

Description of five new species and proposal of a new synonym in the genus *Paropsisterna* Motschulsky, 1860, from Australia (Coleoptera, Chrysomelidae, Chrysomelinae)

Mauro DACCORDI¹ & Eva SPRECHER-UEBERSAX²

¹c/o Museo Civico di Storia Naturale, Lungadige Porta Vittoria 9, I – 37129 Verona, Italie <mauro.daccordi@tiscali.it>

²Naturhistorisches Museum, Augustinergasse 2, CH – 4001 Basel, Suisse <eva.sprecher@bs.ch>

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Abstract. – Five new species of *Paropsisterna* are described from Queensland, New South Wales and Western Australia, and a new synonym is proposed: *Paropsisterna ambigua* Daccordi, 2003, n. syn. for *P. cernua* (Chapuis, 1877). *P. dogueti* n. sp. is closely allied to *P. delmastroi* Daccordi, 2003; *P. sergei* n. sp. resembles *P. angustipes* (Blackburn, 1898); *P. cooktowni* n. sp. and *P. fortepunctata* n. sp. are related to *P. purpureoviridis* (Clark, 1864); *P. fontaniva* n. sp. belongs to the species complex of *P. sexpustulata* (Marshall, 1808). The species can be distinguished by the characters of the aedeagus.

Résumé. – Description de cinq espèces nouvelles et proposition d'un nouveau synonyme dans le genre *Paropsisterna* Motschulsky, 1860, d'Australie (Coleoptera, Chrysomelidae, Chrysomelinae). Cinq nouvelles espèces de *Paropsisterna* sont décrites du Queensland, de New South Wales et d'Australie occidentale, et une nouvelle synonymie est proposée : *Paropsisterna ambigua* Daccordi, 2003, n. syn. de *P. cernua* (Chapuis, 1877). *P. dogueti* n. sp. est voisine de *P. delmastroi* Daccordi, 2003 ; *P. sergei* n. sp. ressemble à *P. angustipes* (Blackburn, 1898) ; *P. cooktowni* n. sp. et *P. fortepunctata* n. sp. appartiennent au groupe de *P. purpureoviridis* (Clark, 1864) ; *P. fontaniva* n. sp. fait partie du complexe d'espèces de *P. sexpustulata* (Marshall, 1808). Toutes les espèces se distinguent parfaitement par les caractères de l'édéage.

Keywords. – Taxonomy, morphology, aedeagus.

Accepting REID's (2006) synonymy of *Chrysophtharta* Weise, 1901 (with about 60 known species) with *Paropsisterna* Motschulsky, 1860, this genus becomes one of the most species rich (nearly 110 described species) of the large subtribe Paropsina. However, here this synonymy is rejected and we consider as *Paropsisterna* only the species with the following characters: body elongate-ovate or semi-circular, elliptical, moderately and uniformly convex with elytral margins declined, not upraised; frons without vertical groove beside inner margin of eyes; base of pronotum not margined; hypomeral groove absent; last maxillary palp expanded to apex (fig. 1); antennae elongate with narrow antennomeres; an elongate-oval depression on each side of pronotal disc; punctures on elytra fine, sometimes very fine and often quite irregular as in *P. anomala* (Blackburn, 1901), *P. cernua* (Chapuis, 1877), *P. fulvoguttata* (Baly, 1866) and *P. haekeri* Daccordi, 2003; all the species, known by us, for this genus are winged; mesoventral process strongly transverse with the anterior angles leading to obliquely transverse knobs or ridges (fig. 2); pronotum without setigerous pores at angles; epipleura without setae at internal margin; claws strongly toothed; aedeagus often with venter partly or entirely membranous, base not fissured. Colours not fading after death (*Paropsisterna* s. str.).

The concept of the genera in Paropsina should be reinvestigated because the morphological characters which are used to distinguish the taxa are few (sometimes only a single one) and frequently not prominent. Different species may be clearly distinguished by the examination of the median lobe of the aedeagus. Here we confirm that *P. nigerrima* (Germar, 1848), *P. alternata*

(Germar, 1848), *P. conjugata* (Chapuis, 1877), *P. complexa* (Chapuis, 1877) and *P. picta* (Chapuis, 1877) are only chromatic forms of *P. nigerrima*, a rather variable species.

In *Paropsisterna* (*s. str.*), the colours usually are not brilliant and species do not lose their colour completely after death as happens with many species of the “*Chrysophtharta*” group. There are some species with more or less circular and isolated burnt orange or chrome orange spots as *P. beata* (Newman, 1842), *P. dulcior* (Blackburn, 1898), *P. fontaniva* n. sp., *P. mera* (Chapuis, 1877), *P. octosignata* (Stål, 1860) and *P. seypustulata* (Marshall, 1808). Other species have alternate stripes on the elytra in the colours black and spectrum red or carmine as in *P. alternata*, *P. conjugata*, *P. fallax* (Newman, 1842), *P. mentitrix* (Blackburn, 1898) [probably a synonym of *P. morio* (Fabricius, 1787)]. Furthermore, some species are totally blue-violaceous or green-ferruginous [*P. purpureoviridis* (Clark, 1864), *P. iris* (Chapuis, 1877), *P. cooktowni* n. sp., *P. fortepunctata* n. sp.]. The melanism is present in various species as a simple variation of a generally ochre or reddish coloration on a blackish ground (e.g. *P. beata*) or exclusively as in *P. angustipes* (Blackburn, 1898), *P. delmastroi* Daccordi, 2003, *P. dogueti* n. sp., *P. jawoyna* Daccordi, 2003, and *P. sergei* n. sp. In *P. morio* (a species well-representative of the genus), the coloration is generally black but there are also specimens known as completely chrome orange and some with stripes in carmine alternating with black ones which correspond to the rows of punctures on the elytra as in the form *P. mentitrix* (Blackburn) of *P. morio*.

MATERIAL AND METHODS

The specimens under study come from different museums, universities and private collections as reported in the acronyms. They were examined, dissected, measured and drawn using a stereomicroscope Wild M5 and a microscope Nikon model SBR-Kt. The female internal sclerite structures (spermatheca and apical appendix) were isolated in a diluted solution of KOH (25%), then put in acetic acid, afterwards washed in pure alcohol and fixed in a drop of Euparal on a rectangular transparent plastic tab put on the same pin as the insect and the locality and determination. For male specimens, the median lobe was glued with water soluble glue on tab and pinned under the insect. The colour names are taken from SMITHE (1974, 1975).

Abbreviations. – **BMNH**, The Natural History Museum, London, UK; **IRSN**, Institut Royal des Sciences Naturelles, Bruxelles, Belgique; **MDC**, Mauro Daccordi collection, Verona, Italy; **NHMB**, Naturhistorisches Museum, Basel, Switzerland; **NHRS**, Naturhistoriska Riksmuseet, Stockholm, Sweden; **NMPC**, National Museum Natural History, Prague, Czech Republic; **QM**, Queensland Museum, South Brisbane, Queensland, Australia; **TMAG**, Tasmanian Museum and Art Gallery, Hobart, Tasmania, Australia; **USNM**, National Museum of Natural History, Washington D. C., USA; **ZMHB**, Museum für Naturkunde der Humboldt Universität, Berlin, Germany; **ZSM**, Zoologische Staatssammlung, München, Germany.

L, total length; **W**, largest width; **LE**, length of elytra; **LP**, length of pronotum; **WP**, width of pronotum.

TAXONOMY

SPECIES OF THE GROUP OF *PAROPSISTERNA PURPUREOVIDIS*

Among the species of *Paropsisterna* with a blue violaceous, green ferruginous or dull olive-green colour, we studied *P. purpureoviridis*, *P. iris* and, with doubts, two others which are described below as new species.

Paropsisterna purpureoviridis (Clark, 1864)

Paropsis purpureoviridis Clark, 1864: 250.

Material examined. – NT, 8 km S of Larrimah; QLD, Mt Carbine (MDC).

In the few taxa with a metallic green, blue or reddish colour on the elytra, we consider some specimens from N. Queensland, Mt. Carbine and a female from Victoria without a precise locality, as belonging to *P. purpureoviridis* (type not examined). The species was described by CLARK (1864) from North Australia based on a single female specimen from northern Australia mentioning “(a specimen) which I obtained in M. Damel’s collection some months ago”.

Paropsisterna iris (Chapuis, 1877)

Paropsis iris Chapuis, 1877: 74.

Material examined. – 1 ♂, QLD, Mornington Island; 1 ♂, QLD, Mt. Surprise; 1 ♂, QLD, Gilberton; NT, 25 km S of Katherine; 1 ♂, 1 ♀, NT, 65 km W of Cobar; 1 ♀, NT, 80 km S of Larrimah; 1 ♂, NT, Goote Eylandt; 1 ♂, WA, Swan River; 1 ♂, WA, Roebuck Bay; 1 ♂, WA, 35 km SSW Willare Bridge; 1 ♂, NSW 32,2 km SSW of Bourke (MDC).

The type of *Paropsis iris* (studied by one of us, M.D.) is a female from Eclipse Island (Western Australia). The label under the specimen is from Clavareau, indicating “*Paropsisterna purpureoviridis*”. As female specimens are undistinguishable, the study of the type did not resolve the problem. We assess that examined specimens listed above could reasonably be attributed to *P. iris*. So as not to complicate the nomenclature with a new specific name, we maintain the name used by Chapuis for this species. Fig. 4 and 5 show the shape of the aedeagus. The species *P. iris* differs from *P. purpureoviridis* by the male genitalia (fig. 3), although both species are very similar regarding dimensions, coloration and punctures and above all for the presence of two symmetrical apophyses on the venter of the aedeagus, whose function during copulation is unknown. A few specimens of *P. iris* (Cobar, Bourke, NSW) have very dense and strong punctures in the elytral interstriae, so that the striae are difficult to see.

Paropsisterna cooktowni n. sp.

<http://zoobank.org/6DDFE9CE-E355-4B67-9B2E-56CEA46F80FE>

HOLOTYPE: ♂, Cooktown, Queensland, Mjoberg, (NHRS).

PARATYPES: 1 ♂, Cooktown (MDC); 1 ♂, Claudie River, near Mount Lamond, QLD, 7.I.1972 mv light, D. K. Mc Alpine, G. A. Holloway (QM).

Description of male. – L. 8.7 mm; W 6.2 mm. Head, thorax, scutellum plumbeus; labrum, distal part of palpi yellow ochre and darker in the middle; elytra olive green with a slight shading of ferruginous to yellow ochre. Shape of body elongate-ovate (fig. 43).

Clypeus and frons with dense punctures, denser on clypeus and internal margins of eyes; without metopic suture in the middle of frons. Antennae as in fig. 6.

Pronotum transverse (WP 1 mm; Ln.pr 2.1 mm), with lateral margins widely arcuate; disc of pronotum with dense punctures, like those on frons; at the margins, which are not raised, punctures larger and lateral grooves distinct and deep. Scutellum ogival without punctures.

Elytra elongate (LE 7.0 mm) with dense punctures; humeral callus present, elytral striae nearly imperceptible because of confused strong punctures in interstices; lateral margins straight and with dense punctures at apex; vertical epipleura enlarged in anterior third.

Prosternal process narrow, uniformly oblong, channelled in middle; mesoventrite with deep median groove and distinct knobs at sides; metaventral process slightly bordered; metaventrite glossy and brilliant, smooth, metacoxal plate with elongate punctures; mesanepisterna with dense punctures; mesepimera smooth, metanepisterna with a wide elongate groove, surface corrugated and opaque.

Femora short, fusiforme, subparallel; tibiae short and regularly dilated to apex; first pro- and mesotarsomere enlarged, first metatarsomere narrow with a pad of setulae. Claws toothed.

Abdominal segments smooth, shiny, only first segment with distinct punctures and slight wrinkles anteriorly. Tergite VII sericeous, without median sulcus, with undulated margins at the apex.

Aedeagus as in fig. 7-8, ventral part nearly entirely and at base fully membranous.

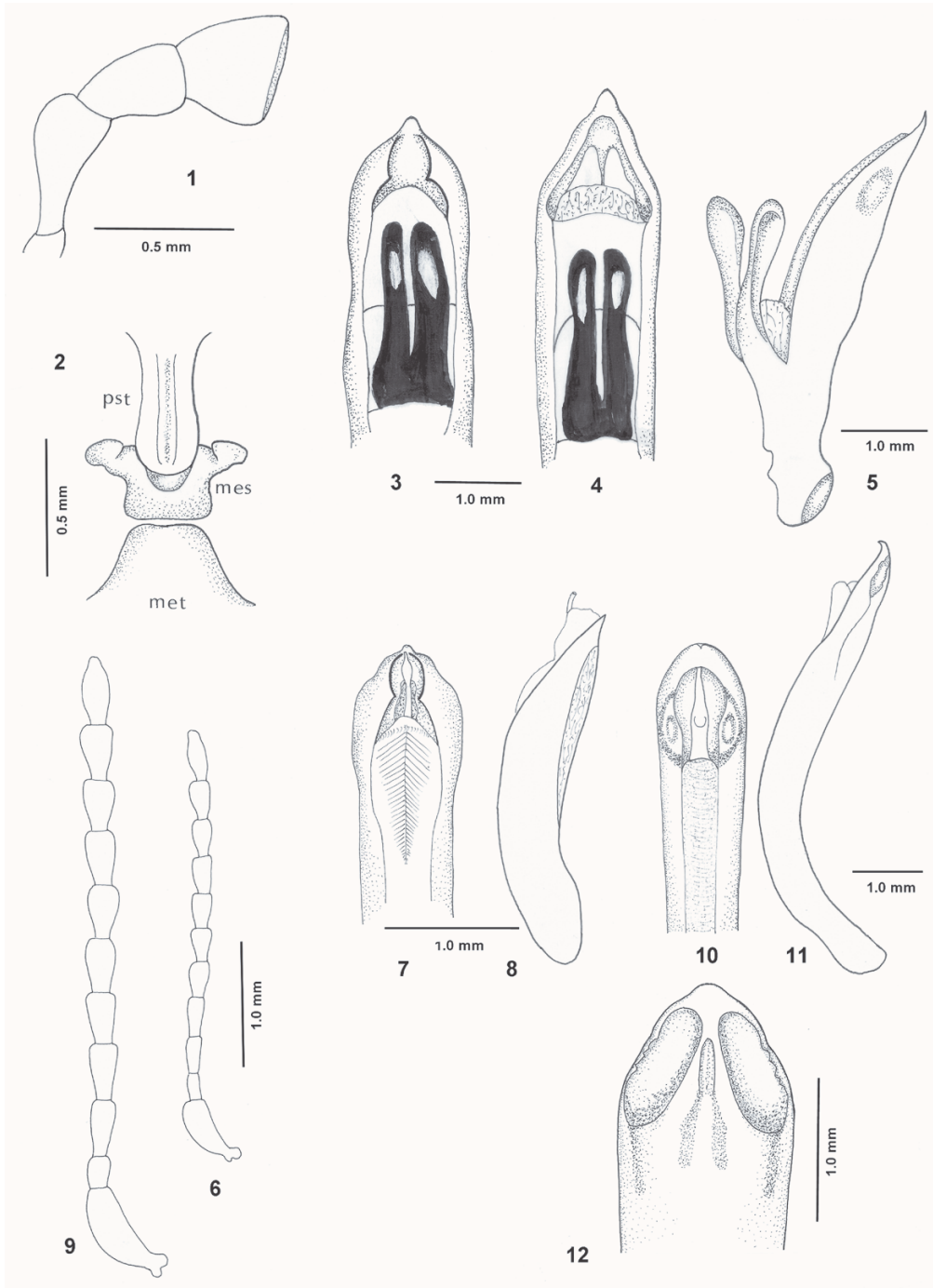


Fig. 1-12. – *Paropsisterna* spp. – 1-2, *P. morio* (Fabricius): 1, maxillary palp; 2, pro-, meso- and metasternal process. – 3, *P. purpureoviridis* (Clark), aedeagus in dorsal view. – 4-5, *P. iris* (Chapuis), aedeagus: 4, dorsal view; 5, lateral view. – 6-8, *P. cooktowni* n. sp., ♂: 6, antenna; 7-8, aedeagus (7, dorsal view; 8, lateral view). – 9-12, *P. fortepunctata* n. sp., ♂: 9, antenna; 10-12, aedeagus (10, dorsal view; 11, lateral view; 12, apex in ventral view).

Etymology. – The name we propose for this species recalls the locality in which the holotype and a paratype specimen were found.

Notes. – *Paropsisterna cooktowni* n. sp. is attributed to the *P. purpureoviridis* group. Inside this group, the new species is characterized by the smaller dimensions and the more densely punctured head. The punctures at the apex of the elytra are sparse and not very regular in *P. cooktowni* n. sp. In *P. purpureoviridis*, *P. iris* and *P. jawoyna*, the rows of punctures are distinct at the apex. However, in the new species the elytra have a brilliant shading and the rows of punctures on the elytra are more distinct than in *P. jawoyna*; in *P. cooktowni* the disc of the pronotum has sparser punctures and the large punctures at the sides are more numerous. The females are unknown.

***Paropsisterna fortepunctata* n. sp.**

<http://zoobank.org/80C9D93E-F395-4728-AC31-AA99FB24AC16>

HOLOTYPE: ♂, Australia, QLD, 11.5 km W Kuranda, 24.-25.XII.1978 at black-light, *W. D. Sumlin* (QM).

PARATYPES: 1 ♂, Queensland (MDC); 1 ♂, Mareeba Rd N Q, Clohesey River, 30.X.1970, *A. & M. Walford-Huggins*, ex coll. *A. Walford-Huggins* (USNM).

Description of male. – L 12.7 mm; W 8.7 mm. Head, thorax and scutellum opaque, light neutral gray; upper labrum yellow ochre; elytra shining, magenta shaded with Paris green and yellow green Chartreuse towards apex, sides of elytra cyan. Ventral parts blackish neutral gray to gem ruby shaded with turquoise green at anterior margins of elytra, humeral callus and in posterior third. Shape of body ellipsoid.

Clypeus and frons with dense punctures, metopic suture absent in middle of frons, frontoclypeal suture angle wide. Antennomeres uniformly slender (fig. 9), last article of maxillary palp expanded to apex.

Pronotum transverse (LP 3.0 mm; WP 6.8 mm), lateral margins widely arcuate; disc of pronotum opaque, with fine, sparse punctures becoming larger and denser at sides, lateral grooves distinct and deep. Scutellum widely ogival without punctures.

Elytra shining, elongate (LE 10.0 mm) with dense punctures; humeral callus present, regular rows of punctures nearly imperceptible because confused with dense interstitial punctures; lateral straight margins densely punctured at apex. Vertical epipleura enlarged in anterior third.

Prosternal process narrow, nearly uniformly elongate, channelled at middle; mesosternal process with deep median groove and distinct knobs at sides; metasternal process slightly bordered; metasternum shining, brilliant, smooth, metacoxal plate with elongate punctures; mesanepisterna with dense punctures; mesepimera smooth; metanepisterna with wide elongate groove, surface corrugate, opaque.

Femora short, fusiform, subparallel; tibiae short and regularly dilated towards apex; first pro- and mesotarsomere enlarged, first metatarsomere narrow with fine glabrous stripe in pad of setulae. Claws toothed.

Abdominal segments smooth, brilliant, first segment only with distinct punctures and slight wrinkles anteriorly. Tergite VII sericeous, without median sulcus, margins undulated at apex.

Aedeagus as in fig. 10-12, elongate, ventral part nearly totally chitinized, except for fine membranous area at base; ventrally two symmetrical deep elongate cavities towards apex, dorsal part nearly fully and regularly furrowed by straight margins, membranous at base.

Etymology. – The name of this new species is taken from the morphological character of the elytra which are stronger punctured than in related species.

Notes. – This species may only be confused with *Paropsisterna purpureoviridis* and *P. iris* because of the coloration and the dimensions, but it can be distinguished from these species without doubt by the stronger elytral punctures and the different shape of the aedeagus. The coloration is variable: a specimen from the typical series (Queensland) is entirely of ferruginous coloration. The other specimen from Mareeba has plumbeous head and thorax, elytra discally

emerald green; laterally, in a narrow anterior belt, and at the sutural margins and apically gem ruby, with apple green humeral callus and posterior third of elytral disc.

Key to species of the *Paropsisterna purpureoviridis* group

1. Body length not exceeding 10 mm; body roundish; interpunctural space of rows on elytra fine and weak *Paropsisterna cooktowni* n. sp.
– Body length larger than 10 mm; body elongate; interpunctures of rows on elytra strong and partly dense .. 2
2. Dorsal side of aedeagus without wide symmetric appendices, elongate *P. fortepunctata* n. sp.
– Dorsal side of aedeagus with two elongate large symmetric appendices 3
3. Lateral side of aedeagus deeply arcuate before apex, which is short *P. purpureoviridis* (Clark)
– Lateral side of aedeagus nearly straight, apex elongate, not enlarged *P. iris* (Chapuis)

SPECIES OF THE GROUP OF *PAROPSISTERNA MORIO*

***Paropsisterna morio* (Fabricius, 1787)**

Chrysomela morio Fabricius, 1787: 66.

Material examined. – 1 ♂, QLD, Mornington Island; 1 ♂, QLD, Mt. Surprise; 1 ♂, QLD, Gilberton; NT, 25 km S of Tasmania, 15 km east Smithtown 40°49’52”S 145°12’30”E; NSW, Armidale; VIC, without date; TAS, without date; TAS, Hobart. Black coloured specimens: ACT, Canberra, Black Mt.; TAS, Ridgeway; TAS, Launceston; TAS, without date; TAS, Hobart (all MDC).

P. morio was described by FABRICIUS (1787) based on two specimens coming from Terra Deimenii Tasmania (formely Van Diemens Land). The types were not examined; they are conserved in the Banks Collection in London (ZIMSEN, 1964). A more precise locality description is: “*P. morio* was described from specimens collected by David Nelson on Captain Cook’s third voyage (H. M. S. Discovery) at Adventure Bay, Bruny Island, in January 1776, making it the first *Paropsisterna* species described from Tasmania. It has frequently been confused with *P. fallax* (aedeagus: fig. 17-18) and *P. nigerrima*. Both of these species were described from mainland Australian material. *P. morio* is a relatively commonly collected species and is frequently collected from *Eucalyptus viminalis* Labillardière, 1806. Apart from Tasmania, it probably also occurs in Victoria, New South Wales and South Australia” (David de Little, pers. comm., 18.I.2013). We agree with these notes.

Aedeagus as in fig. 13-14.

Notes. – In the short description, FABRICIUS (1787) states it is completely black (habitus: fig. 15- 16). However, we know specimens belonging to this species and also found in Tasmania with black stripes and interstices in spectrum red on the elytra. Among the species which are opaque black or brilliant raw sienna to medium plumbeus, we observed no significant variations of the rather uniform coloration belonging to *P. delmastroi*, *P. angustipes*, *P. jawoyna* and the two new species described here below.

***Paropsisterna dogueti* n. sp.**

http://zoobank.org/E7B9A547-5C05-4E5F-9A70-31A53B92CCCA

HOLOTYPE: ♂, Australia, W. A. 06/24, 60 km N. Norseman, 31.69450°S - 121.67359°E, 241 m, 5.I.2006. *M. Baehr* (ZSM).

PARATYPES: 2 ♀, *idem* holotype (ZSM, MDC); 1 ♂, *idem* (NHMB); 1 ♀, Australia, QLD, 01/14, Gayndah, Burnett R. 26-27.III.2001, *M. Baehr* (ZSM); 1 ♂, West Australien, 33 km NNW Raventhorpe (Fo Nv.49), 13.II.1987, *M. Baehr* (MDC).

Description of male. – L 11.0 mm; W 7.8 mm. Brilliant black, legs and ventral parts (mesepimeron, metanepisternum) with walnut brown shadings. Upper labrum ferrugineus, marginal colour cinnamon-rufous. Body ellipsoidal, uniformly slightly convex (fig. 45).

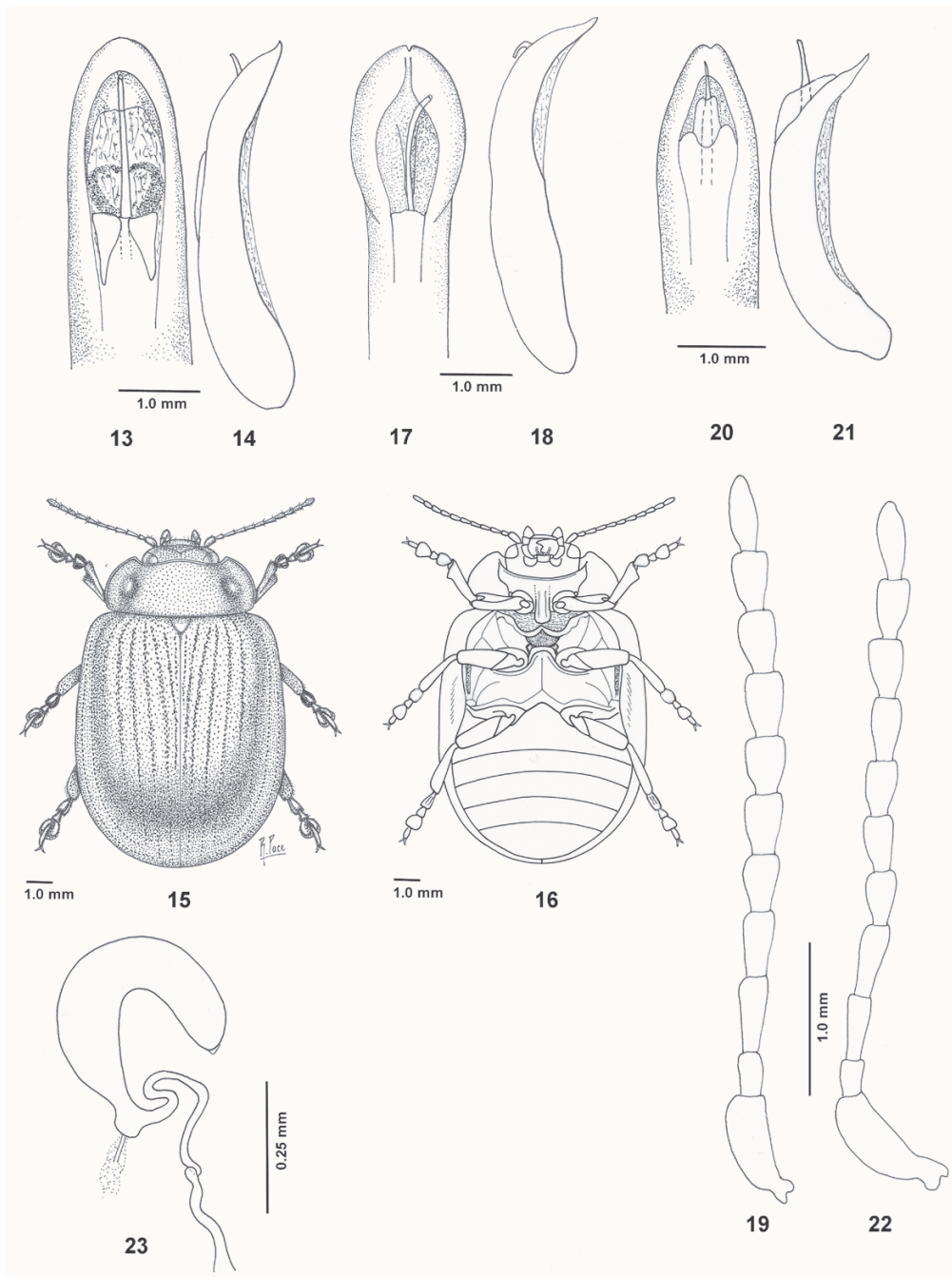


Fig. 13-23. – *Paropsisterna* spp. – 13-16, *P. morio* (Fabricius): 13-14, aedeagus (13, dorsal view; 14, lateral view); 15, habitus; 16, ventral view, schematic. – 17-18, *P. fallax* (Newman), aedeagus: 17, dorsal view; 18, lateral view. – 19-23, *P. dogueti* n. sp.: 19, ♂, antenna; 20-21, aedeagus (20, dorsal view; 21, lateral view); 22, ♀, antenna; 23, spermatheca.

Clypeus and frons with dense punctures, without medial frons metopic suture. Antennae exceeding base of prothorax (fig. 19); last article of maxillary palp expanded at apex.

Pronotum transverse (LP 6.2 mm; WP 2.5 mm), with lateral margins widely arcuate; disc of pronotum with dense punctures, nearly as dense as those of frons; at upraised margins, punctures larger and lateral grooves distinct, deep. Scutellum ogival without punctures.

Elytra elongate (LE 9.3 mm), densely punctured; regular striae nearly imperceptible because confused with interstitial punctuation; lateral margins straight, densely punctured to apex. Vertical epipleura enlarged in anterior third.

Prosternal process narrow, nearly uniformly elongate, medially channelled; mesoventrite with deep median groove and distinct knobs laterally; metaventral appendix slightly bordered; metaventrite surface shiny, brilliant, smooth, metacoxal plate with elongate punctures; mesanepisterna with dense punctures; mesepimera smooth; metanepisterna with wide elongate groove, ground corrugate, opaque.

Femora short, fusiforme, subparallel; tibiae short, regularly dilated towards apex; first pro- and mesotarsomere enlarged, first metatarsomere narrow with fine glabrous stripe in pad of setulae; claws toothed.

Abdominal segments smooth, shiny, only first segment with distinct punctures and slightly wrinkled anteriorly. Tergite VII sericeous, without median sulcus, margins undulate at apex.

Aedeagus as in fig. 20-21, ventral part apparently entirely membranous.

Females. – Larger dimensions (L 11.9 mm; W 8.8 mm); regular punctuation rows more distinct than in males. Antennae: fig. 22. First tarsomere narrow, elongate, medially a line without setulae. Spermatheca: fig. 23.

Etymology. – This species is named after Serge Doguet, deceased too early, in memory of our friendship.

Notes. – *Paropsisterna dogueti* n. sp., *P. angustipes* and *P. delmastroi* are part of a small group of entirely black shiny species with the upper superior labrum appearing entirely blackish. *P. delmastroi* has more elevated, barrel-shaped and bulging sides of the prothorax. *P. angustipes* has finer punctures on the disc of the thorax and on the elytra. This species can be confused with the melanic form of *P. beata* from which it is distinguishable by the very fine punctuation of the disc of the pronotum and the fine elytral punctuation on an opaque ground. However, a reliable determination is only possible by examination of the aedeagus.

Paropsisterna sergei n. sp.

<http://zoobank.org/79701DF5-D93E-4569-9A57-994BAFE587B6>

HOLOTYPE: ♂, W. Australia, Shaw River, VI.1955, leg. Demarz (NHMB).

Description of male. – L 11.7 mm; W 8.7 mm. Head, thorax, elytra, scutellum medium plumbeus. Upper labrum Pratt’s rufous with variations of yellow ochre or blackish with cinnamon rufous at margins. Ventral parts chestnut. Legs and antenna partly amber shading to raw sienna. Body elyptical, uniformly not very convex (fig. 46).

Clypeus and frons with dense punctures, without metopic suture in middle of frons. Antennomeres uniformly fine (fig. 24); last article of maxillary palp expanded at apex.

Pronotum transverse (LP 2.8 mm; WP 6.2 mm), lateral margins widely arcuate; disc of pronotum with dense punctures, almost like those at frons; margins not elevated, with bigger punctures and distinct deep lateral grooves. Scutellum ogival without punctures.

Elytra elongate (LE 9.1 mm) with dense punctures; regular rows of punctures almost imperceptible due to confusion with dense interstitial punctuation; lateral margins straight, densely punctured at apex; Vertical epipleura enlarged in anterior third.

Prosternal process narrow, nearly uniformly elongate, channelled in middle; mesosternum with deep median groove and distinct knobs at sides; metaventral process not bordered; metaventrite shining, brilliant, smooth, metacoxal plate with elongate punctures; mesanepisterna densely punctured; mesepimera smooth; metanepisterna with a wide elongate groove, its ground corrugate, opaque.

Femora short, fusiforme, subparallel; tibiae short, regularly dilated towards apex; pro- and mesotarsomeres enlarged, metatarsomeres narrow with continuous pad of setulae; claws toothed at base.

Abdominal segments smooth, brilliant, first segment only with distinct punctures and slight wrinkles at anterior. Tergite VII sericeous, without median sulcus, margins undulate at apex.

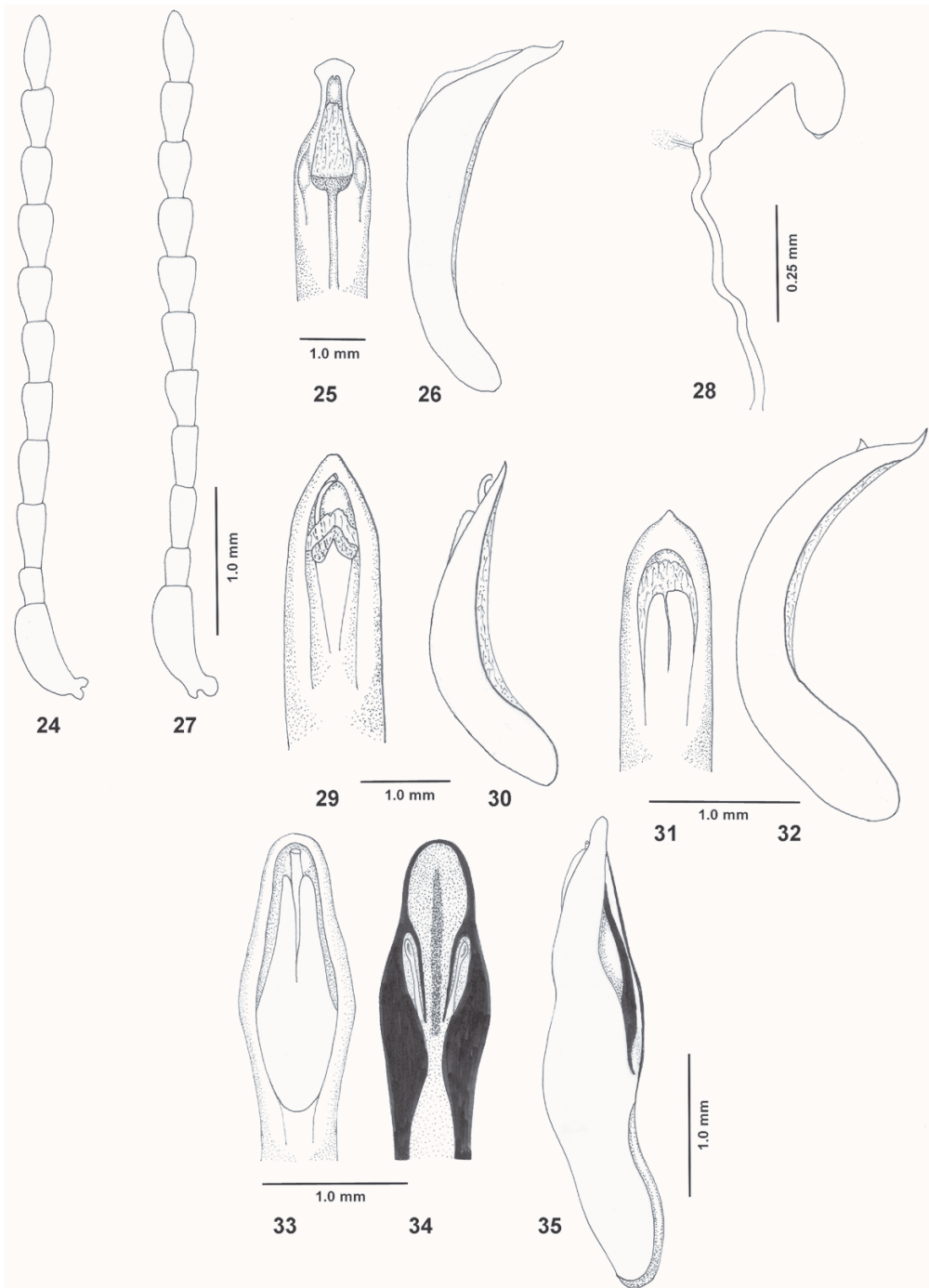


Fig. 24-35. – *Paropsisterna* spp. – 24-28, *P. sergei* n. sp.: 24, ♂, antenna; 25-26, aedeagus (25, dorsal view; 26, lateral view); 27, ♀, antenna; 28, spermatheca. – 29-30, *P. nigerrima* (Germar), aedeagus: 29, dorsal view; 30, lateral view. – 31-32, *P. stygia* (Chapuis), aedeagus: 31, dorsal view; 32, lateral view. – 33-35, *P. beata* (Newman), aedeagus: 33, dorsal view; 34, ventral view; 35, lateral view.

Aedeagus as in fig. 25-26, ventral part almost entirely sclerified, in middle incised by fine continuous fissure, margins slightly thickened; narrow and elongate before apex, at apex enlarged and shaped as a triangular spatula.

Females. – Tegument opaque, dimensions slightly larger (L 12.6 mm; W 8.8 mm; LE 10.1 mm; LP 2.8 mm; WP 6.5 mm). Antennae as in fig. 27. Spermatheca: fig. 28.

Etymology. – This species is dedicated to the late Serge Doguet, an esteemed colleague and good friend.

Key to species of the *Paropsisterna morio* group. – In the group of *Paropsisterna morio*, we include species with uniform black or plumbeous thorax and elytra, but without considering them as a significant phylogenetic group. In some species this coloration is present as a constant character (*P. angustipes*, *P. delmastroi*, *P. dogueti*, *P. sergei*), in others as a chromatic form within the variability of the species (*P. beata*, *P. morio*, *P. nigerrima*, *P. stygia*).

1. Lateral declivity of elytra with three elongate transverse foveae; suture strongly carinate behind *Paropsisterna stygia* (Chapuis)
 - Lateral declivity of elytra not with three elongate transverse foveae; only at apex of suture with short clear incision 2
2. Apical ventral segment of male with strong impression reaching half-way to base; each main row of punctures on elytra delimited by subparallel rows of smaller punctures *P. morio* (Fabricius)
 - Apical ventral segment of male impressed (mostly) at extreme apex; rows of punctures on elytra simple, interstriae sparsely punctate, punctures confuse and almost imperceptible..... 3
3. Elytra brilliant, rows of punctures confused with dense interstitial punctuation; lateral grooves on sides of pronotum deep and wide; in males, first protarsomere narrow, oblong *P. angustipes* (Blackburn)
 - Elytra opaque, little shining; rows of punctures distinct; lateral grooves on sides of pronotum not deep and wide; in males, first protarsomere short and widened 4
4. Coloration of thorax and elytra plumbeous; labrum yellow 5
 - Coloration of thorax and elytra black, labrum maroon, brown or black 6
5. Punctuation of frons and pronotal disc strong and dense; aedeagus bisinuate with short and roundish apex *P. jawoyna* Daccordi
 - Punctuation of frons and pronotal disc sparse and fine; aedeagus arcuate with apical part elongate and triangular apex *P. sergei* n. sp.
6. Sides of thorax flattened; pronotal disc strongly punctured; rows of punctures on elytra distinct from strongly punctured interstriae *P. dogueti* n. sp.
 - Sides of thorax raised; pronotal disc finely punctured; rows of punctures on elytra acicular and little or not distinguished from punctures of interstriae 7
7. External margin of anterior tibiae expanded from apex, without small tooth; rows of punctures on elytra little perceptible; apex of aedeagus elongate, triangular *P. delmastroi* Daccordi
 - External margins of anterior tibiae widened in short tooth before apex; rows of punctures on elytra fine and distinct; apex of aedeagus narrow, enlarged, rounded *P. beata* (Newmann) (melanic form)

Short observations about the black and plumbeous colours in *Paropsisterna*. – We noticed that in *P. nigerrima* (aedeagus: fig. 29-30), a polymorphous species, of which several taxa have been described but in our opinion all synonyms, the typical form is of a blackish colour. Also in *P. stygia*, which presents chromatic polymorphism as well, there is no lack of entirely black specimens. Because of the shape of the thorax with well-defined anterior angles as well as the shape of the aedeagus (fig. 31- 32), *P. stygia* cannot be confused with any other species here discussed. Significantly also in the species group of *Paropsisterna* with dark coloration and isolated reddish or orange dots, there is an entirely melanic form of *P. beata*. Fig. 33-35 show the shape of the aedeagus of *P. beata*, characterized also by trabeculae on the dorsal side (fig. 34).

SPECIES OF THE GROUP OF *PAROPSISTERNA SEXPUSTULATA*

Material examined. – *P. angustipes*: N Sydney; QLD, without date. *P. beata* (melanic form): QLD, Injune env.; QLD, Wild Horse Creek; QLD, Blackwater env.; QLD, Edungalba. *P. beata* (chromatic form): NSW, 14 km N of Molong; NSW, Mandurawa, Millqwolong; NSW, Jamworrrh; QLD, 15 km W Mareeba; QLD, Dimbulah; QLD, Brisbane; NT, 30 km SW Katherine; NT, Katherine; ACT, Canberra; VIC, Casterton; VIC, Wangaratta. *P. dulcior*: NSW, Invarell; WA, Nannup. *P. mera*: Australia, without locality and date. *P. octosignata*: NSW, Jungow; ACT, Canberra; NSW, Sydney. *P. rufobrunnea*: VIC, env. Mansikeld (?); NSW, betw. Canberra and Mt. Franklin; NSW, Taralga; NSW, Mt. Coriculdgy, Great Dividing Range. *P. sexpustulata*: NSW, Sydney, Berkhire Park; NSW, Barrington Tops, Salisbury; VIC, Blacktor; QLD, Injune; QLD, Kingaro. *P. sexpustulata* var. *orientalis*: Victoria.

The group of *Paropsisterna sexpustulata* includes a few taxa having normally dark elytra and also black with more or less isolated and rounded dots coloured burnt orange, Pratt's rufous or chrome orange, a narrow thorax with very arcuate margins. In this group are also forms of an entirely chrome orange to spectrum orange colour as *P. rufobrunnea* (probably only a monochromatic form of *P. sexpustulata*). The following species belong to this group: *P. angustipes*, *P. beata*, *P. dulcior*, *P. fontaniva* n. sp., *P. mera*, *P. octosignata*, *P. rufobrunnea* and probably also *P. suspiciosa* (Baly, 1866).

A form of *P. nigerrima*, *P. picta* (Chapuis, 1877), is known, which has this coloration on the elytra, but which is only a variation of *P. nigerrima* because of the less arcuate margins and the distinct anterior angles of the thorax, as well as the shape of the aedeagus (fig. 29-30). This species does not belong to the species group of *P. sexpustulata*, but to the group of *P. morio*.

***Paropsisterna fontaniva* n. sp.**

<http://zoobank.org/2F4994BD-8712-45D0-863A-02087CA12AED>

HOLOTYPE: ♂, Ebor, 5000 ft, N.S, Wales, *H. Petersen* (USNM).

PARATYPES: 3 ♂, 2 ♀, *idem* holotype (1 ♀, 1 ♂ in USNM; 1 ♂, 1 ♀ in MDC; 1 ♂ in NHMB).

Description of male. – L 9.6 mm; W 7.2 mm. Raw umber with narrow band of orange rufous on frons and sides of thorax; upper labrum ferrugineous with ochre margins; on elytra six orange rufous dots: an anterior rounded dot between raised humeral callus and scutellum, a smaller rounded dot at posterior third between 7th and 10th rows of punctures, a slightly elongate dot at posterior third between 2nd and 5th rows of punctures. Shortly ovoid, body ellipsoid (fig. 47).

Clypeus and frons with dense punctures, very dense at internal margins of eyes, smaller and denser at anterior margin of clypeus; four slight frontal grooves, without median frontal metopic suture. Antennae exceeding posterior margins of prothorax, antennomeres uniformly fine (fig. 36), last article of maxillary palp expanded at apex.

Pronotum transverse (Ln.pr. 2.0 mm; Lg.pr. 4.9 mm), lateral margins widely arcuate; disc of pronotum with dense punctures, almost like those of frons; margins not raised, bigger punctures and lateral grooves distinct, deep. Scutellum ogival without punctures.

Elytra elongate (7.0 mm) with dense punctures; regular rows of punctures almost imperceptible due to confusion with dense interstitial punctuation; lateral margins straight, densely punctured at apex; epipleura vertical, enlarged in anterior third.

Prosternal process narrow, almost uniformly elongate, medially channelled; mesoventrite with deep median groove and distinct knobs at sides; metaventral process slightly bordered; metasternum shining, brilliant, smooth, metacoxal plate with elongate punctures; mesanepisterna with dense punctures; mesepimera smooth; metanepisterna with wide elongate groove, its surface corrugate, opaque.

Femora short, fusiforme, subparallel; tibiae short and regularly dilated towards apex; pro- and mesotarsomeres enlarged, metatarsomeres narrow with fine stripes, without medial setulae; claws toothed.

Abdominal segments smooth, brilliant, only first segment with distinct punctures and slight wrinkles at anterior part. Tergite VII sericeous, without median sulcus, margins undulate at apex.

Aedeagus as in fig. 37-38, ventral part widely membranous except sclerified apical third.

Females. – Larger than males: L 10.4 mm; W 7.8 mm; LE 8.8 mm; LP 2.3 mm; WP 5.8 mm (average size). Antennae longer (fig. 39). Spermatheca: fig. 40.

Etymology. – The name is derived from Latin “*fontes ibi*” meaning place of fountains and recalls the name of Fontenay-sous-Bois (department of Val-de-Marne, region of Île-de-France) where Serge Doguet lived and to which he was very affiliated.

Notes. – The dark coloration with distinct dots in orange rufous resembles the typical form of *P. beata* as well as *P. sexpustulata* (aedeagus: fig. 41-42), but it can be definitely distinguished from all other species of this group of *Paropsisterna* by the shape of the aedeagus, with narrow and elongate apex.

Actually we cannot propose a key for species of the *Paropsisterna sexpustulata* group. First, all types and potential synonymies must be studied. Furthermore, the chromatic variations are mostly considerable in this genus. All this exceeds our aim for this contribution. Here we summarize the main characters of the species of this group: elytra black or very dark with

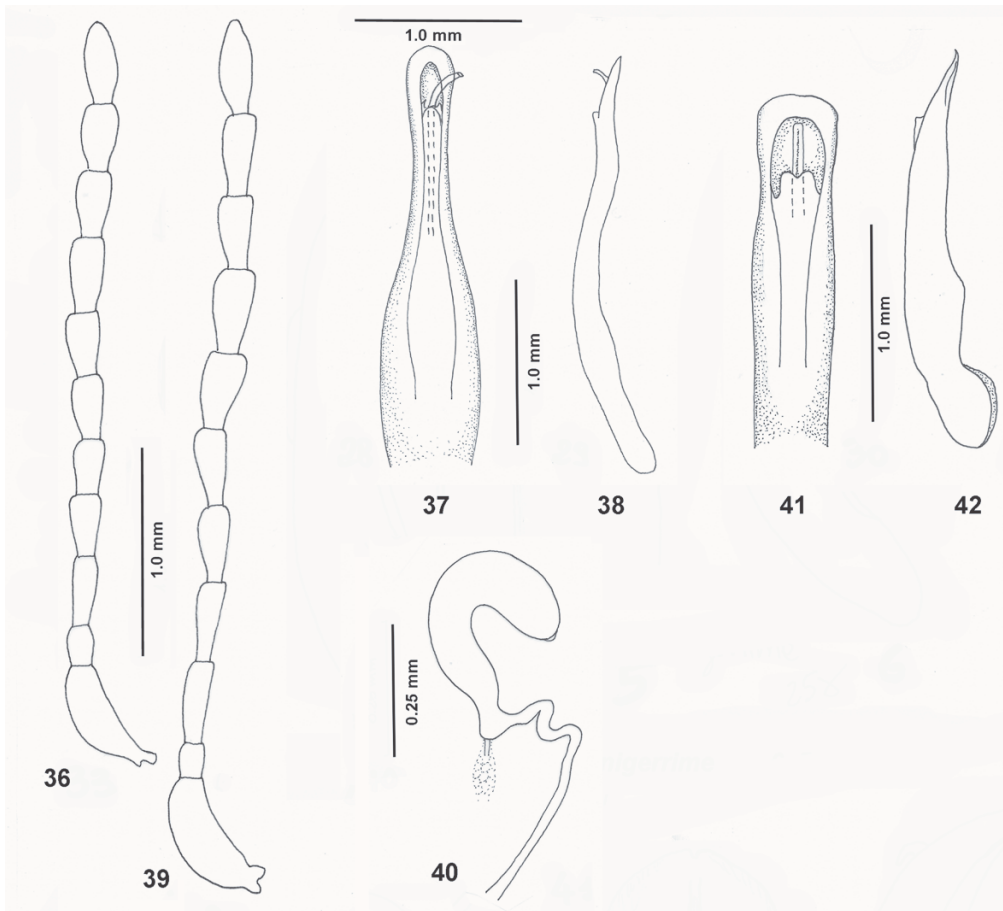


Fig. 36-42. – *Paropsisterna* spp. – 36-40, *P. fontaniva* n. sp.: 36, ♂, antenna; 37-38, aedeagus (37, dorsal view; 38, lateral view); 39, ♀, antenna; 40, spermatheca. – 41-42, *P. sexpustulata* (Marsham), aedeagus: 41, dorsal view; 42, lateral view.

more or less wide orange dots. However, some specimens in this group are entirely orange as *P. rufobrunnea* or entirely black as some specimens among *P. beata*.

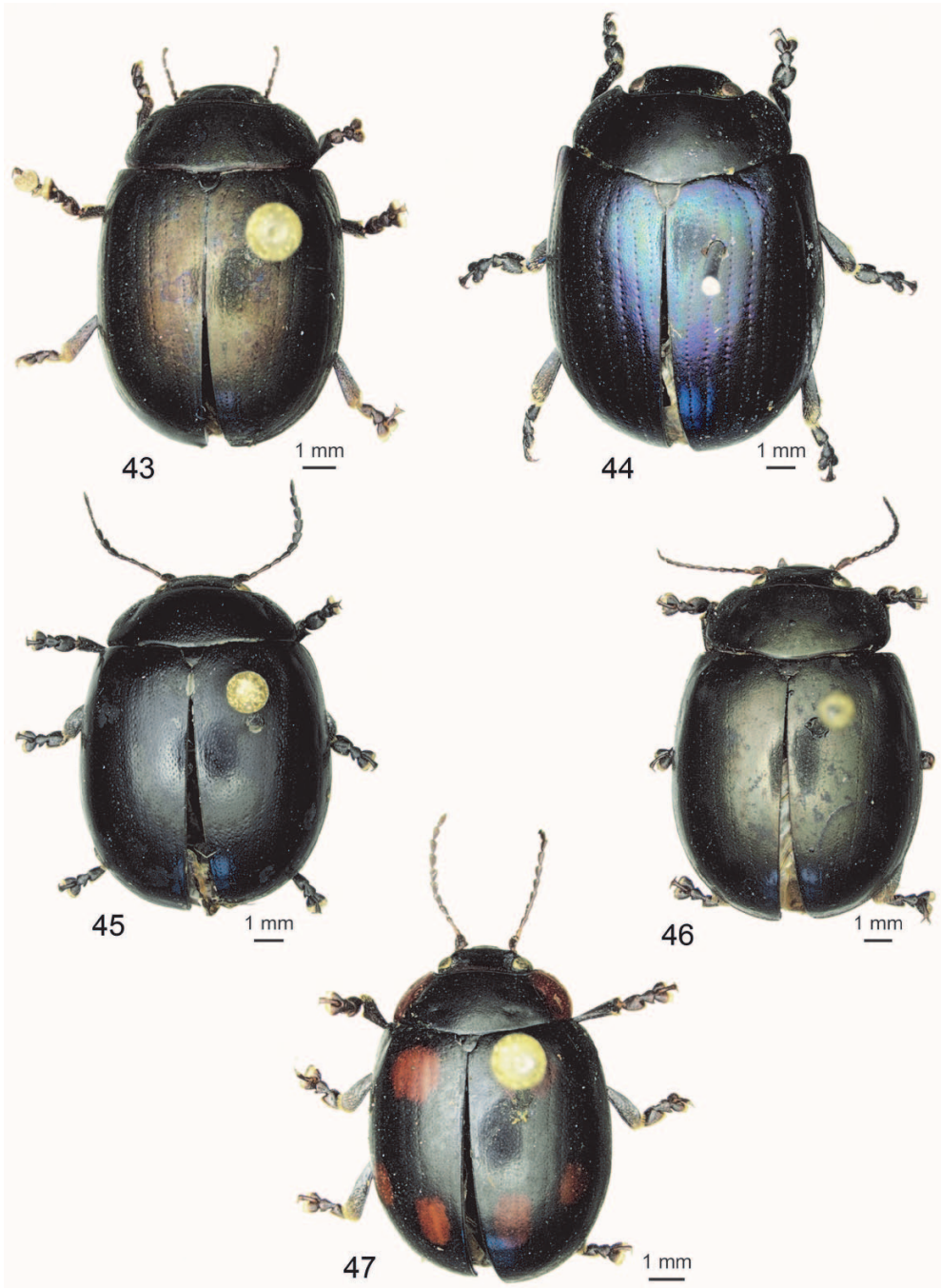


Fig. 43-47. – *Paropsisterna* spp., habitus. – 43, *P. cooktowni* n. sp. – 44, *P. fortepunctata* n. sp. – 45, *P. dogueti* n. sp. – 46, *P. sergei* n. sp. – 47, *P. fontaniva* n. sp.

NEW SYNONYMY

***Paropsisterna cernua* (Chapuis, 1877)**

Paropsis cernua Chapuis, 1877: 81.

Paropsisterna ambigua Daccordi, 2003: 422, **n. syn.**

The study by one of us (M.D.) of two female specimens, types of *Paropsis cernua* conserved in the collections of IRSNB, allows to state that they are conspecific with *Paropsisterna ambigua* described by DACCORDI (2003). There is strong doubt about the type locality of Chapuis “Sydney” because the species is found in Queensland and lives in dry *Eucalyptus* forests. Therefore, we propose the following new synonymy: *Paropsisterna ambigua* Daccordi, 2003, **n. syn.** for *Paropsis cernua* Chapuis, 1877.

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