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New and little known Epilamprinae (Dictyoptera: Blaberidae) from the collections of the Muséum d'histoire naturelle de Genève and the Zoological Institute of Saint Petersburg. Part 4

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Abstract: A new species of cockroach, *Placoblatta semialata* sp. nov., is described from Sulawesi. The names of the tribes Notolamprini Roth, 1971 syn. nov. and Colapteroblattini Roth & Gutiérrez, 1998 syn. nov. are synonymized with Poroblattini Roth, 1971. *Molytria inquinata* (Stål, 1860), *M. vegranda* Roth, 1999, and *Notolampra gibba* (Thunberg, 1826) are redescribed, and structures of the ovipositor of *M. inquinata* and *N. gibba* are described for the first time.

Keywords: Cockroaches - *Placoblatta semialata* - *Molytria inquinata* - *vegranda* - *Notolampra gibba* - Poroblattini - Colapteroblattini - Notolamprini - morphology - taxonomy.

INTRODUCTION

This is the forth paper devoted to cockroaches of the subfamily Epilamprinae (Blaberidae). In spite of the fact that many taxa were described many years ago, the morphology of this group is only insufficiently known. The aim of this and previous papers (Anisyutkin, 2015, 2016, 2018a) is to provide morphological descriptions which are detailed enough for further phylogenetic investigations.

MATERIAL AND METHODS

The author generally follows methods described in Anisyutkin (2014, 2015). Rehn's (1951) terminology of tegmina and wing venation is used. The description of anterior margin of fore femur armament follows Bey-Bienko (1950) and Roth (2003). The terminology of male genital sclerites follows Klass (1997) with some modifications. The terminology used by Grandcolas (1996) for genital structures is given in parentheses. The terminology of female genital structures follows McKittrick (1964) and Klass (1998).

The illustrations were sketched by means of a drawing tube on a Leica MZ 16 binocular microscope; further drawings and examinations were made with an MBS-10 binocular microscope.

The material studied has been deposited in the Muséum d'histoire naturelle in Geneva (MHNG) and in the Zoological Institute of the Russian Academy of Sciences in Saint-Petersburg, Russia (ZIN).

Abbreviation used in figures (see text for further details):

aa.	anterior arch of second valvifer of female genitalia;
a.Par.	isolated anterior sclerite of paraprocts;
a.s.	"additional spines" i.e. spines bordering euplantulae at inner and outer side;
ap.scl.	"apical sclerite" of sclerite L2D of male genitalia;
b.L2D	basal part of sclerite L2D of male genitalia;
b.L3	basal subsclerite of sclerite L3 of male genitalia;
bd.s.	brood sac of female genitalia;
bsv.	basivalvula of female genitalia;
c.p.R1T	caudal part of sclerite R1T of male genitalia;
d.o.	"dorsal outgrows" of apical part of sclerite L2D of male genitalia;
f.s.	"folded structure" of sclerite L3 of male genitalia;
gg.	gonangulum of female genitalia;
IX	9th abdominal tergite;
L4U	sclerites of male genitalia;
Par.	paraproct;
pl.	sclerotized lobes of 2nd and 3rd pairs of valves of female genitalia;

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R2, *R3*, *R4*, *R5*	sclerites of male genitalia;
s.bd.s.	sclerite of brood sac of female genitalia;
s.t.	"small tooth" of apical part of sclerite L3 of male genitalia;
scl.a.	sclerotized area between caudal branches of sclerite R3 of male genitalia;
te.VIII.	tergal process of 8th abdominal tergite;
teIX.	tergal process of 9th abdominal tergite;
tr.l.	"upper triangular lobe" of right phallomere of male genitalia;
v.I., *v.II.*, *v.III.*	1st, 2nd and 3rd valves of ovipositor;
v.s.	vestibular sclerite of female genitalia;
X	abdominal tergite X.

TAXONOMIC PART

Tribe Morphnini McKittrick, 1964

Type genus: *Morphna* Shelford, 1910.

Remark: The tribe Morphnini is characterized by the peculiar structure of the right phallomere of the male genitalia (Anisyutkin, 2017). The genera *Placoblatta* Bey-Bienko, 1969 and *Molytria* Stål, 1874 discussed below share this structure with the genus *Morphna* and undoubtedly belong to Morphnini on the basis of their right phallomere structure (Figs 14-15, 30-31).

Genus *Placoblatta* Bey-Bienko, 1969

Type species: *Placoblatta rugosa* Bey-Bienko, 1969, by monotypy.

Remarks: The genus *Placoblatta* was originally monotypic and established on the basis of females from North Vietnam (Bey-Bienko, 1969). The male of the type species was described later (Anisyutkin, 1999). Other species of *Placoblatta* were described from Sri Lanka (see Anisyutkin & Yushkova, 2017) and South Vietnam (see Anisyutkin, 2018b). Thus the genus *Placoblatta* is widely distributed in Asia. It can be assumed that many representatives of this genus are still undescribed.

Species included: *Placoblatta rugosa*, *P. beybienkoi* Anisyutkin, in Anisyutkin & Yushkova, 2017, *P. minor* Anisyutkin, 2018b and *P. semialata* sp. nov.

Placoblatta semialata sp. nov.

Figs 1-20

Etymology: The species name, an adjective, is derived from the Latin words "semi-" (= half) and "alatus" (= winged) and refers to the structure of the male tegmina.

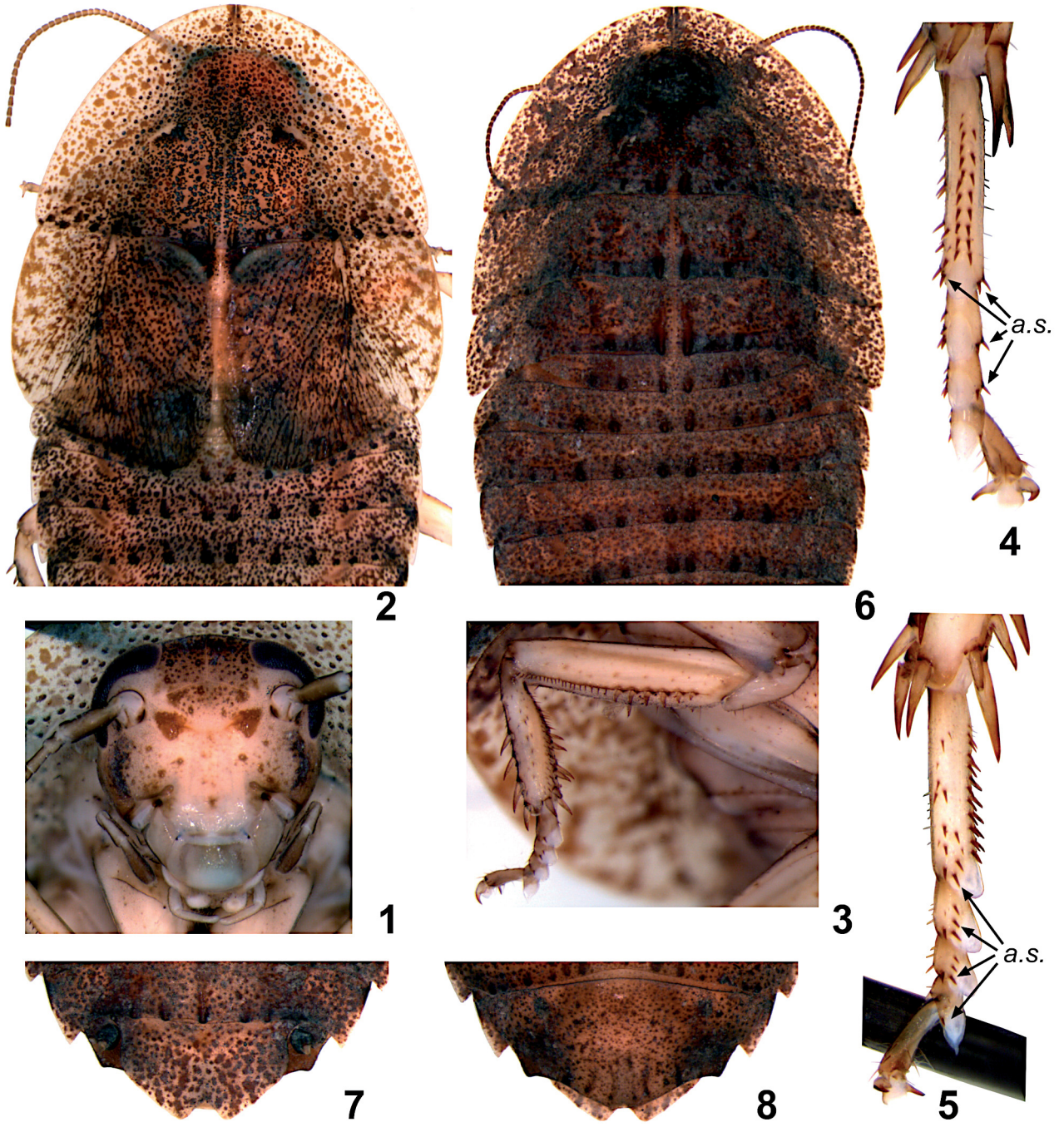
Material examined: MHNG (sample (INDO-13/14, GPS25); male holotype; Indonesia, Sulawesi Tengah, Luwuk Utara Regency, Salodik District, road Luwuk-Gua Bolo Poniki, 00°50'27.0"S, 122°52'31.7"E, 416 m, highland primary forest on limestone, sifting; 12.IV.2013; C. Rahmadi & L. Monod leg., permit 88/SIP/FRP/SM/III/2013. – MHNG; 1 female, 1 larva, paratypes; same data as for holotype. – MHNG (sample INDO-13/15, GPS26); 1 male; Sulawesi, Luwuk Barat Regency, Nambo Bosa District, mountains north of Nambo Bosa, 01°02'11.5"S, 122°41'11.4"E, 607 m, highland primary forest on limestone, night collecting, on tree trunks, under logs and in rock crevices; 13.IV.2013; C. Rahmadi & L. Monod leg., permit 88/SIP/FRP/SM/III/2013.

Diagnosis: The new species can be readily distinguished from all other representatives of the genus by its large tegmina which reach the 2nd abdominal tergite. Additionally, *P. semialata* sp. nov. differs from other species of the genus in the following characters: (1) from *P. rugosa* in smaller size, smaller apical euplantula of hind metatarsus (this euplantula occupying more than half of hind metatarsus length in *P. rugosa*, Figs 4-5, cf. Anisyutkin, 1999: fig. 58) and in a long and slender sclerite L3 of the male genitalia (this sclerite short and robust in *P. rugosa*, Fig. 18, cf. Anisyutkin, 1999: figs 65-66); (2) from *P. beybienkoi* in the presence of a well developed rows of spines on the hind metatarsus (tarsal spines absent in *P. beybienkoi*, Figs 4-5, cf. Anisyutkin & Yushkova, 2017: fig. 7C); (3) from *P. minor* in a flat "dorsal outgrowth" of sclerite L2D of the male genitalia ("dorsal outgrowth" ridge-like in *P. minor*, Figs 16-17, cf. Anisyutkin, 2018b: figs 16-21).

Description of male holotype: General colour yellowish, with scattered brown spots (Figs 1-3); facial part of head mostly yellow (Fig. 1); eyes black; antennae with scapus and pedicellum yellowish brown, following approximately ten segments yellow, remaining segments brownish; mouthparts and part of legs yellow (Figs 3-5). Surfaces lustrous; antennae with lustrous proximal 11-12 segments, other segments dull; pronotum densely covered with small tubercles, especially in central part; abdominal tergites with rows of tubercles along caudal margin (Fig. 2); facial part of head with weak punctuation. Head longer than wide, epicranial sutures distinct (Fig. 1); ocellar spots small, weakly expressed; distinct transverse furrow located between antennal sockets; distance between eyes about 0.8 times eye length; distance between antennal sockets about 1.7 of scape length (about 0.8 mm); approximate ratio of lengths of 3rd to 5th segments of maxillary palps 1.1 : 1.0 : 1.2. Pronotum campaniform, much wider than long, anterior and lateral margins semicircular, posterior margin very weakly protruded caudally (Fig. 2). Meso- and metanotum much wider than long, covered with tegmina (Fig. 2). Tegmina in shape of parallelogram (Fig. 2), reaching 2nd abdominal tergite, venation visible but reduced. Anterior margin of fore femur of type B armament, with 6 spines, apical

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spines absent (Fig. 3). Fore tibiae not thickened distally (Fig. 3). Structure of hind tarsi (Figs 4-5): metatarsus a little shorter than other segments combined, with small apical euplantula and two more or less equal rows of spines along lower margin; euplantulae of 2nd to 4th segments large; all euplantulae bordered with 2-3 additional spines (Figs 4-5, *a.s.*) and without spinules; claws symmetrical and simple; arolium about half of claw length. Fore and mid tarsi similar to hind tarsi, but segments comparatively shorter. Abdominal tergites without visible glandular specializations; posterolateral angles of tergites attenuate and sharp. Anal plate (tergite X) wide, caudal margin widely rounded, with distinct median incision (Fig. 10). Cerci shortened and flattened,



Figs 1-8. *Placoblatta semialata* sp. nov., male holotype (1-5) and female paratype (6-8). (1) Facial part of head. (2, 6) Anterior part of body, dorsal view. (3) Right fore leg, ventral view. (4, 5) Right hind tarsus, ventral (4) and outer (5) view. (7-8) Abdominal apex, dorsal (7) and ventral (8) view. The black parallelogram in Fig. 5 is a pin. Abbreviations: *a.s.* - see chapter "abbreviation used in figures", for details see text. Not to scale.

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with segments partly fused (Figs 10-11). Paraprocts of blaberid-type (Fig. 12). Hypandrium nearly symmetrical (Fig. 13), its caudal margin rounded, with a distinct median incision; styli symmetrical and fusiform.
Genitalia (Figs 14-20). Right phallomere (R+N) with caudal part of sclerite R1T subrectangular in shape (Figs 13-14, *c.p.R1T*), densely covered with bristles; R2 distinctly curved; R3 elongated; R4 plate-like; R5 large, fused with sclerite R3. Sclerite L2D (L1) divided into basal and apical parts (Fig. 16); basal part rod-like; apical part rounded, densely covered with recumbent bristles; "dorsal outgrows" flat (Figs 16-17, *d.o.*). Sclerite L3 (L2d) with basal subsclerite (Fig. 18, *b.L3*) and weak "folded structure", bristles absent; apex of L3 with "small tooth" (Figs 19-20, *s.t.*); groove *hge* absent. Sclerite L4U (L3d) small and elongated, weakly sclerotized.

Variation in males: Male paratype similar to holotype, but slightly smaller.

Description of female paratype: Similar to males, but different in the following characters. General colour slightly darker (Figs 6-8), facial part of head brownish. Distance between eyes about equal to eye length; distance between antennal sockets about 1.6 of scape length (about 0.8 mm). Tegmina and wings completely absent. Anterior margin of fore femur with 5-6 spines, 1 apical spine present on left femora. Abdominal apex as in Figs 7-8. Genital plate wide, caudally rounded (Fig. 8).

Description of larva paratype: Similar to adult female, but smaller and lighter in colour.

Measurements (in mm; measurements in parenthesis are those of holotype): Head length: male 2.9-3.0 (3.0), female 2.8; head width: male 2.5-2.7 (2.7), female 2.6; pronotum length: male 5.0 (5.0), female 4.5; pronotum width: male 8.3-8.4 (8.4), female 8.1; tegmen length: male 4.8-5.0 (4.8); tegmen width: male 4.3-4.7 (4.7).

Genus *Molytria* Stål, 1874

Type species: *Epilampra inquinata* Stål, 1860, by monotypy.

Remarks: This genus was originally monotypic and established for *Epilampra inquinata* from Sidney, Australia (Stål, 1860). The original diagnosis of the genus was based on the structure of the hind tarsus: "planta nuda articuli primi tarsorum posticorum per magnam partem articuli extensa" (Stål, 1874: 12). Later two additional species were described: *M. perplexa* Shelford, 1910 from Victoria, Gippsland (Shelford, 1910) and *M. vegranda* Roth, 1999 from New South Wales (Roth, 1999). The genus was reviewed by L. Roth (1999). The wing venation of a *Molytria* sp. was illustrated in details by Cui *et al*. (2018).
The genus *Molytria* is similar to the genus *Morphna* in the presence of large euplantulae along the lower margin of the hind tarsi and in the structure of its female genitalia, i.e. widely rounded and medially divided basivalvula (Figs 23-24 cf. Anisyutkin, 2018a: figs 21-23) and vestibular sclerite with median outgrowth and lateral branches (Fig. 23 cf. Anisyutkin, 2018a: figs 21-24). The short-winged species from India and Sri Lanka [*Morphna decolyi* (Bolivar, 1897), *M. indica* Anisyutkin, in Anisyutkin & Yushkova, 2017 and *M. srilankensis* Anisyutkin, in Anisyutkin & Yushkova, 2017] are in their habitus very similar to females of the genus *Molytria*. However, both genera can be distinguished by the presence of two distinct rows of spines in the basal part of the metatarsus in *Molytria* (Figs 25-26; these spines are absent or vestigial in *Morphna*) and by the absence of a dorsal outgrowth in the apical part of sclerite L2D of the male genitalia in *Molytria* [Fig. 32; this structure is present in representatives of *Morphna* (see Anisyutkin, 2018a: figs 34-39)].

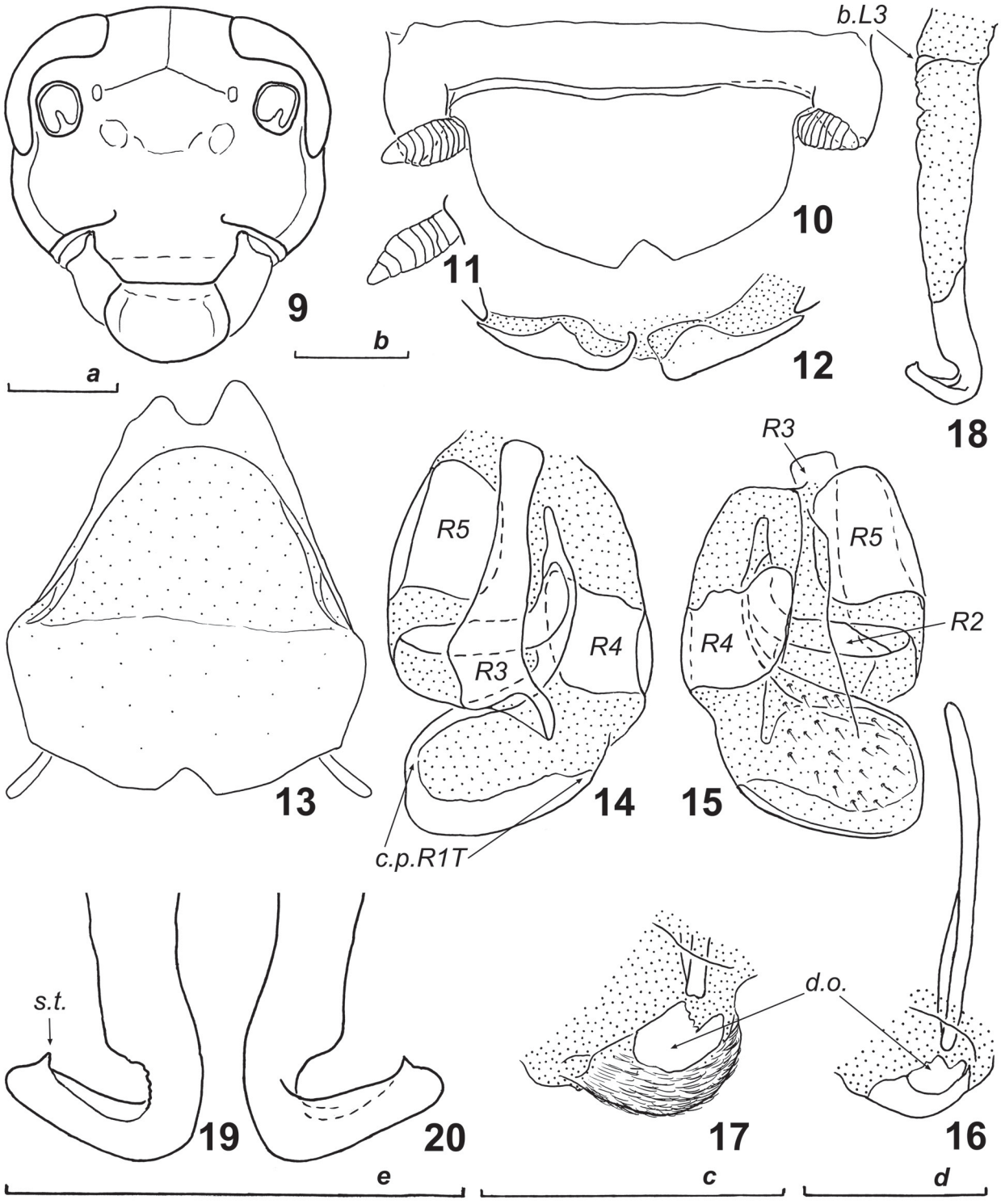
Species included: Three species from Australia (South Australia, New South Wales, Victoria and Tasmania), as given in Beccaloni (2014).

Molytria inquinata (Stål, 1860)
Figs 21-24

Material examined: ZIN; 1 female; "Australia, East Karajong [sic!], under log in bush; 7.VI.1959; M. Nikitin", "Australia *Molytria inquinata* Stal", genital complex in prep. 151119/01. – ZIN; 1 female; Australia, Queensland, Brisbane; 21.II.1969; leg. Plechanov.
The first label was written in Russian, with the exception of "East Karajong" and "under log in bush" which were given in English. "Karajong" is probably Kurrajong, a small town in New South Wales. The second label was all written in Russian.

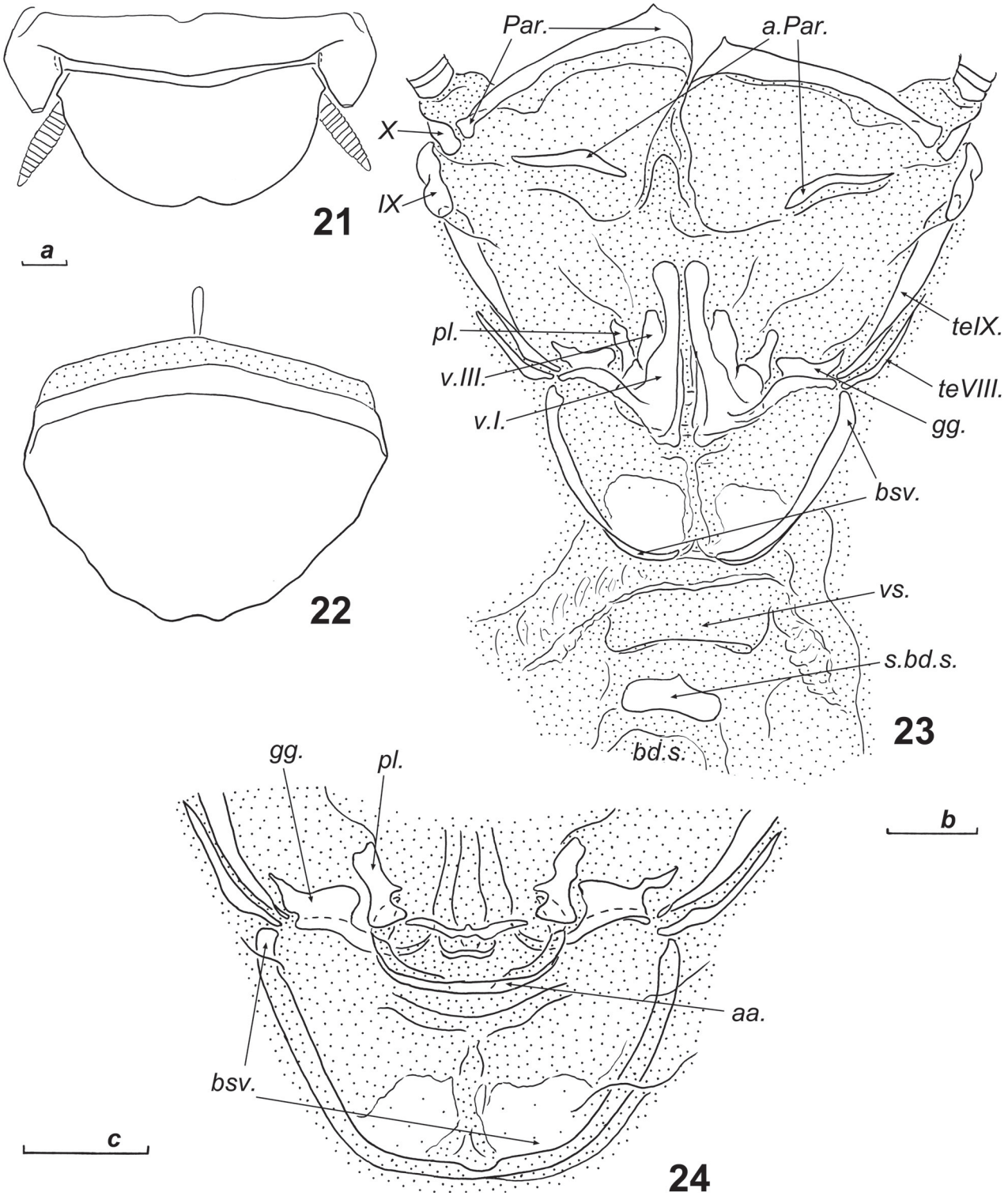
Details: Head rounded; distance between eyes 0.8-0.9 times eye length; distance between antennal sockets about 1.8 times scape length (~1.3 mm); approximate ratio of lengths of 3rd to 5th segments of maxillary palps 1.0-1.1 : 1.0 : 1.4. Fore tibiae not thickened distally. Anterior margin of fore femora of type B armament, with 9 spines, including 2 apical one. Tibial spines well developed. "Additional spines" bordering euplantulae of 2nd to 3rd segments on inner and outer side present. Anal plate (tergite X) wider than long and widely rounded, with weak medial incision on hind margin (Fig. 21). Cerci short and slender, with distinct segments (Fig. 21). Genital plate wide, sinuate along hind margin (Fig. 22).
Ovipositor and adjacent structures (Figs 23-24): Paraprocts with isolated anterior sclerites (Fig. 23, *a.Par.*). Intercalary sclerite absent. Tergal processes of abdominal segment VIII short, not reaching paratergites of tergite VIII (Fig. 23, *teVIII.*); tergal processes of

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Figs 9-20. *Placoblatta semialata* sp. nov., male holotype. (9) Facial part of head. (10) Abdominal apex, dorsal view. (11) Left cercus, dorsal view. (12) Paraprocts, ventral view. (13) Hypandrium, ventral view. (14-15) Right phallomere, ventral (14) and dorsal (15) view. (16) Sclerite L2D, dorsal view. (17) Apical part of sclerite L2D, dorsal view. (18) Sclerite L3. (19-20) Apex of sclerite L3. Dotted areas show membranous parts. Bristles are not shown in Fig. 16. Abbreviations: *b.L3*, *c.p.R1T*, *d.o.*, *R2*, *R3*, *R4*, *R5*, *s.t.* - see chapter "abbreviation used in figures", for details see text. Scale bars 1 mm: a (9), b (10-13), c (14-15, 17), d (16, 18), e (19-20).

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Figs 21-24. *Molytria inquinata* (Stål, 1860), female. (21) Abdominal apex, dorsal view. (22) Genital plate, ventral view. (23) Abdominal apex, ventral view, genital plate removed. (24) Basal part of ovipositor, dorsal view. Dotted areas show membranous parts, except for valves of ovipositor. Abbreviations: *aa.*, *a.Par.*, *bd.s.*, *bsv.*, *gg.*, *Par.*, *pl.*, *s.bd.s.*, *te.VIII.*, *teIX.*, *v.I.*, *v.II.*, *v.III.*, *vs.* - see chapter "abbreviation used in figures"; *IX*, *X* – abdominal tergites IX-X, for details see text. Scale bars 1 mm: a (21-22), b (23), c (24).

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abdominal segment IX fully developed (Fig. 23, *teIX.*). Gonangulum well sclerotized (Figs 23-24, *gg.*). All valves of ovipositor weakly sclerotized. First valves large, membranous at apex, with numerous setae along inner side (Fig. 23, *v.I.*, setae not shown). Base of 2nd and 3rd pairs of valves as in Fig. 24, sclerotized lobes well developed and elongated (Fig. 24, *pl.*). Anterior arch of second valvifer as in Fig. 24, *a.a*. Second valves of ovipositor small, completely hidden under first valves. Third valves of ovipositor (gonoplacs) widened (Fig. 23, *v.III.*). Basivalvula in shape of slightly asymmetrical, widely rounded and partly sclerotized plate, partly divided medially (Figs 23-24, *bsv.*). Vestibular sclerite weakly sclerotized, with long lateral branches (Fig. 23, *vs.*). Brood sac (Fig. 23, *bd.s.*) with distinct wider than long sclerite (Fig. 23, *s.bd.s.*).

Measurements (in mm): Head length 5.2-5.4, head width 5.0-5.3; pronotum length 8.0-8.5, pronotum width 12.0-12.5; tegmen length 11.5, tegmen width 9.0.

Molytria vegranda Roth, 1999
Figs 25-35

Material examined: MHNG; 1 male; Australia, New South Wales, Jenolan; 15-20.I.1995; G. Henrgag. – MHNG; 1 female with same data as for male.

Redescription of male (Figs 25-35): The original description of Roth (1999) can be supplemented with the following details. Head with facial part dark, upper part about above ocelli, vertex and occiput black. Interocular space about as long as width between antennal sockets (~1.9 mm); distance between eyes about 0.8 times eye length; distance between antennal sockets about 1.7 of scape length (about 1.1 mm); approximate ratio of lengths of 3rd to 5th segments of maxillary palps 1.1 : 1.0 : 1.5. Fore tibiae not thickened distally. Anterior margin of fore femora of type B armament, with 5-6 spines, including 1 apical one. Tibial spines well developed. Structure of hind tarsi (Figs 25-26): metatarsus slightly shorter than other segments combined, with large euplantulae occupying about half of metatarsus length, two more or less equal rows of spines located in proximal part of metatarsus; euplantulae of 2nd to 4th segments large; euplantulae of 1st to 3rd segments bordered with 1-2 additional spines (Figs 25-26, *a.s.*); claws symmetrical and simple; arolium about half of claw length. Fore and mid tarsi generally similar to hind tarsi, but segments comparatively shorter; fore tarsi without spines; metatarsus of mid tarsi with short rows of spines. Anal plate as in Fig. 27. Hypandrium nearly symmetrical (Figs 28-29), with caudal margin rounded, without median incision; styli symmetrical and fusiform.
Genitalia (Figs 29-35). Right phallomere (R+N) with caudal part of sclerite R1T rounded at caudolateral angle (Figs 30-31, *c.p.R1T*), densely covered with bristles; R2 distinctly curved; R3 elongated and curved, area between caudal branches sclerotized (Fig. 30, *scl.a.*); R4 plate-like; R5 large, fused with sclerite R3. Sclerite L2D (L1) divided into basal (Fig. 29, *b.L2D*) and apical parts (Figs 29-32); basal part rod-like, distinctly widened cranially, with two lateral outgrowths caudally (Fig. 32); apical part elongated, densely covered with recumbent bristles; "dorsal outgrows" absent. Sclerite L3 (L2d) with basal subsclerite (Fig. 33, *b.L3*) and "folded structure" (Fig. 33, *f.s.*), bristles weak; apex of L3 with well developed "small tooth" (Figs 33-35, *s.t.*); groove *hge* absent. Sclerite L4U (L3d) large and transverse (Fig. 29).

Redescription of female: The original description of Roth (1999) can be supplemented with the following details. Head more rounded and eyes and ocelli smaller than in male; distance between eyes about as long as eye length; distance between antennal sockets about 2.2 of scape length (about 1.0 mm); approximate ratio of lengths of 3rd to 5th segments of maxillary palps 1.1 : 1.0 : 1.4. Structure of legs similar to that of male.

Measurements (in mm): Head length: male 4.2, female 4.6; head width: male 4.0, female 4.5; pronotum length: male 6.3, female 7.1; pronotum width: male 8.2, female 10.3; tegmen length: male 27.0, female 7.5; tegmen width: male 8.5, female 7.2.

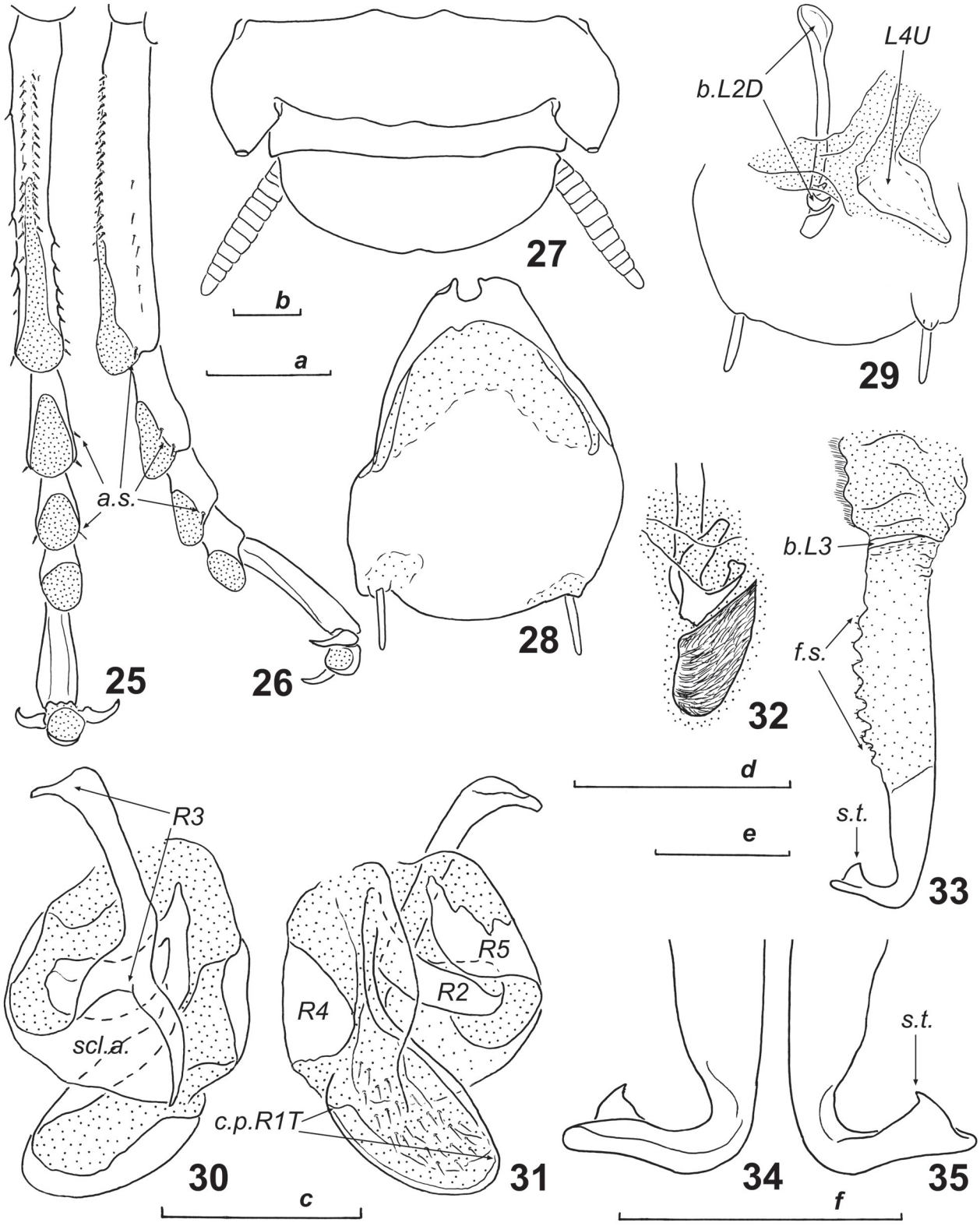
Tribe Poroblattini Roth, 1971

Notolamprini Roth, 1971, syn. nov.
Colapteroblattini Roth & Gutiérrez, 1998, syn. nov.

Type genus: *Colapteroblatta* Hebard, 1919.

Remarks: The tribes Poroblattini and Notolamprini were described in the same paper (Roth, 1971). The first tribe originally included the genera *Poroblatta* Hebard, 1919, *Nauclidas* Rehn, 1930, *Galiblatta* Hebard, 1927, *Dryadoblatta* Rehn, 1930, and *Colapteroblatta*, the second tribe was monotypic (Roth, 1971). Later, the genera *Poroblatta*, *Acroporoblatta* and *Nauclidas* were synonymized under *Colapteroblatta* and the name Poroblattini was replaced with Colapteroblattini: "Because of synonymy this tribe should be called Colapteroblattini" (Roth & Gutiérrez, 1998: 171). This replacement is incorrect because of article 40.1. of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999): "Validity of family-group names not affected. When the name of a type genus of a nominal family-group taxon is considered to be a junior synonym of the name of another nominal genus, the family-group name is not to be replaced on that account alone". Thus I consider Colapteroblattini syn. nov. as a junior synonym of Poroblattini.
The tribe Poroblattini is based on characters of the male

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Figs 25-35. *Molytria vegranda* Roth, 1999, male. (25-26) Left hind tarsus, ventral (25) and inner (26) view. (27) Abdominal apex, dorsal view. (28) Hypandrium, ventral view. (29) Sclerites L2D, L4U and outlines of caudal part of hypandrium, dorsal view. (30-31) Right phallomere, ventral (30) and dorsal (31) view. (32) Apical part of sclerite L2D, dorsal view. (33) Sclerite L3. (34, 35) Apex of sclerite L3. Dotted areas show membranous parts. Abbreviations: *a.s.*, *b.L2D*, *b.L3*, *c.p.R1T*, *f.s.*, *L4U*, *R2*, *R3*, *R4*, *R5*, *s.t.*, *scl.a.* - see chapter "abbreviation used in figures", for details see text. Scale bars 1 mm: a (24-25), b (27-29), c (30-31), d (32), e (33), f (34-35).

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genitalia: "In this tribe the L2d (i.e. apical part of sclerite L2D in present paper) is elongated, curved, sclerotized, tapers slightly toward the tip, and is separated from L2vm (i.e. basal part of sclerite L2D in present paper). Apparently there is no distinct prepuce (i.e. membrane with bristles or teeth or apical sclerite of apical part of sclerite L2D). The R2 has a subapical incision and the shapes of L1 (i.e. right phallomere in present paper) are all basically similar" (Roth, 1971: 181).

Roth did not give a clear definition of the tribe Notolamprini. It was noted "that the 3 species of *Notolampra* have a markedly convex dorsal surface" (Roth, 1971: 181) and some morphological differences and peculiarities in male genitalia structures: "In *N. gibba* ... the L2d is much more robust than the L2d of members of Poroblattini, and does not taper toward the apex. R1 (i.e. sclerite L3 in present paper) is long and slender and has a subapical incision; L1 differs in shape from L1 of Poroblattini" (Roth, 1971: 181).

It must be noted that Roth examined the male genitalia structures mounted on slides (Roth, 1971; Roth & Gutiérrez, 1998). This made it difficult to study fine morphological structures.

In my opinion, *Colapteroblatta compsa* Hebard, 1919 (the type species of *Colapteroblatta*) and *Notolampra gibba* (Thunberg, 1826) (the type species of *Notolampra*) have structurally very similar male genitalia. The differences mentioned by Roth (1971) are not substantial.

The type species of *Colapteroblatta* and *Notolampra* have a number of characters in common:

1. Structure of tarsi: metatarsus distinctly shorter than other tarsal segments combined, with large euplantula; spines absent.
2. Hypandrium (Fig. 41 cf. Anisyutkin, 2018a: fig. 90) asymmetrical, with membranous area along right side; styli asymmetrical and cylindrical.
3. Structure of right phallomere (Figs 42-43 cf. Anisyutkin, 2018a: figs 91-92): caudal part of sclerite R1T distinctly enlarged; "upper triangular lobe" present; R3 short and robust, widened caudally.
4. Apical part of sclerite L2D developed as flattened, elongated and plate-like sclerite; bristles absent (Figs 44-46 cf. Anisyutkin, 2018a: figs 93-95).

Taking into account the aforesaid, I consider the tribe Notolamprini syn. nov. as a junior synonym of Poroblattini.

The features listed above are probably characteristic of the tribe Poroblattini, but I prefer to postpone proposing a formal revised diagnosis of this tribe due to insufficient knowledge of other epilamprine taxa.

Genus *Notolampra* Saussure, 1862

Type species: *Epilampra lucida* Saussure, 1862 (junior synonym of *Blatta gibba* Thunberg, 1826), by monotypy.

Remarks: According to structures of the male genitalia the type species is similar to representatives of the genus *Colapteroblatta* (see above), whereas its habitus is similar to that of *Thorax pocellana* (Saussure, 1862), the type and so far only species of the genus *Thorax* Saussure, 1862. The male genitalia of *Thorax* (see Anisyutkin, 2014), however, clearly differ from those of *Notolampra* and *Colapteroblatta*. I assume that the similarity in the appearance of *Notolampra* and *Thorax* is due to convergence.

Species included: Three species from South America (Brazil, Surinam, French Guiana, Martinique, Trinidad and Tobago), as given in Beccaloni (2014).

Notolampra gibba (Thunberg, 1826)

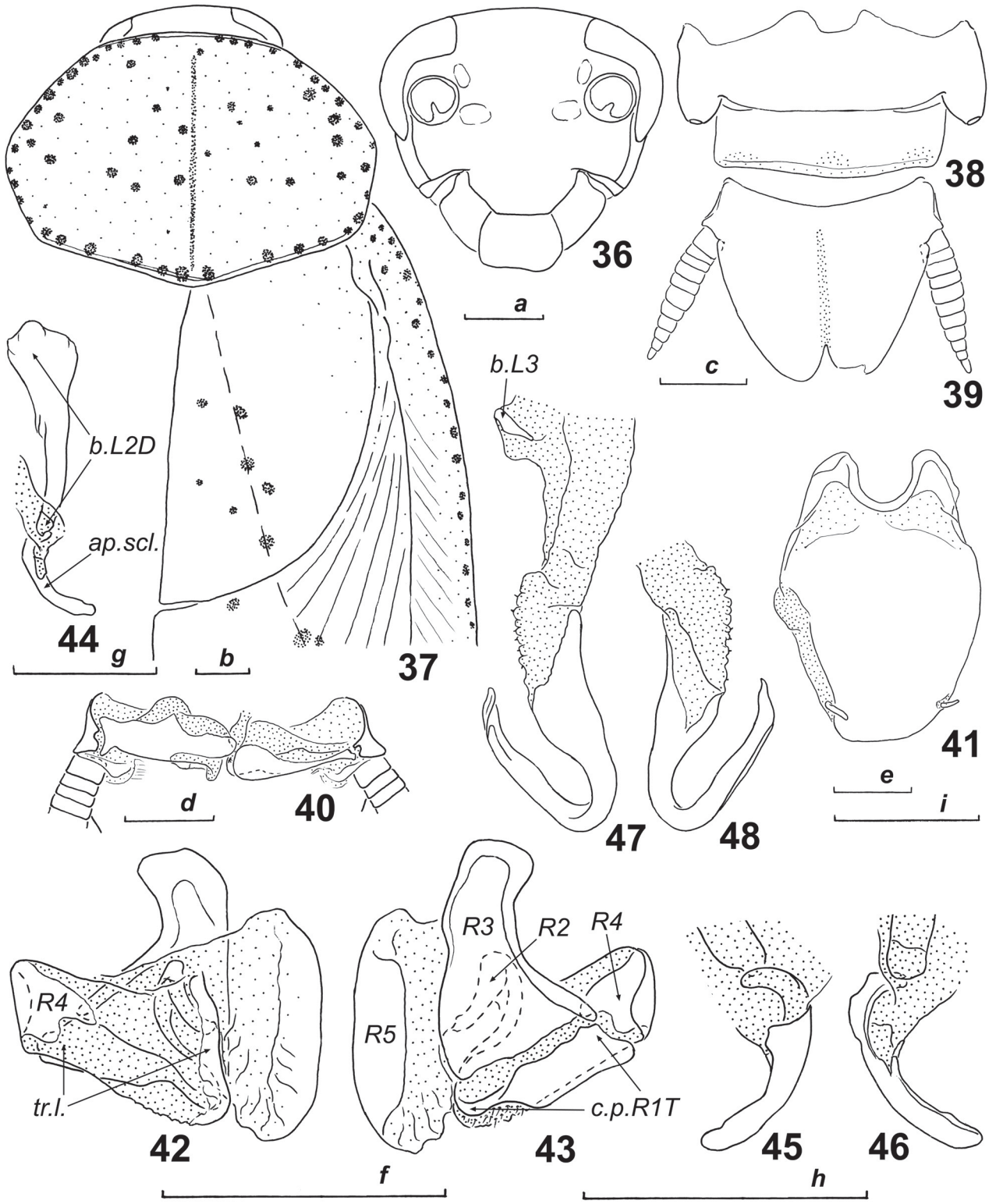
Figs 36-52

Notolampra lucida Saussure, 1862
Phoraspis cassidea Burmeister, 1838 (nec Dalman, 1823)

Material examined: MHNG; 1 male; "Bahia, Brésil; M H de Saussure", "*Thorax cassidea* ♂ Burm.". – ZIN; 1 female; Brazil, "Aqua Preta 22.9.936", "2247", "*Notolampra gibba* Thnb.". – ZIN; 1 female; "Bahia", "*Notolampra gibba*, Thunb. = cassidea, Burm." / "~~*Phoraspis cassidea* Burm~~." (The crossed out identification is written on the back of the label), "R. Shelford det.".

Redescription of male (Figs 36-48): General colour dirty yellow, head, pronotum and tegmina with scattered black dots (Fig. 37), middle legs, coxae of hind legs (other parts of hind legs missing) and ventral side of abdomen blackish. Surfaces smooth and lustrous; antennae with lustrous proximal 10-13 segments, other segments dull; head with large sparse punctuation, pronotum and, to a lesser degree, tegmina with fine dense punctuation. Head wider than long, epicranial sutures absent (Fig. 36); ocellar spots small, weakly expressed; distance between eyes about 1.1 times eye length; distance between antennal sockets about twice scape length (0.8 mm); approximate ratio of lengths of 3rd to 5th segments of maxillary palps 1.0 : 1.0 : 1.1. Pronotum as in Fig. 37. Tegmina and wings completely developed (left tegmen missing), surpassing abdominal apex. Tegmina strongly sclerotized and convex, venation strongly reduced (Fig. 37), in distal half better developed than in proximal half; area of right tegmen overlapped by left one at rest and distinctly reticulate. Anterior margin of fore femur armed as in type B, with 2-4 spines, including 1-2 apical ones. Fore tibiae not thickened distally. Hind and left mid legs broken off. Structure of mid tarsi: metatarsus half as long as other segments combined, with large euplantulae along lower margin; euplantulae of 2nd to 4th tarsal segments large; spines absent; claws symmetrical and simple; arolium large, slightly shorter than claw. Fore tarsi similar to mid tarsi, but segments relatively shorter. Abdominal tergites without visible glandular specializations;

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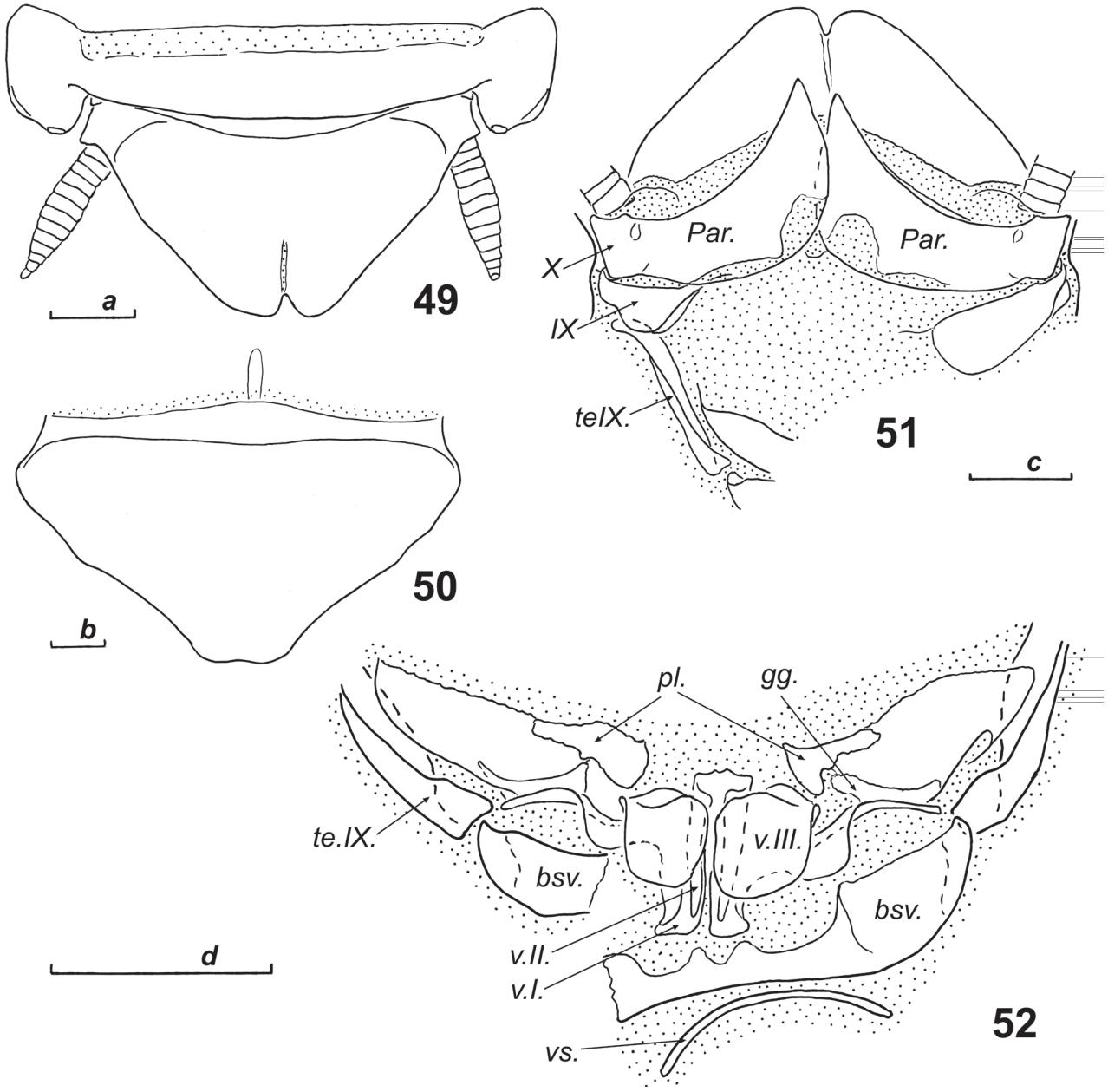


Figs 36-48. *Notolampra gibba* (Thunberg, 1826), male. (36) Facial part of head. (37) Head, pronotum and basal part of left tegmen, dorsal view. (38) Abdominal tergites VIII-IX, dorsal view. (39) Abdominal apex, dorsal view. (40) Paraprocts and adjacent structures, ventral view. (41) Hypandrium, ventral view. (42-43) Right phallomere, dorsal (42) and ventral (43) view. (44) Sclerite L2D, dorsal view. (45-46) Apical part of sclerite L2D, ventral (45) and dorsal (46) view. (47) Sclerite L3. (48) Apex of sclerite L3. Dotted areas show dark colour (37) or membranous parts (38-48). Abbreviations: *ap.scl.*, *b.L2D*, *b.L3*, *c.p.R1T*, *R2*, *R3*, *R4*, *R5*, *tr.l.* - see chapter "abbreviation used in figures", for details see text. Scale bars 1 mm: a (36), b (37), c (38-39), d (40), e (41), f (42-43), g (44), h (45-46), i (47-48).

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posterolateral angles of tergites attenuate and sharp. Anal plate (tergite X) elongated, with large median incision (Fig. 39). Cerci shortened and flattened (Fig. 39). Paraprocts of blaberid-type (Fig. 40). Hypandrium elongated and asymmetrical (Fig. 41), with membranous area along right margin; styli asymmetrical and cylindrical.

Male genitalia (Figs 42-48): Right phallomere (R+N): caudal part of sclerite R1T well sclerotized, enlarged (Figs 42-43, *c.p.R1T*), dorsally with large and medially sclerotized "upper triangular lobe" (Fig. 42, *tr.l.*) densely covered with bristles; R2 curved, with weakly expressed hollow; R3 short and robust, widened caudally; R4 plate-like; R5 in shape of large weakly sclerotized lobe, fused with R2. Sclerite L2D (L1) divided into basal and apical parts (Fig. 44); basal part strongly widened cranially; apical part in shape of flattened and curved plate (Figs 44-46), "dorsal outgrowth" and bristles absent. Sclerite L3 (L2d) with basal subsclerite (Fig. 47, *b.L3*); "folded structure" distinct, with short bristles (Figs 47-48); apex of L3 attenuated; groove *hge* present. Sclerite L4U (L3d) small, very weakly sclerotized.



Figs 49-52. *Notolampra gibba* (Thunberg, 1826), female. (49) Abdominal apex, dorsal view. (50) Genital plate, ventral view. (51) Abdominal apex and right tergal processes, ventral view. (52) Ovipositor and adjacent structures, ventral view, basivalvula broken. Dotted areas show membranous parts, except for valves of ovipositor. Abbreviations: *bsv.*, *gg.*, *Par.*, *pl.*, *teIX.*, *v.I.*, *v.II.*, *v.III.*, *vs.* - see chapter "abbreviation used in figures", for details see text. Scale bars 1 mm: a (49), b (50), c (51), d (52).

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Redescription of female (Figs 49-52): Similar to male, but larger, more robust and more convex. Facial part of head with scattered black dots, eyes black. Head with distance between eyes 1.2 times eye length; distance between antennal sockets about 1.8 times scape length (~1.2-1.3 mm); approximate ratio of lengths of 3rd to 5th segments of maxillary palps 1.1-1.2 : 1.0 : 1.1-1.2. Tegmina with venation nearly indistinct, main veins (*Sc*, *R*, *CuP*) visible as indistinct swellings. Anterior margin of fore femur armed as in type B, with 3-5 spines, including 2 apical ones. Anal plate (X tergite) triangular in shape, with distinct median incision (Fig. 49). Paratergites of tergite IX large and plate-like (Fig. 51). Paraprocts fused with anal plate, tapered and sclerotized caudally (Fig. 51). Genital plate as in Fig. 50.

Ovipositor and adjacent structures (Figs 51-52): Intercalary sclerite absent. Tergal processes of abdominal segment VIII small and fused with tergal processes of abdominal segment IX, the latter fully developed (Figs 51-52, *teIX.*). Gonangulum well sclerotized (Fig. 52, *gg.*), fused with well developed sclerotized lobes (Fig. 52, *pl.*). First valves of ovipositor large, partly membranous, with setae along inner side (Fig. 52, *v.I.*, setae not shown). Second valves of ovipositor small, completely hidden under first valves (Fig. 52, *v.II.*). Third valves of ovipositor (gonoplacs) wide (Fig. 52, *v.III.*). Basivalvula in shape of transverse arch-like plate (Fig. 52, *bsv.*). Vestibular sclerite in shape of thin and curved strip (Fig. 52, *vs.*). Brood sac without sclerotized structures.

Measurements (in mm): Head length: male 3.1, female 4.6-4.9; head width: male 3.3, female 4.3-4.6; pronotum length: male 4.5, female 6.2-6.7; pronotum width: male 6.1, female 8.5-9.2; tegmen length: male <16.0 (apices of tegmina and wings broken), female 19.5-20.5; tegmen width: male 6.0, female 9.0-9.5.

Remarks: The specimens described above and the specimen determined as *N. gibba* in a paper by Roth (1971) have different shapes of the apical part of sclerite L2D (Figs 44-46 cf. Roth, 1971: fig. 27). This can be explained by different angles of view, or the specimens may belong to different species.

The descriptions of ovipositor and adjacent structures are incomplete due to insufficient conspecific material. Note that in Fig. 52 the ovipositor is in such a position that the third valves cover the first and second ones. Only two females of this species were at the disposal of the author. One of them has a missing abdomen, while the other has damaged genitalia (Figs 51-52).

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