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**Autor:** Kolibá, Jií  
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## A review of the Trogositidae. Part 1: Morphology of the genera (Coleoptera, Cleroidea)

by Jiří Kolibáč

**Abstract.** Type or model species of trogositid genera are described and illustrated. The following synonyms are established: *Temnochilodes* Lèveillé, 1890 syn.nov. (*Airora* Reitter, 1876), *Marnia* Lèveillé, 1889 syn.nov. (*Calanthosoma* Reitter, 1876), *Colydobius* Sharp, 1891 syn.nov. and *Leveillesoma* Lepesme et Paulian, 1944 syn.nov. (*Corticotomus* Sharp, 1891), *Onyschomorpha* Arrow, 1900 syn.nov. (*Leperina* Erichson, 1844), *Cylidrella* Sharp, 1891 syn.nov. (*Nemozoma* Latreille, 1824), *Ostoma* Laicharting, 1781 syn.nov. (*Peltis* O. F. Müller, 1764), *Floricatores* Crowson, 1970 syn.nov. (*Peltonyxa* Reitter, 1876). Two new species are described: *Ancyrona kosnovskorum* sp.nov. (Madagascar) and *Rentonellum loebli* sp.nov. (Brazil). Type species are designated for all genera. With the exception of species from synonymized genera, one new combination is established: *Parallelodera parallelus* Fairmaire, 1850 comb.nov. (from *Tenebroides* Piller et Mitterpacher, 1783). Two genera are removed from Trogositidae, and even from Cleroidea: *Holopleuridia* Reitter, 1876 (to Tenebrionidae) and *Peltoschema* Reitter, 1880 (to Chrysomelidae).

**Key words.** Coleoptera – Cleroidea – Trogositidae – morphology – synonymy

### Introduction

The family Trogositidae is one of the smaller families among the Cleroidea; fewer than a thousand species have been described to date. In spite of this, the family is distributed worldwide and is both morphologically and ecologically extremely diversified. A student of these beetles may find four-eyed predatory species that fly, run and even jump around swiftly in the sunshine of forest clearings to contrast with flattened, slow-moving, fungivorous species that dwell under the bark of old, dead trees. There are also species that squat on flowers to feed on pollen grains as well as peculiar, minute creatures that have been extracted from forest litter and soil.

Both the diversity and relative rarity of these beetles probably contribute to the chaos that is the classification of the trogositids. Several important review papers were published the 19th century, especially ERICHSON (1844), LACORDAIRE (1854), and REITTER (1876); the last of which is especially useful to present-day students of the family. A catalogue of trogositids was compiled by LÉVEILLÉ (1910); unfortunately this potentially important list of taxa includes many mistakes. After some 50 years lacking publication of any note, CROWSON (1964, 1966, 1970) wrote a series of extraordinarily important papers on the higher taxonomy of the trogositids. Although some authors do not agree with his atomization of the family, those papers have become classics in our time. Since Crowson, two important papers have appeared written: BARRON (1971) and SLIPINSKI (1992).

This communication is the first part of a complete review of the trogositid genera. The second part is being written concurrently, together with a content analysis of characters and suggestions for the higher taxonomy of this fascinating family of beetles.

## Material

Exact citations of labels are given only for type specimens. Most non-type specimens in the study are in the keeping of the Hungarian Museum of Natural History, Budapest.

## Abbreviations

BMNH	.....	Natural History Museum (British Museum of Natural History), London
MNHN	.....	Musée National d'Histoire Naturelle, Paris
MMJK	.....	Moravian Museum (coll. J. Kolibáč), Brno
MHNG	.....	Muséum d'Histoire Naturelle, Geneva

## Methods

Standard dissection methods were employed throughout. This communication has been around 10 years in the creation, so the drawing techniques have changed over time. Some of the illustrations were drawn through an ocular grid in a binocular microscope or a compound microscope, while the most recent illustrations were made using a camera lucida. The description of genera is based on a type species, or occasionally on a model species (however, nearly all the type species have been directly examined); this is made clear in parentheses. However, certain descriptions have also been modified after characters revealed in other species of the genus.

Genera are listed in alphabetical order. Phylogeny will be addressed in the second part of this communication.

## Genera of the family Trogositidae

### *Acalanthis* Erichson, 1844 (Pls 1–2)

**Type species:** *Acalanthis quadrisignata* Erichson, 1844 (by monotypy)

**Description** (*A. quadrisignata*). Cranium: gular sutures long (towards submentum), convergent along base, then subparallel; frontoclypeal suture absent, frons arcuate; antennal groove present, relatively weak; eyes medium-sized, elevate; epicranial acumination weak.

Maxilla: lacinia elongate, narrow, with a large hook and a small one at apex; partially coalescent with basistipes; basigalea relatively large; galea slightly elongate and arcuate, not clavate, with sclerotized rod at outer side; setae not ciliate or serrate; basistipes relatively large, denticulate along outer margin; palpifer not denticulate along margin; terminal joint of palpi cylindrical.

Mandible: 2 apical teeth, one situated next to but slightly above the other; medial tooth present; mola large, distinct; penicillus – thin ridge with weak ciliation present in middle of molar area; ventral ciliate furrow conspicuous; basal notch weak.

Labrum: oblong, weakly emarginate; epipharynx deeply pubescent; small cordate sclerite present on epipharyngeal side; connecting and median tormal processes present.

Labium: mentum wide but short, oblong (corners not extended); prementum with weakly extended middle portion; ligula: hard, strongly emarginate, not conspicuously retroflex; setae not ciliate; mental apodemes present; hypopharyngeal bar absent; hypopharyngeal sclerite present; terminal joint of palpi conical.

Antennae: 10-segmented (10+11 perfectly coalescent, suture invisible); club 1- or 2-segmented (joint 9 much smaller than 10); scape large, joint 2 relatively large, 3–8 oblong, 9 dilated and weakly asymmetrical, without sensorial fields, 10 large and arcuate with remainder of sensorial fields of joints 10 and 11; short, not reaching back to anterior margin of pronotum.

Prothorax: pronotum cordate, weakly narrowing towards base, anterior margin not conspicuously arcuate; lateral edge present; prosternal process large, dilated at apex, prosternum raised; coxal cavities closed; coxae transverse; trochantin inconspicuous.

Mesothorax: prepectus inconspicuous; coxal cavities closed; coxae rounded, nearly spherical; trochantin distinct, not large; mesonotum small, elongate, scutellum transverse; elytra with narrow epipleure, elytral lock distinct; carinae conspicuous; punctation distinct, deep, composed of perfectly regular rows of elongate punctures; surface with colour pattern.

Metathorax: metasternum convex, weakly narrowing towards anterior portion; discriminial line short but distinct, sharp; paracoxal sutures relatively wide, parallel with coxae; coxae with strong longitudinal furrow; wing with radial cell large, triangular; radial fleck (below Rc) nearly perfect; anal field with 4 veins and 2 cross veins (1A–2A, 2A–3A), wedge cell absent.

Legs: trochanter extremely small; femur very weakly clavate; only hind femora with shallow, inconspicuous furrow for tibiae; front and middle tibiae with about 4–5 large, distinct spines along side; spines along sides of hind tibiae inconspicuous; apices of all tibiae with spines; tibial spur pattern 2–2–2, large, hooked spur on front tibiae only; middle tibia with weakly hooked spur, spur on hind tibia normal; tarsomere 1 small, inconspicuous; apodeme of tarsomere 5 inconspicuous; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; with arcuate keel; parasternites I present, II absent; male segments IX–X fully developed as in *Egolia*; tegmen composed of 2–3 pieces, inverted; parameres with long cilia on inner margin – as in *Egolia*; phallus stout; aedeagus – size moderate; ovipositor relatively short, coxite pigmented; bursa copulatrix conspicuous; spermatheca spherical; gut empty, probably predatory (?).

Body size: 7–9 mm.

Colouration, pubescence, sculpture: black-blue, each elytron with 2 red spots; elytra and margins of pronotum with very long hairs; pronotum with deep elongate punctures; head with distinct longitudinal wrinkles composed of extremely elongate punctures; elytra with distinct rows of punctures.

**Distribution of the genus.** South America (Chile, Argentina).

### *Airora* Reitter, 1876 (Pls 3–5)

**Type species:** *Airora cylindrica* Serville, 1828 (by BARRON 1971)

*Temnochilodes* Lèveillé, 1890 **syn.nov.** (type species: *Temnochilodes dugesi* Lèveillé, 1890)

**Description** (*A. cylindrica*). Cranium: gular sutures conspicuous, long (towards submentum), subparallel; frontoclypeal suture absent; antennal groove present; eyes – size moderate; not exceeding contour of cranium; emarginate posteriorly(!); epicranial acumination conspicuous, deep and narrow.

Maxilla: similar to that in *Alindria grandis*; galea without spine at base (only sclerotized); terminal joint conical-elongate and narrowed.

Mandible: 2 apical teeth situated in vertical axis; medial tooth conspicuous; mola nearly absent; penicillus present – ciliation sparse and fine; ventral ciliate furrow present; cutting edge extended (remainder of mola); basal notch present, deep.

Labrum: oblong, weakly emarginate; epipharynx larger than plate of labrum; connecting and median tormal processes present.

Labium: mentum large, anterior margin emarginate; male submentum without tuft of setae(!); prementum strongly extended anteriorly; ligula rigid, dark, emarginate, extremely retroflex – setae growth up from retroflexed portion; pair of sclerites present, nearly connected to each other; hypopharyngeal bar absent; terminal joint of palpi cylindrical, arcuate.

Antennae: 11-segmented; weak and loose club 3-segmented, joints 9, 10 not truncate at side; scape large, joint 2 robust, 3–8 small and oblong, 9–11 asymmetrical; antennae very short, reaching back only to anterior margin of pronotum.

Prothorax: pronotum elongate, oblong, corners not extended; lateral edge present; prosternal process large, dilated at apex; prosternum depressed at sides; coxal cavities closed; coxae transverse; trochantin very large.

Mesothorax: prepectus absent; coxal cavities open; coxae oval; trochantin large; scutellum extremely small, even minute; elytra with narrow epipleure; distinct, powerful elytral lock present; elytral carinae absent; punctation regular.

Metathorax: metasternum neither flat nor wide, narrowing weakly towards anterior portion; discriminial line short; paracoxal sutures narrow, nearly parallel with coxae; metasternum with depression for coxae (in a similar way that of prosternum); anepisternum 3 weakly triangular; wing – radial cell absent, radial fleck reduced (very weak); anal field with 4 veins; wedge cell absent; only cross vein 1A–2A present.

Legs: trochanter relatively small, triangular; femur clavate, with conspicuous furrow for tibiae; tibia with robust spines along side (about 7); tibial spur pattern 2–2–2; hooked spur present on all tibiae; row of spines at apex inconspicuous; tarsomere 1 partly coalescent with tarsomere 2 – suture conspicuous; apodeme of tarsomere 5 absent; tarsal pattern 5–5–5 (seemingly 4–5–5).

Abdomen: 5 visible sternites; parasternites I present, II absent; male sternite VIII without spiculum gastrale; male segments IX–X – segments conspicuous but reduced (not large); tegmen composed of 2 pieces, suture between parameres and phallobase conspicuous; tegmen inverted; tegminal struts coalescent with phallobase; aedeagus – size moderate.

Body size: about 14 mm.

Colouration, pubescence, sculpture: black; without pubescence; head and pronotum finely and sparsely punctate; elytra regularly punctate, rows of punctures simple, not doubled.

**Biology of the genus.** Predatory; collected on branches, trunks and under bark of trees.

**Distribution of the genus.** South, Central and North America (from Brazil to USA).

*Airora dugesi* (Léveillé, 1890) **comb.nov.** (Pl. 3)

*Temnochilodes dugesi* Léveillé, 1890

**Description.** Most character states similar to those in *A. cylindrica*. Mandibles with remainder of mola, wing with small radial cell and wedge cell. For differences in labrum, labium and antennae see Pl. 3.

**Distribution of the genus.** Mexico.

*Alindria* Erichson, 1844 (Pls 5–6)

**Type species:** *Alindria grandis* Serville, 1828 (present designation).

**Description** (*A. grandis*). Cranium: gular sutures inconspicuous; frontoclypeal suture absent; antennal groove present; eyes weakly elevated – slightly exceeding contour of cranium; not emarginate; epicranial acumination conspicuous, deep, narrow; tentorial bridge present but coalescent with cranium (bridge not free); apodemes of tentorial bridge parallel.

Maxilla: lacinia oblong, not coalescent with basistipes, without hooks or spines; basigalea relatively large; galea elongate (not clavate), with dark spine at base; palpifer large, suboval, denticulate on outer side; terminal joint of palpi cylindrical.

Mandible: 2 apical teeth situated in vertical and very slightly horizontal axes; medial tooth inconspicuous; mola absent (mola-like denticle occurs between ventral ciliate furrow and penicillus); penicillus present, ciliation sparse and fine; ventral ciliate furrow present; cutting edge extended; basal notch absent.

Labrum: oblong, very weakly emarginate; epipharynx not larger than plate of labrum; connecting and median tormal processes present.

Labium: mentum large, anterior margin emarginate, corners depressed; male submentum with tuft of setae; prementum with anterior margin weakly extended, deeply incised in middle; ligula rigid, dark, deeply emarginate (in two parts), retroflex – setae growth up from retroflexed portion; pair of elongate sclerites present, not connected to each other; hypopharyngeal bar absent; terminal joint of palpi cylindrical.

Antennae: 11-segmented; club 3-segmented, relatively weak, loose, asymmetrical; joints 9, 10 truncate at side; scape large, joint 2 small, 3–8 oblong, 9–11 asymmetrical; antennae short, reaching back only to anterior margin of pronotum.

Prothorax: pronotum quadrate, anterior margin weakly arcuate; lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; coxae distinctly transverse; trochantin very large.

Mesothorax: prepectus absent; coxal cavities externally open, internally closed; coxae oval; trochantin large; mesonotum relatively small; scutellum very small, narrow; elytra with narrow epipleure; distinct, powerful elytral lock present; carinae very weak, carinae along suture absent; punctation regular.

Metathorax: metasternum neither flat nor wide, narrowing towards anterior portion; discriminial line short; paracoxal sutures narrow, subparallel with coxae; anepisternum 3 relatively large, triangular; wing with radial cell elongate, radial fleck perfect, 4 veins in anal field; wedge cell present; cross veins 1A–2A, 2A–3A present.

Legs: trochanters relatively small, triangular; femur clavate, with conspicuous furrow for tibiae; tibia with large, robust spines along side (about 3–5); tibial spur pattern 2–2–2; spurs on middle and hind tibiae large but equal; hooked spur present only on front tibia; row of large spines at apex in all tibiae present; tarsomere 1 independent, smaller than 2 to 4; apodeme of tarsomere 5 absent; tarsal pattern 5–5–5.

Abdomen: with 5 visible sternites; parasternites I and II present; male spiculum gastrale absent; male segments IX–X conspicuous but reduced (not large); tegmen composed of 1–2 pieces – remainder of suture between parameres and phallobase conspicuous; tegmen inverted; tegminal struts coalescent with phallobase; aedeagus size moderate; gut empty.

Body size: 24–33 mm.

Colouration, pubescence, sculpture: black; without pubescence; head and pronotum punctate; elytra with low, indistinct carinae, regularly punctate (2 rows of punctures between carinae).

**Biology of the genus.** Probably predatory. Attracted by light in evening.

**Distribution of the genus.** Tropical Africa, Madagascar, south-eastern Asia.

### *Anacypta* Illiger, 1807 (Pls 7–8)

**Type species:** *Nitidula punctata* Fabricius, 1801

*Acrops* Dalman, 1824: 15 (type species: *Acrops metallica* Dalman, 1824, syn. of *Acrops punctata* Fabricius, 1801)

**Description** (*A. punctata*). Cranium: gular sutures short, strongly convergent; frontoclypeal suture absent; antennal groove present; antennal sockets distinctly covered by margin of frons; 4 eyes present – 2 large, elliptical, dorsally situated, almost connected at vertex and 2 smaller eyes situated ventrolaterally (near to antennal sockets); large and small eyes not connected to each other; eye elevations not exceeding contour of cranium; emargination absent in both pairs of eyes; epicranial acumination small, narrow.

Maxilla: lacinia connected with basistipes but suture conspicuous; with several pale, thorn-like setae but true hooks absent; galea clavate, with several thorn-like setae similar to those on lacinia; basistipes large, connected with lacinia; palpifer large, suboval, denticulate along outer margin; terminal joint of palpi coniform, apex of joint truncate.

Mandible: 2 apical teeth, one situated next to and very slightly above the other; medial tooth small, inconspicuous; mola absent (but molar area conspicuous, extended); penicillus present at base of molar area; ventral ciliate furrow absent; cutting edge inconspicuous; basal notch shallow.

Labrum: connecting tormal process absent; median tormal process present; labrum subquadrate, not emarginate, very rigid and strongly pigmented.

Labium: mentum large, emarginate anteriorly; prementum – anterior margin elongate and acuminate; ligula rigid, dark, rounded, without emargination, with furrow for row of setae; mental apodemes formed of two arcuate sclerites, not connected to each other; hypopharyngeal bar absent; hypopharyngeal sclerite composed of pair of small sclerites; terminal joint of palpi coniform, truncate at apex.

Antennae: 10-segmented; club 3-segmented, large, asymmetrical, with sensorial fields; scape large, joints 2–7 fluently enlarged; joints 8–10 triangular, angles rounded; antennae very short, not reaching rear of head.

Prothorax: transverse, anterior margin arcuate (*Peltis*-like); lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open, small part of furcasternum visible from above; coxae transverse, oval; trochantin distinct, not large.

Mesothorax: prepectus absent; coxal cavities externally widely open, internally closed; coxae suboval, nearly spherical; trochantin small; mesonotum wide; elytral epipleure medium-sized; carinae absent; punctation distinct, composed of regular rows of deep punctures.

Metathorax: metasternum flat, wide; discriminial line long, reaching across whole metasternum; paracoxal sutures narrow; wing with radial cell triangular; radial fleck nearly perfect; 4 veins in anal field; wedge cell absent; cross vein 1A–2A present, 2A–3A not perfect.

Legs: trochanter small, triangular; femur clavate; tibia with row of fine spines (or rigid setae) along side; tibial spur pattern 2–2–2; hooked spur reduced (spur weakly hooked on front legs only); row of spines at apex absent; tarsomere 1 free, not dilated at apex, as long as tarsomere 2; tarsal pattern 5–5–5.

Abdomen: with 5–6 visible sternites; parasternites I distinct, II absent; male sternite VIII without spiculum gastrale; male segment IX–X reduced – not complete; tegmen composed of 2–3 pieces, inverted; phallobasic apodeme present, tegminal struts present; aedeagus moderate-sized; gut content – probably fragments of cuticle.

Body size: 5.5–6.0 mm.

Colouration, pubescence, sculpture: black to bronze; dark, metallic; elytra with small cupreous flecks along suture; without pubescence; head punctate; pronotum with groups of punctures; elytra regularly punctate, with weak humeral gibbae.

**Biology of the genus.** Predatory; dwelling on dry branches and logs together with some Cleridae (*Omadius*, *Stigmatium*); active, very good fliers, some species of the genus jumping.

**Distribution of the genus.** South-eastern Asia.

### *Ancyrona* Reitter, 1876 (Pls 9–12)

**Type species:** *Ancyrona lewisi* Reitter, 1876 (by KOLIBÁČ 1993)

**Material examined.** *A. lewisi*: Holotype female: “Japonia”; (HMNH).

**Description** (*A. lewisi*, ex KOLIBÁČ 1993). Head: Gular sutures long, parallel. Deep subocular groove (for antennal joints 1–3) present. Mandibles without mola. Antennal

club 3-segmented, antenna with 10 joints. Apical joint of labial and maxillary palps coniform. Mentum large.

Thorax: Front coxal cavities open. Front coxae strongly transverse. Prosternal process dilated. Mesocoxal cavities nearly closed by meso- and metasternite. Mesocoxae transversely oval, intercoxal process slender. Discriminal line inconspicuous. Metacoxae transverse, long, with straight groove. All tibiae with short spines along outer sides and partly also along ventral sides. Tibial apices with a long, hooked spur and a short, straight one. First tarsomeres very small and scarcely perceptible, tarsi 5-segmented. Bisetose empodium distinct. Pronotum with short, black, thick and scaly hairs and light longitudinal stripe down the centre. Mesonotum with wide scutellum. Elytra without carinae, with punctures in double rows, and with short, thick, scaly setae.

Abdomen: with 5 visible and bordered sternites.

Body size: 5.0 mm.

Body light brown, legs and antennae yellowish-brown. Head dorsally with short, black, thick and scaly setae. Elytra with black and yellowish scale-like setae, the latter forming an X-shape in centre of elytra.

**Biology of the genus.** Species of *Ancyrona* are probably predatory, dwelling on dry logs and branches of trees.

**Remarks.** The species *A. diversa* Pic, 1921 and *A. japonica* (Reitter, 1889) are also described and illustrated in KOLIBÁČ (1993).

#### *Ancyrona kosnovskorum* sp.nov. (Pls 11–12)

**Material examined.** Holotype male and 7 paratypes: “Madagascar / Tamatave distr. / Moramanga env. / 24.2.–1.3.1995 / Ivo Jeniš coll.”; 1 paratype: “Madagascar / Tamatave distr. / Andasime (Maromizaha) / 24.2.–1.3.1995 / Ivo Jeniš coll.”; (MMJK, MHNG).

**Description.** Cranium: gular sutures strongly convergent; frontoclypeal suture absent; antennal groove present; eyes large, elevate, not emarginate; epicranial acumination absent.

Maxilla: Lacinia not coalescent with basistipes, apically with small, inconspicuous, double-hooked thorn; 2 dark, rigid, spine-like setae on outer margin of lacinia; galea clavate; terminal joint of palpi cylindrical.

Mandible: 2 apical teeth, situated in horizontal axis (next to one another); medial tooth blunt; penicillus extraordinarily large, composed of tuft of rigid setae; cutting edge straight; mola absent; basal notch minute.

Labrum: transverse, oval; with distinct lateral tormal processes but without connecting process; median tormal process present.

Labium: mentum narrow; ligula membranous; mental apodemes present; hypopharyngeal sclerite present; hypopharyngeal bar present; terminal joint of palpi cylindrical.

Antennae: 10-segmented; club 3-segmented, loose; antennae shorter than head.

Prothorax: pronotum transverse; lateral edge present; prosternal process dilated; coxal cavities externally open, internally open; coxae transverse; trochantin visible.

Mesothorax: prepectus absent; coxal cavities open; coxae oval; elytral epipleure narrow, reaches apex; carinae weak but dense.

Metathorax: discriminial line absent; paracoxal sutures conspicuous; wing with large radial cell; radial fleck small and weak; 4 veins in anal field; cross veins absent, wedge cell absent.

Legs: trochanter small, triangular; femora clavate; tibiae with row of spines along side; apex of tibia with one extremely large hooked spur and one normal spur (spur pattern 2–2–2); tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternite I present, II absent; male spiculum gastrale absent; male segments IX–X fully developed; tegmen composed of 3 pieces, inverted; phallobasic apodeme and tegminal struts present; phallus robust; aedeagus medium-sized; gut empty.

Body size: about 6.0 mm.

Colouration, pubescence, sculpture: body brown; colour pattern formed of yellowish and black decumbent scale-like setae – head and pronotum with longer, light setae, elytra with black spots; head and pronotum coarsely punctate; elytra with regular rows of punctures.

**Distribution of the genus.** Madagascar.

**Differential diagnosis.** Apart from the colour pattern, it differs from other known *Ancyrona* species in its primitive tripartite tegmen, male segments IX–X and lacinia with hooked thorn.

**Derivatio nominis.** The species is dedicated to my partner and her family.

### ***Antixoon* Gorham, 1886**

**Type species:** *Antixoon cribripenne* Gorham, 1886 (by monotypy)

**Remarks.** Described in Melyridae. Not studied here. See CROWSON (1964) for notes on morphology.

**Distribution of the genus.** Central America.

### ***Australiodes* Endrödy-Younga, 1960**

**Type species:** *Clambus vestitus* Broun, 1886 (by monotypy)

**Remarks.** Type species described in Liodidae, author of the genus also classified it within the latter family. Not studied here. See CROWSON (1966) for notes on morphology and biology.

**Distribution of the genus.** New Zealand.

### ***Calanthosoma* Reitter, 1876 (Pl. 13)**

**Type species:** *Calanthosoma flavomaculatum* Reitter, 1876 (by monotypy)

*Marnia* Lèveillé, 1889 **syn.nov.** (type species: *Marnia sipolisi* Lèveillé, 1889; present designation)

**Description** (*C. flavomaculatum*). Cranium: gular sutures short, parallel, narrow; frontoclypeal suture absent; antennal groove present, relatively weak; antennal sockets visible from above; eyes medium-sized, weakly exceeding contour of cranium, not emarginate; epicranial acumination conspicuous, relatively wide.

Maxilla: lacinia elongate, partially coalescent with basistipes; dark, simple hook at apex of lacinia; basigalea relatively large; galea not elongate and arcuate, weakly clavate; some, but not all, setae serrate, rather than ciliate; small, weak spine present at outer side of galea; basistipes small, denticulate along outer margin; palpifer not denticulate, relatively large; terminal joint of palpi cylindrical.

Mandible: 2 apical teeth situated in vertical and horizontal axes; medial tooth conspicuous; mola large; penicillus minute – thin ridge with inconspicuous ciliation present in middle of molar area; ventral ciliate furrow present but ciliation minute; cutting edge absent; basal notch weak.

Labrum: cordate sclerite present but small; connecting tormal process present, median tormal process absent; labrum oblong, weakly emarginate; epipharynx deeply pubescent (as in *Acalanthis*).

Labium: mentum wide but short, arcuate; male submentum with tuft of setae(!); prementum incised in middle; ligula dark, rigid, weakly emarginate, not conspicuously retroflex; setae not ciliate; mental apodemes present; hypopharyngeal sclerite composed of one minute transverse sclerite and pair of elongate sclerites; hypopharyngeal bar absent; terminal joint of palpi slightly dilated, arcuate, truncate at apex.

Antennae: 11-segmented; club 3-segmented; scape large, joint 2 small, 3–8 oblong, 9–11 asymmetrical, with sensorial fields; antennae short, reaching back to anterior margin of pronotum.

Prothorax: pronotum shape elongate, very weakly narrowing towards base, anterior margin not arcuate; lateral edge present; prosternal process large, dilated at apex; prosternum raised; coxal cavities closed; coxae distinctly transverse; trochantin not large.

Mesothorax: prepectus absent; coxal cavities nearly closed; coxae oval, nearly spherical; trochantin distinct, not large; mesonotum small, elongate; elytral epipleure narrow, elytral lock very powerful; carinae conspicuous in posterior half; apical portion of elytra depressed and pubescent (somewhat resembling some Bostrichidae).

Metathorax: metasternum convex, weakly narrowing towards anterior portion; discriminial line absent; paracoxal sutures relatively wide, parallel with coxae; anepisternum 3 weakly triangular; wing with radial cell large, triangular; radial fleck reduced; 4 veins in anal field; wedge cell present; cross veins 1A–2A, 2A–3A present.

Legs: trochanter extremely small; femur very weakly clavate, with shallow, inconspicuous furrow for tibiae; tibia with spines along side (about 3–5 small but distinct spines present in apical portion of all tibiae – most conspicuous on front tibiae); spur pattern 2–2–2; front tibiae with extremely long, robust and hooked spur; this spur medium-sized in other tibiae; row of spines at apex of all tibiae present – spines robust; tarsomere 1 small, inconspicuous; apodeme of tarsomere 5 inconspicuous; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I with thin line (keel) present; male sternite VIII with minute spiculum gastrale; male segment IX–X reduced but present; tegmen composed of 2–3 pieces; parameres with long cilia at inner margin (as in *Acalanthis*); tegmen inverted; phallobasic apodeme and tegminal struts present; phallus stout; aedeagus moderate; gut empty.

Body size: 9 mm.

Colouration, pubescence, sculpture: black-blue, slightly glabrous, each elytron with 3 red spots; pronotum with short, weak longitudinal wrinkles; head with distinct longitudinal wrinkles composed of elongate punctures; elytra with regular rows of punctures; pubescence present on depressed portion of elytra.

**Distribution of the genus.** Venezuela, Brazil, Antilles.

### *Calitys* Thomson, 1859 (Pls 14–15)

**Type species:** *Hispa scabra* Thunberg, 1784 (by original designation and monotypy)

**Description** (*C. scabra*). Cranium: gular sutures long, strongly convergent; frontoclypeal suture present; antennal groove present but small; eyes weakly elevate, not emarginate; epicranial acumination very distinct; tentorial bridge not connected.

Maxilla: lacinia with two large hooks, partly coalescent with basistipes (suture conspicuous); galea clavate; terminal joint of palpi coniform.

Mandible: 2 apical teeth situated in horizontal axis (next to one another); medial tooth absent; mola present; penicillus minute; ventral furrow ciliate and distinct, with long setae; basal notch absent.

Labrum: plate of labrum dark, rigid, pubescent; tormal processes H-like.

Labium: mentum dark, rigid, tuberculate; prementum with almost straight anterior margin, shallowly incised at centre; ligula rigid, pigmented; mental apodemes probably absent; hypopharyngeal sclerite present, connected in middle; hypopharyngeal bar present; terminal joint of palpi coniform.

Antenna: 11-segmented; club 3-segmented; pedicel robust; antennae reach base of head.

Prothorax: pronotum transverse; lateral edge present; prosternal process heavily dilated; coxal cavities closed.

Mesothorax: prepectus narrow; coxal cavities open; elytra with very wide epipleure; 4 carinae present on each elytron, 3rd carina forms edge.

Metathorax: metasternum wide; discriminial line short; paracoxal sutures present; wing with radial cell; radial fleck incomplete; anal field with 4 veins; wedge cell present; cross veins 1A–2A and 2A–3A present.

Legs: trochanter triangular; femora clavate; tibiae with spines along side; tibial apices with row of spines and 2 spurs; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I and II present; male sternite VIII with spiculum gastrale; male segment IX–X complete; tegmen composed of 3 pieces, inverted; phallobasic apodome and tegminal struts present; phallus relatively slender; aedeagus moderate-sized.

Body size: about 10 mm.

Colouration, pubescence, sculpture: black; whole body with dense pubescence and tufts of scales; body finely punctate; elytra with regular punctation.

**Biology of the genus.** Fungivorous. Live under bark of old coniferous trees (fir, pine) and on tree fungi.

**Distribution of the genus.** Holarctic.

### *Colydiopeltis* Slipinski, 1992 (Pls 16–17)

**Type species:** *Colydiopeltis burckhardti* Slipinski, 1992 (by SLIPINSKI 1992)

**Remarks.** All species of the genus have been carefully described and illustrated by SLIPINSKI (1992). Some detailed drawings appear in Pls 16–17.

Some interesting features of *C. compactum*: tentorial bridge with conspicuous apodemes; lacinia with single dark, robust thorn approximately in middle(!); mandible with 3 apical teeth – two situated in horizontal axis, one situated in horizontal and vertical axes; large wrinkled mola; penicillus and ventral ciliate furrow conspicuous; basal notch absent; prementum deeply incised; ligula formed of rigid membrane; mental apodeme present, hypopharyngeal sclerite probably absent; hypopharyngeal bar absent; antennae 8-segmented with single-segment club; front coxal cavities half-closed; middle cavities open; discriminial line absent; paracoxal sutures absent; elytral epipleure wide; carinae absent; tibiae without conspicuous spines along side; spurs at tibial apex present but minute (absent according to SLIPINSKI 1992!) – tibial spur pattern 2–2–2; tarsomere 1 partly fused with tarsomere 2; tarsal pattern 5–5–5; empodium conspicuous, bisetose; abdominal segments with parasternites I and II; male sternite VIII with spiculum gastrale; male segment IX–X reduced – “spicular fork” rests; tegmen composed of 2 pieces (“parameres” and “phallobase”), inverted; phallobasic apodeme long; tegminal struts short; aedeagus moderate-sized; ovipositor short; bursa copulatrix large; spermatheca rounded.

**Biology of the genus.** All species extracted from forest litter, mostly in dry period (November, December).

**Distribution of the genus.** Thailand.

### *Corticotomus* Sharp, 1891 (Pl. 18)

**Type species:** *Corticotomus basalis* Sharp, 1891 (by BARRON 1971)

*Colydobius* Sharp, 1891 **syn.nov.** (type species: *Colydobius divisus* Sharp, 1891; present designation)

*Leveillesoma* Lepesme et Paulian, 1944 **syn.nov.** (type species: *Nemosomia fulva* Lèveillé, 1905; by LEPESME & PAULIAN 1944)

**Remarks.** The genus *Corticotomus* is addressed in detail by BARRON (1971).

**Distribution of the genus.** Central and North America.

**Biology of the genus.** Collected on pines and other trees including oak, together with scolytids.

***Corticotomus divisus* (Sharp, 1891) (Pl. 18)**

**Material examined.** Syntype: “Bugaba / 800–1500 ft. / Champion.”; (BMNH).

**Remarks.** Very similar to *C. cylindricus*; it may be a synonym.

***Corticotomus cylindricus* (LeConte, 1863) (Pl. 18)**

*Nemozoma cylindricum* LeConte, 1863

**Description.** Cranium: gular sutures short, parallel, narrow; frontoclypeal suture absent; antennal groove present; antennal sockets visible from above; eyes medium-sized, weakly exceeding contour of cranium, not emarginate; epicranial acumination conspicuous, relatively wide.

Maxilla: lacinia relatively small (as in *Tenebroides*), maxilla similar to that of *Temnoscheila caerulea* (but lacinia smaller); hooks absent, with thick setae along outer margin of lacinia; basigalea medium-sized; galea elongate, arcuate, sparsely pubescent, outer margin with ciliate setae; basistipes oblong, with arcuate sides; palpifer denticulate along margin; terminal joint cylindrical to coniform, elongate.

Mandible: 2 apical teeth situated in horizontal axis (next to one another) in left mandible, only 1 tooth in right mandible(!); medial tooth inconspicuous; mola absent; penicillus present, relatively large (long); ventral ciliate furrow present in left mandible, inconspicuous in right; cutting edge straight (similar to that in Cleridae) in right mandible, convex in left; basal notch weak.

Labrum: epipharynx exceeds plate of labrum; cordate sclerite present; connecting tormal process present, median tormal process absent; labrum oblong, weakly emarginate.

Labium: mentum large, arcuate; male submentum probably without tuft of setae(!); prementum with extended middle portion; ligula rigid, dark, weakly emarginate, not retroflex; setae ciliate; mental apodemes composed of pairs of sclerites; one transversal hypopharyngeal sclerite present; hypopharyngeal bar absent; terminal joint of palpi weakly dilated, arcuate.

Antenna: 11-segmented; club 3-segmented; scape large, joint 2 small, 3–8 oblong, 9–11 asymmetrical with sensorial fields; antennae reach back to anterior margin of pronotum.

Prothorax: pronotum elongate, anterior margin not arcuate; lateral edge present but reduced in anterior part(!); prosternal process large, dilated at apex; coxal cavities externally closed, internally open; coxae transverse; trochantin distinct, not large.

Mesothorax: prepectus absent; coxal cavities externally open, internally closed; coxae oval, nearly spherical; trochantin distinct; mesonotum medium-sized; elytral epipleure narrow, elytral lock not powerful; carinae absent; elytra do not cover whole abdomen.

Metathorax: metasternum neither flat nor wide, weakly narrowing towards anterior portion; discriminial line present but indistinct; paracoxal sutures narrow, parallel with coxae; anepisternum 3 weakly triangular; radial cell absent (see BARRON, 1971, for

another species); radial fleck absent; anal field with 4 veins but 4A shortened; wedge cell absent; anal veins connected without conspicuous cross veins.

Legs: trochanter relatively small, triangular; femora clavate, with shallow, inconspicuous furrow for tibiae; front and middle tibiae with about 2 large spines present on apical portion; tibial spur pattern 2–2–2; heavily hooked spur on front tibiae only, spurs on other tibiae weakly hooked; row of spines at apex of all tibiae present, spines large; tarsomere 1 small but conspicuous; apodeme of tarsomere 5 inconspicuous; tarsal pattern 5–5–5.

Abdomen: 5–6 visible sternites; tegmen composed of 2–3 pieces, inverted; ovipositor with very long coxitae.

Body size: 4.2 mm.

Colouration, pubescence, sculpture: black-brown, slightly glabrous; without pubescence; head with short, weak, longitudinal wrinkles; pronotum sparsely punctate; elytra with regular rows of inconspicuous shallow punctures.

**Distribution.** Eastern USA.

### *Corticotomus dufai* (Léveillé, 1907) comb.nov.

*Colydobius dufai* Léveillé, 1907

**Remarks.** Slender as *Nemozoma* but frons not incised and without longitudinal furrow. Pronotum narrow, elongate, anterior portion wider than the posterior. Antennal club similar to that in *Tenebroides* but looser. Elytra with regular rows of shallow punctures. Dorsal surface without pubescence, glabrous (not metallic), light brown.

Body size: 2.5 mm.

**Distribution.** Guadeloupe.

### *Decamerus* Solier, 1849 (Pls 19–20)

**Type species:** *Decamerus haemorrhoidalis* Solier, 1849 (by monotypy)

**Description** (*D. haemorrhoidalis*). Cranium: gular sutures wider than in *Eronyxa*, short, weakly convergent; frontoclypeal suture present but inconspicuous; antennal groove minute; antennal socket visible from above; eyes medium-sized, not as elevate as in *Eronyxa*; eyes not emarginate; epicranial acumination inconspicuous; tentorial bridge present, with apodemes.

Maxilla: lacinia narrow, with one dark thorn at centre, without hooked apical thorns; basigalea small; galea elongate (adaptation to feeding on pollen grains?); suture between lacinia and basistipes conspicuous; terminal joint of palpi elongate, narrowed towards apex.

Mandible: 2 apical teeth situated in horizontal axis (next to one another); tooth in ventral side small; medial tooth blunt; mola large, asperate; penicillus minute; ventral ciliate furrow conspicuous, with long setae; basal notch absent.

Labrum: connecting tormal process present, median tormal process absent; labrum rectangular, not emarginate.

Labium: mentum narrow; prementum not extended at centre; ligula membranous, deeply emarginate; mental apodemes absent(?); hypopharyngeal bar absent; hypopharyngeal sclerite present; terminal joint of palpi cylindrical.

Antenna: 10-segmented; club 3-segmented, weakly asymmetrical; antennae as long as head (shorter than in *Eronyxa*).

Prothorax: pronotum transverse; lateral edge denticulate, side margin not explanate; prosternal process narrow; coxal cavities externally open (closed to 3/4), internally open; coxae transverse.

Mesothorax: prepectus present; coxal cavities open; coxae oval; elytral epipleure narrow, conspicuous only to 1/2; carinae absent.

Metathorax: metasternum convex; discriminal line short; paracoxal sutures conspicuous; wing with complete radial cell; radial fleck not complete; anal field with 3 veins; wedge cell absent; rest of cross vein 3A–2A present.

Legs: trochanter triangular; femora clavate; tibiae with conspicuous spines along side; tibial apex with row of spines and 2 spurs; claws with large rounded denticle(!); empodium large, bisetose; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites absent (or membranous); male sternite VIII without spiculum gastrale; male segment IX–X developed (as in *Eronyxa*); tegmen composed of single piece, uninverted (dorsally open!); phallobasic apodeme and tegminal struts long; phallus slender, long; aedeagus medium-sized.

Body size: about 3 mm.

Colouration, pubescence, sculpture: brown or black; body surface with dense, semierect pubescence; coarsely and irregularly punctate (including elytra).

**Biology of the genus.** Floricolous, feeding on pollen grains.

**Distribution of the genus.** South America (Chile).

### ***Diontobus* Solier, 1849 (Pls 21–22)**

**Type species:** *Diontobus punctipennis* Solier, 1849 (by monotypy)

**Description** (*D. punctipennis*). Similar to *Decamerus* in many features.

Head: Antennal groove shallower than in *Decamerus*. Maxilla: lacinia elongate, with 2–3 dark spines; galea ovoid (or clavate); terminal joint of palpi long, slender, narrowed towards apex. Mandible: 2 apical teeth situated in horizontal axis, ventral tooth moderate (not reduced); mola asperate; penicillus large. Labrum: median tormal process present. Labium: mentum rectangular; prementum with shallow notch; mental apodemes present, hypopharyngeal bar present; hypopharyngeal sclerite present; terminal joint of palpi coniform. Antenna: 11-segmented; club 3-segmented, weakly asymmetrical; antennae reach back to base of head.

Thorax: pronotum transverse; lateral edge denticulate, broadly explanate (more so than in *Decamerus*, less than in *Eronyxa*); front coxal cavities closed or minute gap present; wing with small radial cell; radial fleck absent; anal field with 2 veins; cross veins absent; femora weakly clavate; tibiae with only one spur at apex; claws with large denticle (as large as claw itself); tarsal pattern 5–5–5.

Abdomen: tegmen composed of 3 pieces (phallobase partly coalescent with parameres), inverted.

Body size: about 3–4 mm.

Colouration, pubescence, sculpture: yellow-brown or yellowish; pubescence long, sparse; elytra without carinae, irregularly punctate.

**Biology of the genus.** Floricolous, also found on lichens. Larva extracted from a soil sample (CROWSON 1964).

**Distribution of the genus.** South America (Chile).

### ***Dupontiella* Spinola, 1844**

**Type species:** *Dupontiella ichneumonoides* Spinola, 1844 (present designation)

**Material examined.** Not examined. *D. fasciatella* is probably deposited only in the Spinola collection; a specimen of *D. ichneumonoides* may also be placed in “collectio Chevrolat” in MNHN but I have not found it there myself.

**Remarks.** Originally described in Cleridae (SPINOLA 1844). LACORDAIRE (1857: 493) saw the species *D. ichneumonoides* and transferred the genus to Trogositidae.

**Distribution of the genus.** Venezuela.

### ***Egolia* Erichson, 1842 (Pl. 2)**

**Type species:** *Egolia variegata* Erichson, 1842 (by monotypy)

**Description** (*E. variegata*). Very similar to *Acalanthis quadrisignata*. Head: eyes elevate, not emarginate; gular sutures wide, heavily convergent, reaching submentum; mandible with 2 apical teeth situated in horizontal axis; antennae 10-segmented; terminal joints of maxillary and labial palpi coniform.

Thorax: prothorax cordate; anterior angles of pronotum not extended; prosternal process dilated; front coxal cavities closed; scutellum transverse; middle coxae nearly closed; wing as in *Acalanthis*; discriminial line inconspicuous; paracoxal sutures distinct; hind coxae with furrow; trochanters triangular, with long setae; front and middle femora without furrows, hind femora with weak furrow; tibiae without spines along side; tibial spurs not hooked, nearly equal in size; tarsomere 1 shortened.

Abdomen: male segments IX–X fully developed; sternites not completely bordered; tegmen inverted (or laterally situated in specimens examined); tegminal struts present.

Body size: about 9 mm.

Colouration, pubescence, sculpture: elytra oval, brown with yellowish pattern and fine, regular punctation – fine, short hair growth from elytral punctures; body bare apart from elytral pubescence; head with two shallow depressions and pronotum with three of them; head with elongate wrinkles; pronotum densely punctate.

**Distribution of the genus.** Australia.

***Elestora* Pascoe, 1868**

**Type species:** *Elestora fulgurata* Pascoe, 1868 (by monotypy)

**Description.** This rare single species of the genus will be described and illustrated in the second part of this communication.

**Biology of the genus.** Observed on smoulder log at margin of tropical forest clearing in Laos. Very rapid flier.

**Distribution of the genus.** SE Asia.

***Eronyxa* Reitter, 1876 (Pls 23–24)**

**Type species:** *Eronyxa dohrni* Reitter, 1877 (by monotypy)

*Ostomodes* Reitter, 1877

**Description** (*E. pallidus* female, *E. angustus* male). Cranium: gular sutures heavily convergent, short, narrower than in *Decamerus*; frontoclypeal suture distinct (deep groove); antennal groove absent; antennal sockets not visible from above; eyes large, elevate, not emarginate; epicranial acumination present.

Maxilla: lacinia narrow, with 2 large, dark hooks; basigalea small, triangular; galea ovoid; basistipes not coalescent with galea; palpifer elongate; terminal joint of palpi coniform.

Mandible: 2 apical teeth, originally situated in horizontal axis, mutually coalescent into one tooth; medial tooth inconspicuous; mola distinct, asperate; penicillus below mola; ventral ciliate furrow inconspicuous; basal notch medium-sized.

Labrum: plate of labrum without cordate sclerite; median tormal process absent, connecting tormal processes not connected in middle; labrum wide, oblong.

Labium: mentum rectangular; prementum extended at centre, without incision; ligula transparent, membranous; mental apodemes large; hypopharyngeal sclerite absent; hypopharyngeal bar absent; terminal joint of palpi coniform.

Antenna: 11-segmented; club 3-segmented, loose, joints oblong; antennae long – reach back to halfway along pronotum.

Prothorax: pronotum oblong; lateral edge denticulate, broadly explanate; prosternal process recurved, weakly dilated; coxal cavities externally open, internally closed(?); coxae transverse, trochantin large.

Mesothorax: prepectus distinct; coxal cavities open; coxae oval; elytral epipleure wide at base, narrowed towards apex; carinae absent.

Metathorax: discriminial line inconspicuous; paracoxal sutures distinct; radial cell oval, narrow; radial fleck reduced; anal field with 4 veins; wedge cell absent; cross vein 2A–3A present.

Legs: trochanter triangular; femora not clavate; tibiae with about 10 spines along side; apex with 2 spurs; tarsomere 1 small; empodium large; claws without denticle; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I and II present; male sternite VIII without spiculum gastrale; male segment IX–X fully developed; tegmen composed of 2 pieces (parameres and phallobase), inverted; phallobasic apodeme present, tegminal struts absent; phallus slender; aedeagus medium-sized; ovipositor with transversely divided coxitae; bursa copulatrix large; spermatheca triangular; vaginal sclerites absent.

Body size: 3.5 mm.

Colouration, pubescence, sculpture: dark brown or black; pubescent; with dense, irregular punctation.

**Biology of the genus.** Frequent on flowers, also collected on bark of coniferous trees.

**Distribution of the genus.** North America.

### *Eupycnus* Sharp, 1891 (Pl. 25)

**Type species:** *Eupycnus lentus* Sharp, 1891 (monotypy)

**Material examined.** Syntypus: “Jalapa / Mexico / Hoege.”; (BMNH).

**Description.** Cranium: gular sutures short, straight, heavily convergent; frontoclypeal suture absent; antennal groove present; antennal sockets visible from above; eyes relatively small, not exceeding contour of cranium, not emarginate.

Maxilla: terminal joint of palpi elongate, cylindrical.

Mandible: 2 apical teeth situated in vertical axis; mola absent.

Labrum: oblong, weakly emarginate, similar to that of *T. mauritanicus*.

Labium: mentum large; male submentum without tuft of setae(!); prementum extended in middle; ligula dark, hard, weakly emarginate, not retroflex; setae ciliate; pair of mental apodemes present; hypopharyngeal bar absent; hypopharyngeal sclerite composed of pair of longitudinal sclerites and one transverse sclerite; terminal joint slightly dilated, weakly arcuate.

Antennae: 11-segmented; club 3-segmented, compact; scape large, joint 2 small, 3–8 oblong, 9–11 asymmetrical; antennae short, reach back to anterior margin of pronotum.

Prothorax: pronotum very weakly cordate, sides subparallel; lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; coxae transverse; trochantin distinct, relatively large.

Mesothorax: prepectus absent; coxal cavities open; coxae oval, weakly transverse, with furrow for femora; trochantin distinct; mesonotum medium-sized; elytral epipleure narrow, elytral lock powerful; carinae absent, thin longitudinal depressed lines present.

Metathorax: metasternum not flat and wide, weakly narrowing towards anterior portion; discriminial line absent; paracoxal sutures sharp, parallel with coxae, not narrow; anepisternum weakly triangular; radial cell absent; radial fleck reduced; anal field with 4 veins; wedge cell absent; cross veins absent, 1A and 2A joined without cross vein.

Legs: trochanter medium-sized, triangular; femora clavate, with furrow for tibiae; tibiae with about 5 large spines along side; tibiae clavate; tibial spur pattern 2–2–2; spurs distinctly hooked on front tibiae only, spines on other tibiae weakly hooked; all tibiae with row of robust spines at apex; tarsomere 1 small but conspicuous; tarsi very slender;

apodeme of tarsomere 5 present – empodium retracted from ventral view; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternite 1 present, with suture at 1/3; male sternite VIII with minute spiculum gastrale; male segment IX–X present but reduced; tegmen composed of 2–3 pieces, inverted; phallobasic apodeme moderate; tegminal struts present; phallus slender; aedeagus moderate-sized.

Body size: 7.5 mm.

Colouration, pubescence, sculpture: black, slightly glabrous; without pubescence; head and pronotum sparsely punctate; elytra with thin lines and wrinkles between them; punctuation indistinct, elytra rather wrinkled.

**Distribution of the genus.** Mexico.

### *Euschaefferia* Leng, 1920

**Type species:** *Euschaefferia hicoriae* Schaeffer, 1918 (by monotypy and original designation)

**Material examined.** Not studied.

**Remarks.** See BARRON (1971) for descriptions of both species.

**Biology of the genus.** Predatory. Reared from burrows of scolytids.

**Distribution of the genus.** North America.

### *Grynocharina* Reitter, 1877 (Pls 26–27)

**Type species:** *Grynocharina peltiformis* Reitter, 1877 (by monotypy)

**Material examined.** Holotype: “I. or.” “*Grynocharina peltiformis* Reitt. / Birma / unicum”; (MNHN).

**Description.** Cranium: gular sutures convergent; frontoclypeal suture present, clypeus with thick setae; antennal groove distinct; antennal sockets not visible from above; eyes coarsely faceted, elevated, not emarginate; epicranial acumination present.

Maxilla: lacinia elongate, separated from basistipes, with 3 dark thorns; galea clavate, with thick setae; terminal joint of palpi coniform.

Mandible: 2 apical teeth situated in horizontal axis (next to one another); medial tooth blunt; mola absent; penicillus large, composed of tuft of rigid setae; ventral ciliate furrow absent or without setae; cutting edge rounded; basal notch absent.

Labrum: plate of labrum transverse, rounded; connecting tormal processes short, median process present.

Labium: mentum oblong; prementum deeply incised at centre, to the point at which it is nearly divided into two parts; ligula rigid, with stout setae; mental apodemes present; hypopharyngeal bar large; hypopharyngeal sclerite H-shaped; (labial palpi absent in specimen examined).

Antennae: 9-segmented; club 2-segmented; joints oval; antennae as long as head.

Prothorax: pronotum *Ancyrona*-like, with arcuate anterior margin; lateral edge present, explanate; prosternal process T-shaped at apex; coxal cavities open to halfway; coxae transverse.

Mesothorax: prepectus present; coxal cavities open; elytral epipleure narrow; carinae (5) inconspicuous.

Metathorax: discriminal line short; paracoxal sutures present; radial cell absent; radial fleck weak; anal field with one distinct vein, 1A and 2A weak, 4A shortened; wedge cell and cross veins absent.

Legs: femora not clavate; tibiae with minute spines along sides; 2 minute apical spurs present; tarsomere I with row of spines(!); claws with small denticle; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I and II present; male sternite VIII without spiculum gastrale; male segments IX–X developed; tegmen composed of 2 pieces, laterally situated in specimen examined; phallobasic apodeme extremely long; tegminal struts absent; phallus extremely long and slender; aedeagus as long as whole abdomen.

Body size: 3 mm.

Colouration, pubescence, sculpture: brown; without pubescence; punctate; elytra with regular rows of punctures.

**Distribution of the genus.** Burma (Myanmar).

### *Grynocharis* Thomson, 1859 (Pls 28–29)

**Type species:** *Silpha oblonga* Linnaeus, 1758 (by monotypy and original designation)

**Description** (*G. oblonga*). Cranium: gular sutures long, convergent; frontoclypeal suture present; antennal groove present; antennal sockets slightly covered from above; eyes moderate-sized, not emarginate; epicranial acumination distinct, incisions in cranium very deep; tentorial bridge not connected, without apodemes.

Maxilla: lacinia with double-hooked thorn at apex; galea clavate, with pigmented strip along inner margin; terminal joint of palpi coniform.

Mandible: 2 large apical teeth situated in horizontal axis (next to one another); medial tooth absent; mola present; penicillus minute; ventral ciliate furrow present but without setae; basal notch absent.

Labrum: plate of labrum oblong; medial tormal process present, connecting tormal processes present but not connected.

Labium: mentum oblong with somewhat extended middle portion; prementum with deep notch in middle; ligula transparent, rigid but membranous; mental apodemes present; hypopharyngeal bar absent; hypopharyngeal sclerite present, small; terminal joint of palpi coniform.

Antennae: 11-segmented; club 3-segmented, loose; scape large; antennae reach base of pronotum.

Prothorax: pronotum transverse; lateral edge distinct, explanate; prosternal process weakly dilated; coxal cavities externally open to half, internally open; coxae wide, transverse; trochantin conspicuous.

Mesothorax: prepectus conspicuous; mesosternum flat; coxal cavities open; coxae oval; elytral epipleure developed along whole length of elytra; each elytron with 4 carinae.

Metathorax: metasternum flat; discriminial line and paracoxal sutures present; radial cell large; radial fleck not complete; anal field with 4 veins; wedge cell absent; cross vein 2A–3A present, veins 1A–2A nearly connected, without cross vein.

Legs: trochanter triangular; femora clavate; tibiae with spines along side; tibial apex with 2 spurs, one of them hooked; empodium very large, bisetose; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I and II present; male sternite VIII with spiculum gastrale; male segment IX–X developed; tegmen composed of 3 pieces, inverted; phallobasic apodeme and tegminal struts present; phallus stout; aedeagus medium-sized. Gut with remains of decayed vegetation(?).

Body size: 6–7 mm.

Colouration, pubescence, sculpture: black-brown or black; with inconspicuous pubescence; punctate; elytra with carinae and regular rows of punctures.

**Biology of the genus.** Dwells under bark of old, decaying trees (both deciduous and coniferous) or scales of bark. Probably fungivorous.

**Distribution of the genus.** European species, the genus is Holarctic.

### ***Grynoma* Sharp, 1877 (Pl. 30)**

**Type species:** *Grynoma diluta* Sharp, 1877 (present designation)

**Description.** Cranium: gular sutures longer than in *Promanus* (to 1/3 of cranium), weakly convergent; frontoclypeal suture arcuate, very weak; antennal groove weak but present; antennal sockets visible from above (not covered by margin of frons); eyes medium-sized, markedly elevated, rounded, not emarginate; epicranial acumination weak, not sharp.

Maxilla: lacinia connected with large basistipes but suture conspicuous; lacinia without hooks – only about 5 pale thorns; basigalea smaller than in *Promanus*; palpifer large, tubular; terminal joint of palpi securiform.

Mandible: 2 apical teeth situated in horizontal axis; medial tooth absent; mola absent; penicillus present at base of area of cutting edge; ventral ciliate furrow absent; shaped cutting edge longer than in *Promanus*, evidently derived from reduced mola; basal notch absent.

Labrum: oblong, not emarginate; connecting tormal process absent; median tormal process absent (or not observed); labrum firmly connected with clypeus and only very short lateral tormal processes observed.

Labium: mentum narrow; prementum narrow; ligula membranous, not emarginate; mental apodemes arcuate; hypopharyngeal bar absent; hypopharyngeal sclerite present; terminal joint of palpi small, cylindrical.

Antennae: 10-segmented; club 3-segmented, loose; joints 2–7 cylindrical, joints 8–10 oval, rounded; antennae reach back halfway along pronotum.

Prothorax: pronotum transverse; lateral edge explanate; prosternal process narrow, weakly dilated at apex; coxal cavities externally widely open, internally open; oblong furcasternum visible from above; coxae transverse; trochantin distinct.

Mesothorax: prepectus minute (very narrow), composed of 3 parts; coxal cavities externally open, internally closed; coxae oval; trochantin small; mesonotum wide, scutellum oval; elytral epipleure conspicuous along whole length, narrowed from 1/3; carinae absent.

Metathorax: metasternum flat; discriminal line absent; paracoxal sutures sharp, narrow, extending through whole metasternum; radial cell oval, obliquely situated; radial fleck reduced; anal field with 4 veins; wedge cell absent; cross veins absent.

Legs: trochanter small, rounded; femora weakly thickened; tibia with about 3–5 spines along side; tibial spur pattern 2–?–1; empodium heavily projecting; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I and II absent; male sternite VIII with minute, nearly invisible, spiculum gastrale; male segments IX–X fully developed; tegmen composed of 2 pieces (ventral and dorsal pieces fused), inverted; phallobasic apodeme present; tegminal struts absent; phallus stout; aedeagus moderate-sized; gut with plant remains.

Body size: 5–5.5 mm.

Colouration, pubescence, sculpture: brown, black and rusty; colour pattern formed by whitish hairs. Pubescence short, dense, decumbent, composed of whitish hairs and sparse, dark, erect hairs; elytra with tubercles in basal and central portion; punctation of elytra distinct, punctures not in perfectly regular rows.

**Biology of the genus.** Probably fungivorous.

**Distribution of the genus.** New Zealand.

### *Gymnochila* Klug, 1844 (Pls 31–32)

**Type species:** *Trogosita vestita* Griffith, 1832 (by monotypy)

**Description** (*G. varia*, *G. sparsuta*). Cranium: gular sutures inconspicuous; frontoclypeal suture absent; antennal groove present; antennal sockets covered by margin of frons; 4 eyes present – 2 large, elliptical, dorsally situated and 2 smaller ventrolaterally situated; large and small eyes separated by sharp keel; eyes flat, not elevated; emargination absent in both pairs; epicranial acumination conspicuous, epicranium with deep, sharp incisions.

Maxilla: lacinia connected with basistipes – suture inconspicuous; lacinia without hooks, with numerous pale spines; basigalea larger than that in *Leperina decorata*; galea clavate; palpifer large, triangular, denticulate along margin; terminal joint of palpi coniform, apex truncate.

Mandible: single apical tooth, second tooth completely absent; medial tooth robust; mola present at base of mandible; penicillus present at base of mola; ventral ciliate furrow absent; deep basal notch present at side of mandibular base.

Labrum: connecting toral process absent; median toral process present; labrum quadrate, not emarginate; heavily pigmented and rigid.

Labium: mentum large, anterior margin deeply emarginate; prementum with anterior margin extended; ligula cordate, rigid, dark, without emargination, with furrow

for row of setae; mental apodemes – two arcuate sclerites, not connected to each other; hypopharyngeal bar absent; hypopharyngeal sclerite absent; terminal joint of palpi weakly clavate, truncate at apex.

Antennae: 11-segmented; club 3-segmented, large and distinct, asymmetrical, with sensorial fields; scape not projecting, joints 2–8 subquadrate, joints 9–11 triangular, angles rounded; antennae short, reaching back to base of head.

Prothorax: pronotum transverse, anterior margin arcuate (*Peltis*-like); lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; oblong furcasternum visible from above; coxae widely transverse; trochantin distinct, relatively large.

Mesothorax: prepectus absent; coxal cavities externally nearly closed, internally closed; coxae oval, depressed in centre; trochantin not observed (small?); mesonotum wide; elytral epipleure relatively very narrow; carinae absent (or reduced to narrow lines).

Metathorax: metasternum flat, wide; discriminial line very short (to approximately 1/4 of metasternum); paracoxal sutures not parallel with coxae (wide), not reaching sides of metasternum; radial cell large; radial fleck nearly complete (not perfect in *G. sparsuta*); anal field with 4 veins; wedge cell present; cross veins 1A–2A, 2A–3A present.

Legs: trochanter small, elongate; femora clavate; tibiae with 4 spines along side; tibial spur pattern 2–2–2; large hooked spur present on each tibia; apex of tibia with row of spines; tarsomere 1 free, small; row of thick setae present ventrally on tarsomeres 1–4; empodium not heavily projecting, bisetose; tarsal pattern 5–5–5.

Abdomen: 5(6) visible sternites; parasternites I present but not distinct; parasternites II present; male segments IX–X complete; tegmen composed of 3 pieces, inverted; phallobasic apodeme and tegminal struts present; phallus and aedeagus moderate in size; gut content: body of fat, fragments of cuticle.

Body size: 10–13 mm.

Colouration, pubescence, sculpture: body dark, with white-yellow scales; head and pronotum punctate; elytra with lines (or thin furrows), punctation fine, irregular.

**Biology of the genus.** Predatory.

**Distribution of the genus.** Tropical Africa.

### ***Indopeltis* Crowson, 1966 (Pls 33–34)**

**Type species:** *Indopeltis nilgiriensis* Crowson, 1966 (by monotypy and original designation)

**Material examined.** Holotype male (slide): “Nilgiri Hills / G. F. Hampson / 94–89”; (BMNH).

**Description** (see CROWSON 1970). Cranium: gular suture relatively long, convergent; tentorium with discontinuous bridge; eyes oval, elevate, medium-sized, and situated somewhat dorsally.

Maxilla: lacinia with one dark thorn and thick spine-like setae, not connected with basistipes; terminal joint of palpi cylindrical.

Mandible: 2 apical teeth situated in horizontal axis (next to one another); mola conspicuous, composed of about 10 small plates with slots among them.

Labium: with membranous ligula (only sclerotized at its base); terminal joint of palpi cylindrical; hypopharyngeal sclerite M-shaped; prementum divided into 2 parts.

Labrum with simple lateral tormal processes and median process; epipharynx larger than plate of emarginate labrum.

Antennae: 11-segmented; club 3-segmented, loose.

Thorax: pronotum wide, with prolongate anterior corners; front coxal cavities open; intercoxal process dilated; front coxae transverse; middle coxal cavities open, coxae nearly spherical; elytra with six interrupted carinae and wide epipleure; discriminial line inconspicuous; metendosternite characteristic (see Pl. 34); hind coxae with longitudinal groove; wing with large radial cell; radial fleck conspicuous; 4 veins in anal field; cross veins absent.

Legs: tibiae with short, stout spines on outer side, apices with one large spur, second spur small; tarsal pattern 5–5–5; tarsomere 1 shorter than tarsomere 2 in all pairs of legs; empodium large and distinct.

Abdomen: sternites large and flat; male sternite VIII with minute spiculum gastrale; male segments IX–X complete; tegmen peltine-like.

Body size: about 5–6 mm.

Pubescence, sculpture: cranium with large shallow impressions dorsally; elytra with regular rows of punctures from which short setae grow.

**Distribution of the genus.** Southern India.

### ***Juralithinus* Kireichuk et Ponomarenko, 1990**

**Type species:** *Juralithinus gracilidorsum* Kireichuk et Ponomarenko, 1990 (by monotypy and original designation)

**Material examined.** Not examined.

**Description.** See KIREICHUK & PONOMARENKO (1990).

**Distribution of the genus.** Upper Jurassic of Kazakhstan.

### ***Larinotus* Carter et Zeck, 1937 (Pl. 35)**

*Nebophilus* Crowson, 1970

**Type species:** *Larinotus umblicatus* Carter et Zeck, 1937 (by monotypy)

**Description** (see also CROWSON 1970, SLIPINSKI 1992). Cranium: gular sutures short, heavily convergent; frontoclypeal suture fine; antennal groove present; antennal sockets not covered by frons(!); eyes large, finely faceted, not emarginate; epicranial acumination small; tentorial bridge absent.

Maxilla: lacinia elongate, with double-hooked thorn at apex, not coalescent with basistipes; terminal joint of palpi coniform.

Mandible: 2 apical teeth, one next to and slightly above the other; medial tooth asymmetrical – below apical teeth in right mandible, alongside lower apical tooth in left

mandible; mola present, asperate; penicillus, ventral ciliate furrow and basal notch absent.

Labrum: median, connecting and lateral tormal processes present, connecting process perfectly coalescent in middle(!); labrum not transverse but somewhat elongate.

Labium: mentum transverse, deeply emarginate; prementum divided into 2 parts, coalescent with rigid ligula; mental apodemes and hypopharyngeal bar absent; hypopharyngeal sclerite composed of 2 arcuate sclerites; terminal joint of palpi coniform.

Antennae: 9-segmented; club 1-segmented, composed of coalescent joints 9–11; antenna shorter than head.

Prothorax: lateral edge denticulate; prosternal process dilated; coxal cavities closed; coxae small (short).

Mesothorax: coxal cavities closed, coxae oval; elytral epipleure narrowing towards apex; carinae absent.

Metathorax: discriminal line and paracoxal sutures present; radial cell present, radial fleck present.

Legs: femora clavate; tibiae without spines along sides; small remnant of hooked spur present; tarsomere 1 coalescent with tarsomere 2 but suture present; claws long and sharp; tarsal pattern 5–5–5 (although seemingly 4–4–4).

Body size: about 6 mm.

Colouration, pubescence, sculpture: black-brown; with extremely long whitish pubescence; body surface with small tubercles.

**Distribution of the genus.** Australia.

### *Latolaeva* Reitter, 1876 (Pl. 36)

**Type species:** *Latolaeva ferrarii* Reitter, 1876 (present designation)

**Remarks.** Character states similar or identical with those in *Ancyrona*. Species of *Latolaeva* are bare and rounded while species of *Ancyrona* are pubescent or with scales and rather elongate. Because of the richness of species in both genera, they are not synonymized here; more extensive examination will undoubtedly be necessary to resolve their status. For illustration of some of the body parts see Pl. 36.

**Distribution of the genus.** South-eastern Asia. *Latolaeva brasiliica* Perty, 1830 (Brazil, Minas Geraes) does not belong to Cleroidea, while the status of *L. bivittata* Lèveillé, 1899 remains unclear.

### *Leipaspsis* Wollaston, 1862 (Pl. 37)

**Type species:** *Leipaspsis lauricola* Wollaston, 1862 (present designation)

**Description** (*L. lauricola*). Cranium: gular sutures very short, straight, heavily convergent; frontoclypeal suture absent or very weak; antennal groove present; antennal sockets not visible from above; eyes relatively small, weakly exceeding contour of cranium, not emarginate; epicranial acumination conspicuous, not deep.

Maxilla: lacinia extremely small, not coalescent with basistipes; thorns absent but apex of lacinia with one pale blunt apodeme, outer margin with thick setae; basigalea relatively large; galea elongate, arcuate, pubescent, outer margin with thick setae, apical portion with ciliate setae; basistipes nearly oblong; palpifer coarsely denticulate along margin; terminal joint of palpi cylindrical, elongate.

Mandible: 2 apical teeth, above one the other but slightly separate on the horizontal axis; medial tooth composed of 2 small tubercles; mola absent; penicillus present, relatively large; ventral ciliate furrow present; cutting edge straight (similar to that in Cleridae); basal notch inconspicuous, shallow.

Labrum: cordate sclerite present, large; tormal processes L-shaped; median tormal process absent; labrum oblong, emarginate, corners rounded.

Labium: mentum large, transverse; male submentum not examined (tuft of setae?); prementum with deep notch at centre; ligula dark, rigid, deeply emarginate, not retroflex; setae ciliate; mental apodemes minute; hypopharyngeal bar absent; hypopharyngeal sclerite present, transverse; terminal joint of palpi slightly dilated, truncate at apex.

Antenna: 11-segmented; club 3-segmented; scape large, joint 2 as long as 3, 3–8 oblong, 9–11 asymmetrical; antennae reach back to anterior margin of pronotum.

Prothorax: pronotum shape elongate, cordate, corners not extended; lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; coxae transverse; trochantin distinct, not large.

Mesothorax: prepectus absent; coxal cavities externally open, internally closed; coxae oval, very weakly transverse, with inconspicuous furrow for femora; trochantin small; mesonotum medium-sized; elytral epipleure narrow, elytral lock extremely powerful; carinae absent, thin depressed lines present.

Metathorax: metasternum neither flat nor wide, weakly narrowing towards anterior portion; discriminal line absent; paracoxal sutures sharp, narrow, parallel with coxae; anepisternum weakly triangular; coxae with inconspicuous furrow for femora; wingless species.

Legs: trochanter relatively small, triangular; femora weakly clavate, with shallow, inconspicuous furrow for tibiae; tibiae without spines along sides; tibial spur pattern 2–2–2; hooked spur absent (one spur larger than the second); apex of tibiae with only 2–3 thick spines; tarsomere 1 small but conspicuous; apodeme of tarsomere 5 inconspicuous; tarsal pattern 5–5–5.

Abdomen: 5 or 6 visible sternites; parasternites I with arcuate suture; parasternites II absent;

ovipositor with arcuate coxitae; styli clavate; baculli normal; vaginal sclerites absent; gut with (insect) fat body.

Body size: about 9 mm.

Colouration, pubescence, sculpture: brown; without pubescence; head and pronotum finely punctate; elytra with lines and regular punctation.

**Biology of the genus.** Predatory.

**Distribution of the genus.** Canary Islands.

***Leperina* Erichson, 1844 (Pls 38–40)**

**Type species:** *Trogosita decorata* Erichson, 1844 (present designation)

*Onyschomorpha* Arrow, 1900 **syn.nov.** (type species: *Onyschomorpha marmorata* Arrow, 1900; by monotypy)

**Material examined.** *O. marmorata*: “Flying Fish / Cove Oct. 1897”, “Christmas I. / C. W. Andrews / 1898 / 98/20”; (BMNH).

**Description** (*L. decorata*). Cranium: gular sutures reach 1/3 of cranium, heavily convergent; frontoclypeal suture inconspicuous; antennal groove present; antennal sockets visible from above (not covered by margin of frons); eyes medium-sized, not elevated, elliptical, triangular from above, attenuate towards frons, not emarginate; epicranial acumination conspicuous, incision deep and narrow.

Maxilla: lacinia perfectly fused with basistipes suture inconspicuous; lacinia without hooked thorns, with only pale, spine-like setae; galea ovoid; palpifer large, triangular; terminal joint of palpi coniform.

Mandible: 2 apical teeth (ventral very small) situated in horizontal axis; 2 medial teeth present; mola absent (small mola present in *L. squamulosa*); penicillus present at base of “molar area”; ventral ciliate furrow absent; cutting edge absent, only short edge derived from mola present at base of mandible; basal notch shallow.

Labrum: connecting toral process present; median toral process absent; labrum oblong, not emarginate, rigid and heavily pigmented.

Labium: mentum large, anterior margin emarginate; prementum with extended anterior margin; submentum very narrow, oblong; ligula rigid, dark, not incised in middle (only weakly emarginate), with furrow for row of setae; mental apodemes – 2 arcuate sclerites, not connected to each other; hypopharyngeal bar absent; hypopharyngeal sclerite composed of 2 complex sclerites; terminal joint of palpi coniform (truncate in *L. squamulosa*).

Antenna: 11-segmented; club 3-segmented, large and distinct, with sensorial fields; scape not projecting, joints 2–8 subquadrate, joints 9–11 triangular, angles rounded; antennae reach nearly 1/4 of pronotum or less.

Prothorax: pronotum transverse, anterior margin arcuate (*Peltis*-like); lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; oblong furcasternum visible from above; coxae transverse; trochantin distinct, small.

Mesothorax: prepectus narrow (wider along anepisternum) composed of 3 parts; coxal cavities externally open, internally closed; coxae oval, nearly transverse; trochantin large; mesonotum wide, scutellum cordate; elytral epipleure relatively narrow, conspicuous along whole length, narrowing from 1/3 of elytra; 2 carinae present (number of carinae varies in other species: numerous in *L. squamulosa*, 2 in *L. cirrosa*, none in *L. marmorata*).

Metathorax: metasternum flat; discriminal line deeply impressed towards 1/3 of metasternum; paracoxal sutures inconspicuous, narrow, extending through whole metasternum; radial cell rhomboid, obliquely situated; radial fleck conspicuous, nearly perfect; anal field with 4 veins; wedge cell present; cross veins complete (1A–2A absent in *L. squamulosa*).

Legs: trochanter small, elongate; femora weakly thickened; tibiae with some 5 spines along side; tibial spur pattern 1–2–2; hooked spur (especially in front tibiae) large and heavily hooked; tarsomere 1 fused with 2, suture more or less conspicuous (not visible in *L. marmorata*); claws very large; empodium strongly projecting, bisetose; tarsal pattern 5–5–5 (4–4–4 in *L. marmorata*).

Abdomen: 5 visible sternites; parasternites I and II present; male sternite VIII without spiculum gastrale; male segments IX–X complete; tegmen composed of 3 pieces, inverted; phallobasic apodeme and tegminal struts present; phallus stout and relatively short; aedeagus moderate-sized; ovipositor ordinarily formed; bursa copulatrix developed; spermatheca oval; vaginal sclerites absent; gut content – empty in 2 specimens studied; CROWSON (1964): fungi, detritus, insect fragments.

Body size: 8–13 mm.

Colouration, pubescence, sculpture: brown, with black and yellow scales or scale-like setae; pubescence – species of genus with various patterns composed of scales; head and pronotum punctate; elytra with regular or even irregular punctuation and with or without carinae (2 rows of punctures between carinae in *L. squamulosa*, several regular in *L. marmorata*).

**Biology of the genus.** Both fungivorous and predatory.

**Distribution of the genus.** Australia, New Zealand, New Guinea, New Caledonia. Two species in Siberia and Japan.

### *Leptonyxa* Reitter, 1876 (Pls 41–42)

**Type species:** *Leptonyxa brevicollis* Reitter, 1876 (present designation)

**Description** (*L. germaini*, *L. brevicollis*, male organs *L. fairmairei*). Cranium: gular sutures narrow; frontoclypeal sutures and antennal grooves absent; antennal socket visible; eyes large, distinctly elevate, not emarginate; epicranial acumination inconspicuous; tentorium narrow, bridge soft, membranous.

Maxilla: lacinia oval, elongate, perfectly fused with basistipes – suture inconspicuous; lacinia lacking hooked thorns or spines, with only soft setae; galea ovoid, with soft setae; palpifer large; terminal joint of palpi coniform.

Mandible: 2 apical teeth situated in horizontal axis (next to one another); medial tooth composed of 3 blunt tubercles; mola absent; penicillus absent; ventral ciliate furrow short, present at base of mandible; basal notch absent. Only female mandible figured and described – males of all species with truly huge mandibles (photographs to be published in the next part of this communication).

Labrum fused with clypeus, impossible to separate from cranium by normal dissection technique.

Labium: mentum nearly triangular; prementum divided into 2 parts; ligula rigid, small, not emarginate; mental apodemes very small; hypopharyngeal bar present; hypopharyngeal sclerite absent; terminal joint of palpi large, coniform.

Antenna: 10-segmented; club 3-segmented but weak and loose; antennae reach back to halfway along pronotum.

Prothorax: pronotum transverse; lateral edge distinct, explanate; prosternal process narrow; coxal cavities externally widely open, internally open; coxae transverse; trochantin distinct.

Mesothorax: prepectus present; coxal cavities open, coxae coniform, rounded at base; elytral epipleure conspicuous from base to apex; 3 carinae present in each elytron.

Metathorax: metasternum flat; discriminial line absent; paracoxal sutures very narrow; wing radial cell present; radial fleck incomplete; anal field with 4 veins; wedge cell and cross veins absent.

Legs: trochanter triangular; femora clavate; tibiae with spines along sides; hooked spur present in all tibiae, in front tibia spur huge, 2nd spur also hooked but smaller; claws with dilated base; tarsal pattern 5–5–5.

Abdomen: 5(6) visible sternites; parasternites absent; male sternite VIII without spiculum gastrale; male segments IX–X reduced to spicular fork; tegment composed of 3 pieces but only parameres conspicuous (dorsal and ventral pieces membranous), laterally situated in dissected specimen (as in Pl. 42); phallus larger than tegmen, robust, with sclerotized denticulate armature in apical part; ovipositor normal; gut empty.

Body size: 7 mm (male of *L. fairmairei*).

Colouration, pubescence, sculpture: all species yellowish with black pattern; pubescence short, sparse; head and pronotum smooth; elytra with regular punctation.

**Distribution of the genus.** South America (Columbia, Brazil, Bolivia).

### *Lophocateres* Olliff, 1883 (Pl. 43)

**Type species:** *Lophocateres nanus* Olliff, 1883 (by monotypy)

**Remarks.** *L. pusillus* Klug, 1832 (= *Lophocateres nanus* Olliff, 1883) has been described many times, as well as its larva. For detailed illustration see Pl. 43. Of particular interest are: gular sutures convergent; frontoclypeal suture conspicuous; lacinia with double thorn at apex and 1 dark thorn below it; ciliate membrane (penicillus) between medial tooth and mola; epipharynx with 3 types of sensillae; ligula membranous, not emarginate; front and middle coxal cavities open; stalk of metendosternite very robust, thick; discriminial line long; all tibiae with row of spines along sides; hooked spur present on all tibiae; tegmen composed of 3 parts, inverted; phallobasic apodeme extremely short, nearly absent; tegminal struts absent; 6 malpighian tubules – 2 tubules long and 4 relatively short; ventriculus with papillae.

**Biology of the genus.** Pest, in stored plant material.

**Distribution of the genus.** Type species cosmopolitan, a second dubious species (*L. pilosus* Olliff, 1883) south-eastern Asia (Penang).

### *Lycoptis* Casey, 1890

**Type species:** *Peltis americana* Motschoulsky, 1863 (by monotypy)

**Material examined.** Not examined.

**Remarks.** A genus with a single rare and poorly known species (*L. americana* = *L. villosa* Casey, 1890) also classified within *Lophocateres* for a long time. Adequately described and figured by BARRON (1975).

**Biology of the genus.** Collected under bark of *Carya* (BARRON 1975).

**Distribution of the genus.** USA (Georgia, Maryland, North Carolina, South Carolina)

### ***Melambia* Erichson, 1844 (Pls 44–45)**

**Type species:** *Trogosita gigas* Fabricius, 1798 (present designation)

**Description** (*M. gigas*). Cranium: gular sutures inconspicuous; frontoclypeal suture absent; antennal groove present; antennal sockets visible from above; eyes medium-sized, not exceeding contour of head; not emarginate; epicranial acumination conspicuous, narrow.

Maxilla: lacinia fused with basistipes – suture absent; lacinia lacking hooks or spines, densely pubescent; galea securiform, with dense pubescence; palpifer medium-sized; terminal joint of palpi cylindrical.

Mandible: 2 apical teeth situated in vertical axis (one above the other); medial tooth present; mola absent; penicillus minute; ventral ciliate furrow present; cutting edge even, with small denticle; basal notch present.

Labrum: epipharynx with dark, rigid cordate sclerite in centre; tormal processes L-shaped; median tormal process absent; labrum oblong, weakly emarginate.

Labium: mentum large, anterior margin arcuate; prementum with extended anterior margin; ligula rigid, dark, very deeply emarginate (in fact, divided into two parts), retroflex; hair growth from retroflex portion; mental apodemes present; hypopharyngeal bar present; hypopharyngeal sclerite absent; terminal joint of palpi short, cylindrical.

Antennae: 11-segmented; club 3-segmented, distinct, asymmetrical, with sensorial fields; scape not projecting, joints 2–8 subquadrate, joints 9–11 dilated; antennae reach back to anterior margin of pronotum.

Prothorax: pronotum transverse; lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; coxae transverse; trochantin distinct.

Mesothorax: prepectus absent; coxal cavities externally widely open, internally closed; coxae suboval, nearly spherical; trochantin conspicuous; mesonotum small, rounded; metasternum flat, wide; elytral epipleure very narrow; carinae absent in basal half but remainders of carinae perceptible in posterior portion of elytra.

Metathorax: discriminial line long (to more than halfway along metasternum), distinct; paracoxal sutures not perfectly parallel with coxae, slightly divergent, narrow, reaching sides of metasternum; radial cell large, oval; radial fleck nearly perfect; anal field with 4 veins; wedge cell present; cross veins 1A–2A, 2A–3A present.

Legs: trochanter relatively small, elongate; femora weakly clavate, with furrow for tibiae; tibiae with 3–5 spines along sides; tibial spur pattern 2–2–2; hooks conspicuous; middle and hind tibiae with row of spines at apex; tarsomere 1 small; ventral side of tarsomeres pubescent; empodium not heavily projecting, bisetose, visible from above

but ventrally covered by apodeme of tarsomere 5; tarsal pattern 5–5–5.

Abdomen: 6 visible sternites; parasternites I and II present; parasternites II moreover with edges; male sternite VIII without spiculum gastrale; male segments IX–X complete; tegmen composed of 2–3 pieces, inverted; phallobasic apodeme peculiar, apparently absent; tegminal struts present; phallus normally shaped; aedeagus medium-sized.

Body size: 23–26 mm.

Colouration, pubescence, sculpture: black, not glabrous; without pubescence; head and pronotum finely and sparsely punctate; elytra with fine, regular lines of punctures.

**Biology of the genus.** Probably predatory.

**Distribution of the genus.** Central and south-eastern Asia, tropical Africa.

### *Meligethiella* Medvedev, 1969

**Type species:** *Meligethiella soroniiformis* Medvedev, 1969 (by monotypy and original designation)

**Material examined.** Not examined.

**Description.** See KIREICHUK & PONOMARENKO (1990) for all 3 species.

**Distribution of the genus.** Upper Jurassic and Lower Cretaceous of Kazakhstan and eastern Siberia.

### *Narcisa* Pascoe, 1863 (Pl. 71)

**Type species:** *Narcisa decidua* Pascoe, 1863 (by monotypy)

**Description.** Cranium: gular sutures inconspicuous, minute, parallel; frontoclypeal suture absent; antennal groove present; antennal sockets conspicuously covered by margin of frons; 4 eyes present – 2 large, elliptical, dorsolaterally situated (as in *Xenoglana*) and 2 smaller situated ventrolaterally near antennal sockets; large and small eyes not connected with each other; all eyes weakly elevated, flat, not emarginate; epicranial acumination small, narrow.

Maxilla: similar to that in *Xenoglana*; terminal joint of palpi relatively long, flat, cylindrical.

Mandible: 2 apical teeth situated in horizontal even vertical axes (next to one another, possibly even above one another); medial tooth absent; mola absent (but molar area conspicuous, extended); penicillus present at base of molar area; ventral ciliate furrow absent; basal notch shallow.

Labrum: similar to that in *Xenoglana*; labrum oblong, anterior margin even.

Labium: similar to that in *Xenoglana*; mentum large, anterior margin even; ligula dark, rigid, rounded, without emargination, with furrow for row of very long, thick setae; terminal joint of palpi small, thick, cylindrical.

Antennae: 11-segmented; club 3-segmented, large and distinct, compact, weakly asymmetrical, with sensorial fields; scape large, joints 3–8 rectangular, each with long, thick seta, joints 9–11 rounded; antennae short, reach back only to base of head.

Prothorax: pronotum transverse, anterior margin deeply emarginate but arcuate forwards of centre; lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; small part of furcasternum visible from above; coxae transverse, oval; trochantin distinct, not large.

Mesothorax: coxal cavities open; coxae suboval, nearly triangular; trochantin small; mesonotum wide; elytral epipleure relatively thick (in comparison with *Acrops* or *Xenoglana*); carinae absent.

Metathorax: metasternum wide, transversally convex at centre; discriminial line inconspicuous, paracoxal sutures narrow, parallel; radial cell triangular; radial fleck open, not complete; anal field with 4 veins; wedge cell present; cross veins 1A–2A, 2A–3A present.

Legs: trochanter small, triangular; femora clavate; front tibiae with minute spines along side; tibial spur pattern 2–2–2; hooked spurs weak (slightly hooked on front legs, not hooked on other legs); row of spines at tibial apex absent; tarsomere 1 very small in front and middle legs – perfectly retracted in apex of tibiae, conspicuous in hind tarsi; tarsal pattern 5–5–5, seemingly 4–4–5.

Abdomen: 6 visible sternites; parasternites I inconspicuous, II present; male sternite VIII without spiculum gastrale; male segments IX–X complete; tegmen composed of 3 pieces, inverted; phallobasic apodeme and tegminal struts present; phallus and aedeagus medium-sized; gut containing what were probably fragments of rigid cuticle.

Body size: 8 mm.

Colouration, pubescence, sculpture: brown; whole dorsal surface covered in rounded, decumbent, whitish scales; elytra with erect, slender dark scales as well; ventrally with sparser and smaller scales; pronotum irregularly punctate; elytra with regular rows of relatively fine punctures.

**Biology of the genus.** Probably predatory.

**Distribution of the genus.** South-eastern Asia.

### *Neaspis* Pascoe, 1872 (Pl. 46)

**Type species:** *Neaspis villosa* Pascoe, 1872 (by monotypy)

**Description** (*N. variegata*). Head: Similar to that of *Ancyrona* (e.g. *A. diversa*). Gular sutures short, subparallel; antennal groove shallow. Lacinia lacking hooked thorns, with only 7 spines; terminal joint of palpi coniform, longer than labial one. Antennae 10-segmented; club compact, joints 9 and 10 coalescent but suture conspicuous. Labium with rigid ligula; terminal joint of palpi short, coniform. Labrum with simple tormal processes. Mandible without mola, however wide in lateral view.

Thorax: Similar to that of *Ancyrona*. Anterior coxal cavities open; intercoxal process only weakly dilated. Anterior angles of pronotum acuminate. Mesoscutellum broadly oval. Middle coxal cavities closed. Front coxae heavily transverse, middle coxae rounded. Whole ventral side flat. Wing with conspicuous radial cell and 3 veins in anal field. Elytra without carinae. Hind coxae with acuminate process at apical part.

Legs: Femora laterally flattened. Tibial spur pattern 2–2–2. Tarsi 5-segmented, first tarsomeres minute. Abdomen: 5 flat sternites visible. Female internal copulatory organs

damaged in the specimen examined (Pl. 46). Tegmen composed of 3 pieces, laterally situated in specimen examined. Male segment IX–X complete.

Body size: 4.0 mm.

Colouration, pubescence, sculpture: body brown; head and pronotum densely pubescent; elytra coarsely punctate, impressed, with simple, regular rows of short hairs.

**Distribution of the genus.** Australia.

### *Necrobiopsis* Crowson, 1964 (Pls 47–48)

**Type species:** *Necrobiopsis tasmanicus* Crowson, 1964 (by monotypy and original designation)

**Material examined.** Paratype: “Hobart / Tasmania”; (BMNH).

**Description.** Cranium: gular sutures convergent at base, then parallel, long; frontoclypeal suture present; antennal groove present; antennal sockets not visible from above; eyes large, heavily elevate, not emarginate; epicranial acumination present; tentorial bridge probably present (not clearly visible in studied specimen).

Maxilla: elongate lacinia with double-hooked thorn at apex; basistipes free, relatively small; basigalea small; galea elongate, evenly rounded at apex; terminal joint of palpi acuminate.

Mandible: 2 apical teeth situated in horizontal and vertical axes; medial tooth absent; mola present, asperate; penicillus very small; ventral ciliate furrow present; basal notch absent.

Labrum: connecting and median tormal processes present; epipharynx sclerotized; plate of labrum weakly transverse and emarginate.

Labium: mentum narrow, oblong; prementum deeply incised; ligula membranous, weakly emarginate; mental apodemes triangular, short; hypopharyngeal bar present; hypopharyngeal sclerite M-shaped; terminal joint of palpi acuminate.

Antennae: 8-segmented; club 1-segmented, composed of fused joints 8–11 (sutures partially visible); antennae shorter than head.

Prothorax: pronotum transverse; lateral edge present; prosternal process dilated; coxal cavities closed; coxae weakly transverse.

Mesothorax: prepectus narrow; coxal cavities closed(!); coxae small, spherical; elytral epipleure narrow; 3 distinct carinae present in each elytron.

Metathorax: metasternum flat; discriminal line long; paracoxal sutures present; radial cell present, small; radial fleck inconspicuous; anal field with 3 veins – 1A and 2A weak, unclear, 4A shortened; cross vein between 1A–2A and 3A present; wedge cell absent.

Legs: femora clavate; tibiae lacking spines along sides(!); tibial apices with 2 spurs, one conspicuously hooked; empodium large; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; parasternites I and II present; male sternite VIII with minute spiculum gastrale; male segments IX–X complete but segments reduced; tegmen composed of 2 parts (parameres coalescent with phallobasis), uninverted (dorsally open); phallobasic apodeme and tegminal struts present; phallus robust, short; aedeagus medium-sized.

Body size: 3.7 mm.

Colouration, pubescence, sculpture: black; with very long pubescence; head with longitudinal wrinkles; elytra regularly punctate, 2 rows of punctures present among carinae.

**Distribution of the genus.** Tasmania.

### *Nemosoma* Latreille, 1824 (Pls 49–50)

**Type species:** *Dermestes elongatus* Linnaeus, 1760 (by monotypy)

*Nemosomia* Reitter, 1876 (type species: *Nemosomia vorax* Reitter, 1876; by monotypy) [as subgenus in LEPESME & PAULIAN 1944]

*Aponemosoma* [subgenus] Lepesme et Paulian, 1944 (type species: *Nemosoma caucasicum* Ménétries, 1832; by LEPESME & PAULIAN 1944)

*Paranemosoma* [subgenus] Lepesme et Paulian, 1944 (type species: *Nemosoma punctatum* Lèveillé, 1886; by LEPESME & PAULIAN 1944)

*Pseudalindria* Fall, 1910 (type species: *Pseudalindria fissiceps* Fall, 1910; by monotypy)

*Monesoma* Lèveillé, 1894 (type species: *Nemosoma cornutum* Sturm, 1826; by LÉVEILLÉ 1894)

*Cylidrella* Sharp, 1891 **syn.nov.** (type species: *Cylidrella mollis* Sharp, 1891; by monotypy)

**Description** (*N. elongatum*). Cranium: gular sutures short, weakly arcuate, strongly convergent; frontoclypeal suture absent, frons with distinct longitudinal groove; anterior margin of cranium extended into two conspicuous horns; cranium elongate; antennal groove present; antennal sockets visible from above; eyes relatively small, flat, not exceeding contour of cranium, not emarginate; epicranial acumination peculiar (Pl. 49); tentorial bridge absent.

Maxilla: lacinia short, coalescent with basistipes; hooked thorns absent, several thick setae present along margin of lacinia; galea elongate, slightly arcuate, with thick, ciliate setae and fine setae; basistipes arcuate; palpifer not denticulate; terminal joint of palpi cylindrical, elongate.

Mandible: 2 small apical teeth, above one another and only very slightly removed in the horizontal axis; medial tooth composed of two small tubercles; mola absent; penicillus absent; ventral ciliate furrow present, ciliation very fine and sparse; cutting edge straight, inconspicuous; basal notch present, moderate.

Labrum: cordate sclerite present, larger than plate of labrum; only lateral tormal processes present; labrum quadrate, weakly emarginate, sparsely pubescent.

Labium: mentum oblong, narrow; male submentum without tuft of setae but with 2 long hairs; prementum without extended middle portion; ligula relatively soft, pale, emarginate, not retroflex; setae ciliate; prementum with extremely long apodemes; mental apodemes not observed; hypopharyngeal bar absent; hypopharyngeal sclerite not observed; terminal joint of palpi cylindrical.

Antennae: 10-segmented; club 3-segmented; scape large, joint 2 larger than 3–7, 3–7 oblong, 8–10 asymmetrical with sensorial fields; antennae shorter than head.

Prothorax: pronotum extremely elongate, anterior corners not extended; lateral edge present at basal half but incomplete (reduced in anterior portion of pronotum); prosternal process large, dilated at apex; coxal cavities externally closed, internally open; coxae heavily transverse, large; trochantin distinct.

Mesothorax: prepectus absent; coxal cavities externally open, internally closed; coxae oval, weakly transverse; trochantin distinct; mesonotum small; elytral epipleure narrow, elytral lock very large; carinae absent, thin depressed lines present.

Metathorax: metasternum neither flat nor wide, narrowing anteriorly; discriminial line absent; paracoxal sutures sharp, parallel with coxae; anepisternum triangular; radial cell absent; radial fleck reduced, nearly absent; anal veins with 3 veins (4A shortened); wedge cell absent; cross vein 1A–2A present.

Legs: trochanter relatively small, triangular; femora clavate, with shallow, inconspicuous furrow for tibiae; tibiae without spines along side; tibial spur pattern 2–2–2; hooked spur present, row of spines at tibial apex inconspicuous; tarsomere 1 very small; empodium projecting, bisetose; tarsal pattern 5–5–5 (seemingly 4–4–4).

Abdomen: 5 visible sternites; parasternites present (probably p. II), with 2 sutures (Pl. 49); male sternite VIII without spiculum gastrale; male segments IX–X reduced to spicular fork; tegmen composed of 2–3 pieces, inverted; phallobasic apodeme extremely long and slender; tegminal struts present; phallus longer than tegmen; aedeagus moderate; coxitae relatively short, compact; styli, proctiger, baculli in normal cleroid positions; bursa copulatrix absent; spermatheca oval; vaginal sclerites absent.

Body size: about 4 mm.

Colouration, pubescence, sculpture: head and pronotum black-brown, elytra yellow-brown with dark stripe in rear half; without pubescence; head and pronotum finely punctate, elytra coarsely irregularly punctate.

**Distribution of the genus.** Holarctic, Central and South America (Brazil, Venezuela, Columbia).

### *Nemozoma mollis* Sharp, 1891 comb.nov. (Pl. 50)

*Cylidrella mollis* Sharp, 1891

**Material examined.** Type (syntype?) male: “Guatemala; Cerro Zunil / 4–5000ft. / Champion” – “B.C.A., Col., II, (1).”; (BMNH).

**Remarks.** All character states of *Cylidrella* are apomorphic with respect to *Nemozoma*. See also descriptions in BARRON (1971).

**Description.** Head: cranium elongate, eyes flattened; gular sutures short, subparallel, relatively wide; frons deeply emarginate giving the cranium 2 “horns”. Antennae 9-segmented with distinct 3-segmented club. Mandible with 2 acuminate apical teeth situated in vertical axis (above one another); mola absent.

Thorax: lateral edge heavily reduced, nearly absent, visible only in basal third of pronotum. Front coxal cavities closed, intercoxal process dilated; coxae heavily elongate, slightly projecting. Mesocoxal cavities widely open; mesocoxae projecting. Metasternum very long and narrow; discriminial line absent. Elytra short, covering only thorax. Wing lacking open radial cell, with only one vein in anal field; vein Cu incomplete; wings long, soft. Femora clavate; tibiae flat with thick spines along outer sides and row of finer spines along inner sides; tibial spur pattern 2–2–2; tarsal pattern 5–5–5; tarsomere 1 very short.

Abdomen: segments not covered by elytra; sternites not bordered.

Body size: 4.5 mm.

Colouration, pubescence, sculpture: head and prothorax black, head with elongate wrinkles. Ventral side of meso- and metathorax glabrous, black, with transverse wrinkles. Pronotum finely and sparsely punctate. Elytra yellowish, glabrous (not metallic) with base and apices light brown; punctation very shallow and sparse, inconspicuous. Body almost without pubescence, except legs.

**Distribution.** Central America.

### ***Ostomalynus* Kireichuk et Ponomarenko, 1990**

**Type species:** *Ostomalynus ovalis* Kireichuk et Ponomarenko, 1990 (by monotypy and original designation)

**Material examined.** Not studied.

**Description.** See KIREICHUK & PONOMARENKO (1990).

**Distribution of the genus.** Lower Cretaceous of eastern Siberia.

### ***Paracalanthis* Crowson, 1970**

**Type species:** *Paracalanthis binnaburrense* Crowson, 1970 (by monotypy and original designation)

**Material examined.** Not studied.

**Description.** Adequately described and illustrated by CROWSON (1970).

**Distribution of the genus.** Australia.

### ***Parallelodera* Fairmaire, 1881 (Pl. 65)**

**Type species:** *Parallelodera quadraticollis* Fairmaire, 1881 (by monotypy)

**Description** (*P. quadraticollis*). Cranium: gular sutures short, straight, strongly convergent; frontoclypeal suture absent, frons with small rounded impression, without longitudinal furrow; antennal groove present, very deep; antennal sockets visible from above; eyes moderately-sized, not exceeding contour of cranium, not emarginate.

Maxillae: terminal joint of palpi cylindrical, elongate.

Mandible: 2 apical teeth situated in vertical, or even horizontal, axes; medial tooth present.

Labrum: epipharynx larger than plate of labrum, cordate sclerite large; labrum oblong, weakly emarginate.

Labium: submentum conspicuous, separated by suture; terminal joint of palpi slightly dilated, arcuate.

Antennae: 11-segmented; club distinct, 3-segmented, relatively loose; scape large, joints 2–8 relatively small, oblong, 9–11 asymmetrical; antennae reach back to anterior margin of pronotum.

Prothorax: pronotum almost parallel-sided, very weakly cordate; lateral edge present; prosternal process large, dilated at apex; coxal cavities closed; coxae transverse; trochantin distinct, narrow.

Mesothorax: prepectus absent; coxal cavities open; coxae oval, weakly transverse, with furrow for femora; trochantin distinct; mesonotum medium-sized; scutellum relatively small, rounded; elytral epipleure narrow, elytral lock very powerful; carinae absent, thin depressed lines present.

Metathorax: metasternum not flat and wide, weakly narrowing towards anterior portion; discriminial line absent; paracoxal sutures sharp, parallel with coxae; anepisternum weakly triangular; radial cell absent; radial fleck heavily reduced, nearly absent; anal field with 4 veins; wedge cell absent.

Legs: trochanter relatively small, triangular; femora weakly clavate, without conspicuous furrow for tibiae; all tibiae with about 6 distinct spines along side; tibial spur pattern 2–2–2; hooked spur present on all tibiae (although robust in only front tibiae); all tibiae with row of spines at apex; tarsomere 1 extremely small, suture between tarsomeres 1 and 2 inconspicuous; apodeme of tarsomere 5 small but conspicuous; tarsal pattern 4–4–4 rather than 5–5–5.

Abdomen: 5 or 6 visible sternites.

Body size: 11 mm.

Colouration, pubescence, sculpture: black, slightly glabrous; without pubescence; head and pronotum sparsely punctate; elytra with thin lines and transverse wrinkles among them, punctation inconspicuous.

**Distribution of the genus.** Fiji, Viti Island.

### *Parallelodera luteicornis* Fairmaire, 1881

**Description.** Frons with deep longitudinal furrow. Antennae as in *Tenebroides*. Body parallel-sided, pronotum longer than wide but not heavily elongate. Pronotum with fine punctures, elytra transversely wrinkled. Body black-brown.

Body size: 11.5 mm.

**Distribution of the genus.** Fiji, Viti Island.

### *Parallelodera parallelus* Fairmaire, 1850 comb.nov.

*Trogosita parallelus* Fairmaire, 1850

*Tenebroides parallelus*: LÉVEILLÉ (1910): 18.

**Distribution of the genus.** New Caledonia, Tahiti, Nuka-Hiva.

### *Parapeltis* Slipinski, 1992

**Type species:** *Parapeltis australicum* Slipinski, 1992 (by monotypy and original designation)

**Material examined.** Two paratypes: "Australia: QLD. / Brisbane Mt. Coottha / 8.VIII.1966 R. A. Crowson"; (MHNG).

**Description.** Adequately described and illustrated by SLIPINSKI (1992).

**Biology of the genus.** Found in leaf litter.

**Distribution of the genus.** Australia.

### ***Parentonium* Crowson, 1970**

**Type species:** *Rentonium magnum* (Crowson, 1966) (by original designation)

**Material examined.** Not examined.

**Description.** Two species of the genus described and illustrated by CROWSON (1966, 1970).

**Biology of the genus.** In leaf litter and under bark of fallen *Nothophagus*.

**Distribution of the genus.** Australia, New Zealand.

### ***Peltis* O. F. Müller, 1764 (Pls 51–54)**

**Type species:** *Silpha grossa* Linnaeus, 1758 (by HOPE 1840)

*Ostoma* Laicharting, 1781 **syn.nov.** (type species: *Silpha ferruginea* Linnaeus, 1758; by STEPHENS 1830)

**Description.** Well-known species, often figured and described. Detailed illustration of the type species, *P. grossa*, appears in Pls 51–53, figures of *P. ferruginea* on Pl. 54.

Important features of the genus: eyes rather small; gular sutures long; lacinia with large, hooked thorn at apex; mandible with conspicuous mola; ligula deeply emarginate, formed by rigid membrane; elytra with carinae, regularly punctate; wing with complete radial fleck, all anal veins including cross veins and wedge cell; tibiae with hooked spur; tegmen in 2 or 3 pieces, inverted; male segment IX–X complete.

**Biology of the genus.** Fungivorous, found under bark of decaying deciduous and coniferous trees.

**Distribution of the genus.** Holarctic.

### ***Peltonyxa* Reitter, 1876 (Pls 55–56)**

**Type species:** *Peltonyxa deyrollei* Reitter, 1876 (by monotypy)

*Floricatores* Crowson, 1970 **syn.nov.** (type species: *Floricatores pusillus* Crowson, 1970; by original designation)

**Description** (*P. deyrollei*). Cranium: gular sutures wide at base, long, convergent to half of length then divergent; frontoclypeal suture present; antennal groove present; submentum depressed, with row of setae; eyes moderately elevated.

Maxilla: lacinia long, without hooked thorns, not coalescent with basistipes; galea extremely small; terminal joint of palpi coniform.

Mandible: 2 apical teeth situated in horizontal axis; mola absent; ventral ciliate furrow and penicillus not observed.

Labrum: plate of labrum transverse; connecting tormal processes to form bridge between lateral processes; median tormal process present.

Labium: mentum narrow; prementum with shallow incision in middle; ligula membranous, deeply emarginate; mental apodemes, hypopharyngeal bar and hypopharyngeal sclerite present; terminal joint of palpi arcuate, cylindrical.

Antennae: 9-segmented, club loose, 3-segmented, composed of large joints.

Prothorax: lateral edge conspicuous; coxae transverse; coxal cavities open to more than to halfway; intercoxal process slightly dilated.

Meso- and metathorax: middle coxal cavities open, coxae transverse; discriminial line absent; radial cell narrow; radial fleck absent; anal field with 4 veins; cross veins absent.

Legs: tibial spur pattern 2–2–2; front tibiae with about 8 spines along outer sides; tarsal pattern 5–5–5, tarsomere 1 minute.

Abdomen: 6 visible sternites; male sternite VIII with small spiculum gastrale; male segments IX–X reduced; tegmen composed of 2–3 parts, inverted; phallobasic apodeme characteristic; tegminal struts absent; phallus robust.

Colouration, pubescence, sculpture: dark brown; pubescence very short and sparse; head and pronotum finely punctate, elytra with fine carinae and regular rows of punctures.

Body size: 3.5 mm.

**Distribution of the genus.** Australia.

### ***Peltonyxa pusilla* (Crowson, 1970) comb.nov.**

*Floricateres pusillus* Crowson, 1970

**Material examined.** Holotype, sex unknown: "Australia NSW / Cabramatta / Georges R. Valley / 5–30.i.63 / M. Nikitin / B.M. 1963-283"; (BMNH).

**Description.** All observed body parts similar to those of *P. deyrollei*. Smaller than latter species (2.4 mm). Elytra without carinae; finely, more or less regularly punctate and pubescent. Elytra yellow-brown, pronotum and head darker – towards brown-black. For more detailed description, see CROWSON (1970).

### ***Phanodesta* Reitter, 1876 (Pl. 57)**

**Type species:** *Phanodesta cordaticollis* Reitter, 1876 (present designation)

**Description** (*P. cribraria* = *P. cordaticollis*). Cranium: frontoclypeal suture inconspicuous; antennal groove present; antennal sockets visible from above; eyes moderately elevate, elliptical, triangular from above, shallowly emarginate posteriorly; epicranial acumination conspicuous, deep and narrow.

Maxilla: lacinia connected with basistipes – suture inconspicuous; lacinia without hooked thorns, with about 6 pale, spine-like setae; basigalea small; galea ovoid; palpifer triangular; terminal joint of palpi coniform.

Mandible: 2 apical teeth – ventral tooth doubled; teeth above one another and slightly removed in the horizontal axis; 2 medial teeth present; mola absent; penicillus present at base of mandible; ventral ciliate furrow present; cutting edge absent, short edge derived from mola present at base of mandible; basal notch shallow.

Labrum: connecting tormal process present but not connected; median tormal process absent; labrum oblong, weakly emarginate.

Labium: mentum with anterior margin emarginate; prementum extended at centre; submentum narrow and oblong; ligula dark, rigid, not incised in middle (only slightly emarginate); without distinct furrow for row of setae; mental apodemes composed of two rod-like sclerites; hypopharyngeal bar absent; hypopharyngeal sclerite absent.

Antennae: 11-segmented; club 3-segmented, large and distinct, joints with sensorial fields; scape not projecting, pedicel relatively large, joints 2–8 subquadrate, joints 9–11 triangular, angles rounded; antennae reach back to 1/4-way along pronotum, or less.

Prothorax: pronotum slightly cordate, subquadrate, anterior margin arcuate (*Peltis*-like); lateral edge present; prosternal process large, dilated at apex; coxal cavities closed; coxae transverse; trochantin large.

Mesothorax: prepectus absent; coxal cavities open; coxae oval; trochantin large; mesonotum wide, scutellum cordate; elytral epipleure relatively narrow, conspicuous along whole length of elytra, narrowed from 1/3 of length; carinae absent – possibly transformed to sculpture (regular rows of small, elongate, pearl-like tubercles).

Metathorax: metasternum flat; discriminial line absent; paracoxal sutures distinct, narrow, extending through whole metasternum; wingless.

Legs: trochanter small, elongate; femora not clavate; tibiae without spines along side; tibial spur pattern 2–2–2; hooked spurs absent; row of spines at apex of tibiae absent; tarsomere 1 fused with 2, suture conspicuous; claws large; empodium strongly projecting, bisetose; tarsal pattern 5–5–5 (or 4–4–4).

Abdomen: 5 visible sternites; parasternites I present; ovipositor slightly shortened, typically cleroid; bursa copulatrix developed; spermatheca oval; vaginal sclerites absent.

Body size: about 7.5 mm.

Colouration, pubescence, sculpture: brown; pronotum very sparsely pubescent (denser at anterior margin only), head not pubescent; elytra with short, erect, sparse pubescence growing from punctures; head and pronotum shallowly punctate, elytra with regular sparse punctation and regular rows of pearl-like tubercles; each puncture situated between two tubercles.

**Distribution of the genus.** Chile.

### *Promanus* Sharp, 1877 (Pl. 58)

**Type species:** *Promanus depressus* Sharp, 1877 (by monotypy)

**Description.** Cranium: gular sutures short, wide, slightly convergent; frontoclypeal suture extremely deep, conspicuous, arcuate (as in some Sphindidae, Protocucujidae); antennal groove present; antennal sockets visible from above; eyes medium-sized, heavily elevated, rounded, not emarginate; epicranial acumination absent.

Maxilla: lacinia coalescent with basistipes, suture conspicuous; 2 dark, hooked thorns present at apex of lacinia and 1 pale spine in middle; basigalea relatively large; galea somewhat clavate; palpi 5-segmented (basal joint minute, pale, membranous), terminal joint weakly securiform.

Mandible: 2 apical teeth situated in horizontal axis (next to one another); medial tooth absent; mola absent; penicillus present – small, finely ciliate, situated at base of mandible; ventral ciliate furrow absent; cutting edge very short; basal notch absent.

Labrum: only lateral and median tormal processes present; plate of labrum oblong, emarginate.

Labium: mentum wide, anterior angles acuminate; prementum extended in middle; ligula membranous, deeply emarginate; hypopharyngeal sclerite H-shaped; hypopharyngeal bar inconspicuous; terminal joint of palpi small, weakly widened towards apex, not securiform.

Antennae: 11-segmented; club 3-segmented, loose; joints 3–8 cylindrical; 9–11 oval, rounded; antennae reach back to halfway along pronotum.

Prothorax: pronotum *Peltis*-like; lateral edge present; prosternal process narrow; coxal cavities externally open, internally open; narrow furcasternum present; coxae wide and transverse; trochantin large.

Mesothorax: prepectus narrow, composed of 3 parts; coxal cavities externally open, internally closed; coxae wide, transverse; trochantin large; mesonotum wide; elytral epipleure conspicuous along whole length; carinae invisible, conspicuous only when elytra transilluminated.

Metathorax: metasternum flat, wide; discriminial line runs halfway across metasternum, not distinct; paracoxal sutures narrow, extending through whole metasternum; radial cell large; radial fleck reduced; anal field with 4 veins; wedge cell absent; cross veins 2A–3A present.

Legs: trochanter small, femur slightly overlaps its base; femora weakly thickened (clavate); tibiae with several spines along side; tibial spurs pattern 2–2–2; tarsomere 1 slightly shorter than 2, 3 or 4; empodium projecting; tarsal pattern 5–5–5.

Abdomen: 5–6 visible sternites; parasternites I and II present; ovipositor – coxitae with suture in middle; styli and baculli normal; bursa copulatrix large; spermatheca membranous; vaginal sclerites absent; gut perhaps with body of fat and insect cuticle.

Body size: 9 mm.

Colouration, pubescence, sculpture: brown-black; pubescence short, sparse, decumbent; elytral punctation not perfectly regular.

**Biology of the genus.** Probably predatory.

**Distribution of the genus.** New Zealand.

### *Protopeltis* Crowson, 1964

**Type species:** *Grynomia viridescens* Broun, 1886 (by monotypy and original designation)

**Material examined.** Type(?): “New Zealand / Otago”; (BMNH, Broun coll.).

**Description.** For detailed description see CROWSON (1964).

Important features: Mouth foramen bordered at sides. Antennae with large, extremely differentiated club. Coxal cavities open, front coxae heavily transverse. Membrane between pro- and mesothorax with 2 sclerites. Meso- and metathorax wide and short (e.g. as in *Peltis*). Middle coxae open. Discriminal line long, reaches mesocoxal process of metasternum; paracoxal sutures very narrow; metepisternites rather wide. Hind coxae without furrow. Elytra denticulate along sides, with wide epipleure, metallic greenish with irregular sculpture and tubercles. Abdomen with 5 conspicuously visible sternites, sternite VI not distinctly visible.

Body size: 2.5 mm.

**Distribution of the genus.** New Zealand.

### *Rentonellum* Crowson, 1966

**Type species:** *Rentonellum apterum* Crowson, 1966 (by monotypy and original designation)

**Material examined.** Type species not studied.

**Description.** For detailed description of *R. apterum* see CROWSON (1966).

**Distribution of the genus.** New Zealand, South America (Brazil).

### *Rentonellum loebli* sp.nov. (Pls 59–60)

**Material examined.** Holotype female and 7 paratypes: "Brasilia / Nova Teutonia / 27.11. B. 52.23. L. / Fritz Plaumann/VII. 1977 / 300–500 m"; (MHNG).

**Description.** Cranium: gular sutures very wide, straight; frontoclypeal suture present; antennal groove present; antennal socket not covered by frons; eyes small, conspicuously elevate, not emarginate; epicranial acumination absent; tentorial bridge present but coalescent with margin of cranial foramen; bridge without apodemes.

Maxilla: lacinia and galea conspicuous but coalescent with basistipes, with thick spine-like setae; hooked thorns absent; terminal joint of palpi coniform or acuminate.

Mandible: 2 apical teeth situated in horizontal, or even vertical, axes; medial tooth absent; mola large, asperate; penicillus and ventral ciliate furrow absent; basal notch absent.

Labrum: plate of labrum wide, oblong; processes Y-shaped, not connected; median tormal process absent.

Labium: mentum deeply emarginate; prementum narrow, without apodemes; ligula rigid, with only about 4 setae; hypopharyngeal bar absent; one pair of large sclerites present (probably hypopharyngeal sclerite rather than mental apodeme); terminal joint of palpi cylindrical.

Antenna: 10-segmented; club 3-segmented; scape not large; antennae as long as head.

Prothorax: pronotum spherical; lateral edge present; prosternal process keel-shaped; coxal cavities externally open to halfway, internally probably closed(?); coxae oval.

Mesothorax: prepectus absent; coxal cavities closed; coxae oval; elytral epipleure very wide, narrowed towards apex; carinae absent.

Metathorax: metasternum extremely narrow; discriminial line and paracoxal sutures absent; wingless.

Legs: trochanter triangular; femora not clavate; tibiae without spines along side; spurs absent, tibial apices with row of conspicuous spines; tarsomere completely absent; tarsomeres 2 and 3 coalescent but suture visible; empodium bisetose; tarsal pattern 4-4-4, apparently 3-3-3.

Abdomen: 5 visible sternites, parasternites I present, II absent; ovipositor with long, rigid, sclerotized coxitae(!); styli slender, long; gut contents probably with plant remnants.

Body size: about 1 mm.

Colouration, pubescence, sculpture: black or black-brown; pubescence completely absent; head with very fine and sparse punctation, pronotum and elytra smooth.

**Distribution.** South America (Brazil).

**Differential diagnosis.** Differs from *R. apterum* in, for example, keel-shaped prosternal process, maxilla and ovipositor.

**Derivatio nominis.** The species is dedicated to my friend Ivan Löbl (Geneva).

### ***Rentonidium* Crowson, 1966**

**Type species:** *Rentonidium costiventris* Crowson, 1966 (by monotypy and original designation)

**Material examined.** Not studied.

**Description.** For detailed description see CROWSON (1966).

**Distribution of the genus.** New Zealand.

### ***Rentonium* Crowson, 1966 (Pls 61–62)**

**Type species:** *Rentonium daldinae* Crowson, 1966 (by original designation)

**Description** (*R. daldinae*, *R. chilense*). For detailed description see CROWSON (1966).

Other important features: Gular sutures divergent from halfway along length, similar to those in *Protopeltis*. Cranium with conspicuous antennal groove. Eyes elevate. Antennal joints 1 and 2 large, club 3-segmented, distinct. Labial palpi small, maxillar larger. Front coxal cavities externally open, internally closed, coxae projecting. Mesothorax somewhat concave. Discriminial line absent, anepisternum wide, with shagreened sculpture similar to that in *Protopeltis*. Hind coxae with furrow. Tarsal pattern 5-5-5. Front and middle tibiae with spines. Elytra with very narrow epipleure with fine sculpture. Wing long, simplified, with heavily reduced radial sector; anal field reduced to single vein. Abdomen with 5 visible bordered sternites. Tegmen composed of 1 piece, phallobasic apodeme short but present, tegminal struts absent. Male sternite VIII with spiculum gastrale; segment IX-X reduced to spicular fork. Ovipositor short and wide.

Body size: about 1 mm.

**Biology of the genus.** Collected from fungus *Daldinia* growing on dead tree (*R. daldiniae*). In *Nothophagus* forest (*R. chilense*).

**Distribution of the genus.** New Zealand, Chile.

### *Seidlitzella* Jacobs, 1915 (Pl. 63)

**Type species:** *Peltis procera* Kraatz, 1858 (by monotypy)

*Cymba* Seidlitz, 1875 [homonym] (type species: *Peltis procera* Kraatz, 1858; by monotypy)

*Peltocymba* Reitter, 1920 (type species: *Peltis procera* Kraatz, 1858; by monotypy)

**Description.** Cranium: gular sutures short, wide, strongly convergent; frontoclypeal suture absent; antennal groove present; antennal sockets visible from above; eyes not exceeding contour of cranium; emargination absent; epicranial acumination conspicuous.

Maxilla: lacinia not connected with basistipes, free; hooked horns absent, lacinia with several pale spine-like setae; basigalea medium-sized; galea clavate, with several short, spine-like setae; palpifer large, suboval, denticulate at outer side; terminal joint of palpi cylindrical, weakly dilated in middle.

Mandible: 2 apical teeth situated in vertical and slightly horizontal axes; medial tooth inconspicuous; mola absent (molar area weakly extended); penicillus present at base of molar area; ventral ciliate furrow absent; cutting edge inconspicuous; basal notch shallow.

Labrum: tormal processes, see Pl. 63, not connected; median tormal process absent; labrum oblong, weakly emarginate.

Labium: mentum large, anterior margin emarginate; male submentum with tuft of setae; prementum with anterior margin extended; ligula rigid, dark, cordate, emarginate, with furrow for row of setae; mental apodemes composed of 2 elongate sclerites, not connected to each other; hypopharyngeal bar absent; hypopharyngeal sclerite probably absent; terminal joint of palpi weakly clavate, truncate at apex.

Antennae: 11-segmented; club 3-segmented, relatively weak, loose, asymmetrical, with narrow sensorial fields; scape large, joints 2–6 slightly enlarged, joints 7–8 enlarged, 9–11 oblong; antennae reach back nearly halfway along pronotum.

Prothorax: pronotum not transverse, anterior margin weakly arcuate; lateral edge present; prosternal process large, dilated at apex; coxal cavities externally closed, internally open; small part of furcasternum visible from above; coxae transverse, oval; trochantin distinct, not large.

Mesothorax: prepectus absent; coxal cavities externally widely open, internally closed; coxae oval; trochantin medium sized; mesonotum wide; elytral epipleure narrow; 7 carinae present.

Metathorax: metasternum flat, wide; discriminial line short; paracoxal sutures narrow, parallel with coxae; radial cell triangular; radial fleck nearly complete; anal field with 4 veins; wedge cell may be absent or present (in specimens studied, cross vein 2A–3A was or was not present); cross vein 1A–2A was present.

Legs: trochanter small, triangular; femora relatively slender, without conspicuous furrow for tibiae; all tibiae with spines along side; tibial spur pattern 2–2–2; hooked spur large in front tibiae, weaker in other pairs; tibial apices with row of spines; tarsomere free, small, seemingly coalescent with tarsomere 2; empodium strongly projecting, bisetose; tarsal pattern 5–5–5.

Abdomen: 5(6) visible sternites; parasternites I present, II absent; male sternite VIII without spiculum gastrale; male segments IX–X complete; tegmen composed of 2–3 pieces, inverted; phallobasic apodeme and tegminal struts present; phallus medium-sized; aedeagus moderate; ovipositor – coxitae long; proctiger below oblique bacculi, but not as low as in *Leperina*; oblique bacculi longitudinal; bursa copulatrix present; spermatheca present; vaginal sclerites absent.

Body size: 11–19 mm.

Colouration, pubescence, sculpture: black; nearly without pubescence; head and pronotum densely punctate; elytra with low sharp carinae elytra; punctation distinct – 2 regular rows of deep punctures between carinae.

**Biology of the genus.** Predatory.

**Distribution of the genus.** Greece, Cyprus.

### *Temnoscheila* Westwood, 1830 (Pls 64–65)

**Type species:** *Trogosita caerulea* Olivier, 1790 (by monotypy)

*Temnochila* Westwood, 1830: 231 (no valid emendation by ERICHSON 1844: 449)

**Description** (*T. caerulea*). Cranium: gular sutures inconspicuous; frontoclypeal suture absent; frons with distinct longitudinal groove, without horns; antennal groove present; antennal sockets visible from above; eyes moderate, not exceeding contour of cranium; weakly emarginate; epicranial acumination conspicuous, deep, narrow.

Maxilla: lacinia small, retracted under basistipes; hooked thorns absent; basigalea relatively large; galea elongate, densely pubescent, setae at apex ciliate; basistipes oblong, free (not coalescent with galea); palpifer denticulate along margin; terminal joint of palpi cylindrical, elongate.

Mandible: 2 apical teeth, above one another; 2 medial teeth present; mola absent; penicillus present, ciliation sparse and fine; ventral ciliate furrow present; cutting edge straight (similar to that in Cleridae); basal notch present, but very slight.

Labrum: epipharynx larger than plate of labrum – large cordate sclerite present; connecting tormal process not quite connected; median tormal process absent; labrum oblong, weakly emarginate.

Labium: mentum large, arcuate (see Pl. 64); male submentum with tuft of setae; prementum relatively small; ligula dark, rigid, very deeply emarginate (but not divided into 2 parts), weakly retroflex; hair growth from retroflex and even anterior portions; mental apodemes present; hypopharyngeal bar present; hypopharyngeal sclerite present – one simple transverse sclerite; terminal joint of palpi cylindrical, arcuate.

Antennae: 11-segmented; 3-segmented club (as in *Airora cylindrica*); scape large, joint 2 robust, 3–8 small oblong, 9–11 asymmetrical; antennae reach back to anterior margin of pronotum.

Prothorax: pronotum weakly cordate, oblong, corners slightly extended; lateral edge present; prosternal process large, dilated at apex; coxal cavities closed; coxae transverse; trochantin distinct, not large.

Mesothorax: prepectus absent; coxal cavities open; coxae oval, nearly rounded, with furrow for femora; trochantin distinct; scutellum extremely small, even minute; elytral epipleure narrow, with distinct and powerful elytral lock; carinae absent, thin, depressed lines present.

Metathorax: metasternum not flat and wide, weakly narrowing towards anterior portion; discriminial line absent; paracoxal sutures sharp, subparallel with coxae; anepisternum triangular; radial cell extremely small, present; radial fleck only weakly reduced, nearly complete; anal field with 4 veins; wedge cell present; cross veins 1A–2A, 2A–3A present.

Legs: trochanter relatively small, triangular; femora weakly clavate, with shallow, inconspicuous furrow for tibiae; tibiae without spines along sides, with several spine-like setae at apices; tibial spur pattern 2–2–2; hooked spurs on front tibiae only; tarsomere 1 small but conspicuous; empodium projecting, bisetose, apodeme of tarsomere 5 present – empodium retracted if viewed from below; tarsal pattern 5–5–5.

Abdomen: 5 visible sternites; simple row of parasternites present, probably II; for male copulatory organs see BARRON (1971); ovipositor with coxite very long; baculli normal cleroid; bursa copulatrix present; spermatheca oval; vaginal sclerites absent.

Body size: 13–19 mm.

Colouration, pubescence, sculpture: metallic blue, green to black; without pubescence; head and pronotum densely punctate; elytra regularly very finely punctate; rows of punctures inconspicuously doubled – elytra seem wrinkled rather than punctate.

**Biology of the genus.** Predatory.

**Distribution of the genus.** Holarctic and Neotropic. Majority of species in South America.

### *Tenebroides* Piller et Mitterpacher, 1783 (Pls 66–68)

**Type species:** *Tenebrio mauritanicus* Linnaeus, 1758 (by WESTWOOD 1838)

**Description** (*T. mauritanicus*). The type of the genus is well known, and has been figured and described many times. Some details of the species are illustrated in Pls 66–68.

Important features: Head: gular sutures short, convergent; antennal grooves present; eyes flat; tentorial bridge absent; lacinia lacking hooked thorns; galea with ciliate setae; basistipes coalescent with lacinia; ligula rigid, sclerotized, with row of ciliate setae; probably without mental apodemes but with hypopharyngeal sclerite; male submentum without tuft of setae; mola absent; penicillus and ventral ciliate furrow present; basal notch present; antennae 11-segmented; club 3-segmented.

Thorax: front coxal cavities closed; middle coxal cavities open; discriminial line absent; paracoxal sutures sharp, parallel with coxae; elytral epipleure narrow; elytral lock appears rather weak; radial cell absent; radial fleck nearly complete; anal field with

4 veins; wedge cell and cross veins absent; femora weakly clavate, with inconspicuous furrow for tibiae; front and middle tibiae with about 3 small spines along side; tibial apex with several spine-like setae; tibial spur pattern 2–2–2, hooked spurs on front tibiae only; tarsomere 1 small but conspicuous; tarsomere 5 with apodeme in apex; tarsal pattern 5–5–5.

Abdomen: male sternite VIII without spiculum gastrale; male sternite IX–X reduced; tegmen composed of 2–3 pieces, inverted; phallobasic apodeme very long; ovipositor normal cleroid; vaginal sclerites absent.

Body size: 7–9 mm.

Colouration, pubescence, sculpture: black or black-brown, matt; without pubescence; head and pronotum sparsely punctate; elytra without carinae but with thin lines and wrinkles among them.

**Biology of the genus.** Predatory, under bark of deciduous and coniferous trees.

**Distribution of the genus.** Holarctic and Neotropic. Majority of species in South America. *T. mauritanicus* cosmopolitan.

### *Thymalus* Latreille, 1802 (Pls 69–70)

**Type species:** *Peltis brunnea* Thunberg, 1794 (by monotypy and original designation)

**Description.** The type of the genus, *Thymalus limbatus* Fabricius, 1802 (= *Peltis brunnea*), is well-known, and has been figured and described many times. Some illustration of the species appears in Pls 69–70.

Important features: Gular sutures short, convergent; head covered by pronotum (body hemispherical); tentorium without bridge; lacinia with 2 hooked thorns and row of spines; both galea and lacinia divided into 2 parts(!); mola present, asperate; ligula rigid; hypopharyngeal sclerite H-shaped; mental apodemes absent; antennae 11-segmented.

Thorax: Front coxal cavities widely open; front coxae heavily transverse; middle coxae nearly closed; elytra with extremely wide epipleure along whole length; discriminial line present; radial cell present; radial fleck complete; anal field with 4 veins; wedge cell present; tibiae with minute spurs at apices.

Abdomen: sternites bordered; tegmen composed of 3 pieces, inverted; phallus stout.

Body size: 5.5–7 mm.

Colouration, pubescence, sculpture: yellow-brown; with dense long pubescence; elytra without carinae; dorsal surface with sculpture formed by relatively large punctures.

**Biology of the genus.** Probably fungivorous. Under bark, or scales of bark, of old deciduous and coniferous trees.

**Distribution of the genus.** Holarctic.

### *Xenoglana* Reitter, 1876 (Pl. 71)

**Type species:** *Xenoglana deyrollei* Reitter, 1876 (by monotypy)

**Description** (*X. quadrisignata*). Cranium: gular sutures inconspicuous but long, narrow, convergent and then parallel; frontoclypeal suture absent; antennal groove present; antennal sockets covered by margin of frons; 4 eyes – 2 large, elliptical, dorsolaterally situated, 2 smaller ventrolaterally situated, connected by inconspicuous keel, not elevated, both pairs not emarginate; epicranial acumination inconspicuous, shallow.

Maxilla: lacinia connected with basistipes, suture conspicuous; hooked thorns absent, about 5 pale spine-like setae present (as in *Acrops punctata*); galea clavate, with several spine-like setae; palpifer medium-sized; terminal joint of palpi coniform, apex of joint truncate.

Mandible: 2 apical teeth situated in horizontal even vertical axes (or next to, or even above, one another); medial tooth absent; mola present but reduced; penicillus present along whole molar area; ventral ciliate furrow absent; basal notch shallow.

Labrum: connecting toral process absent; median toral process inconspicuous; lateral processes soft, pale, indistinct; labrum oblong, anterior margin emarginate.

Labium: mentum large, anterior margin deeply emarginate; prementum with anterior margin not extended; ligula dark, rigid, weakly emarginate, with furrow for row of setae, cordate in shape; mental apodemes inconspicuous; hypopharyngeal bar small; hypopharyngeal sclerite absent(?); terminal joint of palpi short, cylindrical.

Antennae: 11-segmented; club 3-segmented, large and distinct, asymmetrical, with sensorial fields; scape not projecting, joints 2–8 subquadrate, joints 9–11 triangular with angles rounded, joints 3 and 4 equal, smaller than remainder; antennae reach back to centre of pronotum.

Prothorax: pronotum weakly transverse, anterior margin arcuate; lateral edge present; prosternal process large, dilated at apex, its corners covered by tips of hypomerion; coxal cavities externally closed, internally open; oblong furcasternum visible from above; coxae transverse, relatively narrow; trochantin distinct.

Mesothorax: prepectus absent; coxal cavities externally wide open, internally closed; coxae oval, not large; trochantin conspicuous; elytral epipleure very narrow; carinae absent.

Metathorax: metasternum flat, wide; discriminial line very short, nearly absent; paracoxal sutures parallel with coxae, narrow, reaching sides of metasternum; radial cell very large, oblong; radial fleck nearly complete; anal field with 4 veins; wedge cell absent; cross vein 1A–2A present.

Legs: trochanter small, elongate; femora not clavate; tibiae, spines along sides absent; tibial spur pattern 2–2–2; hooked spurs inconspicuous; tibiae without row of spines at apex; tarsomere I small, probably partially fused with tarsomere 2, suture distinct; empodium projecting, bisetose; tarsal pattern 5–5–5.

Abdomen: 6 visible sternites; parasternites I absent, II present; ovipositor – coxitae normal; proctiger extremely distant from oblique bacculi; styli and baculli normal cleroid; gut content – body of fat.

Body size: 8–9 mm.

Colouration, pubescence, sculpture: dark; each elytron with spot formed by short thick, whitish scales; pubescence sparse, composed of scales, abdomen with short, split

setae; head and pronotum wrinkled, elytra with regular lines (or thin furrows) of fine punctures.

**Biology of the genus.** Predatory. Rapid and excellent fliers.

**Distribution of the genus.** Mongolia, Siberia, Japan (*X. quadrisignata*), majority of species in south-eastern Asia.

### *Xenoglena deyrollei* Reitter, 1876 (Pl. 71)

**Description.** Antennae 10-segmented, club 3-segmented. Prosternal process extremely wide. Front and middle coxal cavities closed. Scutum wide, covered by pronotum, scutellum small, rounded. Elytra long, slender, narrowing towards apex. Discriminal line conspicuous. Femora clavate, tibiae without spines along sides. Tarsal pattern 5–5–5, tarsomere 1 small. Ovipositor as in *X. quadrisignata*, bursa copulatrix and spermatheca normal cleroid. Elytra with 3 spots formed by black scales, elytral apex also with such scales; ventral part of body covered in yellow scales.

Body size: 11.5 mm.

**Distribution.** Indonesia (Java).

## Genera removed from the family Trogositidae

### *Holopleuridia* Reitter, 1876

**Type species:** *Holopleuridia maculosa* Reitter, 1876 (by monotypy)

**Material examined.** Holotype “La Luzera”, probably Columbia (MNHN).

**Remarks.** This belongs to the Tenebrionoidea, probably Tenebrionidae.

### *Peltoschema* Reitter, 1880

**Type species:** *Peltoschema filicorne* Reitter, 1880 (by monotypy)

**Material examined.** Three specimens on single pin, probably “Australia” (MNHN).

**Remarks.** This belongs to the Chrysomelidae.

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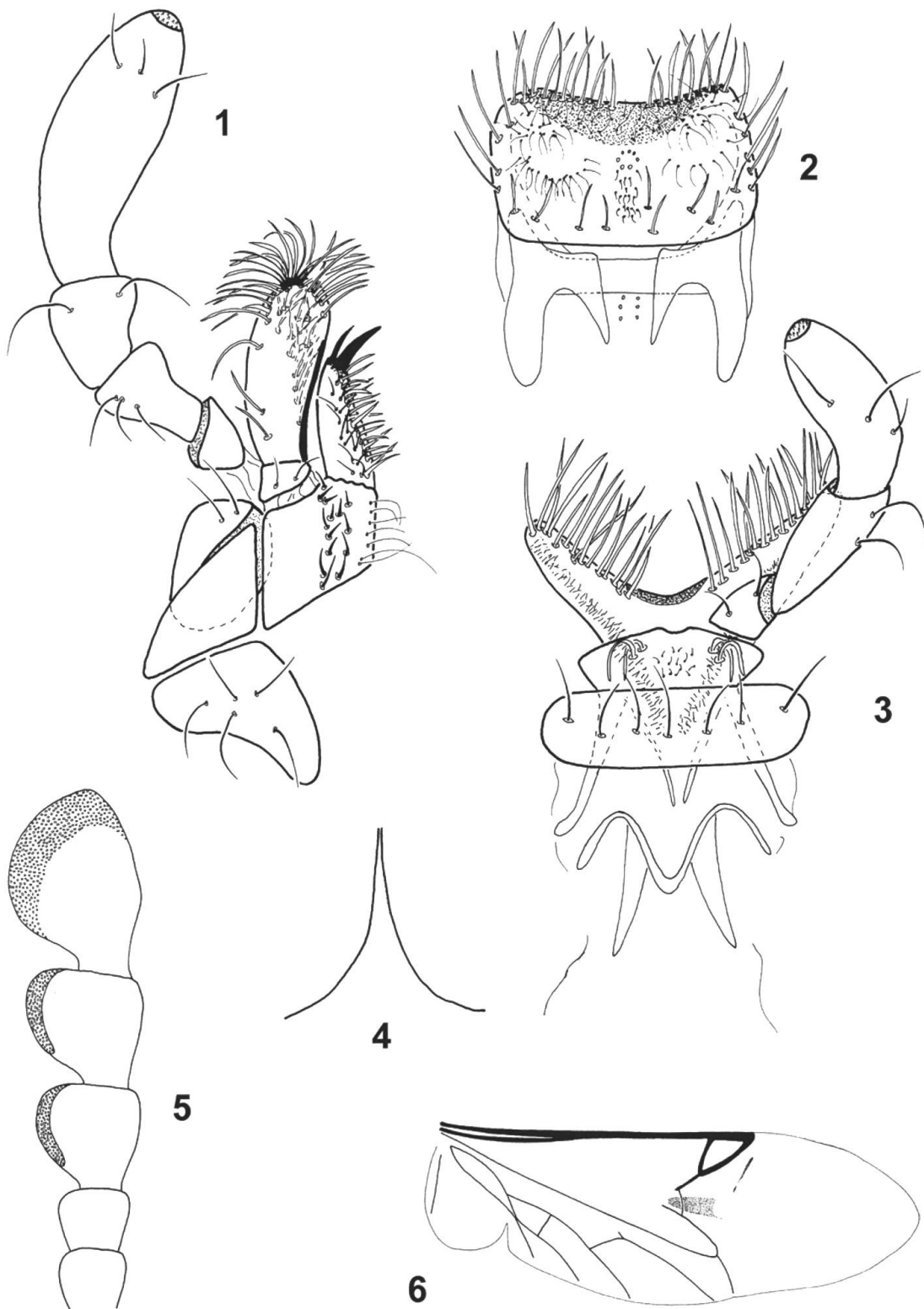
The Ministry of Culture of the Czech Republic supported this project with grant MK0CEZ00F2402.

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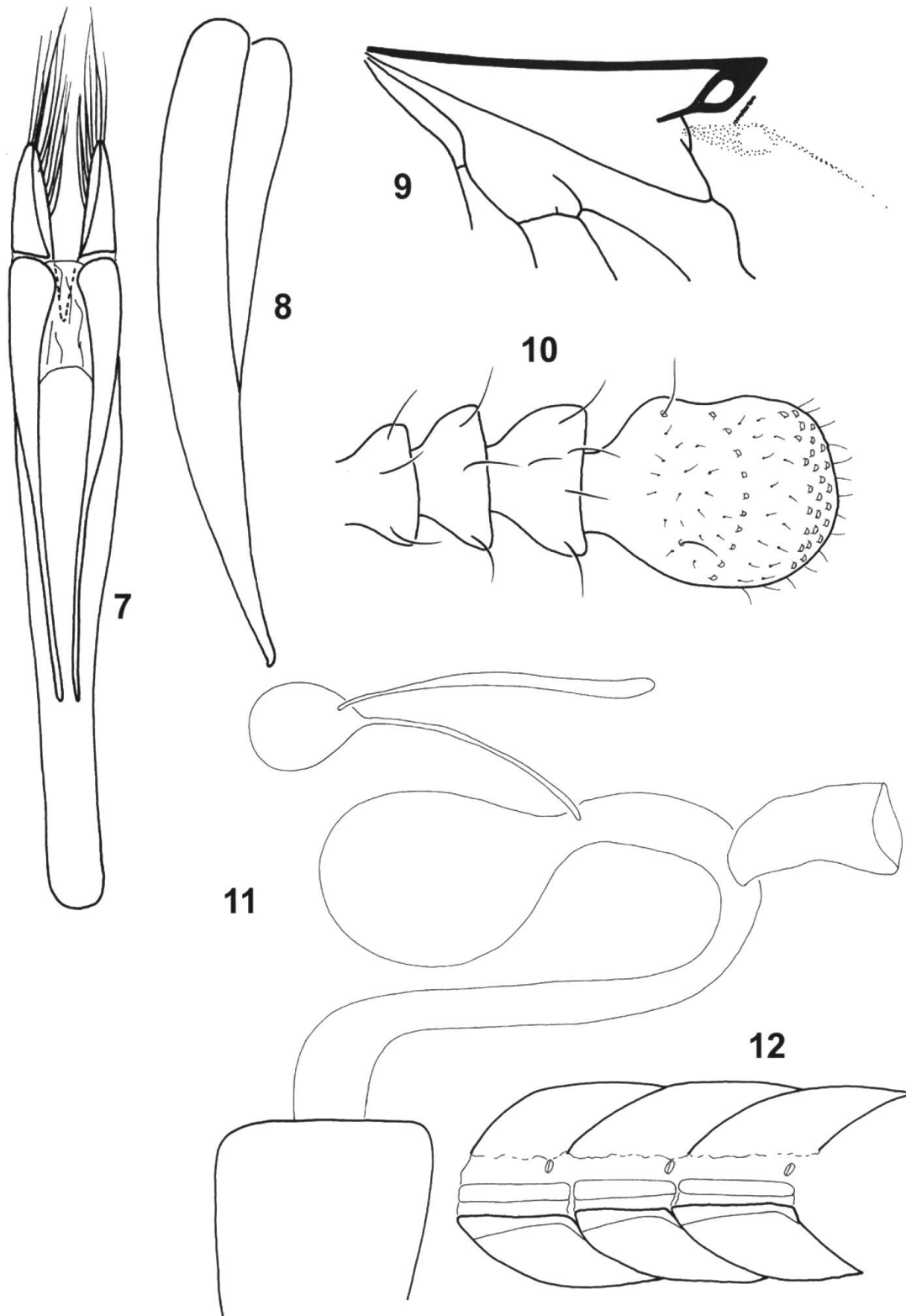
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#### Author's address:

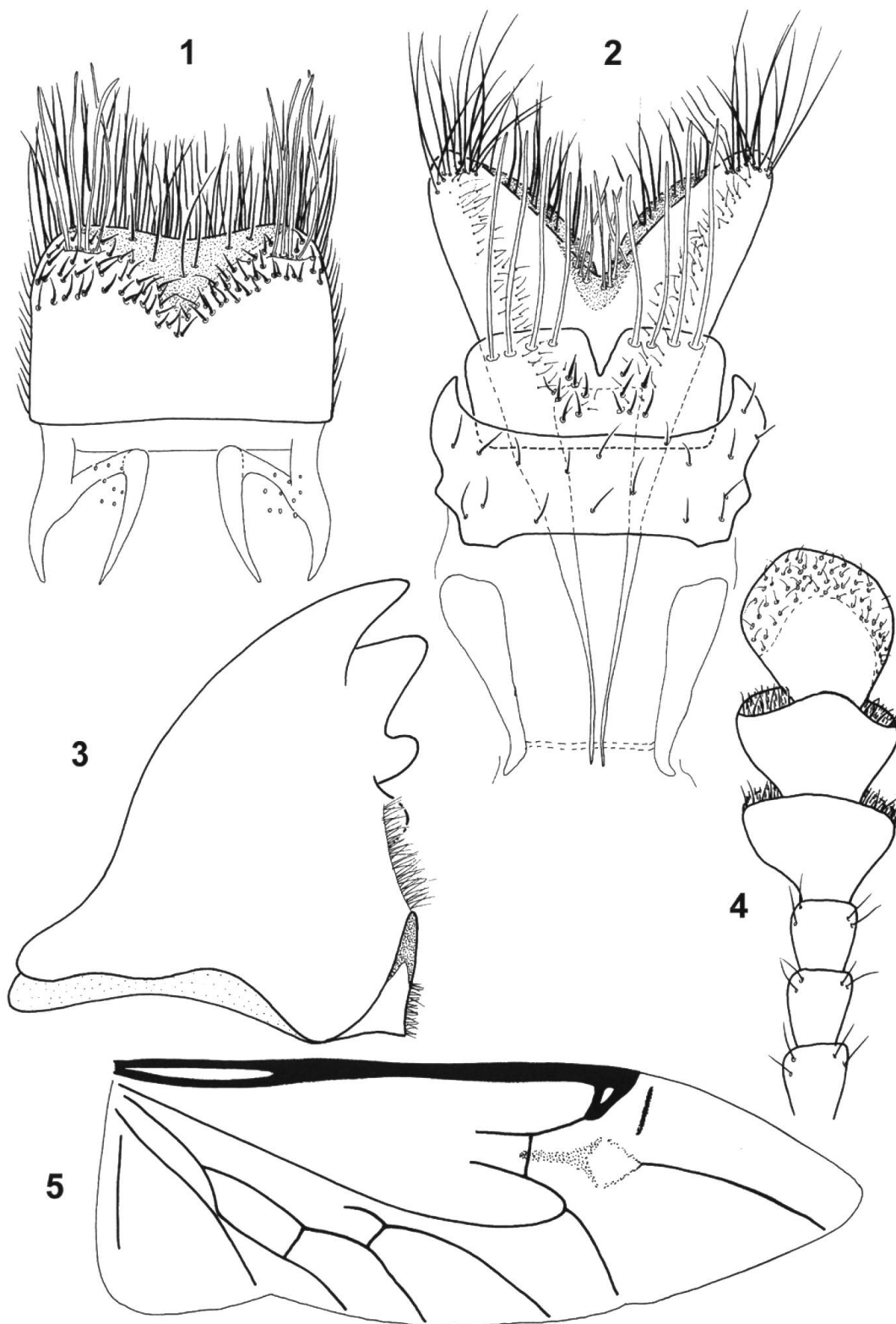
Dr. Jiří Kolibáč  
Moravian Museum  
Department of Entomology  
Hviezdoslavova 29a  
627 00 Brno  
CZECH REPUBLIC  
e-mail: ento.kol@volny.cz



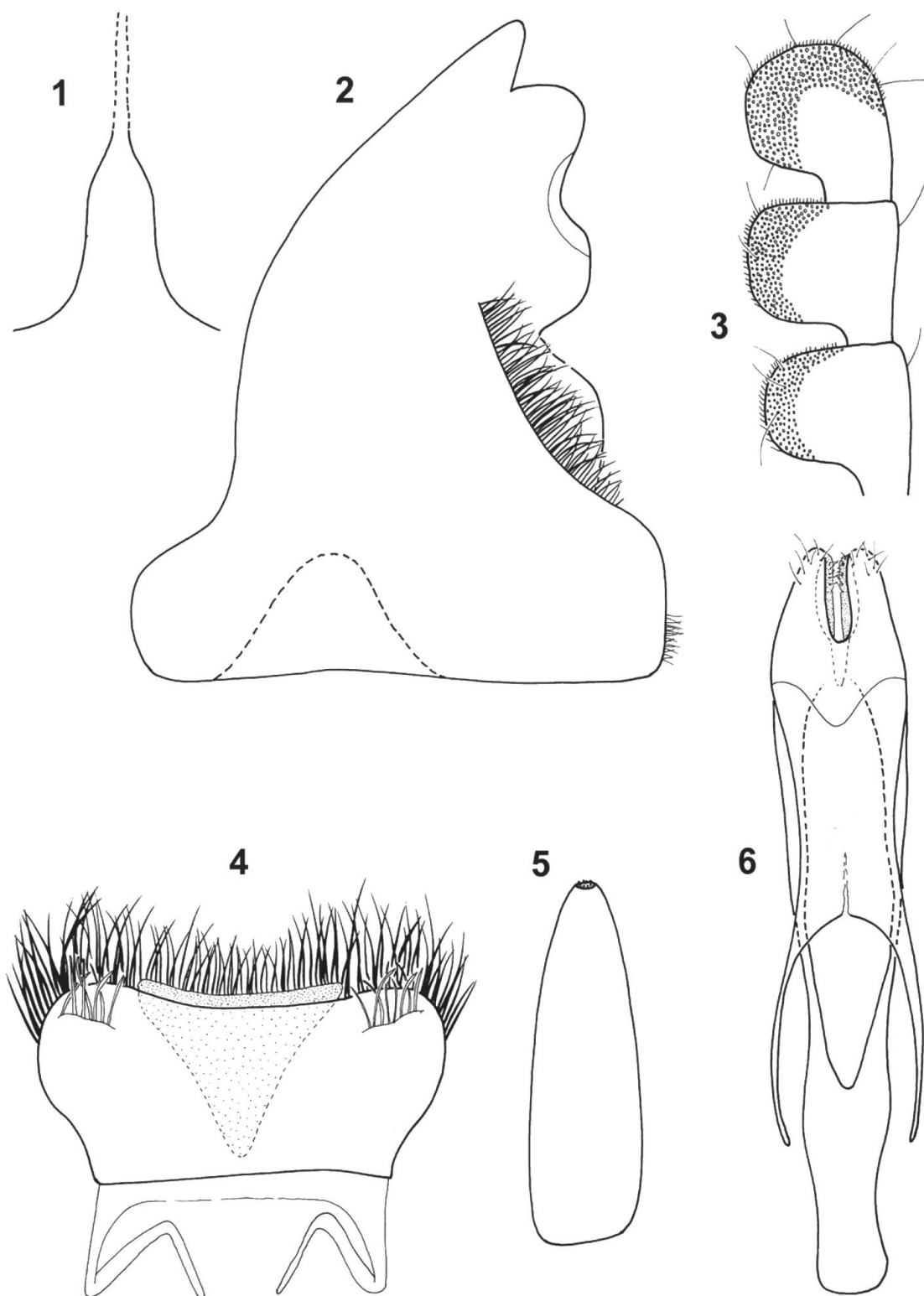
Pl. 1. *Acalanthis quadrisignata*: 1, maxilla; 2, labrum; 3, labium; 4, gular sutures; 5, end of antenna; 6, wing.



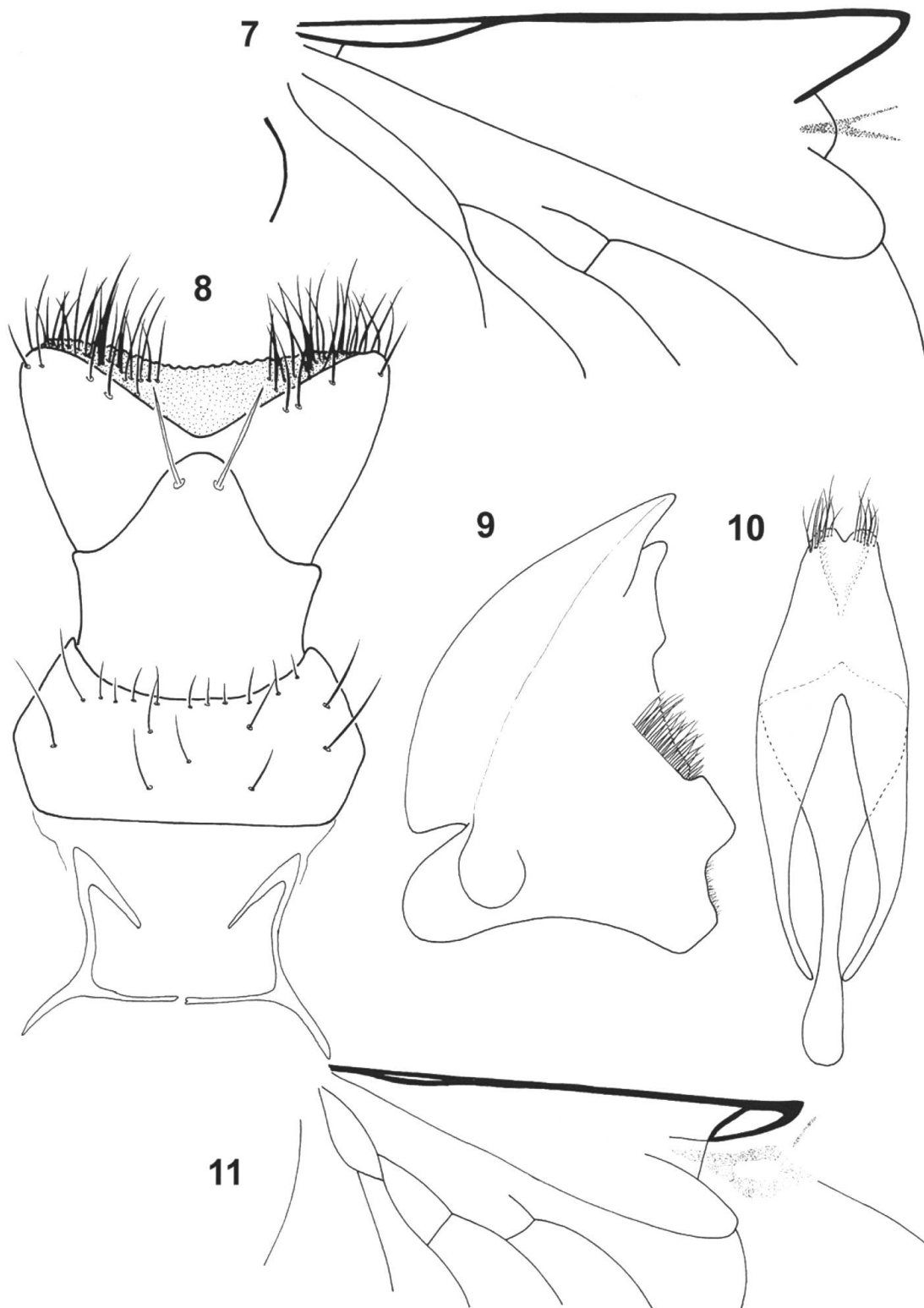
**Pl. 2.** *Egoia variegata*: 7, tegmen ventrally; 8, phallus. *Acalanthis quadrisignata*: 9, wing venation; 10, end of antenna; 11, female internal copulatory organs; 12, abdominal segments laterally.



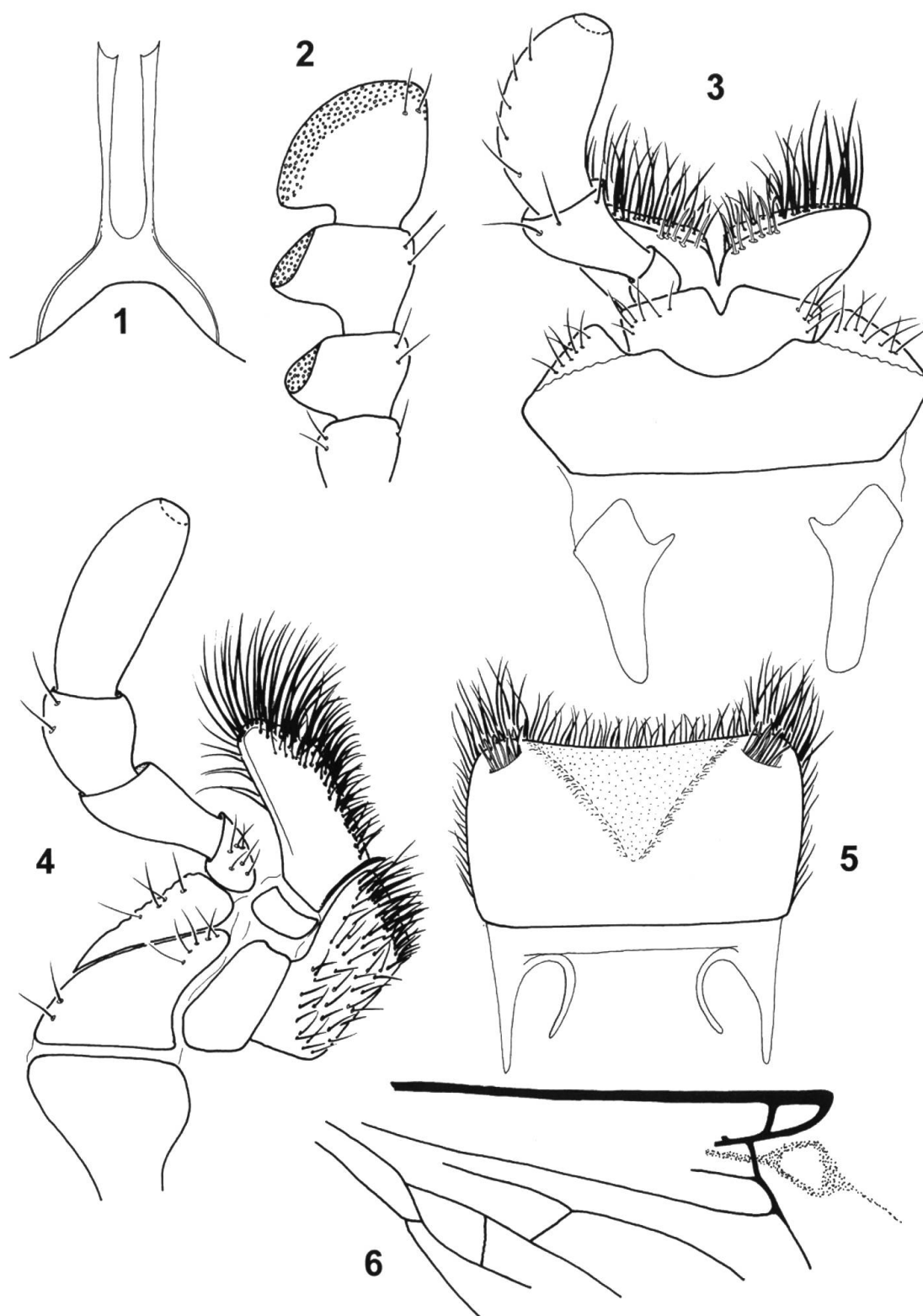
Pl. 3. *Airora dugesi*: 1, labrum; 2, labium; 3, mandible ventrally; 4, end of antenna; 5, wing.



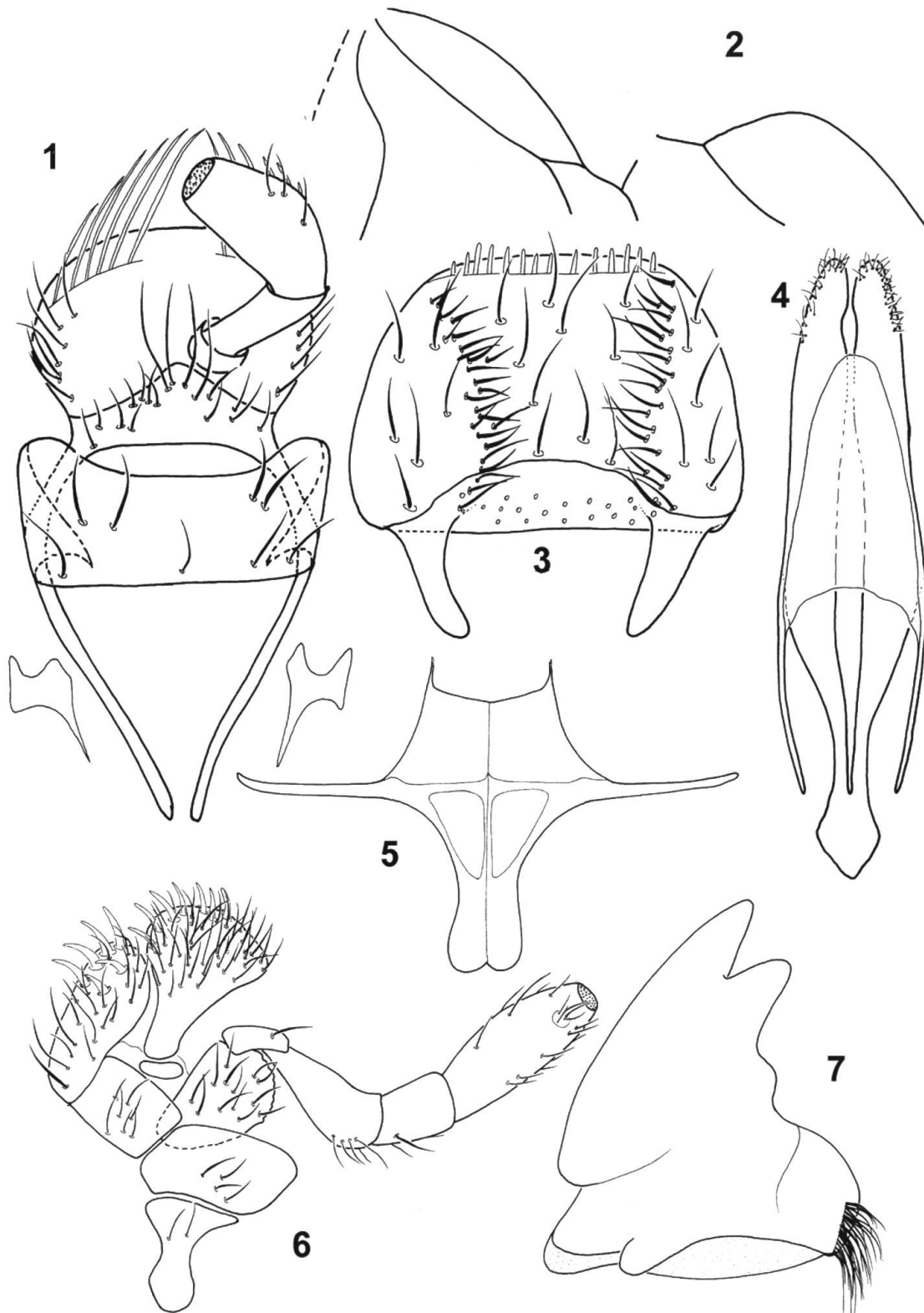
Pl. 4. *Airora cylindrica*: 1, gular sutures; 2, mandible ventrally; 3, end of antenna; 4, labrum; 5, terminal joint of maxillary palp; 6, tegmen ventrally.



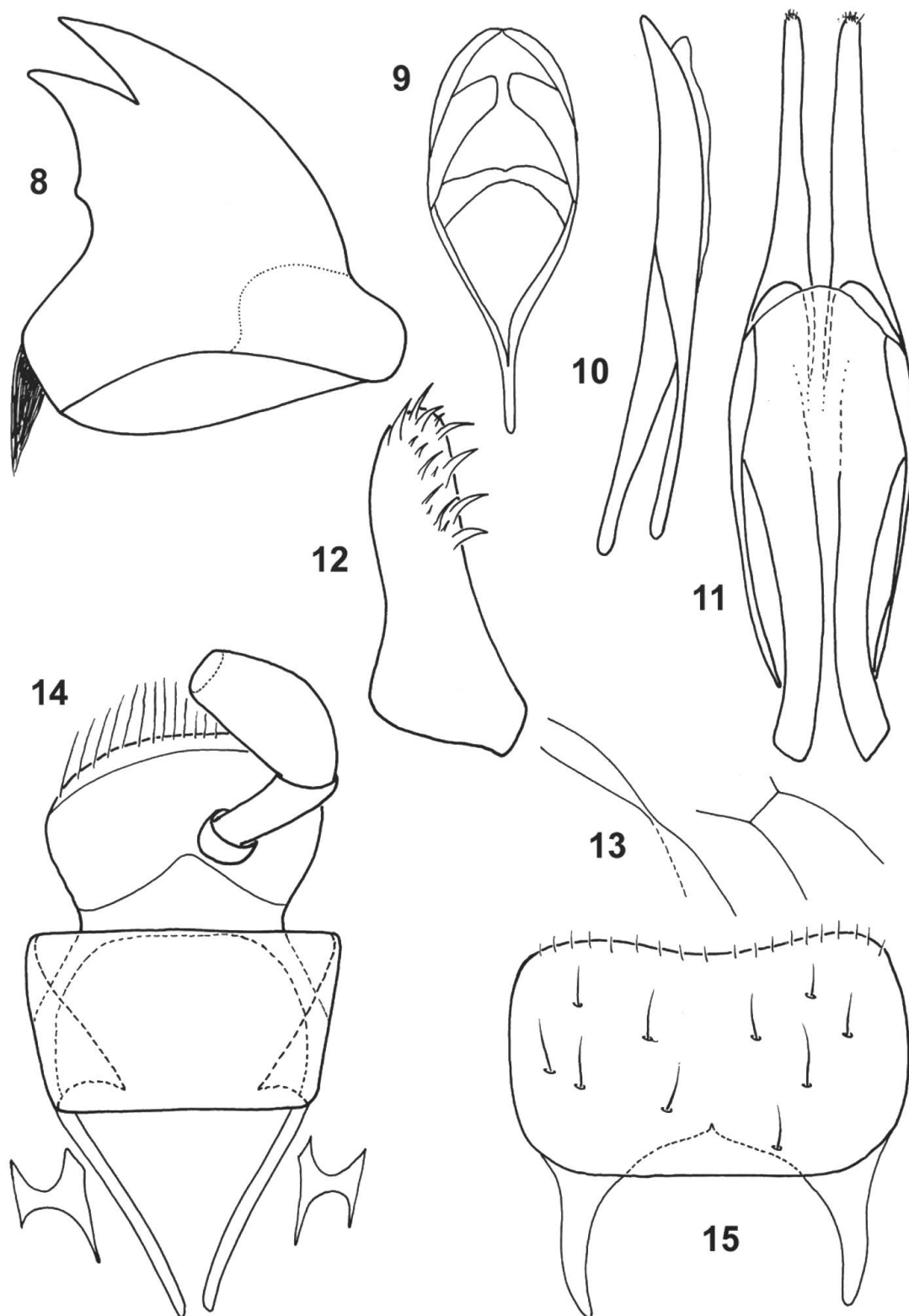
Pl. 5. *Airora cylindrica*: 7, wing venation; 8, labium. *Alindria gigas*: 9, mandible ventrally; 10, tegmen ventrally; 11, wing venation.



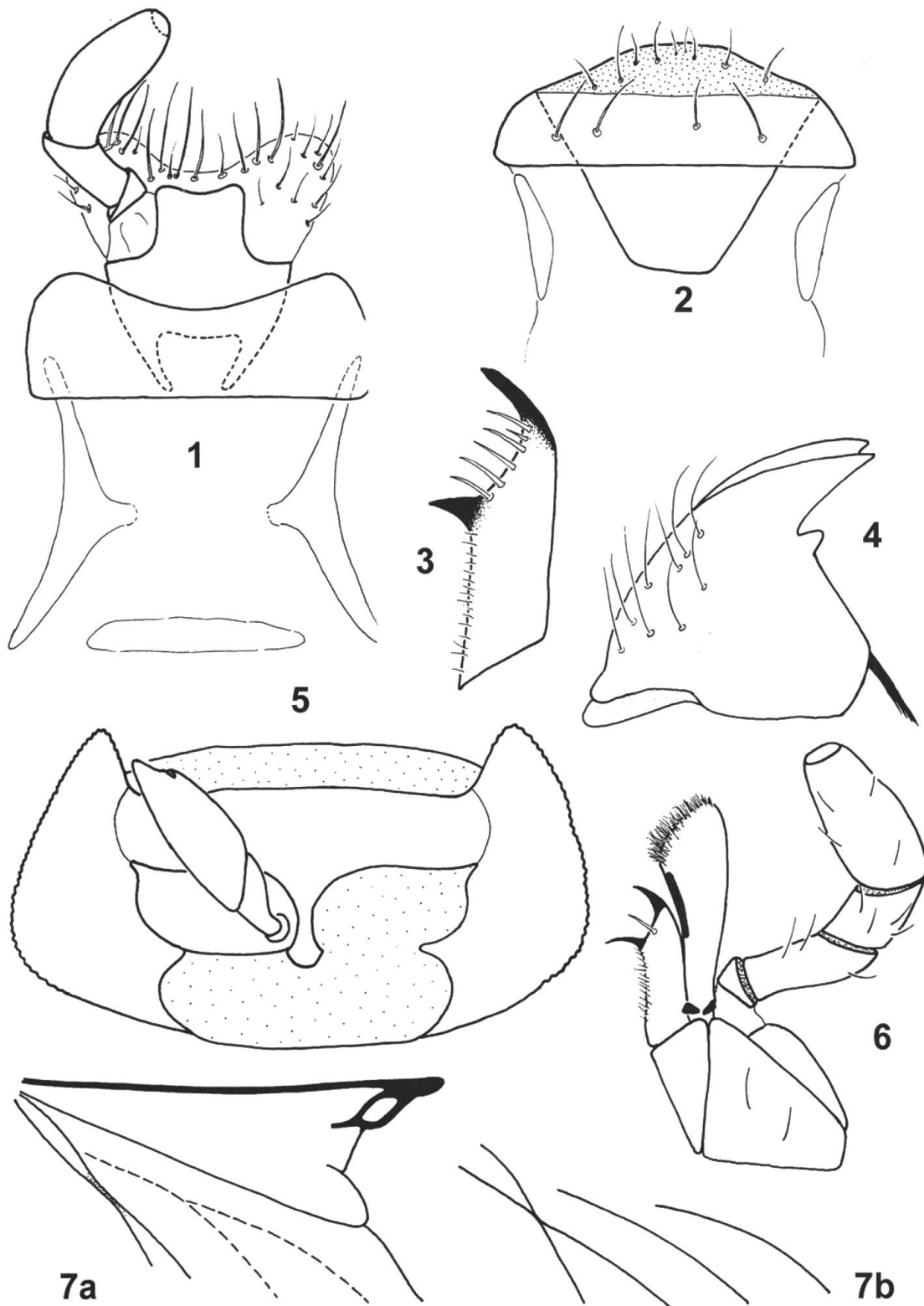
**Pl. 6.** *Alindria gigas*: 1, gular sutures; 3, labium; 5, labrum. *Alindria grandis*: 2, end of antenna; 4, maxilla. *Alindria spectabilis*: 6, wing venation.



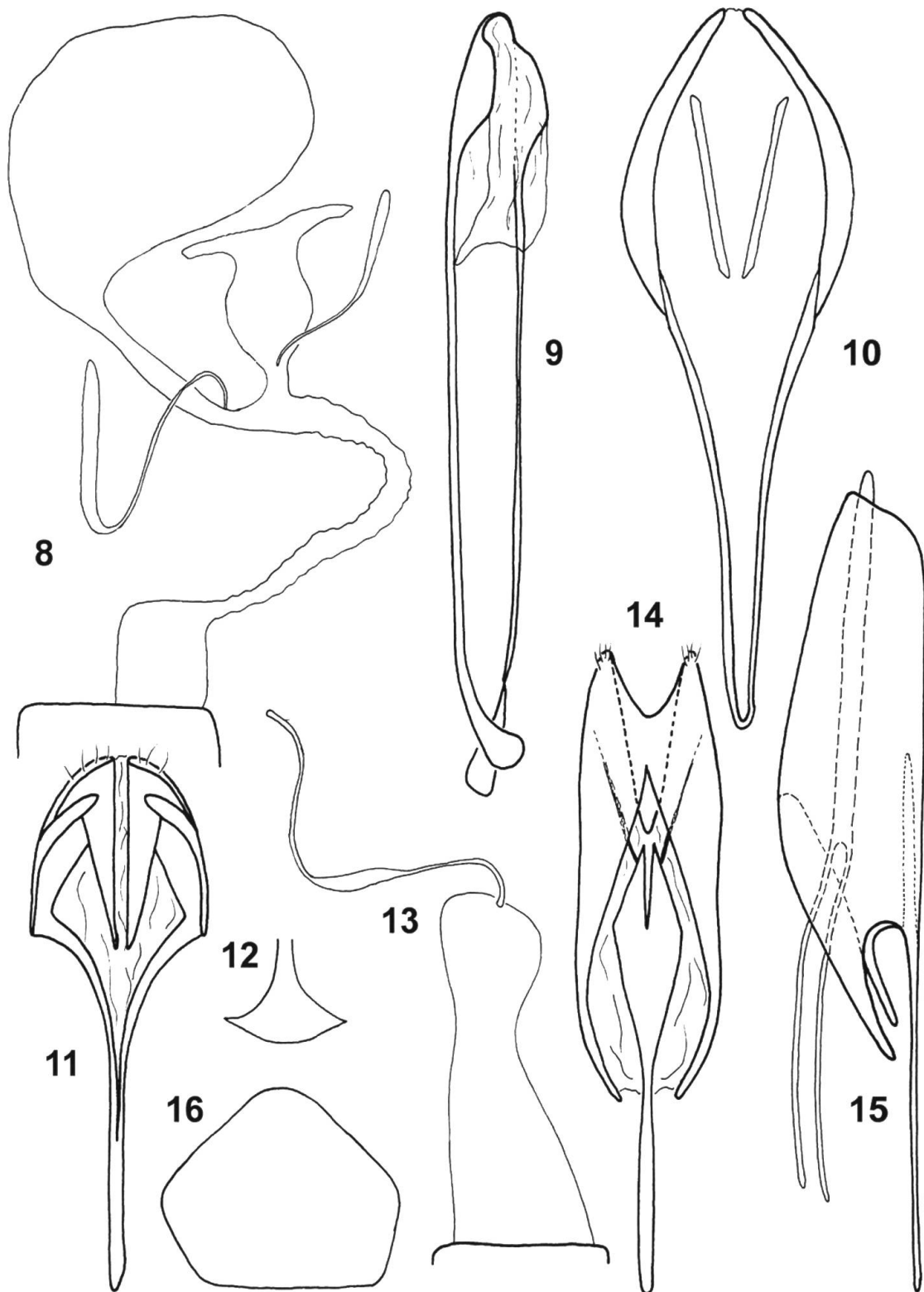
Pl. 7. *Anacypta punctata*: 1, labium; 2, wing venation; 3, labrum; 4, tegmen ventrally; 5, metendosternite; 6, maxilla; 7, mandible ventrally.



Pl. 8. *Anacypta* sp. (Vietnam): 8, mandible ventrally; 9, male segment IX-X; 10, phallus; 11, tegmen ventrally; 12, lacinia; 13, wing venation; 14, labium; 15, labrum.



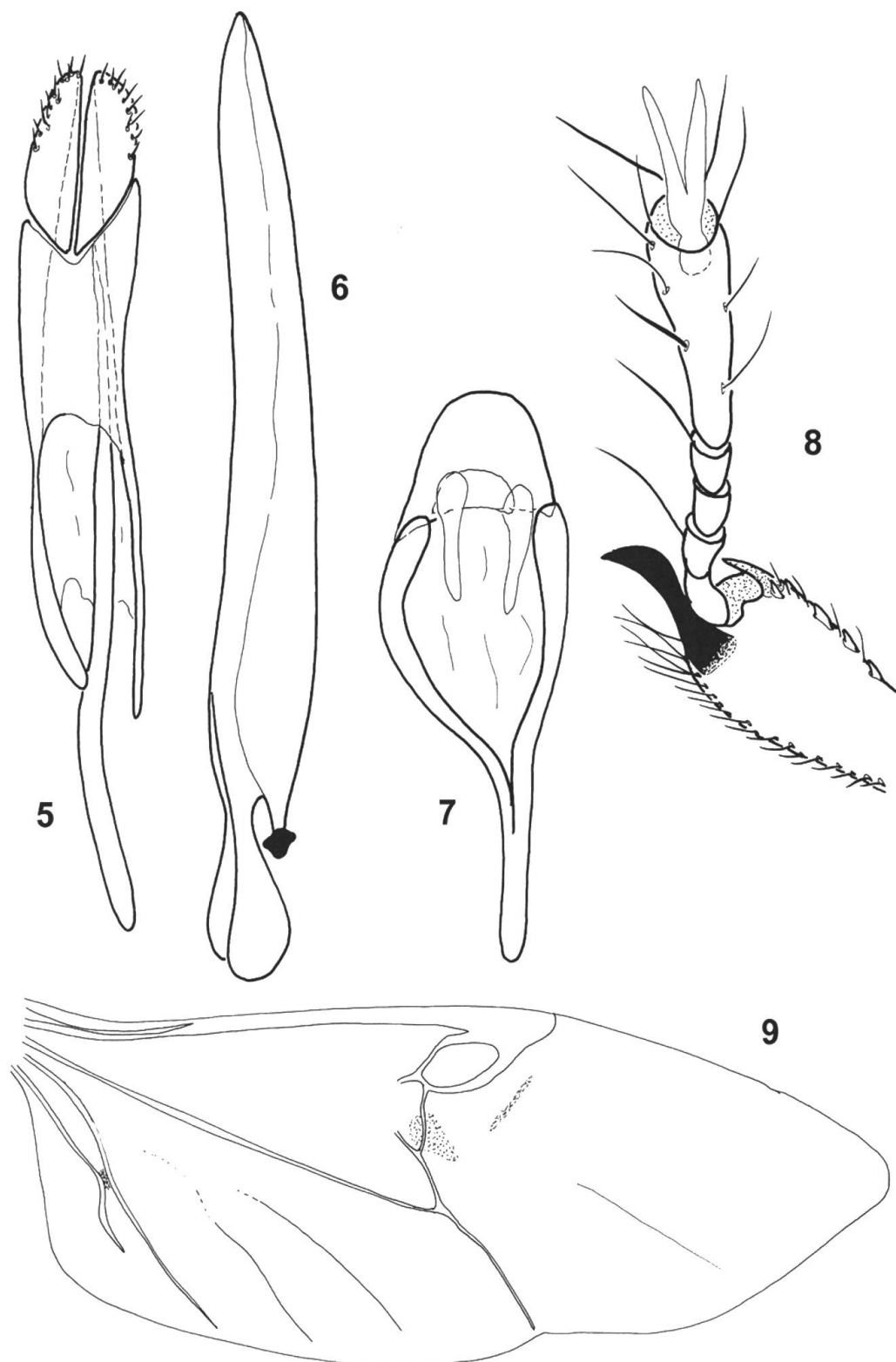
Pl. 9. *Ancyrona diversae*: 1, labium; 2, labrum; 3, lacinia; 7b, wing venation, anal field. *Ancyrona japonica*: 4, mandible; 5, prothorax ventrally; 6, maxilla; 7a, wing venation.



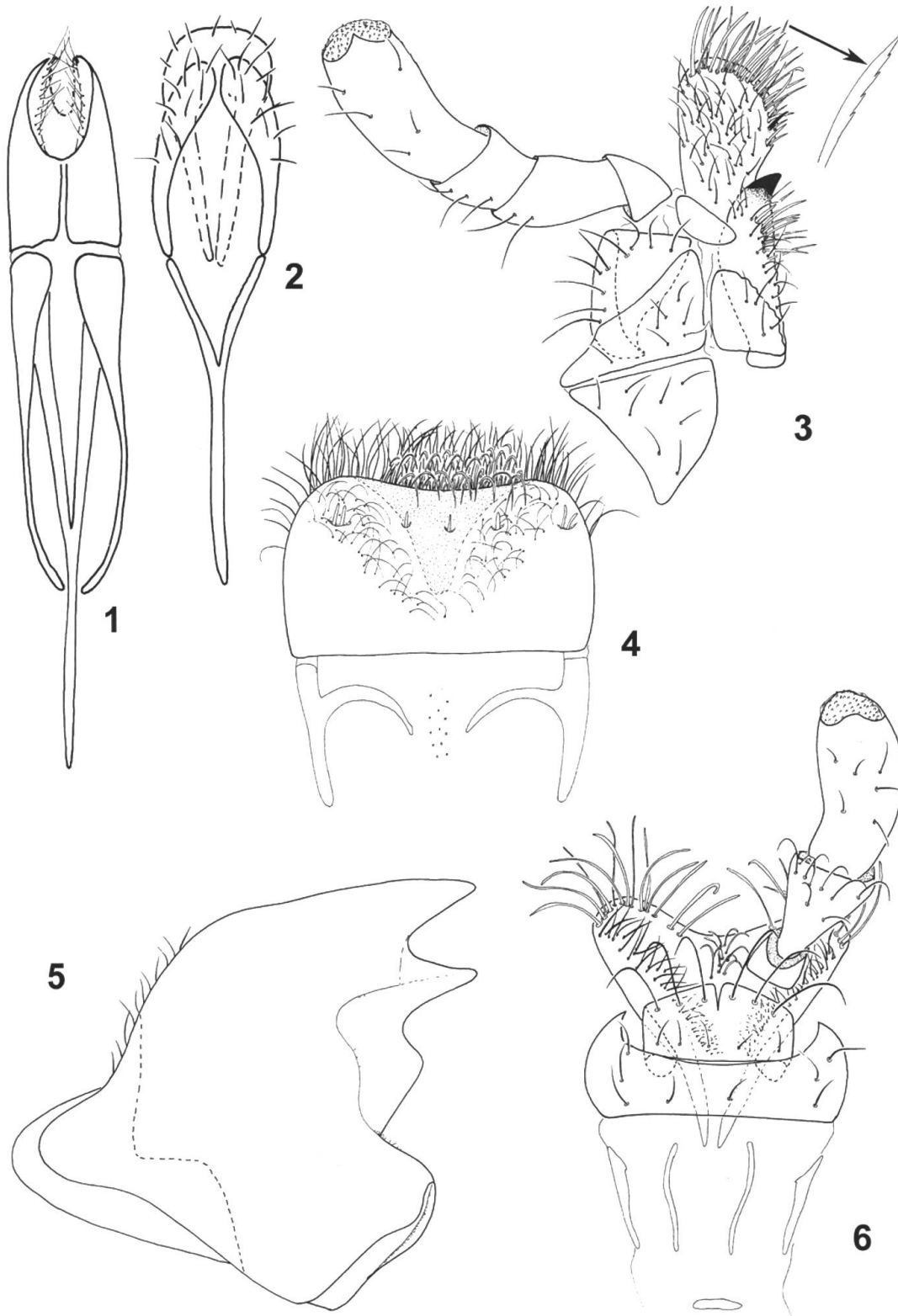
Pl. 10. *Ancyrona lewisi*: 8, female internal copulatory organs; 12, prosternal process; 16, mentum. *Ancyrona diversa*: 9, phallus; 11, male segment IX-X; 13, female internal copulatory organs; 14, tegmen ventrally. *Ancyrona japonica*: 10, male segment IX-X; 15, tegmen laterally.



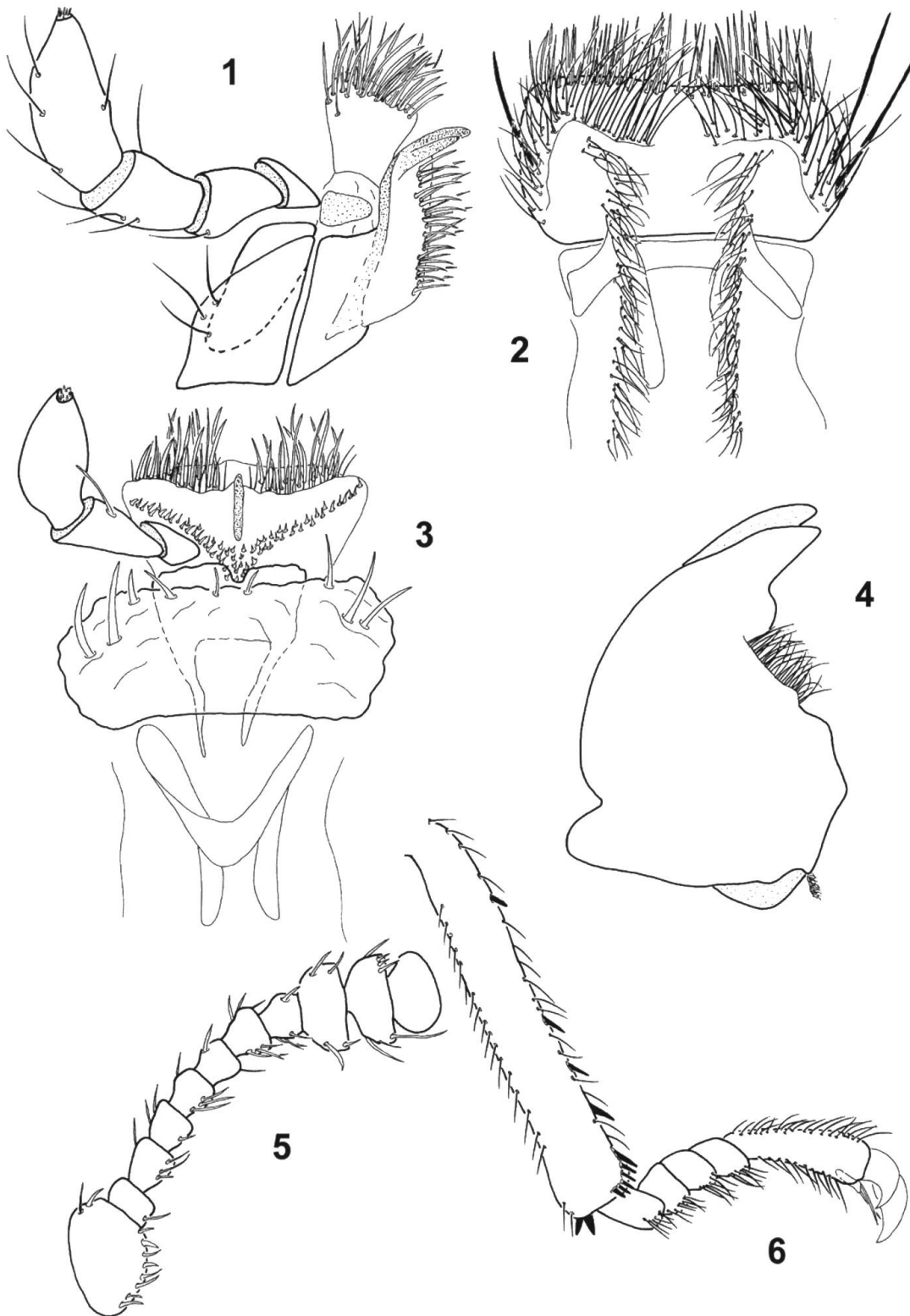
Pl. 11. *Ancyrona kosnovskorum* sp.nov.: 1, labrum; 2, mandible ventrally; 3, maxilla; 4, labium.



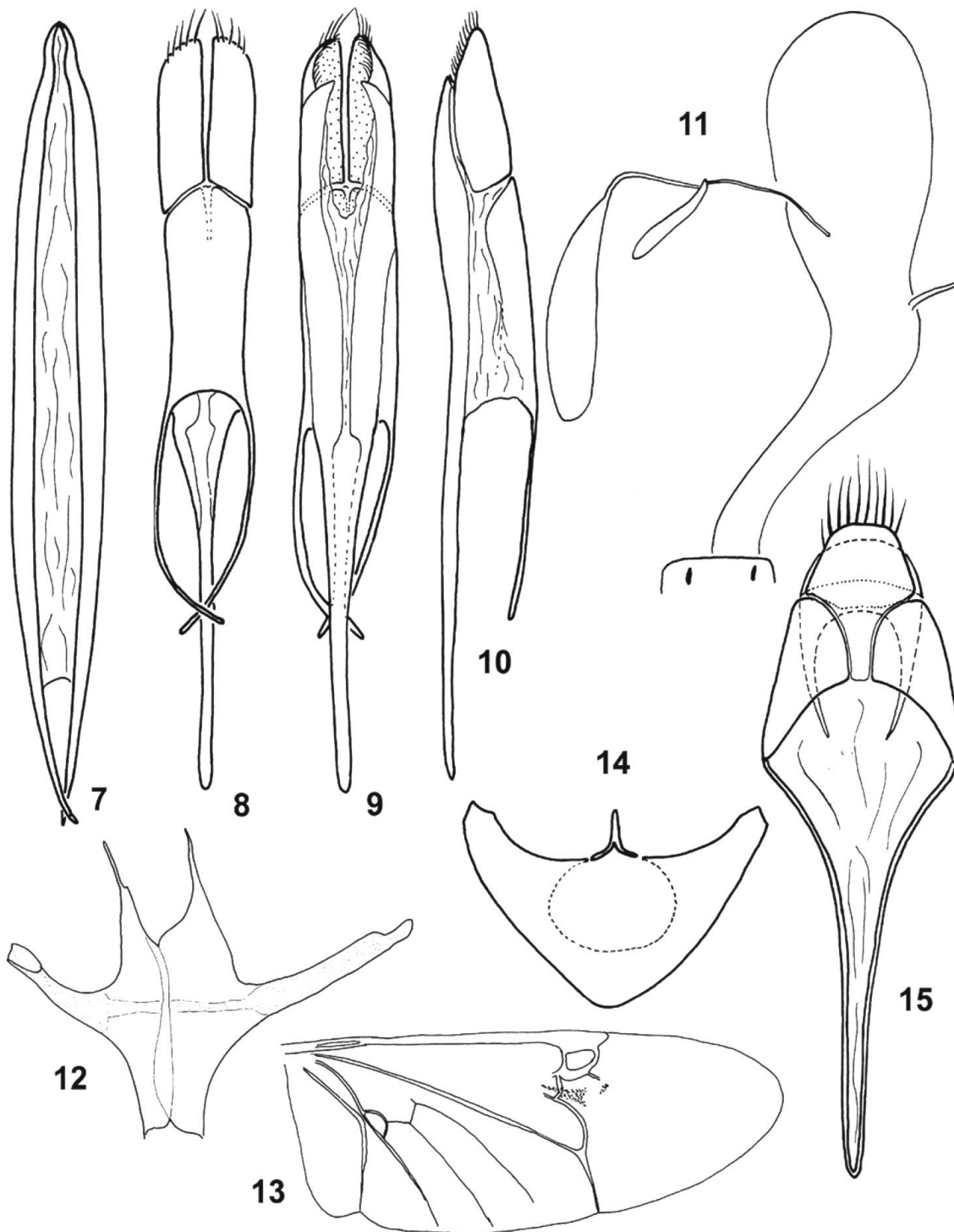
Pl. 12. *Ancyrona kosnovskorum* sp.nov.: 5, tegmen ventrally; 6, phallus; 7, male segment IX-X; 8, apex of front tibia and tarsus; 9, wing.



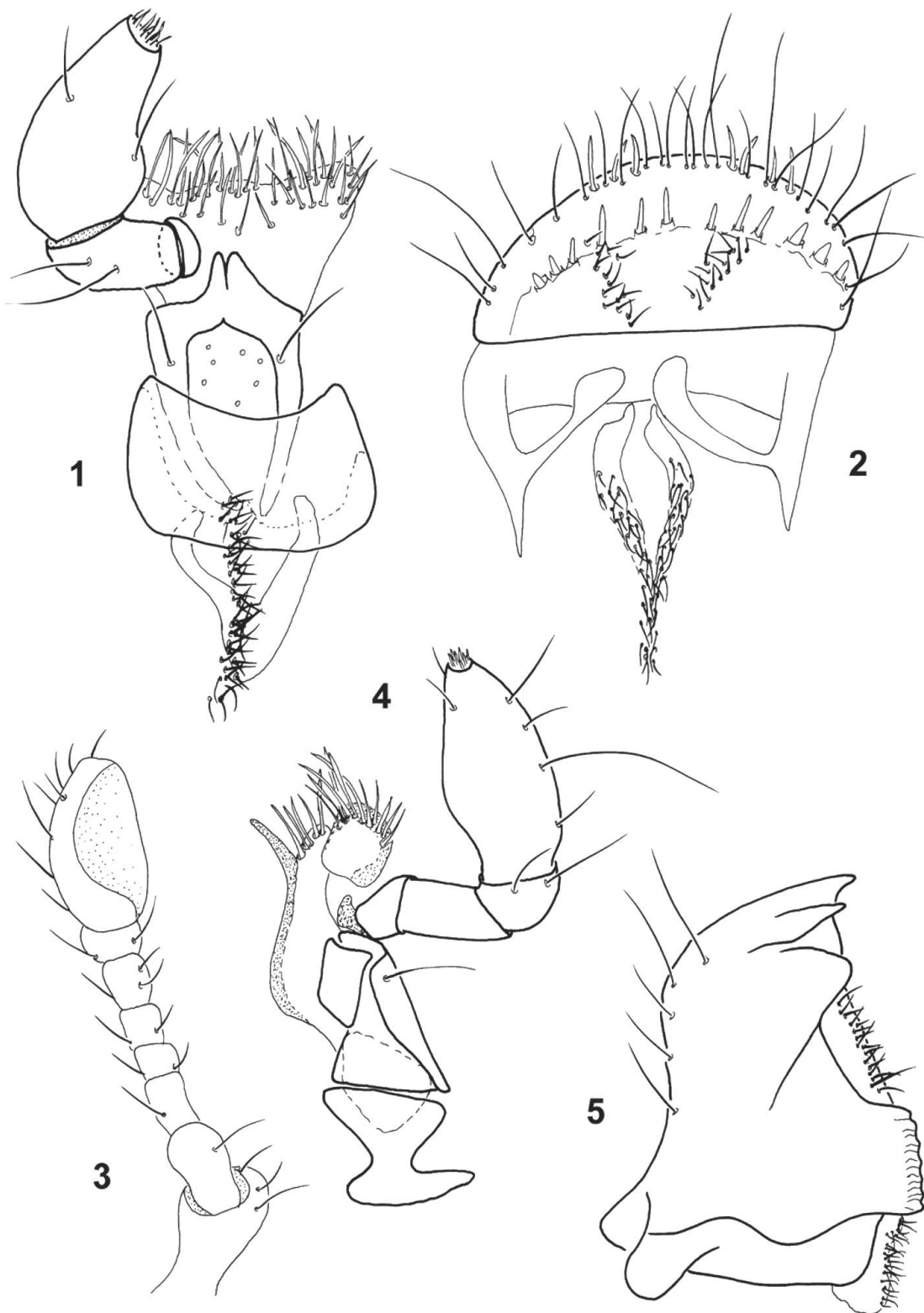
Pl. 13. *Calanthosoma flavomaculatum*: 1, tegmen ventrally; 2, male segment IX-X; 3, maxilla; 4, labrum; 5, mandible ventrally; 6, labium.



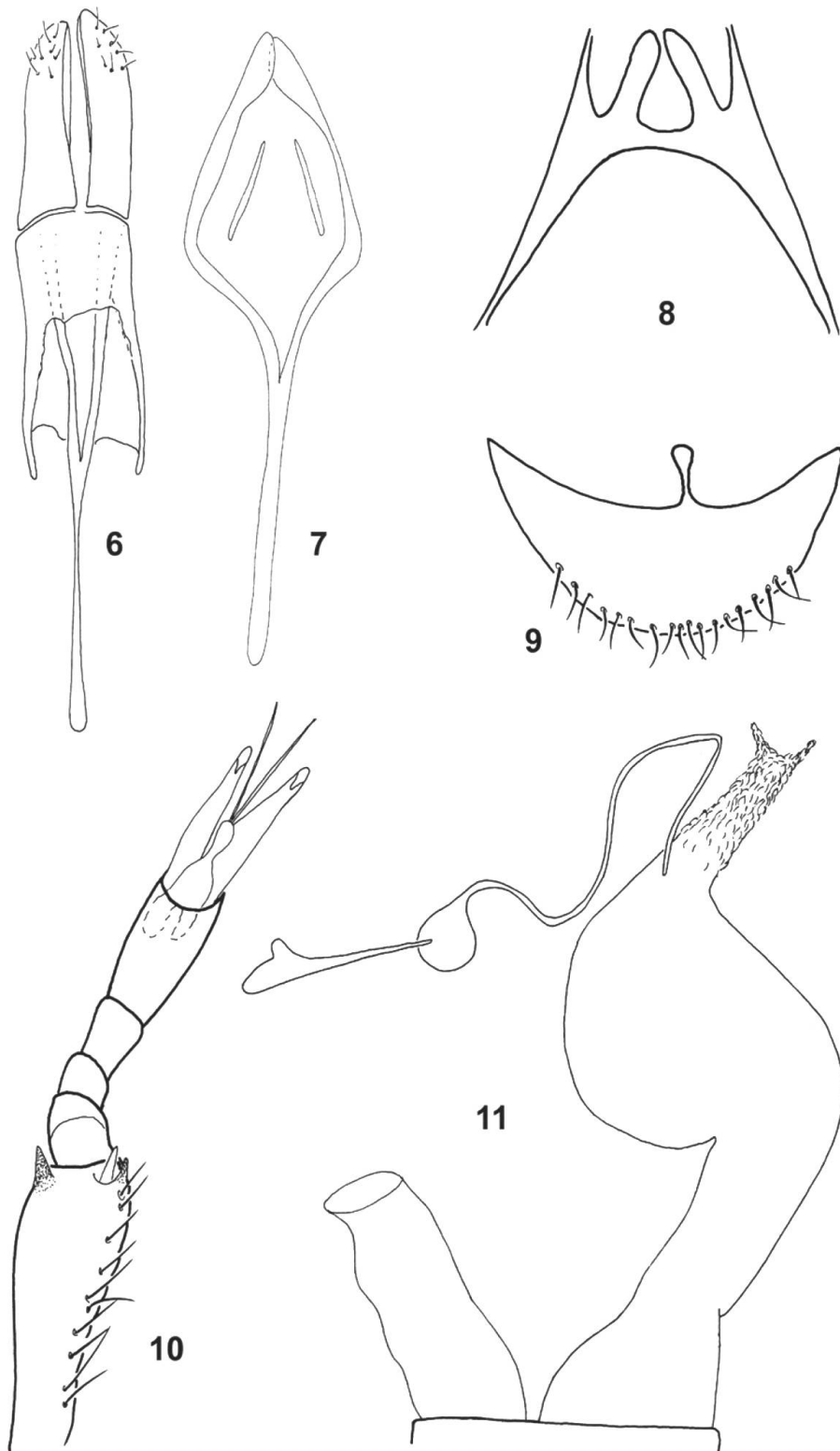
Pl. 14. *Calitys scabra*: 1, maxilla; 2, labrum; 3, labium; 4, mandible ventrally; 5, antenna; 6, hind tibia and tarsus.



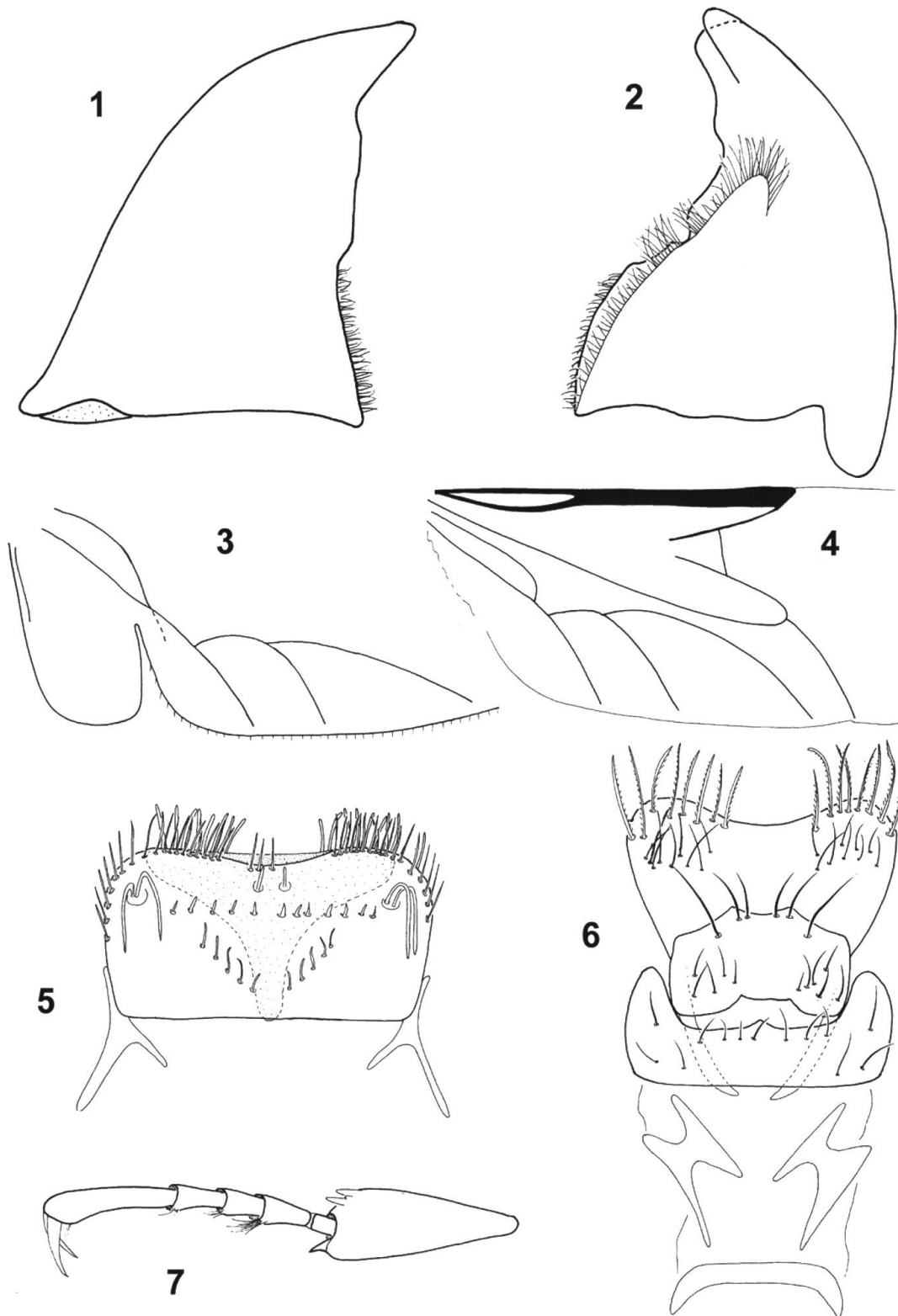
Pl. 15. *Calitys scabra*: 7, phallus; 8, tegmen ventrally; 9, tegmen dorsally; 10, tegmen laterally; 11, female internal copulatory organs; 12, metendosternite; 13, wing; 14, male sternite VIII; 15, male segment IX-X.



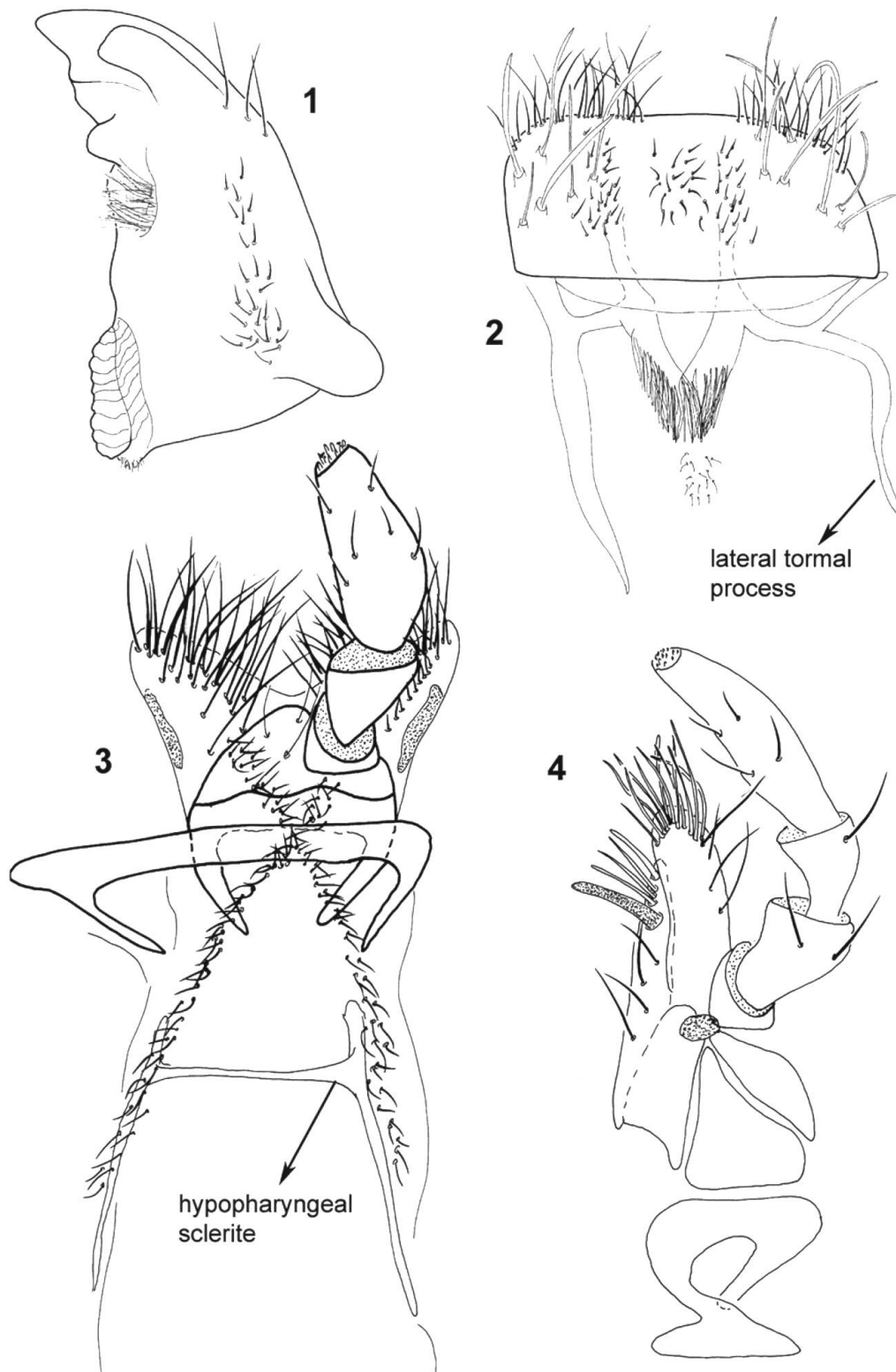
Pl. 16. *Colydiopeltis compactum*: 1, labium; 2, labrum; 3, antenna; 4, maxilla; 5, mandible ventrally.



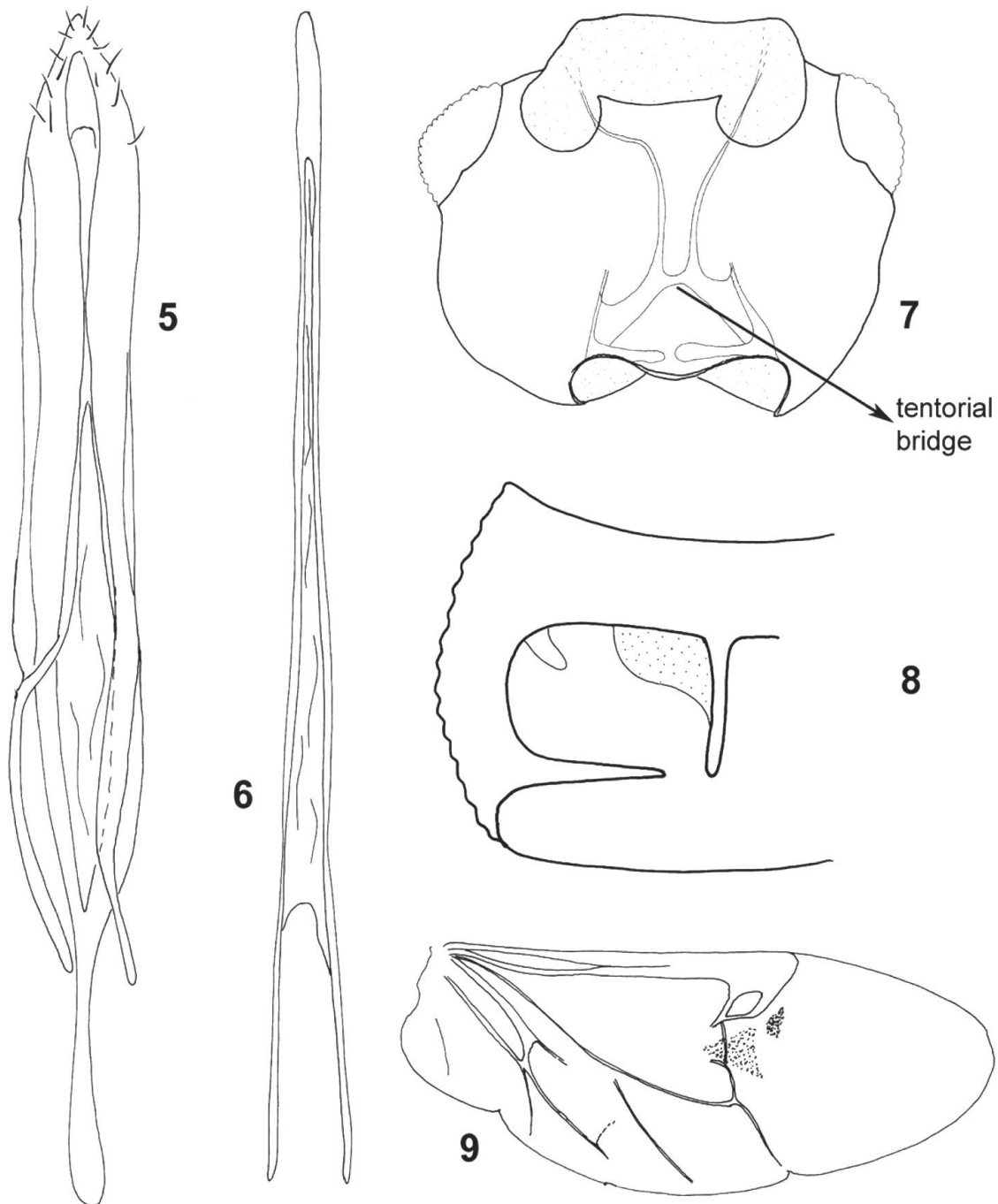
Pl. 17. *Colydiopeltis compactum*: 6, tegmen ventrally; 7, male segment IX-X; 8, tentorium; 9, male sternite VIII; 10, apex of front tibia and tarsus; 11, female internal copulatory organs.



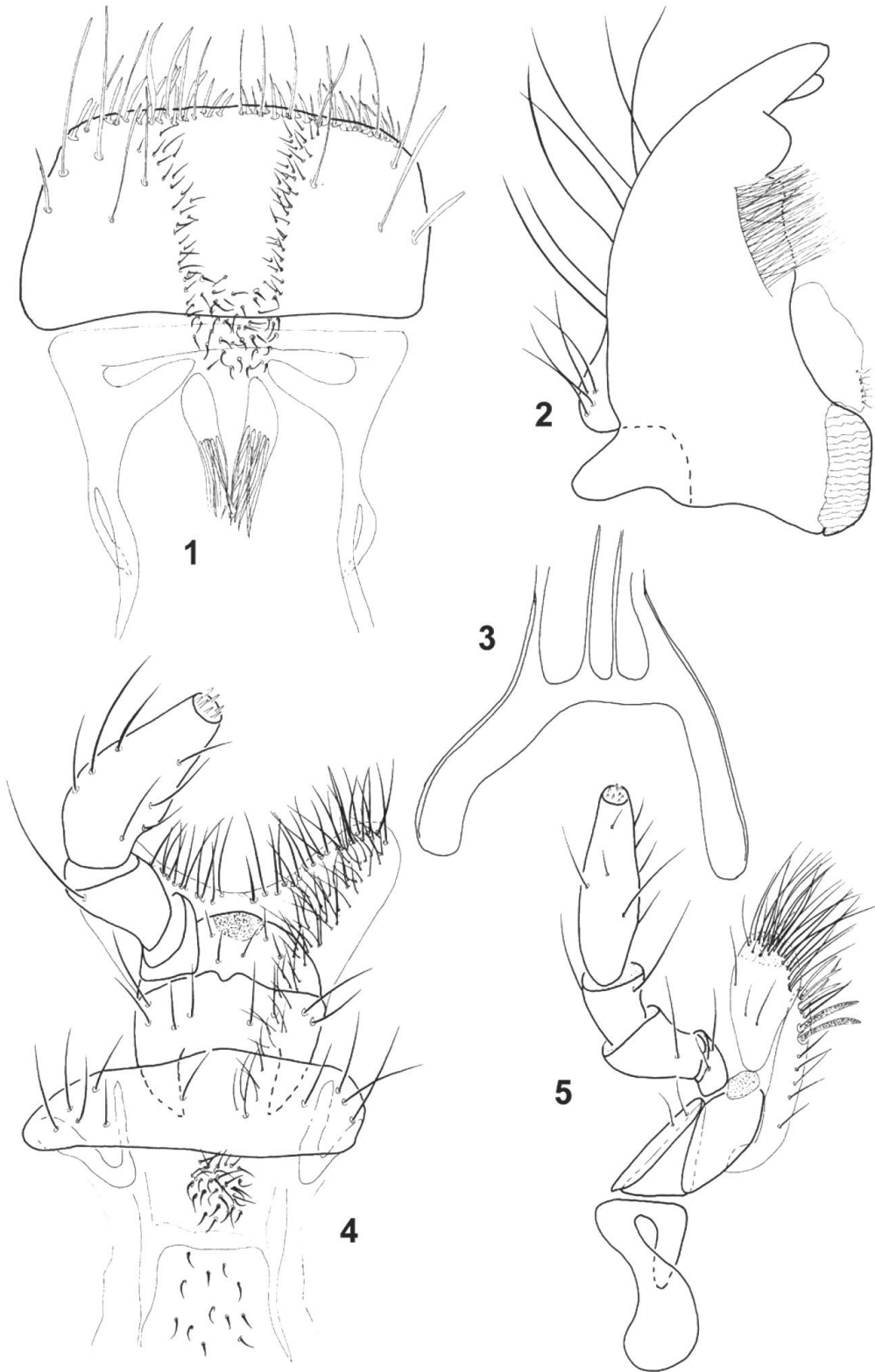
Pl. 18. *Corticotomus cylindricus*: 1, right mandible ventrally; 2, left mandible ventrally; 3, wing venation; 5, labrum; 6, labium; 7, middle tibia and tarsus. *Corticotomus divisus*: 4, wing venation.



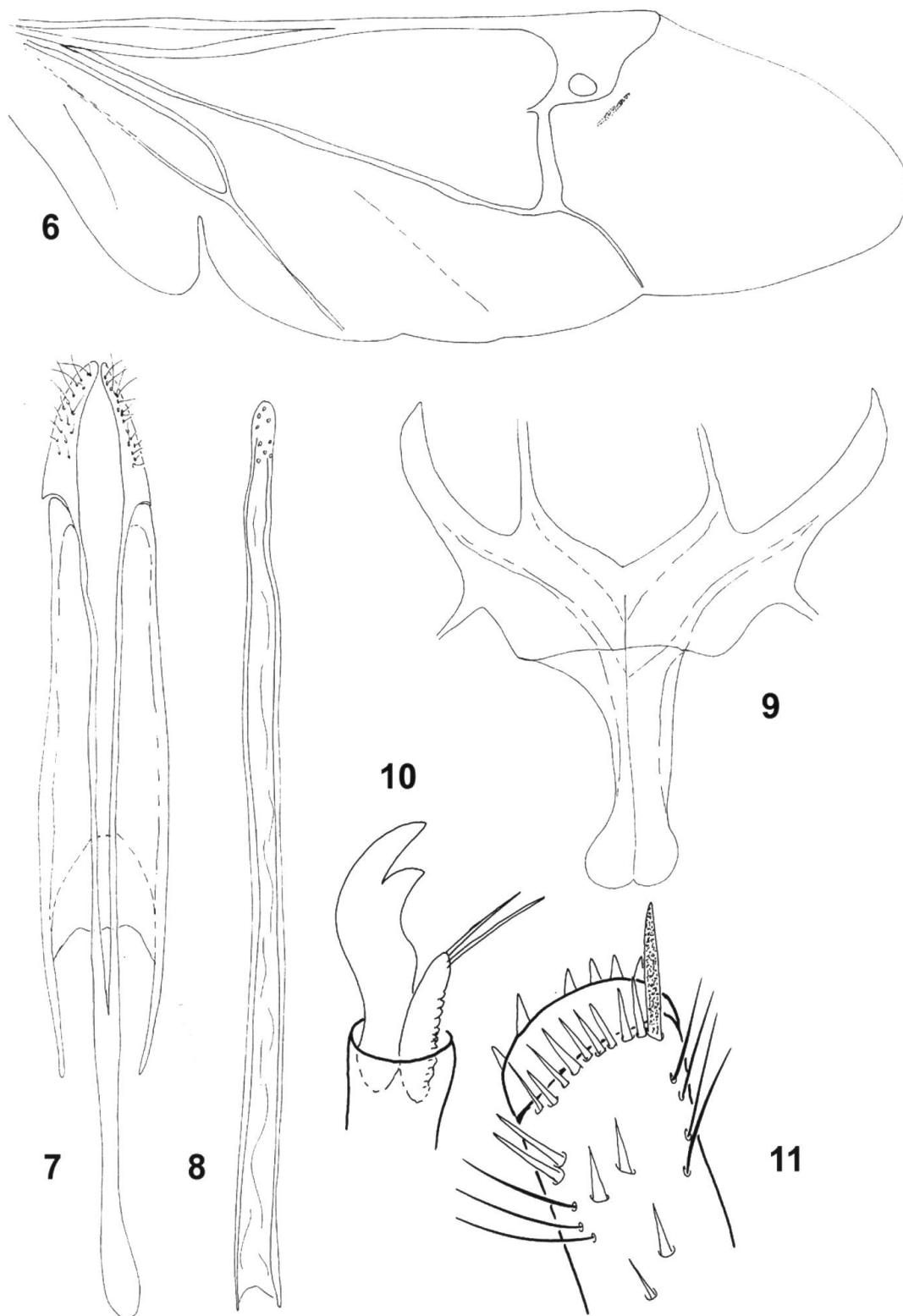
Pl. 19. *Decamerus haemorrhoidalis*: 1, mandible ventrally; 2, labrum; 3, labium; 4, maxilla.



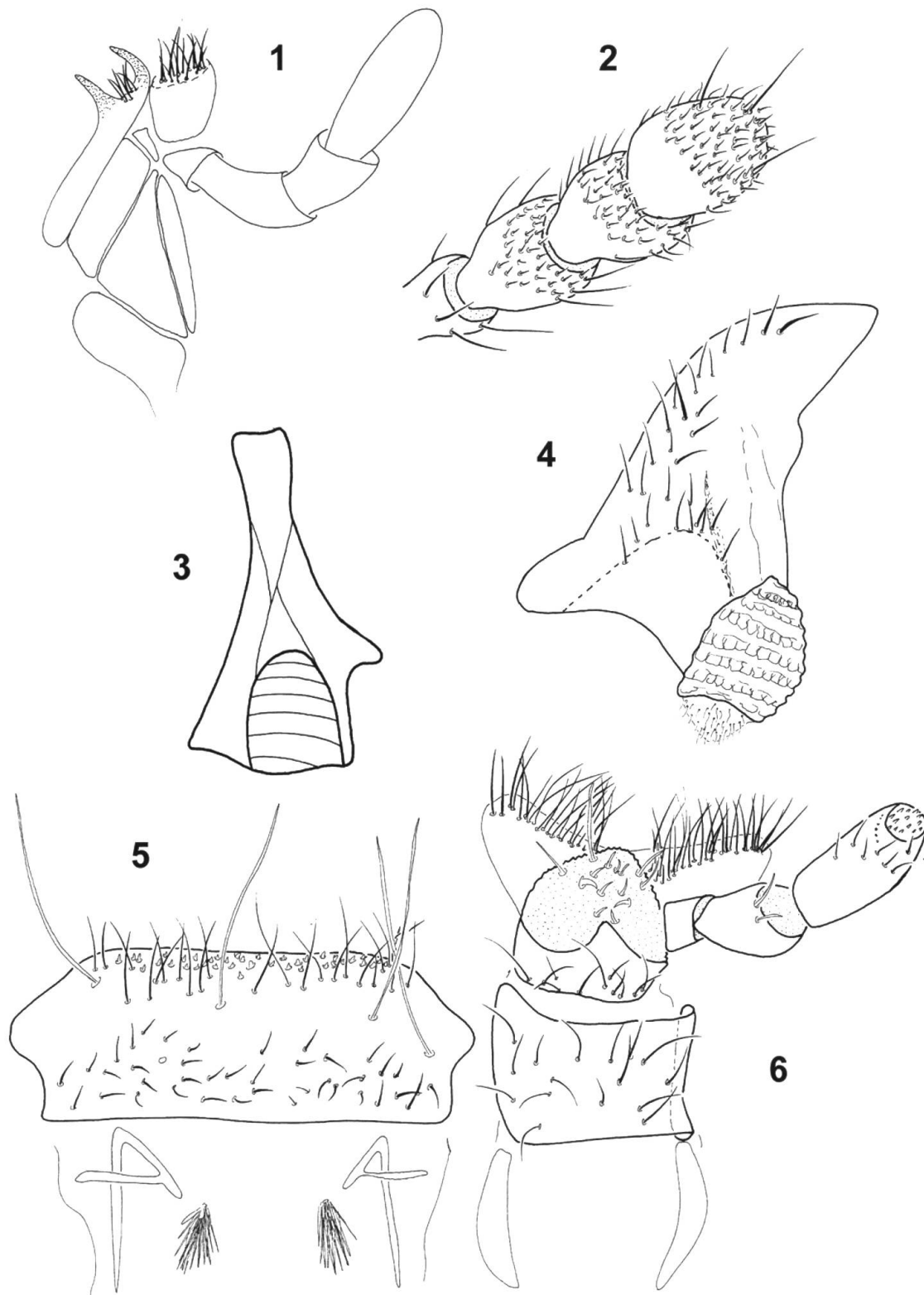
Pl. 20. *Decamerus haemorrhoidalis*: 5, tegmen ventrally; 6, phallus; 7, cranium ventrally with tentorium; 8, prothorax ventrally; 9, wing.



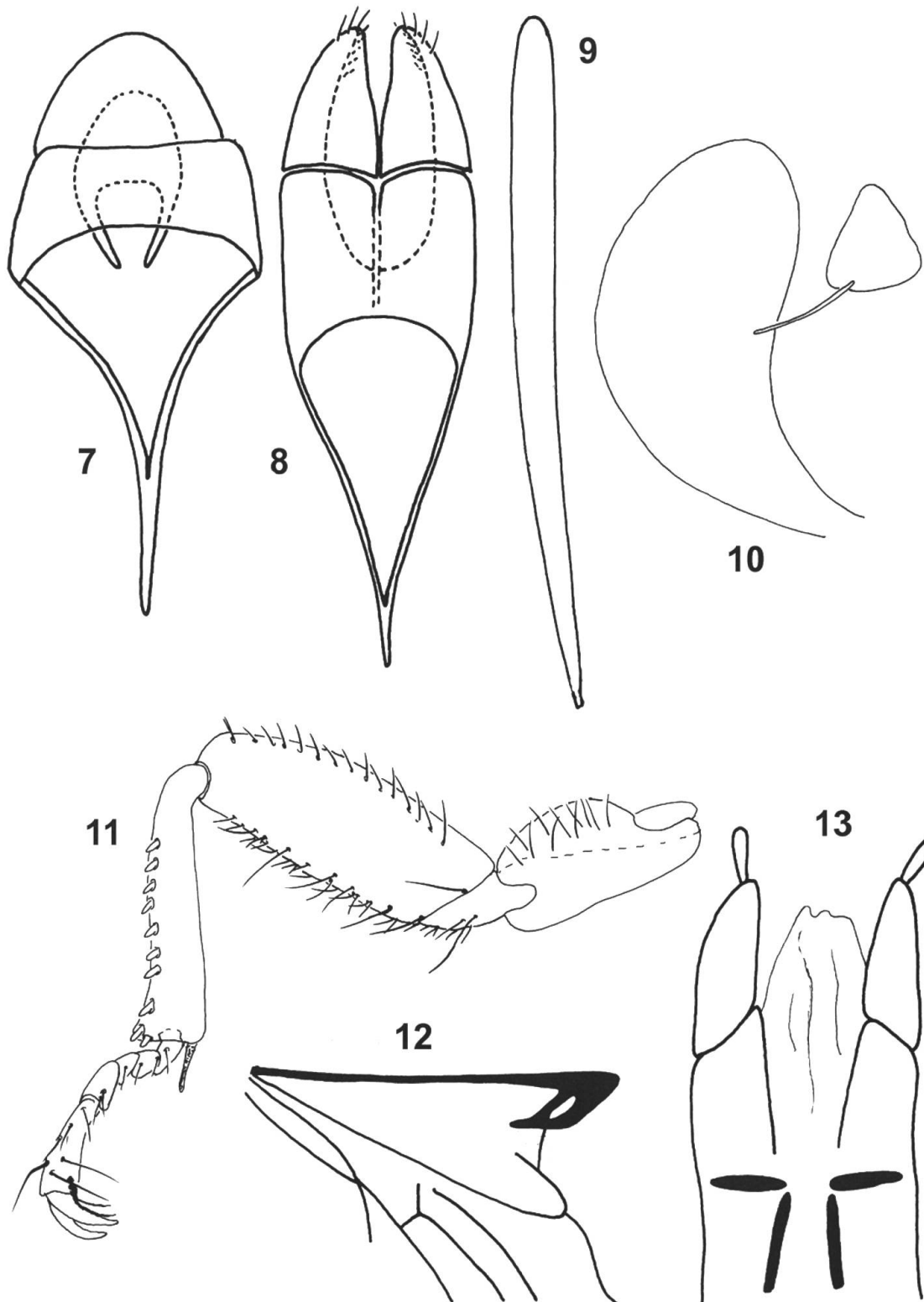
Pl. 21. *Diontolobus punctipennis*: 1, labrum; 2, mandible ventrally; 3, tentorium; 4, labium; 5, maxilla.



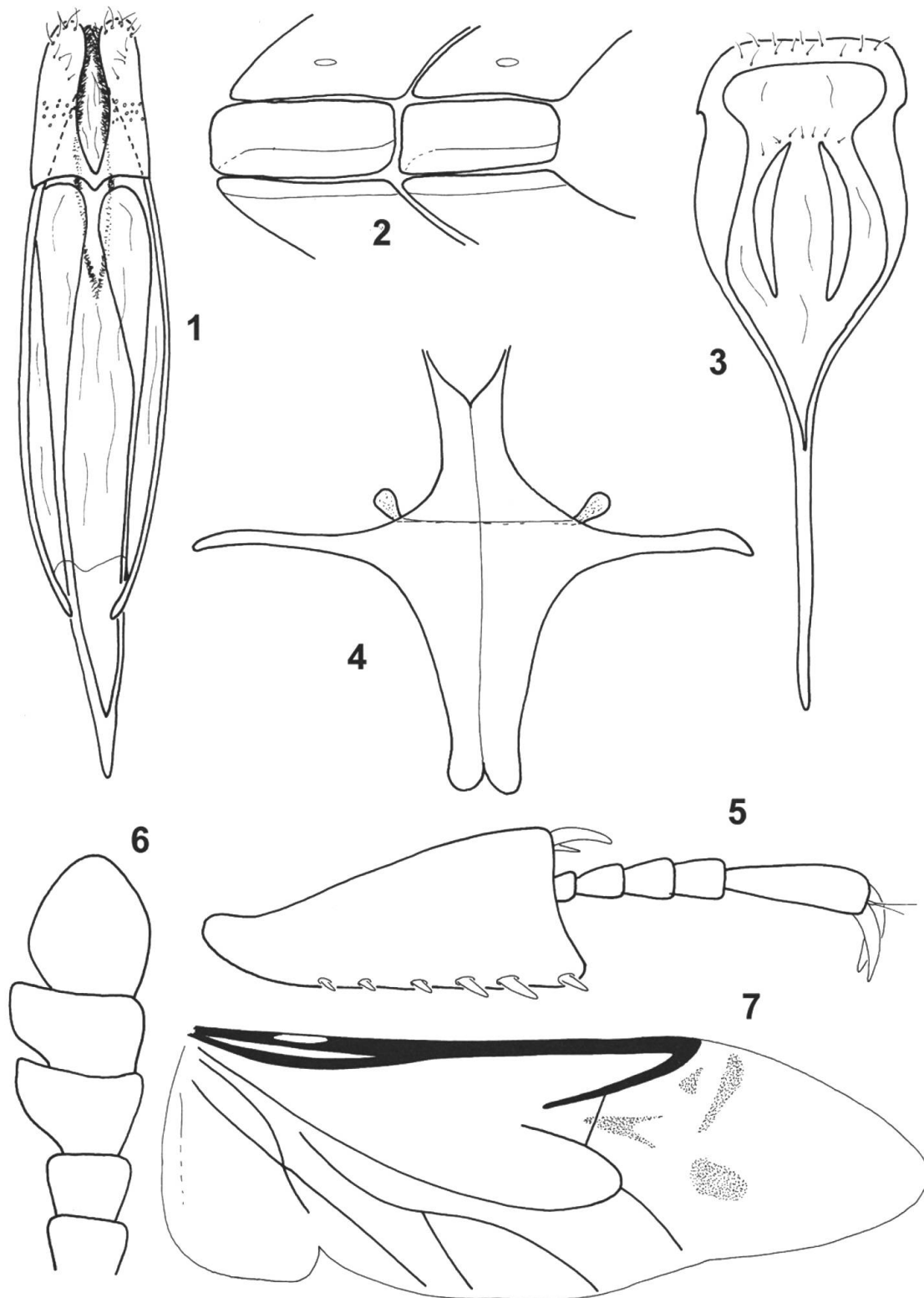
Pl. 22. *Diontolobus punctipennis*: 6, wing; 7, tegmen ventrally; 8, phallus; 9, metendosternite; 10, tarsal claw and empodium; 11, apex of hind tibia.



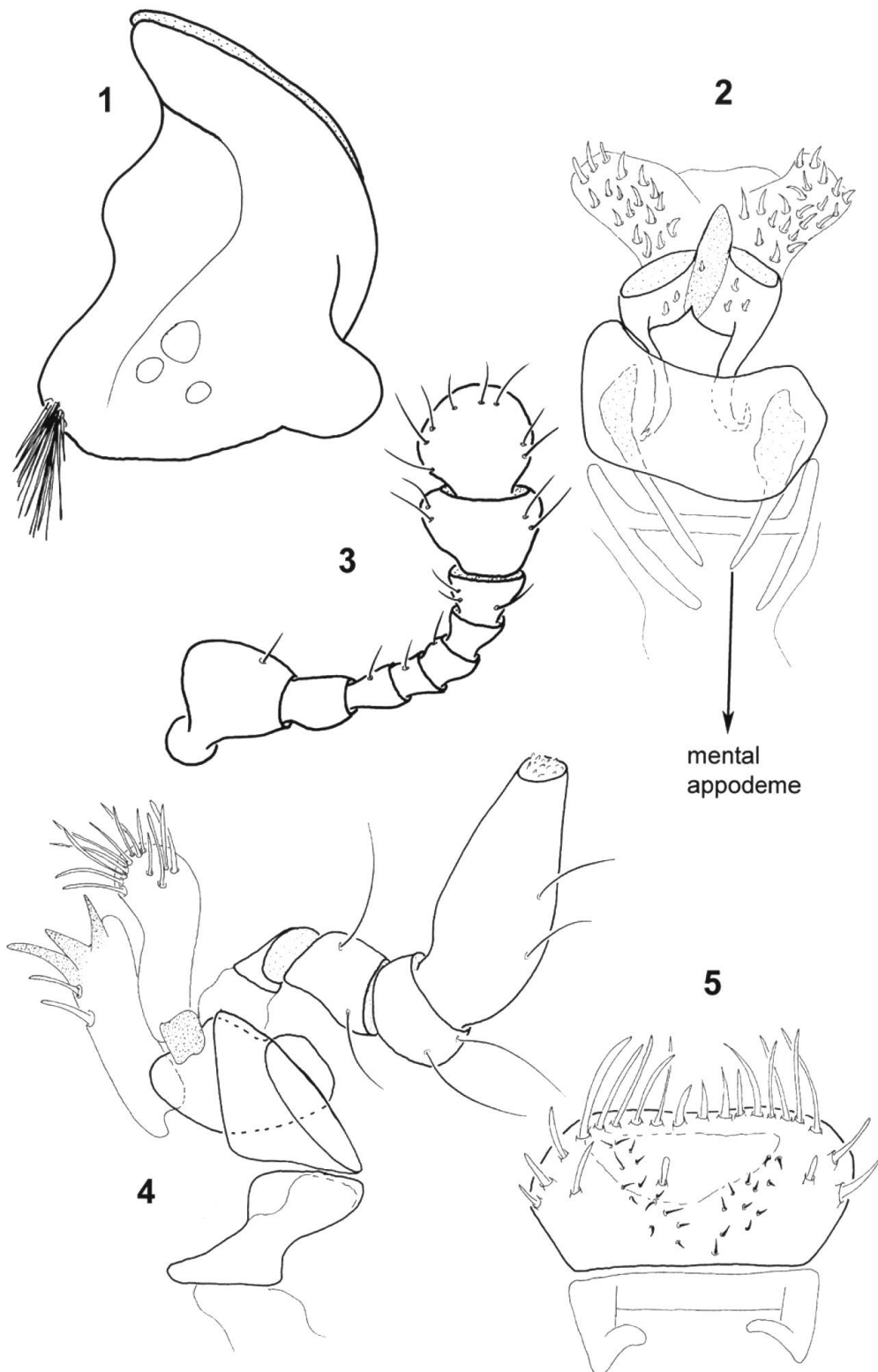
Pl. 23. *Eronyxa pallidus*: 1, maxilla; 2, end of antenna; 3, mandible, frontal view; 4, mandible ventrally; 5, labrum; 6, labium.



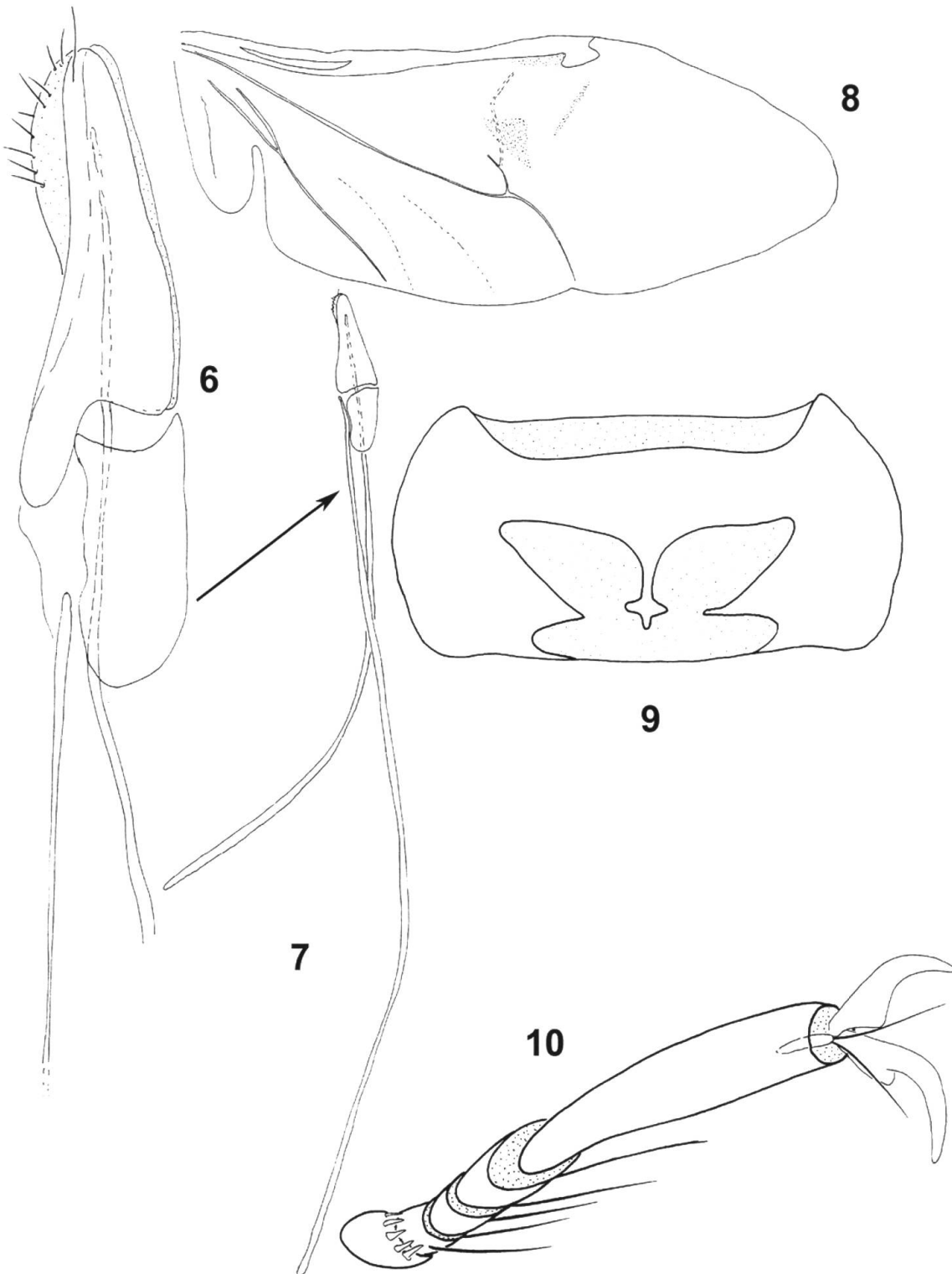
Pl. 24. *Eronyxa angustus*: 7, male segment IX-X; 8, tegmen ventrally; 9, phallus. *Eronyxa pallidus*: 10, female internal copulatory organs; 11, front leg; 12, wing venation; 13, apex of ovipositor.



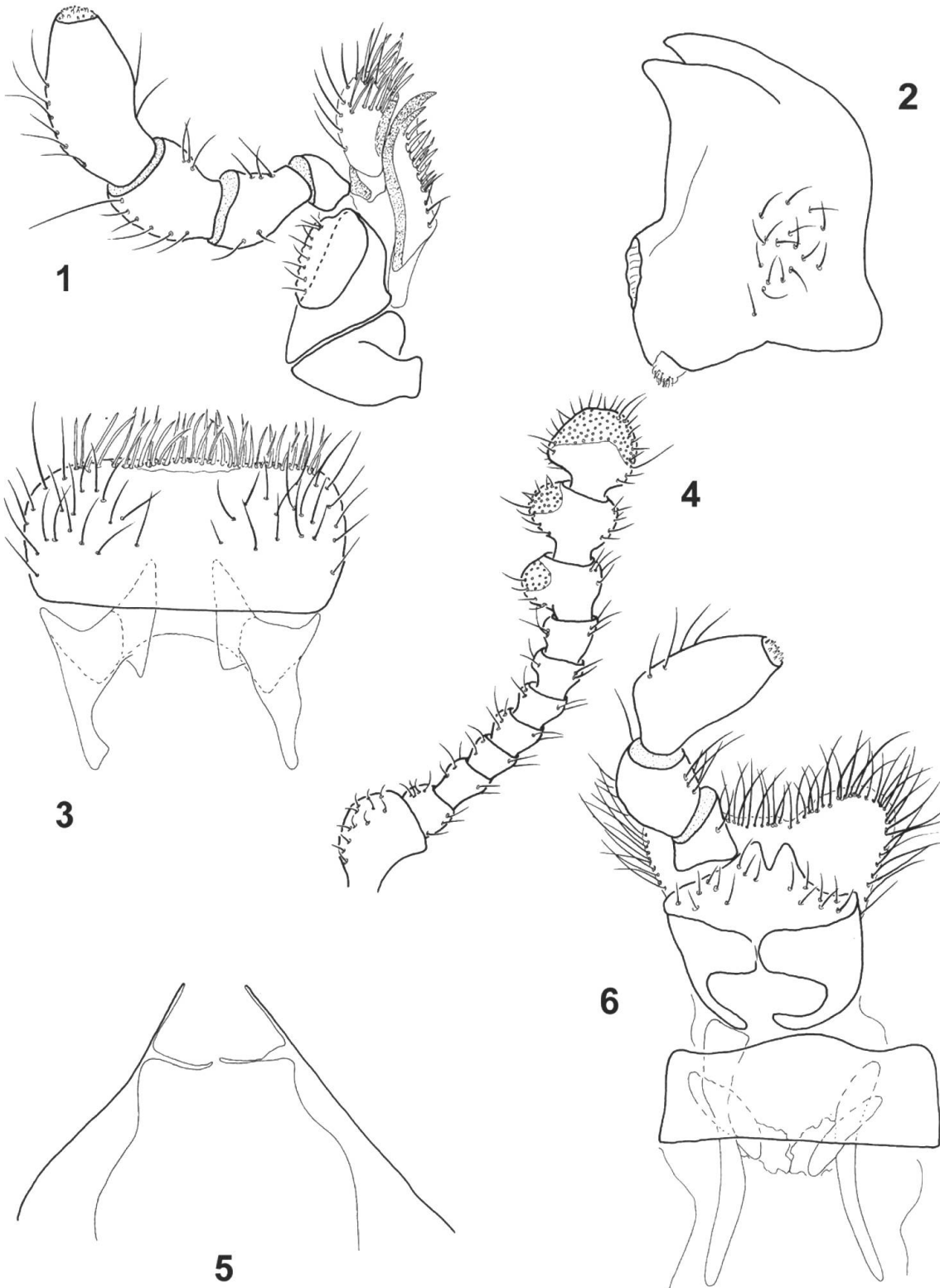
Pl. 25. *Eupycnus lentus*: 1, tegmen ventrally; 2, abdominal segments laterally; 3, male segment IX-X; 4, metendosternite; 5, front tibia and tarsus; 6, end of antenna; 7, wing.



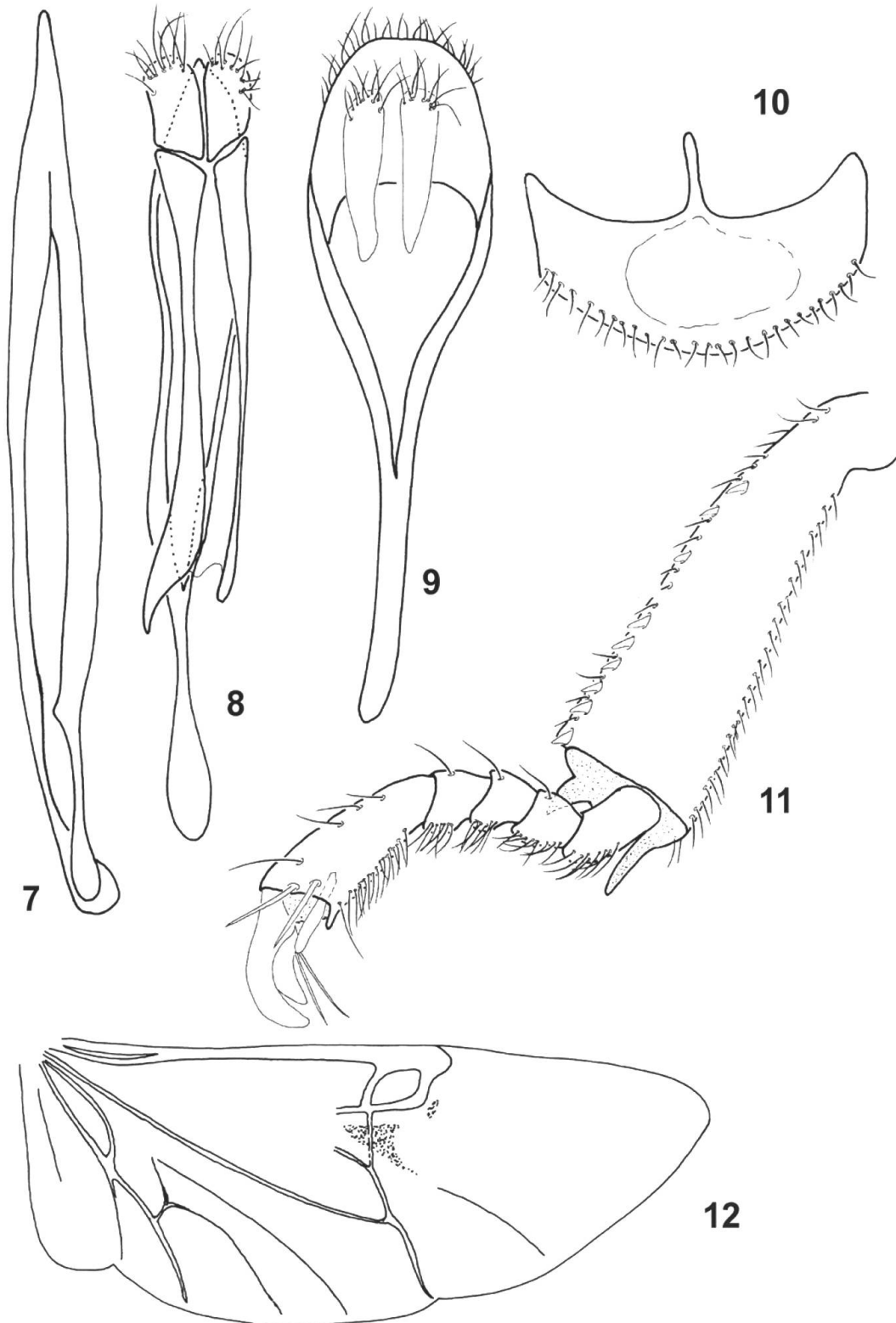
Pl. 26. *Grynocharina peltiformis*: 1, mandible ventrally; 2, labium; 3, antenna; 4, maxilla; 5, labrum.



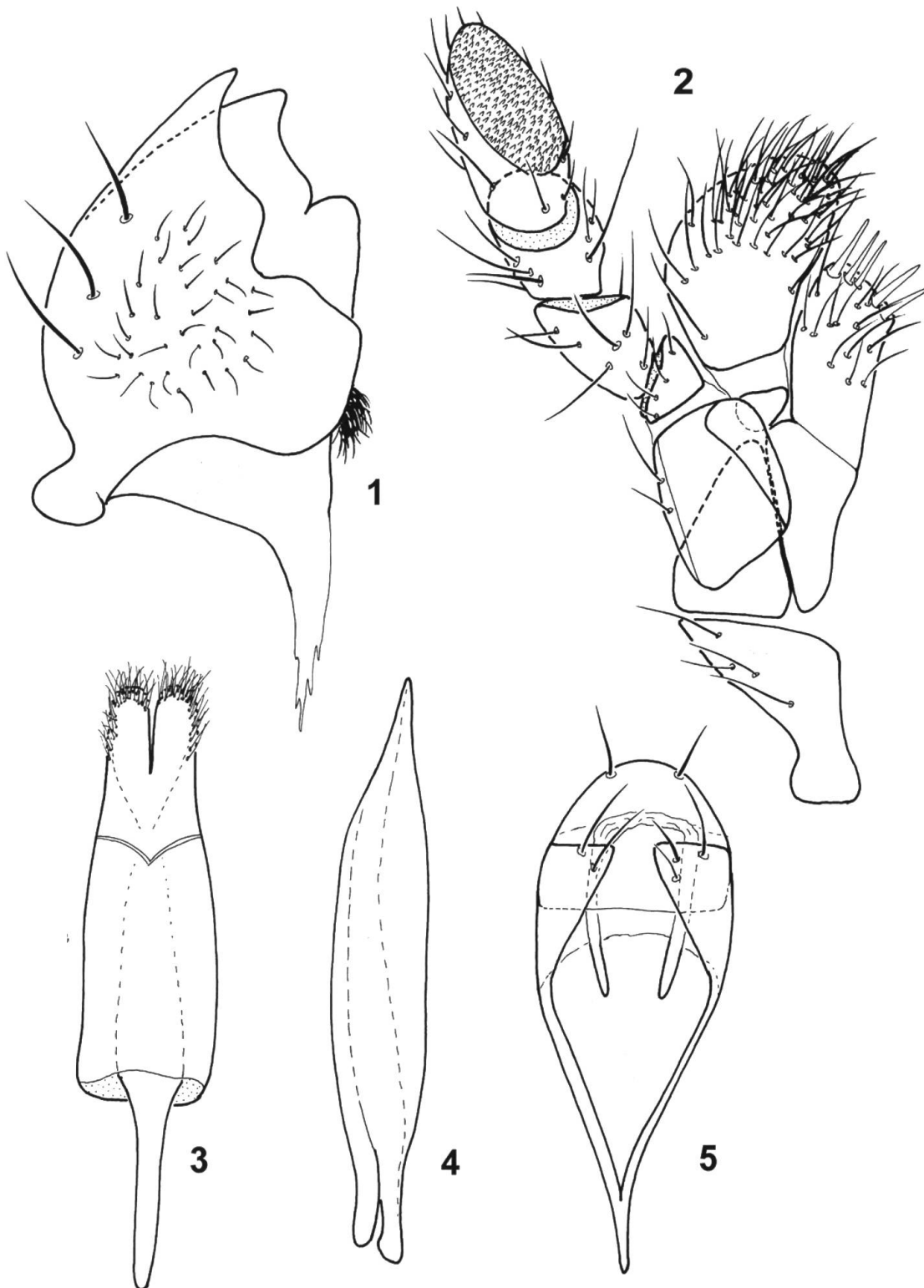
**Pl. 27.** *Gynocharina peltiformis*: 6, aedeagus laterally (shortened); 7, aedeagus in full size; 8, wing; 9, prothorax ventrally; 10, tarsus.



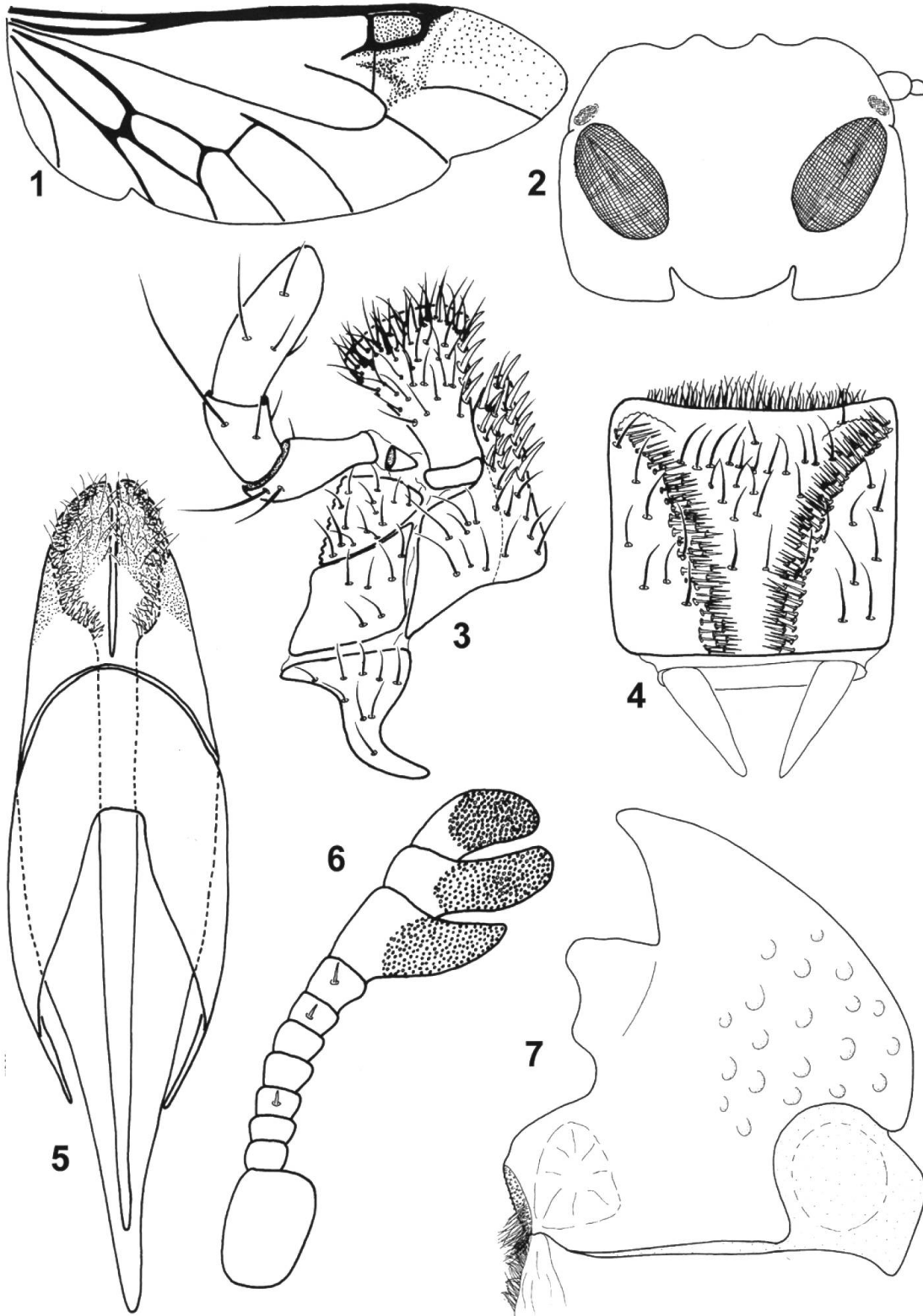
Pl. 28. *Grynocharis oblonga*: 1, maxilla; 2, mandible ventrally; 3, labrum; 4, antenna; 5, tentorium; 6, labium.



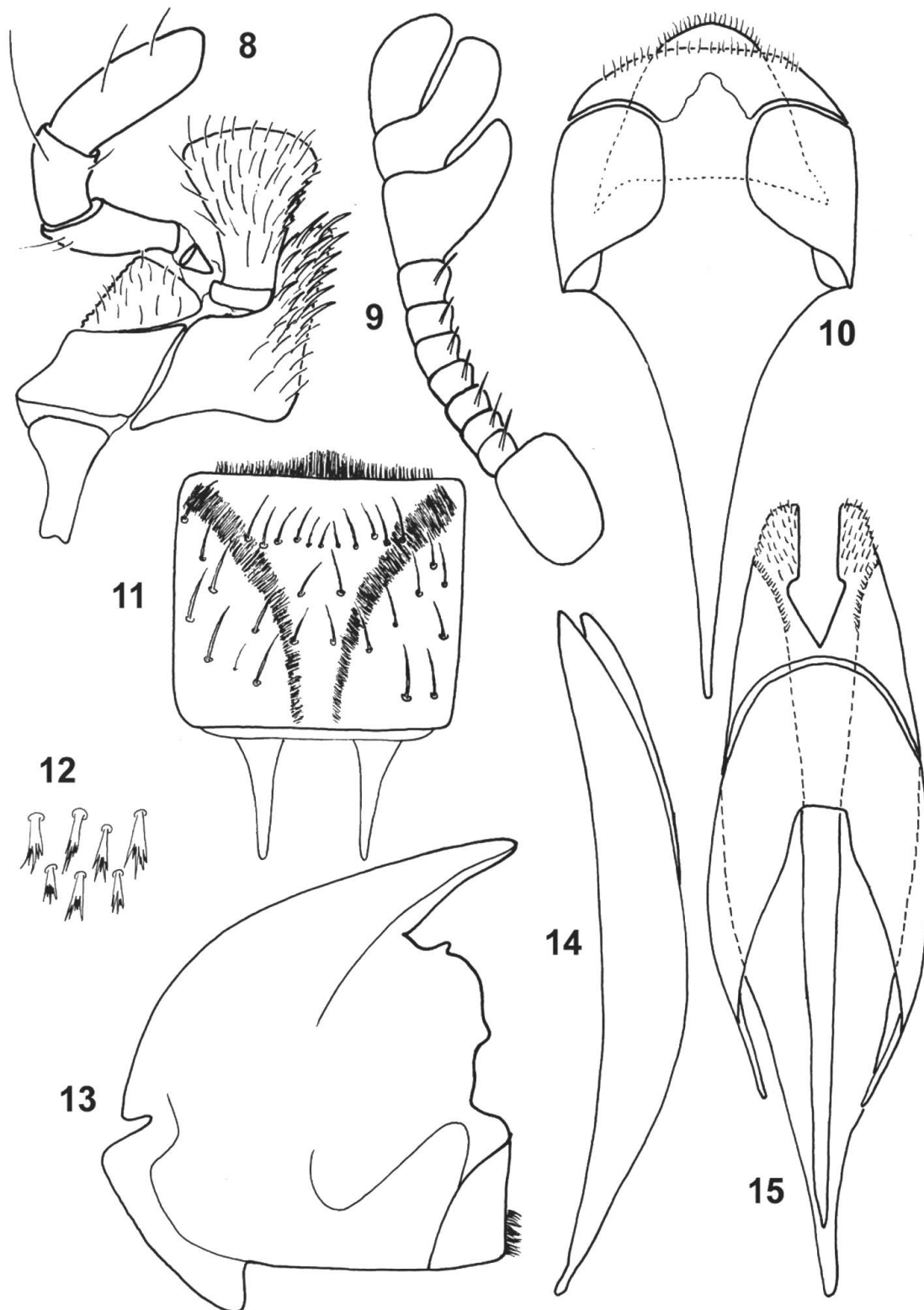
Pl. 29. *Grynocharis oblonga*: 7, phallus; 8, tegmen ventrally; 9, male segment IX-X; 10, male sternite VIII; 11, tibia and tarsus; 12, wing.



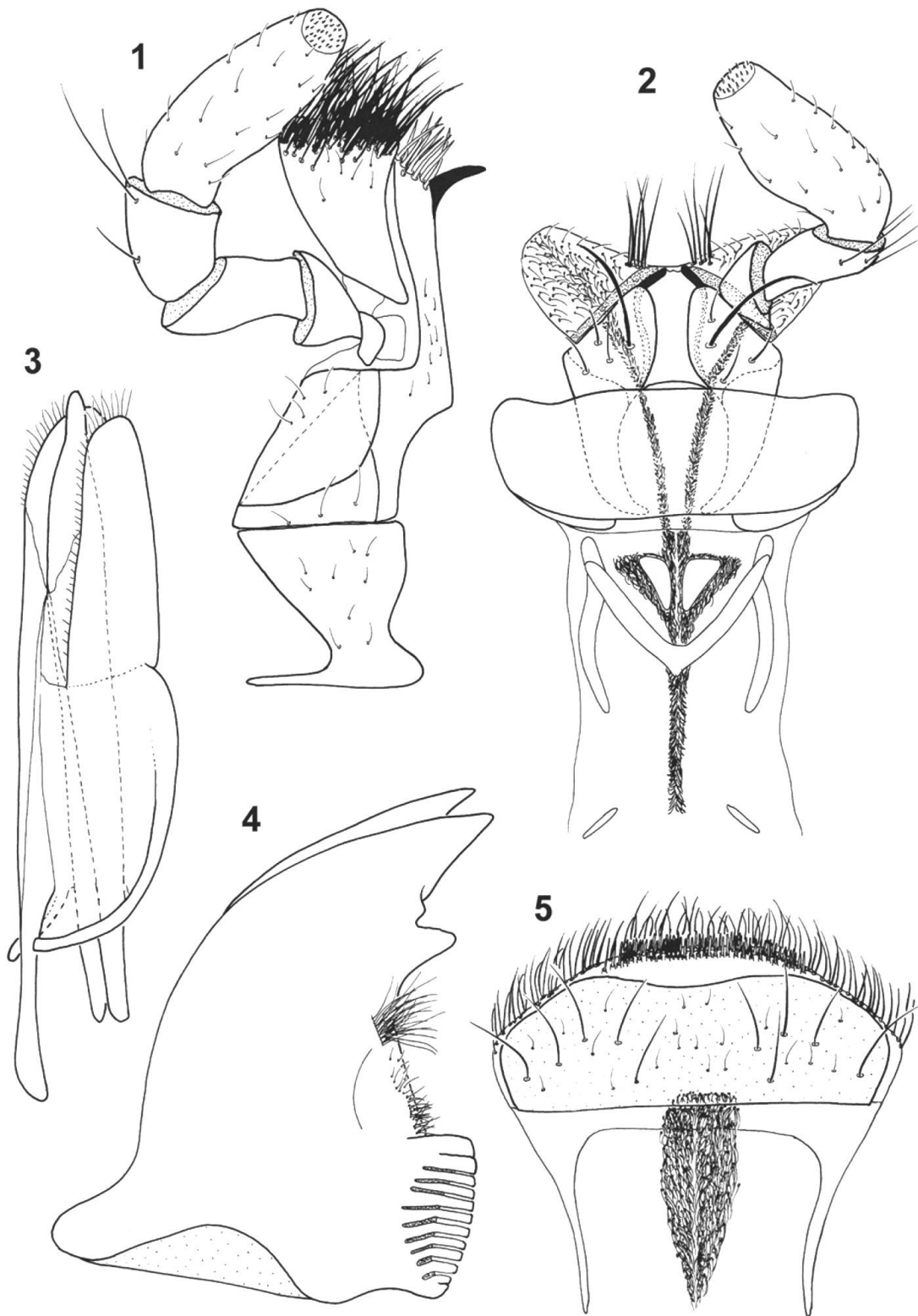
Pl. 30. *Grynomia diluta*: 1, mandible ventrally; 2, maxilla; 3, tegmen ventrally; 4, phallus; 5, male segment IX-X.



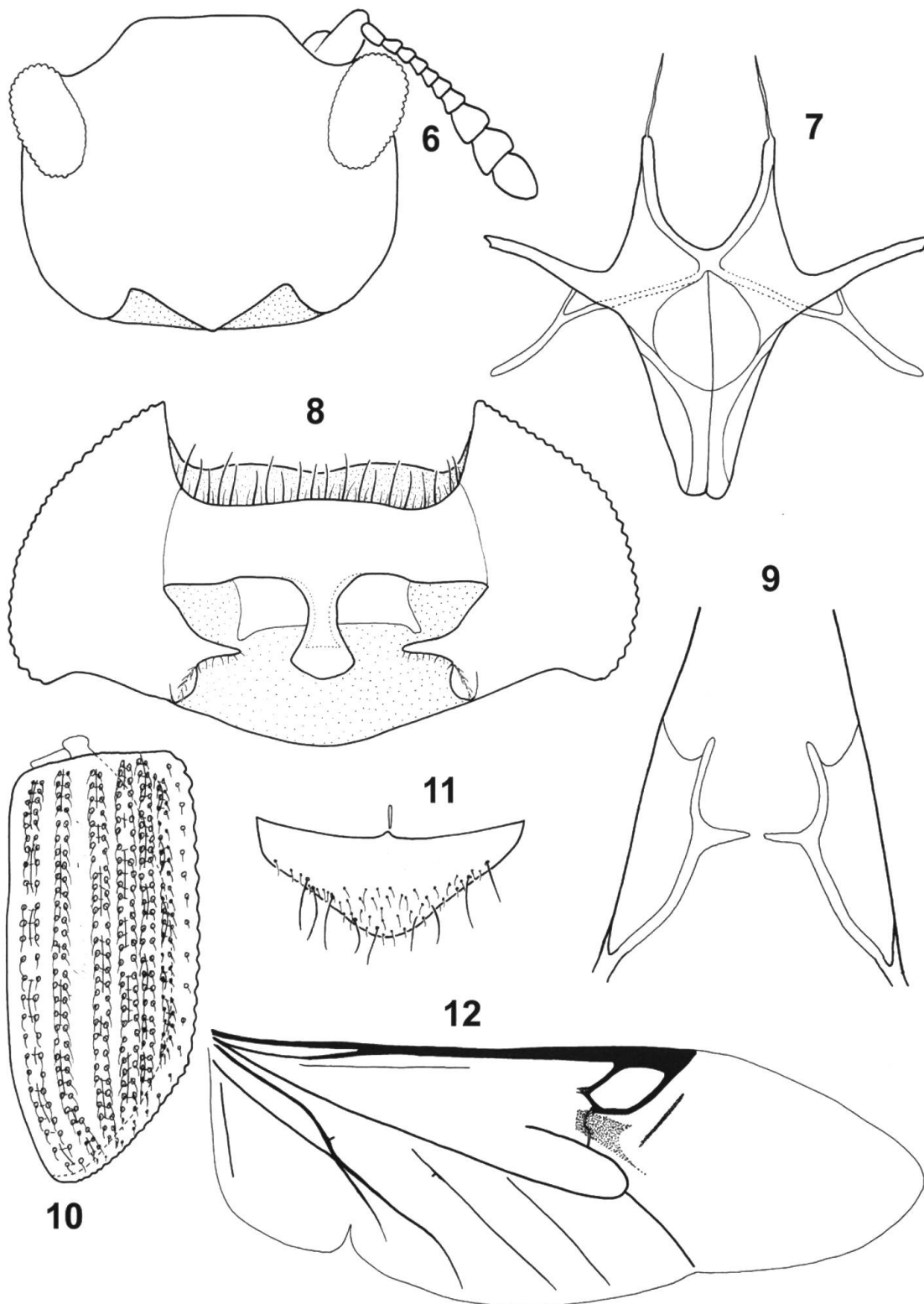
Pl. 31. *Gymnochila sparsuta*: 1, wing; 2, cranium dorsally. *Gymnochila varia*: 3, maxilla; 4, labrum; 5, tegmen ventrally; 6, antenna ventrally; 7, mandible ventrally.



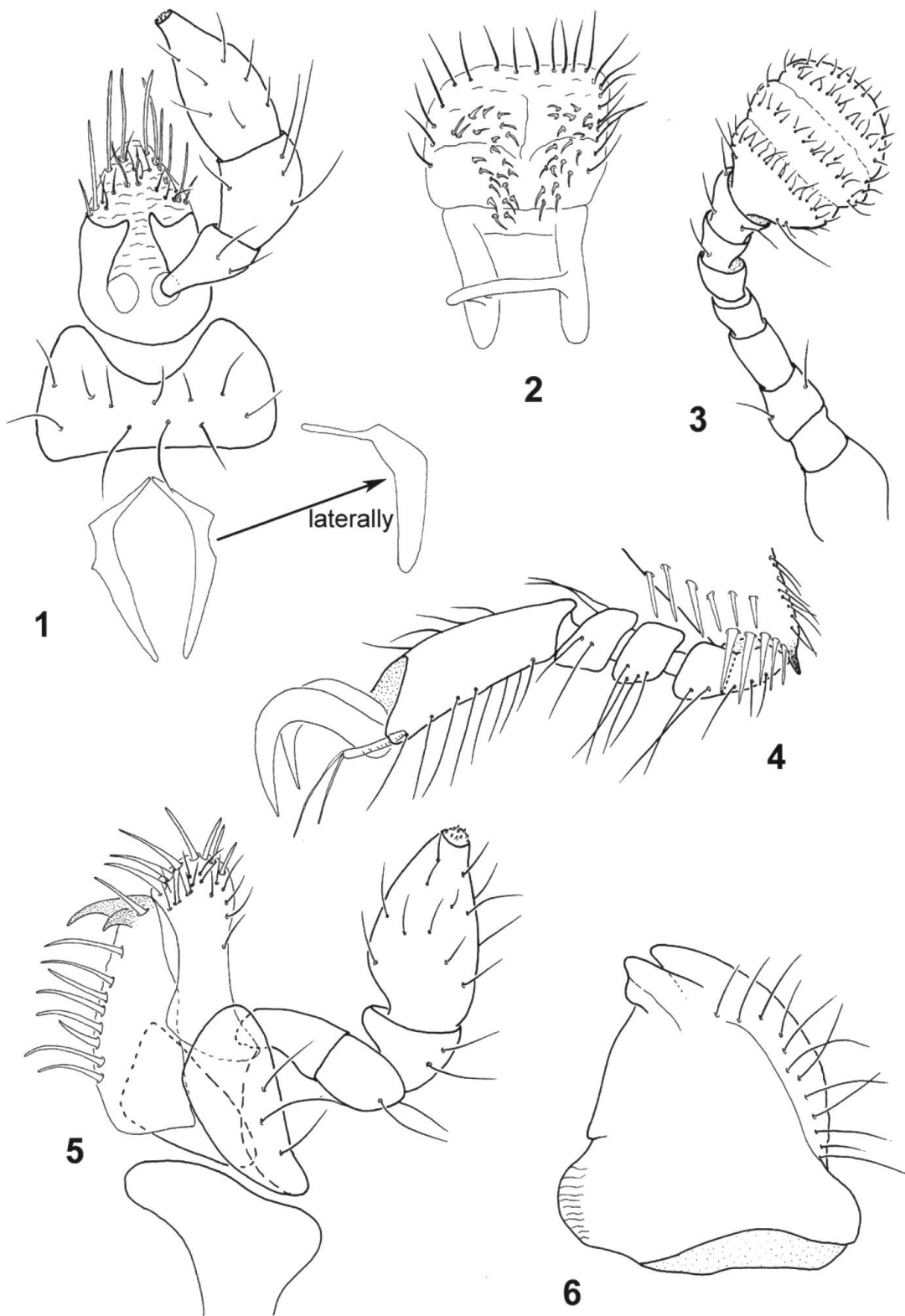
Pl. 32. *Gymnochila sparsuta*: 8, maxilla; 9, antenna dorsally; 10, male segment IX-X; 11, labrum; 13, mandible ventrally; 14, phallus; 15, tegmen ventrally. *Gymnochila varia*: 12, setae in male sternite and tergite VIII.



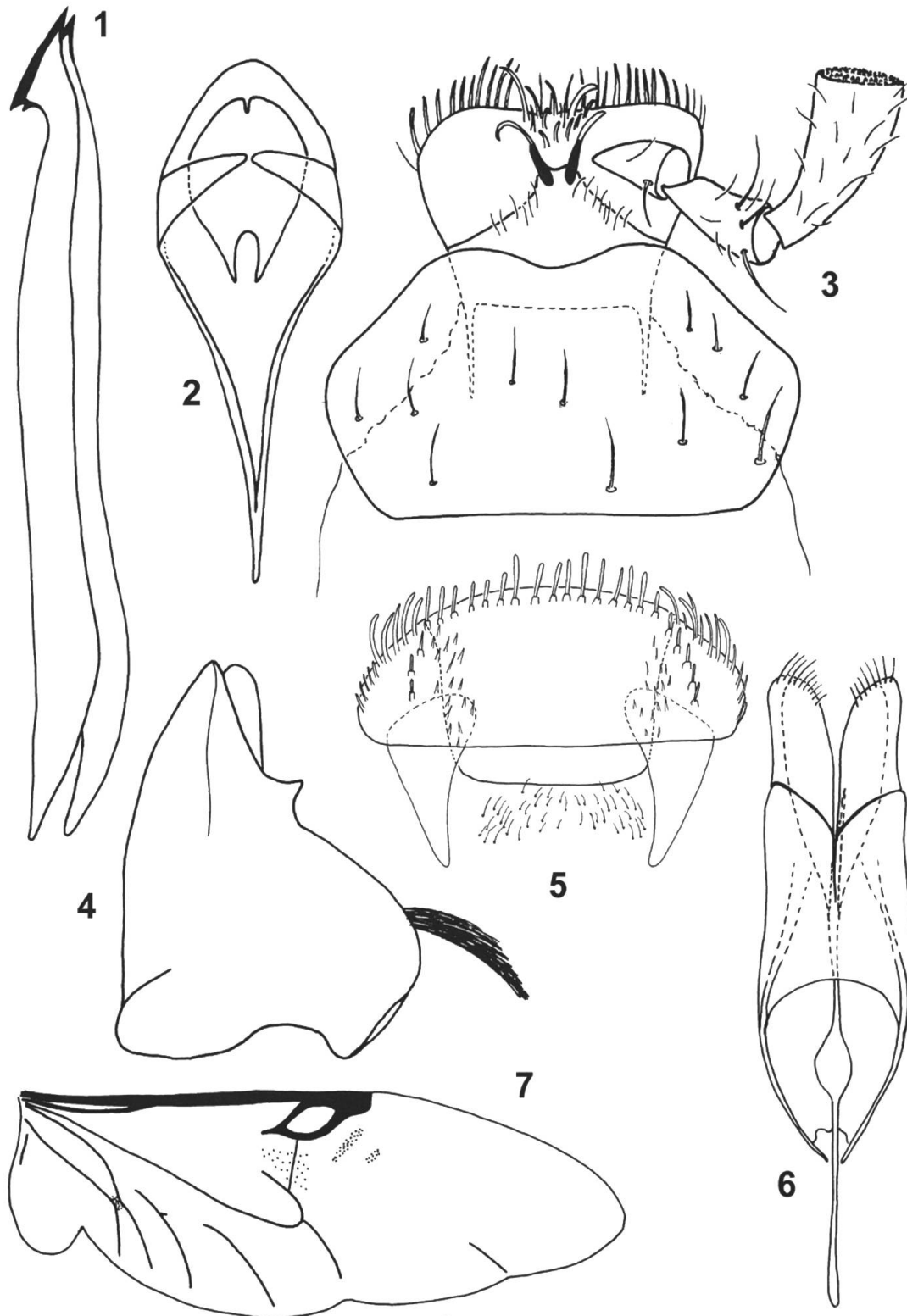
Pl. 33. *Indopeltis nilgiriensis*: 1, maxilla; 2, labium; 3, tegmen dorsolaterally; 4, mandible ventrally; 5, labrum.



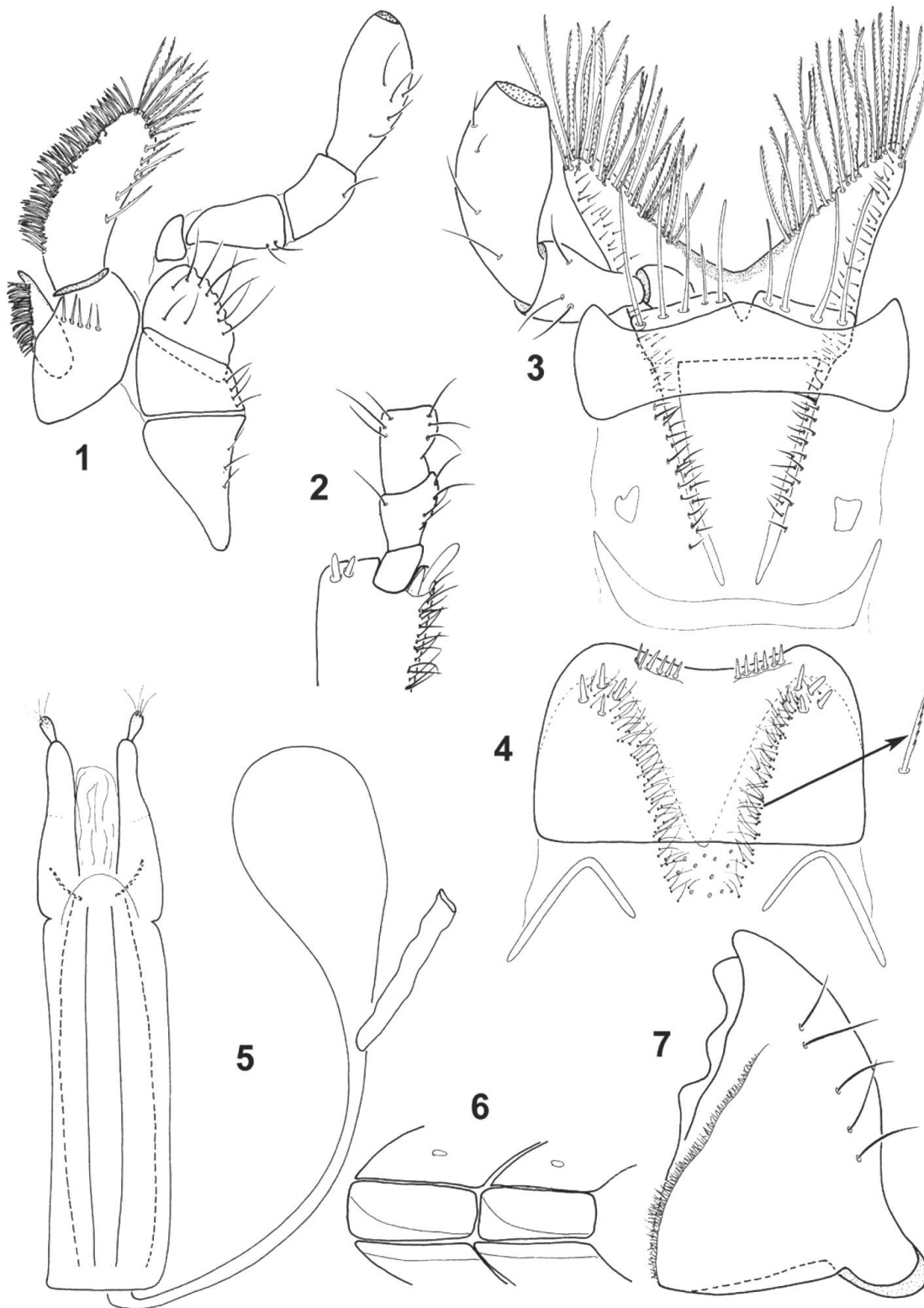
Pl. 34. *Indopeltis nilgiriensis*: 6, cranium and antenna dorsally; 7, metendosternite; 8, prothorax ventrally; 9, tentorium; 10, elytron (epipleure in dotted line); 11, male sternite VIII; 12, wing.



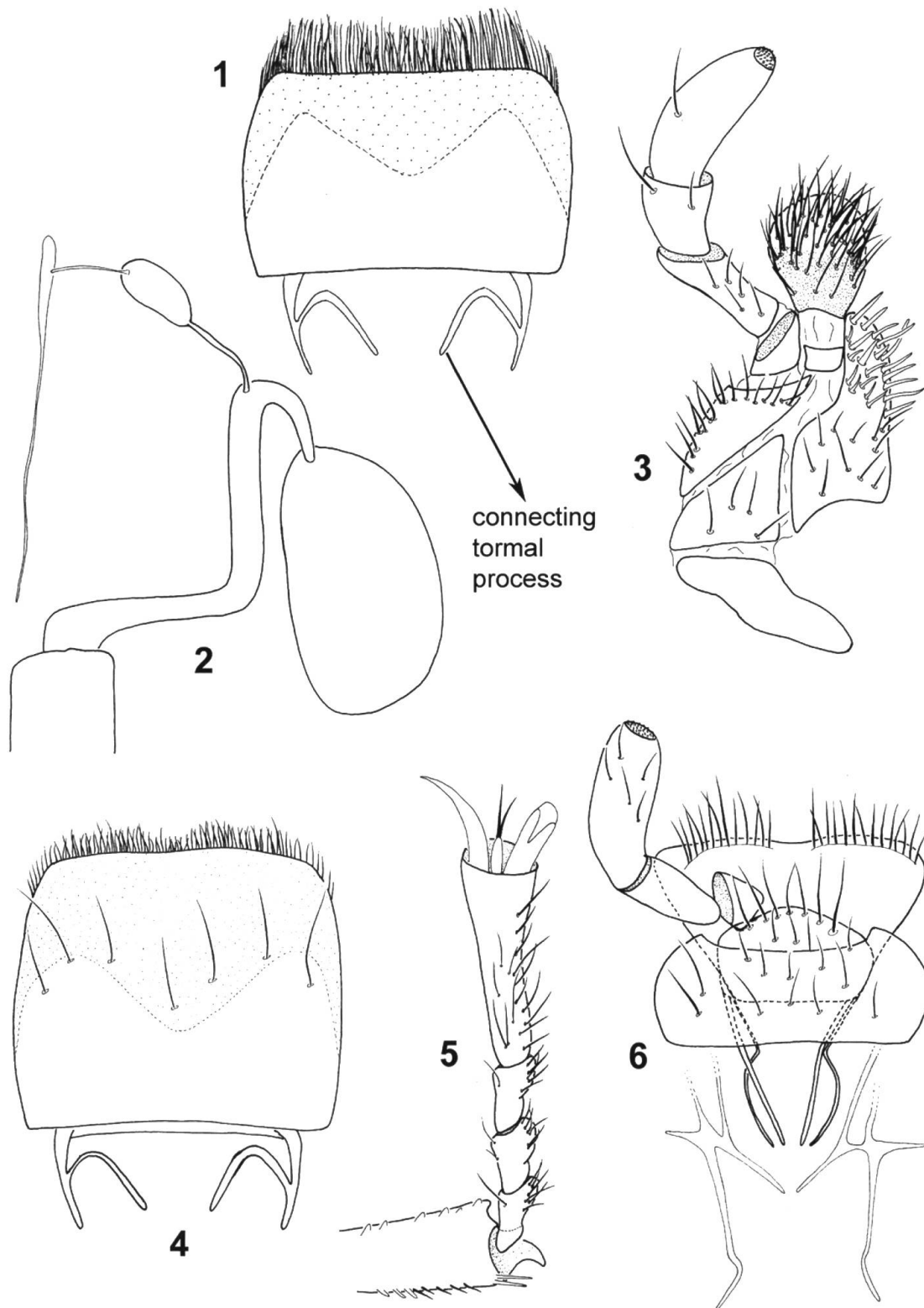
Pl. 35. *Larinotus umblicatus*: 1, labium; 2, labrum; 3, antenna; 4, tarsus; 5, maxilla; 6, mandible ventrally.



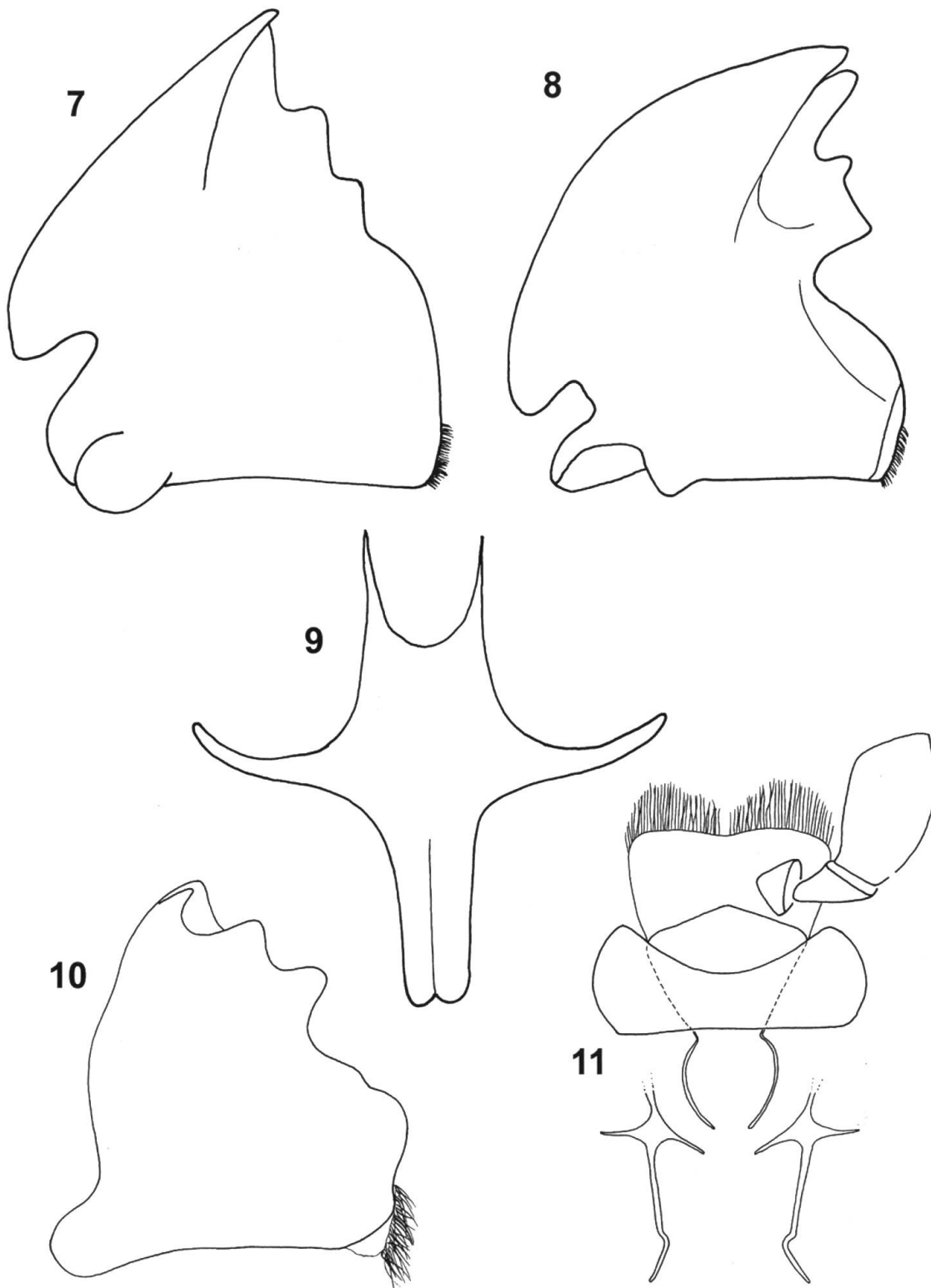
Pl. 36. *Latolaeva incensa*: 1, phallus; 2, male segment IX-X; 3, labium; 4, mandible; 5, labrum; 6, tegmen ventrally; 7, wing.



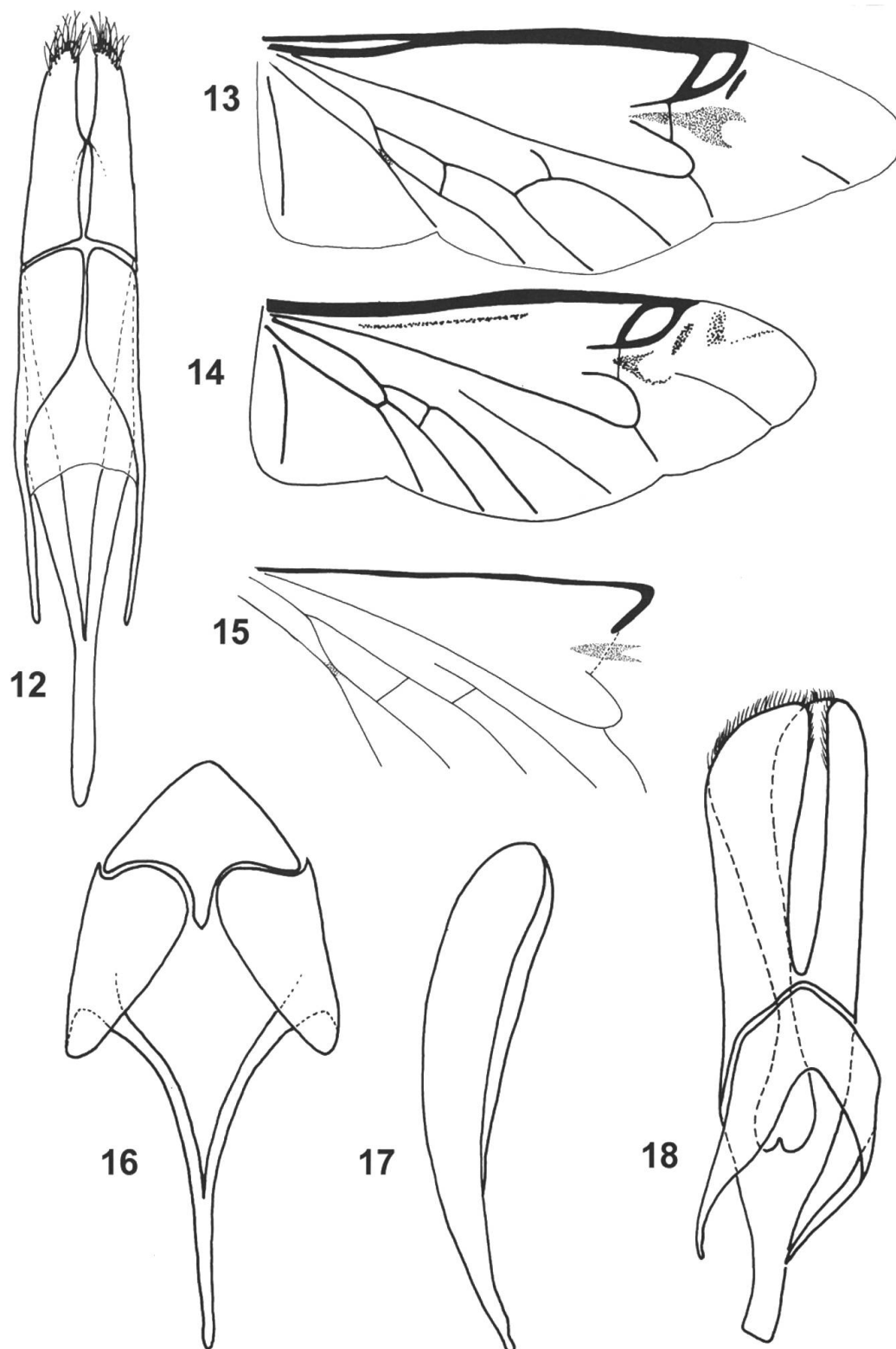
Pl. 37. *Leipaspis lauricola*: 1, maxilla; 2, apex of front tibiae; 3, labium; 4, labrum; 5, female copulatory organs; 6, abdominal segments laterally; 7, mandible ventrally.



Pl. 38. *Leperina decorata*: 1, labrum; 2, female internal copulatory organs; 3, maxilla; 4, labrum; 5, apex of front tibia and tarsus; 6, labium.



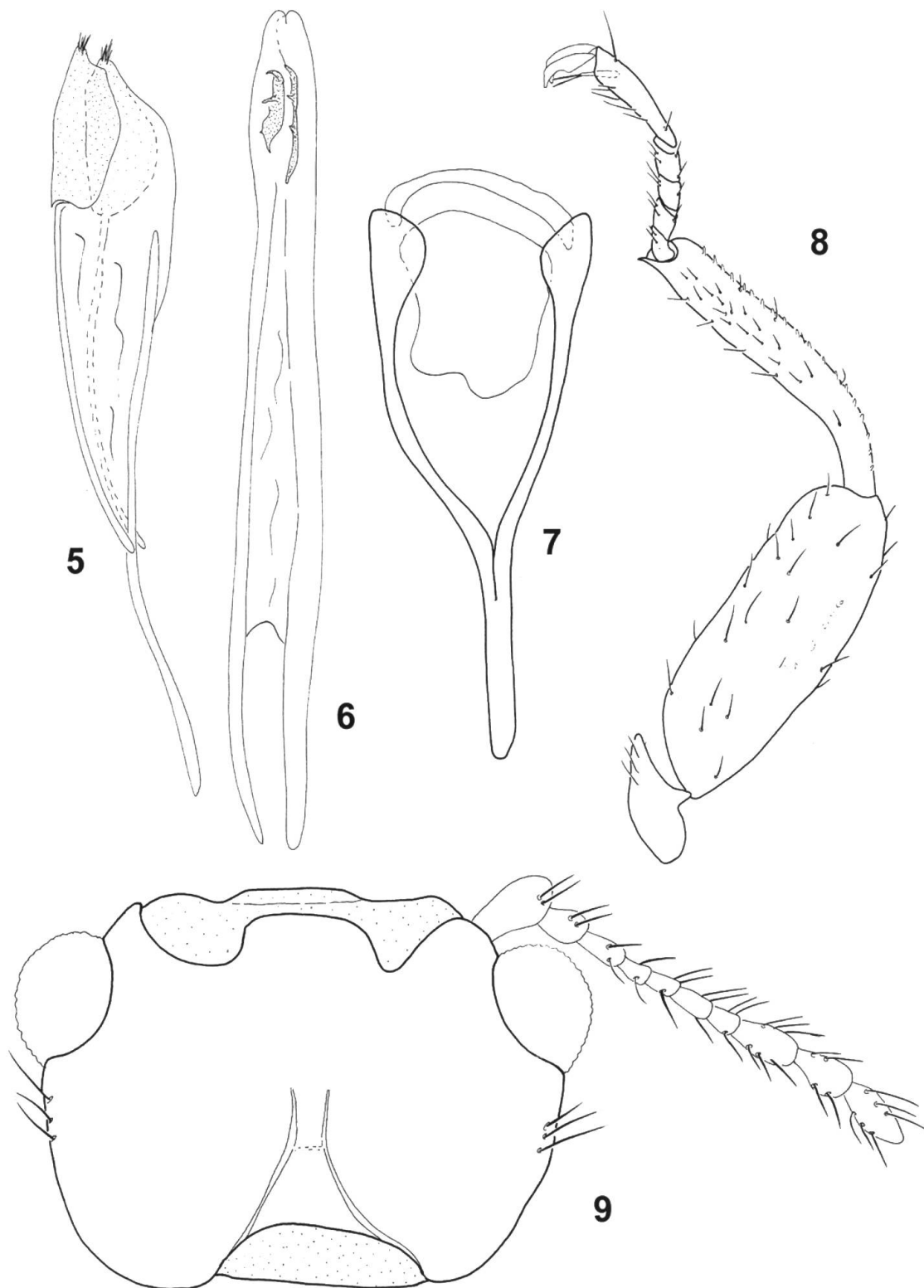
Pl. 39. *Leperina cirrosa*: 7, mandible ventrally; 9, metendosternite. *Leperina squamulosa*: 8, mandible ventrally; 11, labium. *Leperina decorata*: 10, mandible dorsally.



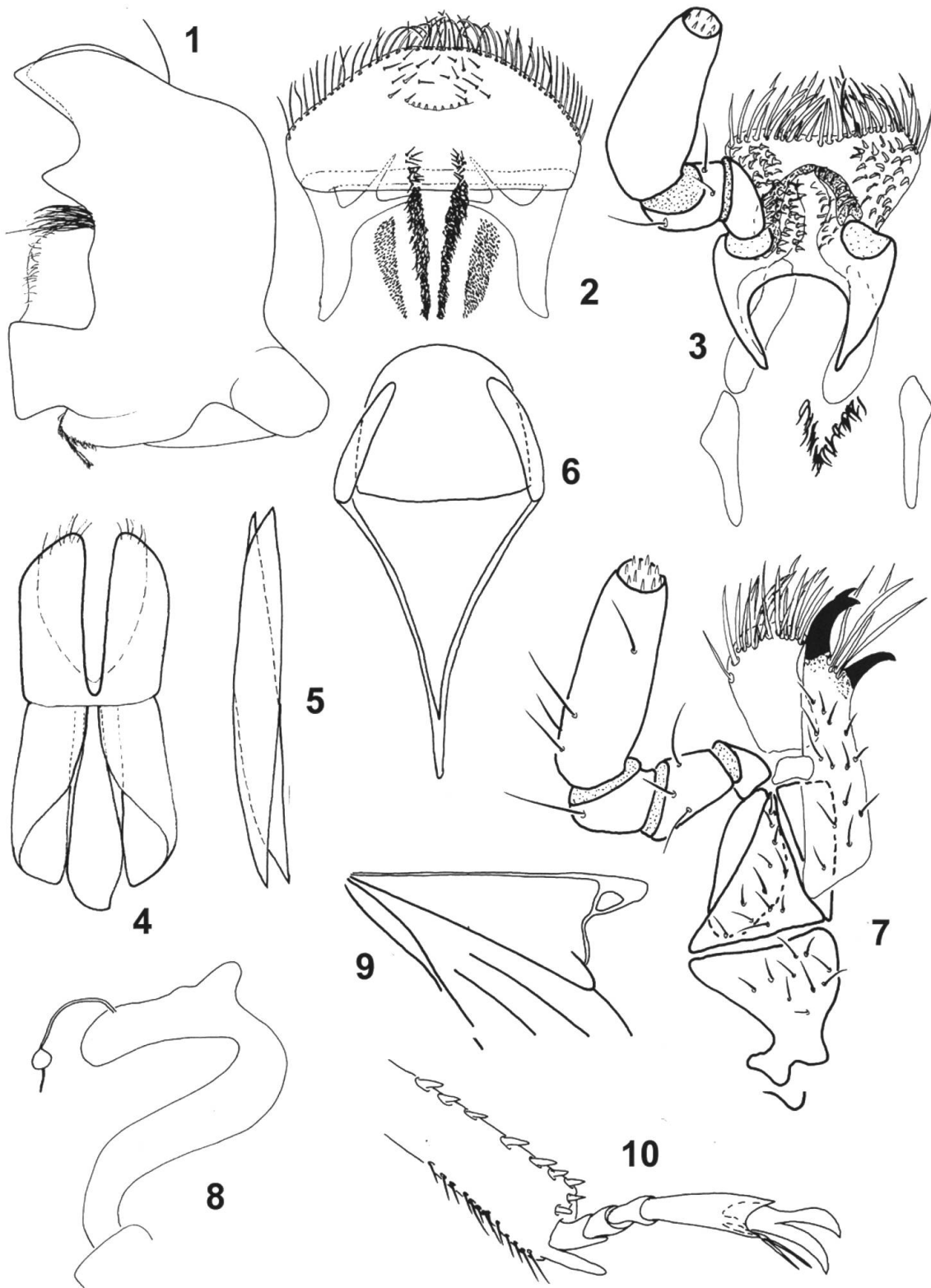
Pl. 40. *Leperina decorata*: 12, tegmen ventrally; 13, wing. *Leperina squamulosa*: 14, wing; 16, male segment IX-X; 17, phallus; 18, tegmen ventrally. *Leperina marmorata*: 15, wing venation.



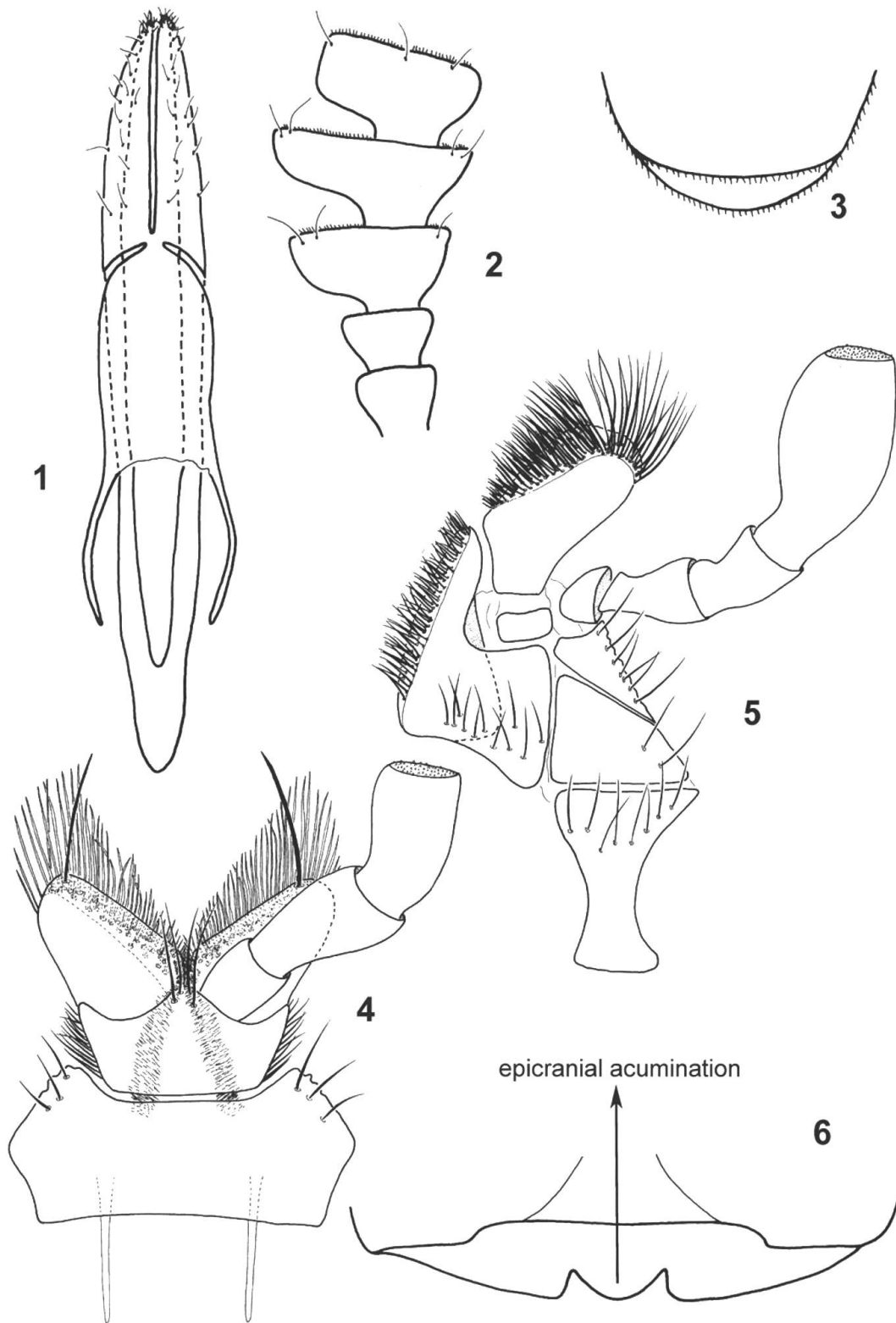
Pl. 41. *Leptonyxa germaini*: 1, maxilla; 2, wing; 3, mandible ventrally; 4, labium.



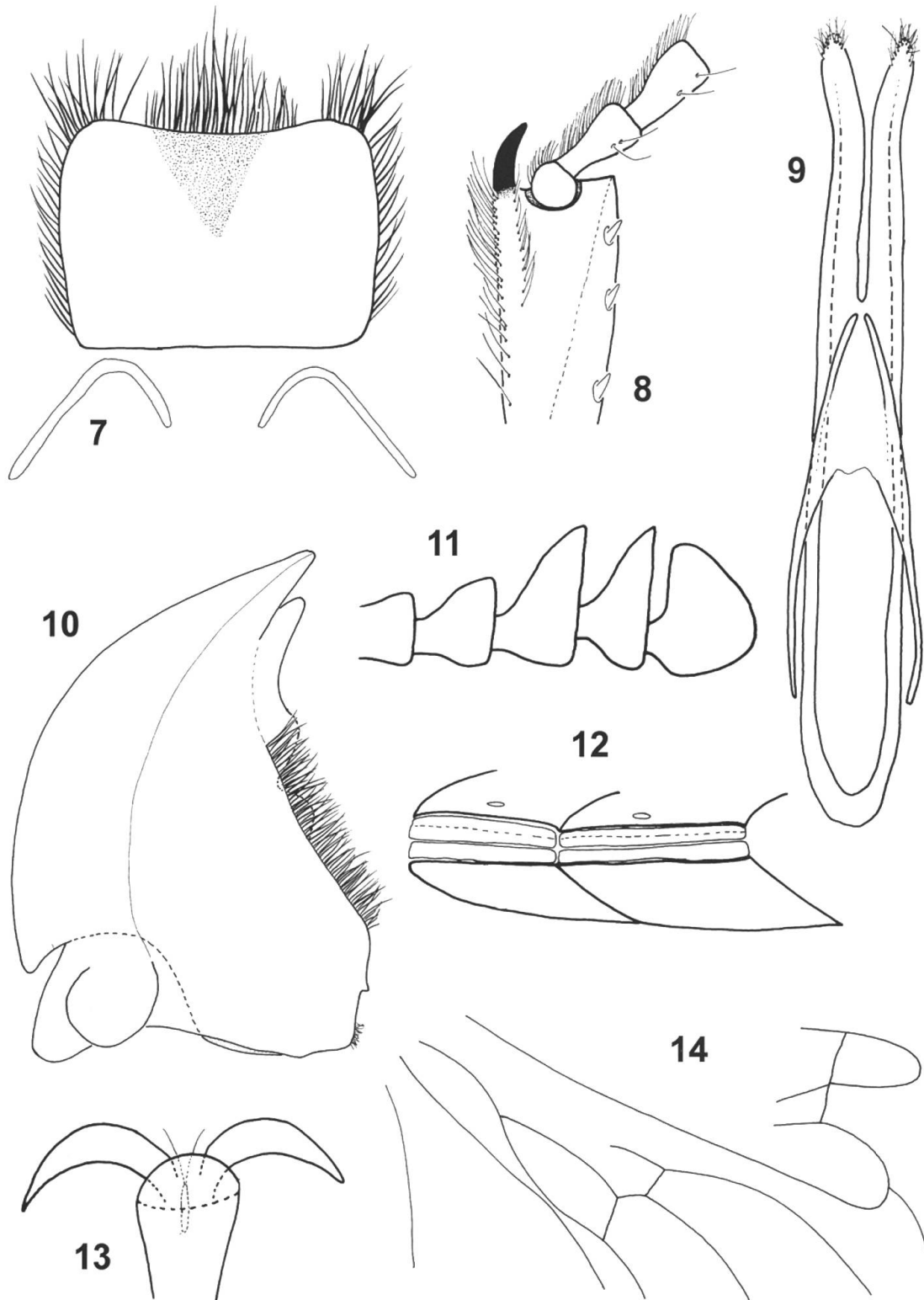
Pl. 42. *Leptonyxa fairmairei*: 5, tegmen laterally; 6, phallus; 7, male segment IX-X. *Leptonyxa germaini*: 8, front leg; 9, cranium, tentorium and antenna ventrally.



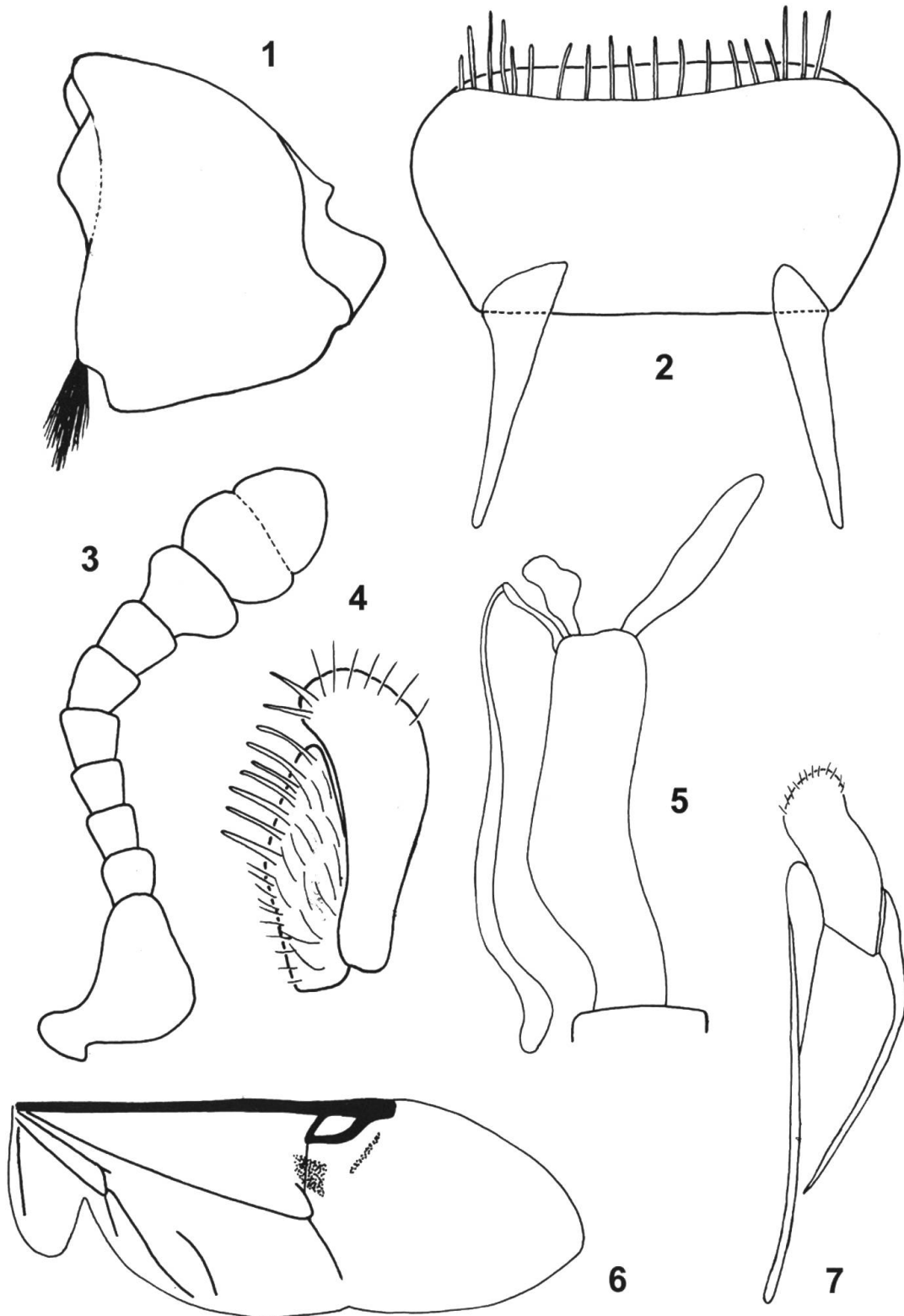
Pl. 43. *Lophocateres pusillus*: 1, mandible ventrally; 2, labrum; 3, labium; 4, tegmen ventrally; 5, phallus; 6, male segment IX-X; 7, maxilla; 8, female internal copulatory organs; 9, wing venation; 10, apex of hind tibia and tarsus.



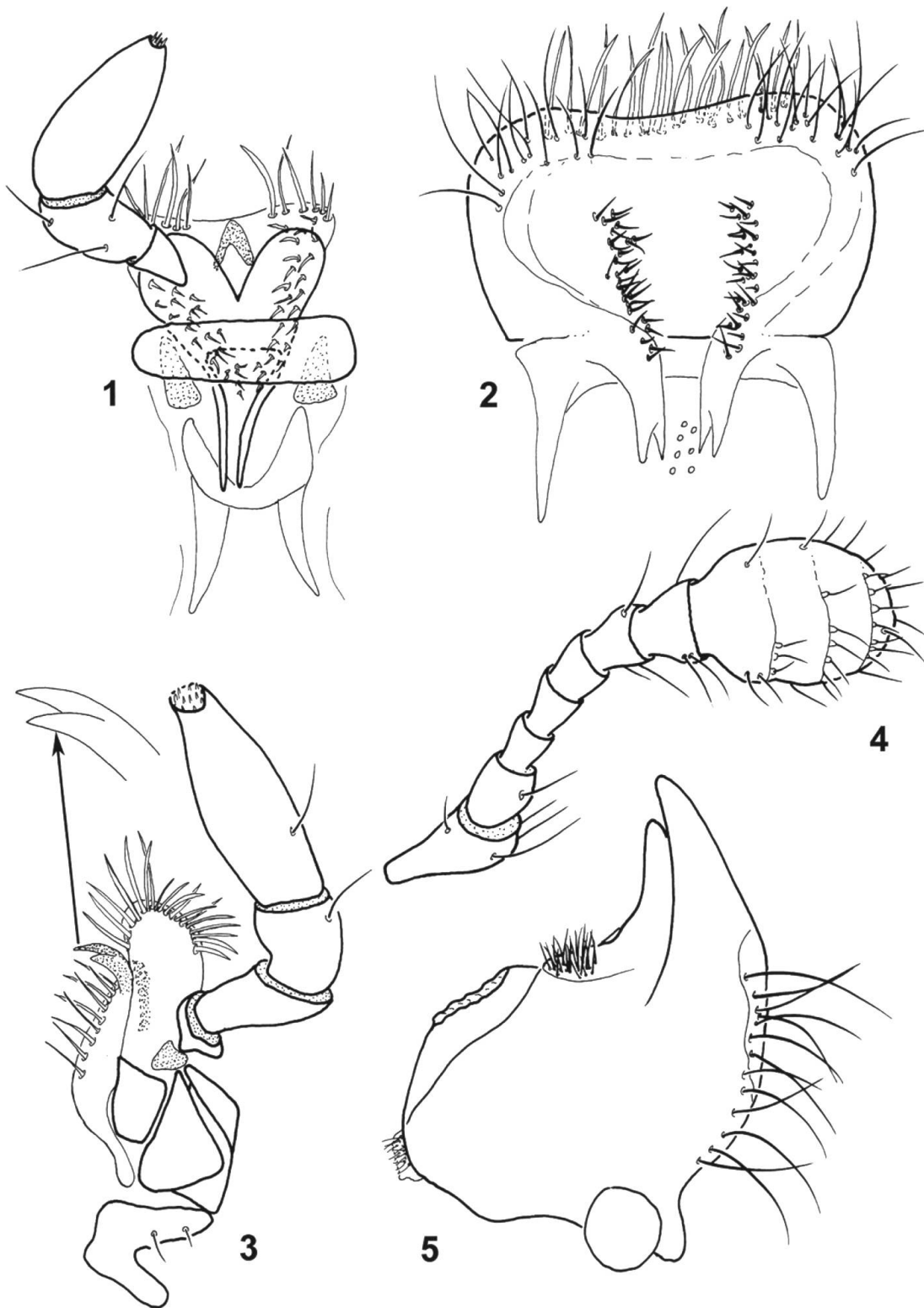
Pl. 44. *Melambia tekkensis*: 1, tegmen ventrally; 2, end of antenna; 3, abdominal (visible) sternite V; 6, posterior foramen of cranium ventrally. *Melambia gigas*: 4, labium; 5, maxilla.



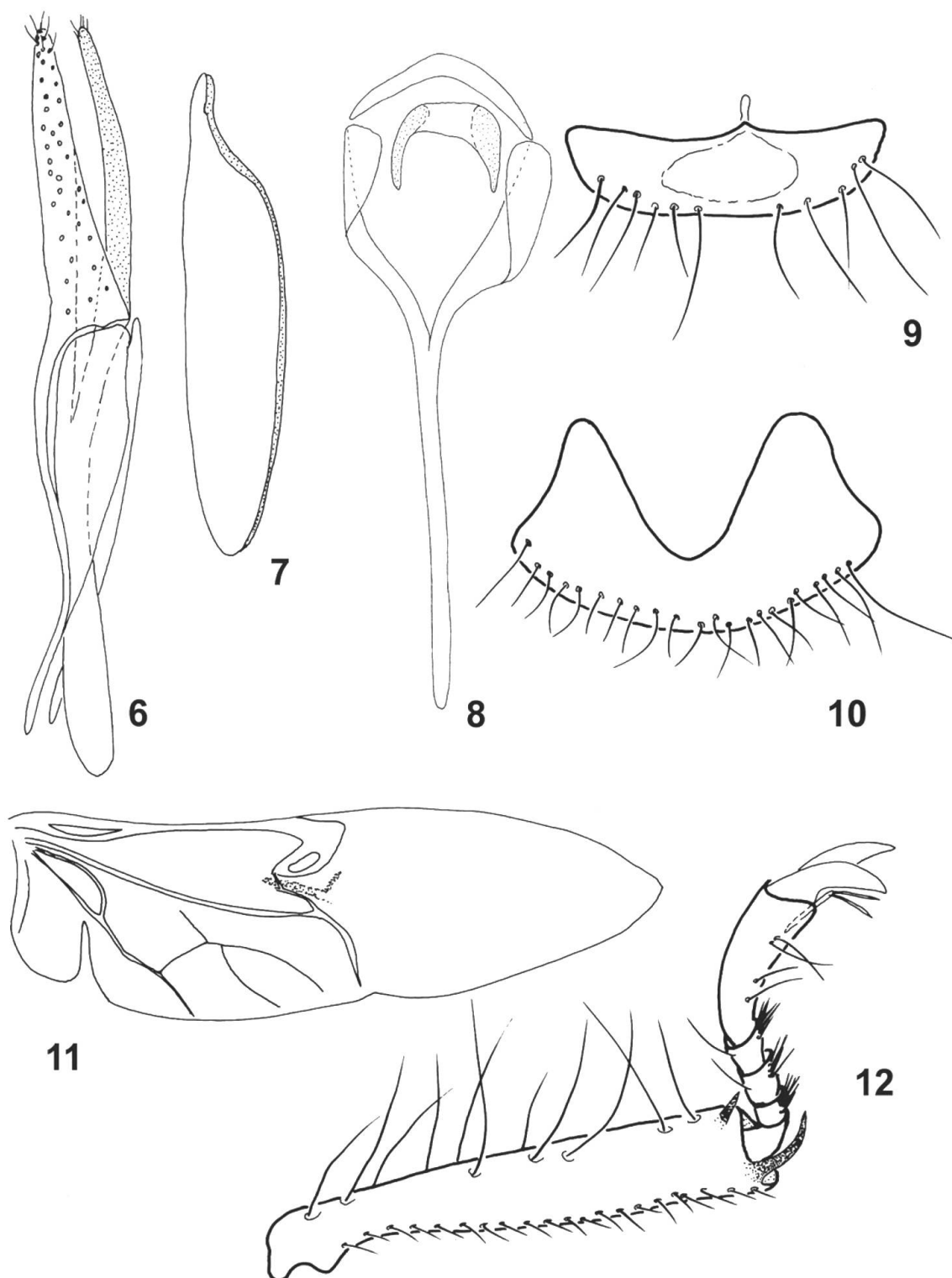
Pl. 45. *Melambia gigas*: 7, labrum; 8, apex of front tibia; 9, tegmen ventrally; 10, mandible ventrally; 11, end of antenna; 12, abdominal segments laterally; 13, tarsal claws and empodium; 14, wing venation.



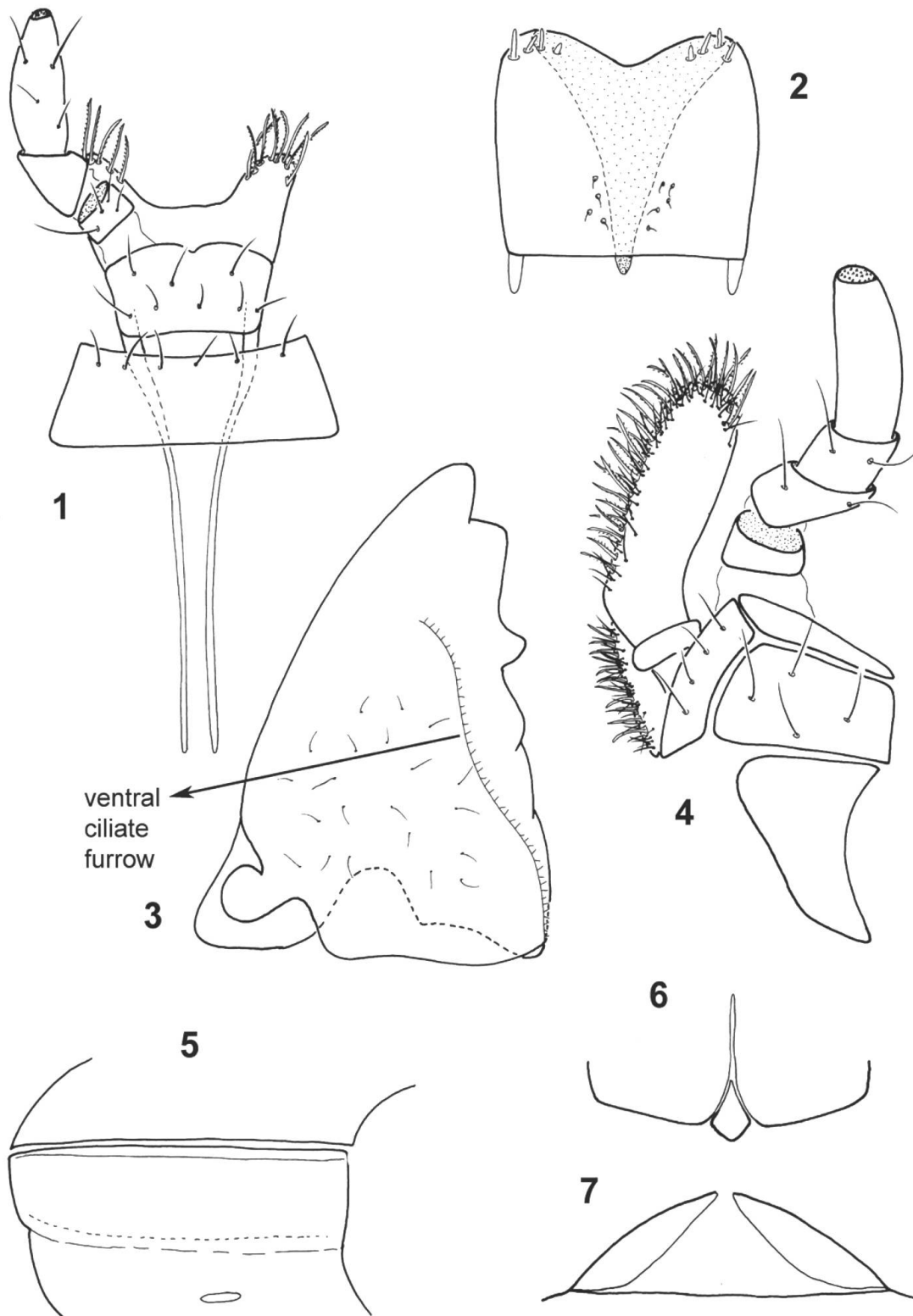
Pl. 46. *Neaspis variegata*: 1, mandible ventrally; 2, labrum; 3, antenna; 4, lacinia and galea; 5, female internal copulatory organs; 6, wing; 7, tegmen laterally.



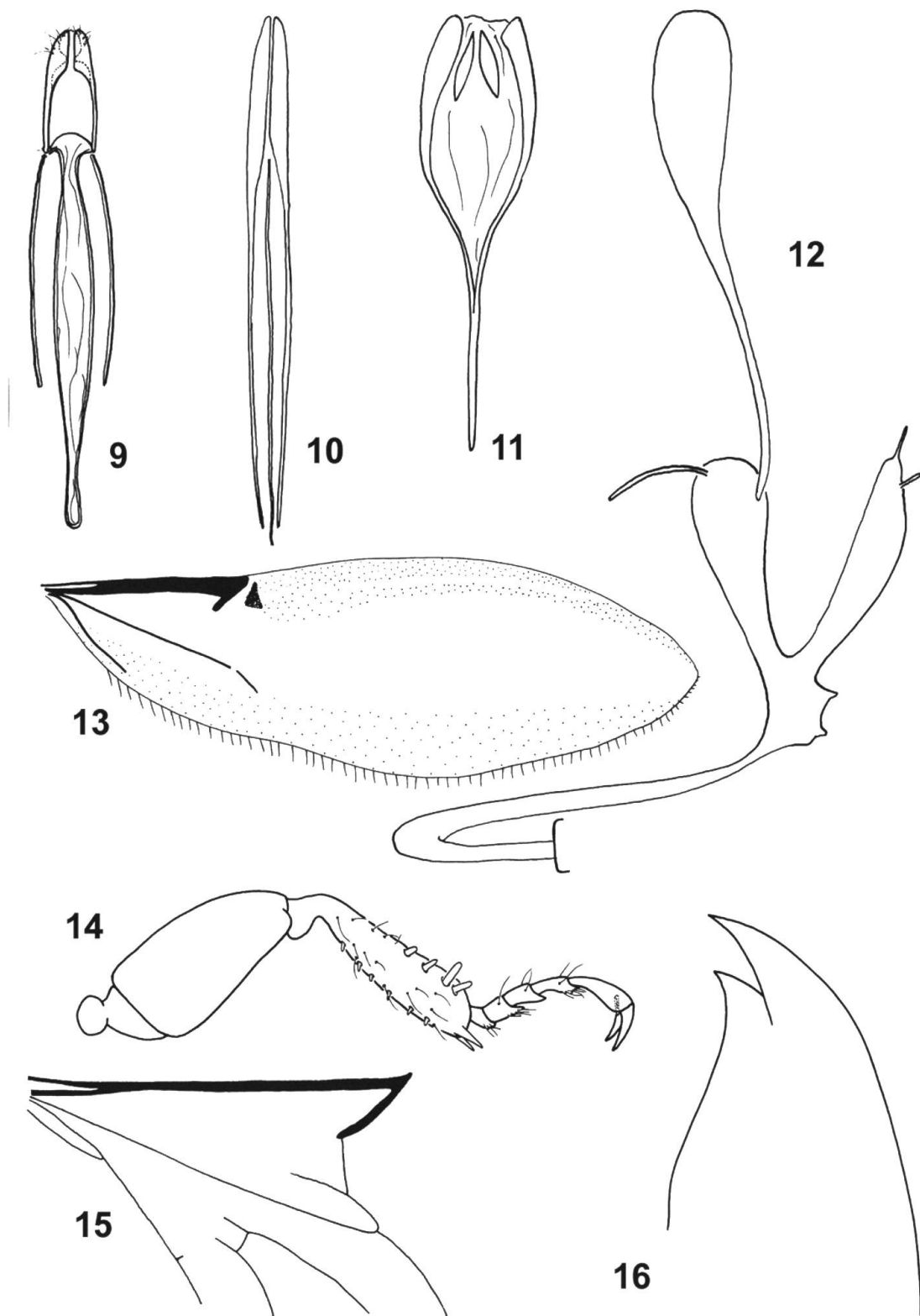
Pl. 47. *Necrobiopsis tasmanicus*: 1, labium; 2, labrum; 3, maxilla; 4, antenna; 5, mandible ventrally.



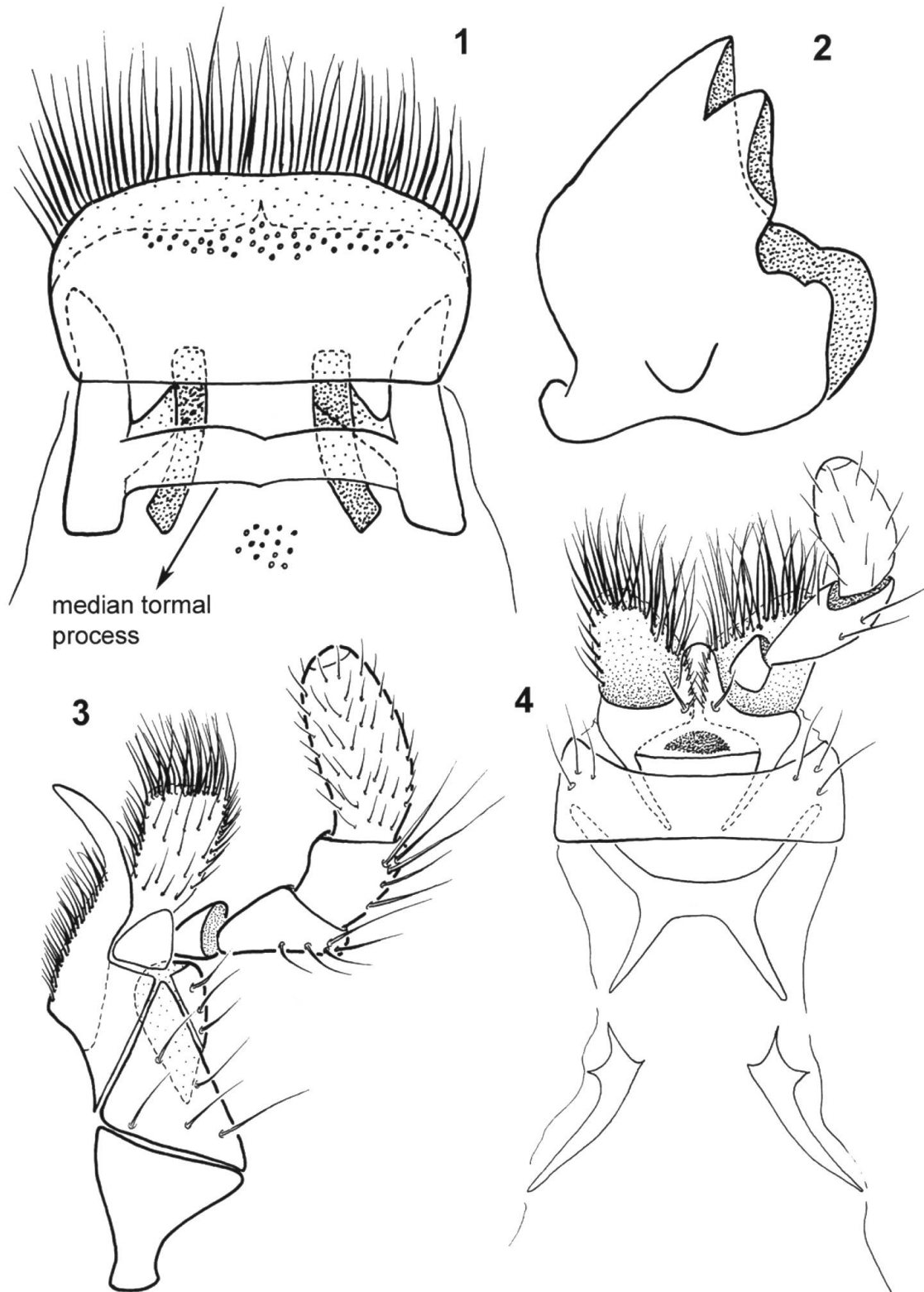
**Pl. 48.** *Necrobiopsis tasmanicus*: 6, tegmen laterally; 7, phallus; 8, male segment IX-X; 9, male sternite VIII; 10, male tergite VIII; 11, wing; 12, front tibia and tarsus.



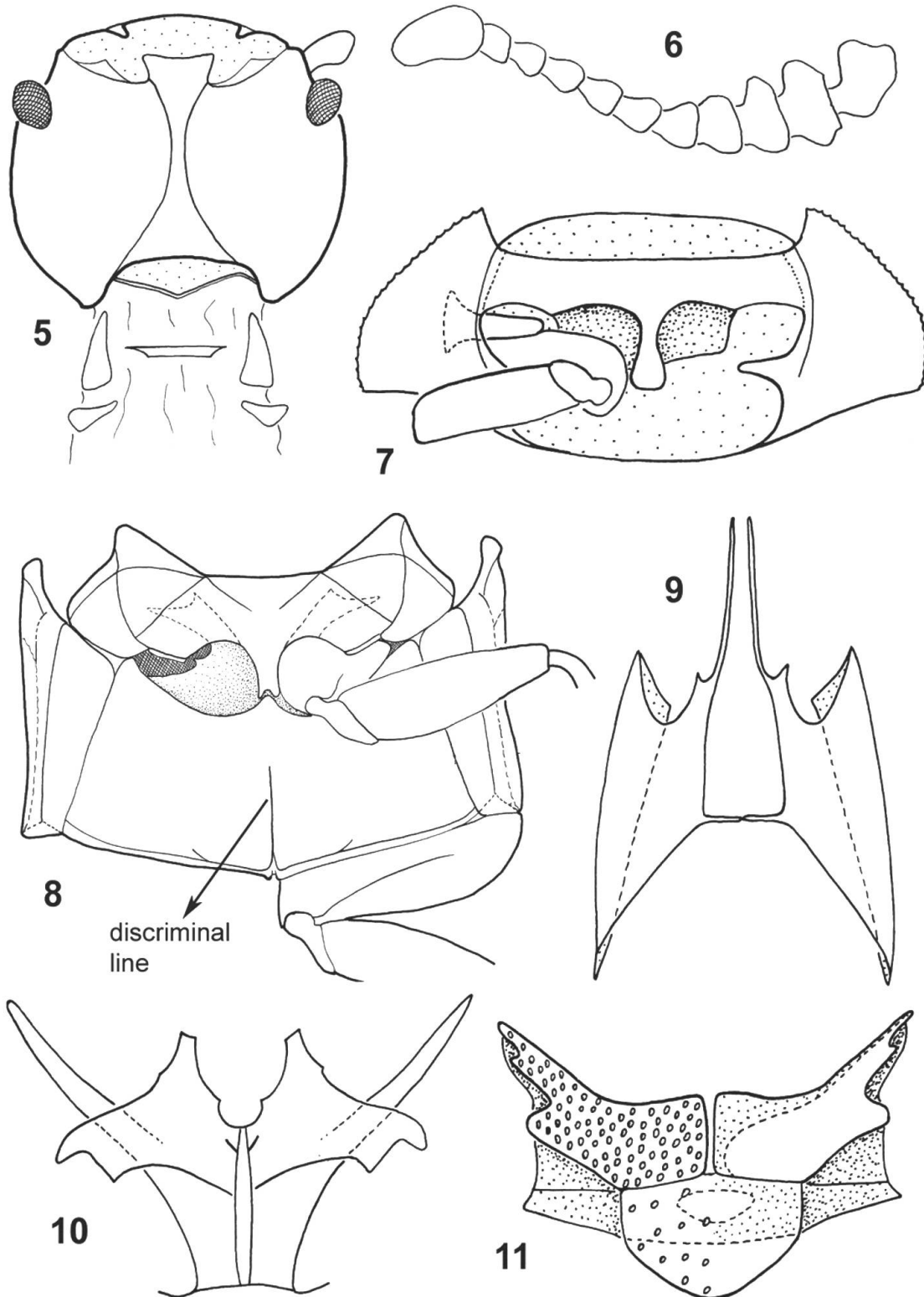
Pl. 49. *Nemozoma elongatum*: 1, labium; 2, labrum; 3, mandible ventrally; 4, maxilla; 5, abdominal segment laterally; 6, base of cranium dorsally; 7, gular sutures and tentorium.



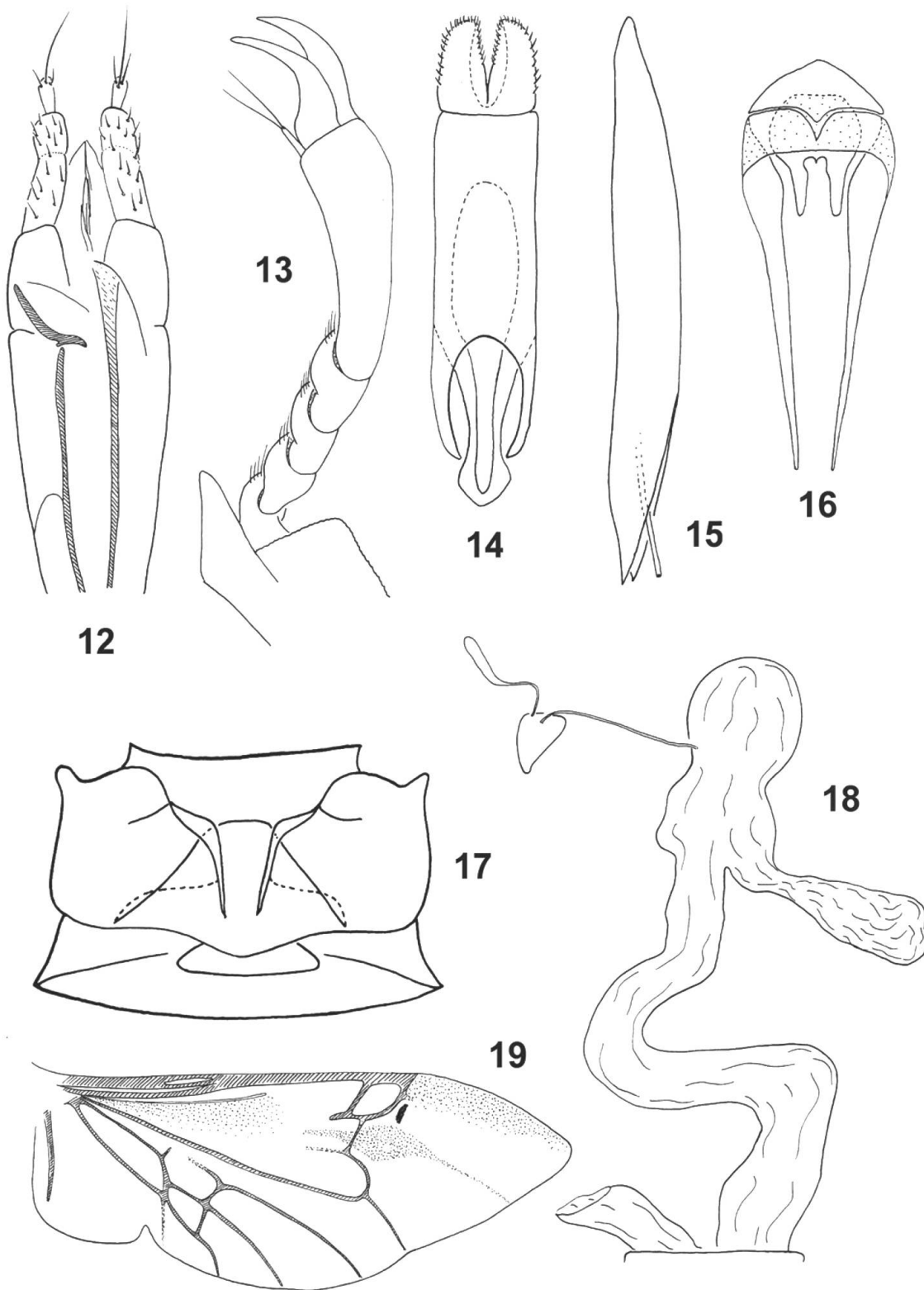
Pl. 50. *Nemozoma elongatum*: 9, tegmen ventrally; 10, phallus; 11, male segment IX-X; 12, female internal copulatory organs; 15, wing venation; *Nemozoma mollis*: 13, wing; 14, middle leg; 16, apex of mandible ventrally.



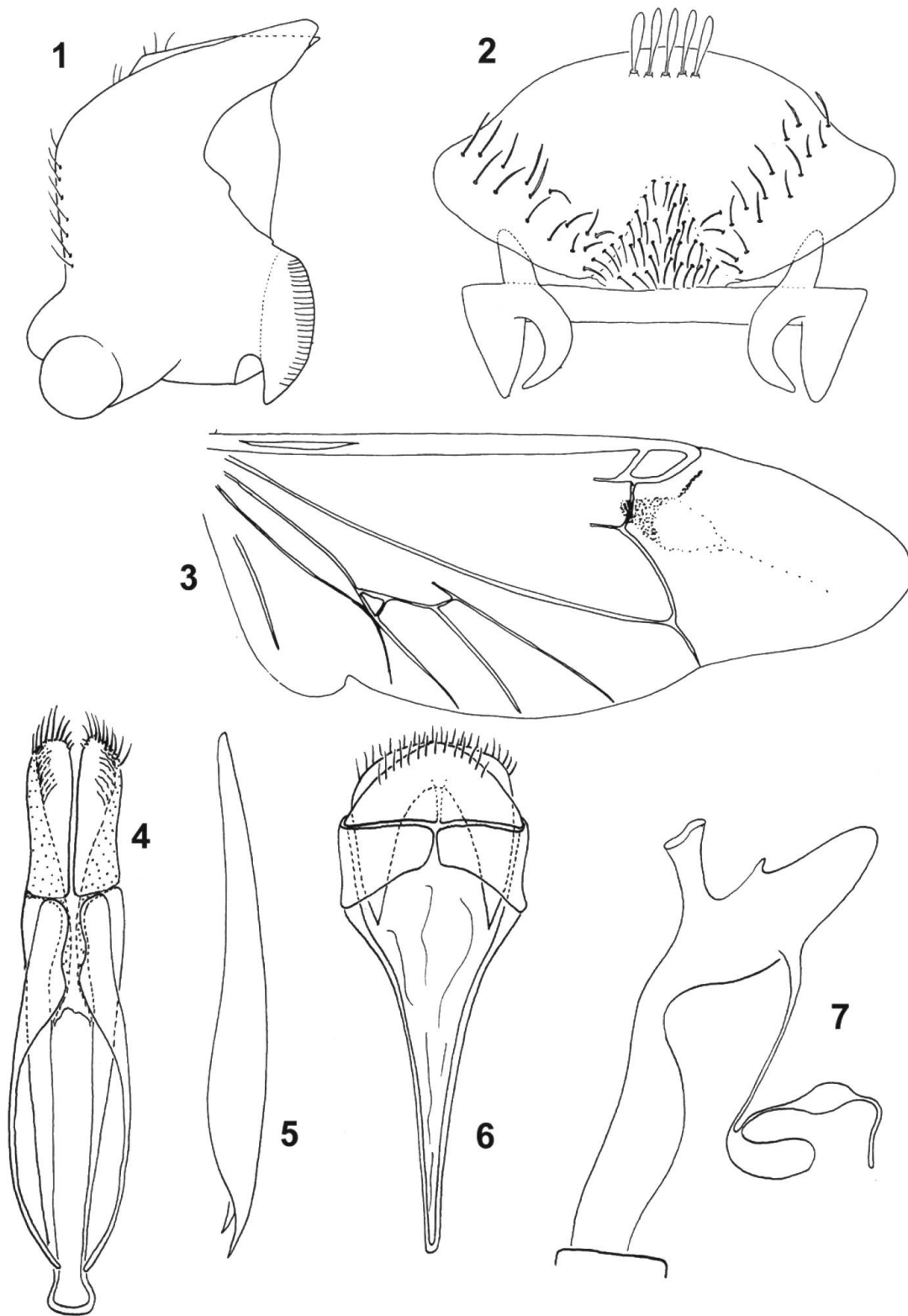
Pl. 51. *Peltis grossa*: 1, labrum; 2, mandible ventrally; 3, maxilla; 4, labium.



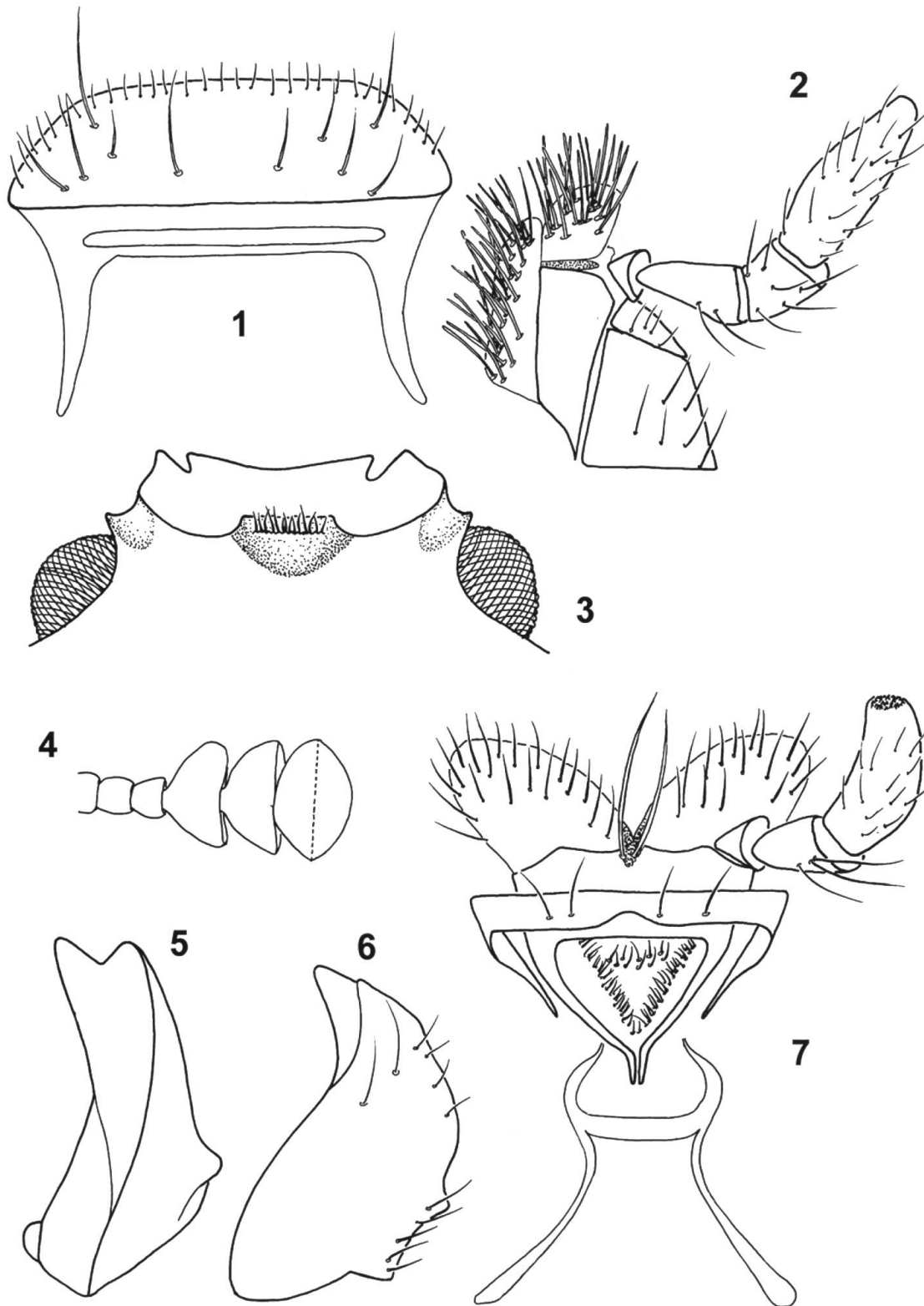
Pl. 52. *Peltis grossa*: 5, cranium and antenna ventrally; 6, antenna; 7, prothorax ventrally; 8, meso- and metathorax ventrally; 9, tentorium; 10, metendosternite; 11, mesonotum.



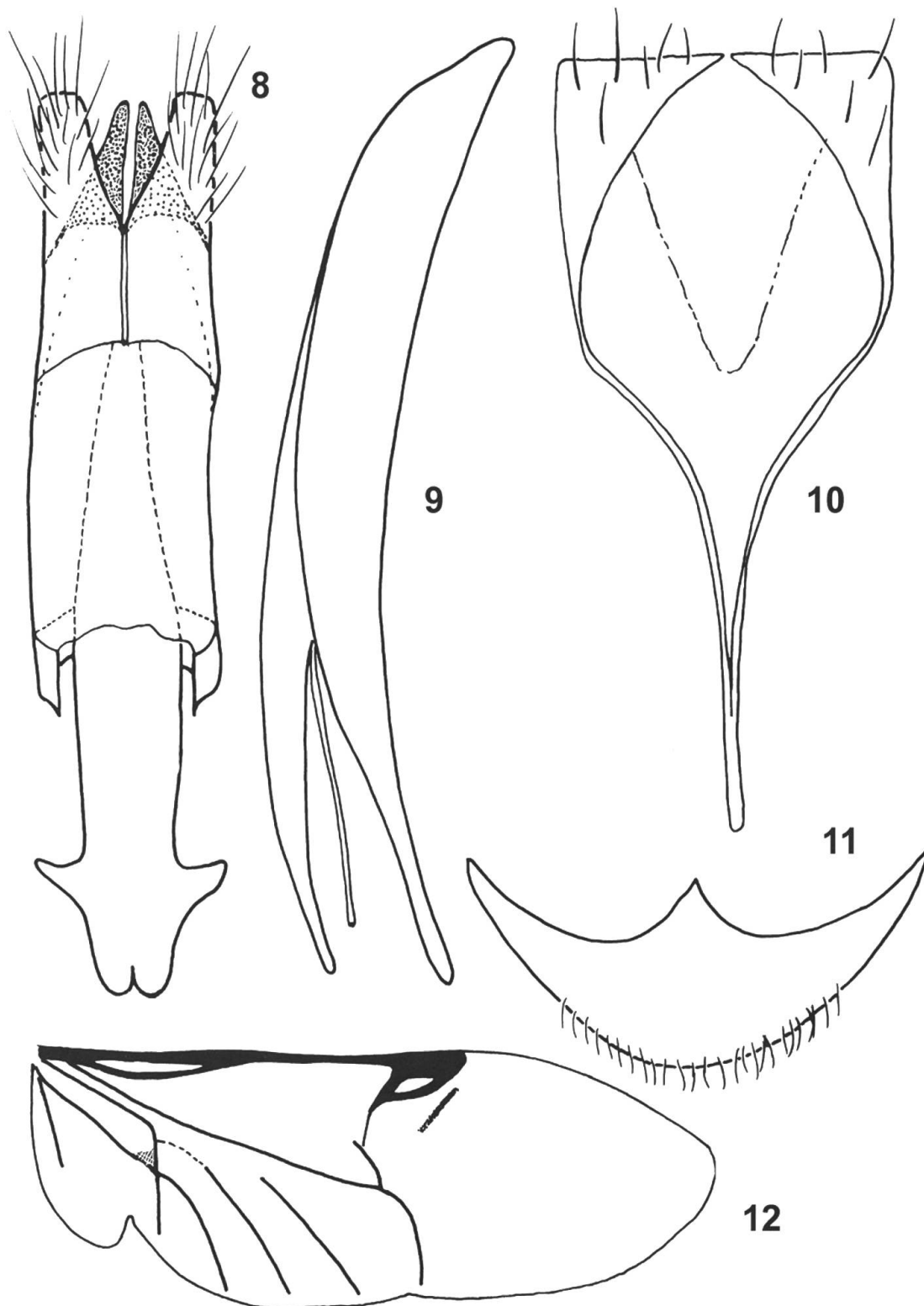
Pl. 53. *Peltis grossa*: 12, ovipositor; 13, apex of front tibia and tarsus; 14, tegmen ventrally; 15, phallus; 16, male segment IX-X; 17, metanotum; 18, female internal copulatory organs; 19, wing.



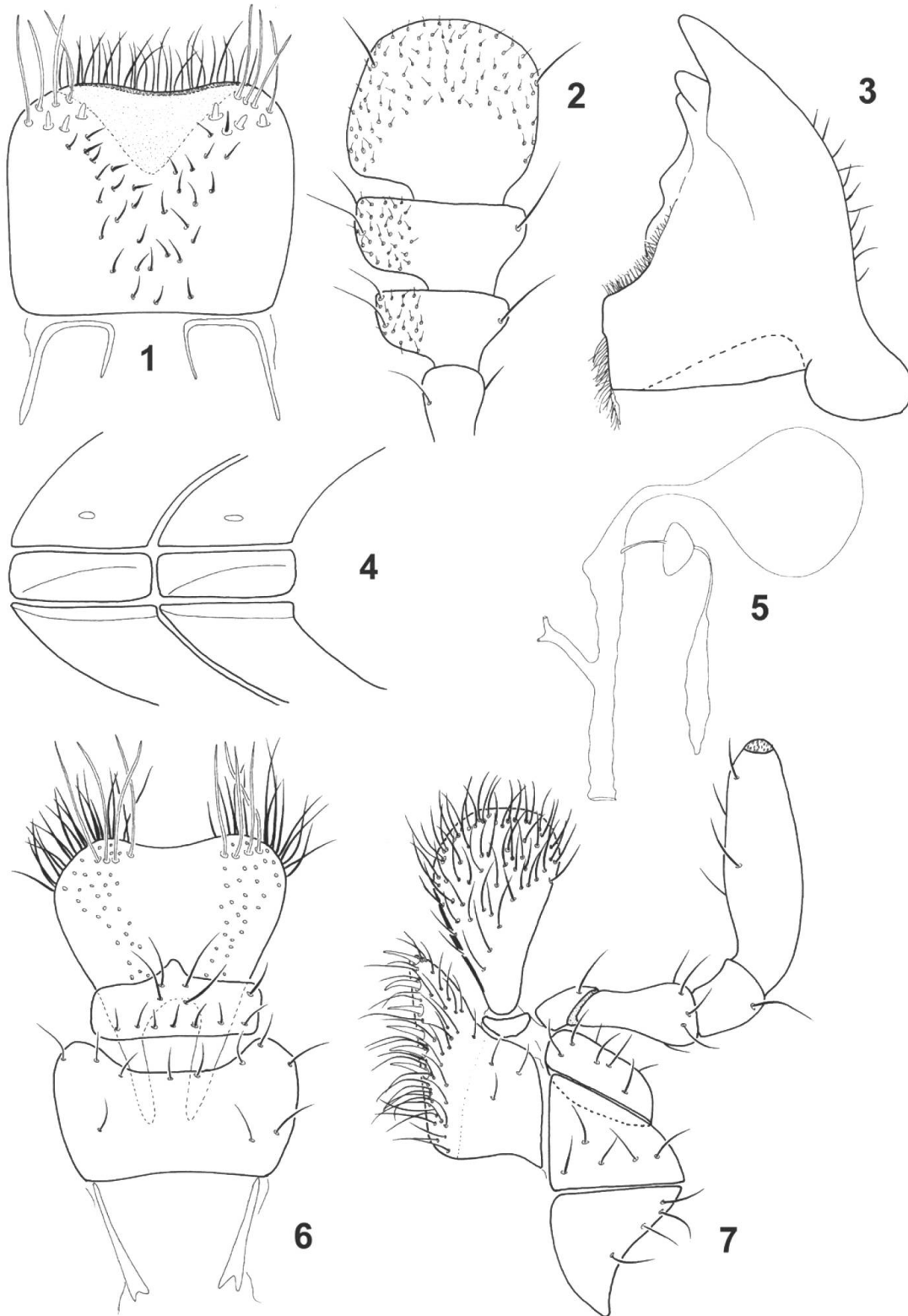
Pl. 54. *Peltis ferruginea*: 1, mandible ventrally; 2, labrum; 3, wing; 4, tegmen ventrally; 5, phallus; 6, male segment IX-X; 7, female internal copulatory organs.



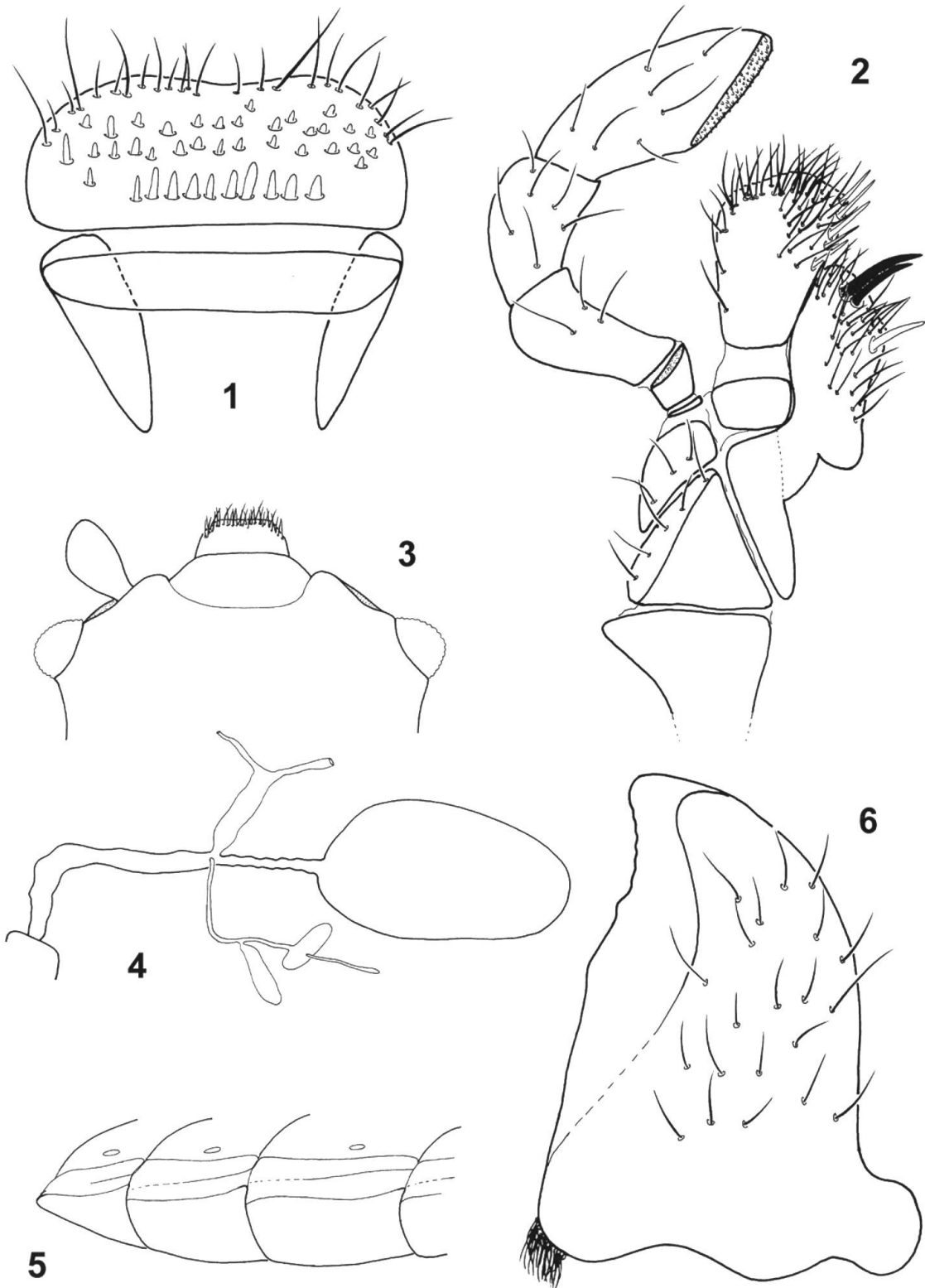
Pl. 55. *Peltonyxa deyrollei*: 1, labrum; 2, maxilla; 3, anterior part of cranium ventrally; 4, end of antenna; 5, mandible frontal view; 6, mandible ventrally; 7, labium.



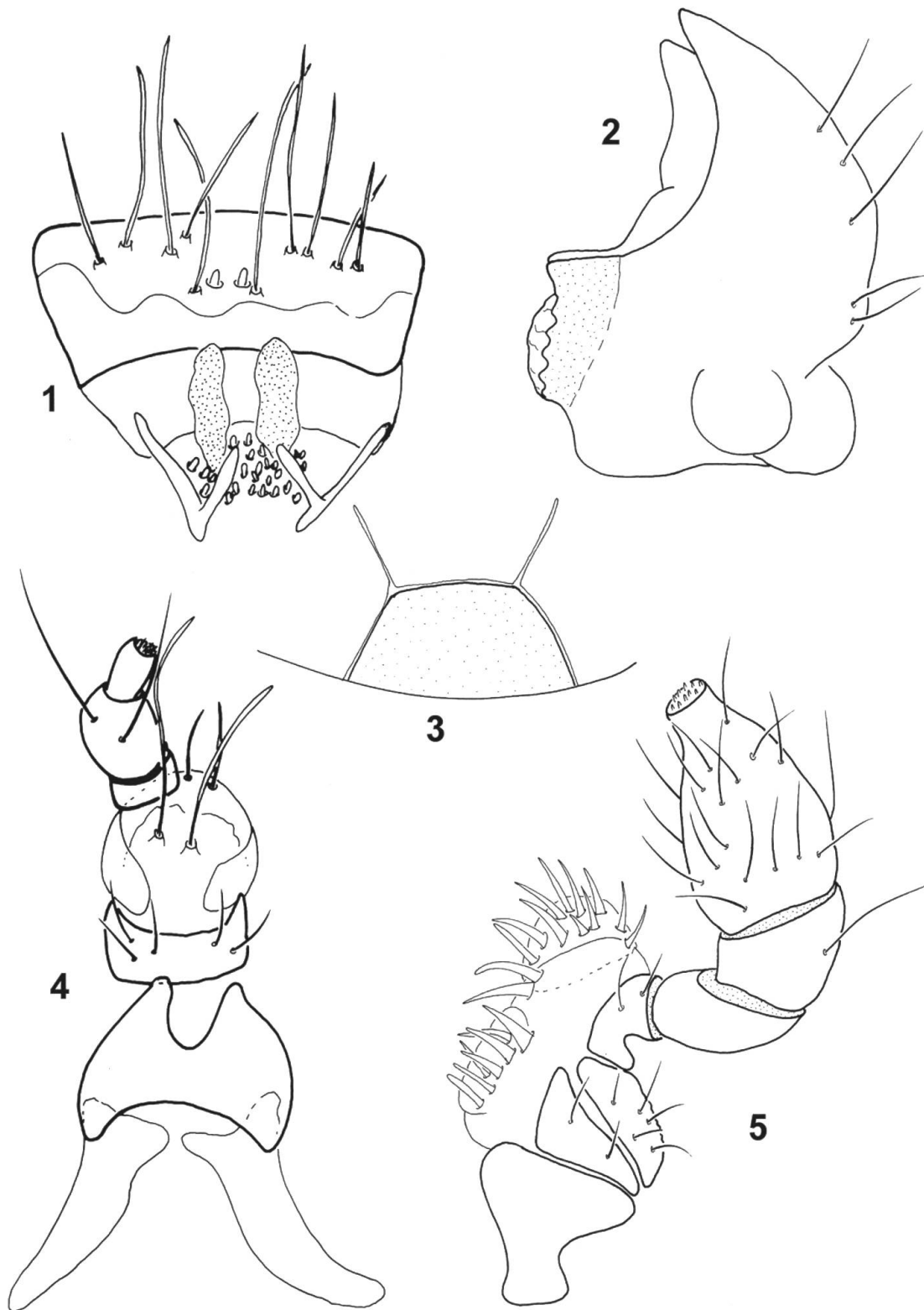
Pl. 56. *Peltonyxa deyrollei*: 8, tegmen ventrally; 9, phallus; 10, male segment IX-X; 11, male sternite VIII; 12, wing.



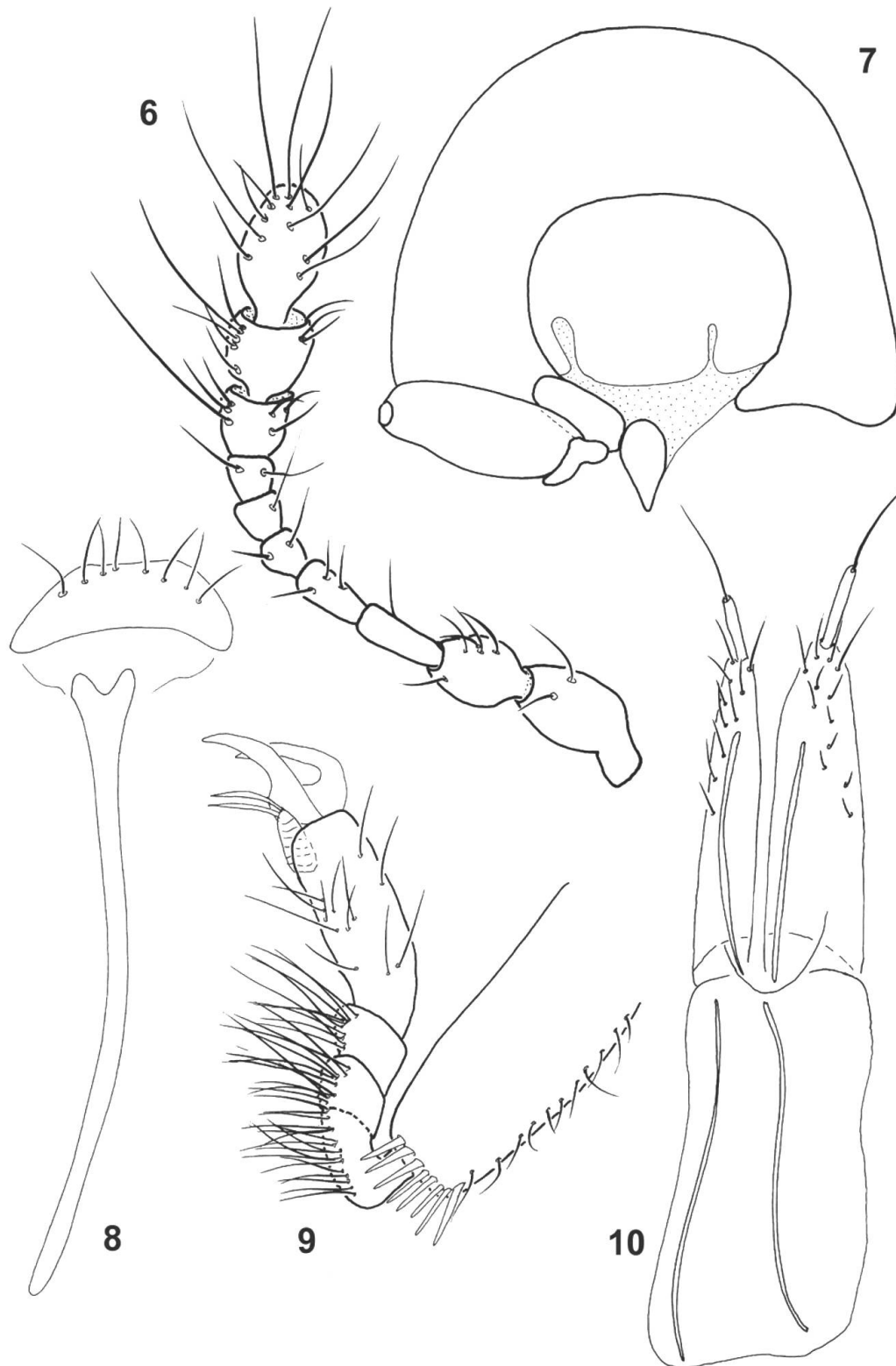
Pl. 57. *Phanodesta cribraria*: 1, labrum; 2, end of antenna; 3, mandible ventrally; 4, abdominal segments laterally; 5, female internal copulatory organs; 6, labium; 7, maxilla.



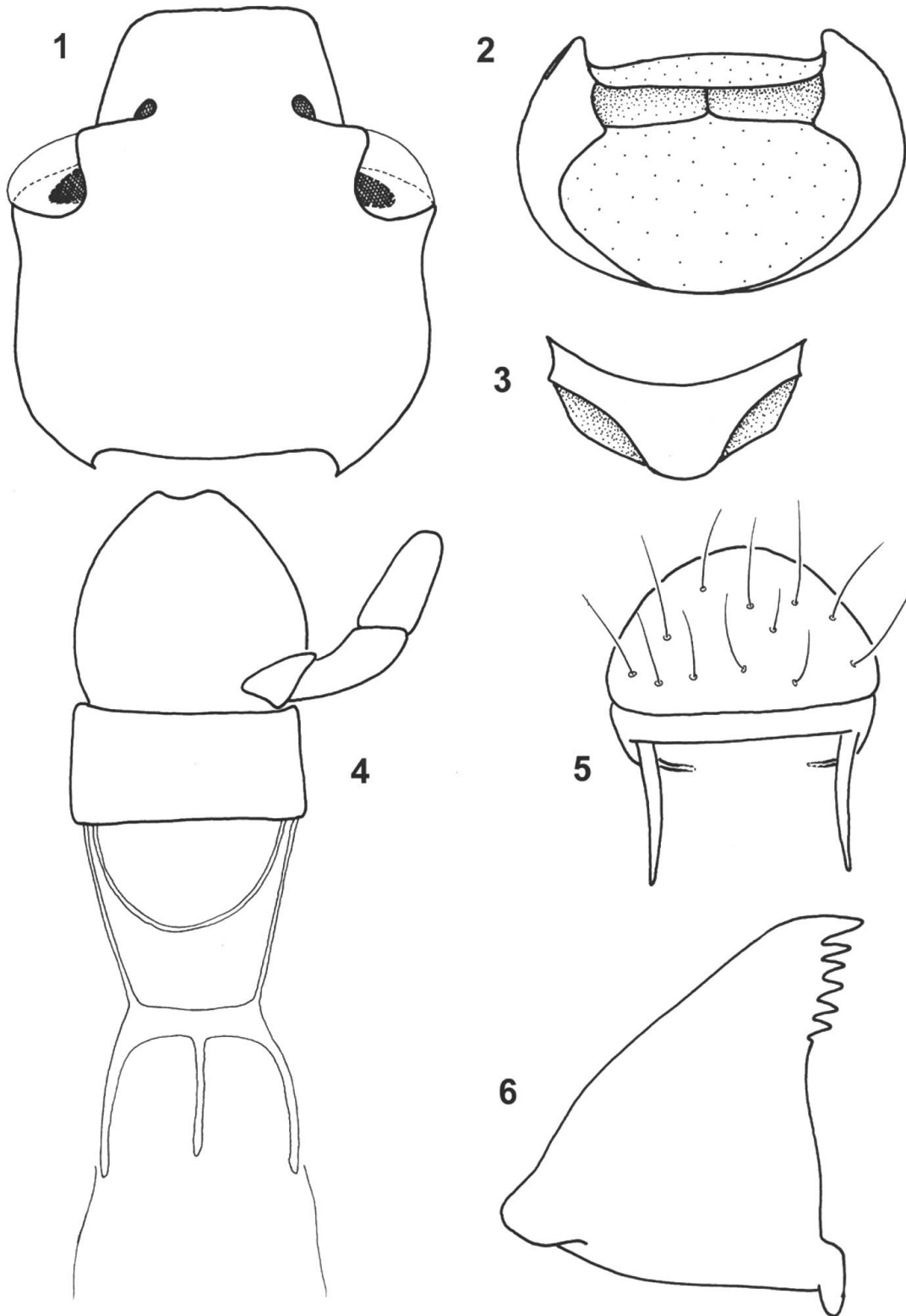
Pl. 58. *Promanus depressus*: 1, labrum; 2, maxilla; 3, anterior part of cranium (incl. labrum) dorsally; 4, female internal copulatory organs; 5, abdominal segments laterally; mandible ventrally.



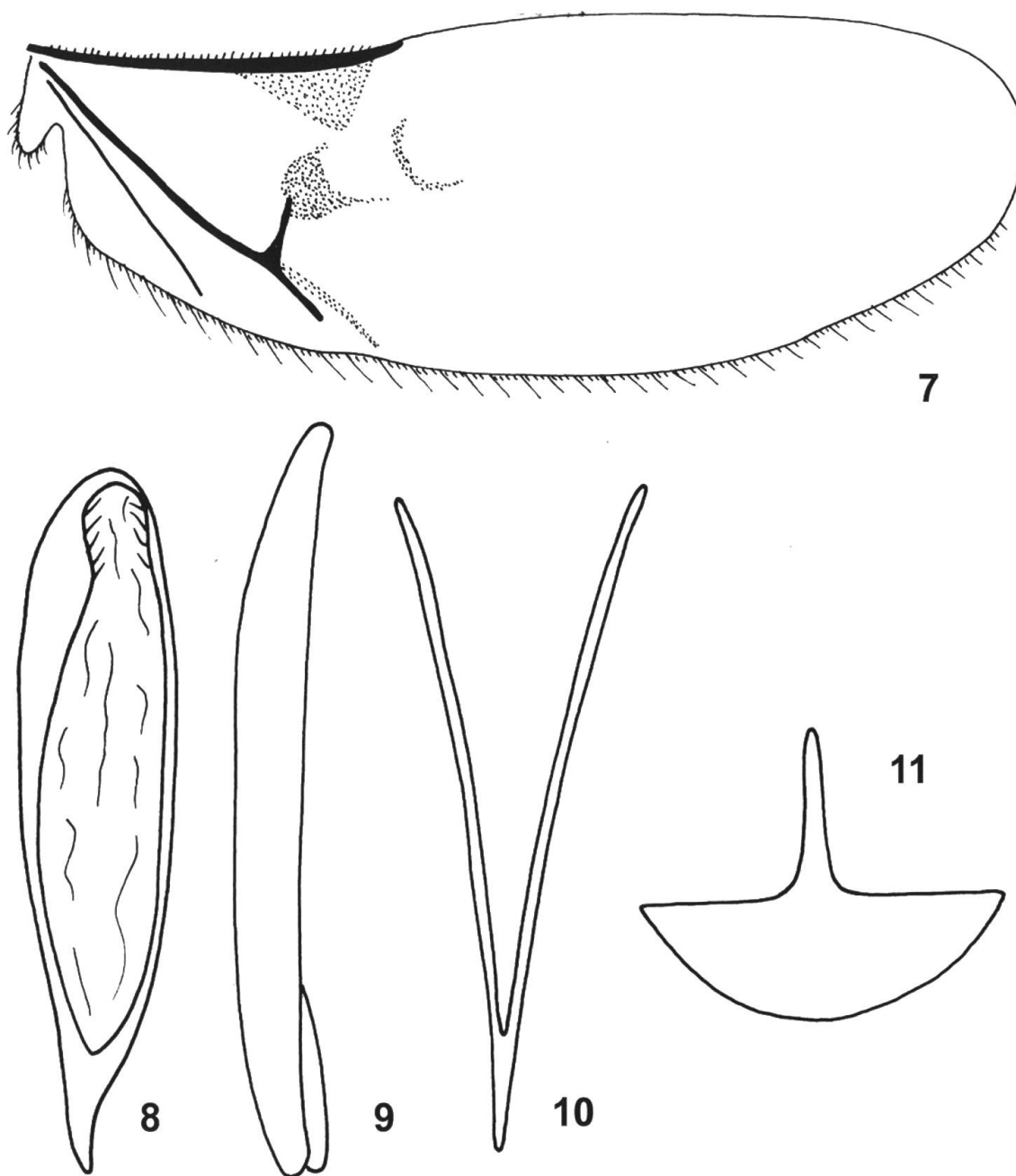
Pl. 59. *Rentonellum loebli* sp.nov.: 1, labrum; 2, mandible ventrally; 3, gular sutures; 4, labium; 5, maxilla.



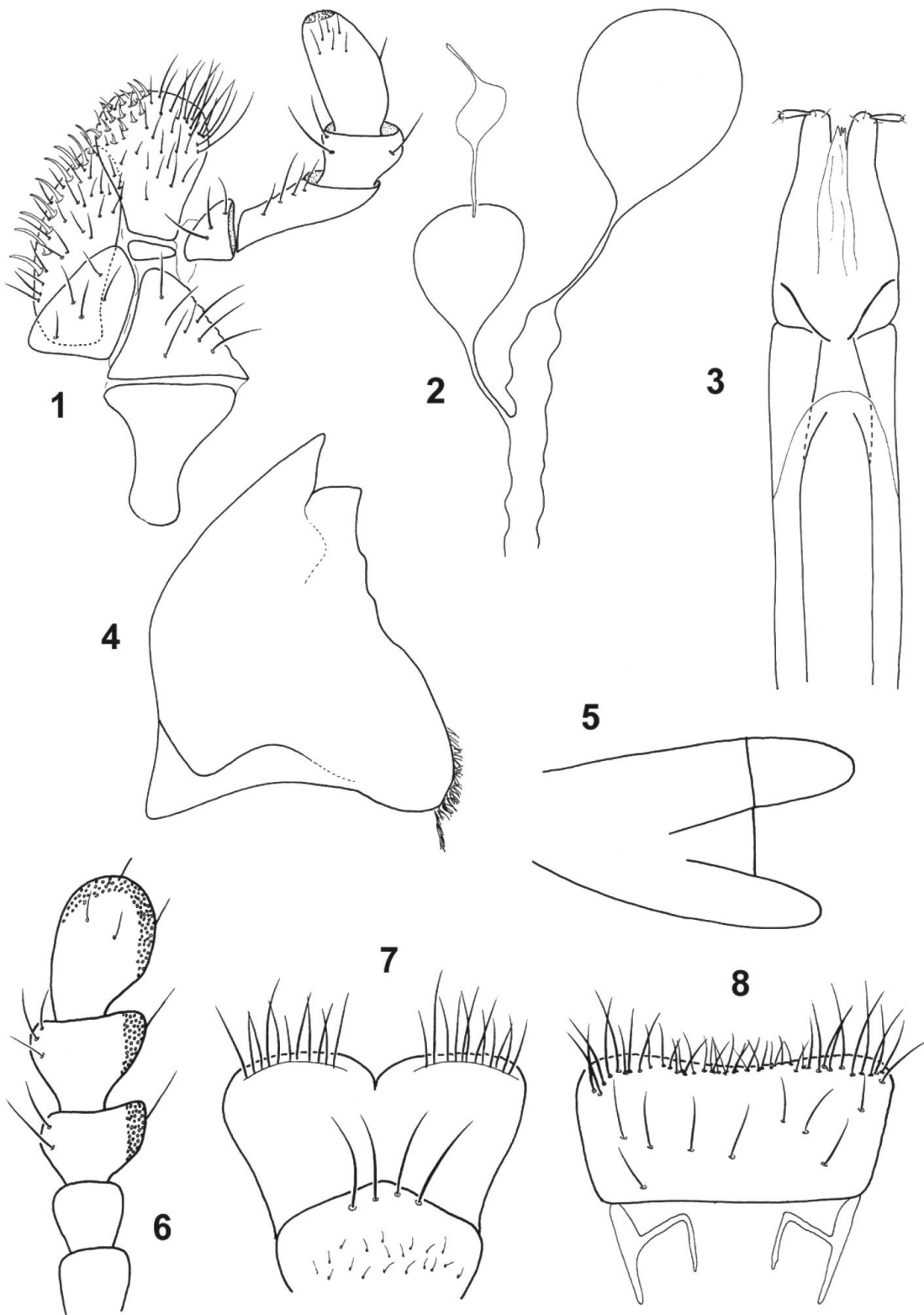
Pl. 60. *Rentonellum loebli* sp.nov.: 6, antenna; 7, prothorax – posterior view; 8, female sternite VIII; 9, apex of front tibia and tarsus; 10, ovipositor.



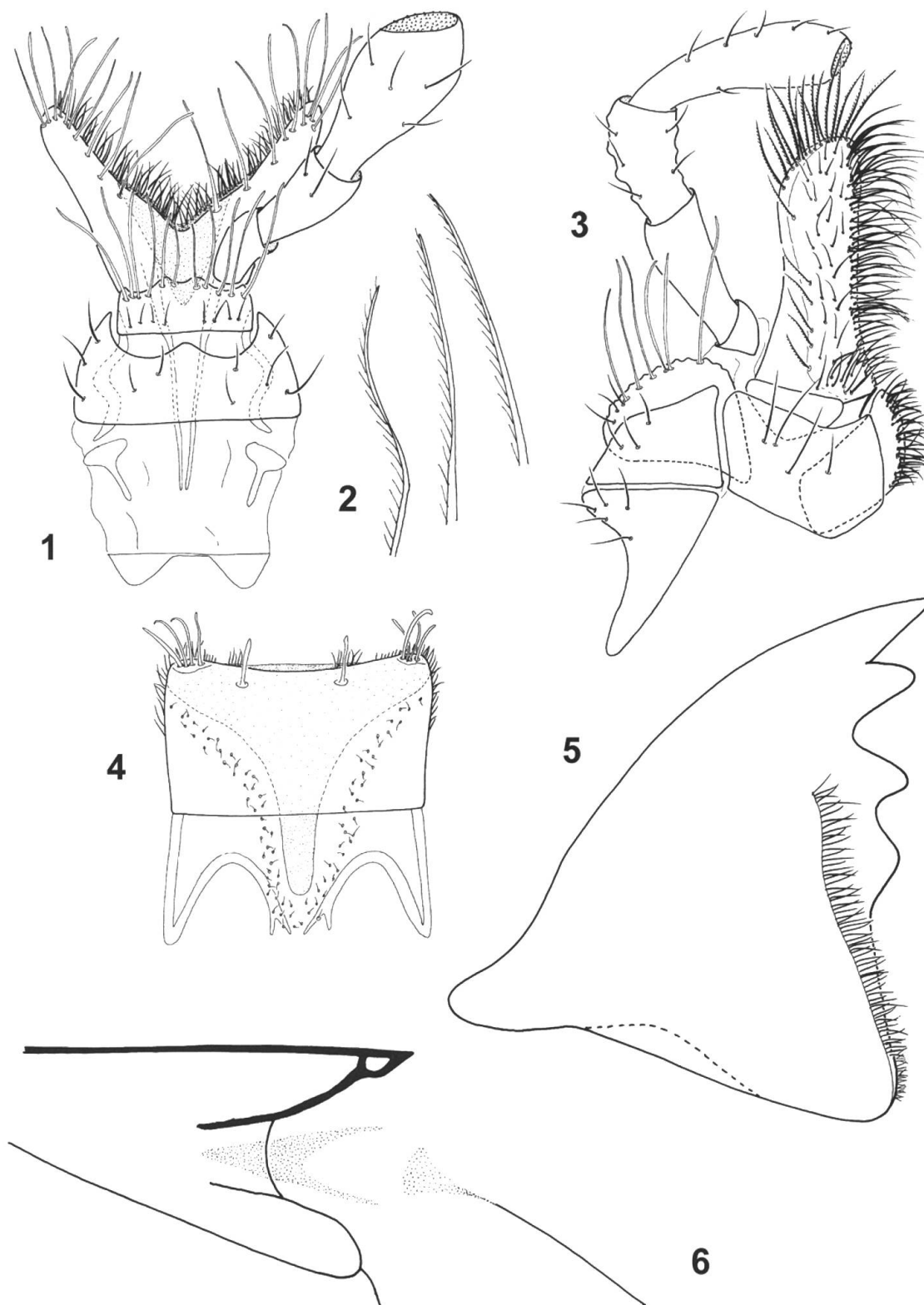
Pl. 61. *Rentionium chilense*: 1, cranium dorsally; 4, labium; 5, labrum; 6, mandible. *Rentionium daldinia*: 2, prothorax ventrally; 3, mesonotum.



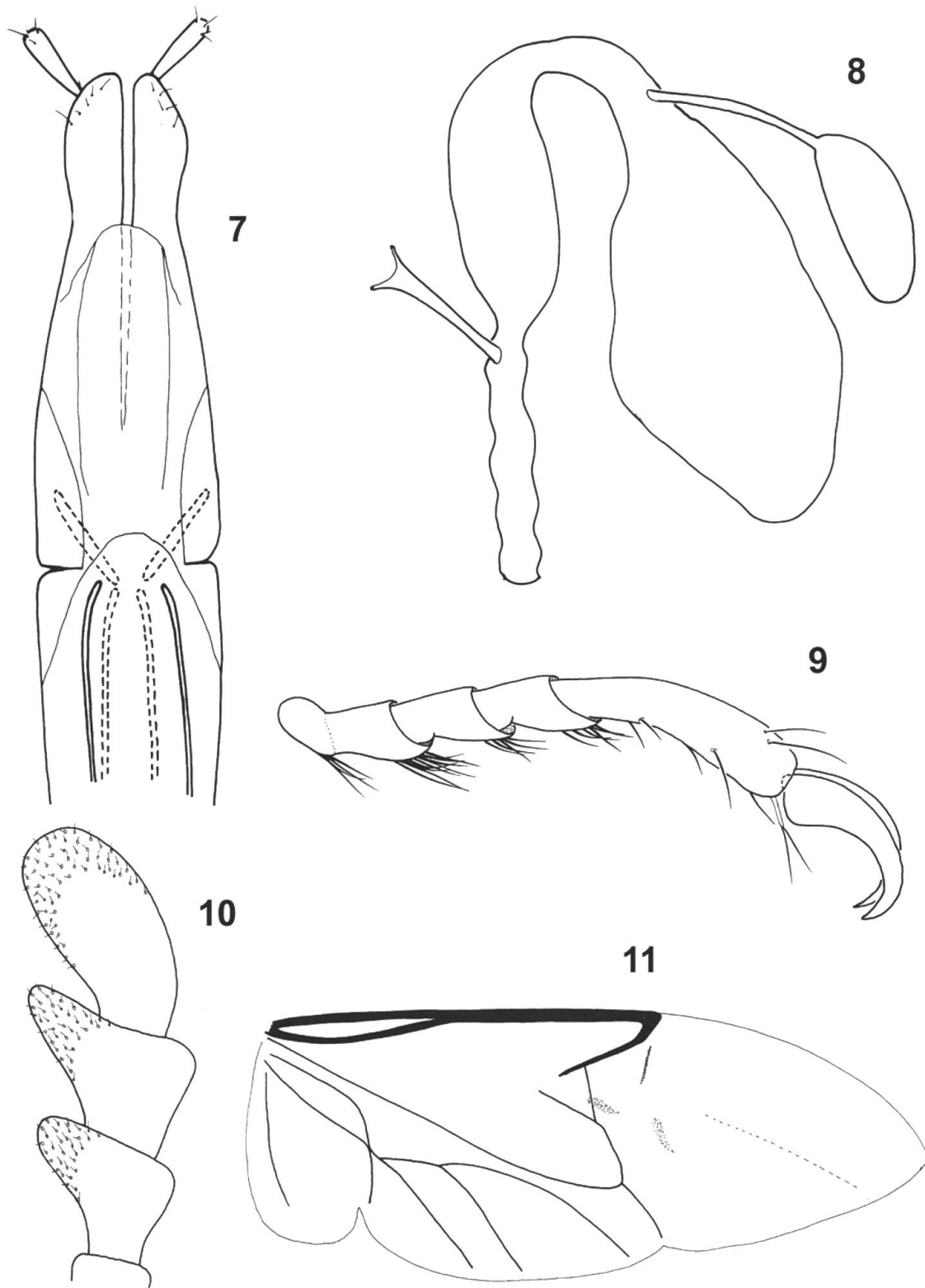
Pl. 62. *Rentonidium daldinia*: 7, wing; 8, tegmen ventrally; 9, phallus; 10, spicular fork; 11, male sternite VIII.



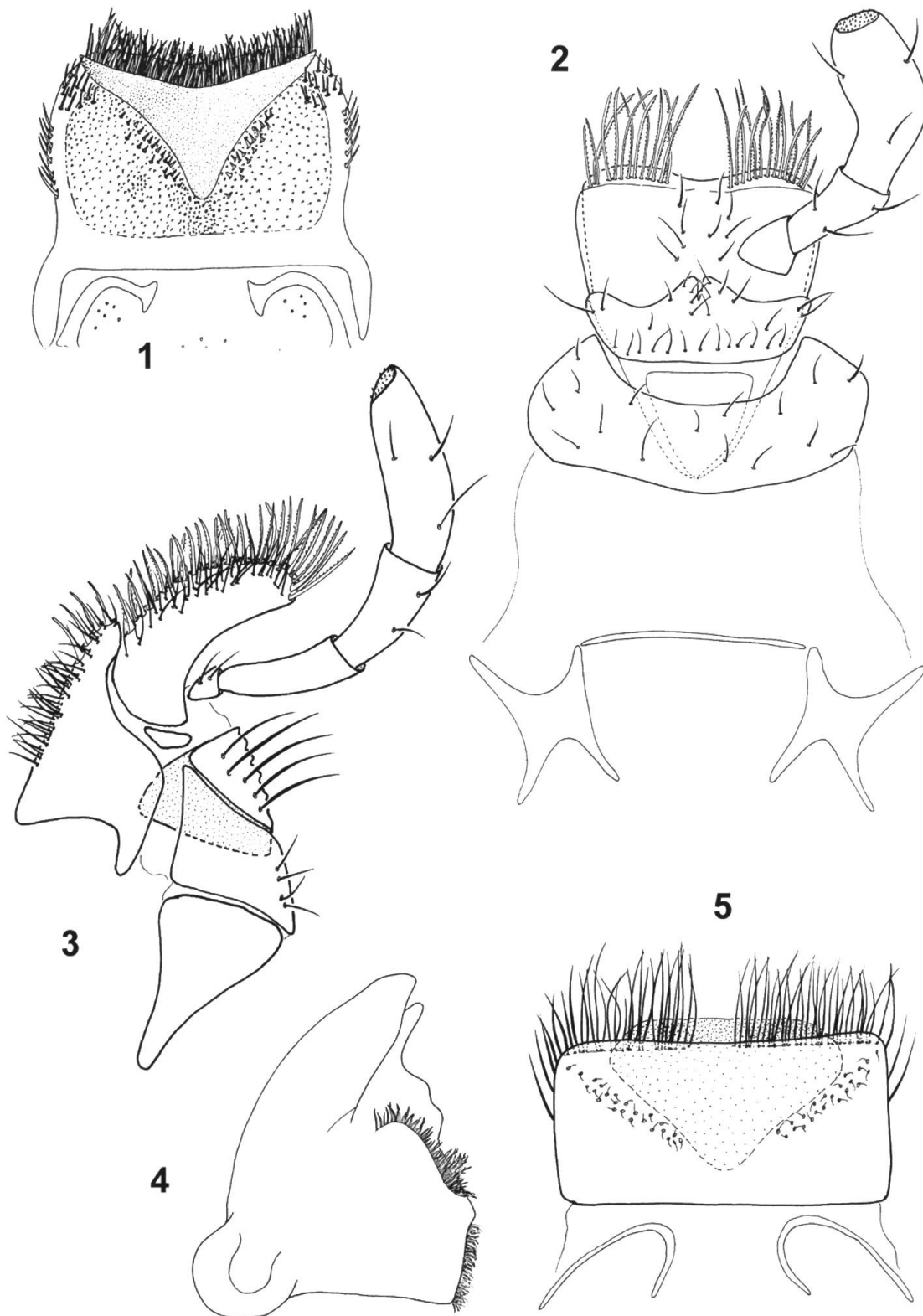
Pl. 63. *Seidlitzella procera*: 1, maxilla; 2, female internal copulatory organs; 3, ovipositor; 4, mandible ventrally; 5, radial cell and Cu vein, schema; 6, end of antenna; 7, ligula and prementum; 8, labrum.



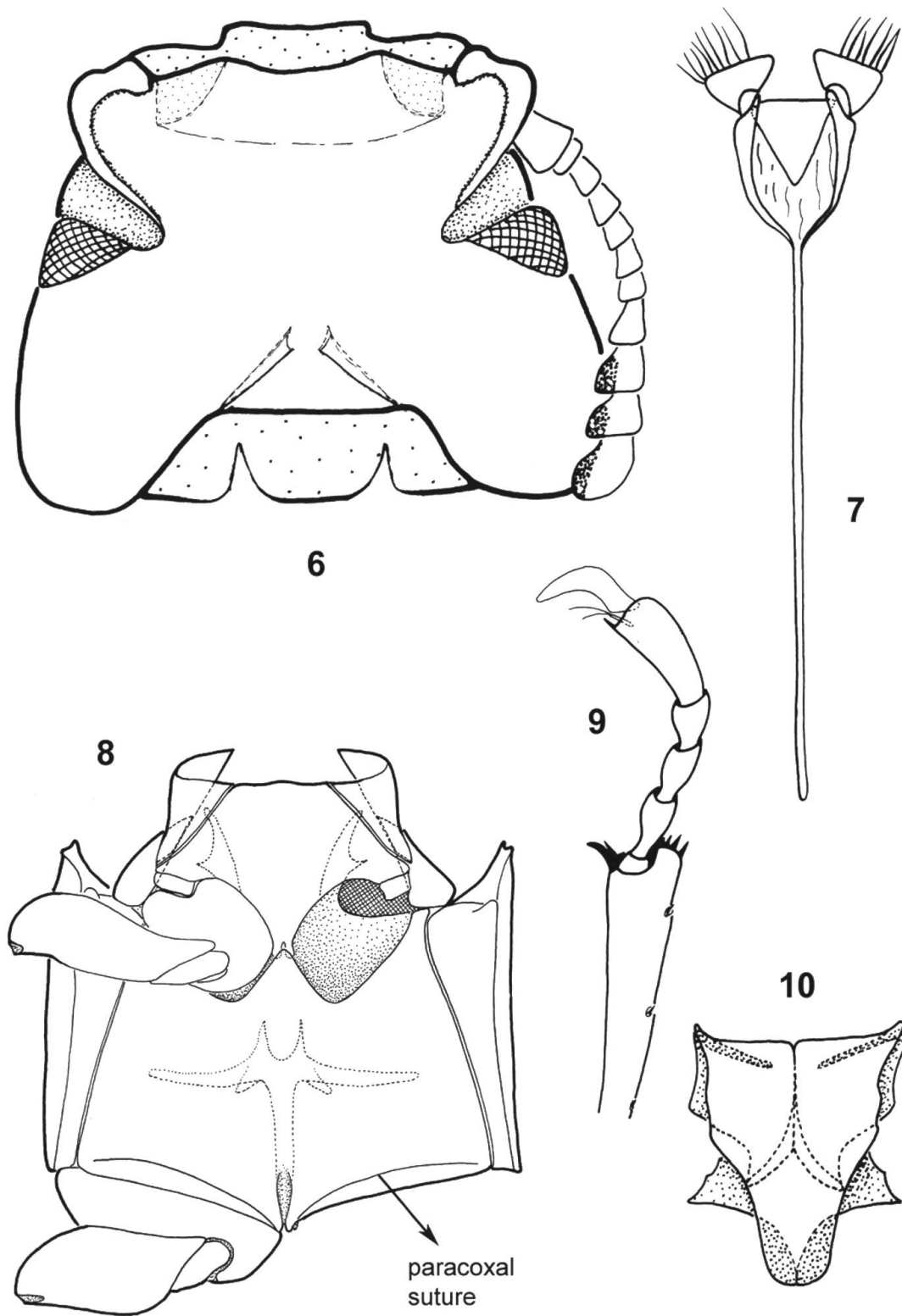
Pl. 64. *Temnoscheila caerulea*: 1, labium; 2, setae in apex of galea; 3, maxilla; 4, labrum; 5, mandible ventrally; 6, radial sector of wing.



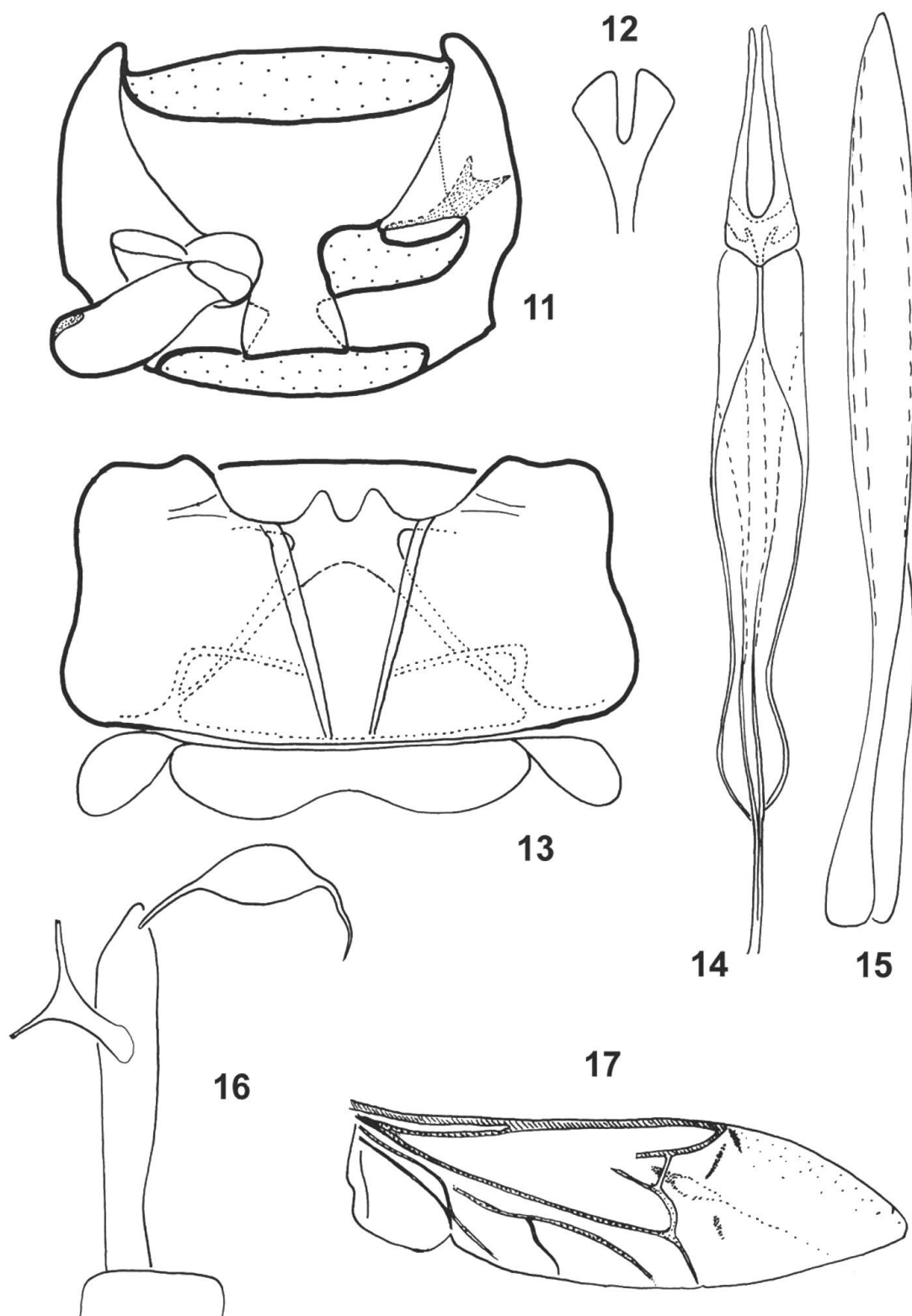
Pl. 65. *Temnoscheila caerulea*: 7, ovipositor; 8, female internal copulatory organs. *Parallelodera quadraticollis* 9, middle tarsus; 10, end of antenna; 11, wing.



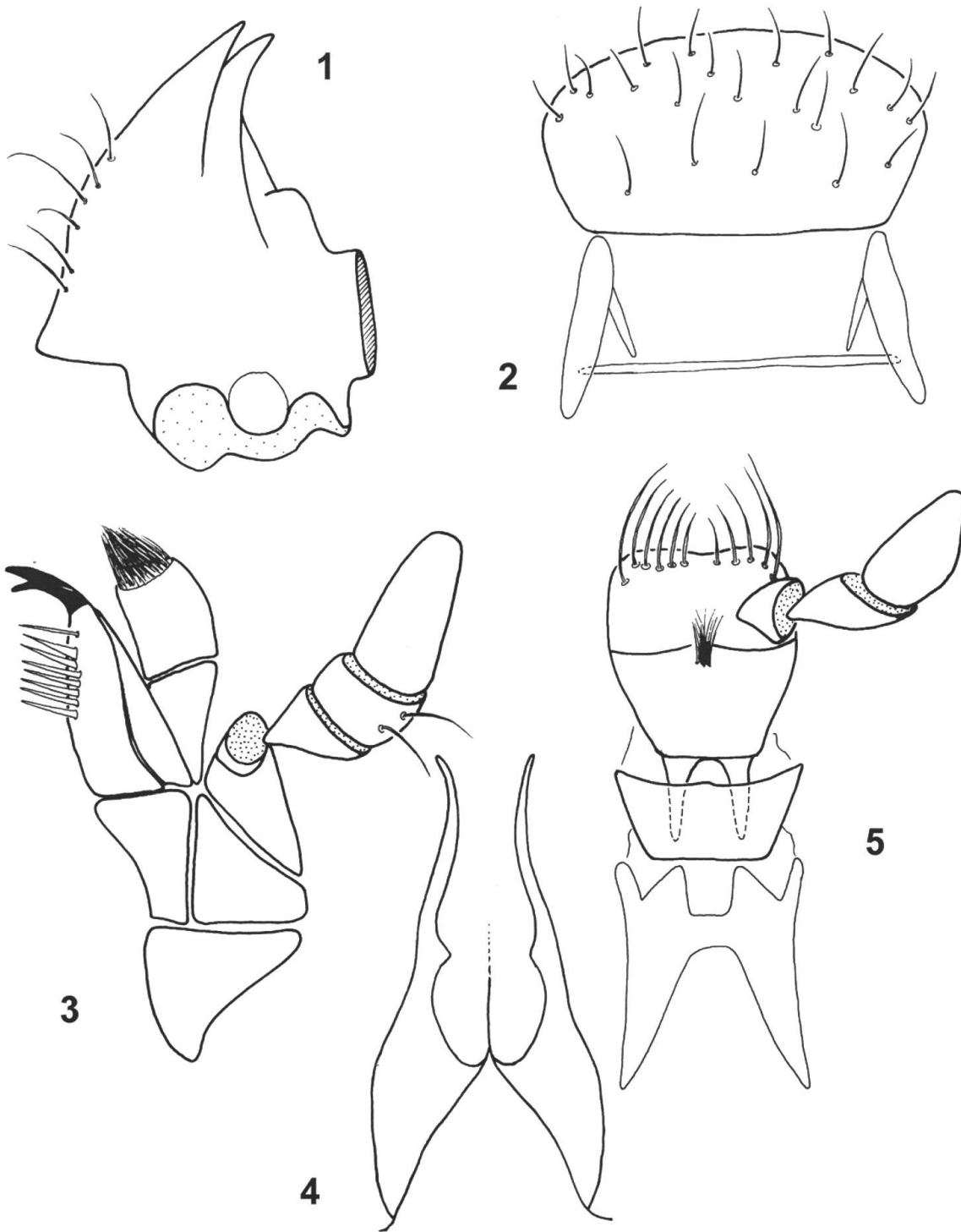
Pl. 66. *Tenebroides mauritanicus*: 1, labrum ventrally; 2, labium; 3, maxilla; 4, mandible ventrally; 5, labrum dorsally.



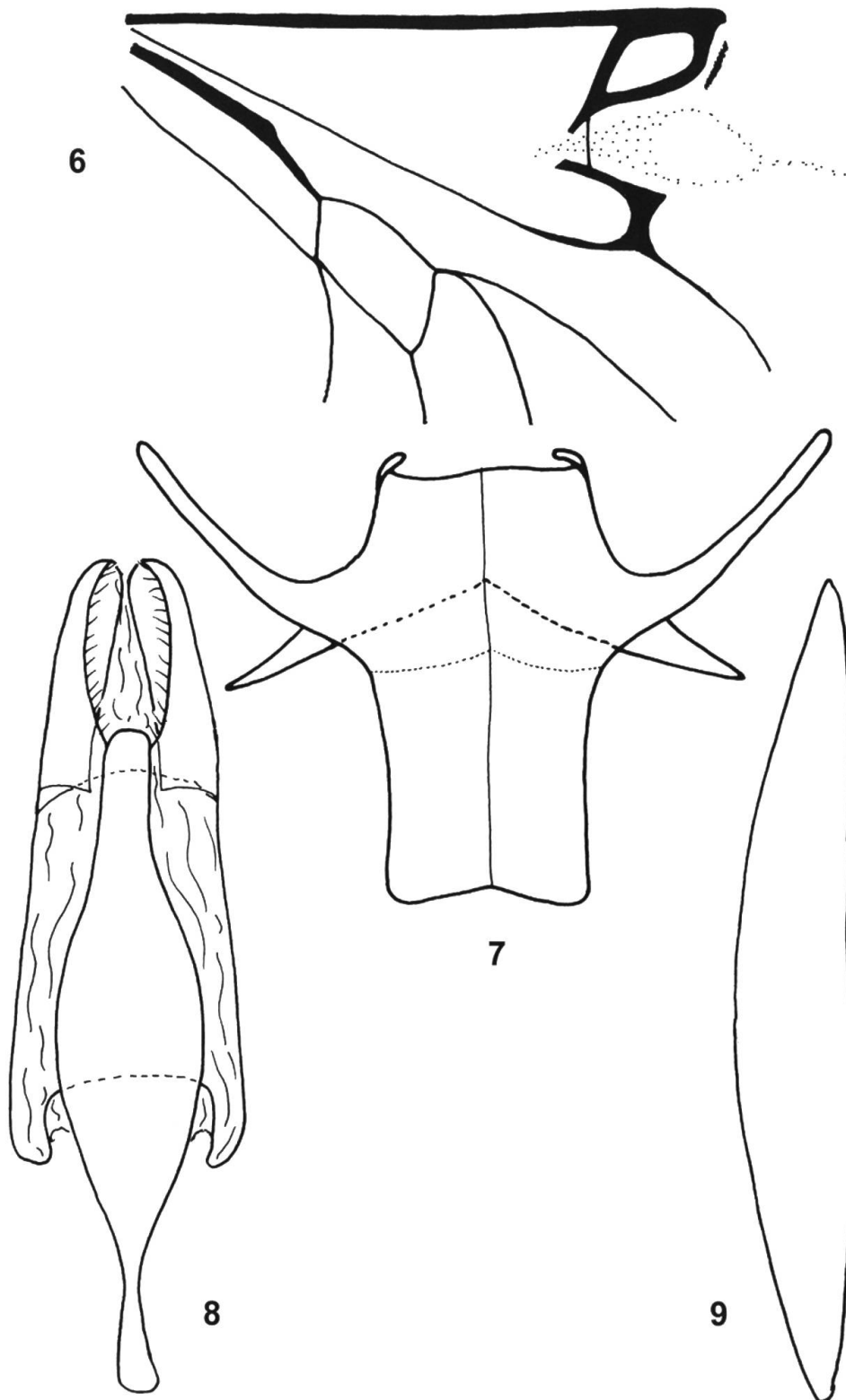
Pl. 67. *Tenebroides mauritanicus*: 6, cranium and antenna ventrally; 7, male segment IX-X; 8, meso- and metathorax with mes- and metendosternite; 9, apex of middle tibia and tarsus; 10, mesonotum.



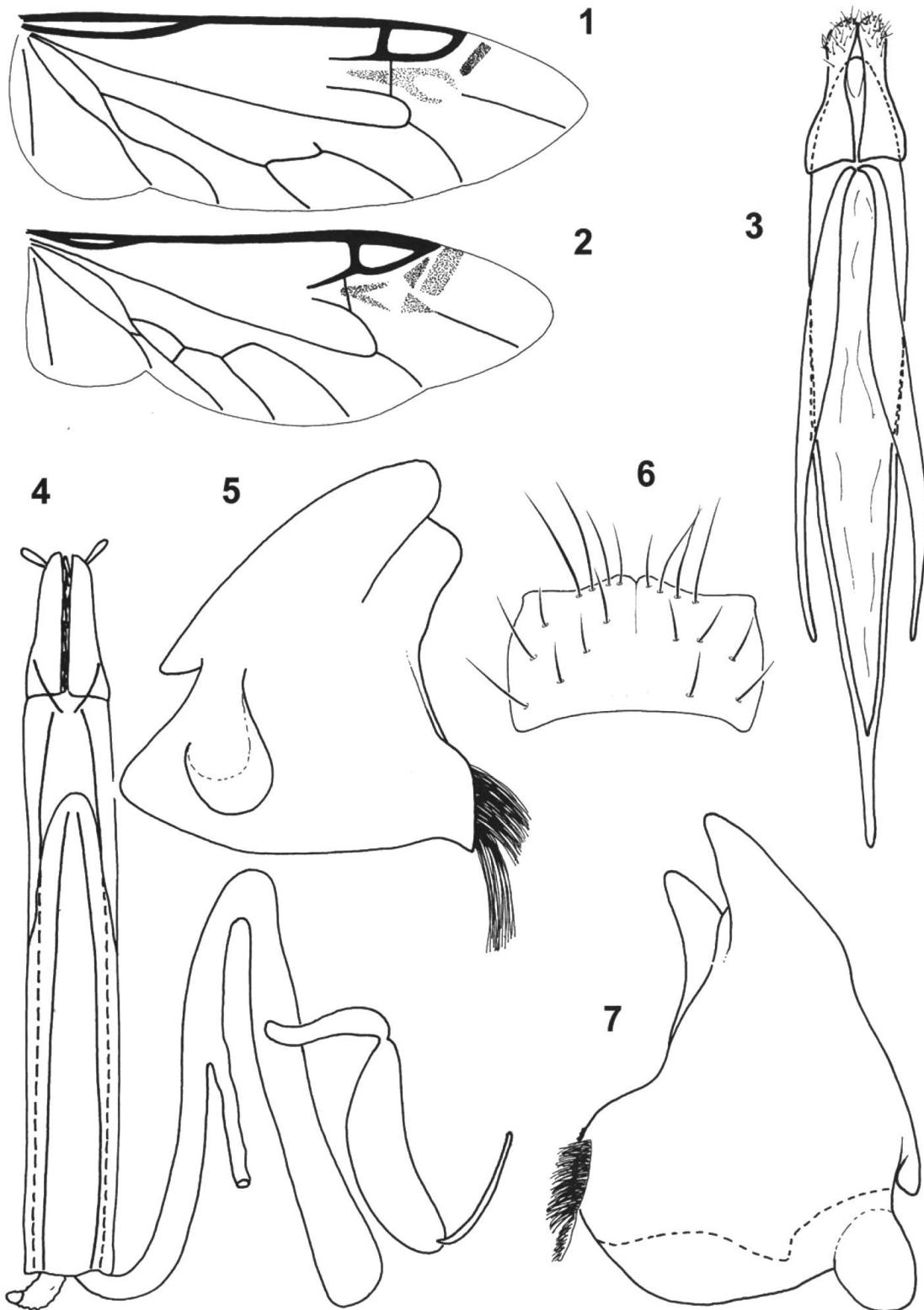
Pl. 68. *Tenebroides mauritanicus*: 11, prothorax ventrally; 12, proendosternite; 13, metanotum; 14, tegmen ventrally; 15, phallus; 16, female internal copulatory organs; 17, wing.



Pl. 69. *Thymalus limbatus*: 1, mandible ventrally; 2, labrum; 3, maxilla; 4, tentorium; 5, labium.



Pl. 70. *Thymalus limbatus*: 6, wing venation; 7, metendosternite; 8, tegmen dorsally; 9 phallus.



Pl. 71. *Xenoglena quadrisignata*: 1, wing; 6, prementum; 7, mandible ventrally. *Narcisa decidua*: 2, wing; 3, tegmen ventrally; 5, mandible ventrally. *Xenoglena deyrollei*: 4, female copulatory organs.

