncticollis* MOTSCH., det. PEČIRKA", "DEI Eberswalde") (EBW). Moreover, one female was examined ("Tarbagataj, Zhelauly, 2000 m, 3 VI 1962", "*Selatosomus anxius* GEBL., W. DOLIN det.") (KIW).

GROUP III

Two species belong to this group, which are the biggest of the genus, with characteristic colourful body. One of them occurs in the Himalaya Mountains, the other one in North America.

1. Body distinctly wider (biggest width from 5.5 to 7.5 mm); vestiture all over pronotum and elytra.
   ..... *S.* (s. str.) *whitii* (CAND.)
-. Body narrower (biggest width from 4.5 to 5.5 mm); pronotum and elytra only partly covered with vestiture.
   ..... *S.* (s. str.) *lateralis* (LEC.)

### *Selatosomus* (s. str.) *lateralis* (LECONTE)

*Corymbites lateralis* LECONTE, 1853: 439.

Terra typica: Oregon (USA).

DESCRIPTION.

Length: 14.0-18.0, width: 4.5-5.5 mm. Body quite slender. Mostly black; metasternum, abdomen and legs very dark brown; prothorax bicoloured, pronotum usually bordered on each side by a red margin, whose width equals that of scutellum, not spread over posterior angles. This elongate margin often reduced or dark, exceptionally lacking; propleura usually broadly or wholly red, occasionally only with a red, lateral patch. Antannae do not reach tips of posterior angles of pronotum for a distance of 2.5 to 4 segment length; their segment III half longer than wide and 1/4 narrower than IV; segment IV 1/10 shorter or equals the third one; segment VI 1/5 and apical one 2/5 as narrow as long. Pronotum medially strongly punctured, punctures laterally shallow, more or less merged. Pronotum somewhat wider than

long; laterally quite strongly arch-shaped. Elytral intervals rather poorly convex, delicately and moderately closely punctured with hints of transverse wrinkles. Pronotum and elytra glabrous, except posterior edge of pronotum and also base and lateral margins of elytra. Propleuron shiny, similarly as pronotal sides, closely punctured; punctures not lenticular, do not fuse with each other. Posterior angles of prothorax, when viewed from ventral side, apically truncate, their outer apex more or less rounded, never acute; posterior angles of pronotum also rounded with lateral edge usually adapically poorly arch-shaped (fig. 293). Prosternum coarsely and metasternum and abdomen delicately and moderately closely punctured. Male. Aedeagus (fig. 292). Female. Body somewhat, broader and more convex. Larva unknown.

DISTRIBUTION

USA: Oregon; Canada: British Columbia.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

The species is closely related to *S.* (s. str.) *whitii* (CAND.), from which it differs in almost glabrous pronotum and elytra and distinctly slender body. GURYEVA (1989) reported this species from Japan (Hokkaido) but this report may concern another species.

MATERIAL

Holotype, M ("Oregon, *Corymbites lateralis* LECONTE", coll. LECONTE", "Canadian National Collection, Ottawa"). BROWN (1935a) mentions 23 specimens from the following localites: Victoria (Canada: British Columbia) and Mary's Peak, Blodgett (USA: Oregon).

### *Selatosomus* (s. str.) *whitii* (CANDÈZE)

*Corymbites whitii* CANDÈZE, 1863: 171.

Terra typica: the Himalaya Mts.

DESCRIPTION

Length: 15.0-22.0 mm; width: 5.5-7.5 mm. Body characteristically coloured: head black with two triangular redbrown patches on sides, medially with elongated round patch of the same colour; pronotum black with two elongate big red light brown patches (fig. 294); scutellum black; elytra red brown with darker humeri and rows; venter and legs brown. Vestiture grey: on head and pronotum long, silky and

adhering; on elytra short. Frons flat. Antennae short, their segment III elongate and slightly shorter than IV (fig. 309). Labial (fig. 313) and maxillary (fig. 312) palps normally developed. Pronotum convex in posterior part (fig. 295), slightly transverse, its sides with incision before posterior angles, midline distinct; posterior angles directed fairly outwards, with distinct ridge (fig. 294). Prosternal collar bent downwards, with anterior edge rounded and noticeably protruding beyond anterior angles of pronotal epipleura (fig. 306). Posterior angle of pronotal epipleuron sharp (fig. 307). Scutellum wide, smoothly narrowed and rounded apically (fig. 310). Elytra convex (fig. 295), widened just behind middle (fig. 294), punctures in rows elongated, and in convex intervals tiny. Femoral plates of hind legs gently narrowed terminally (fig. 311). Legs normally developed (figs 296-298). Male. Aedeagus (fig. 299); terminal abdominal segments: tergites VIII, IX and X (figs 300, 301), sternite IX (fig. 302). Female. Ovipositor (fig. 303), spermatheca (fig. 308); VIII abdominal segment: tergite (fig. 304) and sternite (fig. 305). Larva unknown.

DISTRIBUTION
The Himalaya Mts, Kashmir.

BIONOMICS, ECOLOGY
Probably mountain species.

REMARKS
SCHENKLING (1927) included it in the subgenus *Poemnites* BUYSS.

MATERIAL
2 MM ("Coll. R.I.Sc.N.B., Kashmir", "Collection E. CANDÈZE", "*Corymbites whitei* CAND., det. E. CANDÈZE); 1 M ("Coll. R.I.Sc.N.B., 2876 5, Srina Gar", "Collection E. CANDÈZE", "*Corymbites whitei* CAND. rév. E. FLEUTIAUX)" and 1 F ("Coll. R.I.Sc.N.B., Kashmir", "*Diacanthus picticollis* GAM.", "C. FAIRM.", "Collection E. CANDÈZE", "*Corymbites whitei* CAND. rév. E. FLEUTIAUX", "*whitei* CDZ. Ind. ar. bor.") (BRU).

GROUP IV

The group is characterized by distinct transverse wrinkles on elytra, a short, horizontal posterior process of prosternum (figs 344, 346) and femoral plates of hind legs unevenly narrowed terminally (figs 357, 358).

1. Femoral plates of hind legs narrow, with thin tip (fig. 358). Tip of posterior process of prosternum unevenly truncate (fig. 346). Black, shiny, elytra with copper brown, violet or green tint. Vestiture red grey.
..... *S.* (s. str.) *confluens* (GEBLER)

-. Femoral plates of hind legs wider, their tip thicker (fig. 357). Tip of posterior process of prosternum straightly truncate (fig. 344). Black and shiny, elytra with violet or green tint. Red grey vestiture.
..... *S.* (s. str.) *gloriosus* (KISHII)

### *Selatosomus* (s. str.) *confluens* (GEBLER)

*Elater confluens* GEBLER, 1829: 80.
*Ludius rugosus* GERMAR, 1835: nr 7.
*rugosus* = *confluens*: BURAKOWSKI, MROCZKOWSKI, STEFAŃSKA 1985: 174.

Terra typica: Altaj, Syberia.

DESCRIPTION

Length of male: 10.5-14.0 mm, width: 4.5-5.3 mm; in female length up to 15.0 mm, width up to 6.0 mm. Whole body with delicate grey vestiture. Head very gently convex, strongly, densely and unevenly punctured, punctures partially merge and form wrinkles; frons widely flat. Antennae serrate; their segment III longer than IV or equal (fig. 339). Apical edge of terminal segment of labial palp rounded (fig. 341), that of maxillary palp rounded and smoothed with blunt angles (fig. 343). Pronotum slightly transverse, flattened (more strongly in male-fig. 316), with well developed midline, often in posterior part with two pits; posterior angles short, directed posteriorly and with distinct ridge (fig. 315). Pronotal dorsum coarsely and densely punctured, on anterior angles punctures assembled so densely, that they merge forming narrow wrinkles. Apical edge of prosternal collar protrudes slightly beyond anterior angles of pronotal epipleura (fig. 329). Tip of posterior angle of pronotal epipleuron rounded (fig. 326). Posterior process of prosternum straight, lightly folded (fig. 346). Scutellum almost square with sharp angles at base (fig. 331). Elytra widest just behind middle (fig. 315), slightly convex (fig. 316); rows deep, densely and elongatedly punctured, often interrupted with high transverse wrinkles; intervals convex, densely and strongly punctured. Femoral plates of hind legs narrowed from trochanter attachement, apically tapered (fig. 358). Legs without any distinct details (figs 318-320). Male. Aedeagus (fig. 333); terminal segments of abdomen: tergite IX and X (fig. 337), sternite IX (fig. 335). Female. Ovipositor (fig. 321), spermatheca (fig. 322); VIII abdominal segment: tergite (fig. 323) and sternite (fig. 324). Larva described by CHEREPANOV (1957).

DISTRIBUTION

A boreal-alpine species, inhabiting higher parts of mountains in Central Europe (subspecies *S.* (s. str.) *confluens rugosus* (GERM.)) and north-eastern regions of European part of the former Soviet Union and Siberia from Ural as far as Pacific shores; moreover, reported from Kamtschatka and Japan where it occurs as nominotype subspecies.

BIONOMICS, ECOLOGY

In Central European mountains it occurs in upper subalpine forests and in alpine zone up to 3000 m.a.s.l., in Siberia in the northern area of taiga and in tundra beyond Arctice Circle. Larvae live in grass soil, under the stones, patches of mosses and lichens, in Siberia in soils, where permafrost occurs as deep as 30-50 cm. Polyphagous. Pupation occurs in the second half of July. Imagines hibernate in pupal cells which are found in the upper layers of soil; they leave them in June and survive till August. Beetles can be encountered under stones, often in the vicinity of snow fields and streams, and at rainy or stormy weather thay appear on grasses, annual plants, bushes and trees.

REMARKS

For many years *S. rugosus* GERM. was the name applied to the species, because it was wrongly accepted that the year 1817 was the date of description. In fact, XVIII part of GERMAR's work was issued in 1835, i.e. after the description of *S. confluens* (GEBLER, 1829) thus the latter name has priority.

Two subspecies are distinguished:

1. On posterior pronotal disc, on either side of midline, approximately medially, more or less distinct pit can be noticed. Pronotal disc more densly punctured: interpunctal spaces, as a rule, smaller than puncture diameter.
   ..... *S.* (s. str.) *confluens rugosus* (GERM.)
-. On posterior pronotal disc no pits are found, or only unclear traces of them occur. Pronotal disc sparsely punctured: interpunctal spaces equal puncture diameter, sometimes bigger or smaller than that.
   ..... *S.* (s. str.) *confluens confluens* (GEBL.)

MATERIAL

For *S.* (s. str.) *confluens rugosus* (GERM.) lectotype (pinned up male with yellow head), "M", "MLU Halle", "WB Zoologie S. Nr.8/4/14, T. Nr.") and 2 paralectotypes (2 MM, labelled as lectotype) have been designated (HAL).

## *Selatosomus* (s. str.) *gloriosus* (KISHII)

*Diacanthus gloriosus* KISHII, 1955: 78.
*Corymbites rugosus* MIWA, 1928: 140 (nec GERMAR, 1835: nr 7).
*rugosus* = *gloriosus*: KISHII, 1955: 78.

Locus typicus: the Daisetsu Mts, Hokkaido, Japan.

DESCRIPTION

Length: 12.0-16.0 mm, width: 4.8-7.0 mm. Whole body with delicate vestiture. Numerous wrinkles on sides of pronotum and on elytra. Head strongly and densely

punctured; frons flattened, with shallow wide depression. Antennae long, serrate; their segment III somewhat shorter than IV (fig. 338). Apical angle of terminal segment of labial palp sharp (fig. 341). Apical edge of terminal segment of maxillary palp smoothed and rounded (fig. 342) Pronotum flat, slightly transverse, with distinct midline; postertior angles poorly directed outwards, with distinct ridge (fig. 314). Anterior edge of prosternal collar protrudes slightly beyond anterior angles of pronotal epipleura (fig. 328). Tip of posterior angle of epipleuron semioval (fig. 327) Posterior process of prosternum straight, with sharp tip (fig. 344). Scutellum almost square, with all angles rounded (fig. 226). Elytra poorly convex (fig. 317); rows deeply, densely and elongatedly punctured, often interrupted with transverse wrinkles; intervals convex, densely and strongly punctured. Femoral plates of hind legs wide, with relatively thick tip (fig. 357). Male. Aedeagus (fig. 332); terminal segments of abdomen: tergites VIII, IX and X (figs 325, 336), sternite IX (fig. 334). Female. Stouter and more convex. Larva described by CHEREPANOV (1957).

DISTRIBUTION

Reported from areas of the former Soviet Union east of the Petchora River: from Ural (except its northern part), from northern parts of Western and Eastern Siberia, from the Sajan Mts and also from Sachalin, Santarskij and Aleutian Islands; moreover, from Northern Corea, Japan (Hokkaido and Honshiu Islands), Aleutian Islands and Alaska.

BIONOMICS, ECOLOGY

Encountered in valleys and mountains, in different types of forests, on meadows and in tundra. Larvae develop within upper layers of soil, in forest litter and under mosses and lichens.

REMARKS

Very similar to *S.* (s. str.) *confluens* (GEBLER), but differs from the latter in the following characters: pronotal midline equally wide along its whole length (in *S. confluens* midline narrower at anterior edge), puncturation denser, scutellum more rounded, elytral intervals more convex especially in anterior half and elytra distinctly metallic green.

MATERIAL

2 MM (1 M, "Juzhnyj Sachalin, Nowoaleksandrowsk, G. CHECHOVA, 21 VI 1976, V. DOLIN"; 1 M, "juzhnyj Sachalin 4, G. CHECHOVA, Vysokotravie, 28 VI 1968") (DT). The type material unknown to me is preserved in KISHI's collection.

GROUP V

The group includes species inhabiting open areas. *S.* (s. str.) *latus* (F.) occurs in lowlands of the whole steppe zone of the Palaearctic, the remaining species on

mountain steppes and meadows of Crimea, Caucasus, Asia Minor and Middle Asia. Their body is characteristically wide with vestiture; prosternal collar is normal or slightly shortened (figs 380-382, 391-394); posterior process of prosternum normally developed (figs 345, 347-351). Moreover, their antennae are poorly serrate, almost moniliform (figs 398-403); femoral plates of hind legs faintly and unevenly narrowed terminally (figs 357-365). In some species of the group reduction of hind wings has occurred; being only slight in badly flying *S.* (s. str.) *tauricus* DOL. and somewhat more pronounced in apterous *S.* (s. str.) *saginatus* (MÉNÉTR.) and *S.* (s. str.) *jailensis* DOL.

1. Elytral intervals flat everywhere or only on sides, less often slightly convex everywhere ..... 2.
-. Elytral intervals strongly convex, elytra look as if ribbed. Chestnut brown; occasionally head, pronotum and scutellum almost black. Body dorsally with quite long and sparse grey yellow hairs.
..... *S.* (s. str.) *salebrosus* GUR.
2. Femoral plates of hind legs with characteristic big process from trochanter attachment to half length and then further narrowed terminally (fig. 363). Pronotum very wide (fig. 373). Black and shiny. Vestiture yellow.
..... *S.* (s. str.) *latissimus* RTT.
-. Femoral plates of hind legs without process and from trochanter attachment gradually narrowed terminally (figs 359-362, 364, 365). Pronotum narrower (figs 369-372, 374, 375) ..... 3.
3. Vestiture distributed patchily. Black with bronze polish, elytra dull. Vestiture yellow.
..... *S.* (s. str.) *roborowsky* (KOENIG)
-. Vestiture distributed evenly ..... 4.
4. Posterior process of prosternum from anterior coxae poorly bent inwards (figs 345, 347, 348, 351) ..... 5.
-. Posterior process of prosternum from anterior coxae strongly bent inwards (fig. 350) ..... 8.
5. Elytra very strongly convex (figs 376, 377) ..... 6.
-. Elytra poorly convex (figs 378, 390) ..... 7.
6. Pronotum poorly convex (fig. 377). Anterior edge of prosternal collar situated higher than anterior angles of pronotal epipleura (fig. 381). Black with dark, metallic polish, venter lighter. Vestiture grey.
..... *S.* (s. str.) *jailensis* DOL.
-. Pronotum strongly convex (fig. 376). Anterior edge of prosternal collar situated lower than anterior angles of pronotal epipleura (fig. 380). Black, dull or with faint metallic polish. Vestiture grey yellow.
..... *S.* (s. str.) *alekseevi* DOL. et PENEV
7. Femoral plates of hind legs with denticle in the place of trochanter attachment (fig. 364). Segment II of antennae small and rounded (fig. 403). Black bronze, faintly shiny. Vestiture dark grey.
..... *S.* (s. str.) *puerilis* (CAND.)

-. Femoral plates of hind legs without denticle in the place of trochanter attachment (fig. 362). Segment II of antennae big and elongated (fig. 399). Black, dull-shiny. Vestiture yellow.
..... *S.* (s. str.) *armeniacus* DOL.

8. Anterior edge of prosternal collar situated slightly below anterior angles of pronotal epipleura (fig. 394) ..... 9.

-. Anterior edge of prosternal collar situated higher then anterior angles of pronotal epipleura (fig. 393). Black with metallic polish. Vestiture white.
..... *S.* (s. str.) *tauricus* DOL.

9. Body dorsum with distinct and dense vestiture. Black bronze with metallic copper, green or violet polish. Vestiture red grey.
..... *S.* (s. str.) *latus* (F.)

-. Body dorsum almost glabrous. Black bronze. Vestiture white.
..... *S.* (s. str.) *saginatus* (MÉNÉTR.)

## *Selatosomus* (s. str.) *alekseevi* DOLIN et PENEV

*Selatosomus alekseevi* DOLIN et PENEV, 1988: 25.

Locus typicus: Kariuhoch Peak, Northern-Osetinskaja ASSR, Central Caucasus.

DESCRIPTION

Length: 9.1-12.0 mm, width: 4.0-5.0 mm. Deep black, antennae, legs and venter black brown or brown black. Sides and venter with very short, almost dusty grey yellow vestiture; only scutellum with longer hairs. Head densely, coarsely and unevenly punctured, frons flatenned. Antennae short; their segment III twice longer than II and slightly longer than IV (fig. 398). Terminal segment of labial palp axe-shaped (fig. 407), and that of maxillary palp elongated and rounded at tip (fig. 409). Pronotum transverse (fig. 369) and distinctly convex (fig. 376); posterior angles short, sharp with long ridge. Anetrior edge of prosternal collar situated below anterior angles of pronotal epipleuron (fig. 380). Posterior angle of pronotal epipleuron narrow (fig. 384). Posterior process of prosternum gently and archwise bent inwards (fig. 345). Scutellum wide, semioval (fig. 439). Elytra convex (fig. 376) and oval (fig. 369); rows deep with big and rounded punctures; intervals flat, poorly elevated only at base, with tiny, transverse wrinkles and not too densely punctured. Femoral plates of hind legs from trochanter attachment gradually narrowed terminally (fig. 361). Male. Aedeagus (fig. 414); terminal abdominal segments: tergite IX and X (fig. 420), sternite IX (fig. 428). Female. Slightly stouter, antennae shorter. Elytra with intervals more distinctly elevated at base. Larva unknown.

DISTRIBUTION

Central Caucasus (Northern-Osetinskaja ASSR).

BIONOMICS, ECOLOGY

Collected in mountains on "steppe-like meadows" (1000 m. a. s. l.) and on subalpine xerothermic meadow (2600-2700 m. a. s. l.).

REMARKS

Most closely related with *S.* (s. str.) *jailensis* DOL.

MATERIAL

Holotype, M ("Kaukaz, Nordossetien, Gipfel Kariuhoch, 2600-2700 m. a. s. l., leg. S. ALEKSEEV") and 34 paratypes (5 MM, labelled like the holotype; 27 MM and 2 FF, "Nordossetien, Ardon-Schlucht, bei Doff Sintzar (1100 m. a. s. l.), 7 VI 1984, leg. S. ALEKSEEV"). The type material is kept in the following collections: holotype and 17 paratypes - KIW, 2 paratypes - LEN, 3 paratypes - MOS, 11 paratypes - LP and 1 paratype - DT.

## *Selatosomus* (s. str.) *armeniacus* DOLIN

*Selatosomus armeniacus* DOLIN, 1982a: 20.

Locus typicus: surroundings of Kadzharan Pass, Armenia.

DESCRIPTION

Length of male: 11.0-12.5 mm, width: 4.0-4.6 mm; in female length up to 14.5 mm and width up to 6.0 mm. Body black, dull-shiny; pronotal epipleura, metasternum and abdominal sternite edges ocassionally yellow brown, claws of tarsi red brown. Dorsum with very short and sparse hairs, venter with distinct grey hairs. Head deeply and densely punctured; frons flat, depressed medially. Antennae short, do not reach tips of posterior angles of pronotum at a distance of four segments; their segment III strongly elongated (fig. 399). Apical edge of terminal segments of labial (fig. 404) and maxillary (fig. 410) palps smoothed, pronotum densely and coarsely punctured, slightly convex (fig. 378), almost square, midline short, present only at base and there with two transvers depressions; posterior angles lightly directed outwards, with distinct ridges (fig. 370). Anterior edge of prosternal collar strongly protrudes beyond anterior angles of pronotal epipleura (fig. 391). Prosternal collar not bent downwards and when viewed from ventral side, forms a straight line together with the remaining surface of prosternum (fig. 378). Epipleuron of pronotum with straightly truncate tip of posterior angle (fig. 385), densely, coarsely and evenly punctured. Posterior process of prosternum from trochanter attachment slightly bent inwards (fig. 347). Scutellum almost square (fig. 438), densely and delicately punctured, with sparse and short vestiture, noticeably swollen. Elytra wide (fig. 370), slightly elevated (fig. 378). Hind wings shortened, hardly reach three fourths of elytra length. Femoral plates of hind legs narrow and elongated, from one third

length straightly narrowed terminally (fig. 362). Male. Body slightly narrower and shorter, antennae longer than in female. Female. Ovipositor (fig. 433), spermatheca (fig. 445); VIII abdominal segment: tergite (fig. 447) and sternite (fig. 450). Larva unknown.

DISTRIBUTION

Caucasus: Armenia; North-East Turkey.

BIONOMICS, ECOLOGY

Encountered high in the mountains (2300-2450 m a. s. l.) on alpine meadows.

REMARKS

Closely related to the species of the next group i. e. *S.* (s. str.) *pecirkanus* RTT., from which it differs in black colour of the body, prosternal collar not bent, coarse puncturation of midpart of pronotum. MARDZHANJAN (1987) suggests, that the species may be a synonym of *S.* (s. str.) *aeneus* (L.), but having no access to the type he could not solve the problem. My own examinations do not confirm his suppositions, and the characters mentioned in the key make it possible to distinguish both species with sufficient certainty.

MATERIAL

Holotype, M ("15-17 VI 1977, Arm. SSR, rajon Kadzharanskogo pierevala, alpijskij lug na wysote 2300-2450 m. a. s. l.") and 26 paratypes: 20 MM, 4 FF (KIW) and 1 M, 1 F (LED) (labelled like the holotype).

### *Selatosomus* (s. str.) *jailensis* DOLIN

*Selatosomus jailensis* DOLIN, 1971: 645.

Locus typicus: Chatyrdag Mountain, Crimea.

DESCRIPTION

Length: 9.5-12.0 mm, width: 4.0-4.5 mm. Body black, with blue or rarely green polish; elytral epipleura, prosternal suture, segmentation of abdominal sternites and legs brown. Wholly covered with short hairs. Head shiny; frons flat. Antennae moniliform, short, hardly reach pronotal base, in female slightly exceed two thirds of pronotal length; their segment III slightly shorter than IV (fig. 400). Terminal segment of labial palp tapered (fig. 405), while that of maxillary palp elongated and rounded (fig. 411). Pronotum transverse (fig. 371), slightly convex (fig. 377) and shiny, with distinct midline; postrior angles short, slightly bent outwards, with distinct ridge. Prosternum anteriorly, before, collar distinctly convex, coarsely, strongly and deeply punctured. Anterior edge of prosternal collar rounded and

significantly protruding beyond anterior angles of pronotal epipleura (fig. 381),. Pronotal epipleuron with rounded tip of posterior angle (fig. 383), very finely and flatly punctured. Posterior process of prosternum from anterior coxae bent inwards (fig. 348). Scutellum widely rounded at top (fig. 341). Elytra widened posteriorly (fig. 371), quite convex (fig. 377), widely rounded at tips. Hind wings noticeably shortened (fig. 352) and useless in flight. Femoral plates of hind legs from one third length abruptly narrowed and with sharp tip (fig. 359). Male. Aedeagus (fig. 415); terminal abdominal segments: tergites IX and X (fig. 421), sternite IX (fig. 427). Female. It differs from male in shorter antennae and coarser puncturation of head and pronotum. Larva described by DOLIN (1971).

DISTRIBUTION

Crimean endemic.

BIONOMICS, ECOLOGY

Larvae live in soil of fields in the vicinity of trees and bushes, also in grass turf and under stones. Polyphagous. Reported as agricultural pests.

REMARKS

Closely related to *S.* (s. str.) *alekseevi* DOL. et PENEV, and also to *S.* (s. str.) *latus* (F.), differing from the latter in thin and short vestiture, strong polish, different body proportions, anteriorly convex pronotum and elytra, very thin elytral rows and completly flat intervals. GURYEVA (1989) considers this species to be a synonym of *S.* (s. str.) *latus* (F.), but based on the characters I regard as taxonomically useful, it seems hardly probable.

MATERIAL

Holotype, M ("Chatyr-Dag, nizhneje plato, granica lesa, 23-24 V 1960, leg. V. M. ERMOLIENKO") and 21 paratypes (20MM, "Chatyr-Dag, 9 V 1968, leg. V. DOLIN"; 1 M, "Aj-Petrinskaja Jajla, 16 VI 1960, leg. V. DOLIN") (KIW). Moreover, 3 MM and 1 F ("Karabi-Jajla") (KIW).

### *Selatosomus* (s. str.) *latissimus* REITTER

*Selatosomus latissimus* REITTER, 1910: 171.

Locus typicus: Amasya, Turkey.

DESCRIPTION

Length of male: 9.0-11.0 mm, width: 3.5-5.0 mm; in female length up to 12.5 mm, width up to 6.0 mm. Body black, broad and strongly convex. Head wide; frons slightly convex. Antennae almost moniliform, short, do not reach beyond base of

pronotum; their segment II short, III and IV of equal length (fig. 401). Mandibules with smoothed inner denticle (fig. 356). Pronotum transverse, strongly narrowed anteriorly (fig. 373), quite convex (fig. 379), midline formed in two thirds of its length does not reach anterior edge; posterior angles with distinct ridge, strongly bent ouwards. Anterior edge of prosternal collar bent downwards (fig. 379), situated at the same level as anterior angles of pronotal epipleura (fig. 382). Pronotal epipleuron broad, its tip directed straigthly backwards (fig. 386). Posterior process of prosternum from anterior coxae strongly bent inwards (fig. 349). Scutellum very wide (fig. 441). Elytra wide, widest right behind middle (fig. 373), strongly convex (fig. 379), punctures in rows very tiny, intervals completly flat, punctured very distinctly and almost as much as pronotum. Femoral plates of hind legs characteristically shaped (fig. 363). Legs with long tibiae (figs 366-368). Male. Aedeagus (fig. 416); terminal abdominal segments: tergites IX and X (fig. 422). Female. Ovipositor (fig. 434), spermaheca (fig. 446); VIII abdominal segment: tergite (fig. 448) and sternite (fig. 451). Larva unknown.

DISTRBUTION

Known so far only from type locality (Amasya, Amasya province, Turkey).

BIONOMICS, ECOLOGY

Unknown.

REMARKS

REITTER (1910) provides a description and name "*latissimus* SCHWARZ i. lit.".

MATERIAL

Holotype, M ("Amasia, leg. STAUDINGER", "Holotypus 1910, *Selatosomus latissimus* REITTER", "*latissimus* SCHWARZ, Amasia STNGR.", "Coll. REITTER") and paratype, F ("Amasia, leg. STAUDINGER", "Paratypus 1910", "*Selatosomus latissimus* REITTER", "Coll. REITTER") (BUD). Moreover, one female was examined ("Posorium"-remaining part of label illegible, "*Selatosomus latissimus* REITT.", "comp. cerm. Paratypus DOLIN") (KIW).

### *Selatosomus* (s. str.) *latus* (FABRICIUS)

*Elater latus* FABRICIUS, 1801.
*Elater pectinicornis* FOURCROY, 1785: 37 (nec LINNAEUS, 1758: 406).
*Elater germanus* OLIVIER, 1790nr 31: 24 (nec LINNAEUS, 1761: 207).
*Diacanthus gravidus* GERMAR, 1843: 78.
*Diacanthus milo* GERMAR, 1843: 78.
*Corymbites corpulentus* CANDÈZE, 1879a: 283.
*Corymbites sulcatus* CANDÈZE, 1881: 96.
*Ludius subrubripes* PIC, 1909: 105.

*pectinicornis* = *germanus* = *latus*: Buysson, 1894: 101.
*gravidus* = *milo* = *latus*: Kiesenwetter 185: 296.
*corpulentus* = *latus*: Guryeva 1982: 544.
*sulcatus* = *subrubripes* = *latus*: **syn. nov.**

Terra typica: Austria.

Description

Length of male: 8.0-15.5 mm, width: 3.0-5.8 mm; in female length up to 18.0 mm, width up to 8.0 mm. Vestiture dense. Head with dense and distinct puncturation; frons with triangular impression or with irregularities. Antennae short, reach slightly beyond middle of pronotum, mat. Pronotum fairly convex (fig. 387), transverse, midline short and faintly marked only at base, in posterior part with two pits or short wrinkles; posterior angles with distinct ridge, directed straight backwards (fig. 374). Pronotum and pronotal epipleura densely and distinctly punctured. Anterior edge of prosternal collar poorly rounded and situated lower than anterior angles of pronotal epipleura (fig. 394). Posterior process of prosternum behind anterior coxae bent inwards and with tiny denticle or process. Prosternal outline straight when viewed from side (fig. 355). Posterior angle of pronotal epipleuron short, with rounded tip (fig. 396). Scutellum very broad at base and with distinct mat margin (fig. 442). Elytra wide, widest just behind middle (fig 374), strongly convex (fig. 387). Femoral plates of hind legs from trochanter attachment narrowed; their tips blunt (fig. 365). Male. VIII abdominal sternite transverse, with archwise bent apical edge, pleurites with bunches of long hairs at tips. Aedeagus: parameres with sharp lateral denticle directed outwards, with tangential, short ridge and with bunch of setae. Tubular part of penis protrudes beyond paramere tips. Female. Ovipositor (fig. 436), spermatheca (fig. 454); VIII abdominal segment: tergite (fig. 457) and sternite (fig. 456). Larva described by Perris (1877).

Distribution

It occurs almost in whole Europe and in Siberia except its northernmost parts; eastwards reaching Japan Sea; reported from Asia Minor, Syria, Transcaucasus, Kazakhstan, northern parts of Mongolia and China.

Bionomics, ecology

It inhabits open areas in lowlands and piedmonts, entering zone of mountain forests through river valleys. Developmental cycle lasts at least three years. Larvae live in rather dry clay, loamy or limestone soils, where they feed on plant roots; that is also why they are reported as pests. Pupation takes place in June and at the begining of August. Adults, after hibernation, appear in the early spring and survive till June.

Remarks

A highly variable species, but the differnces in genital morphology between most distant forms are insignificant. Dolin (1982) erroneously included

*Neopristilophus dauricus* MOTSCHULSKY (1859: 490) in the synonyms of this species, whereas in fact it is a synonym of *Lotrichus affinis* (PAYKULL, 1800) (GURYEVA, 1986).

MATERIAL

I have examined 300 specimens from the whole distribution area (BRU, DT, KAW, KIW, KOP, WAW).

I have studied the specimens labelled:

*gravidus* (1 F, "16516", "Europa Nr 16516", "Typus", "*gravidus* GERM.", "Zool. Mus. Berlin"; 2 FF, "Europa Nr 16516", "Typus", "Zool. Mus. Berlin") (BER);

*sulcatus* (1 M, "Coll. R.I.Sc.N.B., U.R.S.S., Silésie", "Collection E. CANDÈZE", "*Crepidomenus sulcatus* CAND., det. E. CANDÈZE", "*Sulcatus* CAND.", "Siberie") (BRU).

1 M and 1 F labelled as "*Ludius karabachensis* SCHWARZ" (nom. nud.), "Coll. SCHWARZ", "Coll. DEI Eberswalde" (EBW) are also included.

### *Selatosomus* (s. str.) *puerilis* (CANDÈZE) comb. nov.

*Corymbites puerilis* CANDÈZE, 1873: 26

Locus typicus: Nagasaki, Kiushiu, Japan.

DESCRIPTION

Male. Length: 5.5-10.5 mm, width: 3.0-3.5 mm. Body black bronze, very faintly shiny; antennae black, legs brown, tibiae lighter, reddish. Wholly covered with dark grey vestiture. Head wide, strongly punctured; frons flat. Antennae of medium length, slightly serrate; their segment II small, III of the same length as IV (fig. 504). Labial palp with elongated last and thick penultimate segment (fig. 406). Last segment of maxillary palp rounded (fig. 412). Pronotum delicately punctured, transverse (fig. 372), slightly convex (fig. 390), with midline not reaching anterior edge; posterior angles short, hardly directed outwards, with distinct ridge. Anterior edge of prosternal collar strongly rounded and protruding beyond anterior angles of pronotal epipleura (fig. 392). Tip of posterior angle of pronotal epipleuron truncate (fig. 397). Posterior process of prosternum archwise and gently bent inwards (fig. 351). Scutellum almost tetragonal (fig. 444). Elytra short (fig. 372), hardly convex (fig. 390), with distinct rows. Femoral plates of hind legs with denticle behind trochanter attachment, and from there narrowed terminally (fig. 364). Aedeagus (fig. 419); terminal abdominal segments: tergites VIII, IX and X (figs 424, 426), sternite IX (fig. 432). Female differs slightly from male in morphology of antennae ansd slightly bigger body size. Larva unknown.

DISTRIBUTION

Kiushiu, Japan.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
The species resembles *S.* (s. str.) *latus* (F.), from which it differs in body size, square scutellum and pronotum structure (longer midline and posterior angles directed outwards). KISHII (1966), OHIRA (1970) and GURYEVA (1989) placed this species in a separate genus *Eanoides* KISHII (1966: 50).

MATERIAL
Lectotype has been designated ( M, "Coll. R.I.Sc.N.B., Japon", "Collection E. CANDÈZE", "*Puerilis* CAND., Japon Pp.", "*Corymbites puerilis* CAND., dét. E. CANDÈZE") (BRU).

### *Selatosomus* (s. str.) *roborowskyi* (KOENIG)

*Corymbites (Diacanthus) Roborowskyi* KOENIG, 1889: 538.

Locus typicus: Amdo (China: Tibet).

DESCRIPTION
Male unknown. Female. Length: 10.0-11.0 mm, width: 4.0-4.3 mm. Body dark brown, lake-shiny; antennae, legs and venter light brown. Wholly covered with quite long and sparse golden vestiture. Head with broad and flat, triangular depression, tiny and densely punctured, interpunctal distances smaller or in places equal to puncture diameter. Antennae moniliform, do not reach tips of posterior angles of pronotum for a distance of five segments; segment II 1.5 times longer than wide, segment III 1.5 times longer than II and as long as IV, 2.5 times longer than wide; segment IV almost twice longer than wide, segments V-X 1.3 times longer than wide. Pronotum distinctly transverse, widest in middle, from which it ovally narrows, more slightly anteriorly than posteriorly; posterior angles short (1.5 times longer than wide at base), hardly directed outwards, with blunt ridge; midline very short and on posterior disc quite deep; puncturation very fine and quite sparse, interpunctal distances on scutellum bigger than puncture diameter, on sides smaller, size of punctures more or less equal. Prosternal sternite medially punctured in the same way as pronotal disc, punctures at sutures and on propleura flat, big, densely distributed, in some places contacting. Scutellum up to posterior part almost parallelsided, slightly longer than wide. Elytra 3.5 times longer and in the widened part distinctly wider than pronotum, widest in posterior part; rows very narrow, not deep, pits in them on disc hardly distinguishable, in lateral rows rounded, sparsely distributed, distinct; intervals flat, finely and densely punctured wrinkle-like. Larva unknown.

DISTRIBUTION
China: Tibet (Amdo).

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closely related to *S.* (s. str.) *latus* (F.).

MATERIAL
Lectotype, F ("9", "Amdo, 1884, PRZEVALSKY", "Coll. SEMENOV-TIAN-SHANSKY", "*Diacanthus Roborowskyi* KOENIG") and paralectotype, F ("8", "Amdo, 1884, PRZEVALSKY", "Coll. SEMENOV-TIAN-SHANSKY") (LED).

## *Selatosomus* (s. str.) *saginatus* (MÉNÉTRIÉS)

*Elater saginatus* MÉNÉTRIÉS, 1832: 154.
*Elater pasticus* MÉNÉTRIÉS, 1832: 154.
*pasticus* = *saginatus*: GURYEVA 1989: 256.

Terra typica: Talyš Mts, Iran.

DESCRIPTION
Length of male: 15.0-15.5 mm, width: 5.0-5.8 mm; in female length up to 18.0 mm, width up to 8.0 mm. Head densely punctured; frons wrinkled, with impression. Antennae short, reach beyond middle of pronotum for a distance of two segments. Pronotum transverse and convex, posteriorly widened, with distinct midline; posterior angles directed backwards, with ridge. Anterior edge of prosternal collar hardly rounded and situated below anterior angles of pronotal epipleura. Posterior process of prosternum bent inwards. Scutellum transverse. Elytra wide and strongly convex, with punctured rows. Hind wings shortened. Femoral plates of hind legs from trochanter attachment narrowed terminally. Male. Aedeagus (fig. 418); terminal abdominal segments: tergite IX and X (fig. 423), sternite IX (fig. 430). Female. Ovipositor (fig. 435), spermatheca (fig. 455); VIII abdominal segment: tergite (fig. 449) and sternite (fig. 452). Larva unknown.

DISTRIBUTION
Dagestan, Armenia, Iran and north eastern Turkey.

BIONOMICS, ECOLOGY
A mountain species, inhabiting open areas in the vicinity of forests and forest glades. Encountered also on cultivated fields.

REMARKS

Closely related to *S.* (s. str.) *latus* (F.), from which it differs in wider and more convex body, more distinct midline of pronotum, almost glabrous body dorsum, and first of all in the anatomy of genital organs. Many authors regard it as a synonym, variety or subspecies of *S. latus*.

MATERIAL

*Elater saginatus* MÉNÉTR., holotype, F ("Talisch", "var. *saginatus* MÉNÉTR.", "*saginatus* MÉN., Typ., MÉNÉTRIÉS det.") (LED);

*Elater pasticus* MÉNÉTR., holotype, M ("Mt. Talisch") (LED).

Moreover, 2 males and 1 female were examined: 1 M ("Nachichevansk ASSR, Y.Skl. Zangezur. chr., Shchachbuzsk. Aes., 20 VI 1967", "*Selatosomus latus saginatus*, det. V. DOLIN"); 1 M ("N. ASSR, s. Naservaz, 2000 m, 23 VI 1967 g.") (DT); 1 F ("MÉNÉTR.", "Caucasius", small copper rectangle, "*D. latus*, sec. GERMAR", "Zool. Mus. Helsinku, Loan No. C-87 16") (HEL).

### *Selatosomus* (s. str.) *salebrosus* GURYEVA

*Selatosomus* (*Selatosomus*) *salebrosus* GURYEVA, 1989: 257.

Locus typicus: Czalan'tun (Daxing'anling)-North-east China.

DESCRIPTION

Male. Length 9.0 mm, width: 3.0-3.5 mm. Body chestnut brown; sometimes head, pronotum and scutellum almost black. Dorsum with quite long and sparse, venter with short and dense yellow hairs. Head with hardly noticeable, V-shaped depression, finely and quite sparsely punctured, interpunctal spaces equal puncture diameter, in places bigger or smaller. Antennae do not reach posterior angles of pronotum for a distance of three segments, almost moniliform; segment II 1.3 times longer than wide; segment III 1.8 times longer than II and of the same length as IV, 2 times longer than wide; segment IV 1.5 times longer than wide; segments from V to X as long as wide or hardly noticeably longer. Pronotum distinctly transverse, widest in middle and from there narrowing ovally, slightly posteriorly, strongly anteriorly; posterior angles long (2-2.5 times longer than wide at base), directed laterally; midline wide and quite deep in its posterior part; puncturation deep and quite sparse, interpunctal spaces on disc equal puncture diameter or bigger, on sides smaller, in places equal. Prosternal sternite with punctures like those of disc but more sparsely distributed, at sutures punctures big and denser arranged. Propleura punctured like pronotum sides. Scutellum slightly widened in posterior part just behind middle and with widely rounded apex, 1.5 times longer than wide. Elytra 3.5 times longer and hardly noticeably wider than pronotum, from humeri to posterior part almost parallelsided; rows deep, pits in them not too much deeper and hardly

wider than rows, on sides rows distinctly wider; intervals strongly convex, with tiny and sparse punctures and dense protuberances, coarse. Female. Length 12.0 mm, width 4.0 mm. Larva unknown.

DISTRIBUTION
North-east China (Daxing'anling).

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Among all other species of the group it is distinct in more elongated and lighter body and convex elytral intervals (looks like ribbed).

MATERIAL
Holotype, M and 2 paratypes: M and F ("st. Czalantun, B. Hingan, Mancz., LAKTEVICH, 1905") (LED).

### *Selatosomus* (s. str.) *tauricus* DOLIN stat. nov.

*Selatosomus latus tauricus* DOLIN, 1975: 1619.

Locus typicus: Bedogorek, Crimea.

DESCRIPTION
Length:10.0-12.0 mm, width: 4.0-4.5 mm. Frons broad. Antennae short; their segment III widened and almost as long as IV (fig. 403). Terminal segment of labial palp strongly rounded (fig. 408), while maxillary one narrow and elongated (fig. 413). Pronotum transverse (fig. 375), quite strongly convex (fig. 388), midline usually almost reaches anterior edge; posterior angles sharp, distinctly directed outwards, with ridge. Anterior edge of prosternal collar rounded and situated much higher than anterior angles of pronotal epipleura (fig. 393). Posterior angle of pronotal epipleuron long and with truncate tip (fig. 395). Posterior process of prosternum strongly bent inwards (fig. 350). Scutellum almost round, only base straight (fig. 443). Elytra strongly convex (fig. 388), lateral edges almost parallel (fig. 375). Hind wings slightly shortened, beetles can hardly fly. Femoral plates of hind legs narrowed from half length and with sharp tip (fig. 360). Male. Aedeagus (fig. 417); terminal abdominal segments: tergite VIII (fig. 425) and sternite IX (fig. 431). Female. Ovipositor (fig. 437), spermatheca (fig. 453); VIII abdominal segment: tergite (fig. 458) and sternite (fig. 459). Larva unknown.

DISTRIBUTION
Crimea.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closely related to *S.* (s. str.) *latus* (F.), differs from the latter significantly in the structure of pronotum, pronotal epipleura, prosternal collar, posterior process of prosternum, femoral plates of hind legs, scutellum and genital organs (especially female).

MATERIAL
2 paratypes, 1 M and 1 F ("Krym, Bedogorek, W. SKADA, 25 IV 1969", "Paratypus, *Selatosomus latus* ssp. *tauricus* DOLIN 1975") (KIW).

GROUP VI

They differ from the species of the preceding group in femoral plates of hind legs more distinctly narrowed outwards (fig. 468) and posterior process of prosternum which is straight or slightly bent inwards (fig. 467). Hind wings are shortened and the beetles do not fly.

1. Frons with a single triangular depression. Pronotum elongate. Elytral intervals convex. Black, shiny. Vestiture light.
   ..... *S.* (str.) *ampliatus* (FAIRM.)
-. Frons with two elongated depressions. Pronotum square. Elytral intervals flat. Black, elytra with very faint blue polish. Vestiture white.
   ..... *S.* (s. str.) *pecirkanus* RTT.

### *Selatosomus* (s. str.) *ampliatus* (FAIRMAIRE)

*Diacanthus ampliatus* FAIRMAIRE, 1891: CXXVII.

Terra typica: Kashmir.

DESCRIPTION (BASED ON ORIGINAL DESCRIPTION)
Length: 12.0-16.0 mm. Elongate, posteriorly widened, convex, black brown, shiny, with very poor vestiture, almost glabrous; head flattened, densely wrinkle-like punctured, triplicately dished, antennae short, do not reach pronotal base, segment III elongated; pronotum hardly longer than wide, sides quite rounded, posterior edge strongly bi-sinuate, posterior angles elongated, quite narrow with

ridge, anterior ones blunted, dorsum delicately, medially poorly, punctured, sides punctured more densely, disc hardly convex with furrow; scutellum very shortly oval, convex, punctured with blunted tip; elytra punctured strongly in rows, punctures coarse, intervals slightly convex, quite delicately, densely wrinkled, rows at base deeper, marginal row deeper; venter with dense vestiture, delicately, very densely punctured-wrinkled; prosternum incised anteriorly, abdmen incised on sides; legs short. Larva unknown.

DISTRIBUTION
Kashmir.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Most closely related to *S.* (s. str.) *pecirkanus* RTT.

### *Selatosomus* (s. str.) *pecirkanus* REITTER

*Selatosomus Pecirkanus* REITTER, 1910: 167.

Locus typicus: Ordubad, Nakhichevan (Azerbaijan).

DESCRIPTION

Male. Length: 8.0-12.0 mm., width: 3.5-4.0 mm. Black, only elytra with very faint blue polish; sides and elytral epipleura brown black; antennae, legs and prosternal collar red brown. Dorsum with very short and venter with short vestiture. Mandibulae with a red subapical margin. Head poorly punctured; frons with two tiny elongated depressions (fig. 460). Antennae serrate, do not reach pronotal base; their segment III twice longer than II and equal to or slightly longer than IV (fig. 466). Terminal segments of labial (fig. 473) and maxillary (fig. 462) palps axe-shaped. Pronotum finely, moderately strongly and densely punctured (more densely on sides) with shiny polish, square (fig. 460) and convex (fig. 461), with short midline and with two tiny pits in posterior part; posterior angles directed backwards, with strong and straight ridge. Prosternal collar wrinkled, with anterior edge strongly rounded and protruding beyond anterior angles of pronotal epipleura (fig. 464). Tip of posterior angle of pronotal epileuron truncate (fig. 465). Prosternum not too strongly, but deeply and sparsely punctured, between anterior coxae and collar archwise convex. Posterior process of prosternum staright (fig. 467). Scutellum oval (fig. 469). Elytra widest behind middle, with single, hairy stripe at base of each of them; rows on humeri grooved more heavily, forming curved pits (fig. 460), twice stronger punctured than flat intervals. Femoral plates of hind legs wide and poorly

but distinctly narrowed in terminal third of their length (fig. 468). Legs shaped normally (figs 471, 472). Aedeagus (fig. 500); terminal abdominal segments: tergites VIII, IX and X (figs 504, 510), sternite IX (fig. 507). Female unknown. Larva unknown.

DISTRIBUTION
Azerbaijan: Nakhichevan, Talyshskye Gory.

BIONOMICS, ECOLOGY
Mountain species, which lost flight abilities.

REMARKS
MARDZHANJAN (1987) regarded it as a subspecies of *S.* (s. str.) *aeneus* (L.), but the characters presented above make it possible to recognize it as a distinct species and classify it in a completly different group.

MATERIAL
Holotype, M ("Caucasus, Araxesthal, LEDER, REITTER", "Holotypus 1910, *Selatosomus Pecirkanus* REITTER", "*Pecirkanus* m. 1910", "Coll. REITTER") and paratype, M ("Caucasus, Araxesthal, LEDER, REITTER", "Paratypus 1910, *Selatosomus Pecirkanus* REITTER", "Coll. REITTER") (BUD).

Moreover, one male was examined (part of label illegible, "Shachdag (ASSR), 2000 m, 29 IX 33, A. BOGACHEV", "*Selatosomus pecirkanus*, comp. cum. typus, V. DOLIN 1978") (KIW).

### 3. Subgenus *Warchalowskia* subg. nov.

Name derivation: the subgenus dedicated to Prof. dr. Andrzej WARCHAŁOWSKI, an excellent Polish entomologist (Wrocław, Poland).

Type species: *Corymbites atratus* BALLION, 1878: 293. Gender: feminine.

Adults. They usually have prosternal collar shortened (figs 494-496, 518-520, 616, 617), posterior process of prosternum bent inwards (figs 549-553, 612, 613) and femoral plates of hind legs strongly narrowed terminally (figs 554-560, 608, 609). Species of this group can be distinguished by noticeable sexual dimorphism and hind wings reduced to different degree.

Larva. Nasalia wedge-shaped. Posterior lobe of fronto-clypeal plate as wide as long, bluntly emarginate posteriorly. Setae in posterior part of abdominal tergites most often grouped in pairs.

Species of this subgenus inhabit mountain meadows of the Caucasus and Middle Asia. Based on morphological characters I divided them into three auxilliary groups.

1. Terminal segments of labial and maxillary palps not enlarged (at most elongated), axe-shaped (figs 488-493, 538-543) ..... 2.
-. Terminal segments of labial and maxillary palps strongly enlarged (especially in males), knife-shaped (figs 573-578).
..... group III, p.75
2. Femoral plates of hind legs abruptly narrowed behind trochanter attachment (figs 554-566). Posterior process of prosternum behind anterior coxae strongly bent inwards (figs 549-551).
..... group I, p. 65
-. Femoral plates of hind legs abruptly narrowed from trochanter attachment (figs 557-560). Posterior process of prosternum behind anterior coxae slightly bent inwards (figs 552, 553).
..... group II, p. 70

GROUP I

Species of this group inhabit mountain meadows of the Caucasus. They have convex body, with sparse vestiture and without metallic polish, antennae almost moniliform (figs 485-487), prosternal collar usually shortened (figs 494-496), posterior process of prosternum bent (figs 549-551) and femoral plates of hind legs abruptly narrowed, narrowing starts in a distance from trochanter attachment (figs 554-556). Species of this group exhibit noticeable sexual dimorphism and their hind wings are reduced to different degree .

1. Widened part of femoral plates of hind legs smaller than half their width (figs 447, 448) ..... 2.
-. Widened part of femoral plates of hind legs equals half their width (fig. 589). Black brown or black; antennae and legs lighter. Dorsum with short and sparse, while venter with denser and grey vestiture. Length 11.5 mm. Aedeagus (fig. 502).
..... *S. (W.) karabachensis* Dol.
2. Posterior angles of pronotum relatively narrow, with long sharp ridges (fig. 476, 478). Medial furrow on posterior pronotal disc deeply wedged ..... 3.
-. Posterior angles of pronotum relatively wide, with short smoothed ridges (figs 475, 477). Medial furrow on posterior disc smoothed. Black; venter and legs brown. Dorsum and venter with short yellow grey hairs. Length 9-12 mm. Aedeagus (fig. 503).
..... *S. (W.) logvinenkoae* Dol.
3. Metasternum strongly transverse: half sternite twice shorter than wide. Male antennae reach slightly beyond middle of pronotum; their IV segment slightly transverse. Brown black, usually with green metallic polish; elytral epipleura and legs slightly lighter. Dorsum with very short and sparse, while venter with very short, but denser white hairs. Length 9-10 mm.
..... *S. (W.) ampliformis* Rtt.

-. Metasternum slightly transverse: half sternite 1.5 shorter than wide. Male antennae do not reach tips of posterior angles of pronotum for a distance of two segments; their IV segment as long as wide or slightly elongate. Black, with faint green metallic polish; antennae, abdomen and legs red brown. Dorsum with short and sparse, while venter with denser and grey hairs. Length 10-11 mm.
..... *S. (W.) acceptus* GUR.

### *Selatosomus (Warchalowskia) acceptus* GURYEVA comb. nov.

*Selatosomus (Selatosomus) acceptus* GURYEVA, 1989: 262

Locus typicus: Njusnjus (the Arax river valley-Azerbaijan: Nakhichevan).

DESCRIPTION

Male. Length: 10.0-11.0 mm, width: 4.7-5.0 mm. Black, with faint green metallic polish; antennae, abdomen and legs red brown. Dorsum with short and sparse, while venter with denser grey hairs. Head with flat, wide triangular depression, covered with big deep punctures situated at a distance much smaller than their diameter, or in places equal to it. Antennae do not reach tips of posterior angles of pronotum at a distance of two segments; moniliform; segment II almost as long as wide; segment III twice longer than II and equal to IV, 1.8-2 times longer than wide; segment IV 1.5-1.8 longer than wide; segments V-X as long as wide. Pronotum hardly noticeably transverse, widest in middle, from where it narrows ovally, equally in both anterior and posterior directions; posterior angles short (at base as long as wide), directed backwards and hardly noticeably sidewards; midline thin, deep, running almost to anterior edge; punctures deep, big, densely and evenly distributed, interpunctal spaces always smaller than puncture diameter, posterior half of disc tangentially wrinkled. Prosternal sternite and propleura punctured like pronotum. Scutellum slightly widened behind middle, 1.3-1.5 times longer than wide. Elytra 2.5 times longer and slightly wider than pronotum, posteriorly strongly ovally narrowed; rows not deep, pits in them deep, oval, not crossing or hardly crossing their line; intervals on disc flat, on sides slightly and on anterior disc strongly convex (especially third interval), with big, dense punctures and tiny wrinkles, particularly dense at tips and sides. Female unknown. Larva unknown.

DISTRIBUTION

Azerbaijan: Nakhichevan; Turkestan: Chr. Kopetdag.

BIONOMICS, ECOLOGY

A mountain species.

REMARKS

Closely related to *S.* (*W.*) *logvinenkoae* DOL., from which it can be well distinguished by the colour, and the structure of antennae and pronotum.

MATERIAL

Holotype, M ("Njusnjus, dol. r. Araks, Nahicev., ZAGULJAEV, 25 IV 955", "2505 m w gorach do r. Ordubad-chaj 10-12 km") and paratype, M ("Ashabad, Zakasp. obl., HRISTOF", "s. CHRISTOPH") (LED).

### *Selatosomus* (*Warchalowskia*) *ampliformis* REITTER comb. nov.

*Selatosomus ampliformis* REITTER, 1910: 171.

Terra typica: Talysh Mts. (Azerbaijan).

DESCRIPTION

Male. Length 9.5 mm, width 3.5 mm. Dorsum and legs dark brown, pronotum and elytra with light polish, venter lighter. Vestiture grey, short (only on head longer), sparse and delicate, pronotum glabrous and shiny. Head with dense and distinct puncturation. Antennae short, reaching slightly beyond middle of pronotum; their segment III as long as IV and noticeably longer than II (fig. 485). Terminal segments of labial (fig. 488) and maxillary (fig. 491) palps axe-shaped. Pronotum with big punctures, convex (fig. 478), poorly transverse, with thin midline; posterior angles directed backwards, with distinct ridge (fig. 476). Anterior edge of prosternal collar slightly rounded, hardly protrudes beyond anterior angles of pronotal epipleura (fig. 494). Posterior angle of pronotal epipleuron long (fig. 497). Posterior process of prosternum from anterior coxae strongly bent inwards (fig. 550). Pronotal epipleura and prosternal collar with big and conspicuous punctures. Mesosternum with thin callosity at posterior edge. Scutellum almost square (fig. 479), densely and delicately punctured. Elytra short (fig. 476) and convex (fig. 478). Hind wings shortened. Femoral plates of hind legs wide for half length, then narrowed (fig. 555). Legs normally developed (figs 482-484). Aedeagus (fig. 501); terminal abdominal segments: tergites IX and X (fig. 505), sternite IX (fig. 508). Female unknown. Larva unknown.

DISTRIBUTION

Azerbaijan: Talysh Mts.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Closely related to both the remaining species of this group.

MATERIAL

Lectotype has been designated (M, Talyschgebg., Transcaucasus, LEDER, REITTER", "Monotypus 1910, *Selatosomus ampliformis*, M, "*ampliformis* m. 1910, Type", "Coll. REITTER") (BUD).

### *Selatosomus (Warchalowskia) karabachensis* DOLIN comb. nov.

*Selatosomus karabachensis* DOLIN, 1982a: 24.

Locus typicus: Shusha: Nagornyj-Karabach, Azerbaijan.

DESCRIPTION

Length: 11.5-12.5 mm, width: 4.5-5.0 mm. Black brown, only mandibular tips, antennae and legs red brown. Dorsum covered with sparse, short and adherent, while sides with denser and venter with quite dense and moderately long, grey vestiture. Head quite densely and coarsely punctured; frons with round impression. Antennae moniliform, short (fig. 486), do not reach beyond two thirds of pronotal length; their segment III twice longer than II and equal to or slightly longer than IV. Terminal segments of labial (fig. 490) and maxillary (fig. 493) palps elongated. Pronotum pulvinately elevated (fig. 474), slightly transverse, with distinct midline reaching anterior edge; posterior angles directed slightly outwards, with sharp ridge (fig. 473). Anterior edge of prosternal collar arcuate, situated almost at the level of anterior angles of pronotal epipleura (fig. 496). Pronotal epipleuron with sharp tip of posterior angle (fig. 499), in anterior part with dense, almost umbilical puncturation. Posterior process of prosternum from anterior coxae bent inwards (fig. 549). Scutellum semioval (fig. 480), with shallow depression in posterior half, very delicately and quite densely punctured. Elytra wide (fig. 473) and strongly convex (fig. 474). Hind wings underdeveloped, reach hardly two thirds of elytral length. Femoral plates of hind legs very wide for half length, then narrowed terminally (fig. 554). Male. Aedeagus (fig. 502). Female. Body stouter and wider, antennae shorter, reaching only slightly beyond half of pronotum length. Larva unknown.

DISTRIBUTION

Azerbaijan: Karabachskij Chr. (Caucasus).

BIONOMICS, ECOLOGY

A mountain species, collected in high mountain forest and on a high mountain meadow.

REMARKS

Most closely related to *S. (W.) logvinenkoae* DOL.

MATERIAL

Holotype, M ("24 VII 1970, Az. SSR, Nagornyj Karabach, wysokornyj les, leg. V. M. ERMOLENKO") and paratype, F ("26 V 1976, Nagornyj Karabach, okrestnosti Shusha, pereleski na sklonie, leg. V. G. DOLIN") (KIW). Moreover one male was examined ("Nagorn. Karabach, s. Piesotor, wysokogornyj lug, 18 VI 1967", "*Selatosomus karabachensis* DOL., det. V. DOLIN 1987", red square) (KIW).

### *Selatosomus (Warchalowskia) logvinenkoae* DOLIN comb. nov.

*Selatosomus logvinenkoae* DOLIN, 1982a: 21.

Locus typicus: Goderdzi Pass, Caucasus, Armenia.

DESCRIPTION

Male. Length: 9.0-12.0 mm, width: 4.0-5.0 mm. Dorsum black, dull-shiny with brown polish, venter brown, tarsi blackened. Wholly covered with short and adherent yellow grey vestiture. Head thickly and densely punctured. Antennae short, do not reach tips of posterior angles of pronotum for a distance of three segments; their segment III over twice longer than II and equal to IV (fig. 487). Terminal segments of labial (fig. 489) and maxillary (fig. 492) palps, axe-shaped and elongated, respectively. Pronotum almost square (fig. 475), pulvinately elevated (fig. 477), midline usually short; posterior angles hardly directed outwards, with indistinct ridge. Prosternum dull-shiny. Anterior edge of prosternal collar flattened and situated far below anterior angles of pronotal epipleura (fig. 495). Pronotal epipleuron mat, with short posterior angle, rounded on tip (fig. 498). Posterior process of prosternum from anterior coxae bent inwards (fig. 551). Scutellum semioval, as long as or somewhat longer than wide (fig. 481). Elytra quite wide (fig. 475) and convex (fig. 477). Hind wings considerably reduced. Femoral plates of hind legs abruptly narrowed even before middle (fig. 556). Aedeagus (fig. 503); terminal abdominal segments: tergites VIII, IX and X (figs 506, 511), sternite IX (fig. 509). Female unknown. Larva unknown.

DISTRIBUTION

Armenia; Azerbaijan: Nakhichevan.

BIONOMICS, ECOLOGY

A mountain species, collected at 2500 m. a. s. l.

REMARKS

Most closely related to *S.(W.) karabachensis* DOL.

MATERIAL

Holotype, M ("19 V 1966, Caucasus, pereval Goderdzi, leg. V. N. LOGVINENKO") and 2 paratypes: 1 M (labelled like the holotype) and 1 M ("Paratypus, *Selatosomus logvinenkoae* DOLIN, 1982", "Caucasus, pereval Bichenakska, 1977") (KIW). Moreover, one male was examined ("ZaCaucasusie, Nach. ASSR, Bichenakska pereval, 2500 m, 26 VI 1982, M. DANILEVSKIJ") (DT).

GROUP II

Species of this group inhabit mountain meadows in Central Asia. They differ from the species of the preceding group in the shape of femoral plates of hind legs which are sharply narrowed from trochanter attachment or just behind this place.

1. Femoral plates of hind legs sharply and strongly narrowed from trochanter attachment (figs 558-560) ..... 2.
-. Femoral plates of hind legs very strongly and sharply narrowed from just behind trochanter attachment (fig. 557). Black. Dorsum glabrous, venter with sparse, short and adherent dark vestiture.
..... *S. (W.) mirus* GUR.
2. Scutellum distinctly transverse (figs 527, 530) ..... 3.
-. Scutellum almost square (fig. 528). Black. Covered with grey vestiture.
..... *S. (W.) mirificus* GUR.
3. Pronotum firmly convex (fig. 525). Dark brown, dorsum glabrous, venter with very fine and sparse brown vestiture.
..... *S. (W.) informis* (KRAATZ).
-. Pronotum slightly convex (fig. 529). Black and shiny. Vestiture yellow or golden yellow.
..... *S. (W.) persimilis* DOL.

### *Selatosomus (Warchalowskia) informis* (KRAATZ) comb. nov.

*Corymbites (Diacanthus) informis* KRAATZ, 1879a: 287.
*Corymbites (Diacanthus) paradoxus* KOENIG, 1887: 354.
*Selatosomus fraterculus* GURYEVA, 1978: 143.
*paradoxus* = *fraterculus* = *informis*: GURYEVA 1982: 544.

Terra typica: Dzhungarski Alatau (Kazakhstan).

DESCRIPTION

Length of male: 9.5-11.0 mm, width: 3.5-4.5 mm; in female length up to 13.0 mm, width up to 6.0 mm. Wholly black brown, venter and legs slightly lighter, glabrous. Head evenly covered with big and flat punctures; supraantennal ridges high. Antennae almost moniliform; segments laterally mat, centrally shiny; their segment III distinctly longer than II and slightly shorter than IV (fig. 535). Inner edge of mandible indented (fig. 531). Labial palp with characteristically elongated subterminal and small, rounded terminal segments (fig. 541). Terminal segment of maxillary palp elongated and rounded (fig. 538). Pronotum slightly transverse (figs 512, 513), quite strongly convex (figs 524, 525), midline thin, hardly marked; posterior angles directed backwards, with short ridge. Prosternal collar and pronotal epipleura with shallow punctures bigger than those on pronotum. Prosternal collar curved (in female more strongly), with anterior edge slightly protruding beyond anterior angles of pronotal epipleura (fig. 518). Posterior angle of pronotal epipleuron rounded (fig. 523). Scutellum transverse (fig. 527). Elytra short, widest behind middle (fig. 512), strongly convex (figs 524, 525), in female very strongly widened (fig. 513). Hind wings considerably shortened. Femoral plates of hind legs from trochanter attachment very strongly and sharply narrowed, from half length to the very tip very narrow (fig. 558). Femora slightly widened (figs 547, 548). Male. Aedeagus (fig. 579); terminal segments of abdomen: tergite VIII (fig. 586) and sternite IX (fig. 585). Female. Ovipositor (fig. 532); VIII abdominal segment: tergite (fig. 534) and sternite (fig. 533). Larva described by DOLIN (1978) under the name *S. paradoxus* KOEN.

DISTRIBUTION

Kazakhstan: Dzhungarski Alatau.

BIONOMICS, ECOLOGY

Larvae live in soil of fallow grounds, only occasionally encountered on cultivated fields.

REMARKS

Closely related to *S. (W.) persimilis* DOL. After some additional studies, GYRYEVA's (1989) supposition that *Selatosomus fraterculus* GUR. (in Alajskij Chr.-Tadzhikistan) is a good species, as such a disrupted distribution of non-flying mountain forms is hardly probable, may be confirmed.

MATERIAL

Lectotype (M, "Coll. KRAATZ", "Syntypus", "*Selat. informis*, det. Dr. PEČIRKA", "Coll. DEI Eberswalde") and 2 paralectotypes (1 F, "Songor", "Coll. KRAATZ", "Syntypus", "*Selatosomus informis*, det. Dr. PEČIRKA", "Coll. DEI Eberswalde"; 1 F, "Aloi-Tau, D. KRAATZ", "Coll. SCHWARZ", "Syntypus", "*informis* KR.", "Coll. DEI Eberswalde", "*Selatosomus informis* KR.") have been designated (EBW).

I have studied specimens labelled:

*Corymbites (Diacanthus) paradoxus* KOEN., holotype, M ("Lepsinsk", "*Corymbites paradoxus* BALL.") and paratype, F ("Sergiopol", "629) (LED).

*Selatosomus fraterculus* GUR., holotype, M ("402", "*Diacanthus informis* KRTZ., Alai") (LED).

### *Selatosomus (Warchalowskia) mirificus* GURYEVA comb. nov.

*Selatosomus mirificus* GURYEVA, 1972: 301.

Locus typicus: Darvaz, near Duszanbe, Tadzhikistan.

DESCRIPTION

Male. Length: 10.0-15.0 mm, width: 3.8-5.0 mm. Black, covered with delicate vestiture. Head with deep umbilical punctures, its edge above antennal insertions in shape of protruberance. Antennae do not reach posterior angles of pronotum for a distance of two segments; their segment III not much longer than II and slightly shorter than IV (fig. 536). Terminal segments of labial (fig. 543) and maxillary (fig. 539) palps axe-shaped. Pronotum poorly widened (fig. 515), convex in posterior part (fig. 526), midline hardly marked; posterior angles narrow and long, with distinct ridge. Anterior edge of prosternal collar rounded and strongly protruding beyond anterior angles of pronotal epipleura (fig. 531). Tip of posterior angle of epipleuron sharply truncate (fig. 522). Posterior process of prosternum from anterior coxae bent inwards (fig. 552). Scutellum almost square (fig. 528). Elytra with not deep, but distinct rows, punctures in them a bit deeper than rows and not wider; intervals very thickly, coarsely punctured; hardly convex (fig. 526). Hind wings vestigial, as long as first abdominal tergite. Femoral plates of hind legs very strongly narrowed from trochanter attachment (fig. 560). Aedeagus (fig. 580). Female differs from male in shorter antennae, distinctly transverse pronotum, hind tarsus much shorter than tibia. Larva described by GURYEVA (1989).

DISTRIBUTION

Surroundings of Dushanbe, Tadzhikistan.

BIONOMICS, ECOLOGY

It inhabits mountain meadows from 1500 to 3000 m. a. s. l. Larvae live under stones and in grass turf.

REMARKS

Very closely related to *S. (W.) mirus* GUR., from which it differs in size, shape of antennal segment III, denser puncturation of pronotum and shape of its posterior angles, thicker sculpture of elytra and anatomy of genital organs.

MATERIAL

Holotype, M ("Darvaz, W. Buhara, REGEL, III 83") and paratype, M ("L'angar, Kul'ab, W. Buhara, REGEL, VI 83") (LED). Moreover one male was examined ("Tadzh. SSR, Darvaz, ushch. Vischarvi, 14 VI 1985, V. MICHAILOV", "*Selatosomus mirificus* GURYEVA, det. V. DOLIN, 1986") (KIW).

### *Selatosomus (Warchalowskia) mirus* GURYEVA comb. nov.

*Selatosomus mirus* GURYEVA, 1972: 299.

Terra typica: Chazratishoch Mts., Muminabad province, South Tadzhikistan.

DESCRIPTION

Male. Length: 8.0-8.5 mm, width: 3.0-3.5 mm. Head densely covered with deep umbilical punctures; frons edge above antennal insertion elevated in form of protruberance. Antennae relatively long, reach tips of posterior angles of pronotum for a distance of terminal segment; from segment IV moniliform, their segment III triangularly widened apically, twice longer than wide. Pronotum hardly transverse (fig. 516), widest in middle, with hardly marked midline; posterior angles wide, sharp on tips, with distinct ridge. Punctures on prosternum big and umbilical. Prosternal collar short; its anterior edge poorly rounded, not far from edge with short, transverse impression. Posterior process of prosternum behind anterior coxae abruptly bent inwards, then horizontal again. Pronotal epipleura punctured more delicately and more sparsely than prosternum. Metasternum very short, its length in the narrowest place equal to maximal length of femoral plates of hind legs which is connected with almost complete reduction of hind wings retained only as tiny remnants. Scutellum slightly transverse, with almost straight base. Elytra twice longer than pronotum; their biggest width just behind middle, where they are wider than pronotum. Femoral plates of hind legs behind trochanter attachment sharply and strongly narrowed terminally (fig. 557). Posterior tarsi as long as tibiae (fig. 544). Abdomen with very delicate, even and dense puncturation, apex of terminal sternite punctured particularly densely. Aedeagus (fig. 580). Female. Length up to 12.0 mm, width up to 6.2 mm. Antennae short, reach only one third of pronotum length; their mid segments without smooth central stripe; third segment 1.5 times narrower than long, mid segments twice wider than long. Pronotum distinctly transverse (fig. 517). Anterior edge of prosternal collar almost straight. Hind tarsus distinctly shorter than tibiae, femora wide (fig. 545). Elytra 2.5 times longer than pronotum. Larva unknown.

DISTRIBUTION

Surroundings of Muminabad (Chazratishoch and Vachshckij Chr.), Tadzhikistan.

BIONOMICS, ECOLOGY

It inhabits mountains at 1500-2000 m. a. s. l.

REMARKS

Most closely related to *S. (W.) informis* KRAATZ, from which it differs in tiny size, shorter antennae and tarsi and deeper sculpture of pronotum, and especially of elytra. Male of *S. (W.) mirus* GUR. differs from males of the remaining species of the genus in distinctly moniliform antennae.

MATERIAL

Holotype, M ("chr. Chozreti-Shcho,Tadzh., 2000 m, GURYEVA, 11 V 962", "U kraja snega (mokr.), pod kamnem") and 4 paratypes (2 FF, "Tadzhikistan, Muminabad, 18 V 62"; 1 M, "chr. Chozreti-Shcho, Sarkaron, 2000 m, 29 V 57, LOPATIN"; 1 M, "17457", "Kuh-i-Pere, Muminabad, W. Buh., REGEL") (LED).

### *Selatosomus (Warchalowskia) persimilis* DOLIN comb. nov.

*Selatosomus persimilis* DOLIN, 1982a: 22.

Locus typicus: the Komaroy river valley near Garm town, Tadzhikistan.

DESCRIPTION

Male. Length: 11.5-13.0 mm, width: 4.0-5.0 mm. Black, dull-shiny, only mouthparts and claws brown, sometimes also tarsi dark brown. Dorsum glabrous, only scutellum covered with yellow dense hairs; venter with short and adherent golden yellow vestiture. Head poorly covex. Antennae almost moniliform (fig. 537), do not reach tips of posterior angles of pronotum for a distance of half segment, their segment III distinctly longer than II and almost equal to IV. Terminal segment of labial palp short and thick (fig. 542), that of maxillary palp axe-shaped (fig. 540). Pronotum almost square (fig. 514), feebly and evenly convex (fig 529), shiny, especially at anterior and posterior angles, with remnants of short vestiture. Prosternal collar short, its anterior edge situated slightly below the level of anterior angles of pronotal epipleura (fig. 519). Pronotal and prosternal epipleura densely and coarsely punctured. Posterior angle of pronotal epipleuron long and straightly truncate (fig. 521). Posterior process of prosternum behind anterior coxae lightly bent inwards (fig. 553). Scutellum distinctly wider than long, semioval, slightly impressed at base, which makes it look almost heart-shaped (fig. 530). Elytra twice longer than pronotum. Hind wings completely reduced. Femoral plates of hind legs from trochanter attachment strongly and abruptly narrowed, extremely narrow and straight from half length (fig. 559). Legs long, tarsi shorter than tibiae. Aedeagus (fig. 581). Female unknown. Larva unknown.

DISTRIBUTION
Dushanbe (Novabad, Garm), Tadzhikistan.

BIONOMICS, ECOLOGY
It occurs in mountains at 1800-2300 m. a. s. l.

REMARKS
In appearance it resembles *S. (W.) mirificus* GUR. from which it differs, besides the key characters, in practically complete loss of dorsum vestiture, shorter second anntennal segment, convex head, shorter prosternal collar and dark coloured tarsi. GURYEVA (1989) regards this species as a synonym of *S. (W.) mirificus* GUR. In my opinion, based on the above characters, it is a distinct species.

MATERIAL
Holotype, M ("26-30 IV 1978, dolina r. Komaroj bliz Garma, na wysote 1800-2300 m") and 9 paratypes: 8 MM (labeled as holotypes) (KIW) and 1 M ("Tadzh. SSR, Novabad, Komarou, 2200 m, 26-30 IV 1978 g.") (LED).

GROUP III

Species of this group inhabit mountain meadows in Central Asia. They are closely related to the preceding group. They differ from the latter in serrate antennae (figs 570-572) and even more pronounced sexual dimorphism, as males differ from females not only in size and shape of the body and length of antennae but also in longer prosternal collar (figs 616, 617) and shape of terminal segments of labial and maxillary palps (which in male are particularly enlarged, figs 574-578). Hind wings are shortened.

1. Elytral intervals convex. Terminal segment of maxillary palp in male 3 times longer than wide (fig. 576). Black; palps and tarsi brown. Head, scutellum and venter covered with short dusty grey vestiture; pronotum and elytra glabrous. ..... *S. (W.) denisovae* Gur.
-. Elytral intervals flat or only slightly elevated. Terminal segment of maxillary palp in male 2-2.5 times longer than wide (figs 575, 577, 624, 640) ..... 2.
2. Femoral plates of hind legs narrowed, from behind trochanter attachment (fig 629) ..... 3.
-. Femoral plates of hind legs narrowed from trochanter attachment (figs 608, 609) ..... 4.
3. Elytral intervals not wrinkled, sparsely punctured. Terminal segment of maxillary palp in male 2.5 times longer than wide. Black with intense blue polish, antennae and legs dark brown. Dorsum glabrous, while venter covered with tiny adherent and not too dense yellow hairs. ..... *S. (W.) lemniscatus* DEN.

-. Elytral intervals wrinkled, densely punctured. Terminal segment of maxillary palp 2 times longer than wide. Dorsum black with light blue polish, venter dark brown and shiny. Body covered with short white vestiture, pronotum and elytra almost glabrous.
..... *S.* (*W.*) *turkestanicus* sp. nov.

4. Pronotal puncturation sparse: interpunctal spaces 2-3 times bigger than puncture diameter. In male pronotum more or less square and more strongly narrowed posteriorly; terminal segment of maxillary palp 2.5 times longer than wide (fig. 577). Dorsum dark brown, venter light brown. Dorsum seems globrous, as hairs are tiny, sparse and dark; venter with short and dense yellow grey vestiture.
..... *S.* (*W.*) *victor* GUR.

-. Pronotal puncturation dense: interpunctal spaces equal to or smaller than their puncture diameter. In male pronotum slightly transverse and hardly narrowed posteriorly; terminal segment of maxillary palp 2 times longer than wide (figs 577, 640) ..... 5.

5. Antennal segment III narrow (fig. 570). Anterior edge of prosternal collar at the same level as anterior angles of pronotal epipleura (fig. 616). Scutellum round (figs 561, 562). Dorsum black; antennae, legs and venter brown. Dorsum covered with short and sparse, while venter with short and denser, grey, vestiture.
..... *S.* (*W.*) *atratus* (BALLION)

-. Antennal segment III wider (fig. 639). Anterior edge of prosternal collar slightly protrudes beyond anterior angles of pronotal epipleura (fig. 641). Scutellum slightly elongate (fig. 644). Dorsum black; antennae, legs and venter dark brown. Vestiture white, short and very poor, so that body seems almost glabrous; venter with vestiture denser than dorsum.
..... *S.* (*W.*) *theresae* sp. nov.

### *Selatosomus* (*Warchalowskia*) *atratus* (BALLION) comb. nov.

*Corymbites atratus* BALLION, 1878: 293.
*Selatosomus macropalpus* REITTER, 1910: 170.
*macropalpus* = *atratus*: GURYEVA 1982: 544.

Locus typicus: Alma-Ata ("Vernoje"), Kazakhstan.

DESCRIPTION

Length of male: 8.0 to 15.0 mm, width: 3.5-5.0 mm; in female length up to 18.0 mm, width up to 7.0 mm. Head densely and strongly punctured; frons almost flat. Antennae with fine vestiture, do not reach beyond pronotal base; segment III narrow, then conical, twice longer than II and slightly longer than IV, subsequent segments triangular, terminal one elongate and oval, longer than subterminal segments (fig. 570). Terminal segments of labial (fig. 578) and maxillary (fig. 577) palps strongly enlarged. Pronotum in male square (fig. 562) and slightly convex

(fig. 566), in female transverse (fig. 561) and flat (fig. 567), quite strongly and densely punctured, posteriorly punctures become elongately wrinkled, midline distinct; posterior angles quite long, directed backwards, acutely terminated, with strong ridge. Anterior edge of prosternal collar gently rounded and at the same level as anterior angles of pronotal epipleura (fig. 616). Tip of posterior angle of pronotal epipleuron sharp and truncate (fig. 670). Posterior process of prosternum lightly bent inwards (fig. 612). Scutellum round, finely and densely punctured. Elytra finely and densely punctured, with very delicate rows and completely flat intervals. Femoral plates of hind legs very abruptly narrowed at one third length and with sharp tip (fig. 608). Male. Aedeagus (fig. 584); terminal abdominal segments: tergites VIII, IX and X (figs 588, 589), sternite IX (fig. 587). Female. Ovipositor (fig. 590), spermatheca (fig. 591); VIII abdominal segment: tergite (fig. 592) and sternite (fig. 593). Larva described by DOLIN (1978) and GURYEVA (1989).

DISTRIBUTION

Chr. Zailijskij Alatau (Kazakhstan, Kirgizstan).

BIONOMICS, ECOLOGY

It inhabits mainly forest areas. Larvae live in soil of glades in the vicinity of trees; also encountered on cultivated fields.

REMARKS

Quite similar to *S.* (*W.*) *informis* (KRAATZ), from which it differs in colour, puncturation of pronotum and huge maxillary palps, terminal segment of which is twice longer than wide.

MATERIAL

Lectotype, M ("*Corymbites atratus* BALL.", "Vernovo") and paralectotype, F (labelled like the lectotype) (ODE). Moreover, one male was examined ("*Corymbites atratus* BALL., Vernoje", "*S. atratus* BALL., comp. ckm. typei, V. DOLIN, 1968 g.") (KIW). I have examined also two specimens determined as *S. macropalpus*: holotype, M ("Turkestan, Vernoje", "Turkestan, Wenoje", "4 III 06", "Holotypus 1910, *Selatosomus macropalpus* REITTER", "*macropalpus* m. 1910", "Coll. REITTER") and paratype, F ("Turkestan, REITTER", "Paratypus 1910, *Selatosomus macropalpus* REITTER", "Coll. REITTER") (BUD).

### *Selatosomus* (*Warchalowskia*) *denisovae* GURYEVA comb. nov.

*Selatosomus denisovae* GURYEVA, 1978: 142.

Locus typicus: surroundings of the Sary-Chelek Lake, Chatkal'skij Chr., Uzbek SSR.

DESCRIPTION

Male. Length 15.0 mm, width 6.5 mm. Black and shiny. Head with small punctures, especially densely distributed at posterior edge; suprafrontal protruberances high. Antennae short, do not reach tips of posterior angles of pronotum for a distance of three segments, poorly moniliform, with elongated segments; their III segment 3 times longer than II and equal to IV (fig. 571). Terminal segment of maxillary palp big and knife-shaped (fig. 576). Pronotum slightly elongate, posterior angles sharp, directed outwards, with short ridge (fig. 563); surface finely, densely and evenly punctured, interpunctal spaces smaller than puncture diameter and only in places equal. Scutellum almost round. Elytra widest behind middle, from where they are strongly ovally narrowed both anteriorly and posteriorly; rows deep, pits in them very tiny, hardly marked; intervals convex (especially third in its anteriror part), their surface with small, sparse and deep punctures. Female. Length 17.0 mm, width 8.0 mm. Antennae do not reach tips of posterior angles of pronotum. Elytra more strongly convex than in male. Larva unknown.

DISTRIBUTION

So far known from the type locality only.

BIONOMICS, ECOLOGY

Collected in the mountains at 2000 m. a. s. l. in the zone of nut forests.

REMARKS

Closely related to *S. (W.) lemniscatus* DEN. from which it differs in the shape of maxillary palps, shorter antennae, elytra more strongly elevated laterally, denser puncturation of pronotum and more convex elytral intervals.

MATERIAL

Holotype, M ("oz. Sary-Chelek, Chatk. chr., 2000 m, GURYEVA, 16 V 961", "na doroge") (LED).

### *Selatosomus (Warchalowskia) lemniscatus* DENISOVA **comb. nov.**

*Selatosomus* (s. str.) *lemniscatus* DENISOVA, 1948: 43.

Terra typica: the Kugart river valley, South Kirgizstan.

DESCRIPTION

Male. Length: 10.0-12.0 mm, width: 4.4-5.0 mm. Head very finely and densely punctured; frons flat, with slight depression in upper half. Antennae reach base of pronotum; their segments counting from IV, widened, short and thick, tiangular; their segment III 1.25-1.5 longer than II and as long as IV, but distinctly narrower.

Maxillary palp very big, its terminal segment knife-shaped. Pronotum slightly elongate, with hardly marked midline; sides rounded, anteriorly ovally narrowed and before posterior angles more strongly incised; posterior angles long, very thin, strongly directed outwards and with distinct ridge. Pronotal epipleura poorly and not too coarsely punctured, not more densely than prosternum. Prosternal collar small and strongly curved downwards. Posterior process of prosternum behind anterior coxae bent inwards. Elytra convex, strongly widened behind middle, in widest place wider than pronotum; rows distinctly punctured; intervals hardly convex, delicately and quite densely punctured, with wrinkles on sides. Hind wings strongly shortened. Femoral plates of hind legs wide in half length, then abruptly narrowed. Abdominal venter delicately and densely punctured, much more densely than pronotal epipleura and prosternum. Female. Stouter, wider (length up to 18.0 mm, width up to 8.0 mm) (pronotum square), more convex, with more distinctly shorter and thicker antennae and maxillary palps smaller than those of male. Larva described by DOLIN (1978).

DISTRIBUTION

South Kirgizstan: Ferganskij Chr. and Mt. Bozbutau (north-eastern side of Fergana Valley).

BIONOMICS, ECOLOGY

A mountain species. Predacious larvae live in forest soil and litter in the zone of nut forests with admixture of *Pirus* L.

REMARKS

In its body shape it resembles *S.* (*W.*) *informis* (KRAATZ), but can be easily distinguished from the latter by strong metallic polish, very sparse puncturation of pronotal epipleura (punctures distributed not denser than on prosternum) and posterior angles of pronotum, very thin, directed ouwards and blunted apically.

MATERIAL

Lectotype, M ("chr. Sjurjun-Tjube, dol. Kurgarta, Ferg., DOBRZHANSKIJ, 14 V 25", "alp. obl.") and 9 paralectotypes: 1 M and 2 FF (labelled like the lectotype), 4 MM and 2 FF ("Ur. Ak-Terek, Arslanbob, Fergana, PRUTENSKIJ, 12-16 V 935") (LED).

### *Selatosomus* (*Warchalowskia*) *theresae* sp. nov.

Terra typica: Central Asia.

NAME DERIVATION

Dedicated to my wife Teresa.

DESCRIPTION

Male. Length 10.0 mm, width 3.8 mm. Dorsum black, pronotum more strongly shiny than head and elytra; venter, antennae and legs black brown, shiny. Vestiture white, short and very poor, so that body seems glabrous; venter with denser vestiture than dorsum. Head punctured slightly poorer than pronotum, vestiture somewhat longer; frons flat with slight medial depression. Antennae from segment IV serrate; their segment IV 1.5 times longer than II and distinctly shorter than IV (fig. 639). Terminal segments of labial and maxillary palps enlarged (fig. 640). Pronotum evenly convex (fig. 638), almost square, widest before middle, with short and thin midline, hardly noticeable at very base; densely punctured, punctures almost merge with each other; posterior angles short, directed straight backwards, with short ridge (fig. 637). Pronotal epipleura and prosternum punctured slightly poorer than pronotum. Prosternal collar bent, its anterior edge situated slightly higher than anterior angles of pronotal epipleura (fig. 641). Tip of posterior angle of pronotal epipleuron short and wide (fig. 642). Posterior process of prosternum from anterior coxae bent inwards, its tip nipple-like (fig. 643). Scutellum as long as wide, base rounded (fig. 644). Elytra slightly convex (fig. 638), widest behind middle, with tiny pit on humeri (fig. 637); rows distinct, with elongate punctures; intervals flat, finely punctured and with numerous wrinkles. Femoral plates of hind legs from trochanter attachment abruptly narrowed terminally (fig. 645). Tibiae long (figs 646-648). Abdominal segments more finely punctured than the rest of the body. Aedeagus (fig. 649), terminal abdominal segments: tergites VIII, IX and X (figs 650, 651), sternite IX (fig. 652). Female. Length 14.5 mm, width 5.5 mm. Body stouter and more convex (fig. 654). Antennae less serrate; their third segment as long as fourth (fig. 655). Terminal segments of labial (fig. 656) and maxillary (fig. 657) palps almost triangular. Pronotum slightly transverse, widest in middle (fig. 653). Prosternal collar stronger wrinkled than in male (fig. 658). Posterior angle of pronotal epipleuron longer (fig. 659). Posterior process of prosternum not so strongly bent inwards (fig. 660). Scutellum slightly elongate (fig. 661). Elytra widest in middle (fig. 653). Femoral plates of hind legs bigger than in male (fig. 662). Tibiae long (figs 663-665). Ovipositor (fig. 666), spermatheca (fig. 667); VIII abdominal segment: tergite (fig. 668) and sternite (fig. 669). Larva unknown.

DISTRIBUTION

Central Asia: Kazakhstan.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Most closely related to *S.* (*W.*) *atratus* (BALLION), from which it differs in shorter pronotal midline, narrower and shorter third antennal segment, straightly narrowed femoral plates of hind legs, slightly longer prosternal collar, vestiture colour and

structure of anal segments and genital organs. It is also closely related to *S.* (*W.*) *turkestanicus* sp. nov.

MATERIAL

Holotype, M ("Wernyi, Turkest.", "*latissimus* RTT.", "ex coll. H. LGOCKI, Inst. Zool. P.A.N., Kraków, 377/57") and paratype, F (labelled like the holotype). Holotype and paratype are kept in the collection of KAW.

### *Selatosomus* (*Warchalowskia*) *turkestanicus* sp. nov.

Terra typica: Central Asia.

NAME DERIVATION

The name is derived from the old name of Central Asia.

DESCRIPTION

Male. Length 19.5 mm, width 4.0 mm. Dorsum black, with light blue polish; venter dark brown and shiny, claws lighter. Vestiture white and short, pronotum and elytra almost glabrous. Head densely and coarsely punctured, with poor vestiture; frons flat, medially lightly depressed. Antennae from segment IV slightly serrate; their segment III 1.5 times longer than II and slightly shorter than IV (fig. 622). Terminal segments of labial (fig. 623) and maxillary (fig. 624) palps significantly enlarged. Pronotum hardly transverse (fig. 620), convex in its posterior part (fig. 621) with midline short, noticeable at base; posterior angles sharp, directed slightly outwards, with long ridge; surface densely punctured, punctures almost merge with each other. Prosternal collar strongly bent just before anterior edge, which is also slightly rounded and protrudes a bit beyond anterior angles of pronotal epipleura (fig. 625). Tip of posterior angle of pronotum tangentially truncate (fig. 626). Puncturation of pronotal epipleura and abdominal venter dense and noticeable, punctures big, on prosternum more sparsely spread, in anterior part finer. Posterior process of prosternum from anterior coxae bent inwards (fig. 627). Scutellum slightly elongate, with rounded base (fig. 628), finely punctured. Elytra distinctly convex (fig. 621), widest in middle (fig. 620); no depressions on humeri, only fourth row deeper at base; rows distinct, with big and oval punctures; intervals slightly elevated, densely punctured and with numerous delicate transverse wrinkles. Femoral plates of hind legs from half length strongly narrowed and with sharp tip (fig. 629). Tibiae and tarsi long (figs 630-632). Aedeagus (fig. 633); terminal abdominal segments: tergites VIII, IX and X (figs 634, 635), sternite IX (fig. 636). Female unknown. Larva unknown.

DISTRIBUTION

Central Asia.

BIONOMICS, ECOLOGY
Unknown.

REMARKS
Closest related to *S. (W.) atratus* (BALLION), from which it differs in pronotum more strongly convex in posterior part, thicker and shorter second and third segments of antennae, more strongly elongated terminal segment of labial palp, slightly longer prosternal collar, slightly elongated scutellum, elevated elytral intervals and colour of vestiture. Also closely related to *S. (W.) lemniscatus* DEN. and *S. (W.) theresae* sp. nov.

MATERIAL
Holotype, M ("Turkestan, REITTER", "ex coll. H. LGOCKI, Inst. Zool. P.A.N., Kraków, 37/57") and paratype, M (labelled like the holotype). Holotype and paratype are kept in the collection of KAW.

### *Selatosomus (Warchalowskia) victor* GURYEVA comb. nov.

*Selatosomus victor* GURYEVA, 1982: 545.

Locus typicus: Voroncovka near Frunze, Kirgizstan.

DESCRIPTION
Male. Length 12 mm, width 3.8 mm. Head with triangular flat depression in anterior part of frons; frontal ridges relatively sharp; suprafrontal protruberances not big and without puncturation. Antennae of medium length, do not reach tips of posterior angles of pronotum for a distance of two segments; their segment III twice longer than II and equal to IV (fig. 572). Terminal segments of labial (fig. 574) and maxillary (fig. 575) palps extremely big. Pronotum delicately and evenly punctured, interpunctal spaces equal two thirds puncture diameter; slightly convex (fig. 577), square, widest in anterior part and strongly narrowed at base, midline distinct in its midpart; posterior angles long, thin and sharp, directed outwards, with thin ridge (fig. 564). Prosternal sternites as long as wide. Prosternal collar very short and slightly bent, finely and densely punctured, interpunctal spaces smaller than puncture diameter and only in places equal; its anterior edge straight, transversely wrinkled (fig. 617). Pronotal epipleuron with short posterior angle (fig. 671); strongly bulged behind prosternal collar; its puncturation delicate, dense anteriorly and poor posteriorly. Posterior process of prosternum at middle of base incised and bent inwards (fig. 613). Scutellum almost tringular (fig. 569). Metasternum strongly transverse. Elytral epipleuron in anterior part wide; no humeral callosities; elytral rows deep, interrupted, vestigial puncturation hardly visible, not wider than rows; intervals flat and thickly wrinkled. Hind wings shortened. Femoral plates of hind

legs abruptly narrowed almost from the start (fig. 609). Legs normally developed (figs 594-596). Aedeagus (fig. 583). Female. Length 11 mm, width 4.8 mm. Antennae short, do not reach tips of posterior angles of pronotum for a distance of five segments. Terminal segments of labial (fig. 573) and maxillary palps not enlarged. Pronotum and elytra more convex than in male (fig. 565). Larva described by DOLIN (1978) erronuously as larva of *S. macropalpus* RTT., (= *S.* (*W.*) *atratus* (BALLION)) (verified by GURYEVA (1982)).

DISTRIBUTION

Kirgizstan: Kirgizkij Alatau.

BIONOMICS, ECOLOGY

Collected in piedmont regions. Larvae encountered singly in soil of fallow fields, occasionally in cultivated areas.

REMARKS

Closely related to *S.* (*W.*) *lemniscatus* DEN.

MATERIAL

Holotype, M ("Voroncovka, okr. Frunze, V. ZASLAVSKIJ, 12 IV 56", "pod kamnjami") (LED) and paratype, F ("stanicija 5 iz proby No 10"-collections of V. I. PROCHENKO from Frunze district (KIW). Moreover, one male was examined ("predgorja Kirgiz. Chr. jugi. g. Frunze, PROCHENKO, 24 II 1963", "Na juzhnom sklone gory, pod kuchem navoza, dnem chajb.", "*Selatosomus victor* GURYEVA, det. V. DOLIN 1985") (KIW).

## 4. Subgenus *Selatapteria* subg. nov.

Name derivation: the name is a combination of the genus *Selatosomus* and Greek "a" - non; "pteryks, pterygos" -wing; insects with vestigial wings.

Type species: *Selatosomus messorobius* DOLIN, 1971; 647. Gender: feminine.

Adult beetles have mandibulae with smoothed inner denticle (fig. 601) and femoral plates of hind legs very strongly narrowed (figs 614, 615), and also almost complete loss of hind wings (there are only vestiges-remaining venation hardly reaches one fourth elytral length).

Larvae (so far only larva of *S.* (*S.*) *messorobius* was described) have wedged nasalia and widely rounded posterior lobe of fronto-clypeal plate, with no posterior fringe. Seate in posterior part of abdominal tergites are most often grouped in pairs.

Both species included in this subgenus are known from Eastern Siberia.

1. Femoral plates of hind legs sharply narrowed from half of their length (fig. 610). Anterior angle of pronotal epipleuron rounded (fig. 672). Scutellum almost square (fig. 602). Dorsum black, venter brown; Whole surface shiny. Vestiture yellow. ..... *S. (S.) jakobsoni* STEP.
-. Femoral plates of hind legs sharply narrowed immediately from trochanter attachment (fig. 611). Anterior angle of pronotal epipleuron slightly sharpened (fig. 673). Scutellum almost triangular (fig. 603). Brown black, dull shiny. Vestiture yellow grey.
..... *S. (S.) messorobius* DOL.

### *Selatosomus (Selatapteria) jakobsoni* STEPANOV **comb. nov.**

*Selatosomus* (in. sp.) *jakobsoni* STEPANOV, 1930: 87.

Locus typicus: canyon Ak-Tash (district Tashkent-Uzbekistan).

DESCRIPTION

Length of male: 10.0-12.0 mm, width: 3.8-4.3 mm; in female length up to 14.0 mm and width up to 7.5 mm. Dorsum black; venter, antennae and legs more or less brown, in rare melanotic specimens brown are only pronotal epipleura and claws; occasionally middle of pronotum may also be brown. Whole body covered with short hairs. Head very coarsely and densely punctured, punctures wide and flat, but not umbilicate, merge to form wrinkles; frons flat, medially with single impression. Antennae almost moniliform, short and thick; their segment II small, more than twice shorter than III; from segment IV bluntly serrate, terminal ones lightly shiny and more sparsely punctured, terminal segment almost pentagonal (fig. 674). Terminal segments of labial (fig. 677) and maxillary (fig. 676) palps strongly elongated. Pronotum transverse, densely and coarsely punctured, punctures laterally flat and deeper, medially sparser; surface almost flat (fig. 598), with midline distinct only at base, and then very poorly marked but visible along whole length; posterior angles sharp and slightly directed outwards, with sharp ridge situated tangentially (fig. 597). Anterior edge of prosternal collar slightly arcuate and situated level with anterior angles of pronotal epipleura (fig. 618). Pronotal epipleuron densely punctured, puncturation sparser and weaker than on dorsal surface; its posterior angle short and rounded (fig. 672). Posterior process of prosternum bent inwards (fig. 615). Scutellum pentagonal, with flat base (fig. 602). Elytra over 2.5 longer than pronotum (fig. 597), strongly convex (fig. 598), with deep rows. Femoral plates of hind legs from half length sharply narrowed (fig. 610). Legs with long tibiae (figs 680-682).

Male. Aedeagus (fig. 605); terminal abdominal segments: tergites IX and X (fig 606), sternite IX (fig. 607). Female. Antennae do not reach tips of posterior angles of pronotum for a distance of seven segments. Pronotum more transverse, elytra

more strongly widened and more convex than in male. In male they reach base of posterior angles. Larva unknown.

DISTRIBUTION

Uzbekistan: Chatkal'skij Chr. and (?) Ugamskij Chr.

BIONOMICS, ECOLOGY

Ii inhabits mountain meadows at 1500-2500 m. a. s. l..

REMARKS

In KIW collection ther is only one specimen collected in Ugamskij Chr. (Uzbekistan).

MATERIAL

Holotype, M, and paratype, F ("Tashkentsk. u., Sajlyk, 22 V 920 g., ushch. Ak-Tash") (LED). Moreover, one male was examined ("*Selatosomus jacobson*, STEP., Comp. cym. Holotypus, DOLIN 1980", "Uz. SSR, Ugamskij Chr., Mazar-Saj, 16 IV 1980, V. G. DOLIN") (KIW).

### *Selatosomus* (*Selatapteria*) *messorobius* DOLIN comb. nov.

*Selatosomus messorobius* DOLIN, 1971: 647.

Terra typica: district Alma-Ata, Kazakhstan.

DESCRIPTION

Male. Length: 3.8-5.0 mm, width: 1.4-1.9 mm. Brown black, only pronotal epipleura, prosternal collar and tarsi yellow brow. Wholly covered with dense and moderately long vestiture. Head coarsely punctured; frons flat, with anterior edge perpendicularly fringed and shiny. Antennae moniliform, reach tips of posterior angles of pronotum; their segments II and III small compared with the remaining ones (fig. 675). Terminal segments of labial (fig. 679) and maxillary (fig. 678) palps elongated. Pronotum densely and coarsely punctured, shiny and convex (fig. 599), slightly elongate (fig, 600), in posterior part with thin midline; posterior angles sharp, directed outwards, with distinct ridge. Prosternum coarsely and densely punctured, slightly cylindrically swollen under collar. Prosternal collar short and flattened (fig. 619). Posterior angle of pronotal epipleuron wide and tangentially truncate at tip (fig. 673). Pronotal epipleuron anteriorly coarsely and not deeply punctured, posteriorly puncturation sparser, and punctures vanish at tip. Posterior process of prosternum with well developed sharp and elongate ridge, strongly bent inwards (fig. 614). Scutellum almost triangular with sharp apex (fig. 603). Elytra slightly convex (fig. 599), elongatedly oval, their tips sharpened (fig. 600). Hind

wings vestigial. Femoral plates of hind legs strongly narrowed terminally (fig. 611). First four tarsal segments of equal length, fifth equals second and third together. Aedeagus (fig. 604). Female unknown. Larva described by DOLIN (1971).

DISTRIBUTION

Kazakhstan: Piedmont plains of Zailijskij Alatau (district Alma-Ata).

BIONOMICS, ECOLOGY

A steppe species known from piedmont regions. Larvae live in soil of fallow fields and cultivated areas, often in the vicinity of ant nests (*Messor* sp.). Adults collected at gophers' burrows or ant nests (*Messor* sp.).

REMARKS

This is the smallest species in the genus *Selatosomus* STEPH. and its hind wings are most strongly reduced. Process of hind wing reduction was already started in *latus* group.

MATERIAL

Holotype, M ("Ju-W. Kazachstan, okr. Alma-Ata, gniezdo *Messor barbatus*, 15 III 64, leg. MARKOVSKIJ P.", "Holotypus, *Selatosomus messorobius* DOLIN sp. n. 1970") and 2 paratypes, MM ("Ju-W. Kazachstan, okr. Alma-Ata, gniezdo *Messor barbatus*, 15 III 64, leg. MARKOVSKIJ P.", "Paratypus, *Selatosomus messorobius* DOLIN sp. n. 1970") (KIW).

### 5. Subgenus *Hadromorphus* MOTSCHULSKY

Type species: *Corymbites simillissimus* MOTSCHULSKY, 1959 (= *Elater inflatus* SAY, 1825), designated by HYSLOP, 1921: 647.

Adults. Body dark, with no spots, moderately shiny, sometimes with metallic polish; antennae and legs occasionally lighter. Vestiture very delicate, light, different dorsally and ventrally; denser and longer on scutellum. Head densely, but not too coarsely punctured. All antennal segments, counting from fourth or only apical fixed medially to each other. Antennae do not reach beyond tips of posterior angles of pronotum; their segment II 1/4-1/3 shorter than III and of equal width; segment III twice longer than wide, as long as IV and 1/4-1/3 narrower; segment IV 1/4-1/2 and segment XI 1/3-1/2 as narrow as wide; segments V-XI widest beyond middle and widely rounded apically. Pronotum slightly transverse, 0.1-0.2 times as long as wide; puncturation on disc not too coarse, completly compact medially, dense laterally. Prosternal sutures anteriorly depressed. Posterior process of prosternum bent. Elytra with distinctly punctured rows and with poorly convex intervals, delicately punctured and poorly wrinkled. Metasternum and abdomen delicately

punctured, punctures dense on sides. In aedeagus parameres shorter than penis.

Sexual dimorphism poorly pronounced: male differs from female in slightly longer antennae and somewhat bigger size.

Larva. Wedge-shaped nasalia. On each lateral side of caudal segement surface three gibbosities. Caudal segment incision more or less elongate.

They differ from other subgenera of the genus *Selatosomus* STEPH. in depressed prosternal sutures and wider, moderately convex body.

In Nearctic four species, none in Palaearctic.

1. Antennal segments IV-XI very delicately and densely punctured and covered with vestiture; segments II and III different, sparsely punctured and with sparser, longer hairs; male antennae slightly longer and thicker ..... 2.
-. All antennal segments similar in sculpture and vestiture: punctures sparse and very indistinct, hairs sparse and moderately long; antennae similar in both sexes, segments more elongated than in other species ..... 3.
2. Body with metallic polish, legs red yellow, sometimes femora darker. ..... *S.* (*Hadromorphus*) *inflatus* (SAY)
-. Body without metallic polish, legs dark brown or black. ..... *S.* (*Hadromorphus*) *glaucus* (GERMAR)
3. Aedeagus with more elongated lobes and with basal part less transverse (fig. 683). ..... *S.* (*Hadromorphus*) *callidus* (BROWN)
-. Aedeagus with less elongated lobes and with basal part more transverse (fig. 686). ..... *S.* (*Hadromorphus*) *inutilis* (BROWN)

### *Selatosomus* (*Hadromorphus*) *callidus* (BROWN) comb. nov.

*Ludius callidus* BROWN, 1936b: 135.

Locus typicus: Creston (Canada).

DESCRIPTION

Length: 8.1-10.9 mm, width: 3.0-3.5 mm. Body black, without metallic polish; legs variable in colour, from light to dark brown, sometimes red yellow. Vestiture white. Male antennae do not reach tips of posterior angles of pronotum for a distance of one and a half segment, in female for a distance of two segements; segments somewhat thinner than in *S.* (*H.*) *inutilis* (BROWN); sculpture and vestiture of all segments similar, punctures sparse and very indistinct, hairs sparse and rather long. Lateral lobes of aedeagus with apices truncate and inner edge strongly bent (fig. 683). Remaining characters as in *S.* (*H.*) *inutilis* (BROWN).

DISTRIBUTION

Canada: British Columbia (Creston, Copper Mountain); USA: Idaho (Cedar Mt., Moscow).

BIONOMICS, ECOLOGY

Mountain species.

REMARKS

Closely related to *S.* (*H.*) *inutilis* (BROWN) from which it differs in the structure of aedeagus.

MATERIAL

Holotype, M ("Creston, B.C., 11 V 1928, leg. G. STACE SMITH", "No. 4067, Canadian National Collection, Ottawa"); allotype, F ("Creston, B.C., 5 VI 1931, leg. G. STACE SMITH", "Canadian National Collection, Ottawa") and 13 paratypes: 4 MM and 3 FF ("Creston, B.C., 11 V 1928, 5 VI 1931, leg. G. STACE SMITH", "Canadian National Collection, Ottawa"), 1 M and 4 FF ("Copper Mountain, B.C., VI and VII, 1929 and 1930, leg. G. STACE SMITH", "Canadian National Collection, Ottawa"), 1 M ("Cedar Mt., Moscow, Idaho, 24 VI 1920, leg. M. C. LANE", "Canadian National Collection, Ottawa").

### *Selatosomus* (*Hadromorphus*) *glaucus* (GERMAR)

*Hadromorphus glaucus* GERMAR, 1843: 76.
*Hadromorphus similissimus* MOTSCHULSKY, 1859: 374.
*similissimus* = *glaucus*: BROWN, 1936: 135.

Terra typica: Oregon (USA).

DESCRIPTION

Length: 7.4-9.1 mm, width: 2.9-3.6 mm. Both sexes of similar size and shape. Body black, lightly bronze, without metallic polish; legs black, claws red, sometimes tibiae and tarsi dark brown. Vestiture white grey. Head sparsely punctured; frons flat, medially depressed. Antennae of similar size as in *S.* (*H.*) *inflatus* (SAY); sometimes they reach tips of posterior angles of pronotum, but usually they do not reach them for a distance of terminal segment length in male and one and a half or two segments in female; segment II almost as long as but distinctly narrower than IV; III conical, almost 1/4 longer than wide; the rest indented, slightly triangularly widened, apical segment blunted. Pronotum slightly transverse, densely punctured, posterior angles distinctly laterally produced, with blunt tips provided with ridges. Puncturation of propleuron slightly coarser and in places not so dense as in *S.* (*H.*) *inflatus* (SAY). Scutellum with dense vestiture. Elytra of pronotum width and over twice longer poorly widened behind middle; rows distinct, intervals slightly convex,

densely punctured, somewhat wrinkled. Venter with denser and more delicate puncturation and vestiture than the rest of the body. Aedeagus (fig. 684) with square-edged apices of lateral lobes.

DISTRIBUTION

North America: USA (Oregon, Idaho, Utah, Washington, California) and Canada (British Columbia, Alberta). BROWN (1936) mentions very numerous specimens from the following localites: Moscow, Idaho; Logan, Utah; Wawawai and Tieton, Washington; Piedmont, Glenville, Woodacre, and Sequoia National Park, California; Vernon, Lumby, and Summerland, British Columbia; Magrath, Raymond, Cardston, and Medicine Hat, Alberta; and one specimen, *Hadromorphus similissimus*, San Francisco (California), leg. MOTSCHULSKY.

BIONOMICS, ECOLOGY

Agricultural pest.

REMARKS

Closely related to *S.* (*H.*) *inflatus* (SAY), from which it differs in body without metallic polish, darker legs and aedeagus structure.

### *Selatosomus* (*Hadromorpus*) *inflatus* (SAY)

*Elater inflatus* SAY, 1825: 258.
*Elater metallicus* SAY, 1825: 258.
*metallicus* = *inflatus*: BROWN, 1936b: 134.

Terra typica: Pennsylvania.

DESCRIPTION

Length: 8.0-12.0 mm, width: 2.8-4.5 mm. Female always somewhat wider and more convex than male. Body blackish with metallic polish (very distinct in specimens well preserved and stored); antennae brown, lighter at base; pronotum black; elytra dark brown; venter black brown; legs red yellow, femora sometimes darker. Vestiture cinereous, sometimes with faint yellow tint. Head sparsely punctured, with flat depression on frons. Male antennae do not reach tips of posterior angles of pronotum for a distance of one or two segements, in female for a distance of two and a half to three segments and there proportionally thinner; segments II and III with sparser, the rest with denser puncturation and vestiture; segment IV slightly longer than V. Pronotum slightly transverse, densely and delicately punctured; midline disappearing at anterior edge. Propleura not too coarsely and in places densely punctured. Scutellum oval, with dense vestiture. Elytra not too much over twice longer than pronotum; somewhat widened beyond middle, with distinct rows,

intervals almost flat, sometimes distinctly convex, finely punctured and slightly wrinkled. Apices of lateral lobes of aedeagus more widely rounded than in *S.* (*H.*) *glaucus* (GERM.) (fig. 685).

DISTRIBUTION

North America: USA (Pennsylvania, Indiana, New York, South Carolina, Massachesettes) and Canada (Ontario, Quebec). BROWN (1936) mentions 37 specimens from the following localites: Pittsburgh, and State College, Pennsylvania; Indiana; New York; Clemson College, South Carolina; Massachusetts; Arnprior, Trenton, and Strathroy, Ontario; and Aylmer, Quebec.

BIONOMICS, ECOLOGY

Agricultural pest.

REMARKS

Closely related to *S.* (*H.*) *glaucus* (GERM.), from which it differs in body with metallic polish, lighter legs and aedeagus structure.

### *Selatosomus* (*Hadromorphus*) *inutilis* (BROWN) comb. nov.

*Ludius inutilis* BROWN, 1936b: 136.

Locus typicus: Ben Lomond (California).

DESCRIPTION

Length: 7.6-9.8 mm, width: 3.0-3.5 mm. Body black, without metallic polish (occasionally specimens are encountered with indistinct violet polish on elytra); legs red brown. Vestiture white. Antennae do not reach tips of posterior angles of pronotum for a distance of two terminal segments. Aedeagus (fig. 686) with shorter and thicker lobes; its basal part more transverse. Remaining characters as in *S.* (*H.*) *callidus* (BROWN).

DISTRIBUTION

USA: California.

BIONOMICS, ECOLOGY

Unknown.

REMARKS

Closest related to *S.* (*H.*) *callidus* (BROWN) from which it differs clearly in aedeagus structure.

MATERIAL

Holotype, M ("Ben Lomond, California, 1932, leg. L. W. SAYLOR", "No. 4068, Canadian National Collection, Ottawa"); allotype, F ("Ben Lomond, California, 25 V 1932, leg. L. W. SAYLOR", "Canadian National Collection, Ottawa"); and 24 paratypes ("Ben Lomond, California, 1931 and 1932, leg. L. W. SAYLOR", "Canadian National Collection, Ottawa").

IV. CATALOGUE

## Genus *Selatosomus* Stephens

*Selatosomus* Stephens, 1830: 268.

Type species: *Elater aeneus* Linnaeus, 1758; designated by Westwood, 1840: 26.

Stephens, 1830: 268.-Thomson, 1864: 71; 1868: 96.-Seidlitz, 1888: 170; 1888a: 184.-Buysson, 1893-1906 (1894): 78, 88.-Everts, 1903: 125.-Reitter, 1910: 165, 171.-Schaufuss, 1916: 632.-Henriksen, 1913: 75, 78.-Jacobson, 1905-1916 (1913): 738.-Cherepanov, 1957: 278.-Leseigneur, 1972: 276.-Lohse, 1979: 153.-Guryeva, 1985: 565; 1989: 206.-Mardzhanjan, 1987: 55.

Biology: Schiödte, 1870: 519.-Emden, 1945: 13-37.-Jagemann, 1955: 223-233.-Cherepanov, 1957: 278-309; 1965: 71-88.-Dolin, 1964: 109-118; 1978: 52-58; 1982: 226-242.-Burakowski, 1971: 229-231; 1979: 194-195.-Burakowski et al. 1985: 172-182.

### Subgenus *Pristilophus* Latreille

*Pristilophus* Latreille, 1834: 151 (nec Germar, 1843: 82).

Type species: *Elater melancholicus* Fabricius, 1798, designated by Erichson, 1843: 174.

Latreille, 1834: 151.

***cruciatus* (Linnaeus, 1758: 404) (*Elater*)**

Distr.: Palearctic.

***festivus* (Leconte, 1860: 46) (*Corymbites*)**

Distr.: Manitoba and more western regions of North America.

***pulcher* (Leconte, 1853: 440) (*Corymbites*)**

Distr.: Ontario and more eastern regions of North America.

***edwardsi* (HORN, 1871: 324) (*Corymbites*)**

*cruciatus Edwardsi* (HORN, 1871: 324) (*Corymbites*)
*cruciatus ater* (VAN DYKE, 1932: 430, nec CANDÈZE, 1865: 55) (*Ludius*)

Distr.: North America: California, West Nevada.

***suckleyi* (LECONTE, 1857: 46) (*Corymbites*)**

Distr.: North America: Canada: British Columbia; USA: Washington, Oregon.

**subsp. s. str.**

*suckleyi* (subsp.) (BROWN, 1935: 6) (*Ludius*)
Distr.: North America: Canada: British Columbia; USA: Washington.

**subsp. *olympiae* (VAN DYKE, 1932: 431) (*Ludius*)**
Distr.: USA: Oregon.

***melancholicus* (FABRICIUS, 1798: 139) (*Elater*)**

*profugus* (FALDERMANN, 1835: 176) (*Ludius*)
*coerulescens* MOTSCHULSKY, 1860: 109.
*dauricus* CANDÈZE, 1863: 140, nec MOTSCHULSKY, 1859: 490.
*cenisius* (PIC, 1909: 105) (*Ludius*)

Distr.: Palaearctic.

**subsp. s. str.**

*melancholicus* (subsp.) GURYEVA, 1985: 572.
Distr.: Palearctic.

**subsp. *alpestris* (MÉNÉTRIÉS, 1832: 155) (*Elater*)**

*alpestris* (subsp.) GURYEVA, 1985: 572.
Distr.: Caucasus, Turkey.

**subsp. *tianshanicus* DENISOVA, 1948: 42.**
Distr.: South Kazakhstan, Kirgizstan.

***punctatissimus* (MÉNÉTRIÉS, 1851: 53) (*Diacanthus*)**

*spretus* (MANNERHEIM, 1852: 285) (*Diacanthus*), **syn. nov.**
*nigrita* (MANNERHEIM, 1852: 289) (*Diacanthus*)
*atriceps* (J. SAHLBERG, 1902-1903: 24) (*Ludius*)

Distr.: North Mongolia, Siberia, North-East China.

***morulus* (LECONTE, 1863: 85) (*Corymbites*)**

*brunnipes* (BLAND, 1864: 67) (*Corymbites*)

Distr.: North America: USA: Oregon, Washington, Montana, Alaska; Canada: Alberta, British Columbia, Yukon, Ontario.

***sexualis* (BROWN, 1935: 8) (*Ludius*)**

Distr.: North America: USA: Wyoming; Canada: Saskatchewan, Alberta.

***vagepictus* (LEWIS, 1894: 261) (*Corymbites*)**

Distr.: Japan: Kiushiu.

***pacatus* (LEWIS, 1894: 261) (*Corymbites*), comb. nov.**

Distr.:Japan: Honshiu.

***onerosus* (LEWIS, 1894: 260) (*Corymbites*)**

Distr.: Japan: Kiuhsiu, Honshiu.

***semivittatus* (SAY, 1823: 174) (*Elater*)**

Distr.: USA: Colorado, Nebraska, Dacota, Oregon.

## Subgenus *Selatosomus* s. str.

*Selatosomus* STEPHENS, 1830: 268.
*Diacanthus* LATREILLE, 1834: 151.
*Aphotistus* KIRBY, 1837: 149.

Type species: *Elater aeneus* LINNAEUS, 1758; designated by WESTWOOD, 1840: 26.

STEPHENS, 1830: 268.-LATREILLE, 1834: 151.-KIRBY, 1837: 149.-KISHII, 1966: 53.-OHIRA, 1970: 17, 19.-DOLIN, 1982: 230.-GURYEVA, 1989: 235.

***puberulus* (CANDÈZE, 1879: 282) (*Corymbites*)**

Distr.: East Siberia, North-East China, Korea.

***aeneomicans* (FAIRMAIRE, 1889: 33) (*Corymbites*)**

Distr.: Middle China: Guizhou.

***albipubens* REITTER, 1910: 166**

Distr.: North-Middle China: Qinghai, North Sichuan.

***aeneus* (LINNAEUS, 1758: 406) (*Elater*)**

*germanus* (LINNAEUS, 1761: 207) (*Elater*)
*nitens* (SCOPOLI, 1763: 91) (*Elater*)
*viridinitens* (VOET, 1769: 118) (*Elater*)
*aeneusrufipes* (DE GEER, 1774: 149) (*Elater*)
*coeruleus* (HERBST, 1784: 11) (*Elater*)
*impressus* (MARSHAM, 1802: 387) (*Elater*), nec FABRICIUS, 1792: 223.
*cyaneus* (MARSHAM. 1802: 388) (*Elater*)
*mutator* (REY, 1891: 85) (*Corymbites*), **syn. nov.**
*subrugosicollis* (REY, 1891: 85) (*Corymbites*), **syn. nov.**
*superbus* (DANIEL, 1903: 252) (*Ludius*), **syn. nov.**
*bescidicus* REITTER, 1910: 166, **syn. nov.**
*submontanus* REITTER, 1910: 166, **syn. nov.**
*subpuberulus* REITTER, 1910: 166, **syn. nov.**
*hispanicus* REITTER, 1910: 167.
*viturati* PIC, 1910: 67.
*bicolor* DEPOLI, 1913: 22, **syn. nov.**
*vanrooni* EVERTS, 1922: 340, **syn. nov.**
*viridescens* DEPOLI, 1928: 229, **syn. nov.**
*violaceus* MARCU, 1933: 53, **syn. nov.**, nec CANDÈZE, 1889: 115.
*marginatus* PAPP, 1943: 209, **syn. nov.**
*dahuricus* (MANNERHEIM) (*Diacanthus*), **nom. nud.**

Distr.: Europe, Caucasus, Siberia.

***puncticollis* MOTSCHULSKY, 1866: 167**

*reichardti* GUSEV, 1954: 34, nec DENISOVA, 1948: 42.

Distr.: Japan, Sakhalin, Kuril Islands.

***miyajimana* (OHIRA, 1971: 39) (*Aphotistus*)**

Distr.: Japan: Honshiu.

***reichardti* DENISOVA, 1948: 42**

*puberulus* REITTER, 1910: 166, nec CANDÈZE, 1879: 282.

Distr.: East Siberia, North Mongolia, North-East China, Sakhalin, North Korea, Japan.

***songoricus* (KRAATZ, 1879: 283) (*Corymbites*)**

Distr.: Siberia: Chr. Tarbagataj, Chr. Saur, West Altaj (Chr. Kalbinskij), Mongolia (Mongol Altaj).

***caucasicus* (MÈNÈTRIÉS, 1832: 155) (*Elater*)**

*plorator* (CANDÈZE, 1889: 144) (*Corymbites*)
*violaceus* (CANDÈZE, 1889: 115) (*Corymbites*)
*amplicollis* subsp. *circassicus* REITTER, 1910: 169.

Distr.: Caucasus: Dagestan, Azerbaijan, Armenia.

***graecus* sp. nov.**

Distr.: Greece.

***amplicollis* (GERMAR, 1843: 80) (*Diacanthus*)**

*pyrenaeus* (LAPORTE DE CASTELNAU, 1840: 241) (*Ludius*), nec CHARPENTIER, 1825: 189.
*lugubris* DUFOUR, 1851: 326.
*rufoabdominalis* XAMBEU, 1909: 294, **syn. nov.**
*paganettii* REITTER, 1910: 168.
*montenegrinus* REITTER, 1910: 168, **syn. nov.**
*lugubricus* REITTER, 1910: 169, **syn. nov.**
*buyssoni* SZOMBATHY, 1910: 579, **syn. nov.**

Distr.: Pyrenees, Alps, Balkans (Bulgaria, Greece), Asia Minor, Syria.

***punctipennis* REITTER, 1910: 169**

Distr.: Asia Minor (Turkey).

***centralis* (CANDÈZE, 1881: 96) (*Corymbites*)**

Distr.: North-East Mongolia, Middle and North-East China.

***lateralis* (LECONTE, 1853: 439) (*Corymbites*)**

Distr.: North America: USA: Oregon; Canada: British Columbia; ? Japan (Hokkaido).

***whitii* (CANDÈZE, 1863: 171) (*Corymbites*)**

Distr.: Himalayas, Kashmir.

***confluens* (GEBLER, 1829: 80) (*Elater*)**

*rugosus* (GERMAR, 1835: nr 7) (*Ludius*)

Distr.: Europe, Siberia, Japan.

**subsp. nominotype**
*confluens* (subsp.) BURAKOWSKI et al. 1985: 174.
Distr.: Siberia, Japan.

**subsp. *rugosus***
*rugosus* (subsp.) BURAKOWSKI et al. 1985: 174.
Distr.: Europe.

***gloriosus* (KISHII, 1955: 78) (*Diacanthus*)**

*rugosus* (MIWA, 1928: 140) (*Corymbites*), nec GERMAR, 1835: nr 7.

Distr.: Siberia, Korea, Sakhalin, Šantarskije and Aleutian Islands, Japan, Alaska.

***alekseevi* DOLIN et PENEV, 1988: 25**

Distr.: Central Caucasus.

***jailensis* DOLIN, 1971: 645**

Distr.: Krim.

***tauricus* DOLIN, 1975: 1619, stat. nov.**

Distr.: Krim.

***latus* (FABRICIUS, 1801: 232) (*Elater*)**

*pectinicornis* (FOURCROY, 1785: 37) (*Elater*), nec LINNAEUS, 1758: 406.
*germanus* (OLIVIER, 1790-nr 31: 24) (*Elater*), nec LINNAEUS, 1761: 207.
*gravidus* (GERMAR, 1843: 78) (*Diacanthus*)
*milo* (GERMAR, 1843: 78) (*Diacanthus*)
*corpulentus* (CANDÈZE, 1879a: 283) (*Corymbites*)
*sulcatus* (CANDÈZE, 1881: 96) (*Corymbites*), **syn. nov.**
*subrubripes* (PIC, 1909: 105) (*Ludius*), **syn. nov.**

*karabachensis* (SCHWARZ) (*Ludius*), **nom. nud.**

Distr.: Palearctic.

***saginatus* (MÉNÉTRIÉS, 1832: 154) (*Elater*)**

*pasticus* (MÉNÉTRIÉS, 1832: 154) (*Elater*).

Didtr.: Dagestan, Azerbaijn, Armenia, Iran, North-East Turkey .

***puerilis* (CANDÈZE, 1873: 26) (*Corymbites*), comb. nov.**

Distr.: Japan: Kiushiu.

***latissimus* REITTER, 1910: 171**

Distr.: Asia Minor (Turkey).

***salebrosus* GURYEVA, 1989: 257**

Distr.: North-East China: Daxing'anling.

***armeniacus* DOLIN, 1982a: 20**

Distr.: Caucasus: Armenia, North-East Turkey.

***roborowskyi* (KOENIG, 1889: 538) (*Corymbites*)**

Distr.: China: Tibet.

***pecirkanus* REITTER, 1910: 167**

Distr.: Azerbaijan: Nakhichevan, Talyšskye Gory.

***ampliatus* (FAIRMAIRE, 1891: CXXVII) (*Diacanthus*)**

Distr.: Kashmir.

**Subgenus *Warchalowskia* nov.**

Type species: *Corymbites atratus* BALLION, 1878; by present designation.

***karabachensis* DOLIN, 1982a: 24**

Distr.: Azerbaijn: Karabachskij Chr.

***ampliformis* REITTER, 1910: 171**

Distr.: Azerbaijn: Talyshskye Gory.

***logvinenkoae* DOLIN, 1982a: 21**

Distr.: Armenia; Azerbaijn: Nakhichevan.

***acceptus* GURYEVA, 1989: 262**

Distr.: Azerbaijn: Nakhichevan; Turkestan: Chr. Kopetdag

***informis* (KRAATZ, 1879a: 287) (*Corymbites*)**

*paradoxus* (KOENIG, 1887: 354) (*Corymbites*)
*fraterculus* GURYEVA, 1978: 143.

Distr.: Kazakhstan: Dzhungarski Alatau.

***persimilis* DOLIN, 1982a: 22**

Distr.: Tadzhikistan.

***mirus* GURYEVA, 1972: 299**

Distr.: South Tadzhikistan.

***mirificus* GURYEVA, 1972: 301**

Distr.: Tadzhikistan.

***atratus* (BALLION, 1878: 293) (*Corymbites*)**

*macropalpus* REITTER, 1910: 170.

Distr.: Chr. Zailijskij Alatau (Kazakhstan, Kirgizstan).

***theresae* sp. nov.**

Distr.: Kazakhstan.

***lemniscatus* Denisova, 1948: 43**

Distr.: South Kirgizstan.

***turkestanicus* sp. nov.**

Distr.: Middle Asia.

***denisovae* Guryeva, 1978: 142**

Distr.: Uzbekistan.

***victor* Guryeva, 1982: 545**

Distr.: Kirgizstan (Alatau).

### Subgenus *Selatapteria* nov.

Type species: *Selatosomus messorobius* Dolin, 1971; by present designation.

***jakobsoni* Stepanov, 1930: 87**

Distr.: Uzbekstan: Chatkal'skij Chr.

***messorobius* Dolin, 1971: 647**

Distr.: Kazakhstan: Zailijskij Alatau.

### Subgenus *Hadromorphus* Motschulsky

*Hadromorphus* Motschulsky, 1859: 374.

Type species: *Elater inflatus* Say, 1825: 258; designated by Hyslop, 1921: 647.

Motschulsky, 1859: 374, 375.-Schenkling, 1927: 395.-Brown, 1936: 133.-Glen, 1950: 49.-Guryeva, 1989: 273.

***inflatus* (Say, 1825: 258) (*Elater*)**

*metalicus* (Say, 1825: 258) (*Elater*)

Distr.: USA: Pensylvania, Indiana, New York, South Carolina, Massachusetts; Canada: Ontario, Quebec.

***glaucus* (GERMAR, 1843: 76) (*Diacanthus*)**

*similissimus* (MOTSCHULSKY, 1859: 374) (*Hadromorphus*)

Distr.: USA: Oregon, Idaho, Utah, Washington, California; Canada: British Columbia, Alberta.

***callidus* (BROWN, 1936b: 135) (*Ludius*)**

Distr.: USA: Idaho; Canada: British Columbia.

***inutilis* (BROWN, 1936b: 136) (*Ludius*)**

Distr.: USA: California.

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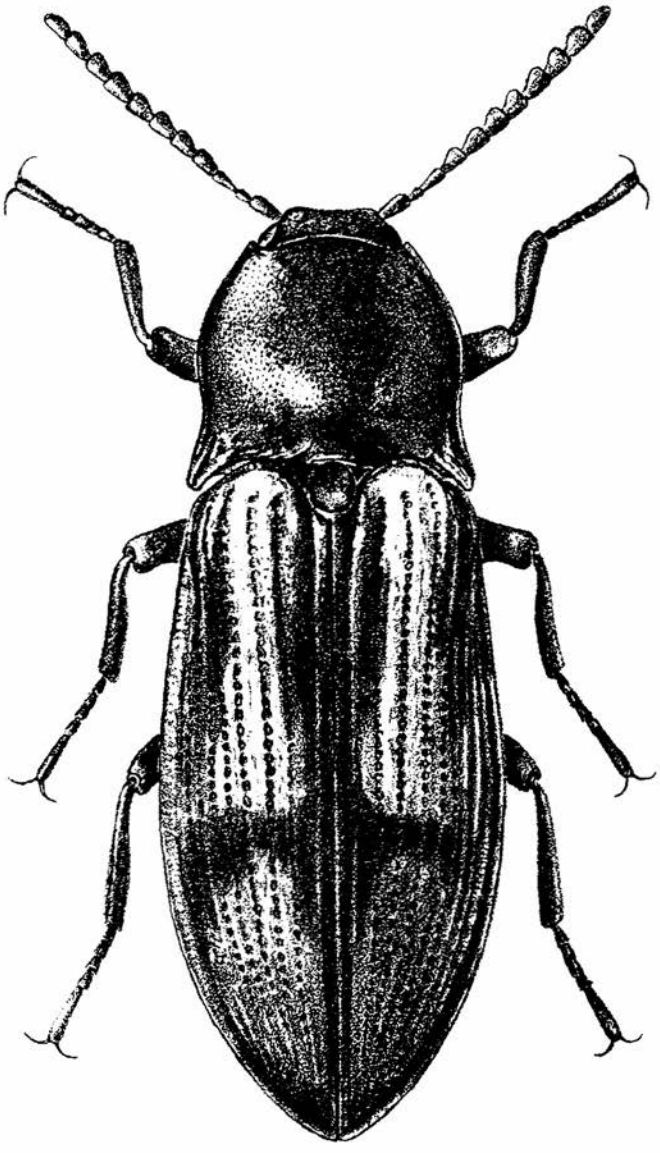
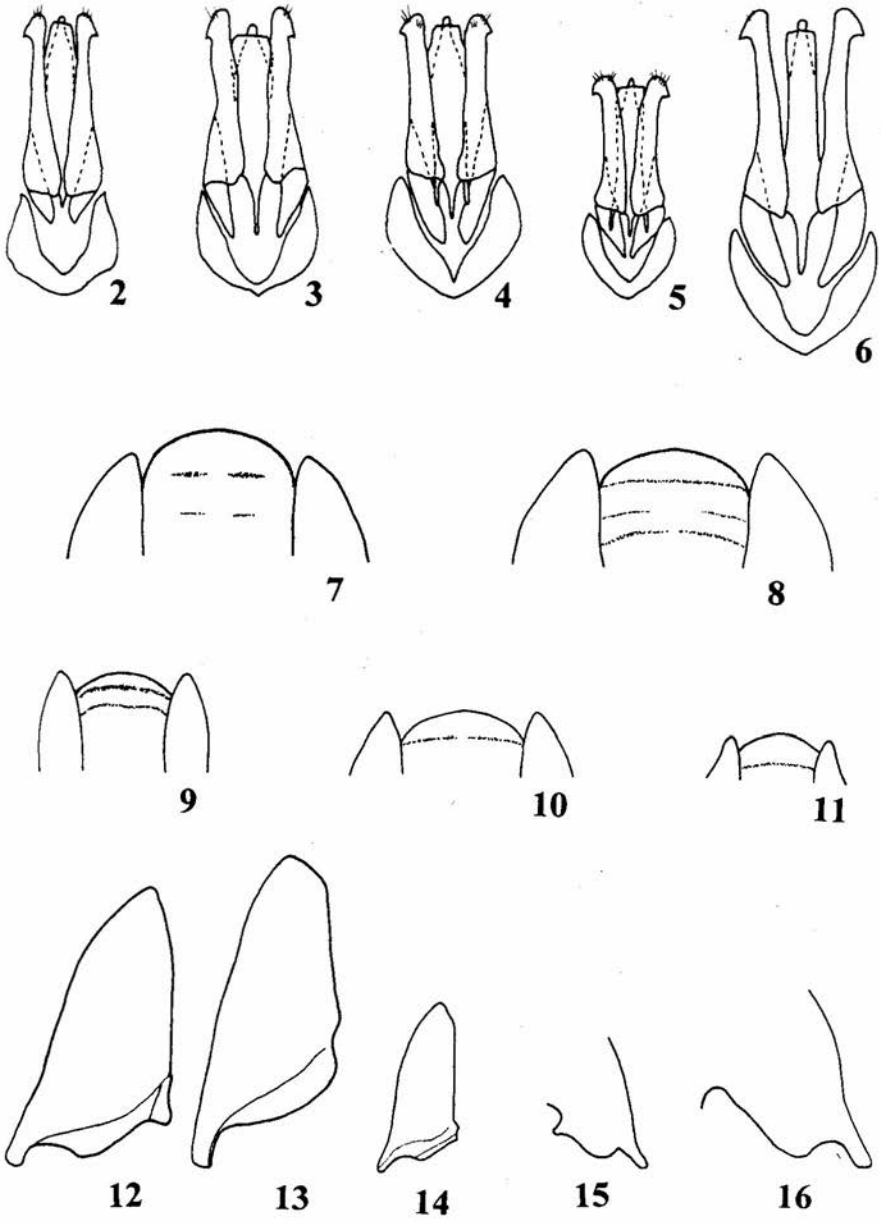
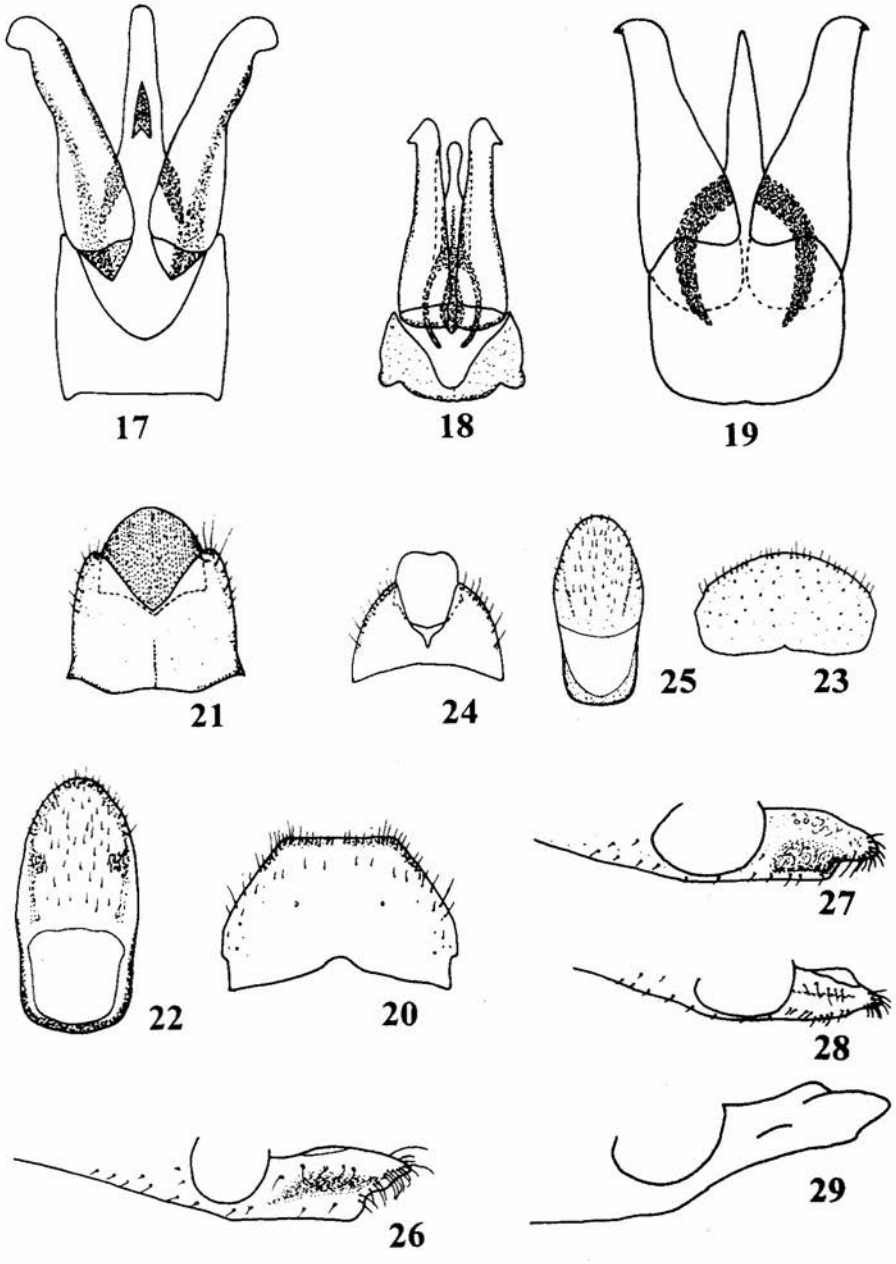
# VI. FIGURES



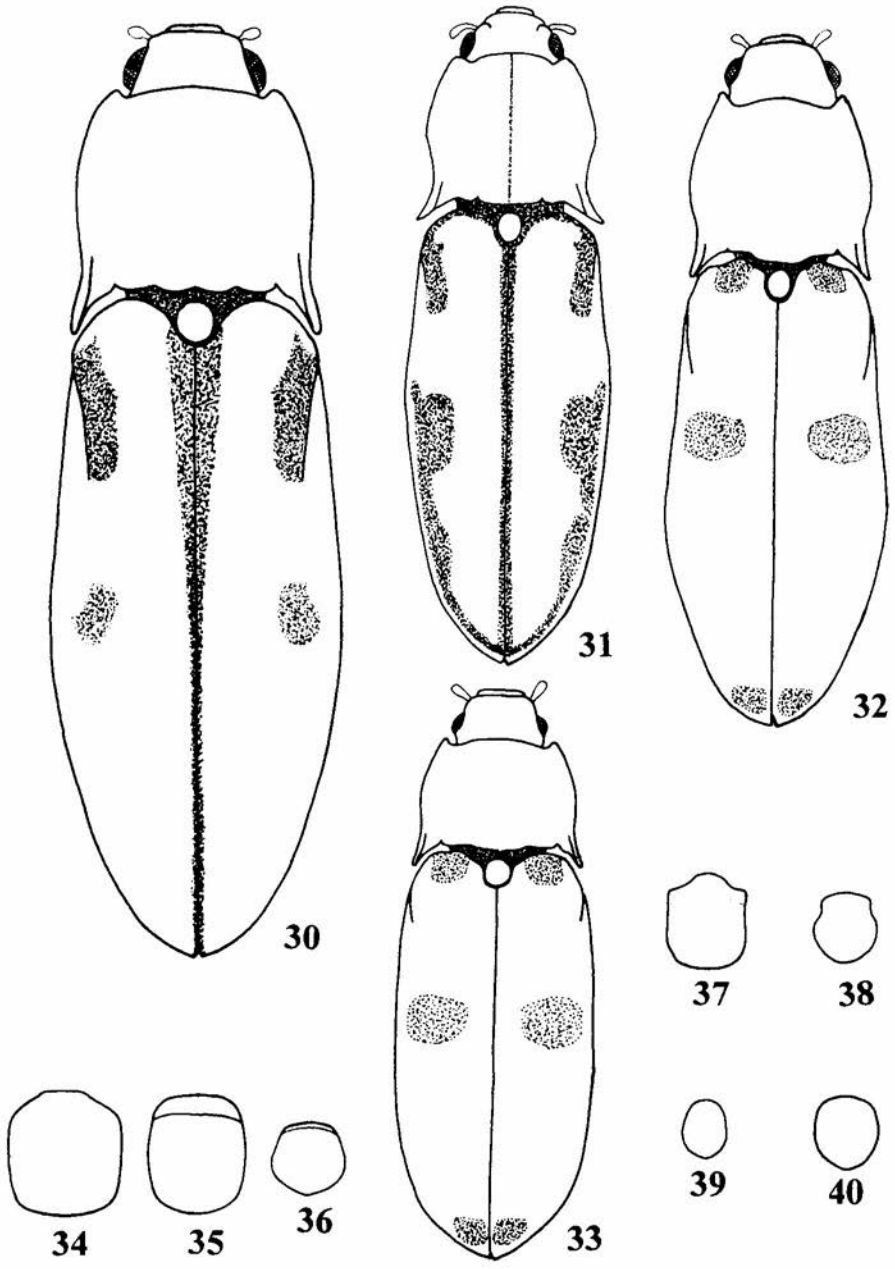
1. *Selatosomus* (*P.*) *cruciatus*, dorsal view (by J. KANIA)



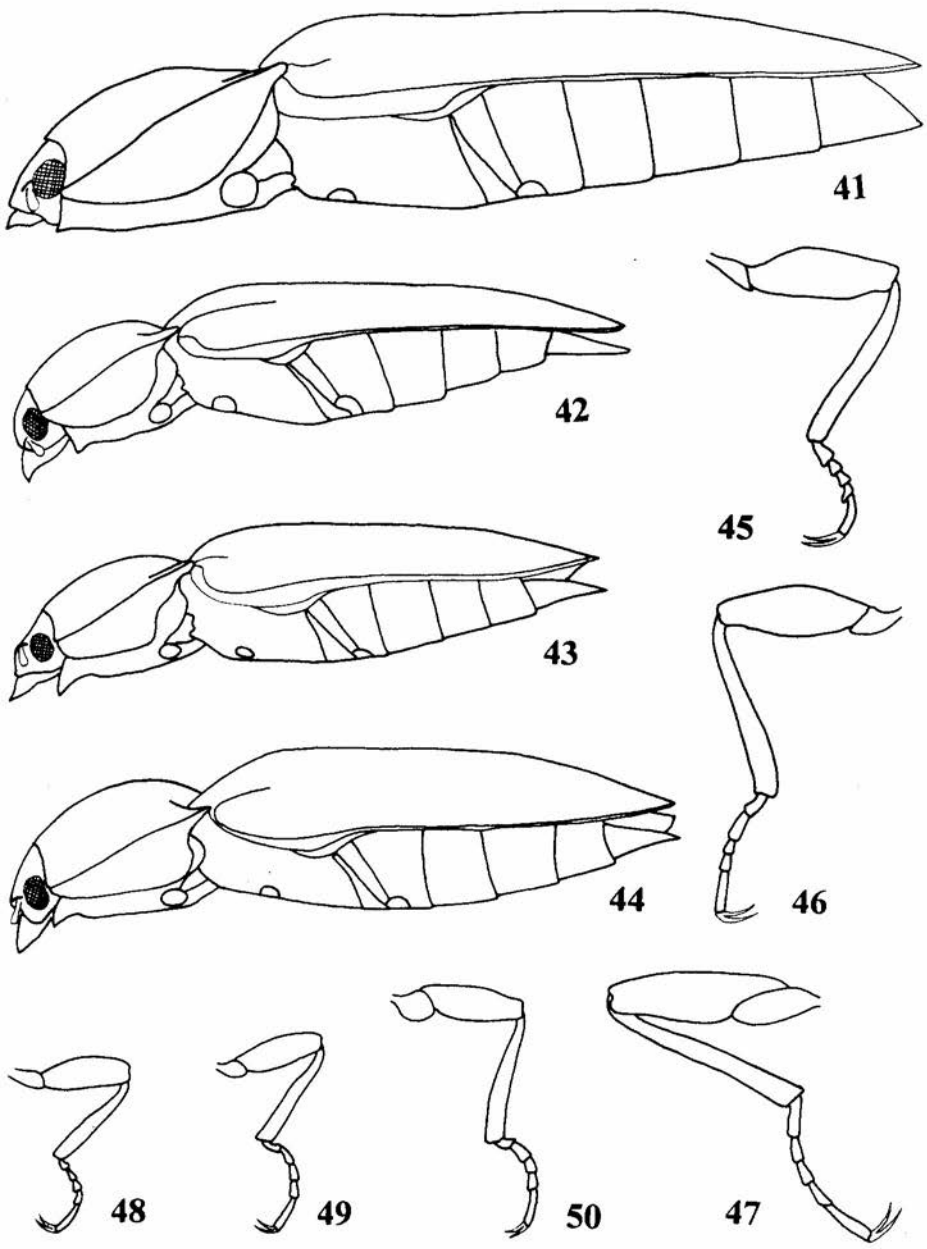

2-6, 8, 13 - *Selatosomus* (*P.*) *melancholicus*; 7, 12 - *S.* (*P.*) *cruciatus*; 9, 14 - *S.* (*P.*) *punctatisimus*; 10, 16 - *S.* (*P.*) *onerosus*; 11, 15 - *S.* (*P.*) *pacatus*; 2-6 - aedeagus: 2 - *S.* (*P.*) *m. melancholicus*, 3 - *S.* (*P.*) *m. alpestris*, 4 - *S.* (*P.*) *m.* ab. *anxius*, 5 - *S.* (*P.*) *m. tianshanicus*, 6 - *S.* (*P.*) *m.* ab. *scabricollis*; 7-11 - prosternal collar; 12-14 - pronotal epipleuron; 15, 16 - posterior angle of pronotal epipleuron; 8-11, 13-16 - M; 7, 12 - F (2-6 - after GURYEVA, 1985)



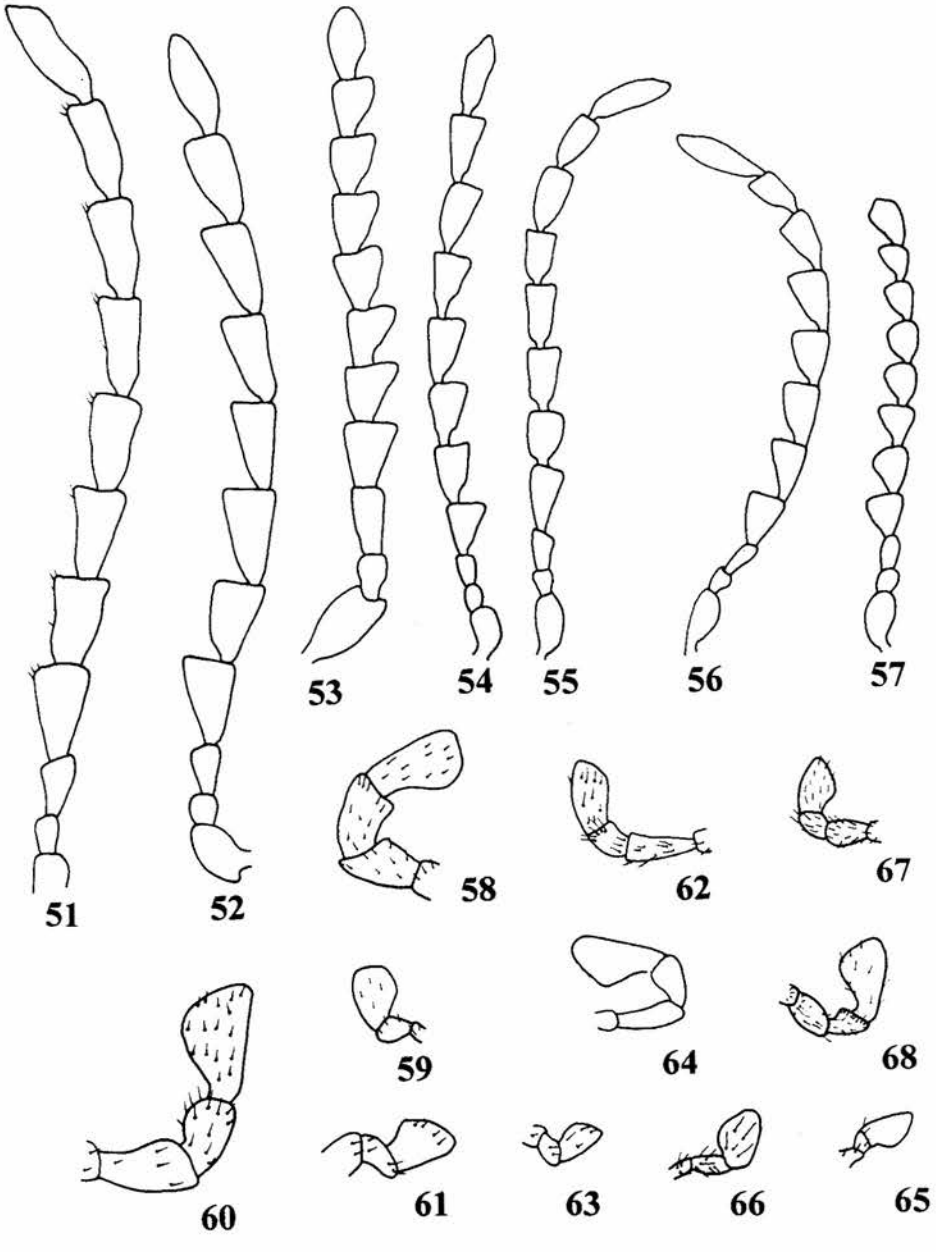

17, 20-22, 26 - *S. (P.) cruciatus*; 18, 23-25, 28 - *S. (P.) punctatissimus*; 19 - *S. (P.) onerosus*; 27 - *S. (P.) melancholicus*; 29 - *S. (P.) vagepictus*; 17-19 - aedeagus; 20-25 - terminal abdominal segments in M: 20, 23 - tergite VIII, 21, 24 - tergites IX and X, 22, 25 - sternite IX; 26-29 - posterior process of prosternum in F (29 - after GURYEVA, 1985)



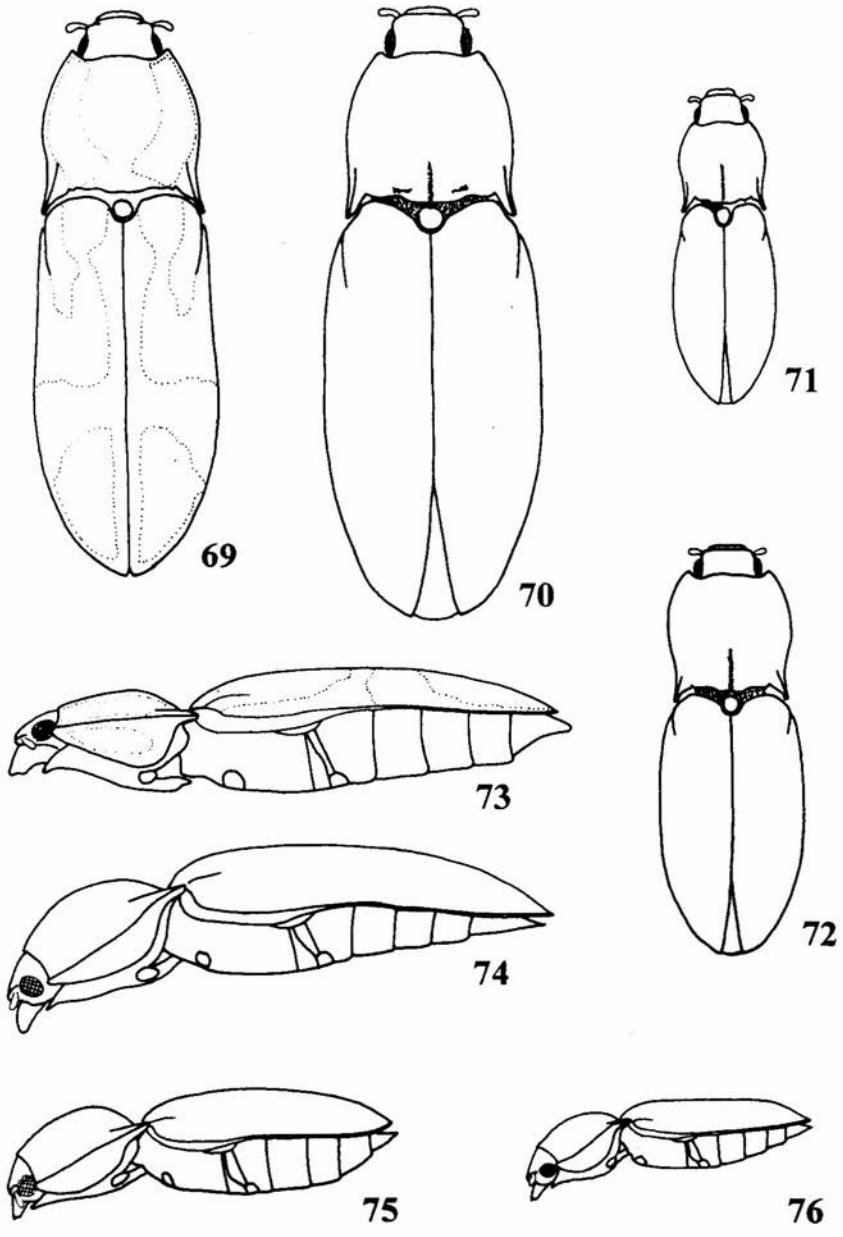

30, 37 - *S. (P.) onerosus*; 31, 38 - *S. (P.) pacatus*; 32, 33, 39, 40 - *S. (P.) vagepictus*; 34 - *S. (P.) cruciatus*; 35 - *S. (P.) melancholicus*; 36 - *S. (P.) punctatissimus*; 30-33 - habitus, dorsal view; 34-40 - scutellum; 30, 31, 33, 35-39 - M; 32, 34, 40 - F



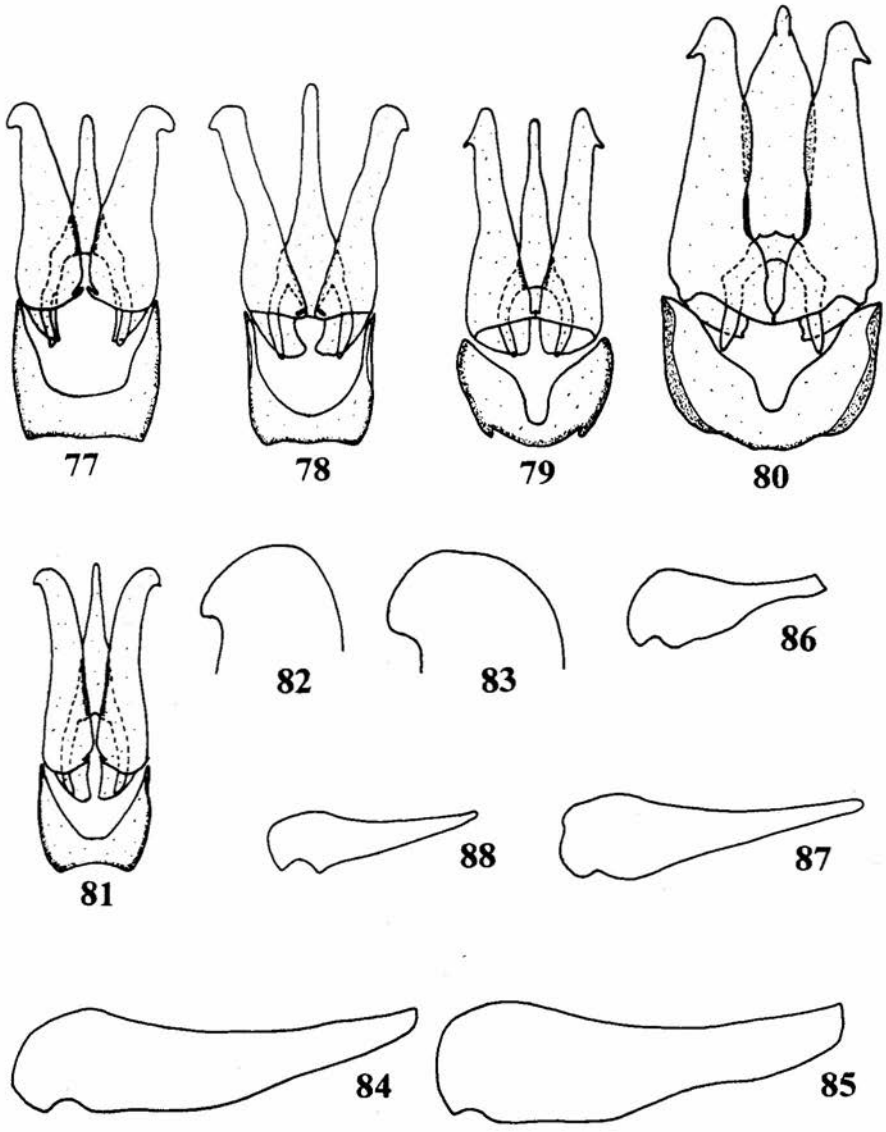

41 - *S.* (*P.*) *onerosus*; 42, 48-50 - *S.* (*P.*) *pacatus*; 43, 44 - *S.* (*P.*) *vagepictus*; 45-47 - *S.* (*P.*) *cruciatus*; 41-44 - habitus, lateral view; 45-50 - leg: 45, 48 - fore, 46, 49 - mid, 47, 50 - hind; 41-43, 48-50- M; 44-47 - F



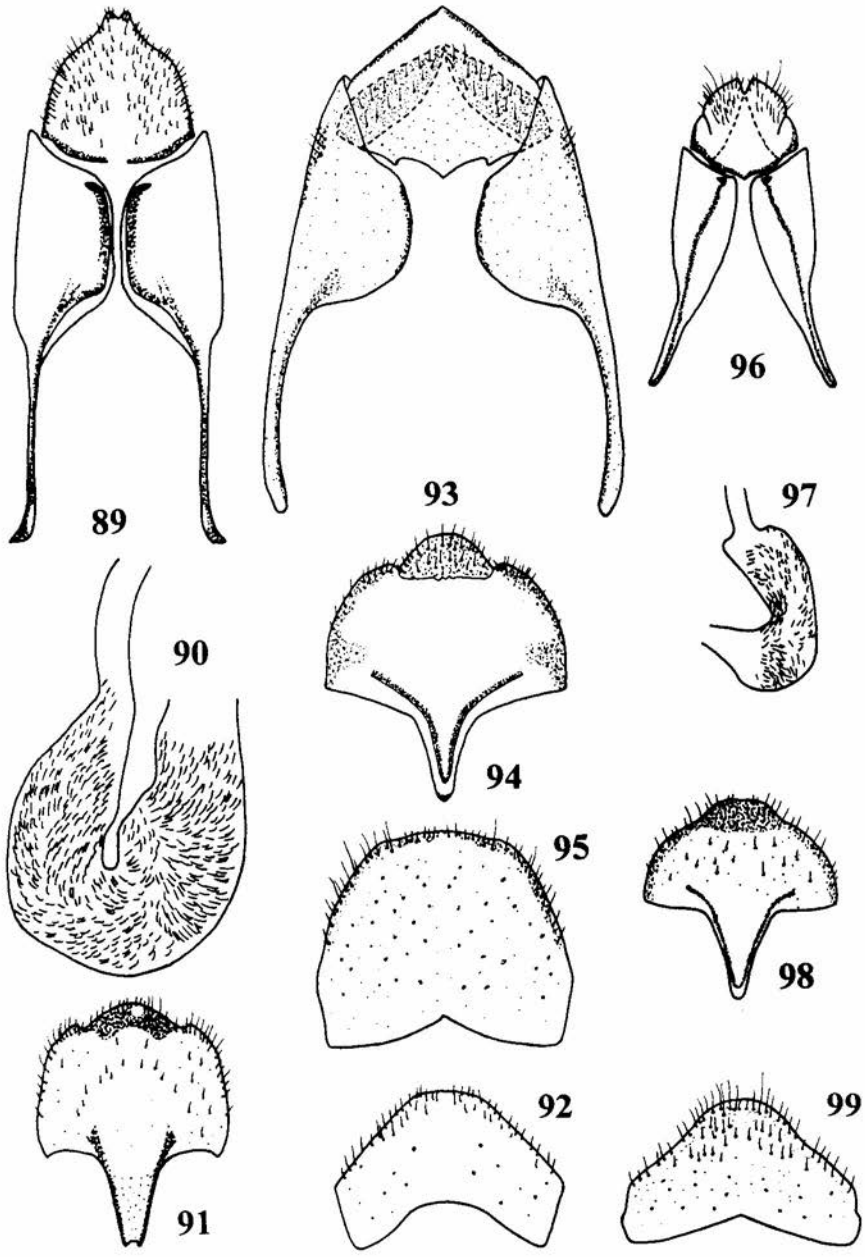

51, 60, 61 - *S.* (*P.*) *melancholicus*; 52, 66, 67 - *S.* (*P.*) *onerosus*; 53, 58, 59 - *S.* (*P.*) *cruciatus*; 54, 57, 68 - *S.* (*P.*) *vagepictus*; 55, 62, 63 - *S.* (*P.*) *punctatissimus*; 56, 64, 65 - *S.* (*P.*) *pacatus*; 52-57 - antennae; 58, 60, 62, 64, 67, 68 - maxillary palp; 59, 61, 63, 65, 66 - labial palp; 51, 52, 54-56, 60-68 - M; 53, 57-59 - F (57 - after Guryeva)



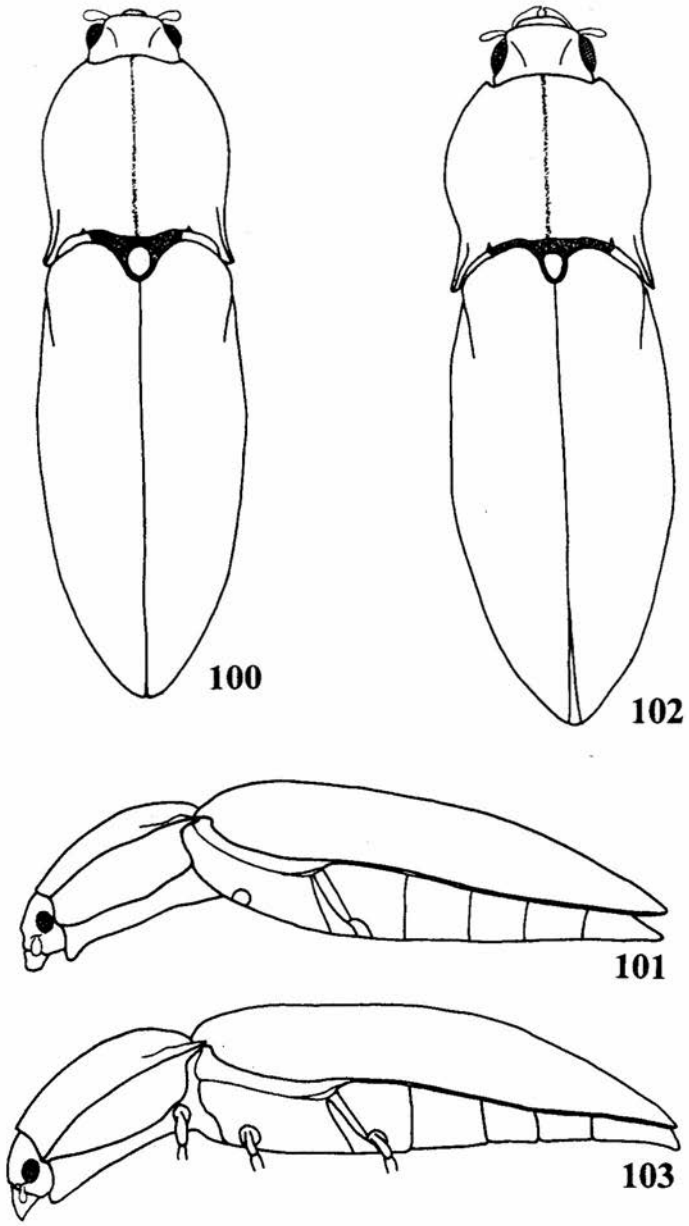

69, 73 - *S.* (*P.*) *cruciatus*; 70, 74 - *S.* (*P.*) *melancholicus*; 71, 72, 75, 76 - *S.* (*P.*) *punctatissimus*; 69-72 - habitus, dorsal view; 73-76 - habitus, lateral view; 70, 71, 74, 76 - M; 69, 72, 73, 75 - F



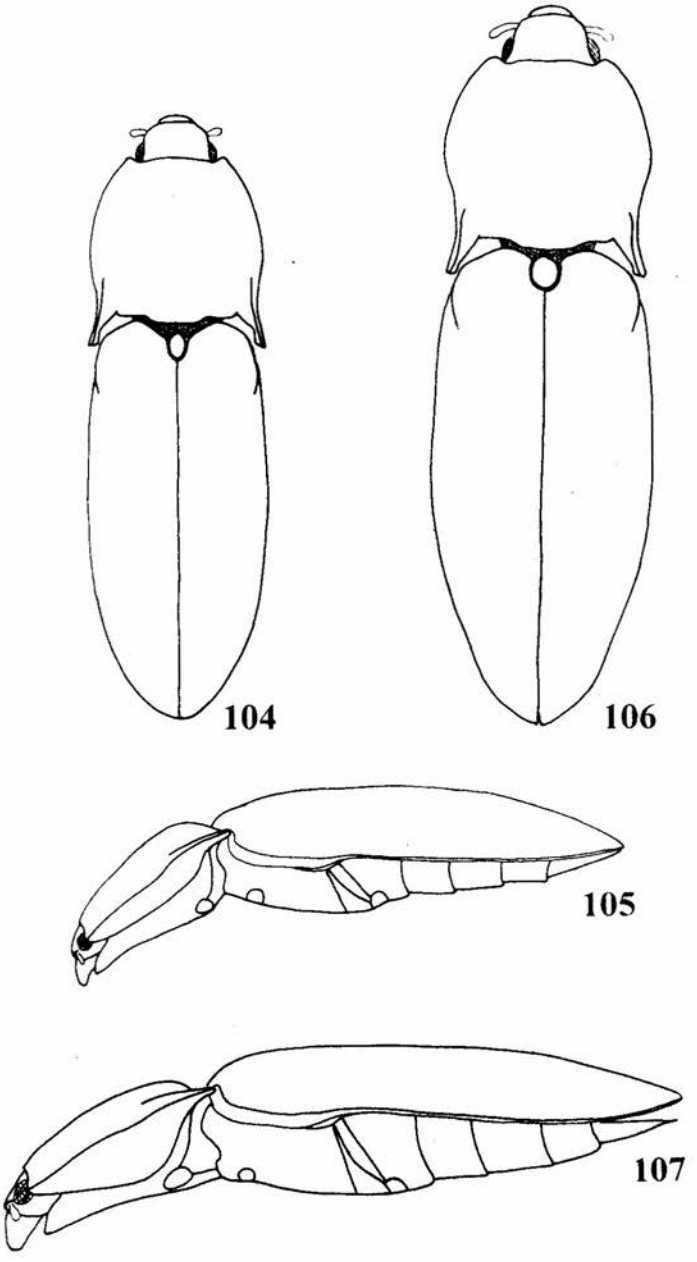

77 - *S. (P.) pulcher*; 78 - *S. (P.) edwardsi*; 79 - *S. (P.) sexualis*; 80 - *S. (P.) morulus*; 81 - *S. (P.) semivittatus*; 82, 87 - *S. (P.) onerosus*; 83 - *S. (P.) vagepictus*; 84 - *S. (P.) cruciatus*; 85 - *S. (P.) melancholicus*; 86 - *S. (P.) punctatissimus*; 88 - *S. (P.) pacatus*; 77-81 - aedeagus; 82-83 - termination of aedeagus paramera; 84-88 - femoral plates of hind legs; 77-81, 85-88 - M; 84 - F (77-80 - after BROWN, 1935; 82-83 - after OHIRA, 1970)



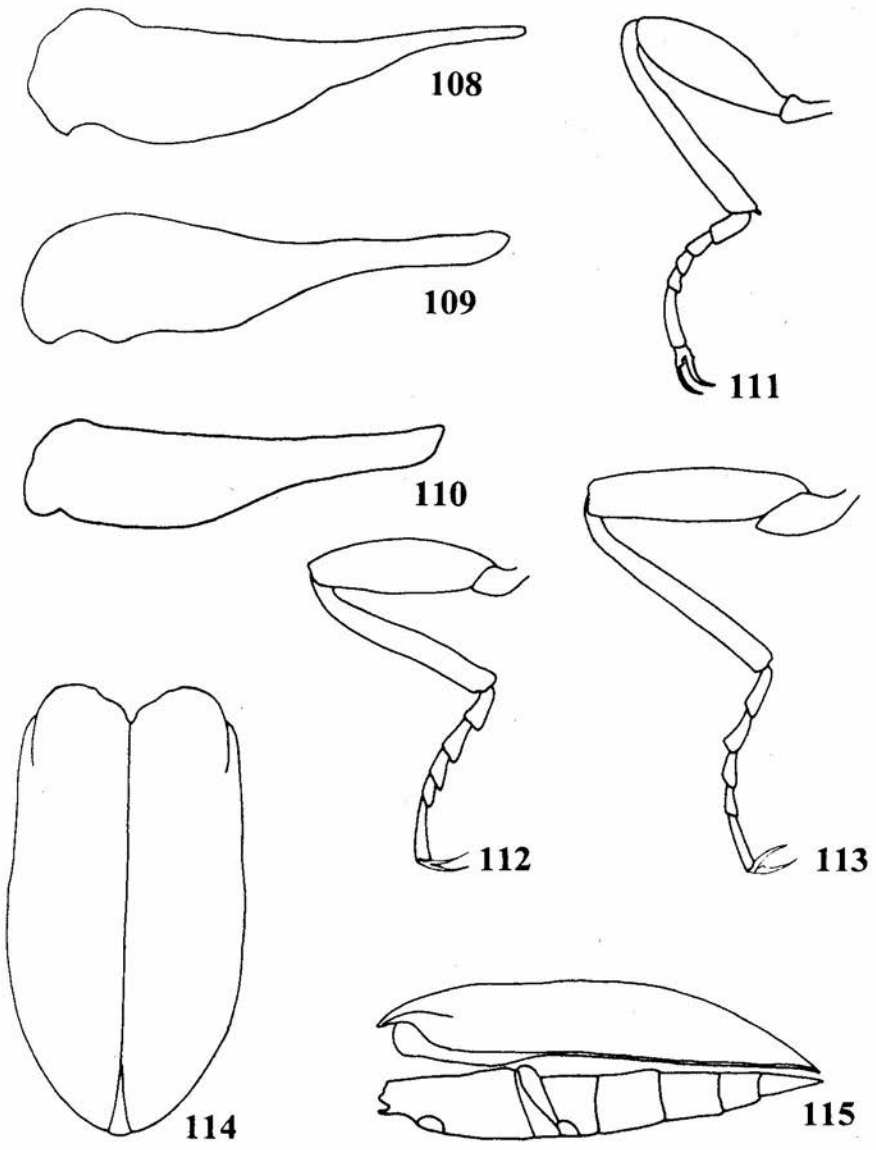

89-99. Female: 89-92 - *S.* (*P.*) *cruciatus*; 93-95 - *S.* (*P.*) *melancholicus*; 96-99 - *S.* (*P.*) *punctatissimus*; 89, 93, 96 - ovipositor; 90, 97 - seminal vesicle; 92, 95, 99 - VIII abdominal tergite; 91, 94, 98 - VIII abdominal sternite



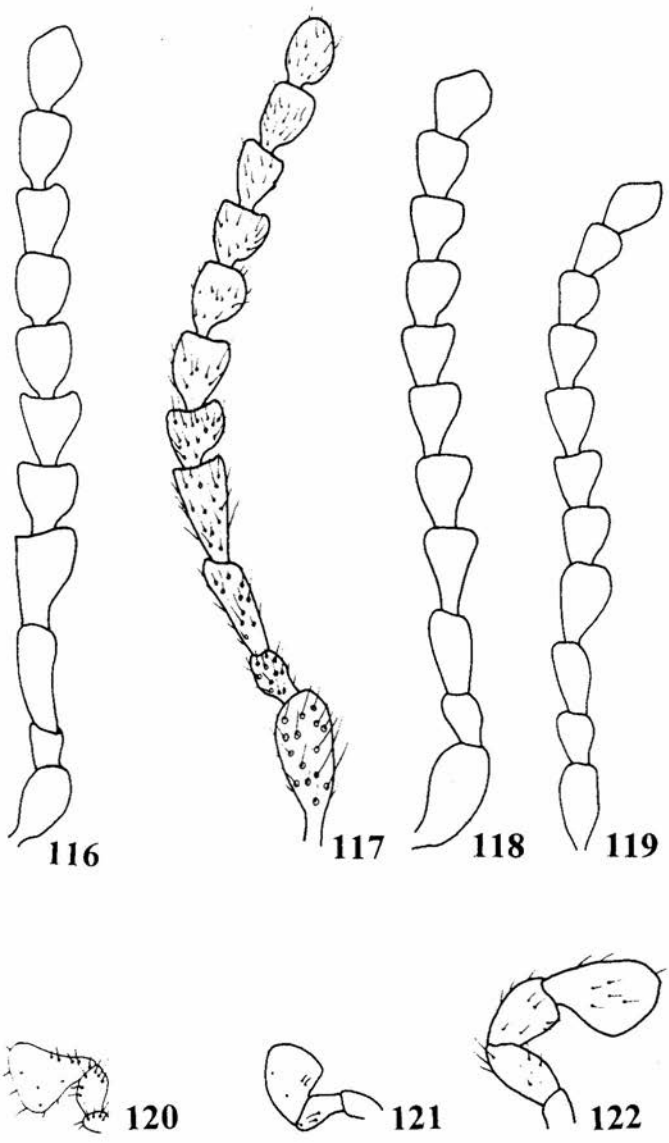

100-103. *S.* (s. str.) *aeneomicans*: 100, 101 - M, 102, 103 - F; 100, 102 - habitus, dorsal view, 101, 103 - habitus, lateral view



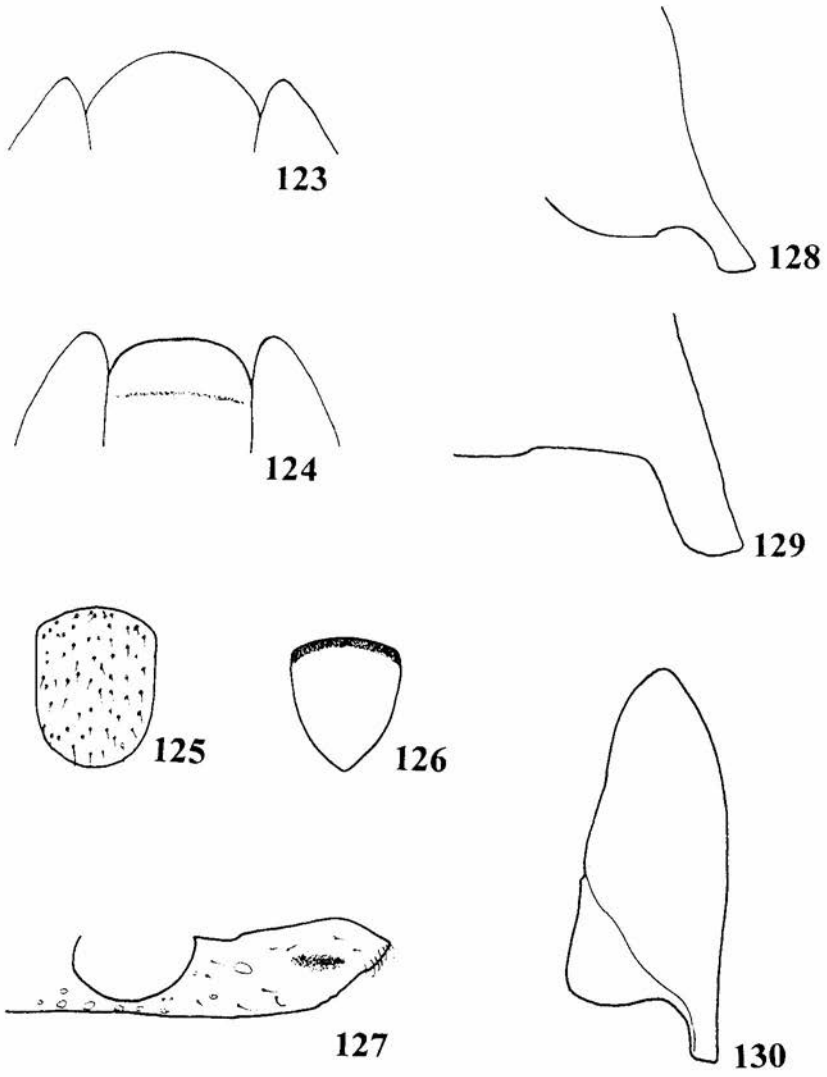

104-107. *S.* (s. str.) *puberulus*: 104-105 - M, 106, 107 - F; 104-106 - habitus, dorsal view, 105-107 - habitus, lateral view




108,111 - *S.* (s. str.) *aeneomicans*; 109, 112-115 - *S.* (s. str.) *albipubens*; 110 - *S.* (s. str.) *puberulus*; 108-110 - femoral plates of hind legs; 111-113 - legs: 111 - fore, 112 - mid, 113 - hind; 114 - elytra, dorsal view; 115 - elytra and abdomen, lateral view

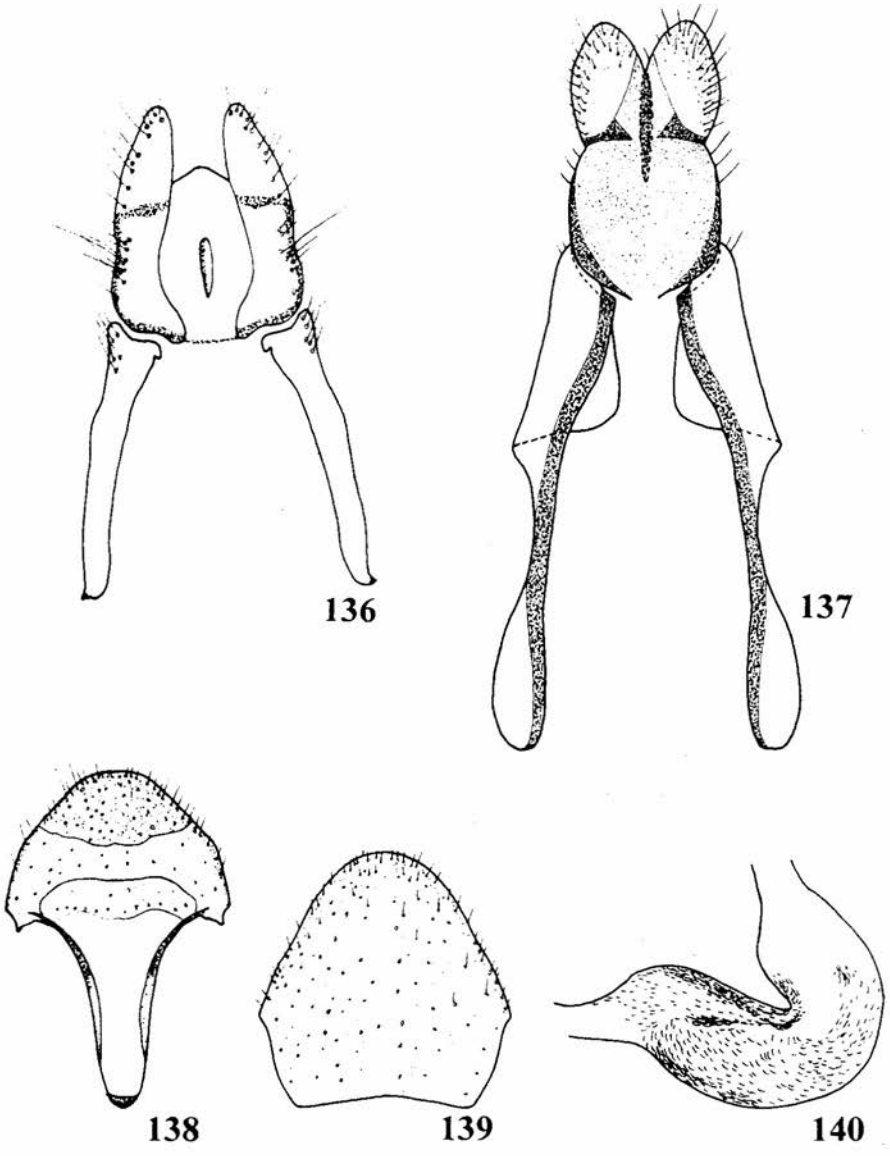



116, 117, 120 - *S.* (s. str.) *aeneomicans*; 118, 119, 121, 122 - *S.* (s. str.) *puberulus*; 116-119 - antennae; 120, 121 - labial palp; 122 - maxillary palp; 116, 119, 121, 122 - M; 117, 118, 120 - F

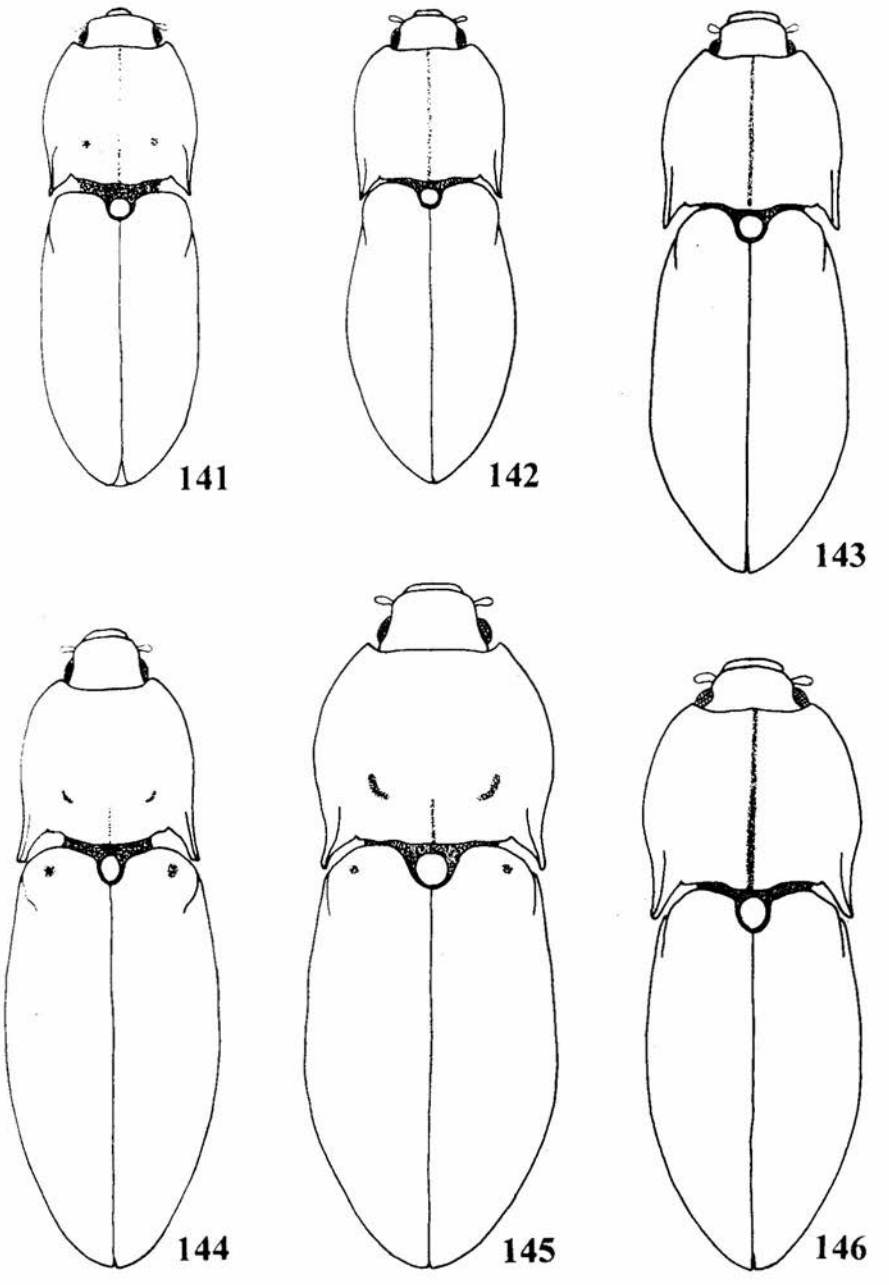



123, 125, 128 - *S.* (s. str.) *aeneomicans*; 124, 126, 127, 129, 130 - *S.* (s. str.) *puberulus*; 123, 124 - prosternal collar; 125, 126 - scutellum; 127 - posterior process of prosternum; 128, 129 - posterior angle of pronotal epipleuron; 130 - pronotal epipleuron; 124, 126, 127, 129, 130 - M; 125, 128 - F (129 - after GURYEVA, 1985)

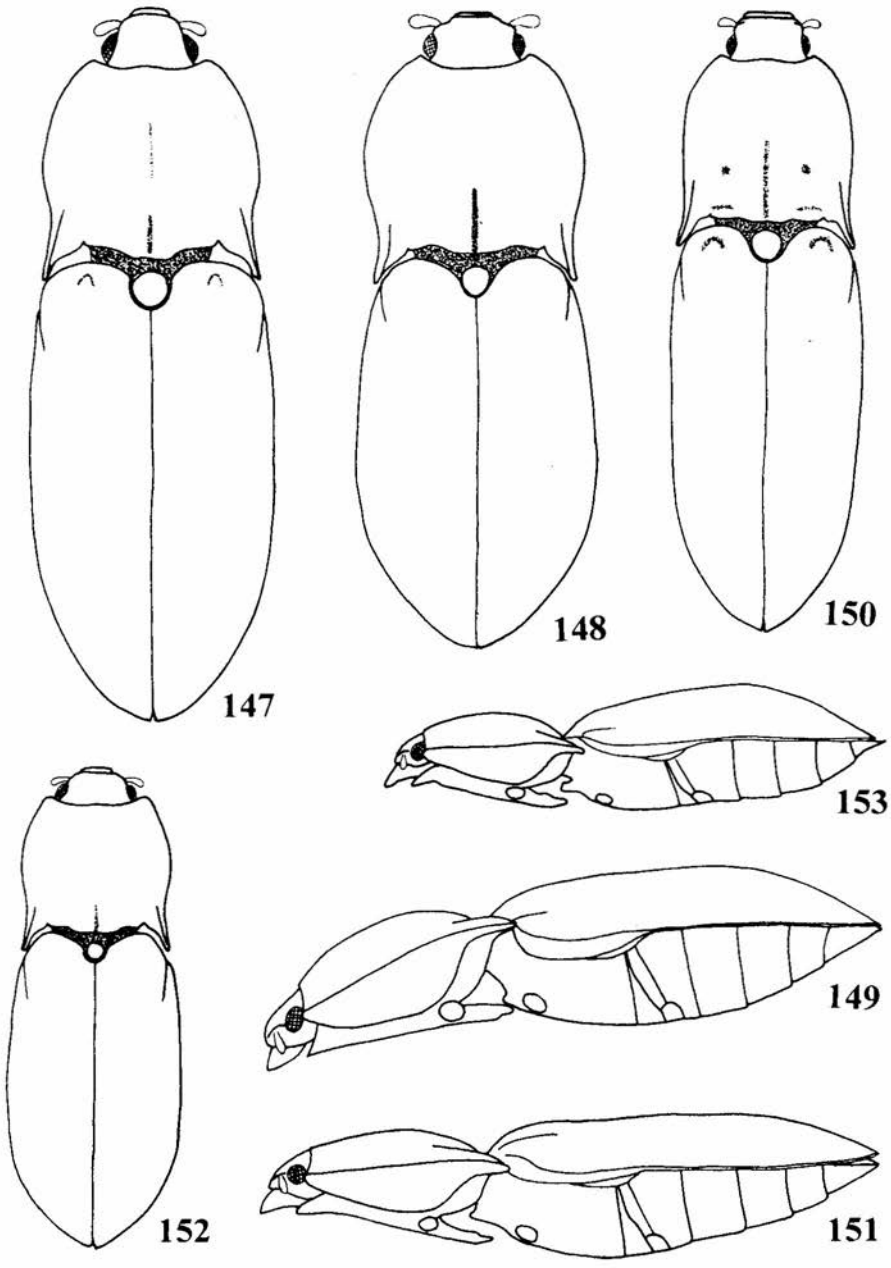
131 - *S.* (s. str.) *aeneomicans*; 132-135 - *S.* (s. str.) *puberulus*; 131, 132 - aedeagus; 133-135 - terminal abdominal segments in M: 133 - tergite VIII, 134 - tergites IX and X, 135 - sternite IX



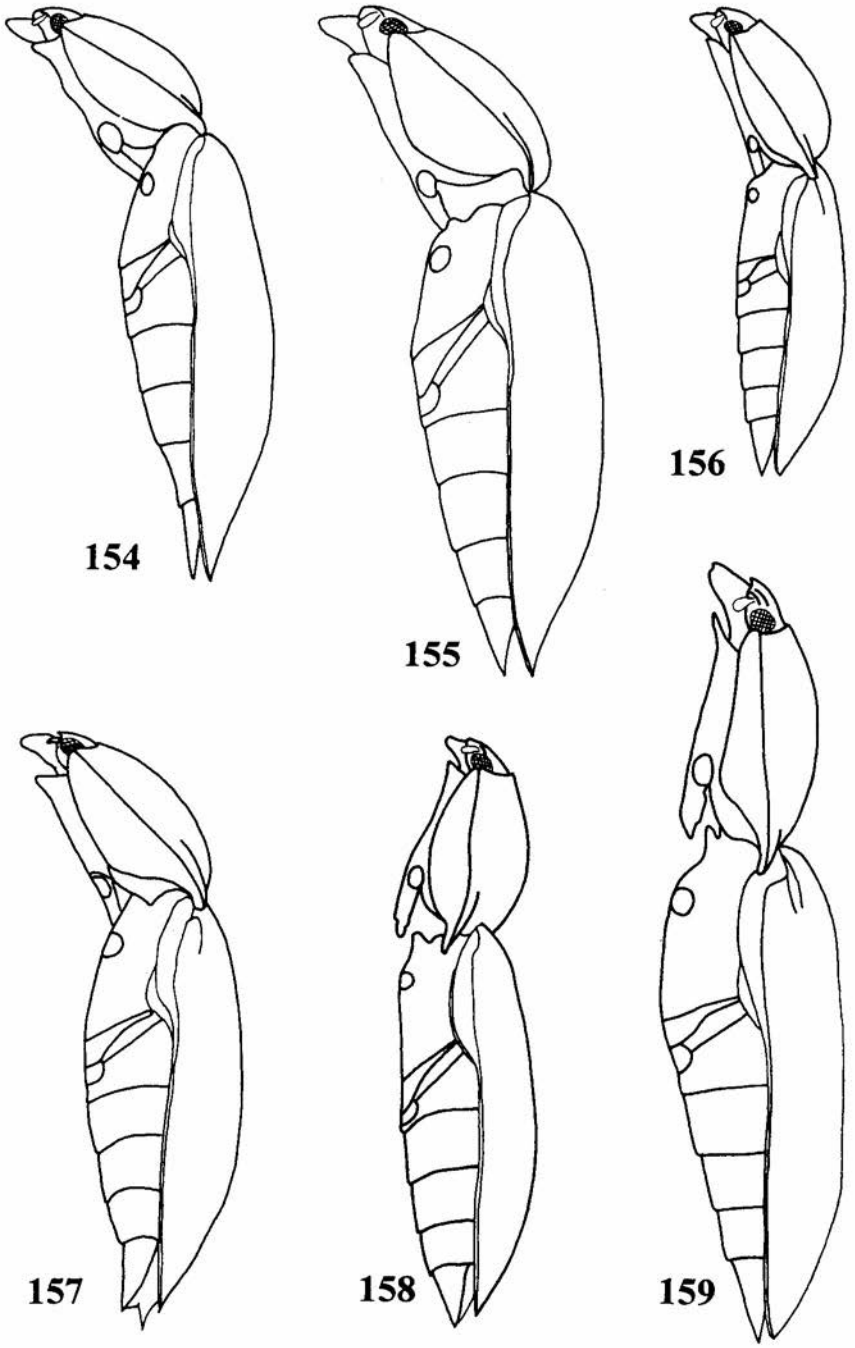

136 - *S.* (s. str.) *aeneomicans*; 137-140 - *S.* (s. str.) *puberulus*; 136, 137 - ovipositor; 138, 139 - VIII abdominal segment in F: 138 - sternite, 139 - tergite; 140 - seminal vesicle



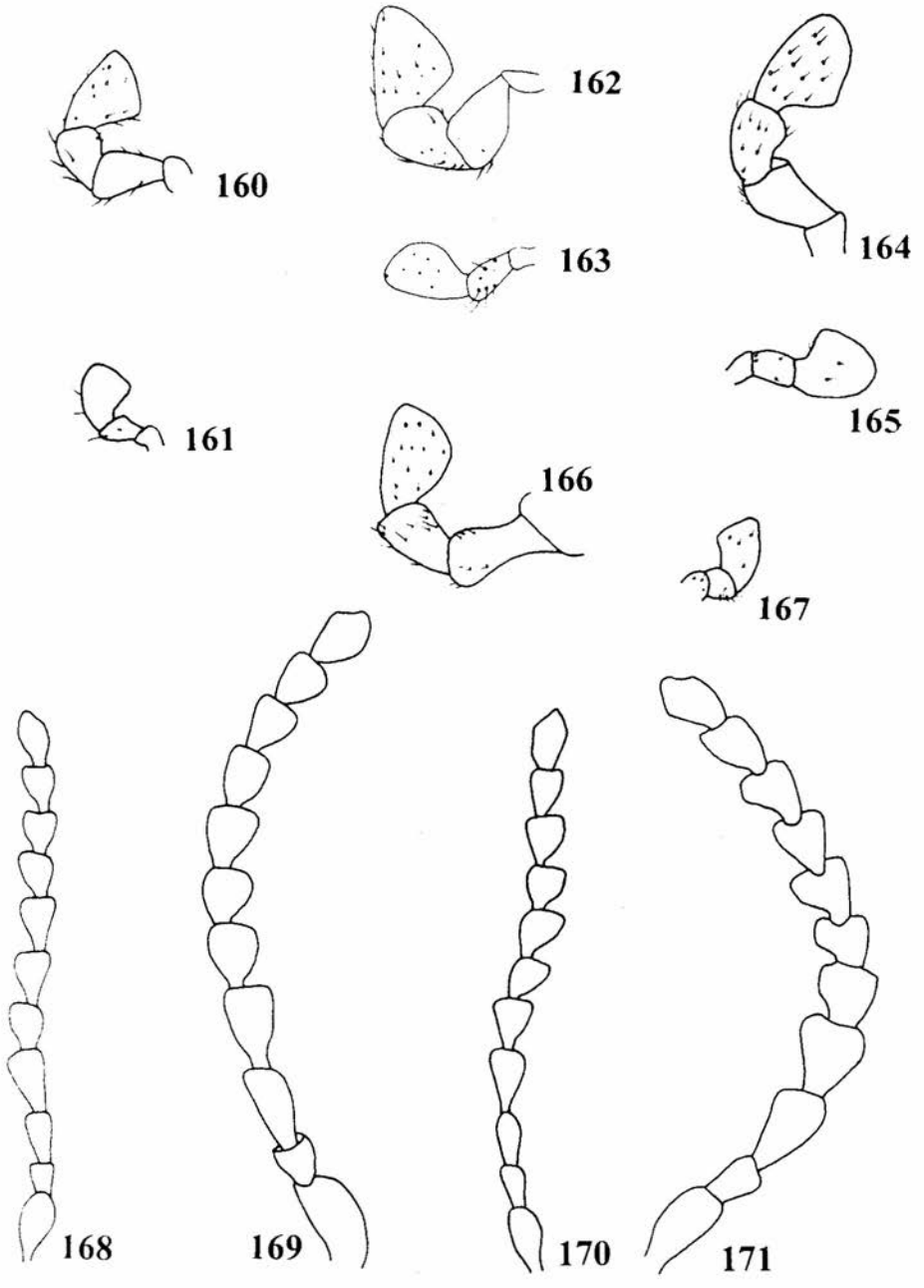

141-146 - habitus, dorsal view: 141 - *S.* (s. str.) *aeneus*, 142, 143 - *S.* (s. str.) *caucasicus*, 144, 145 - *S.* (s. str.) *centralis*, 146 - S. (s. str.) *amplicollis*; 141, 142, 144 - M; 143, 145, 146 - F



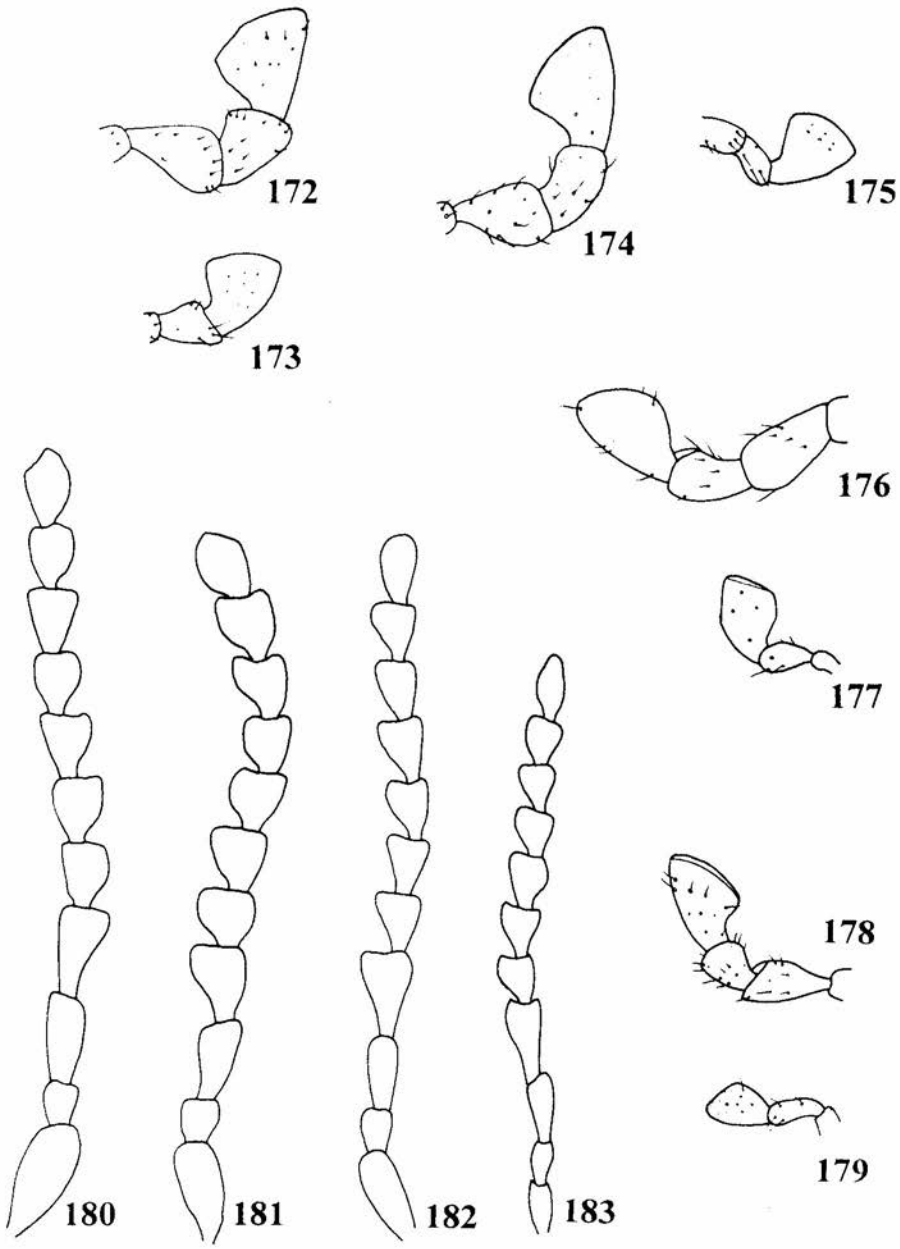

147 - *S.* (s. str.) *puncticollis*; 148, 149 - *S.* (s. str.) *punctipennis*; 150, 151 - *S.* (s. str.) *reichardti*; 152, 153 - *S.* (s. str.) *songoricus*; 147, 148, 150, 152 - habitus, dorsal view; 149, 151, 153 - habitus, lateral view; 148-151 - M; 147, 152, 153 - F



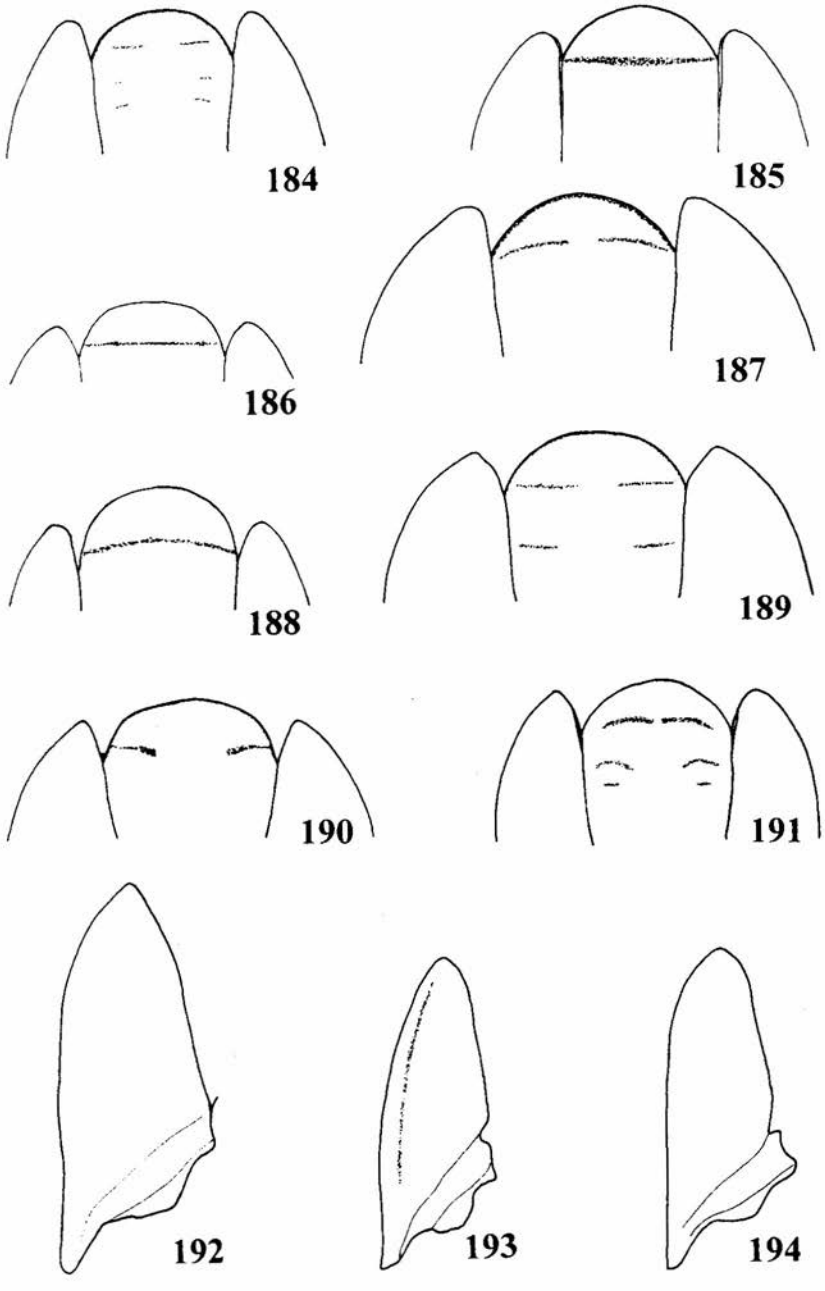

154-159 - habitus, lateral view: 154, 155 - *S.* (s. str.) *centralis*, 156 - *S.* (s. str.) *aeneus*, 157 - *S.* (s. str.) *amplicollis*, 158 - *S.* (s. str.) *caucasicus*, 159 - *S.* (s. str.) *puncticollis*; 154, 156 - M; 155, 157-159 - F



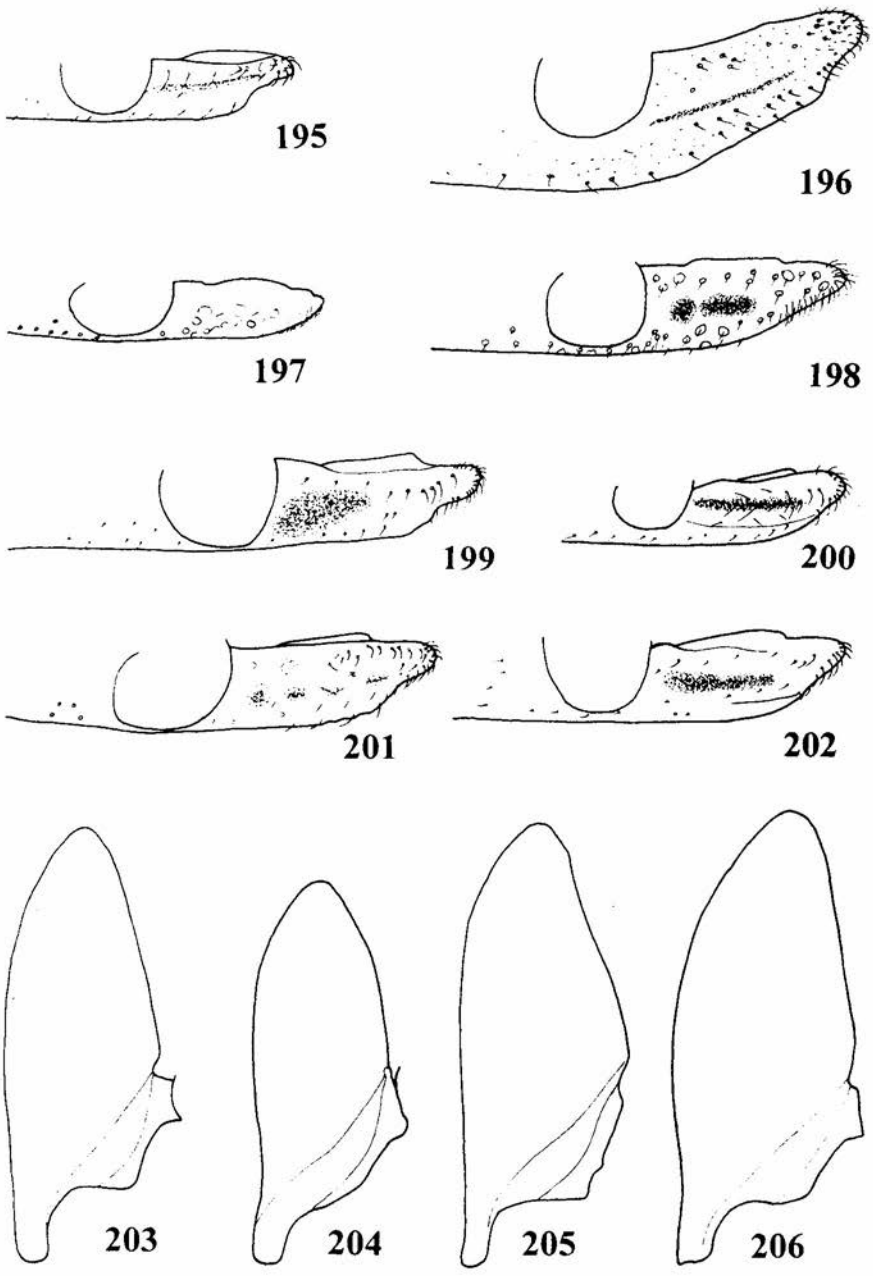

160, 161, 168 - *S.* (s. str.) *aeneus*; 162, 163, 169 - *S.* (s. str.) *amplicollis*; 164, 165, 170 - *S.* (s. str.) *caucasicus*; 166, 167, 171 - *S.* (s. str.) *centralis*; 160, 162, 164, 166 - maxillary palp; 161, 163, 165, 167 - labial palp; 168-171 - antennae; 160, 161, 164-168 - M; 162, 163, 169, 171 - F



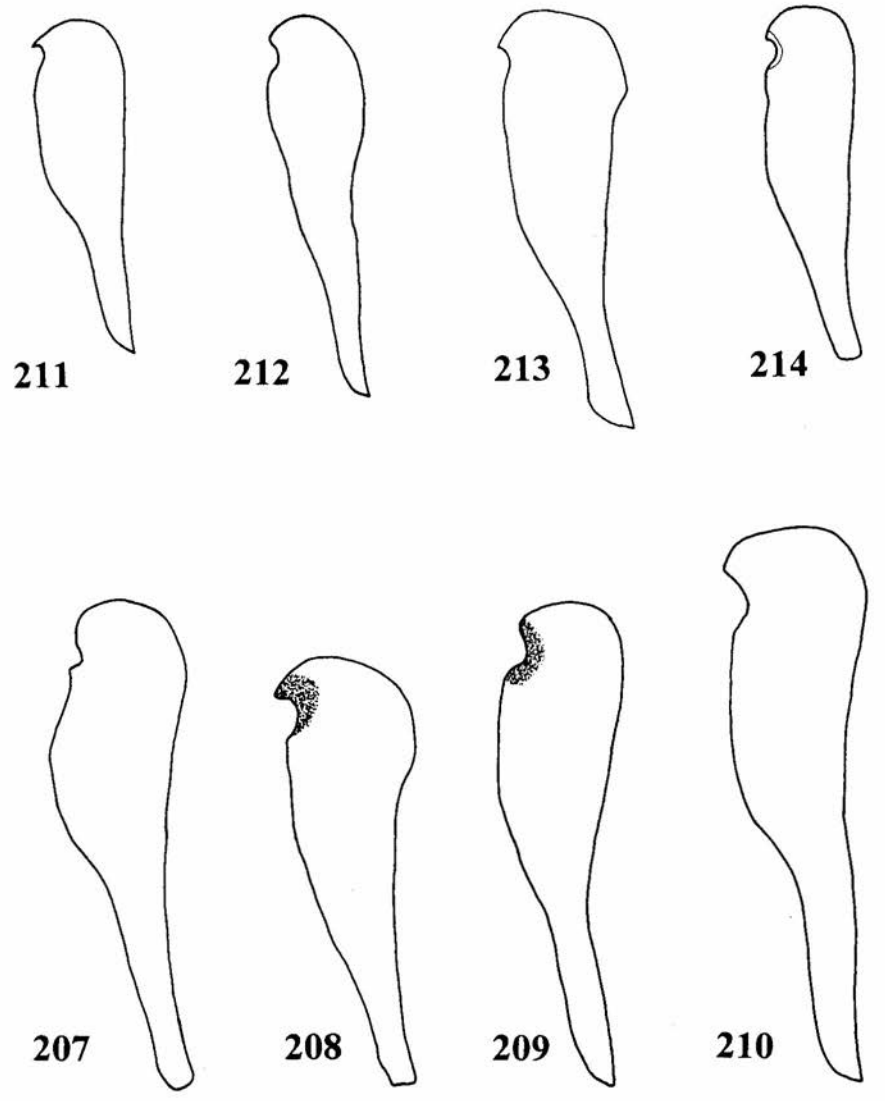

172, 173, 180 - *S.* (s. str.) *puncticollis*; 174, 175, 181 - *S.* (s. str.) *punctipennis*; 176, 177, 182 - *S.* (s. str.) *reichardti*; 178, 179, 183 - *S.* (s. str.) *songoricus*; 172, 174, 176, 178 - maxillary palp; 173, 175, 177, 179 - labial palp; 182, 183 - antennae; 174, 176, 177, 181, 182 - M; 172, 173, 175, 178-180, 183 - F



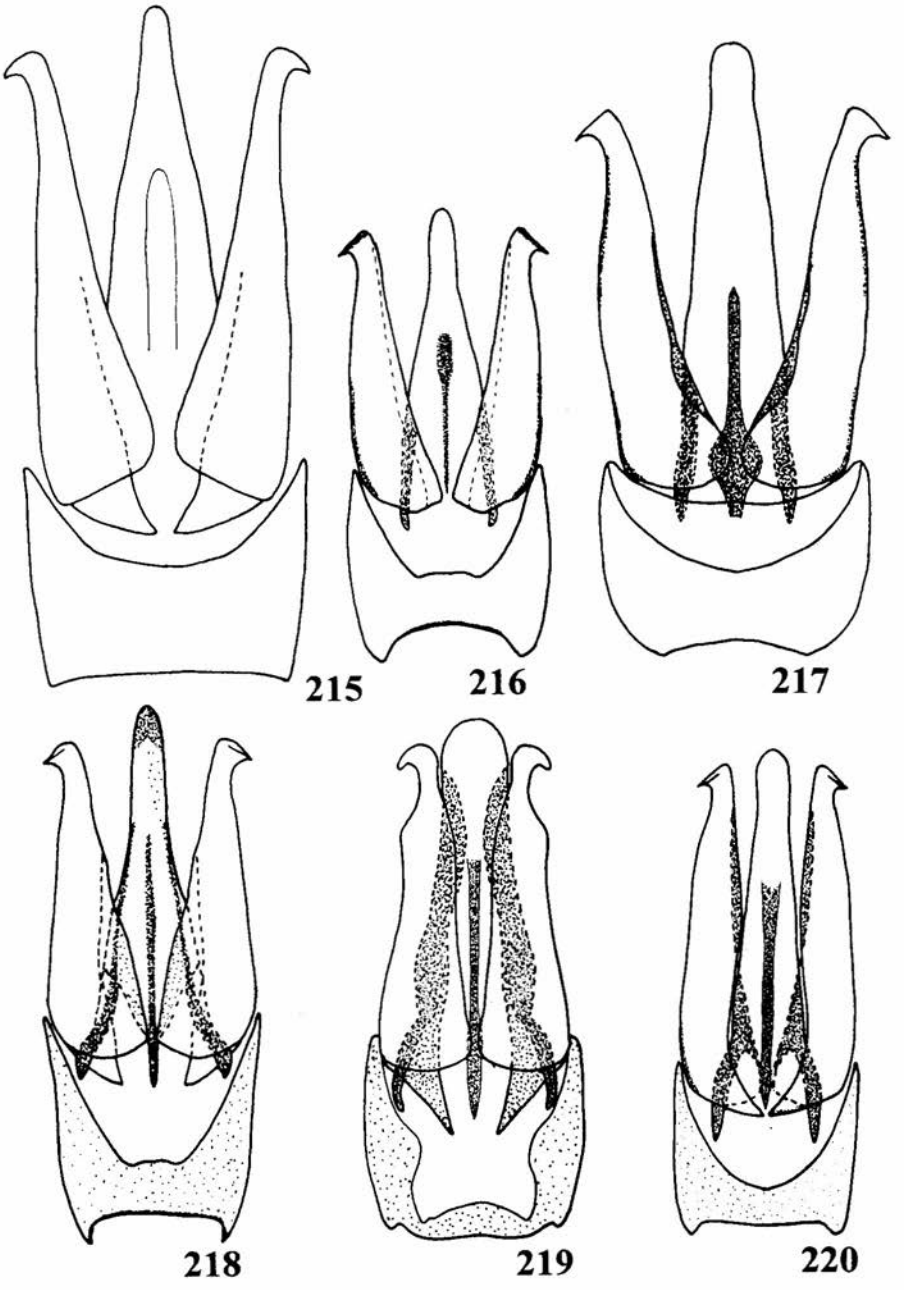

184, 193 - *S.* (s. str.) *aeneus*; 185 - *S.* (s. str.) *amplicollis*; 186 - *S.* (s. str.) *caucasicus*; 187 - *S.* (s. str.) *punctipennis*; 188 - *S.* (s. str.) *centralis*; 189 - *S.* (s. str.) *puncticollis*; 190, 192 - *S.* (s. str.) *reichardti*; 191, 194 - *S.* (s. str.) *songoricus*; 184-191 - prosternal collar; 192-194 - pronotal epipleuron; 184, 186-188, 190, 192, 193 - M; 185, 189, 191, 194 - F



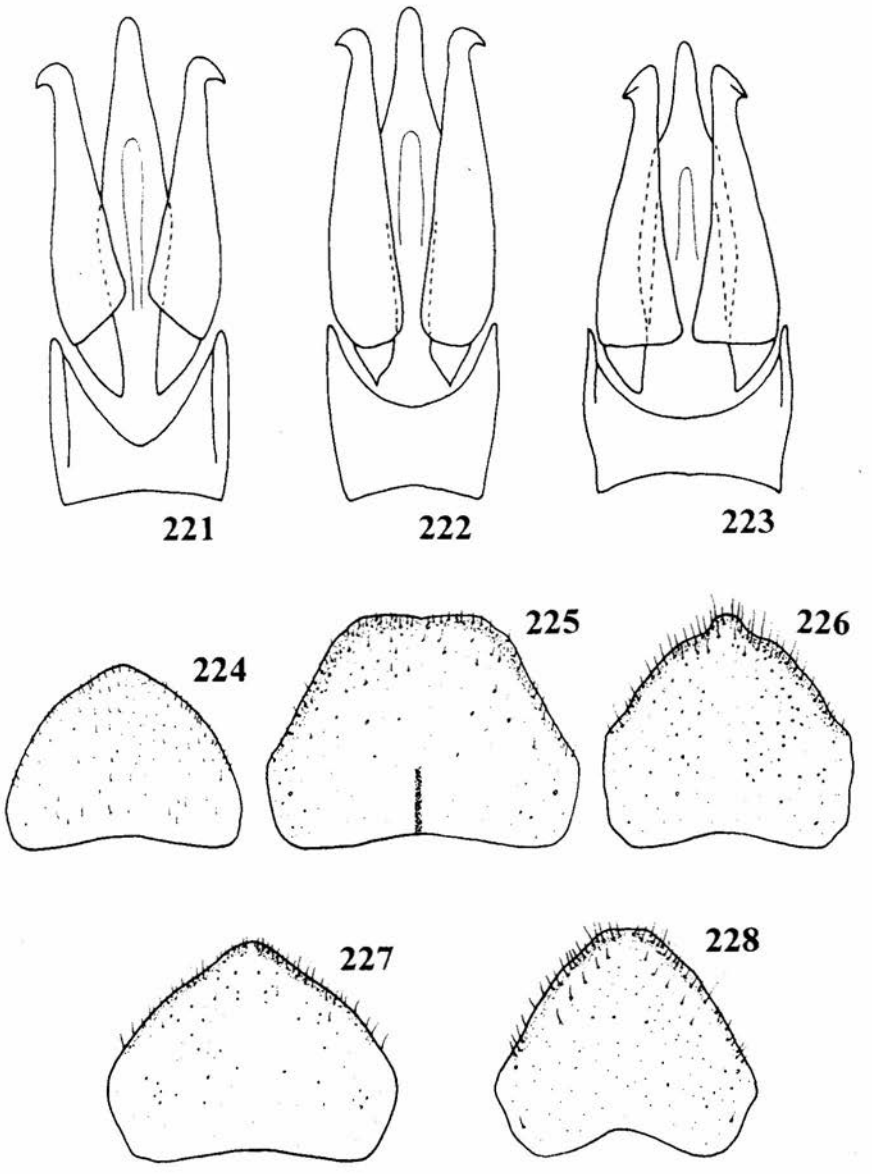

195 - *S.* (s. str.) *aeneus*; 196, 203 - *S.* (s. str.) *amplicollis*; 197 - *S.* (s. str.) *caucasicus*; 198, 204 - *S.* (s. str.) *centralis*; 199, 205 - *S.* (s. str.) *puncticollis*; 200 - *S.* (s. str.) *songoricus*; 201, 206 - *S.* (s. str.) *punctipennis*; 202 - *S.* (s. str.) *reichardti*; 195-202 - posterior process of prosternum; 203-206 - pronotal epipleuron; 195, 197, 198, 202, 204, 206 - M; 196, 199-201, 203, 205 - F



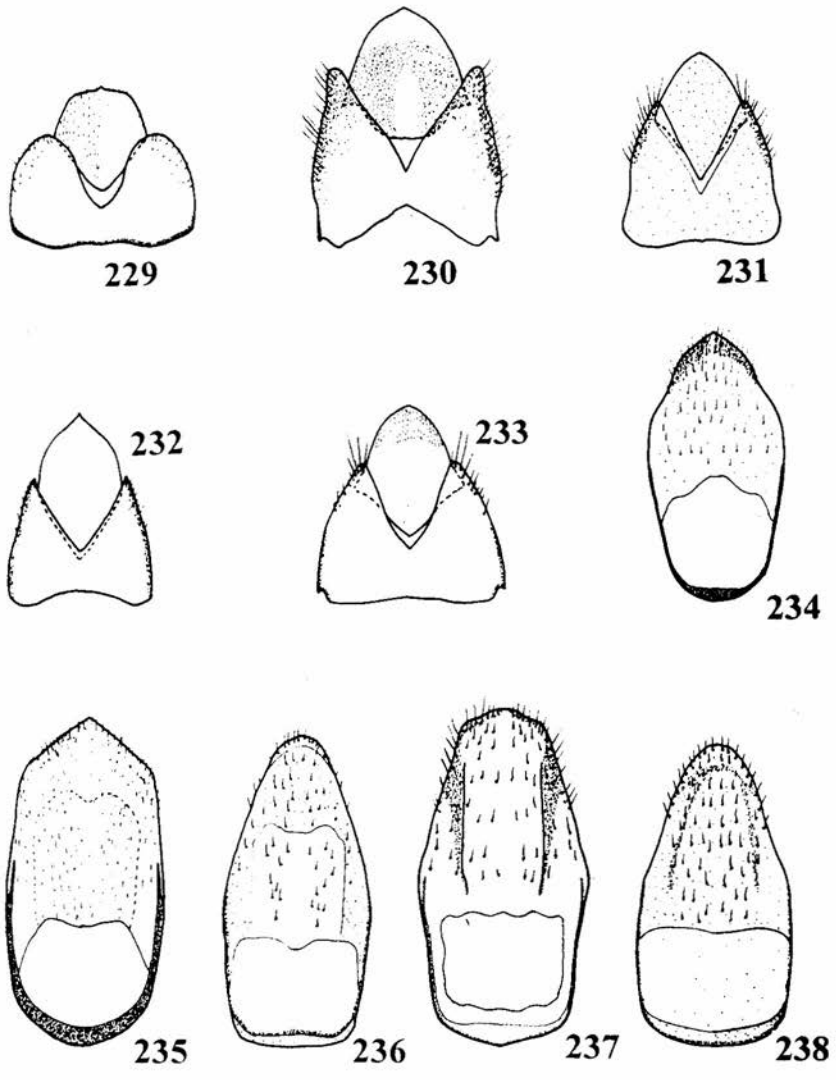

207-214 - femoral plates of hind legs: 207 - *S.* (s. str.) *amplicollis*, 208 - *S.* (s. str.) *centralis*, 209 - *S.* (s. str.) *punctipennis*, 210 - *S.* (s. str.) *puncticollis*, 211 - *S.* (s. str.) *aeneus*, 212 - *S.* (s. str.) *caucasicus*, 213 - *S.* (s. str.) *reichardti*, 214 - *S.* (s. str.) *songoricus*; 208, 209, 211-213 - M; 207, 210, 214 - F



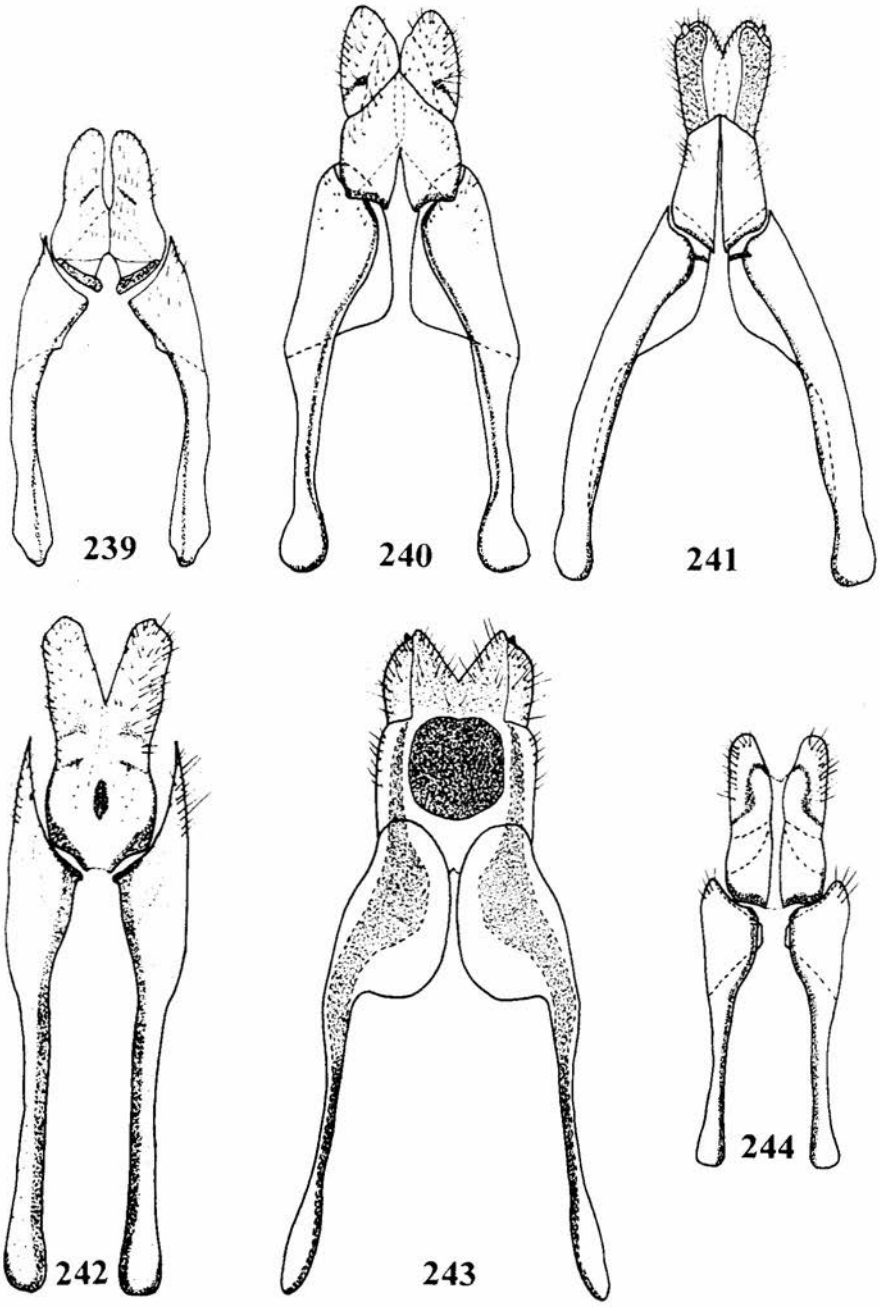

215-220 - aedeagus: 215 - *S.* (s. str.) *amplicollis*, 216 - *S.* (s. str.) *caucasicus*, 217 - *S.* (s. str.) *centralis*, 218 - *S.* (s. str.) *puncticollis*, 219 - *S.* (s. str.) *punctipennis*, 220 - *S.* (s. str.) *reichardti* (215 - after GURYEVA, 1985)



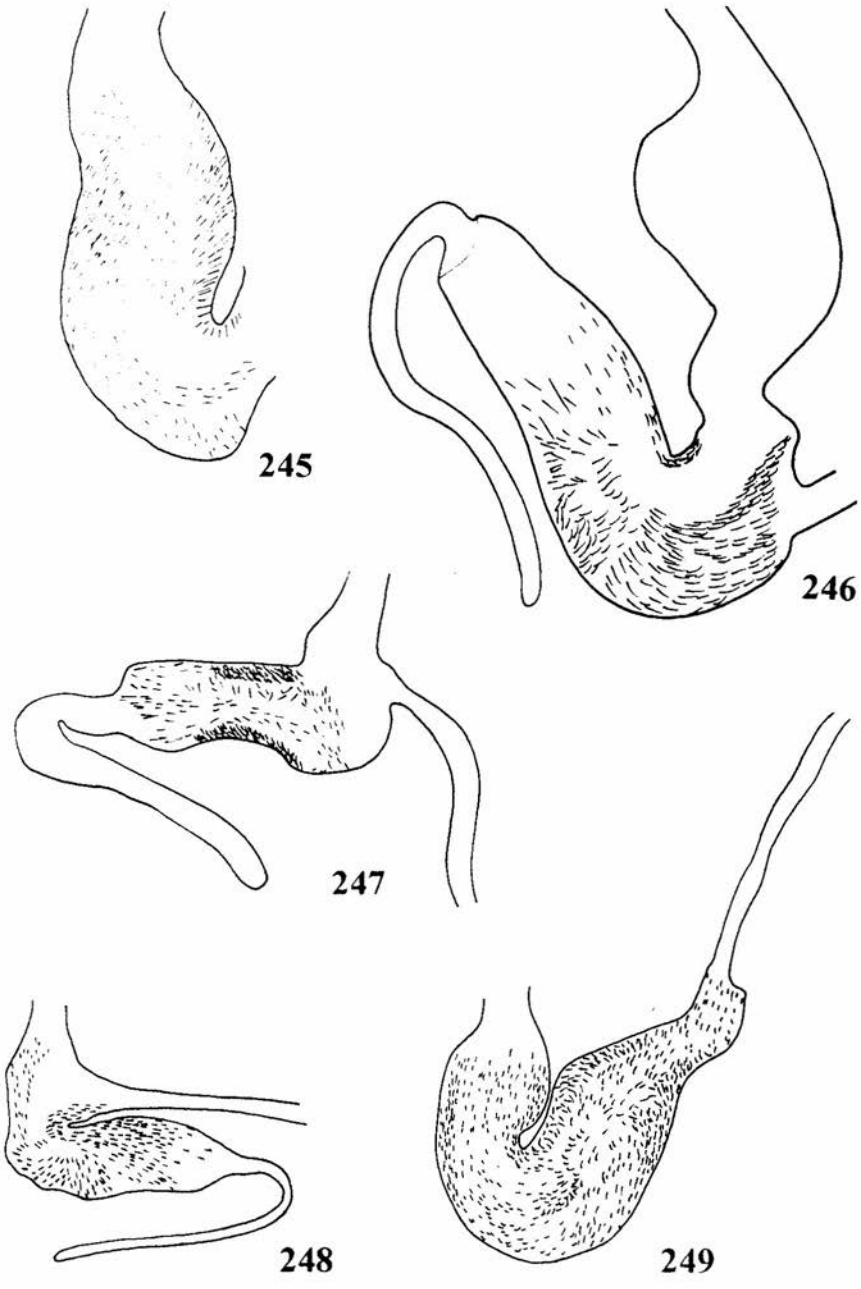

221-223 - aedeagus: 221-222 - *S.* (s. str.) *aeneus*: 221 - from St. Petersburg, 222 - from Spain, 223 - *S.* (s. str.) *songoricus*; 224 - 228 - VIII abdominal tergite in M: 224 - *S.* (s. str.) *caucasicus*, 225 - *S.* (s. str.) *centralis*, 226 - *S.* (s. str.) *puncticollis*, 227 - *S.* (s. str.) *punctipennis*, 228 - *S.* (s. str.) *reichardti* (221-223 - after GURYEVA, 1985)



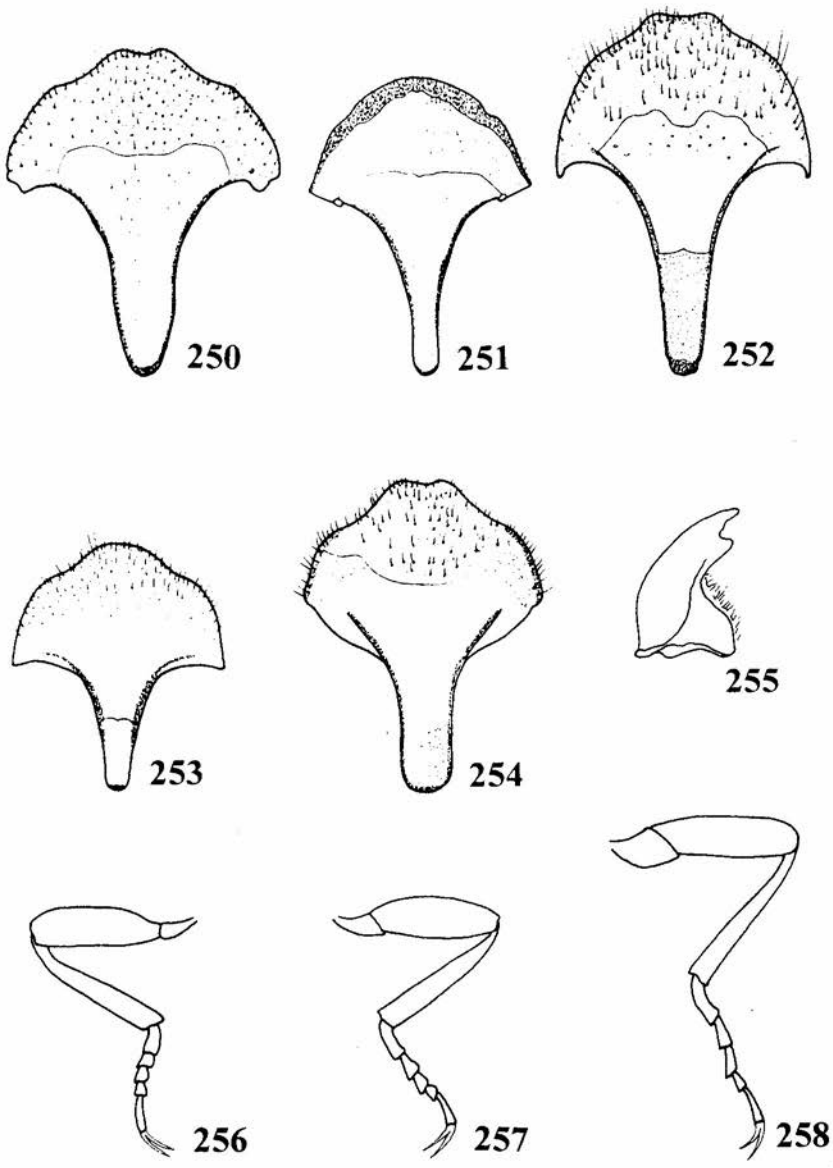

229, 234 - *S.* (s. str.) *caucasicus*; 230, 235 - *S.* (s. str.) *centralis*; 231, 236 - *S.* (s. str.) *puncticollis*; 232, 237 - *S.* (s. str.) *punctipennis*; 233, 238 - *S.* (s. str.) *reichardti*; 229, 233 - IX and X abdominal tergites in M; 234-238 - IX abdominal sternite in M



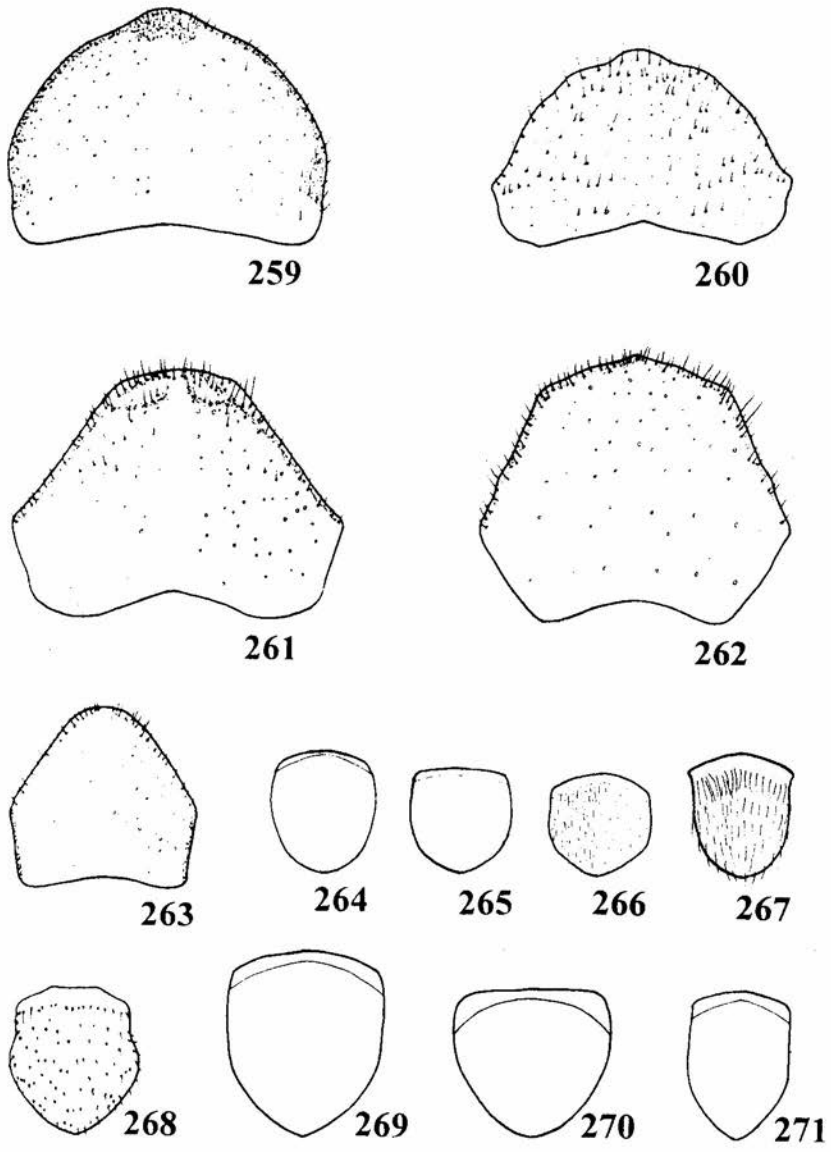

239-244 - ovipositor: 239 - *S.* (s. str.) *aeneus*, 240 - *S.* (s. str.) *amplicollis*, 241 - *S.* (s. str.) *caucasicus*, 242 - *S.* (s. str.) *puncticollis*, 243 - *S.* (s. str.) *punctipennis*, 244 - *S.* (s. str.) *songoricus* (239 - after GURYEVA, 1985)



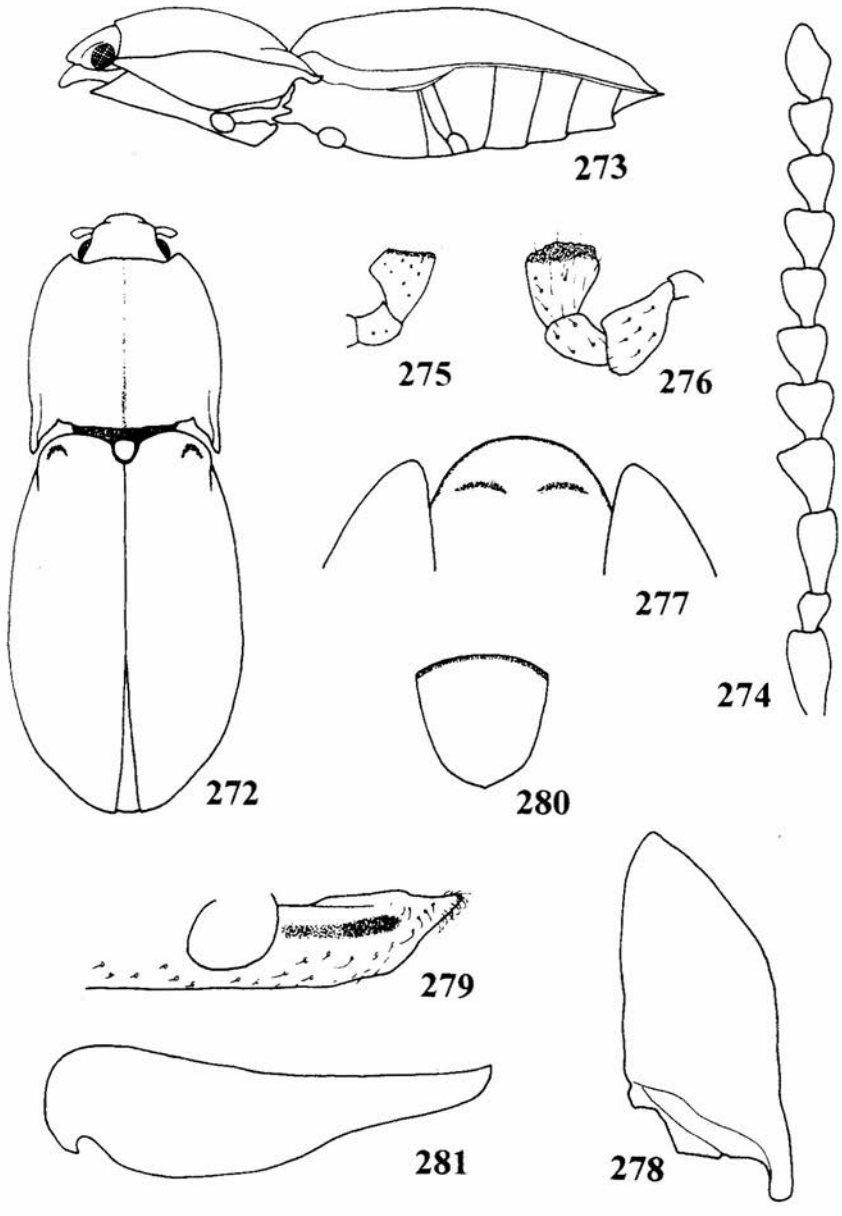

245-249 - seminal vesicle: 245 - *S.* (s. str.) *aeneus*, 246 - *S.* (s. str.) *puncticollis*, 247 - *S.* (s. str.) *punctipennis*, 248 - *S.* (s. str.) *songoricus*, 249 - *S.* (s. str.) *amplicollis* (245 - after GURYEVA, 1985)



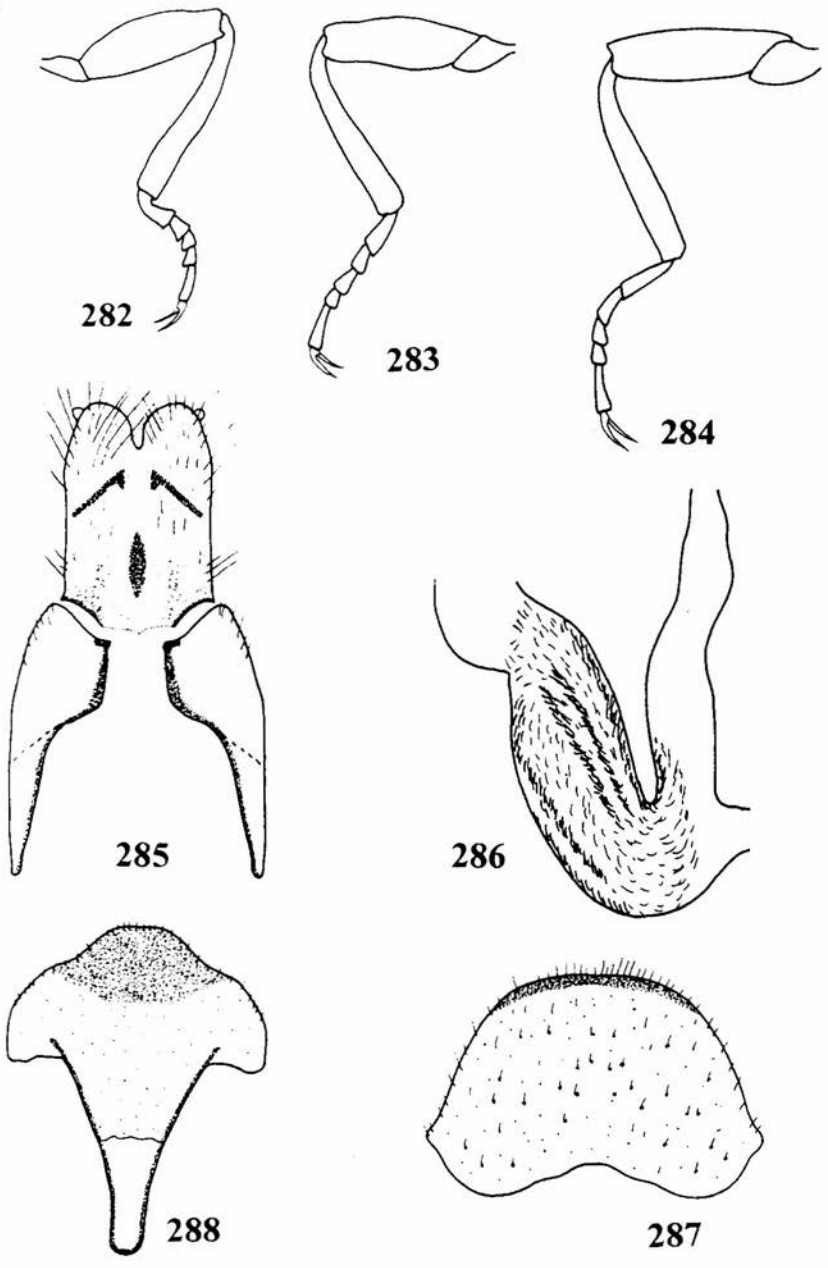

250 - *S.* (s. str.) *amplicollis*; 251 - *S.* (s. str.) *caucasicus*; 252 - *S.* (s. str.) *puncticollis*; 253, 256, 258 - *S.* (s. str.) *songoricus*; 254 - *S.* (s. str.) *punctipennis*; 255 - *S.* (s. str.) *aeneus*, mandible; 250-254 - VIII abdominal sternite in F; 256-258 - legs in F: 256 - fore, 257 - mid, 258 - hind (255 - after GURYEVA, 1985)



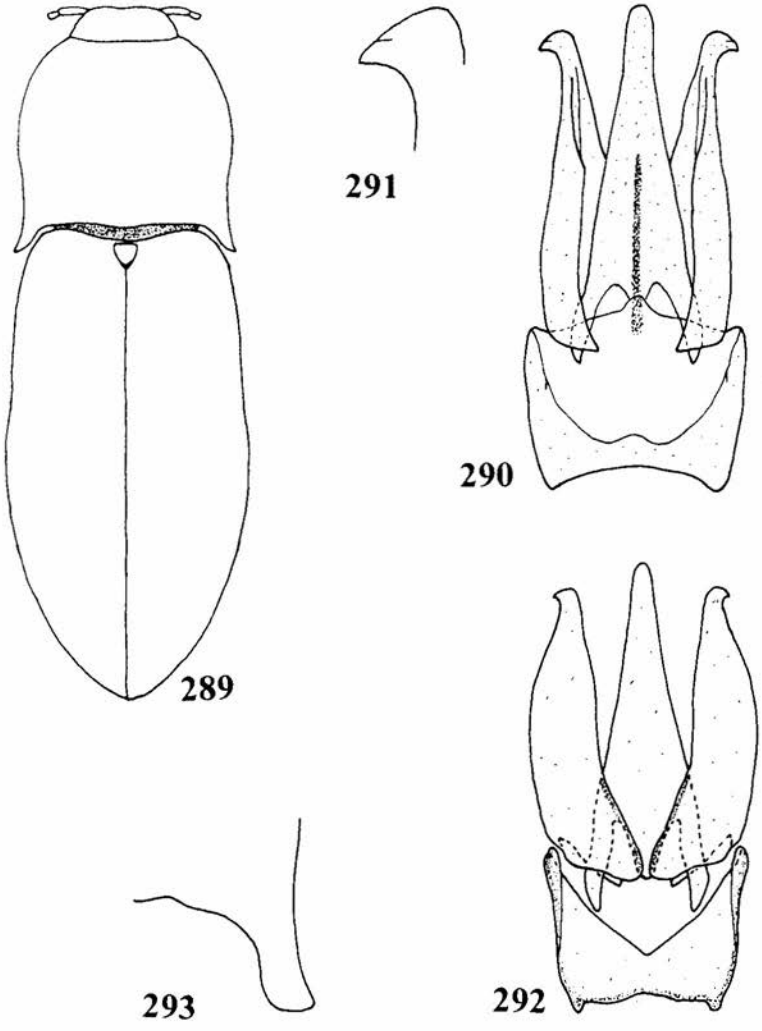

259, 268 - *S.* (s. str.) *amplicollis*; 260, 266 - *S.* (s. str.) *caucasicus*; 261, 269 - *S.* (s. str.) *puncticollis*; 262, 270 - S. (s. str.) *puncipennis*; 263, 264 - *S.* (s. str.) *songoricus*; 265 - *S.* (s. str.) *aeneus*; 267 - *S.* (s. str.) *centralis*; 271 - *S.* (s. str.) *reichardti*; 259-263 - VIII abdominal tergite in F; 264-271 - scutellum: 265-267, 270, 271 - M, 264, 268, 269 - F



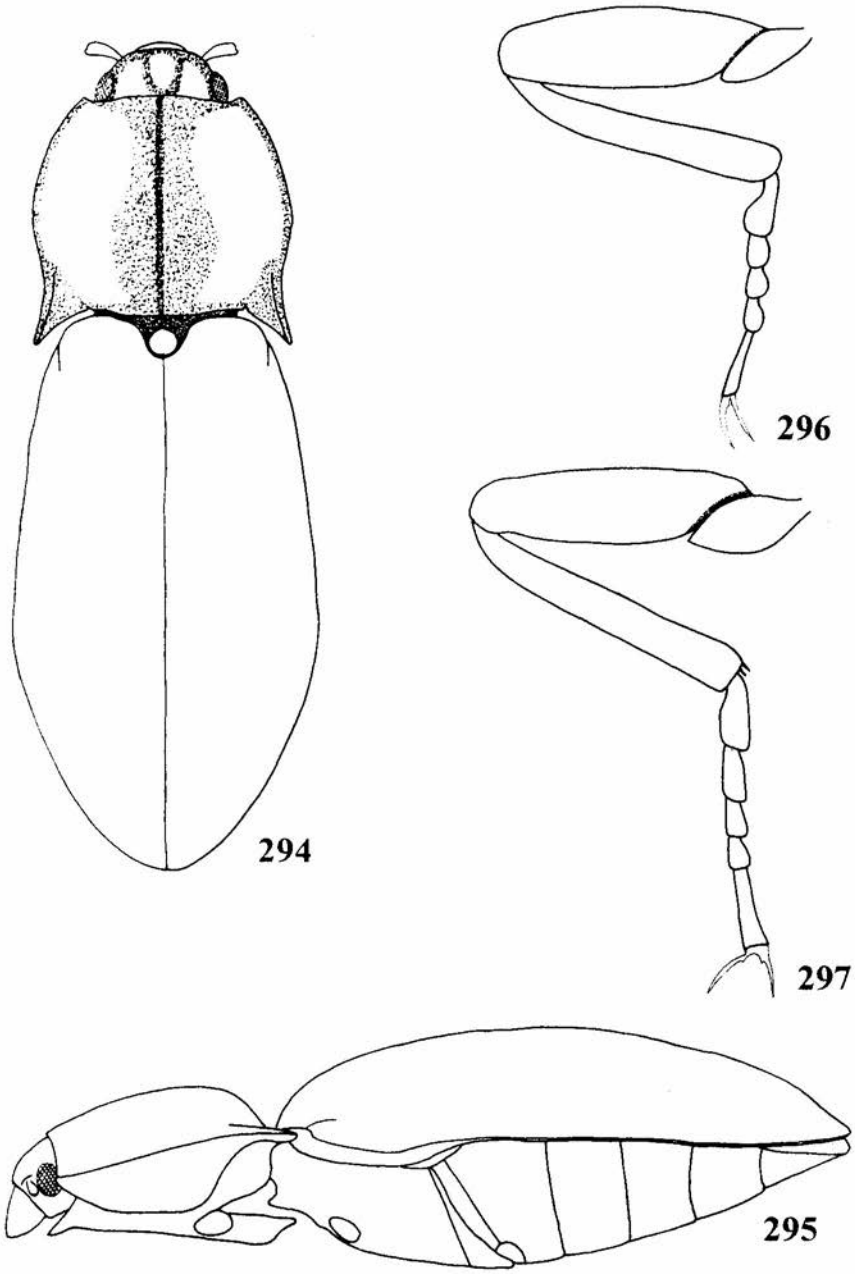

272-281 - *S.* (s. str.) *graecus* sp. nov., holotype, F: 272 - habitus, dorsal view, 273 - habitus, lateral view, 274 - antenna, 275 - labial palp, 276 - maxillary palp, 277 - prosternal collar, 278 - pronotal epipleuron, 279 - posterior process of prosternum, 280 - scutellum, 281 - femoral plate of hind leg



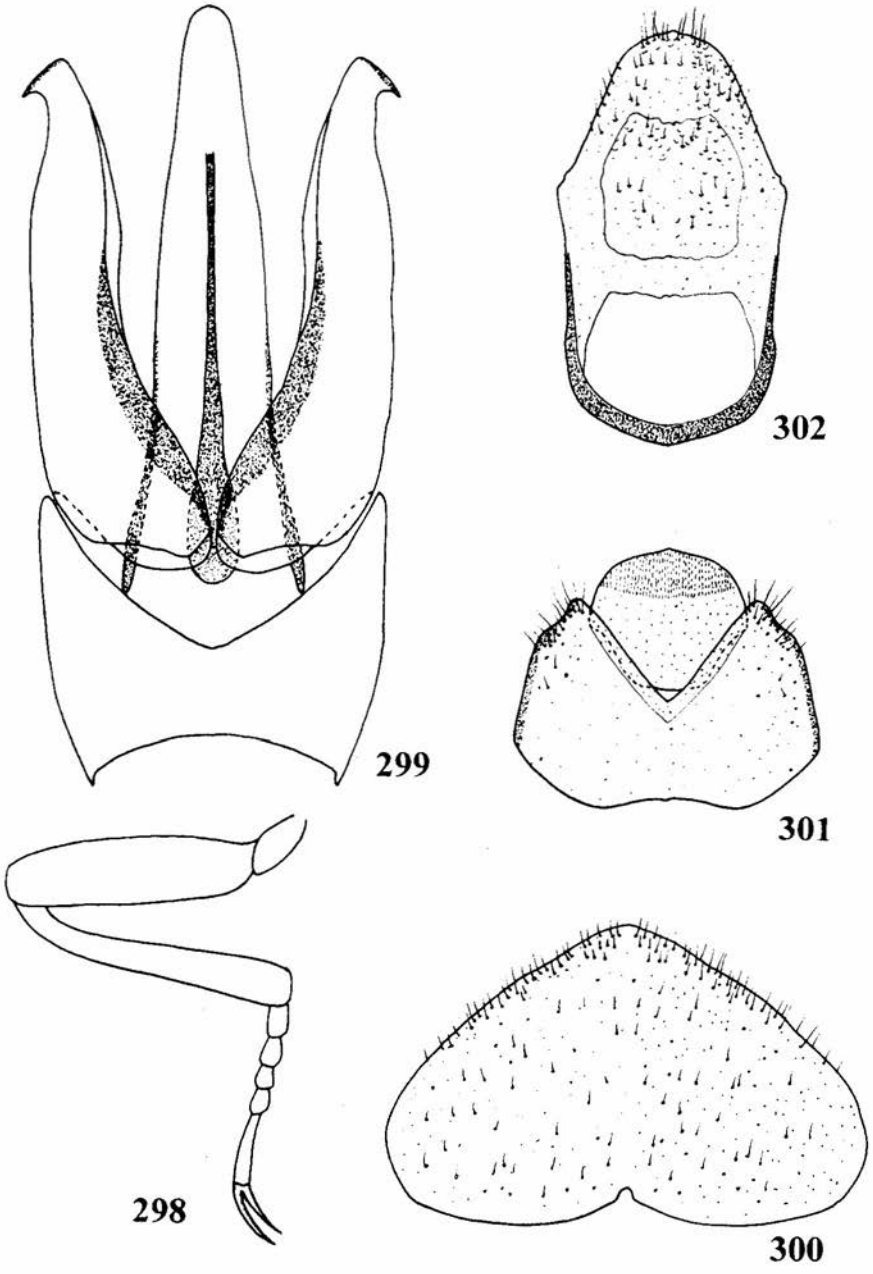

*S.* (s. str.) *graecus* sp. nov., holotype, F: 282-284 - legs: 282 - fore, 283 - mid, 284 - hind, 285 - ovipositor, 286 - seminal vesicle, 287 - VIII abdominal tergite, 288 - VIII abdominal sternite



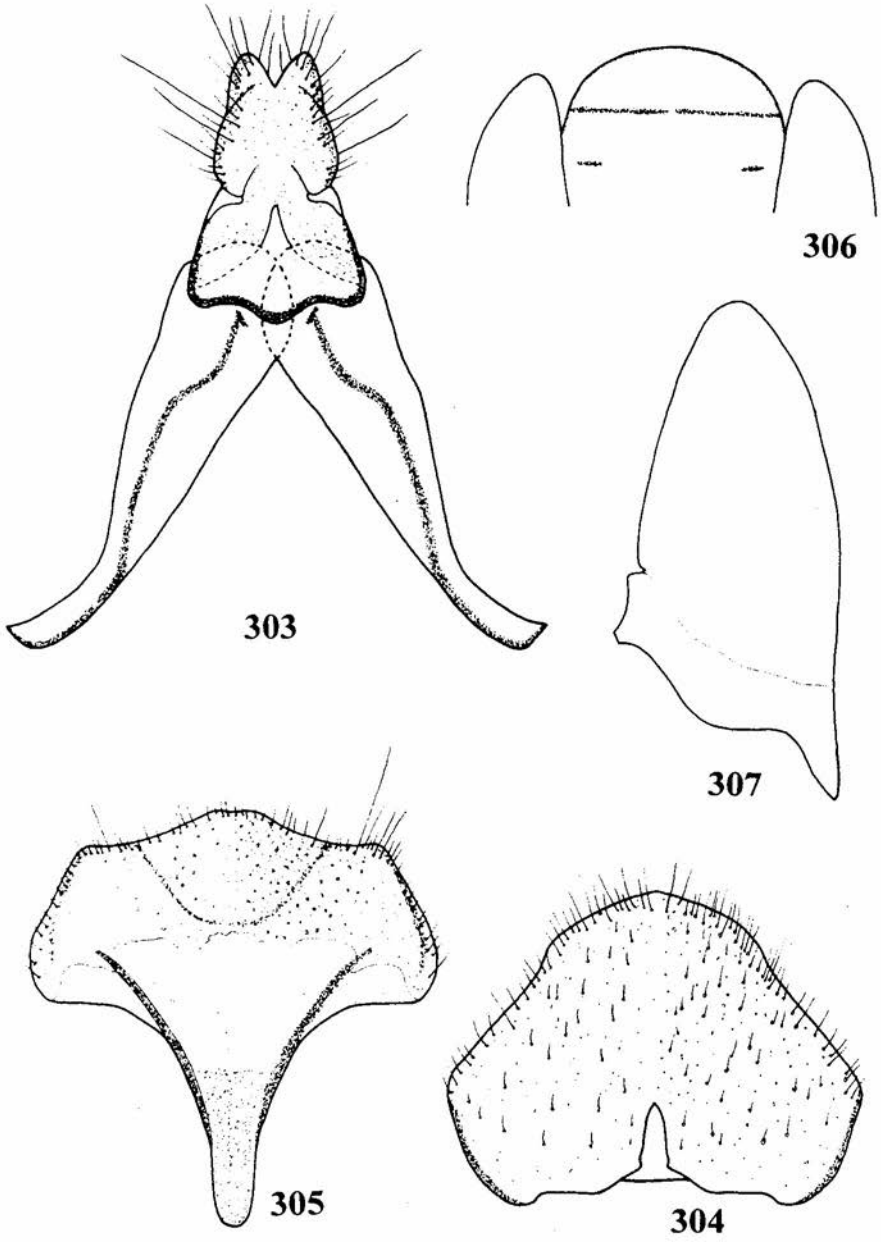

289-291 - *S.* (s. str.) *miyajimana*; 292, 293 - *S.* (s. str.) *lateralis*; 289 - habitus, dorsal view; 290, 292 - aedeagus; 291 - termination of aedeagus paramera; 293 - posterior angleof pronotum (289-291 - after OHIRA, 1971)



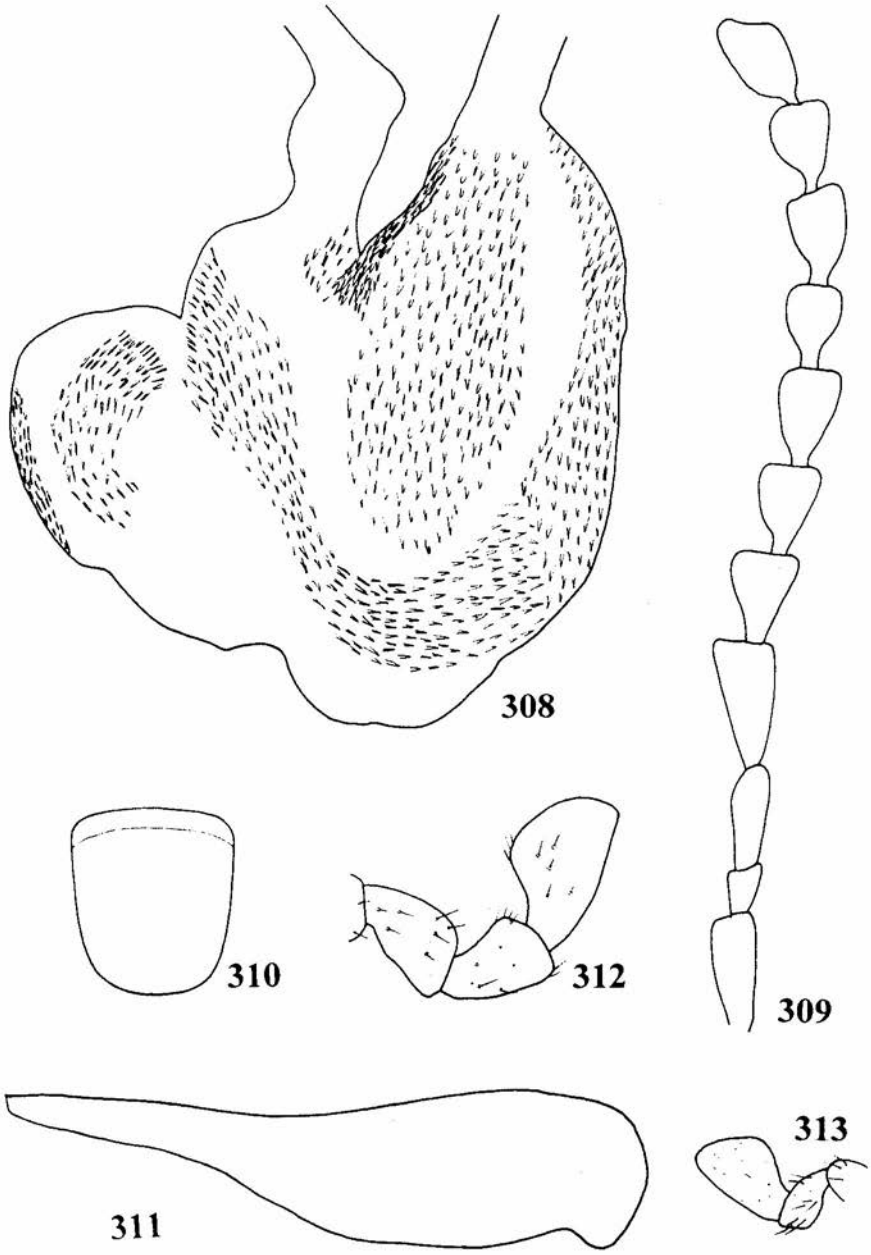

294-297. *S.* (s. str.) *whitii*, M: 294 - habitus, dorsal view, 295 - habitus, lateral view, 296 - mid leg, 297 - hind leg



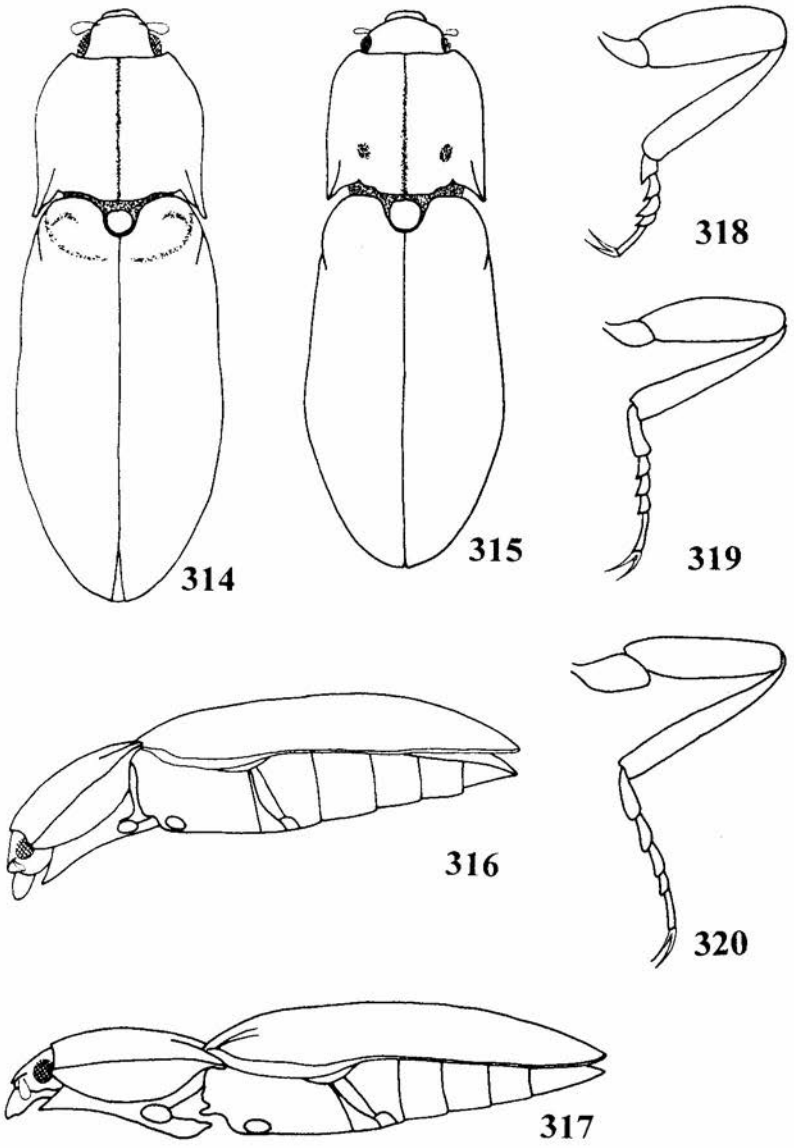

298-302. *S.* (s. str.) *whitii*, M: 298 - fore leg, 299 - aedeagus, 300-302 - terminal abdominal segments: 300 - tergite VIII, 301 - tergites IX and X, 302 - sternite IX



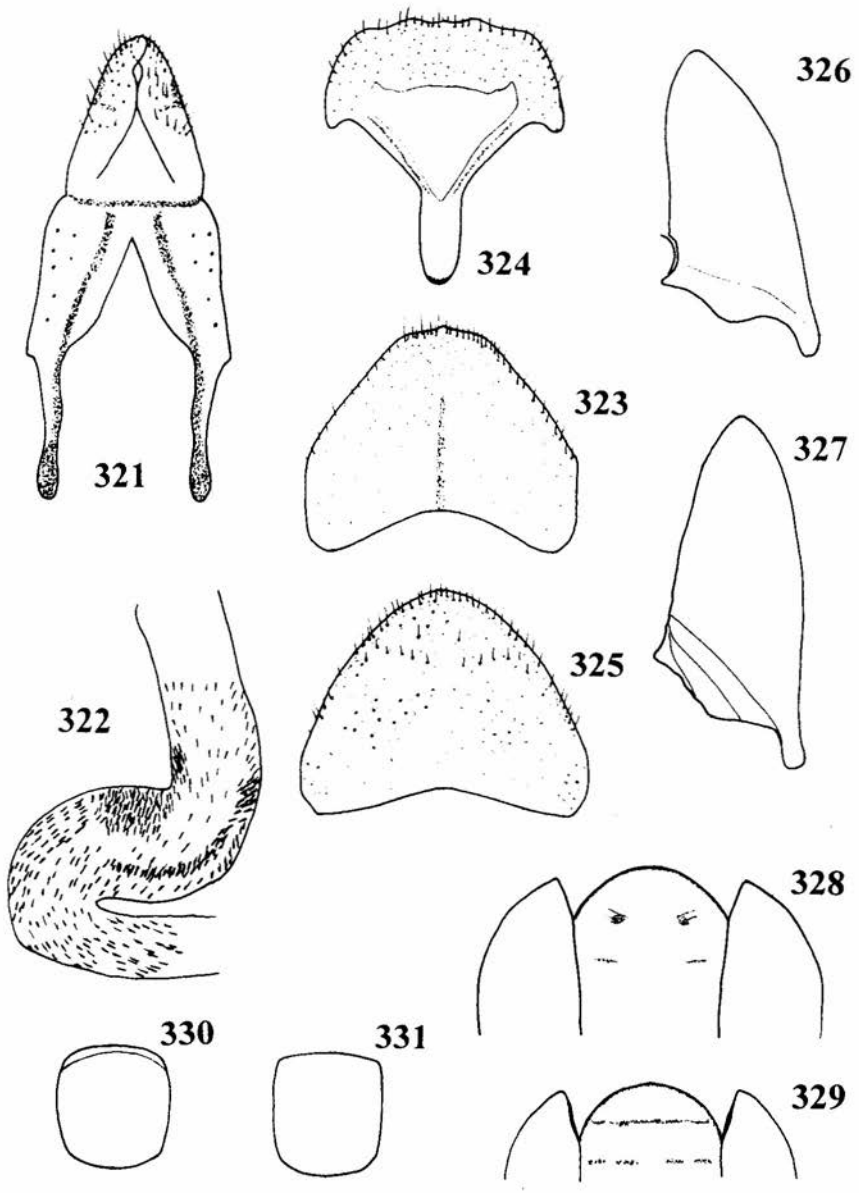

303-307. *S.* (s. str.) *whitii*: 303 - ovipositor; 304, 305 - VIII abdominal segment in F: 304 - tergite, 305 - sternite; 306 - prosternal collar in M; 307 - pronotal epipleuron in M



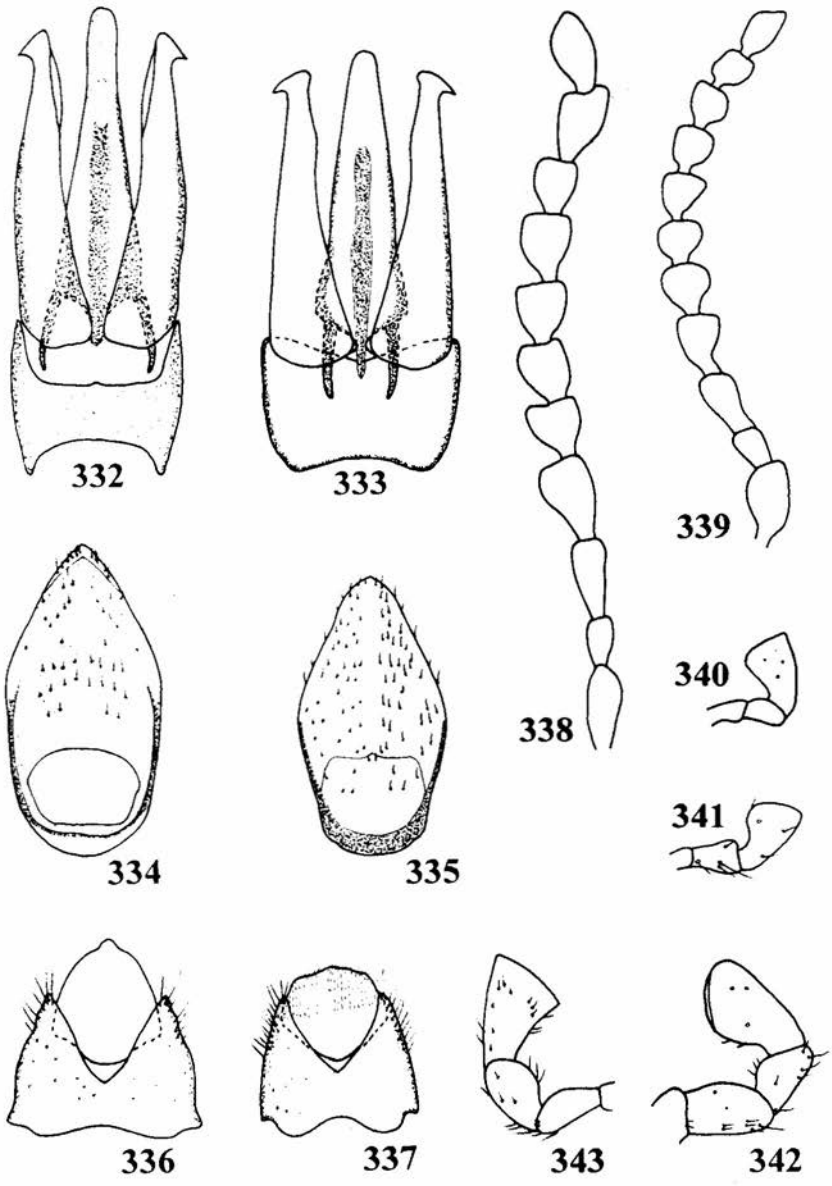

*S.* (s. str.) *whitii*: 308 - seminal vesicle; 309-313 - M: 309 - antenna, 310 - scutellum, 311 - femoral plate of hind leg, 312 - maxillary palp, 313 - labial palp



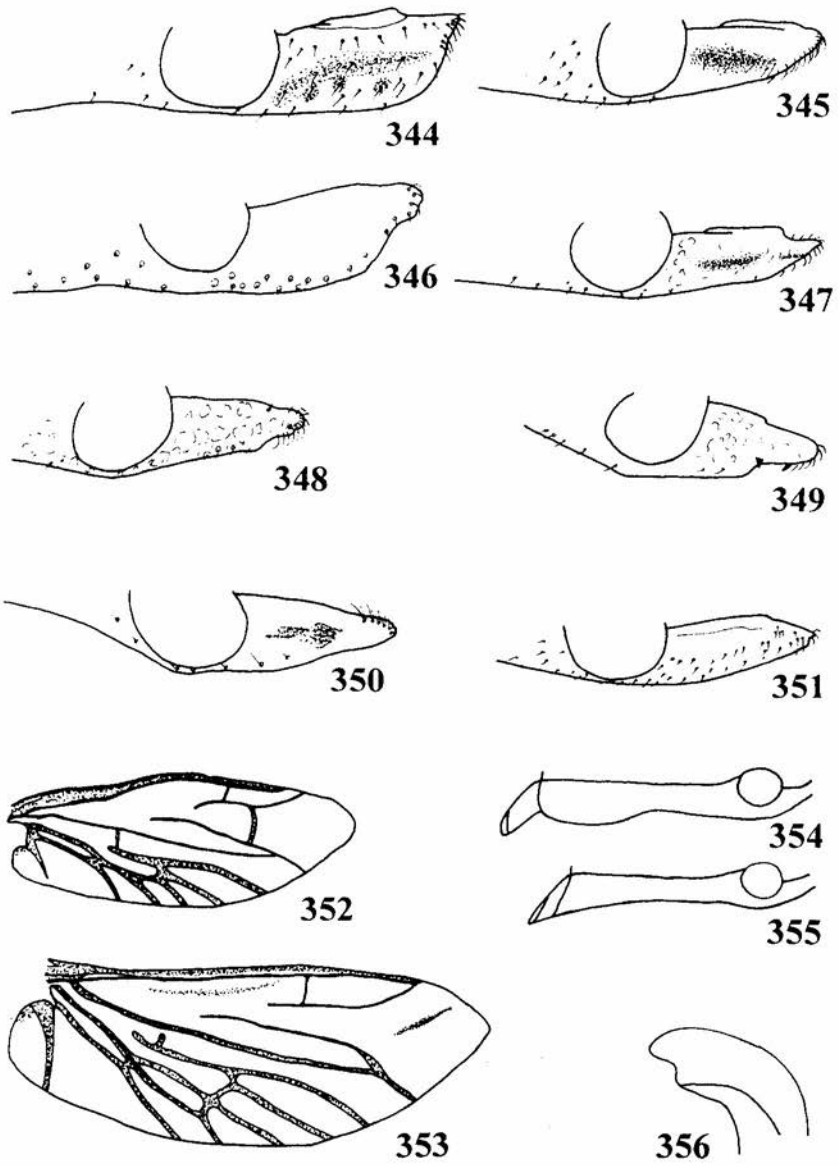

314-320 - male: 314-317 - *S.* (s. str.) *gloriosus*; 315, 316, 318-320 - *S.* (s. str.) *confluens*; 314, 315 - habitus, dorsal view, 316, 317 - habitus, lateral view; 318-320 - legs: 318 - fore, 319 - mid, 320 - hind



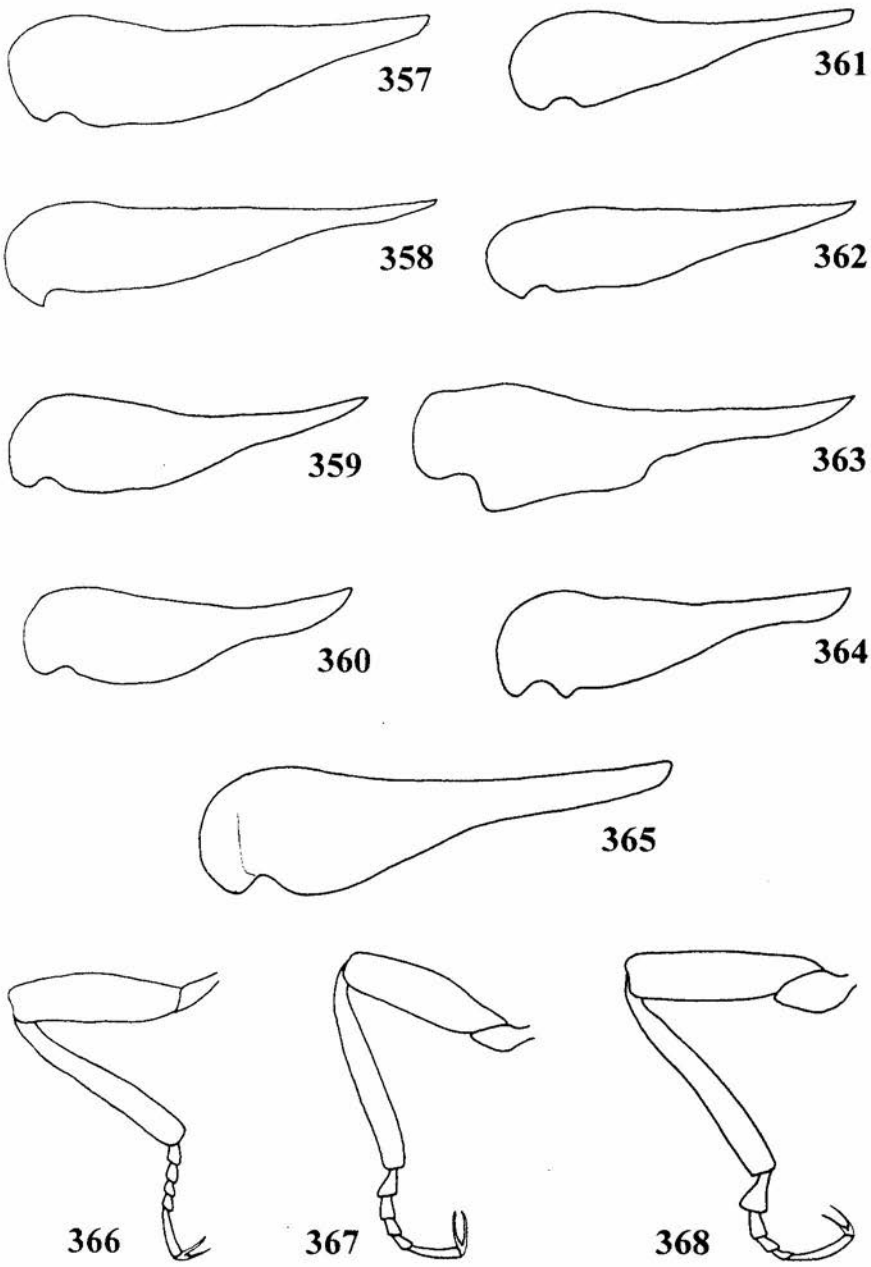

321-324, 326, 329, 331 - *S.* (s. str.) *confluens*; 325, 327, 328, 330 - *S.* (s. str.) *gloriosus*; 321 - ovipositor; 322 - seminal vesicle; 323, 324 - VIII abdominal segment in F: 323 - tergite, 324 - sternite; 325 - VIII abdominal tergite in M; 326, 327 - pronotal epipleuron in M; 328, 329 - prosternal collar in M; 330, 331 - scutellum in M



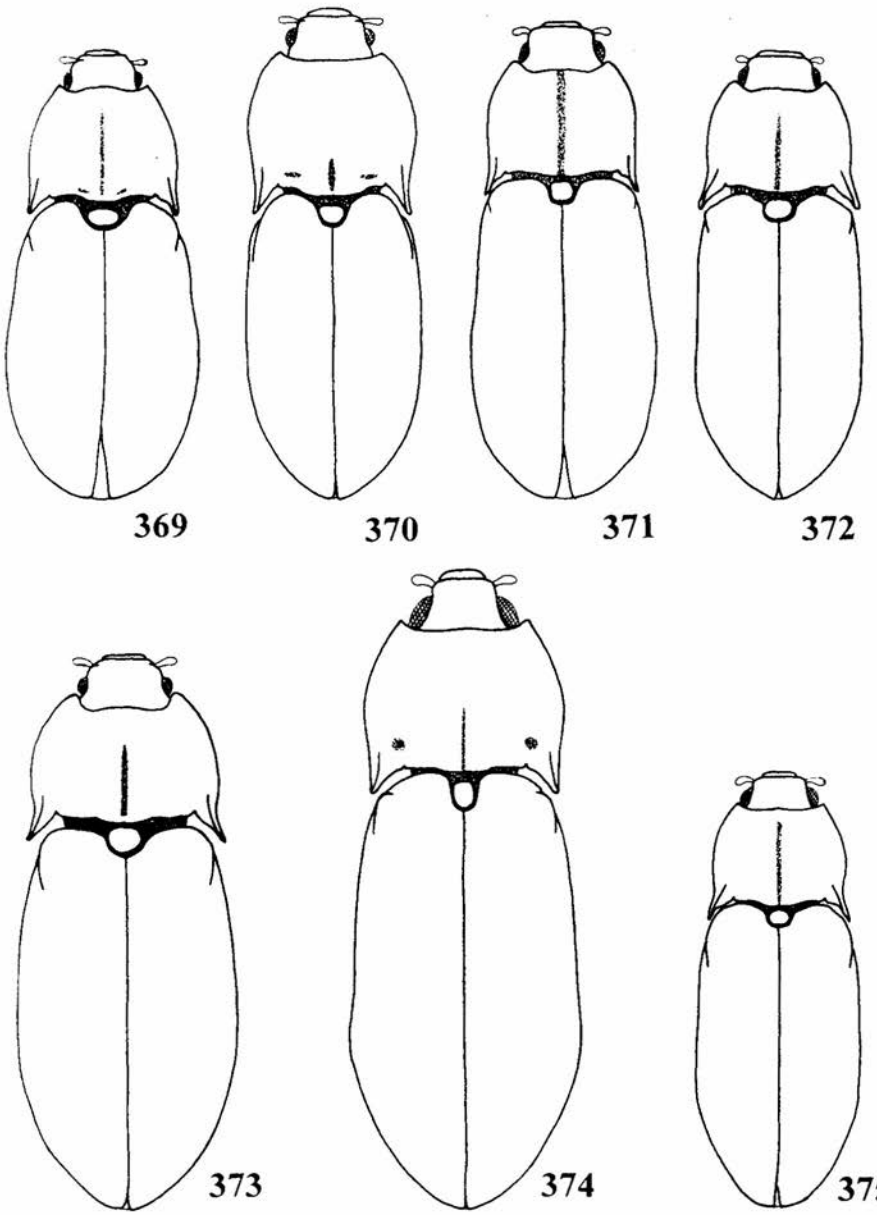

332-343 - male: 332, 334, 336, 338, 340, 342 - *S.* (s. str.) *gloriosus*; 333, 335, 337, 339, 341, 343 - *S.* (s. str.) *confluens*; 332, 333 - aedeagus; 334, 335 - VIII abdominal tergite; 338, 339 - antennae; 340, 341 - labial palp; 342, 343 - maxillary palp



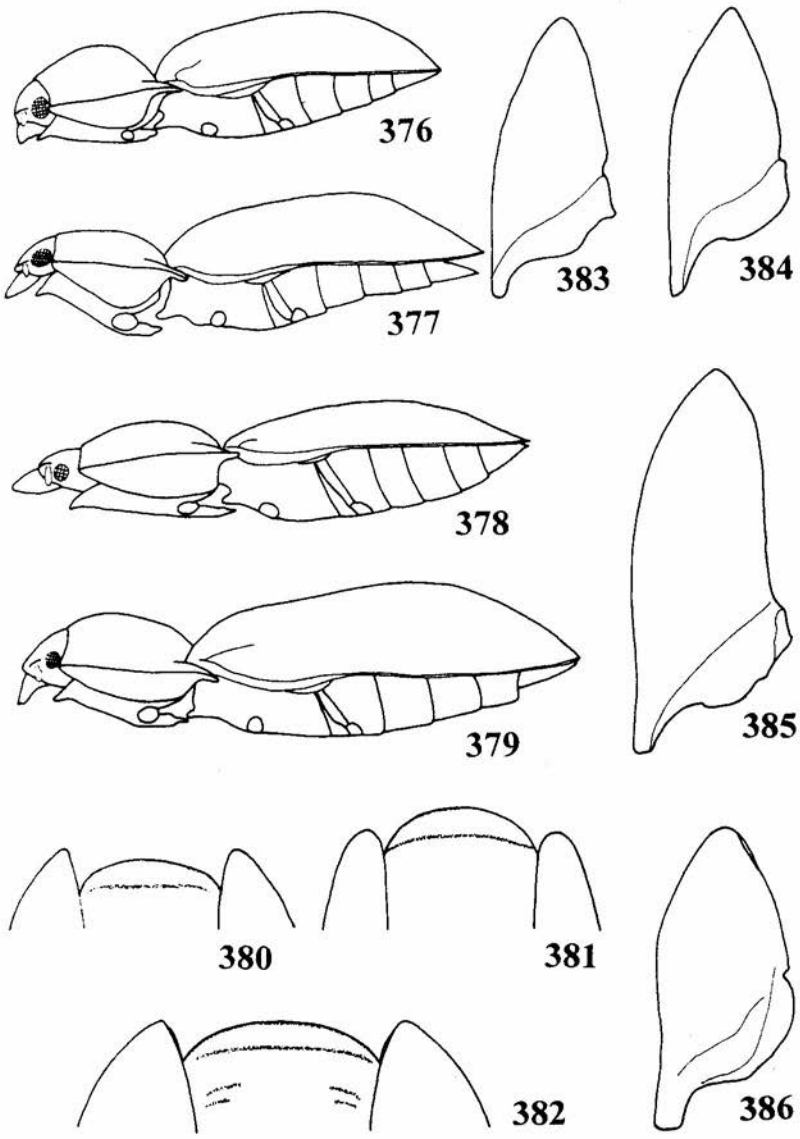

344 - *S.* (s. str.) *gloriosus*; 345 - *S.* (s. str.) *alekseevi*; 346 - *S.* (s. str.) *confluens*; 347 - *S.* (s. str.) *armeniacus*; 348, 352, 354 - *S.* (s. str.) *jailensis*; 349, 356 - *S.* (s. str.) *latissimus*; 350 - *S.* (s. str.) *tauricus*; 351 - *S.* (s. str.) *puerilis*; 353, 355 - *S.* (s. str.) *latus*; 344-351 - posterior process of prosternum; 352, 353 - hind wing; 354, 355 - outline of prosternum, lateral view; 356 - mandible; 344-346, 348, 350, 351 - M; 347, 349 - F (352-355 - after Dolin, 1971)



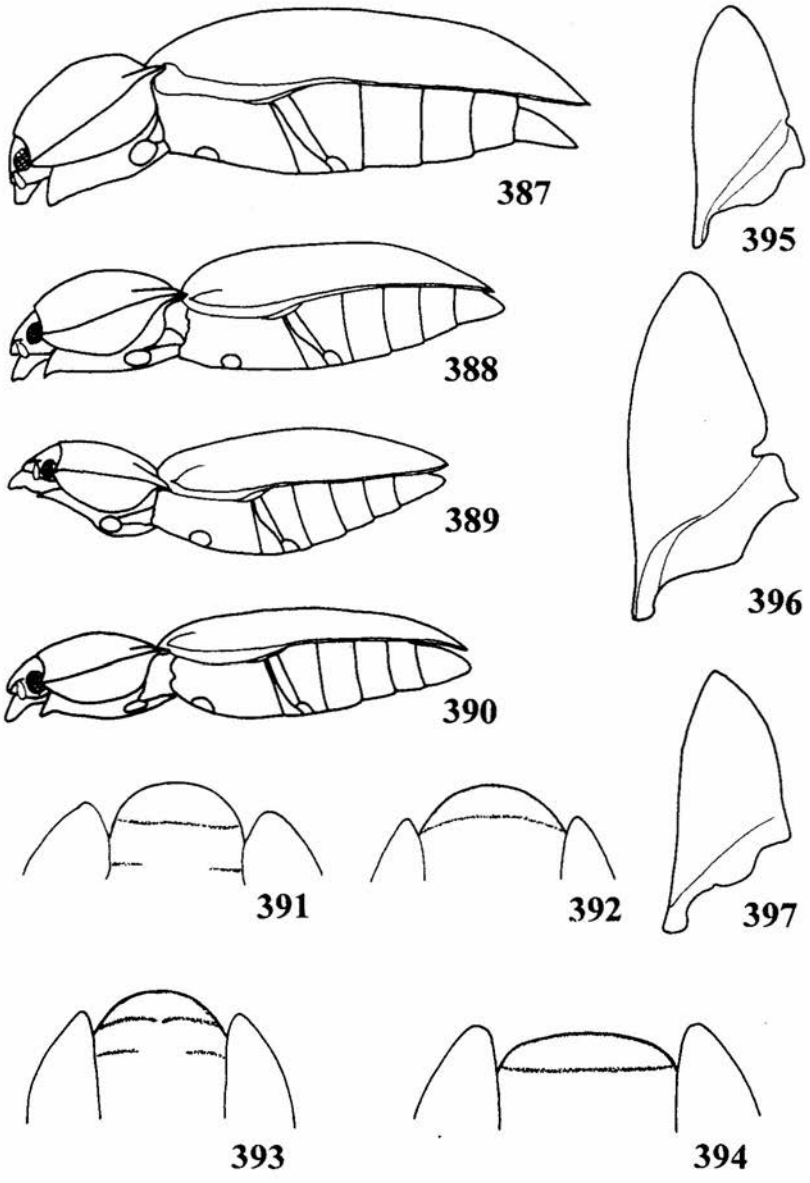

357 - *S.* (s. str.) *gloriosus*; 358 - *S.* (s. str.) *confluens*; 359 - *S.* (s. str.) *jailensis*; 360 - *S.* (s. str.) *tauricus*; 361 - *S.* (s. str.) *alekseevi*; 362 - *S.* (s. str.) *armeniacus*; 363, 366, 368 - *S.* (s. str.) *latissimus*; 364 - *S.* (s. str.) *puerilis*; 365 - *S.* (s. str.) *latus*; 357-365 - femoral plates of hind legs; 366-368 - legs: 366 - fore, 367 - mid, 368 - hind



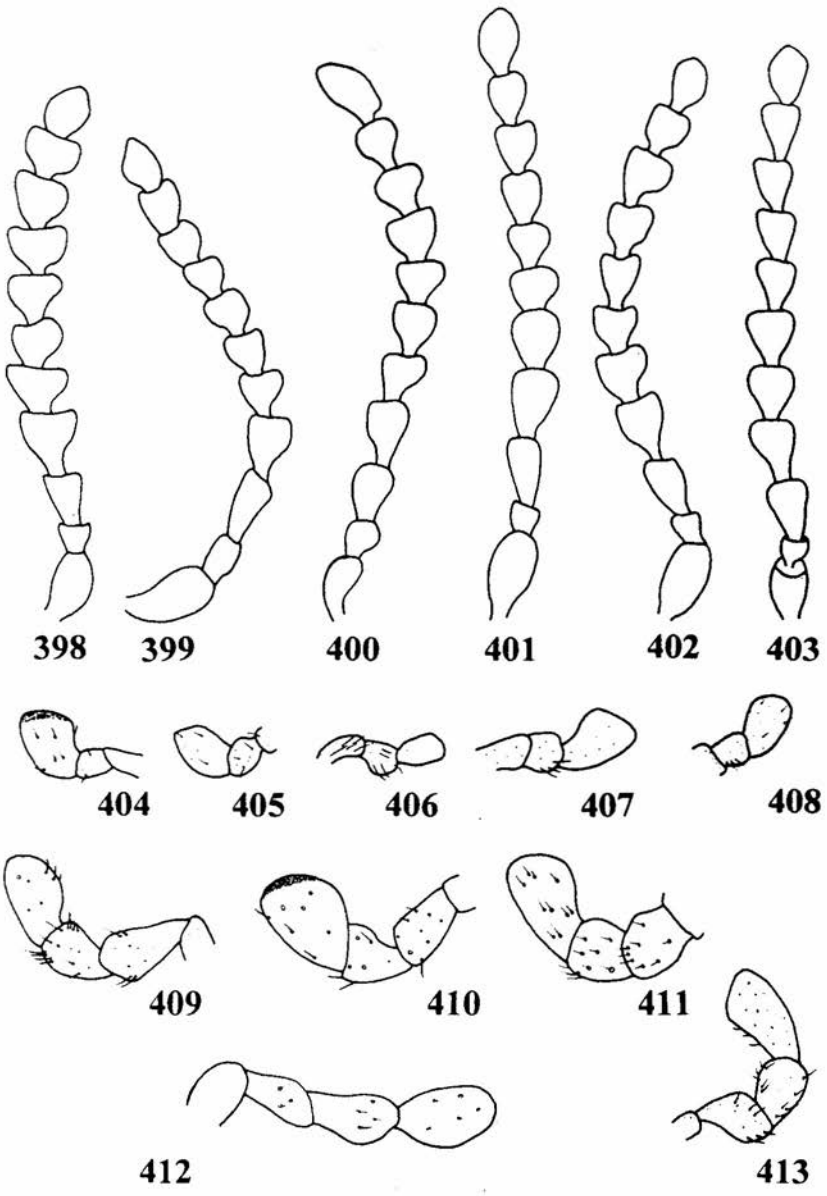

369-375 - habitus, dorsal view: 369 - *S.* (s. str.) *alekseevi*, 370 - *S.* (s. str.) *armeniacus*, 371 - *S.* (s. str.) *jailensis*, 372 - *S.* (s. str.) *puerilis*, 373 - *S.* (s. str.) *latissimus*, 374 - *S.* (s. str.) *latus*, 375 - *S.* (s. str.) *tauricus*; 369, 371, 372, 375 - M; 370, 373, 374 - F



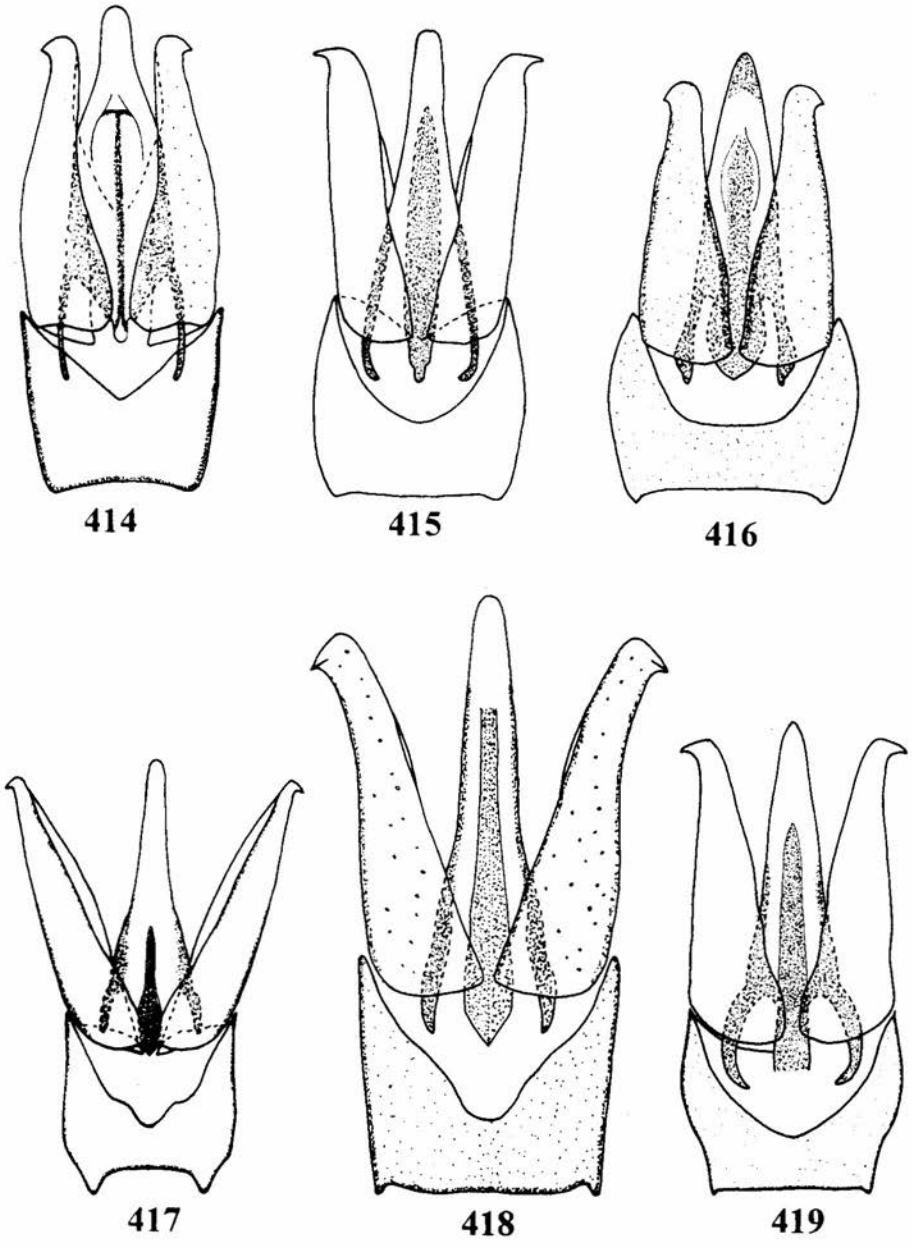

376, 380, 384 - *S.* (s. str.) *alekseevi*; 377, 381, 383 - *S.* (s. str.) *jailensis*; 378, 385 - *S.* (s. str.) *armeniacus*; 379, 382, 386 - *S.* (s. str.) *latissimus*; 376-379 - habitus, lateral view; 380-382 - prosternal collar; 383-386 - pronotal epipleuron; 376, 377, 380, 381, 383, 384 - M; 378, 379, 382, 385, 386 - F



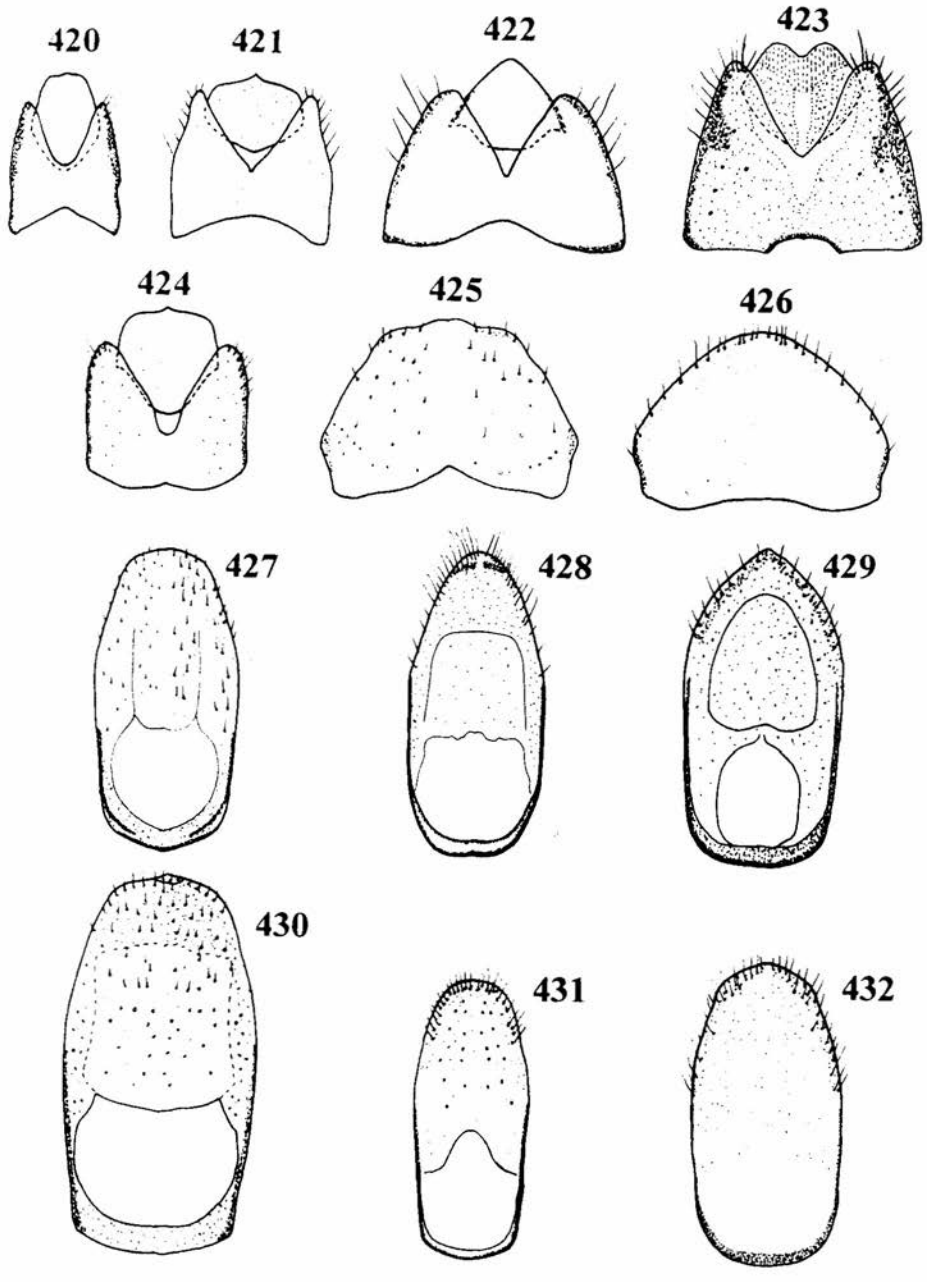

387, 394, 396 - *S.* (s. str.) *latus*; 388, 389, 393, 395 - *S.* (s. str.) *tauricus*; 390, 392, 397 - *S.* (s. str.) *puerilis*; 391 - *S.* (s. str.) *armeniacus*; 387-390 - habitus, lateral view; 391-394 - prosternal collar; 395-397 - pronotal epipleuron; 389, 390, 392, 393, 395, 397 - M; 387, 388, 391, 394, 396 - F



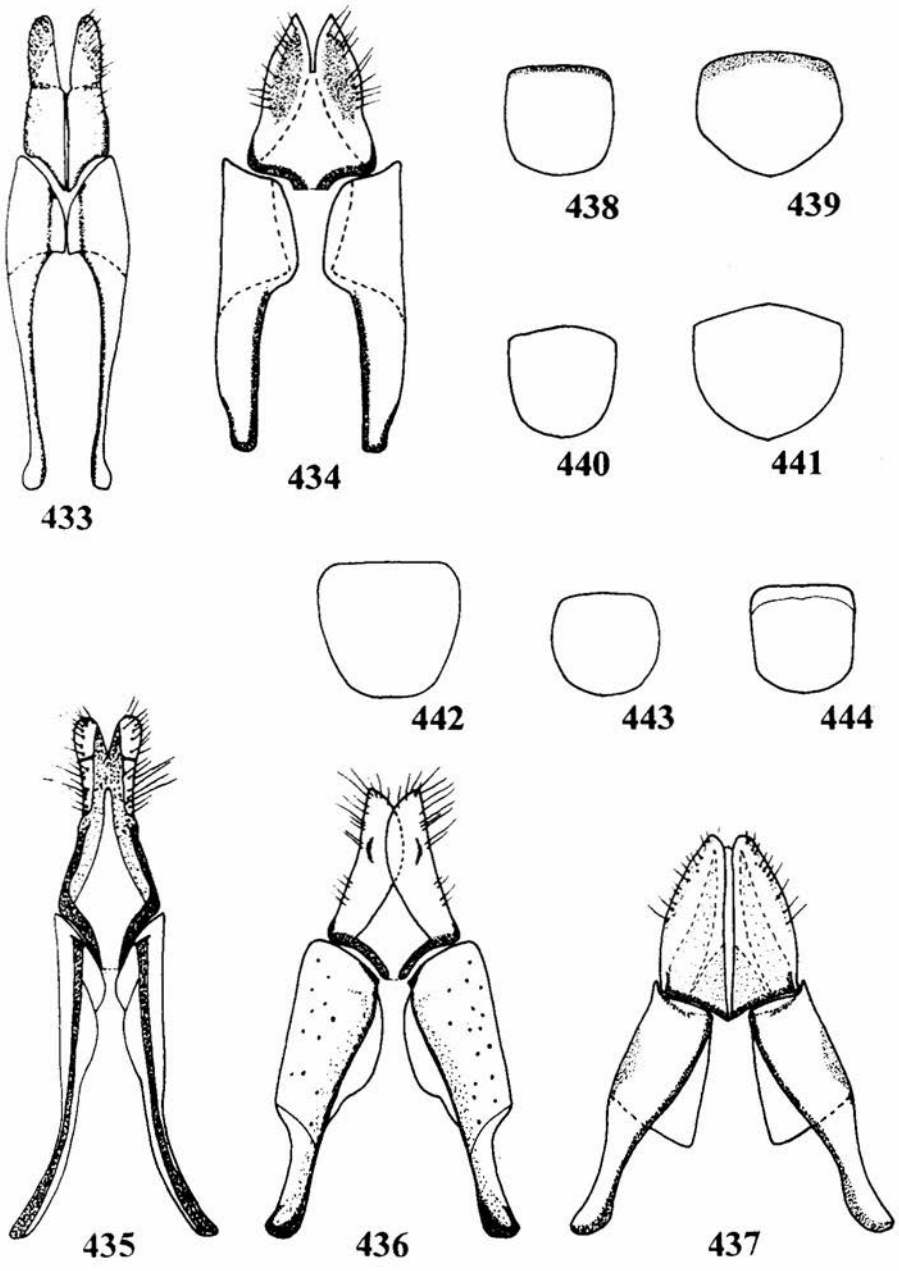

398, 407, 409 - *S.* (s. str.) *alekseevi*; 399, 404, 410 - *S.* (s. str.) *armeniacus*; 400, 405, 411 - *S.* (s. str.) *jailensis*; 401 - *S.* (s. str.) *latissimus*; 402, 408, 413 - *S.* (s. str.) *tauricus*; 403, 406, 412 - *S.* (s. str.) *puerilis*; 398-403 - antennae; 404-408 - labial palp; 409-413 - maxillary palp; 398, 400, 402, 403, 405-409, 411-413 - M; 399, 401, 404, 410 - F



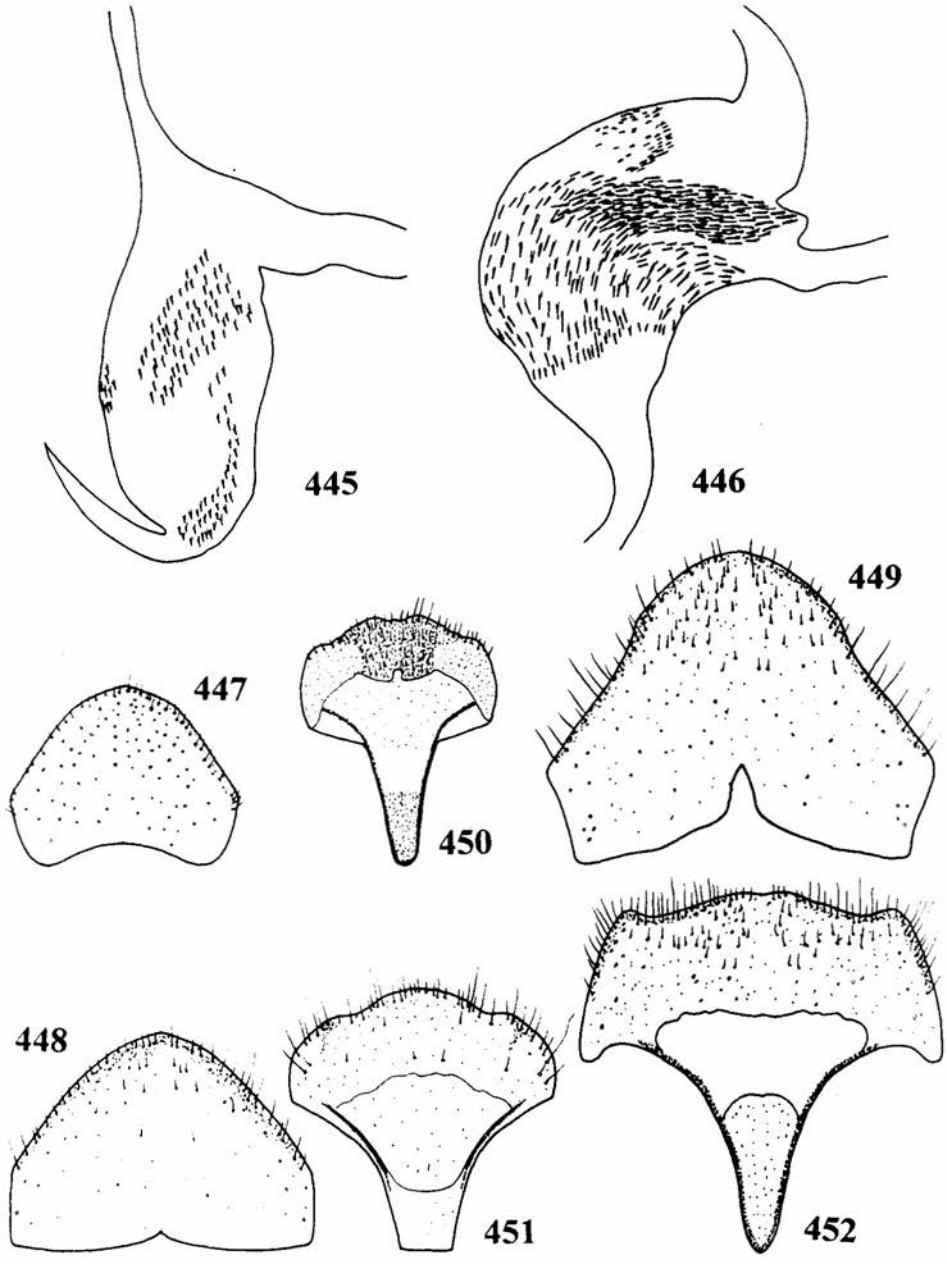

414-419. Aedeagus: 414 - *S.* (s. str.) *alekseevi*, 415 - *S.* (s. str.) *jailensis*, 416 - *S.* (s. str.) *latissimus*, 417 - *S.* (s. str.) *tauricus*, 418 - *S.* (s. str.) *saginatus*, 419 - *S.* (s. str.) *puerilis*



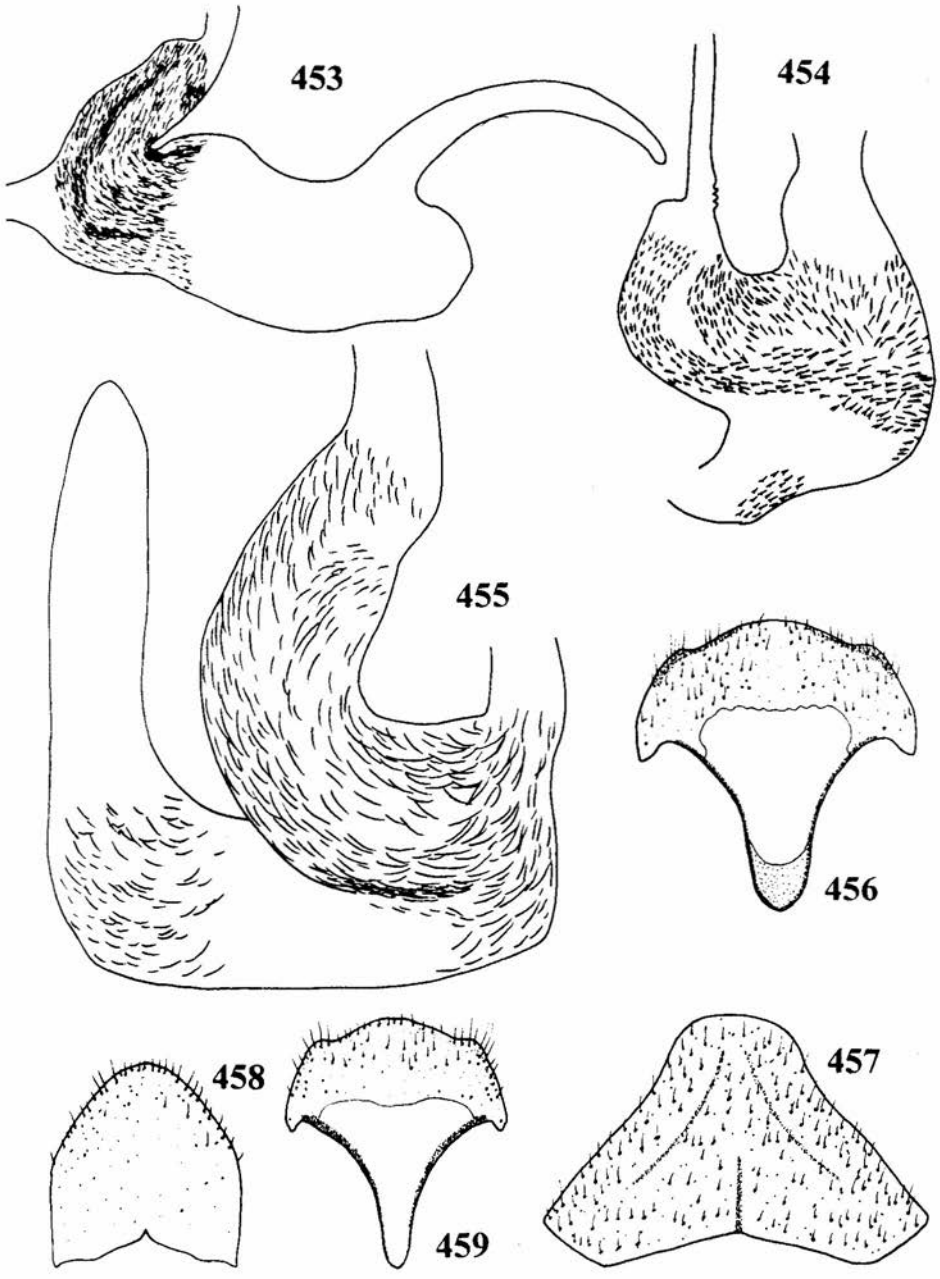

420-432 - terminal abdominal segments in M: 420, 428 - *S.* (s. str.) *alekseevi*, 421, 427 - *S.* (s. str.) *jailensis*, 422, 429 - *S.* (s. str.) *latissimus*, 423, 430 - *S.* (s. str.) *saginatus*, 424, 426, 432 - *S.* (s. str.) *puerilis*, 425, 431 - *S.* (s. str.) *tauricus*; 420-424 - tergites IX and X; 425, 426 - tergite VIII; 427-432 - sternite IX



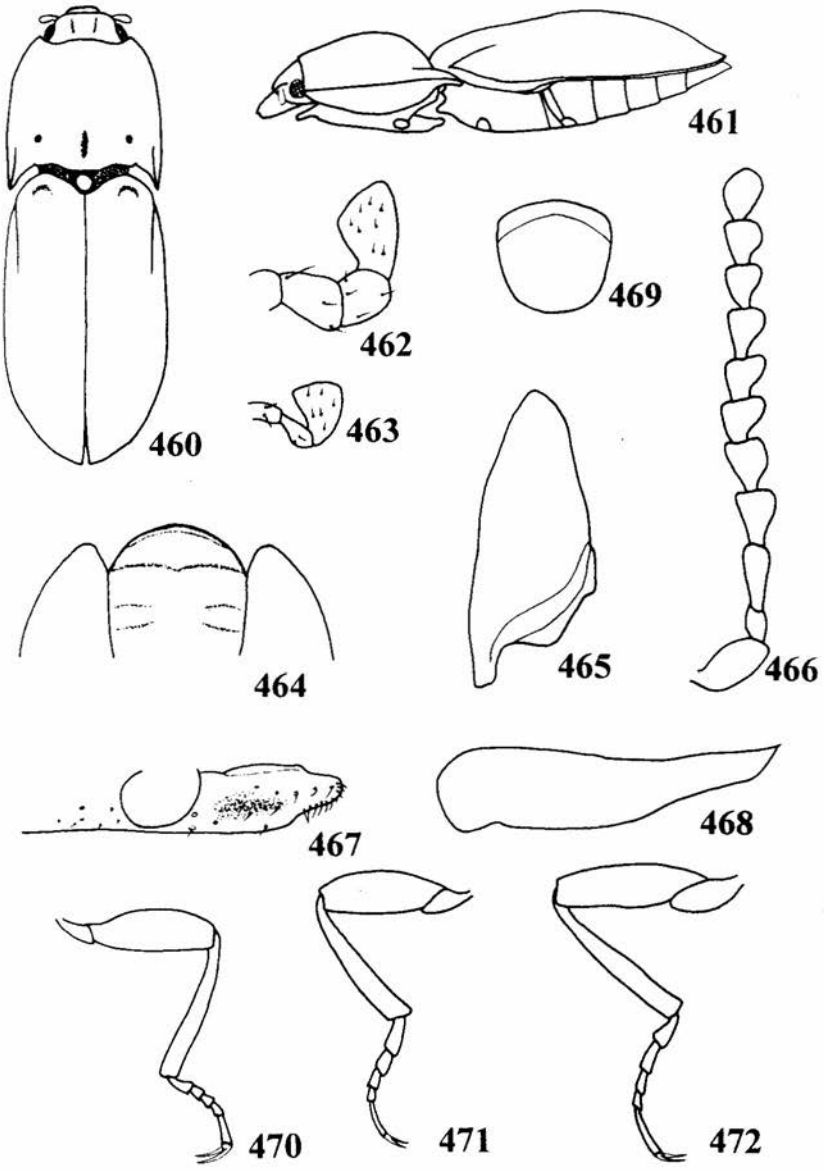

433, 438 - *S.* (s. str.) *armeniacus*; 434, 441 - *S.* (s. str.) *latissimus*; 435 - *S.* (s. str.) *saginatus*; 436, 442 - *S.* (s. str.) *latus*; 337, 443 - *S.* (s. str.) *tauricus*; 439 - *S.* (s. str.) *alekseevi*; 440 - *S.* (s. str.) *jailensis*; 444 - *S.* (s. str.) *puerilis*; 433-437 - ovipositor; 438-444 - scutellum: 439, 440, 443, 444 - M, 438, 441, 442 - F



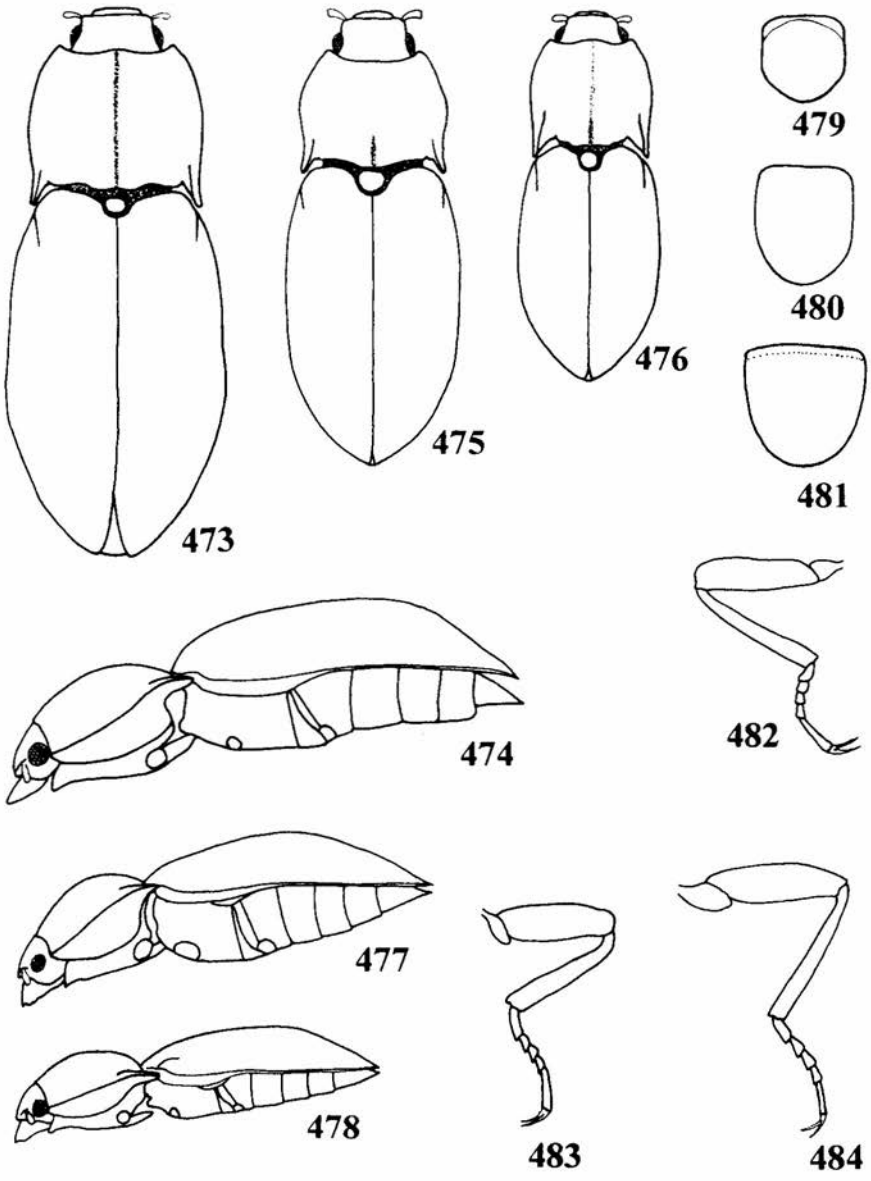

445, 447, 450 - *S.* (s. str.) *armeniacus*; 446, 448, 451 - *S.* (s. str.) *latissimus*; 449, 452 - *S.* (s. str.) *saginatus*; 445, 446 - seminal vesicle; 447-452 - VIII abdominal segment in F: 447-449 - tergite, 450-452 - sternite



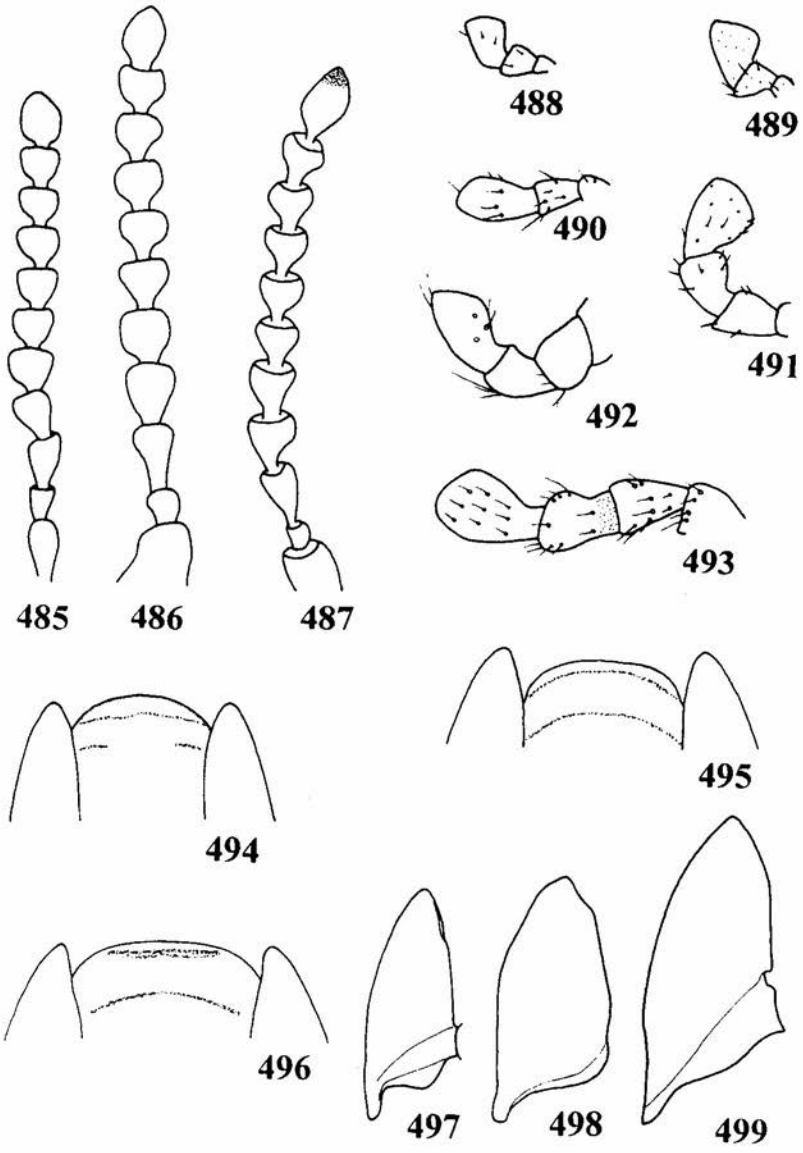

453, 458, 459 - *S.* (s. str.) *tauricus*; 454, 456, 457 - *S.* (s. str.) *latus*; 455 - *S.* (s. str.) *saginatus*; 453-455 - seminal vesicle; 456-459 - VIII abdominal segment in F: 457, 458 - tergite, 456, 459 - sternite



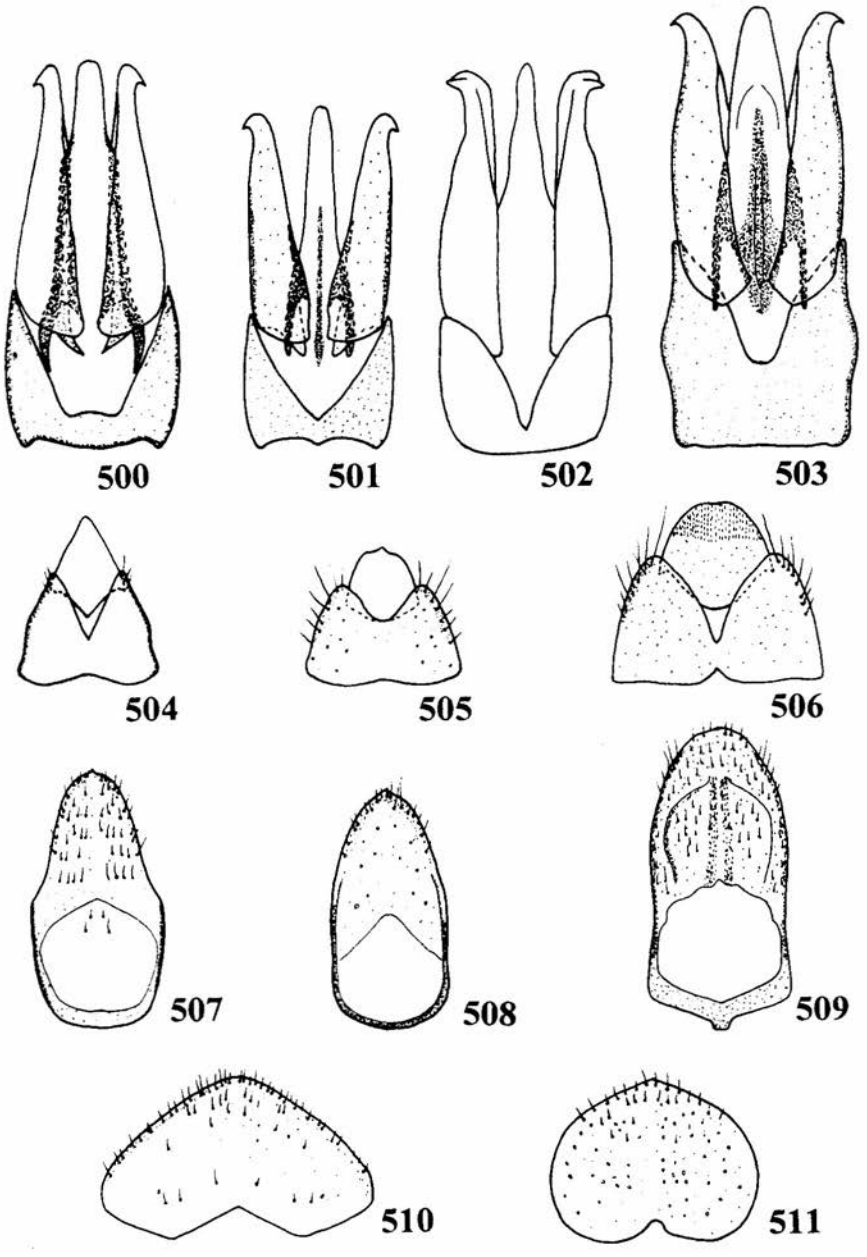

460-472. *S.* (s. str.) *pecirkanus*, M: 460 - habitus, dorsal view, 461 - habitus, lateral view, 462 - maxillary palp, 463 - labial palp, 464 - prosternal collar, 465 - pronotal epipleuron, 466 - antenna, 467 - posterior process of prosternum, 468 - femoral plate of hind leg, 469 - scutellum, 470-472 - legs: 470 - fore, 471 - mid, 472 - hind



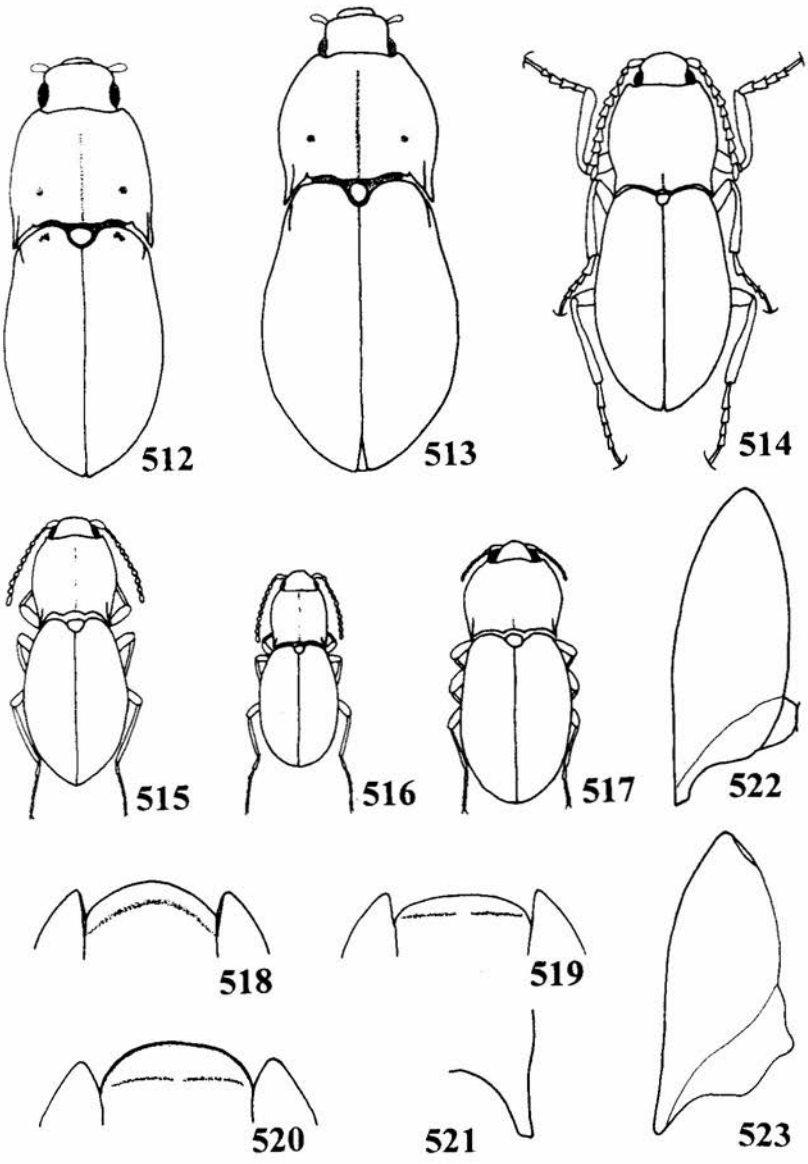

473, 480 - *S.* (*W.*) *karabachensis*, M; 475, 477, 481 - *S.* (*W.*) *logvinenkoe*, M; 476, 478, 479, 482, 484 - *S.* (*W.*) *ampliformis*, M; 473, 475,476 - habitus, dorsal view; 474, 477, 478 - habitus, lateral view; 479-481 - scutellum; 482-484 - legs: 482 - fore, 483 - middle, 484 - hind (480, 481 - after Dolin, 1982a)



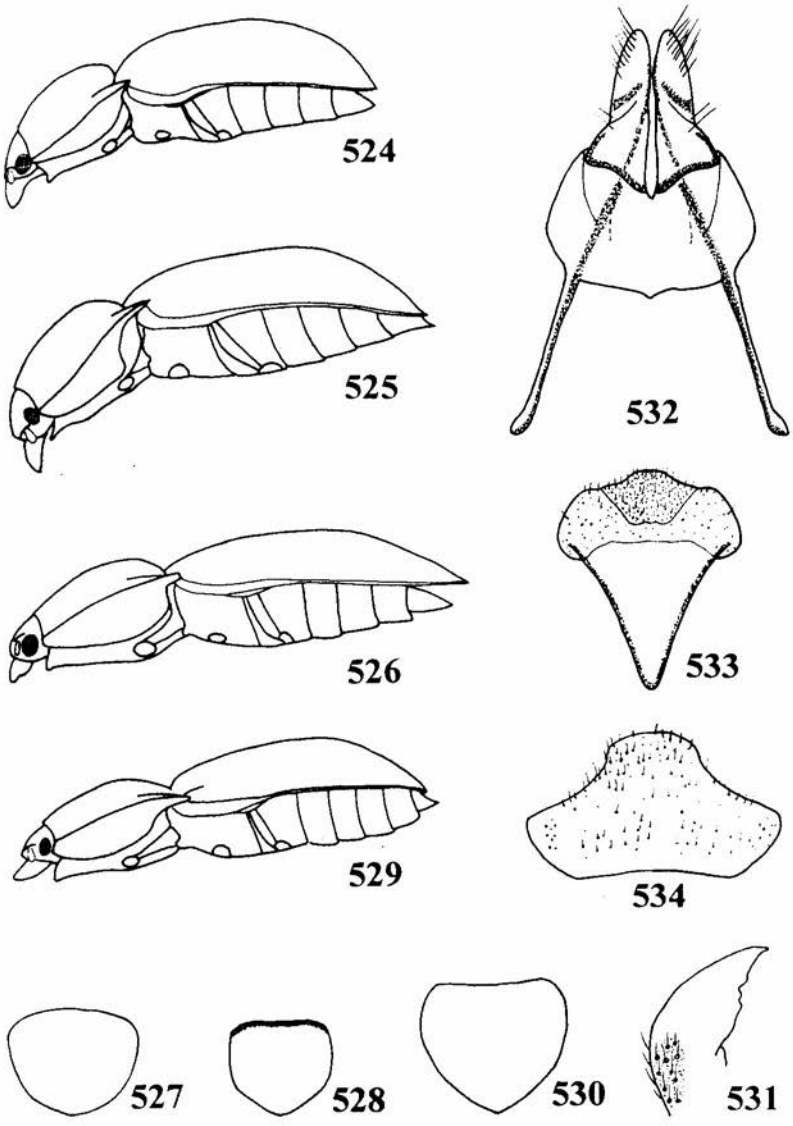

485, 488, 491, 494, 497 - *S. (W.) ampliformis*, M; 486, 490, 493, 496, 499 - *S. (W.) karabachensis*, M; 487, 489, 492, 495, 498 - *S. (W.) logvinenkoe*, M; 485-487 - antennae; 488-490 - labial palp; 491-493 - maxillary palp; 494-496 - prosternal collar; 497-499 - pronotal epipleuron (486, 487 - after DOLIN, 1982a)



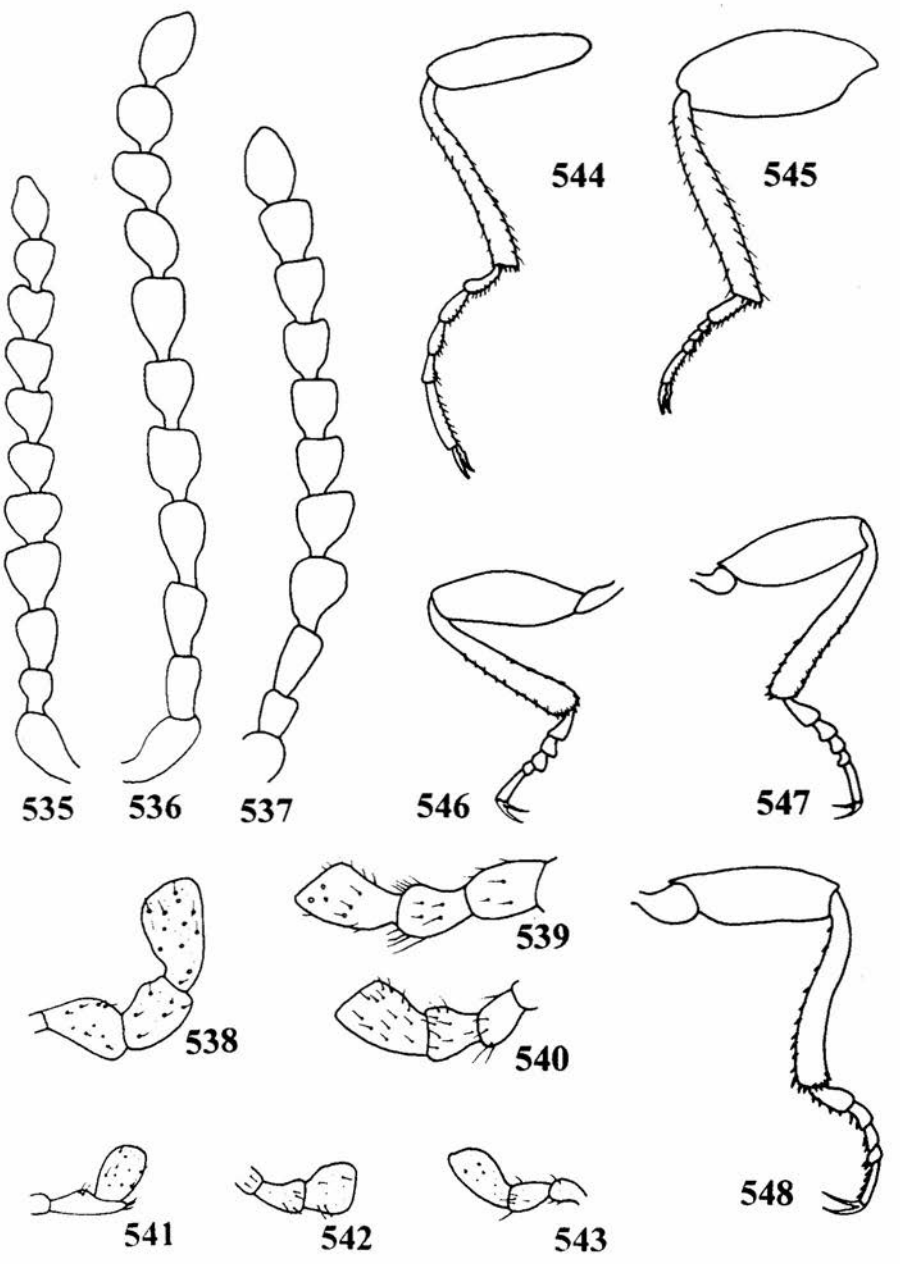

500, 504, 507, 510 - *S.* (s. str.) *pecirkanus*; 501, 505, 508 - *S.* (*W.*) *ampliformis*; 502 - *S.* (*W.*) *karabachensis*; 503, 506, 509, 511 - *S.* (*W.*) *logvinenkoe*; 500-503 - aedeagus; 504-511 - terminal abdominal segments in M: 504-506 - tergites IX and X, 507-509 - sternite IX, 510, 511 - tergite VIII (502 - after DOLIN, 1982a)



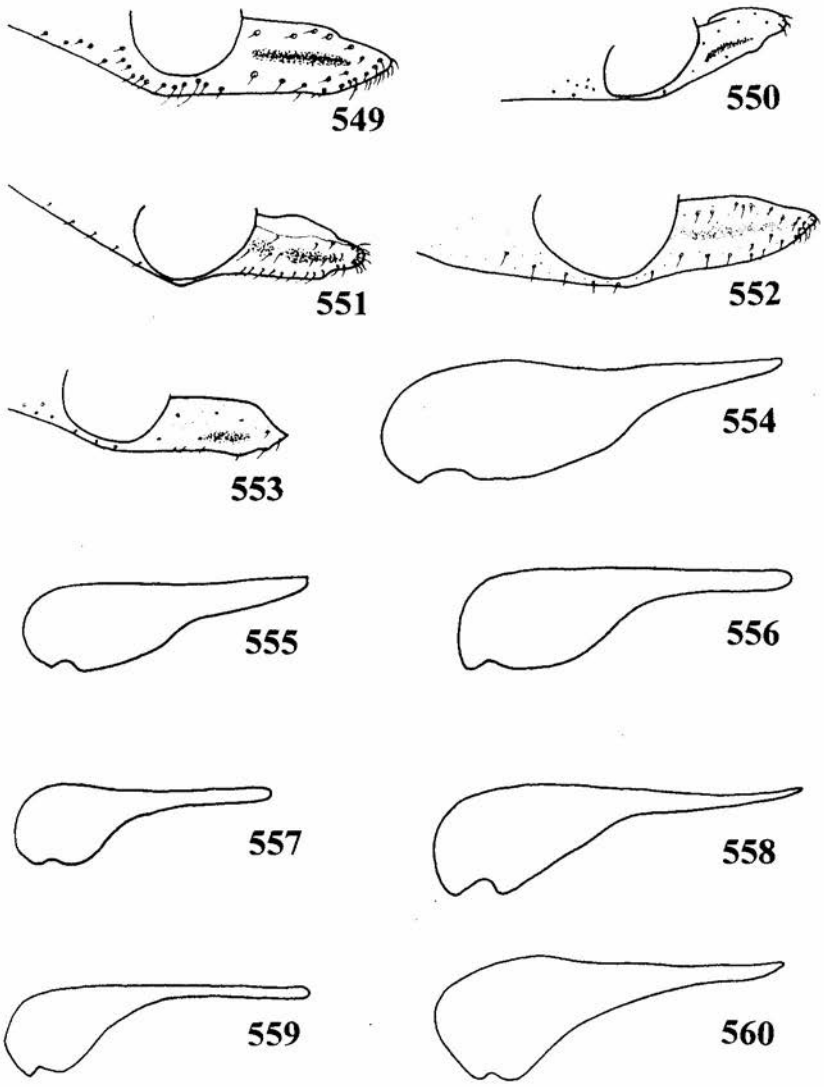

512, 513, 518, 523 - *S.* (*W.*) *informis*; 514, 519, 521 - *S.* (*W.*) *persimilis*; 515, 520, 522 - *S.* (*W.*) *mirificus*; 516, 517 - *S.* (*W.*) *mirus*; 512-517 - habitus, dorsal view; 418-520 - prosternal collar; 521 - posterior angle of pronotal epipleuron; 522-523 - pronotal epipleuron; 512, 514-516, 519-522 - M; 513, 517, 518, 523 - F (514 - after DOLIN, 1982a; 515-517 - after GURYEVA, 1972)



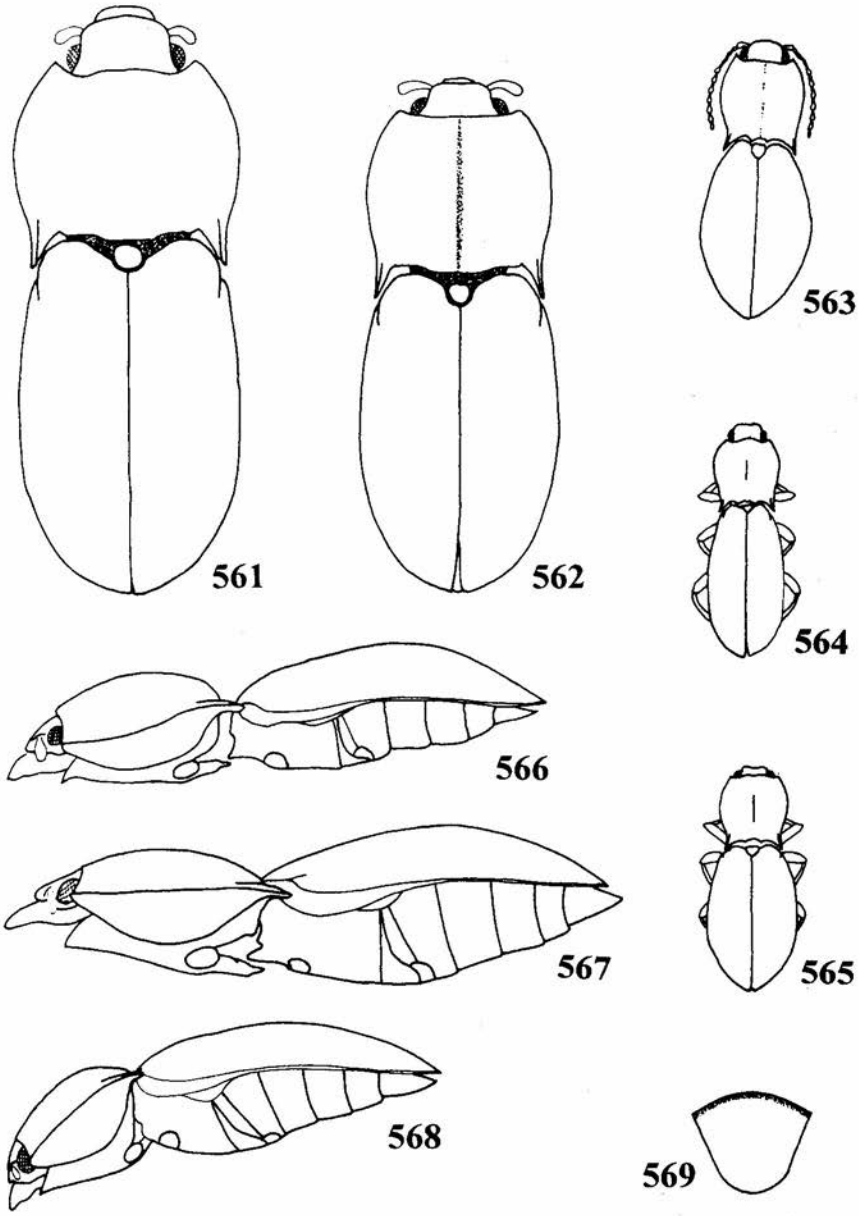

524, 525, 527, 531-534 - *S.* (*W.*) *informis*; 526, 528 - *S.* (*W.*) *mirificus*; 529, 530 - *S.* (*W.*) *persimilis*; 524-526, 529 - habitus, lateral view; 527, 528, 530 - scutellum; 531 - mandible; 532 - ovipositor; 533 - VIII abdominal sternite, 534 - VIII abdominal tergite; 524, 526, 528-530 - M; 525, 527, 531-534 - F (530 - after Dolin, 1982a)



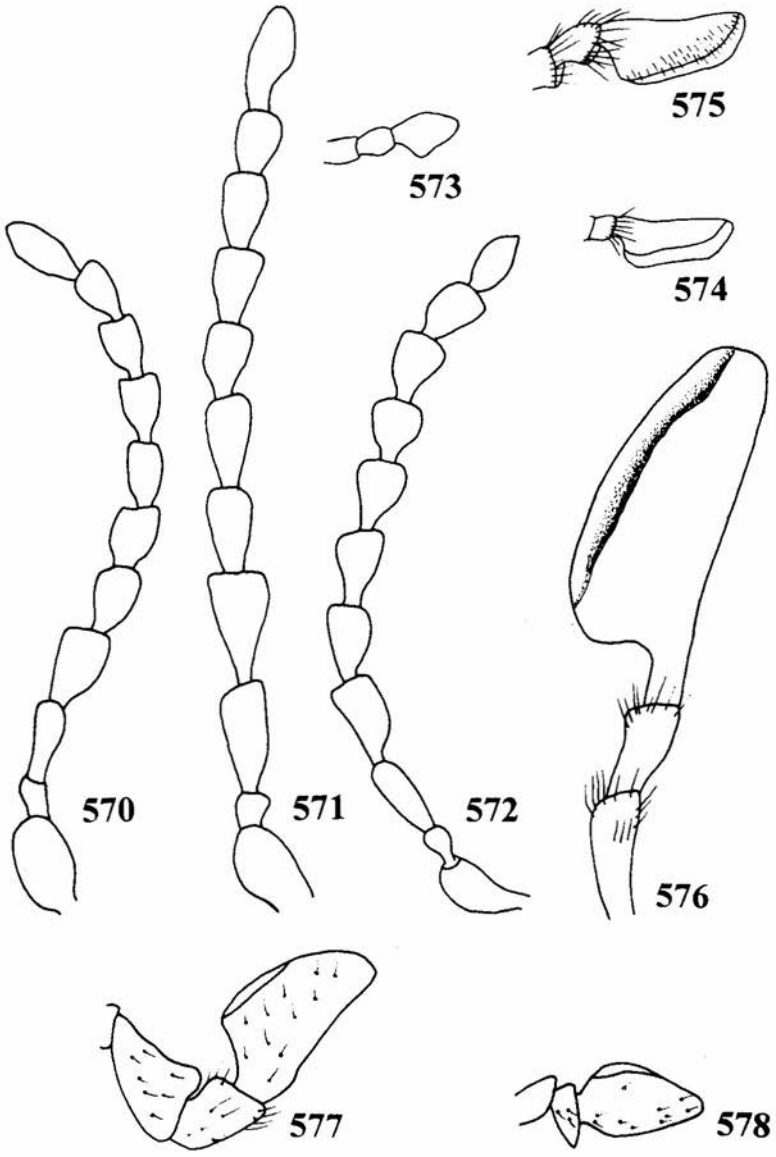

535, 538, 541, 546-548 - *S.* (*W.*) *informis*, F; 536, 539, 543 - *S.* (*W.*) *mirificus*, M; 537, 540, 542 - *S.* (*W.*) *persimilis*, M; 544, 545 - *S.* (*W.*) *mirus*, legs: 544 - M, 545 - F; 535-537 - antennae; 538-540 - maxillary palp; 541-543 - labial palp; 546-548 - legs: 546 - fore, 547 - mid, 548 - hind (537 - after DOLIN, 1982a; 544, 545 - after GURYEVA, 1972)



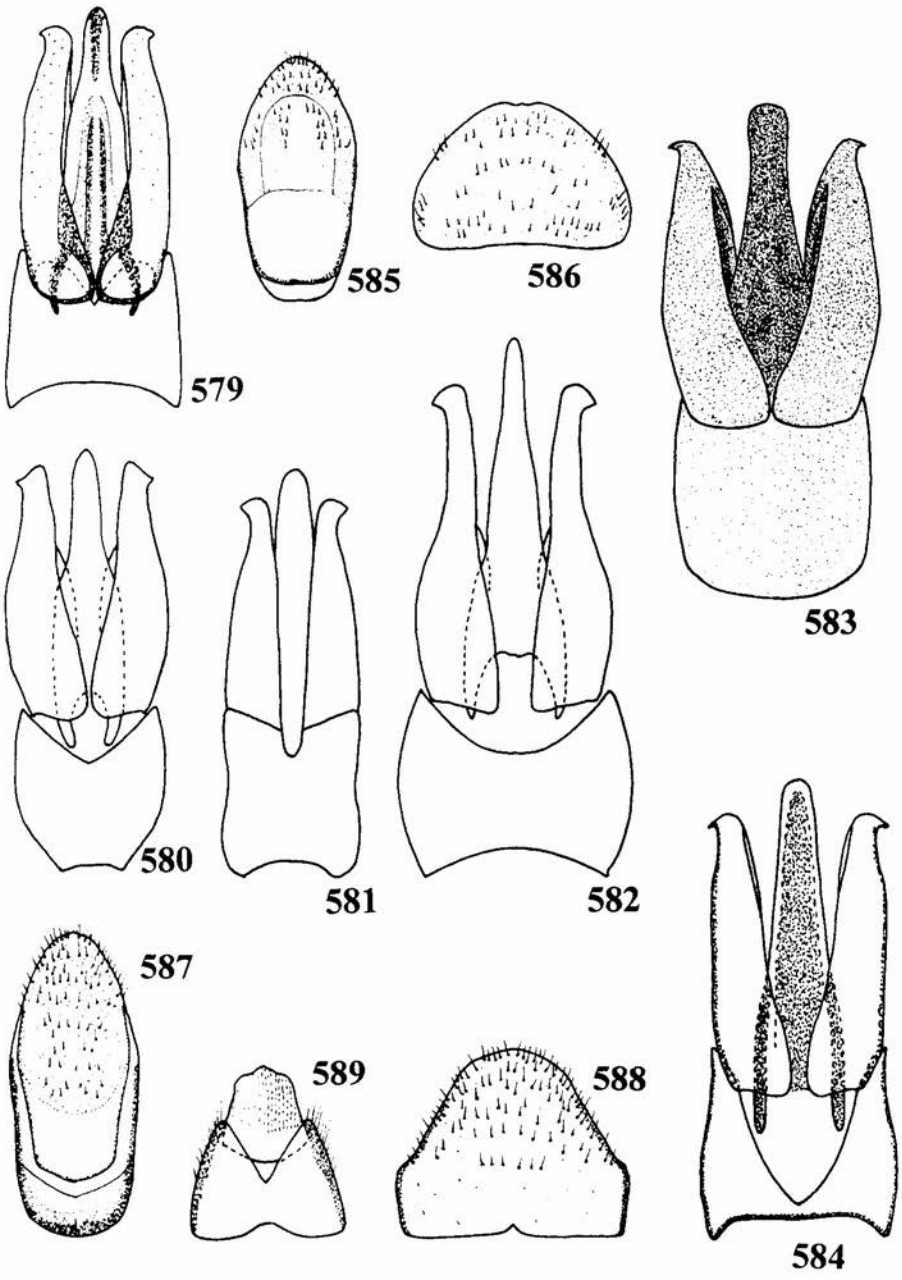

549, 554 - *S.* (*W.*) *karabachensis*; 550, 555 - *S.* (*W.*) *ampliformis*; 551, 556 - *S.* (*W.*) *logvinenkoe*; 552, 560 - *S.* (*W.*) *mirificus*; 553, 559 - *S.* (*W.*) *persimilis*; 557 - *S.* (*W.*) *mirus*; 558 - *S.* (*W.*) *informis*; 549-553 - posterior process of prosternum; 554-560 - femoral plates of hind legs; 549-556, 559, 560 - M; 558 - F (556, 559 - after DOLIN, 1982a; 557 - after GURYEVA, 1972)



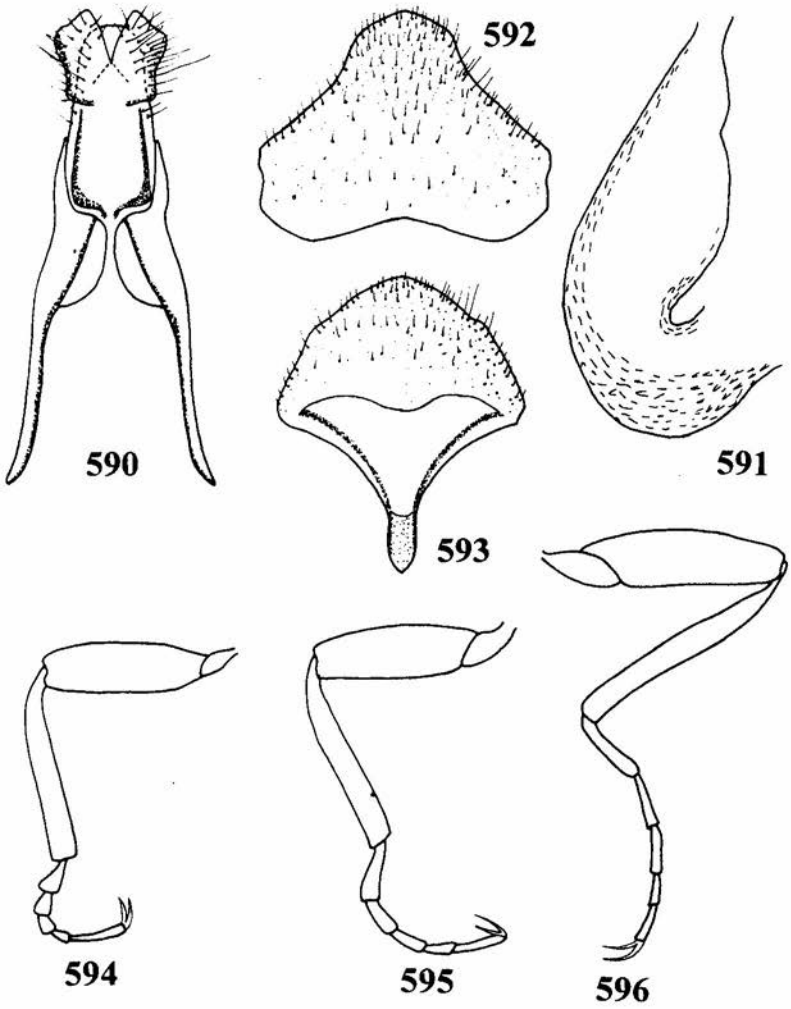

561, 562, 566, 567 - *S.* (*W.*) *atratus*; 563 - *S.* (*W.*) *denisovae*; 564, 565, 568, 569 - *S.* (*W.*) *victor*; 561-565 - habitus, dorsal view; 566-568 - habitus, lateral view; 569 - scutellum; 562-564, 566, 568, 569 - M; 561, 565, 567 - F (563 - after GURYEVA, 1978; 564, 565 - after GURYEVA, 1982)



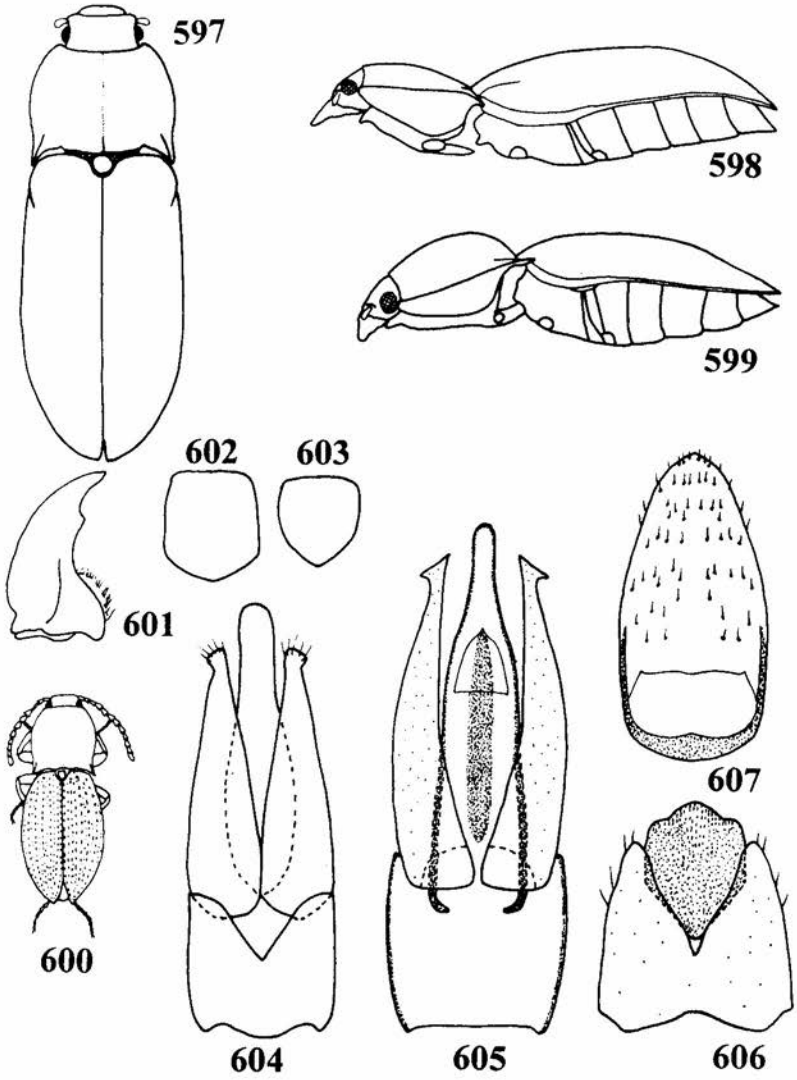

570, 577, 578 - *S.* (*W.*) *atratus*; 571, 576 - *S.* (*W.*) *denisovae*; 572, 573-575 - *S.* (*W.*) *victor*; 570-572 - antennae; 573, 574, 578 - labial palp; 575-577 - maxillary palp; 570-572, 574-578 - M; 573 - F (571 - after Guryeva, 1985; 573-575 - after Guryeva, 1982; 576 - after Guryeva, 1978)



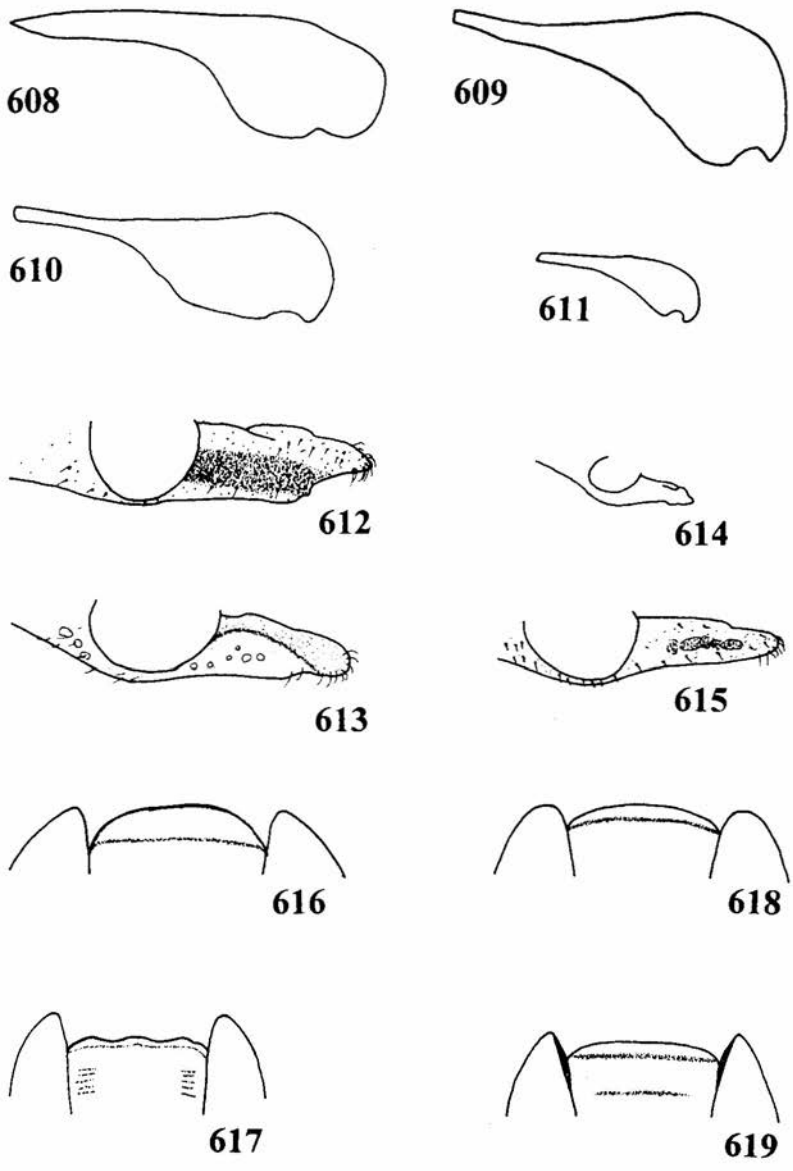

579, 585, 586 - *S. (W.) informis*; 580 - *S. (W.) mirus*; 581 - *S. (W.) persimilis*; 582 - *S. (W.) mirificus*; 583 - *S. (W.) victor*; 584, 587-589 - *S. (W.) atratus*; 579-584 - aedeagus; 585-589 - terminal abdominal segments in M: 585, 587 - IX sternite, 586, 588 - VIII tergite, 589 - IX and X tergites (580, 582 - after GURYEVA, 1972; 581 - after DOLIN, 1982a)



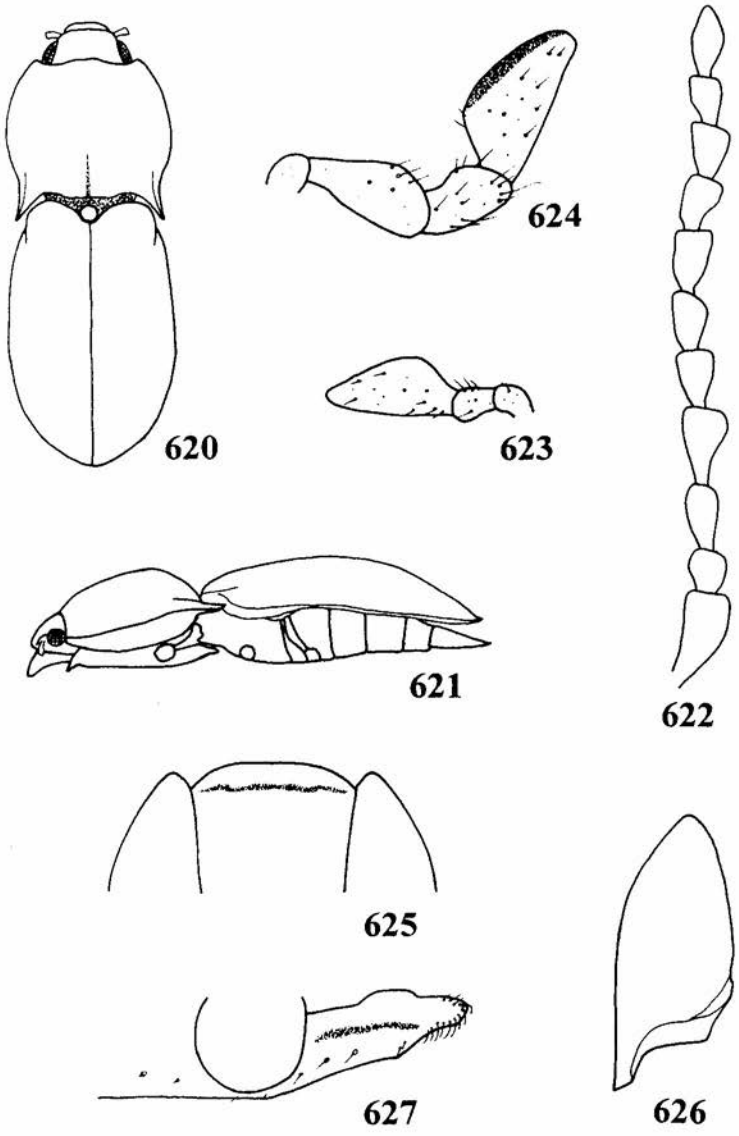

590-593 - *S.* (*W.*) *atratus*, F: 590 - ovipositor, 591 - seminal vesicle, 592 - VIII abdominal tergite, 593 - VIII abdominal sternite; 594-596 - *S.* (*W.*) *victor*, M: legs: 594 - fore, 595 - mid, 596 -hind (591 - after GURYEVA, 1985)




597-607. Male: 597, 598, 601, 602, 605-607 - *S.* (*S.*) *jakobsoni*; 599, 600, 603, 604 - *S.* (*S.*) *messorobius*; 597, 600 - habitus, dorsal view; 598, 599 - habitus, lateral view; 601 - mandible; 602, 603 - scutellum; 604, 605 - aedeagus; 606 - IX and X abdominal tergites; 607 - IX abdominal sternite (600, 604 - after Dolin, 1971; 601 - after Guryeva, 1985)




608-619. Male: 608, 612, 616 - *S.* (*W.*) *atratus*; 609, 613, 617 - *S.* (*W.*) *victor*; 610, 615, 618 - *S.* (*S.*) *jakobsoni*; 611, 614, 519 - *S.* (*S.*) *messorobius*; 608-611 - femoral plates of hind legs; 612-615 - posterior process of prosternum; 616-619 - prosternal collar (609 - after Guryeva, 1982; 614 - after Guryeva, 1985)




620-627. *S. (W.) turkestanicus*, holotype, M: 620 - habitus, dorsal view, 621 - habitus, lateral view, 622 - antenna, 623 - labial palp, 624 - maxillary palp, 625 - prosternal collar, 626 - pronotal epipleuron, 627 - posterior process of prosternum

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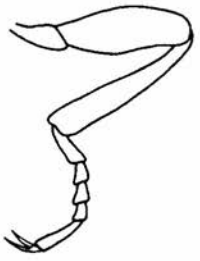

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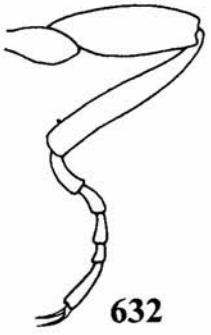

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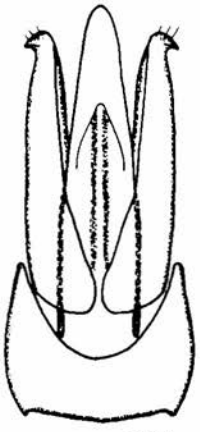

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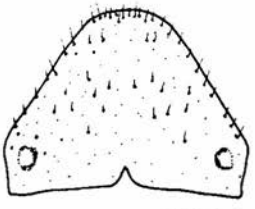

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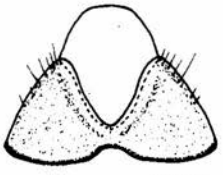
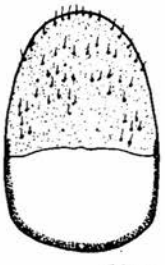


635



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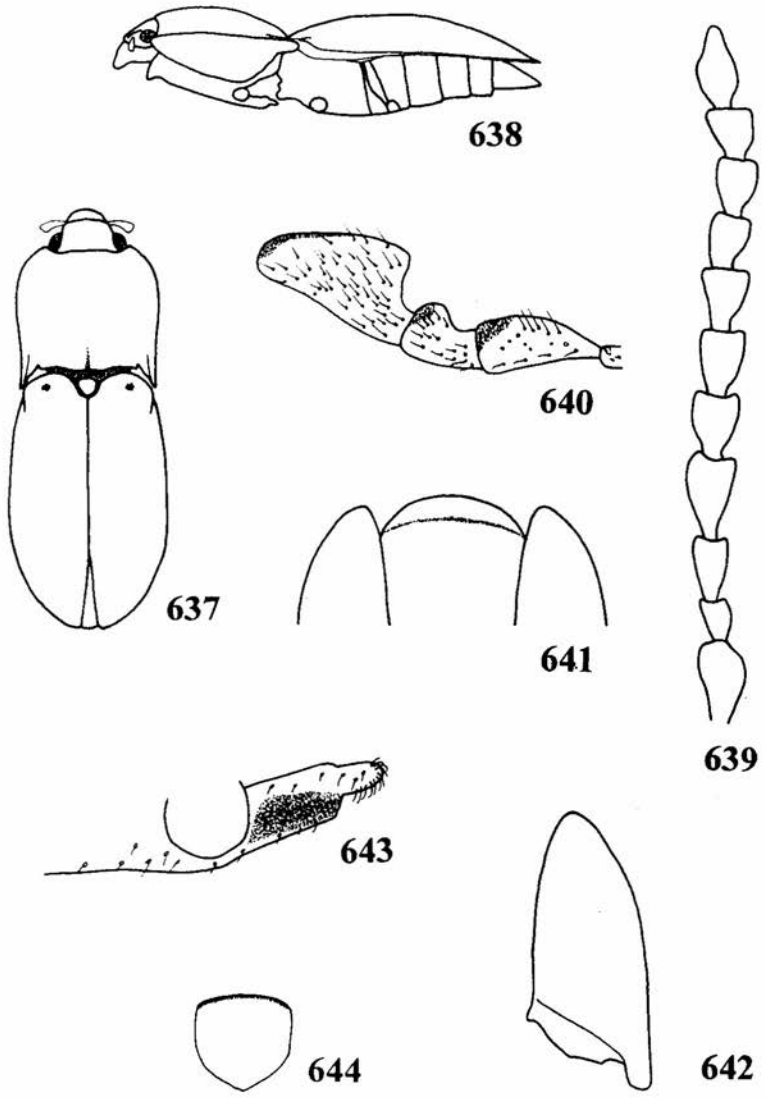
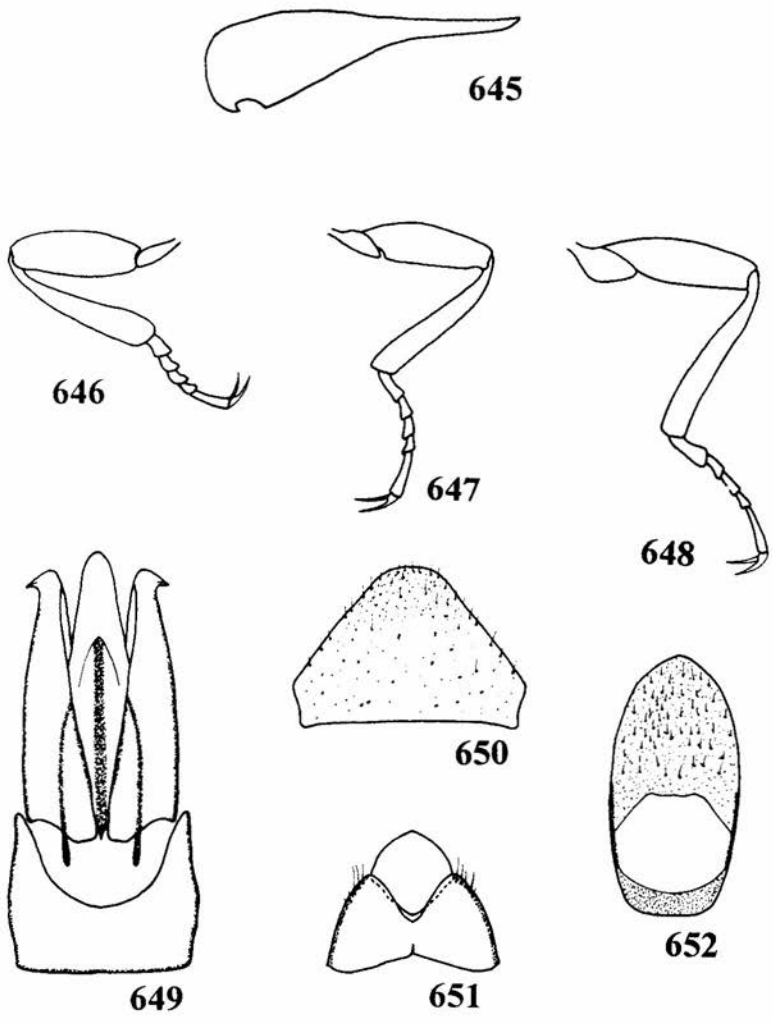
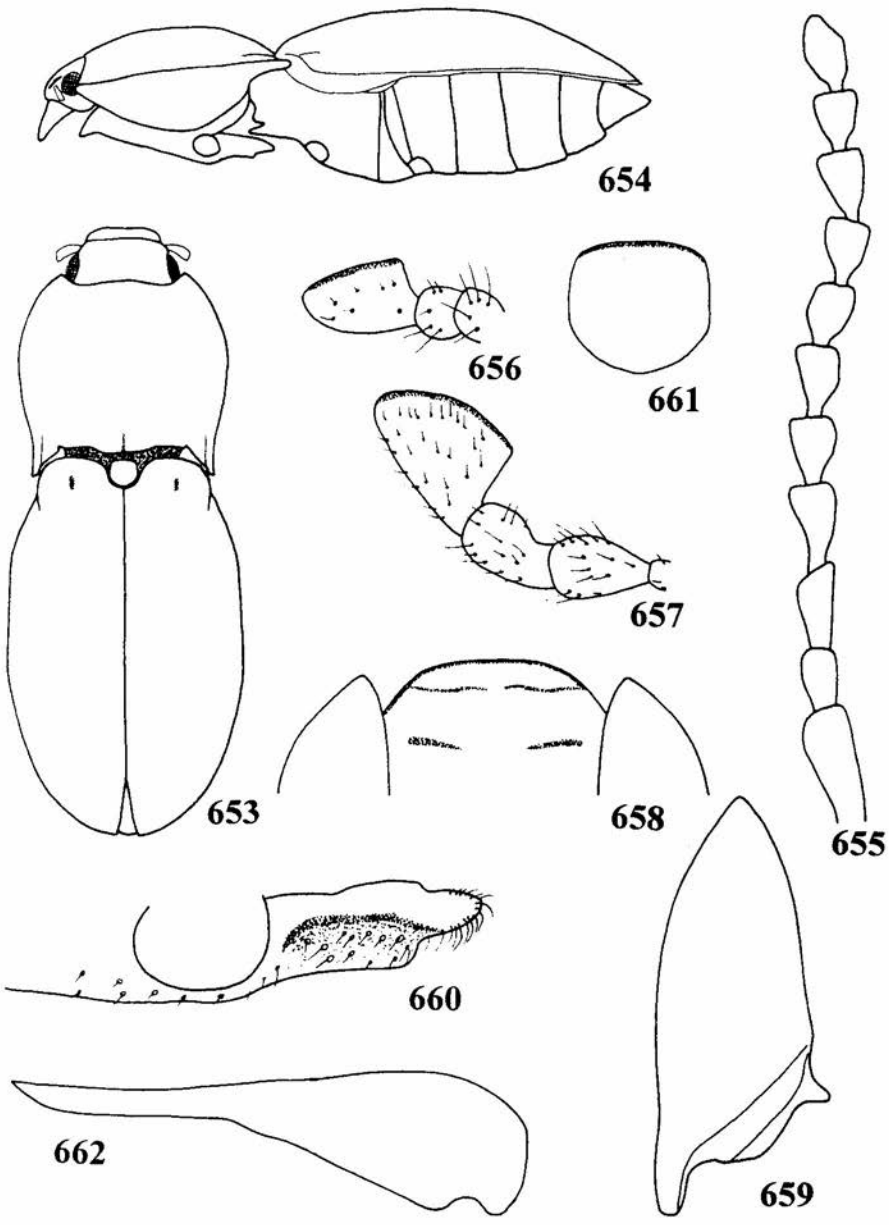
628-636. *S. (W.) turkestanicus*, holotype, M: 628 - scutellum, 629 - femoral plate of hind leg, 630 - fore leg, 631 - mid leg, 632 - hind leg, 633 - aedeagus, 634 - VIII abdominal tergite, 635 - IX and X abdominal tergites, 636 - IX abdominal sternite



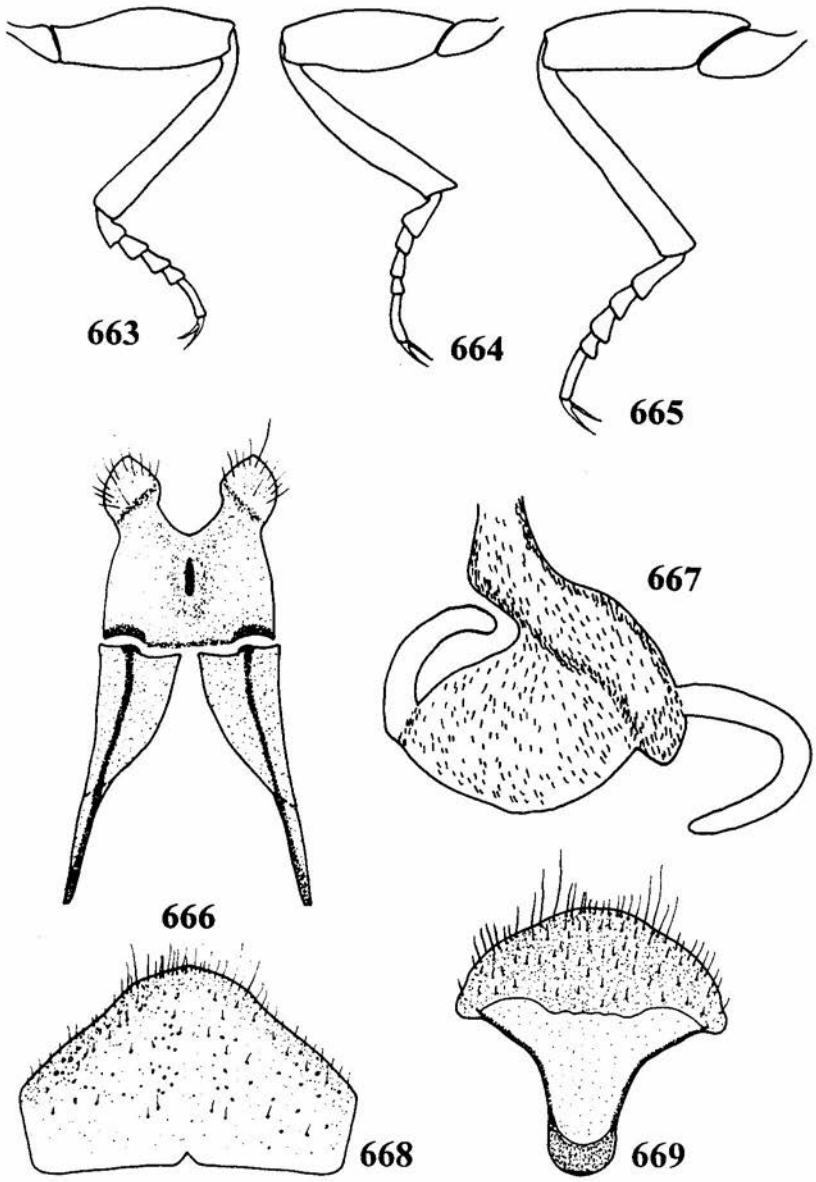

637-644. *S. (W.) theresae*, holotype, M: 637 - habitus, dorsal view, 638 - habitus, lateral view, 639 - antenna, 640 - maxillary palp, 641 - prosternal collar, 642 - pronotal epipleuron, 643 - posterior process of prosternum, 644 - scutellum



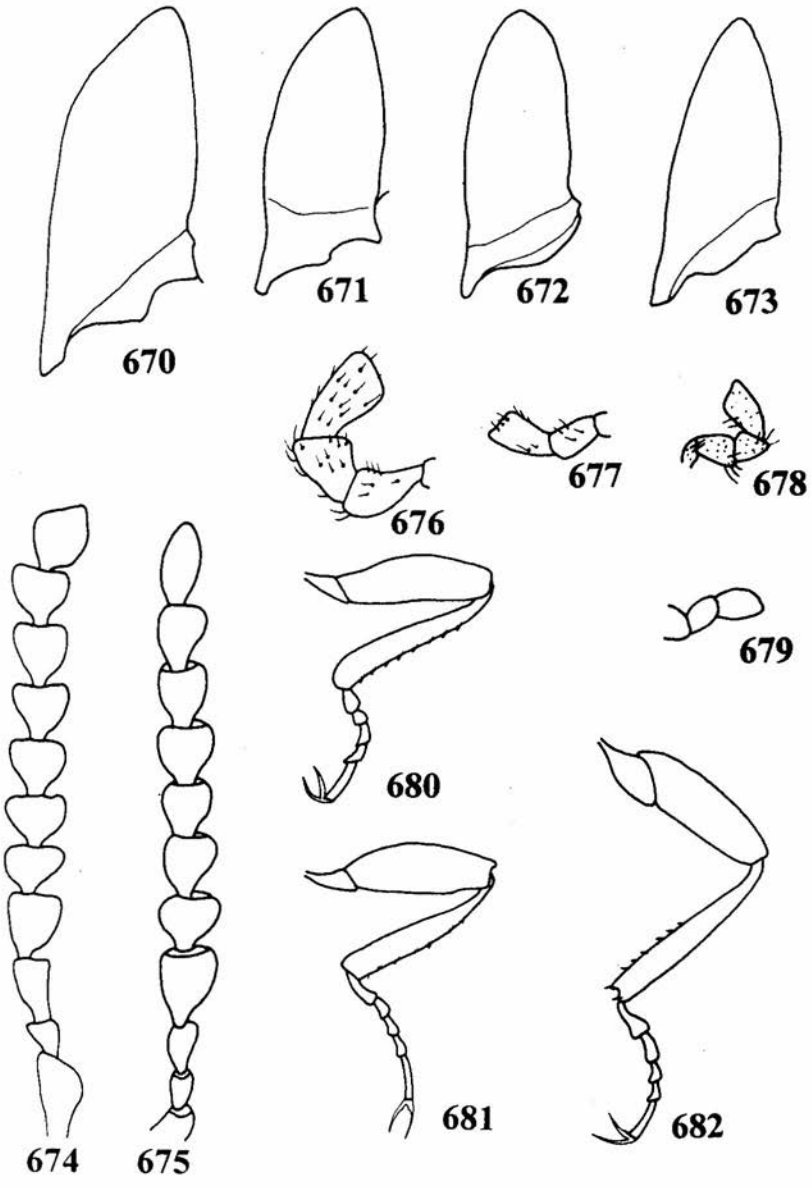

645-652. *S.* (*W.*) *theresae*, holotype, M: 645 - femoral plate of hind leg, 646 - fore leg, 647 - mid leg, 648 - hind leg, 649 - aedeagus, 650 - VIII abdominal tergite, 651 - IX and X abdominal tergites, 652 - IX abdominal sternite



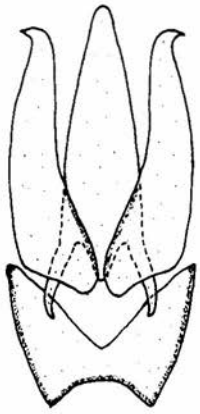

653-662. *S. (W.) theresae*, paratype, F: 653 - habitus, dorsal view, 654 - habitus, lateral view, 655 - antenna, 656 - labial palp, 657 - maxillary palp, 658 - prosternal collar, 659 - pronotal epipleuron, 660 - posterior process of prosternum, 661 - scutellum, 662 - femoral plate of hind leg




663-669. *S.* (*W.*) *theresae*, paratype, F: 663 - fore leg, 664 - mid leg, 665 - hind leg, 666 - ovipositor, 667 - seminal vesicle, 668 - VIII abdominal tergite, 669 - VIII abdominal sternite




670-682. Male: 670 - *S.* (*W.*) *atratus*, 671 - *S.* (*W.*) *victor*, 672, 674, 676, 677, 680-682 - *S.* (*S.*) *jakobsoni*, 673, 675, 678, 679 - *S.* (*S.*) *messorobius*; 670-673 - pronotal epipleuron, 674, 675 - antennae, 676, 678 - maxillary palp, 677, 679 - labial palp, 680 - fore leg, 681 - mid leg, 682 - hind leg ( 675 - after DOLIN, 1971)



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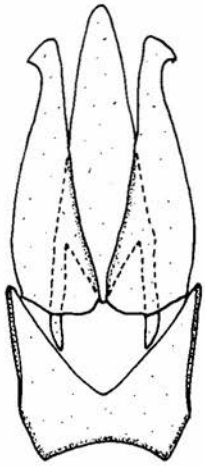

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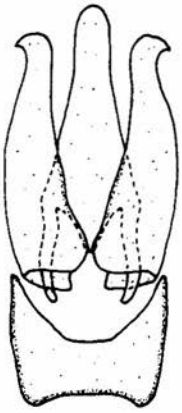

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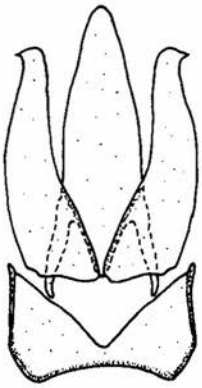

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683-686. Aedeagus: 683 - *S. (H.) callidus*, 684 - *S. (H.) glaucus*, 685 - *S. (H.) inflatus*, 686 - *S. (H.) inutilis* (after Brown, 1936, modified)

VII. INDEX OF LATIN NAMES
(pages with description in italics, pages with figures in bold)