

# REVISION OF THE GENUS *ORCUS* MULSANT (COLEOPTERA: COCCINELLIDAE: CHILOCORINI)

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**Abstract.**— Species of the genus *Orcus* Mulsant, 1850 are revised, keyed and illustrated. *Orcus biroi* var. *ruficollis* Weise, 1902 is regarded as a synonym of *Orcus biroi* Weise, 1902 **new synonym**. Lectotypes are designated for *Orcus biroi* Weise, *Orcus biroi* var. *ruficollis* Weise, *Orcus cinctus* Weise and *Orcus nigricollis* Weise. Three **new species**, all from New Guinea, are described: *Orcus cordiformis*, *O. tetrafasciatus*, *O. viridulus*. *Orcus carinicus* Gorham, *O. bipunctatus* Gorham and *O. quadriguttatus* Gorham are removed from Chilacorini and transferred to the genus *Sticholotis* Crotch (Sticholotidini) (**new combinations**). Distribution, nomenclatural history and diagnoses are provided for each species.



**Key words.**— Entomology, taxonomy, revision, Coleoptera, Cucujoidea, Chilacorini, *Orcus*.

## INTRODUCTION

Mulsant (1850) established *Orcus* in the subfamily Chilacorinae (Chilacorini) for several new species from Australia, New Guinea and Java. This placement of *Orcus* in the system of Coccinellidae (Mulsant 1846, 1850) was based on expanded clypeus, distinctly hemispherical body, and short antennae with their insertions entirely hidden under clypeus. He further placed it among the group (branche) Exochomaires next to *Exochomus* Redtenbacher and *Brumus* Mulsant because of its unarmed legs (without any teeth on the tibiae).

Despite subsequent modifications of the Mulsant's system by Crotch (1874), Chapuis (1876), Ganglbauer (1899) and Casey (1899), *Orcus* has always been classified in a taxon equivalent to subfamily Chilacorinae or a tribe Chilacorini.

In a modern classification, *Orcus* is a member of the tribe Chilacorini classified along with Platynaspini and Telsimini in the subfamily Chilacorinae (Sasaji 1968) or in the tribe Chilacorini in the subfamily Coccinellinae as suggested by Ślipiński (2007), who

proposed only two subfamilies for the family, Microweinseinae and Coccinellinae.

Chilacorini is a moderately large, cosmopolitan group of ladybirds, comprising about 20 genera and 250 species (Korschefskey 1932, Chapin 1965, Kovář 1995), and is characterized by distinctly hemispherical body, expanded clypeus and short appendages received in repose in various fossae on ventral surfaces of the body. The members of the tribe are mostly coccid feeders but some feed on aphids and other Hemiptera.

The nomenclatural history of *Orcus* has been mostly of species descriptions, mainly of the XIX and the very beginning of the XX centuries. Korschefskey's world catalogue of Coccinellidae (Korschefskey 1932) listed 15 genera of Chilacorini and 207 species of *Orcus*. Apart from a paper by Chapin (1965) who reviewed genera of Chilacorini, based however on a study of a single (type) species for each genus, there were no recent publications about *Orcus* until Ślipiński and Giorgi (2006), who provided modern generic description and revised Australian species.

The present paper provides the first comprehensive treatment of the entire genus with key to all species,

and detailed morphological characters allowing their identification.

Species of *Orcus* are distributed in the Oriental and Australian Regions. We recognize 18 species, of which two are endemic to New Caledonia, seven endemic to Australia, five endemic to New Guinea, two are shared by New Guinea and Australia, one recorded from New Guinea and Kei Island and one species is known from Java, Sumba and New Guinea.

Although Chilacorini seems to be pretty well defined as a tribe, the classification on a generic level within this tribe is still very questionable. The present research forms the starting point to further, phylogenetic studies of all genera of Chilacorini to establish the generic boundaries and to resolve the relationships within the tribe.

## MATERIAL AND METHODS

This study was based on the examination of types and other material from the following institutions:

- ANIC – Australian National Insect Collection, Division of Entomology, CSIRO, Canberra, Australia;
- BMNH – The Natural History Museum, London, England;
- BPBM – Bernice P. Bishop, Museum, Honolulu, USA;
- CNC – Canadian National Insect Collection, Ottawa;
- HNHM – Hungarian Natural History Museum, Budapest, Hungary;
- ISNB – Instytut Royal des Sciences Naturelles de Belgique, Brussels, Belgium;
- MIZ – Muzeum i Instytut Zoologii PAN, Warszawa, Poland;
- MNHUB – Museum für Naturkunde der Humboldt Universität, Berlin, Germany;
- SAM – South Australian Museum, Adelaide;
- SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany;
- UMZ – University Museum of Zoology, Cambridge, England.

Measurements were made using an ocular micrometer attached to Olympus (SZH 10) dissecting microscope as follows: (TL) total length, from apical margin of clypeus to apex of elytra; (PL) pronotal length, from the middle of anterior margin to base of pronotum; (PW) pronotal width at widest part; (EL) elytra length along suture including scutellum; (EW) elytra width across both elytra at widest part.

Male and female genitalia were dissected, cleared in 10% solution of KOH and placed in glycerine on slides for further study. The structural illustrations were made from slide preparations using a camera lucida attached to Leica dissecting microscope.

The SEM photographs were made using HITACHI S-3400N and photographic images were made using a digital camera and enhanced using AUTO MONTAGE software, in the laboratory of the MIZ.

## SYSTEMATICS

### *Orcus* Mulsant, 1850

*Orcus* Mulsant, 1850: 465. Type species, by subsequent designation (Crotch, 1874: 188): *Orcus janthinus* Mulsant, 1850.

*Orcus* (*Priasmus*) Mulsant, 1850: 465. Type species, by subsequent designation (Chapin, 1965: 252): *Coccinella bilumulata* Boisduval, 1835.

*Parapriasmus* Chapin, 1965: 254. Type species, by original designation: *Coccinella australasiae* Boisduval, 1835. Synonymised by Ślipiński and Giorgi, 2006.

**Diagnosis.** Within the tribe Chilacorini, *Orcus* is most similar to *Halmus* Mulsant but can be distinguished from it by having distinctly emarginated eyes, 9-segmented (rarely 8-segmented) antenna, elytral epipleuron with usually deep foveae to receive femora and well developed ovipositor.

**Redescription.** Length 2.6–8.0 mm. Body rounded and convex. Dorsum glabrous, elytra black, blue, green or reddish, sometimes with metallic sheen, in some species with contrasting markings. Head, pronotum and elytra with distinct, although usually shallow punctation; punctures about as large as eye facetes.

Head transverse; ventral antennal grooves indistinct, shallow, as long as scape and pedicel together. Eye finely faceted (Figs 2, 22, 29); interocular distance 0.50–0.60 times as wide as head; eye distinctly emarginate; inner margins almost straight or slightly rounded, weakly convergent anteriorly or parallel. Clypeus short, expanded laterally deeply into eye (Figs 2, 22, 29); anterior clypeal margin weakly to strongly emarginate. Antenna 9-segmented (rarely 8-segmented), sparsely covered with long hairs; scape and pedicel entirely hidden under clypeal shelf (Figs 12, 29, 35); scape asymmetrical often with long spine at outer margin anteriorly (Figs 25, 30, 35); pedicel barrel-shaped tapering to apex; terminal antennomere at least as long as penultimate or slightly longer. Mentum transverse, covered with sparse long hairs, cordiform. Labial palp 3-segmented, ventral on prementum; terminal palpomere strongly tapering to apex, rounded, slightly shorter and narrower than penultimate. Maxilla with cardo transverse and stipes triangular in shape (Fig. 12); maxillary palp 4-segmented; terminal palpomere with apex obliquely truncate. Mandible with strong, acute apical tooth (Figs 11, 25, 27); subapical tooth rarely present (Fig. 12). Labrum at least partially visible from above, covered with long sparse hairs.

Prothorax 0.8–0.9 times as wide as base of elytra, strongly descending anteriorly; anterior margin deeply

emarginate with anterior angles and lateral margins rounded (Figs 29, 43); pronotal base usually entirely bordered (Fig. 43); hypomeron with fovea near anterior angles distinct, vestigial or rarely absent; prosternal process truncate or weakly rounded at apex, without carinae. Meso-metaventral junction straight or arcuate anteriorly; discrimen complete; metaventral postcoxal lines weakly descending laterally, joined medially; metaepimeron indistinct; outer margin of metaepisternum usually with distinct small triangular tooth interlocking with fovea on elytron (Fig. 23). Scutellum triangular, at least slightly elongate, very small, without setae. Elytra strongly convex, with at least weakly explanate margins, usually without clear bead; epipleuron broad, complete to apex with foveae deep or vestigial.

Legs moderately stout to slender; femur and tibia sparsely covered with hairs on outer side; all tibiae simple externally, and without apical spurs; tarsal claws subtriangular, subrectangular or almost simple.

Abdomen with ventrite VI in male sometimes partially visible (rarely fairly visible); usually 5 ventrites well visible in both sexes; postcoxal lines separated or joined at middle running parallel to posterior margin of ventrite I or recurving anteriorly; intercoxal process with anterior border weakly to strongly swollen; sternite VIII rounded apically in female and at least subtruncate or weakly emarginate in male; male genital segment almost always with apophysis long, heart-shaped at base, narrow and simple to apex (Figs 60, 84, 112).

Male genitalia: penis slender of uniform diameter throughout most of its length with well developed capsule (Figs 67, 83, 113); penis guide lanceolate (Figs 65, 90, 109); parameres moderately slender, sometimes covered with long hairs (Figs 91, 109).

Female genitalia: coxites well sclerotized, elongate, styli apparently absent with only long setae visible (Figs 81, 89, 110); proper infundibulum absent but bursal appendix present in form of sclerotized spur (Figs 89, 120); spermatheca bean-shaped (Figs 64, 82), rarely with distinct "beak" (Fig. 92).

**Distribution.** Australia, New Caledonia, New Guinea, Java, Kei Is, Sumba Is.

**Key to the species of *Orcus***

- 1. Antennae 9-segmented (Fig. 47) . . . . . 2
- Antennae 8-segmented (Fig. 25) . . . . . 16
- 2. Elytra with maculae or bands . . . . . 3
- Elytra without maculae or bands . . . . . 10
- 3. Elytra with yellowish or orange maculae . . . . . 4
- Elytra with brown or black bands . . . . . 8
- 4. Elytron with single macula or stripe . . . . . 5
- Elytron with 3 or 4 maculae . . . . . 6

- 5. Each elytron with single subbasal transverse macula; Australia . . . . . *bilunulatus* (Boisduval)
- Each elytron with yellowish band running along lateral margin; New Guinea . . . . . *cinctus* Weise
- 6. Elytron with 4 maculae; Australia . . . . .
- . . . . . *nummularis* (Boisduval)
- Elytron with 3 maculae (2 anterior and a single, posterior macula) . . . . . 7
- 7. Tarsal claw simple; elytral maculae distinctly smaller; abdominal postcoxal lines weakly recurved apically; Australia . . . . . *obscurus* Blackburn
- Tarsal claw appendiculate; elytral maculae larger; abdominal postcoxal lines strongly recurved apically; Australia . . . . . *australasiae* (Boisduval)
- 8. Pronotum mostly black; elytral suture black . . . . . 9
- Pronotum and elytral suture reddish [disk of elytron with elongate black band and outer margin of elytron black (Fig. 134)]; New Guinea . . . . .
- . . . . . *tetrafasciatus* sp. nov.
- 9. Pronotum including anterior angles black; disk of elytron with 2 bands, one elongate and second short-oval; New Caledonia . . . . . *artensis* Crotch
- Black pronotum with yellow anterior angles; disk of elytron with single, long band; New Caledonia . . . . .
- . . . . . *chujoi* Bielawski
- 10. Tarsal claws weakly appendiculate; hypomeral foveae vestigial; Australia, New Guinea . . . . .
- . . . . . *punctulatus* Blackburn
- Tarsal claws distinctly appendiculate; hypomeral foveae visible . . . . . 11
- 11. Lateral margins of elytra moderately or strongly reflexed (Figs 132, 135) . . . . . 12
- Lateral margins of elytra weakly reflexed . . . . . 13
- 12. Lateral margins of elytra moderately reflexed; body heart-shaped (Figs 51, 135); venter brownish; punctuation on elytra dense and deep (Fig. 135); New Guinea . . . . . *cordiformis* sp. nov.
- Lateral margins of elytra strongly reflexed (Fig. 132), body rounded (Fig. 132); venter dark greenish; punctuation on elytra sparser and shallower; New Guinea . . . . . *viridulus* sp. nov.
- 13. Dorsum completely black, with distinct blue, green or purple sheen; body larger, above 3.5 mm . . . . . 14
- At least lateral angles of pronotum and lateral margins of elytra paler than rest of dorsum; elytra blackish with weak bluish sheen; body smaller, less than 3.3 mm . . . . . 15
- 14. Elytra with purple and/or greenish metallic reflection; pronotum with at least lateral margins metallic green contrasting with discal colour of elytra; Australia . . . . . *lafertei* Mulsant
- Elytra and pronotum black, purple or green without true metallic reflection; Australia, New Guinea . . . . . *cianocephalus* Mulsant
- 15. Head blackish; pronotum blackish with at most anterior angles brownish; New Guinea, Kei Is . . . . .

- ..... *nigricollis* Weise  
 –. Head yellowish brown; pronotum pale brown or  
 sometimes with disk blackish; New Guinea .....  
 ..... *biroi* Weise  
 16. Elytra without maculae ..... 17  
 –. Each elytron with 2 orange maculae; Australia ....  
 ..... *quadrinotatus* de Kerville  
 17. Small species, length less than 3 mm; elytra metal-  
 lic brownish; pronotum yellowish except for central  
 area brownish; Australia ..... *citri* Lea  
 –. Larger species, length usually above 5 mm; pronotum  
 and elytra bluish; Java, New Guinea .....  
 ..... *janthinus* Mulsant

***Orcus artensis* Crotch**  
 (Figs 52–60)

*Orcus artensis* Crotch, 1874: 188.

**Diagnosis.** The colouration of this species (see below) is unique within the genus and separates easily *O. artensis* from all its congeners.

**Description.** Length 4.1–4.4 mm; TL/EW = 1.1; PL/PW = 0.36–0.45; EL/LW = 0.85–0.97.

Pronotum black, elytra predominantly yellow or reddish. Each elytron with black, reddish or brownish bands; first narrow band running continuously along suture and outer margin of elytron; second short oval placed close to elytral suture and base, and third 4 times as long as second running along middle of each elytron. Venter dark brownish or black.

Head, pronotum and elytra with apparent microreticulation between punctures. Punctuation shallow about as large as eye facetes, 1 diameter apart. Interocular distance about 0.56 times as wide as head width; inner margins of eyes slightly rounded and moderately convergent anteriorly. Anterior clypeal margin moderately emarginate. Antennae about 0.45 times as long as width of head capsule, 9-segmented, sparsely covered with long hairs; antennomere 3 obconical, at base about 0.6 times as wide as at apex; antennomere 4 subquadrate; antennomere 5–6 similar in shape; antennomere 8 about 1.4 times longer than 7; antennomere 9 as long as 8, slightly tapering to apex. Labium with terminal palpomere slightly narrower than penultimate. Terminal maxillary palpomere about 1.6 times as long as wide; outer margin about 2 times as long as inner. Labrum visible from above, about 0.4 times as wide as head width.

Prothorax about 0.90 times as wide as base of elytra; hypomeral foveae vestigial; prosternal process truncate at apex, at base about 0.35 times as wide as longest coxal diameter; prosternum in front of coxae about 0.40 times as long as basal width of prosternal process. Mesoventral process about 0.35

times as wide as mesocoxal diameter; meso-metaventral junction arcuate anteriorly; epipleuron with visible foveae.

Legs moderately stout; tarsal claw slender, simple.

Abdomen with 5 ventrites in both sexes (Fig. 52); ventrite I about 2 times longer than ventrite II; postcoxal lines weakly recurving anteriorly; ventrite V rounded apically in both sexes; tergite VIII as in Fig. 53; sternite VIII rounded apically in female (Fig. 54) and weakly emarginate in male (Fig. 55). Male genital segment as illustrated (Fig. 60).

Male genitalia: apical part of penis slightly twisted with long thin and straight apex (Fig. 58); penis about 0.9 times as long as parameres (Figs 56, 57).

Female genitalia with coxites elongate and rather stout (Fig. 59).

**Types.** Holotype „Type/ *artensis* Cr/ art. Deyr/ Holotype, *Orcus artensis* Crotch 1874” (UMZ).

**Other material examined.** Coll. R.I.Sc.N.B., Nouvelle Calédonie, Ile d’Art, rec. Montrouzier, ex coll. Fauvel, Coll. et det. A. Fauvel, *Orcus artensis* Crotch (1: ISNB); same and R.I.Sc.N.B. 17.479 (2: ISNB).

**Distribution.** New Caledonia.

***Orcus australasiae* (Boisduval, 1835)**

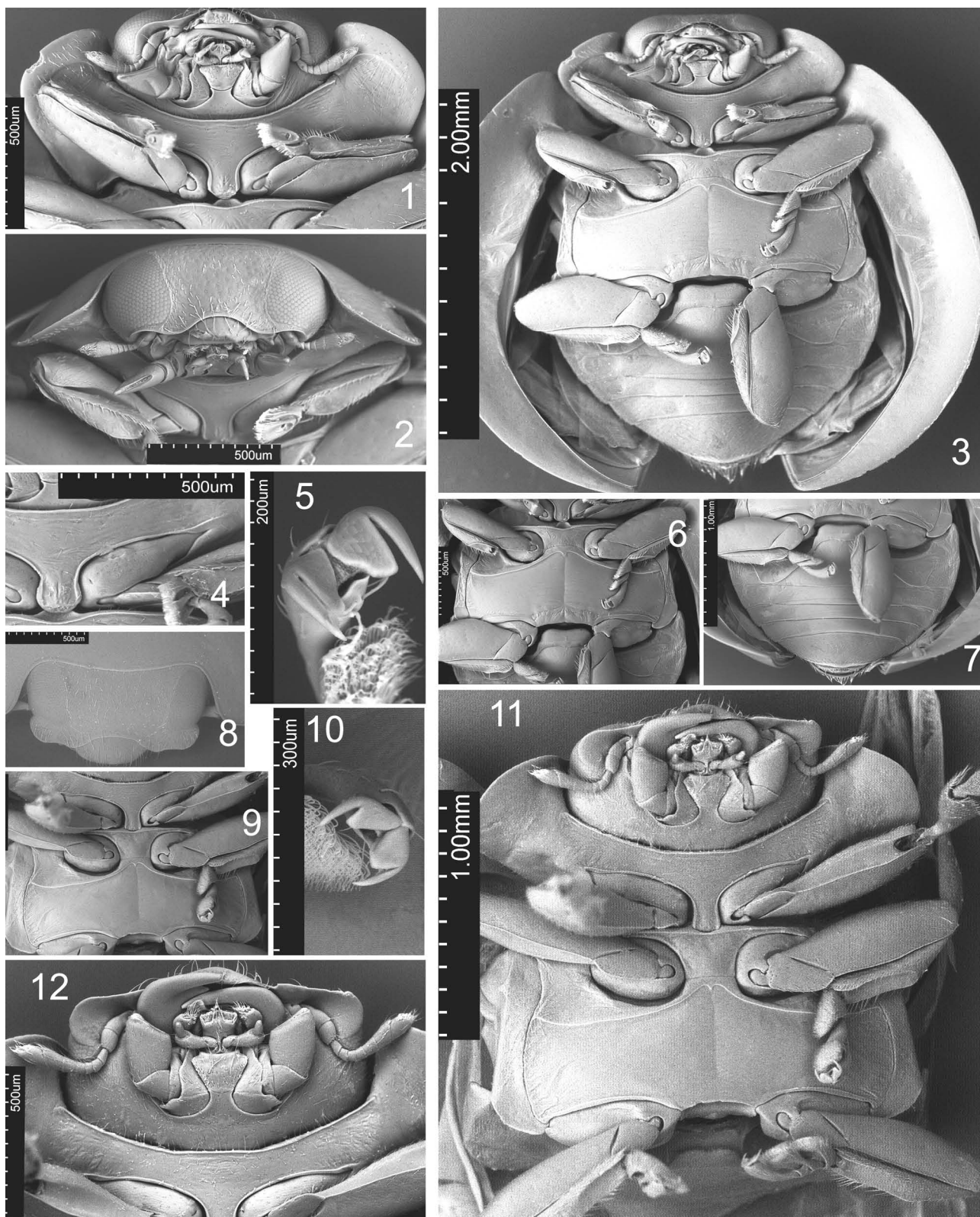
*Coccinella australasiae* Boisduval, 1835: 593.

*Orcus australasiae* var. *quadrinotatus* Lea, 1902: 491.

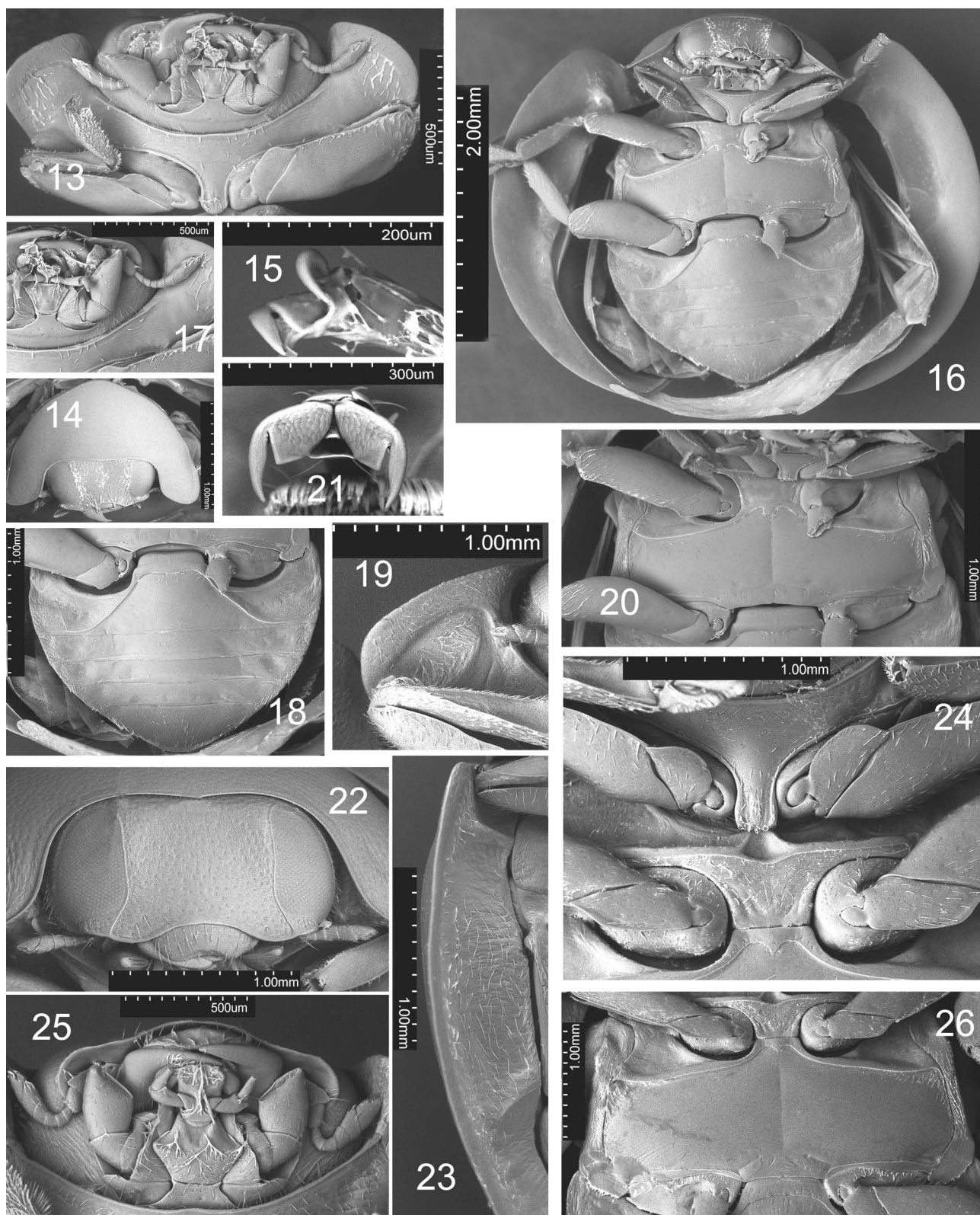
**Diagnosis.** The dorsum black with 3 orange maculae on each elytron makes this species most similar to *O. obscurus*. However, the body larger and less elongate (almost rounded) combined with tarsal claws strongly appendiculate distinguishes *O. australasiae* from that species.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 280.

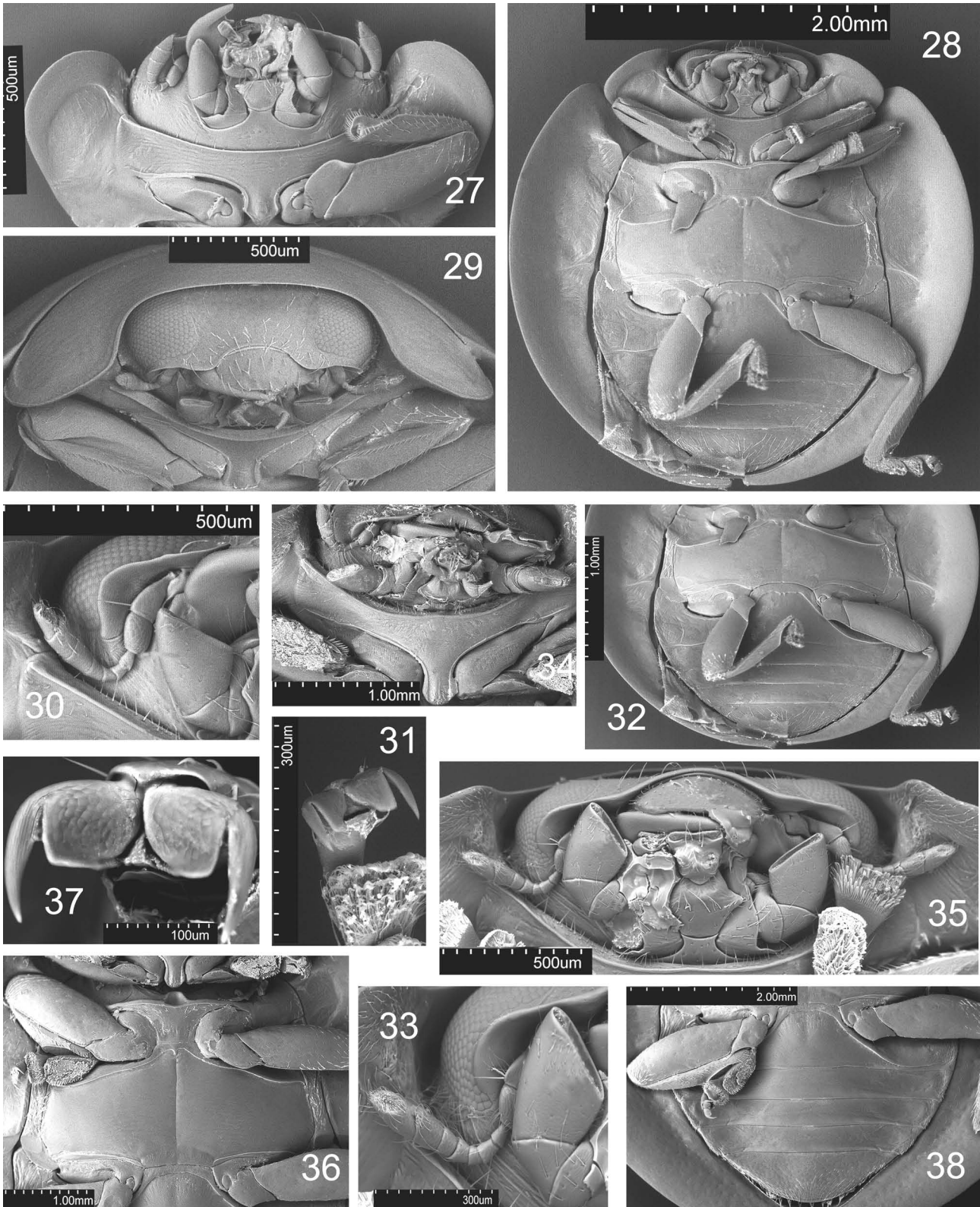
**Material examined.** Australia: Western Australia, nr Yalgurup NP, 21.III.81, R.D. Pope (1: ANIC); Sterling Ra. NP WA by S.R. Caravan Pk. 30 Dec 1985 on Euc. Wandoo., *Orcus australasiae*, det A.S. Ślipiński (1: ANIC); Paperbark and Hakea sp., Yalgurup N.P., Lake Clifton, 22.III.1981, R.D. Pope (1: ANIC); Wilga, X.1973, K.E. Carnaby (1: ANIC). Queensland, *Orcus australasiae*, Coll. R.I.Sc.N.B., Ex coll. Roelofs I.G.: 18.743 (2: ISNB); Australien, *Orcus australasiae* Boisd. det. R. Korschefsky, 1938, Mus. Zool. Polonicum Warszawa 12/45 (2: MIZ); same but 1939 (2: MIZ); Australia, *Orcus australasiae* Boisd., Inst. Zool. Warszawa 77/59 (1: MIZ). New South Wales, Morisset, 4 km SW 33°08’S, 151°27’E, 1.IX.1990, Tom Gush, on live shrub, Tom Gush, Collection 2427 (1: ANIC); (35.49S 150.09E), Mogo, 26.II.1972, S. Misko (1: ANIC); Broulee, 5.I.1970, W.J.M. Vestjens (1: ANIC); Coll. R.I.Sc.N.B., Sydney, ex coll. Montrouzier, ex coll. A. Fauvell, det. Montrouzier, *Orcus* Muls., *australasiae*, Sydney



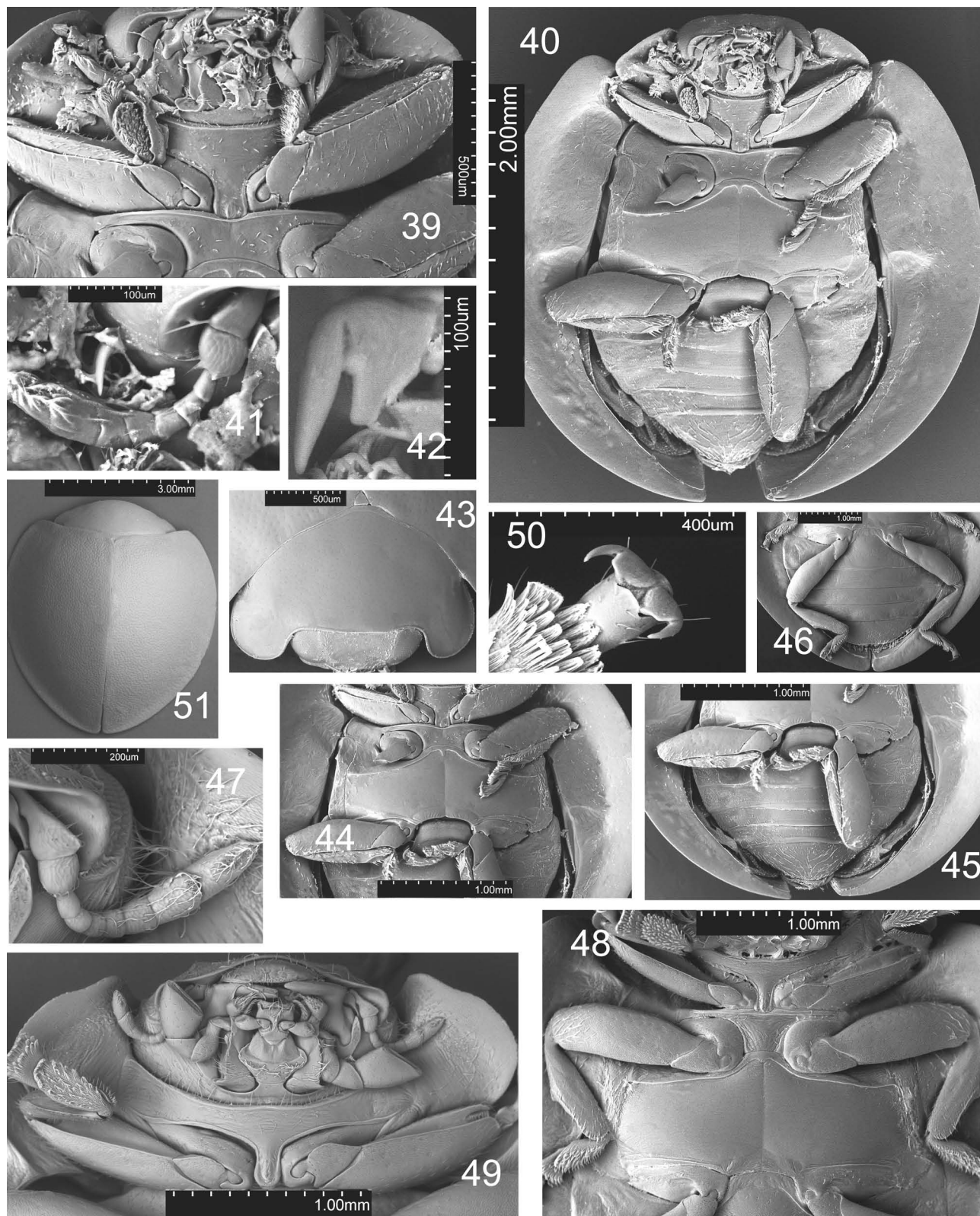
Figures 1–12. (1–7) *Orcus biroi* Weise, (8–12) *Orcus chujoi* Bielawski. (1) Head and prothorax, ventral; (2) head, antero-dorsal; (3, 11) habitus, ventral; (4) prosternum; (5, 10) tarsal claws; (6) meso- and metaventricle; (7) abdomen, female, ventral; (8) head, dorsal; (9) pro-, meso- and metathorax, ventral; (12) head, ventral.



Figures 13–26. (13–18) *Orcus cinetus* Weise, (19–26) *Orcus janthinus* Mulsant. (13) Head and prothorax, ventral; (14) head and pronotum, antero-dorsal; (15, 21) tarsal claws; (16) habitus, ventral; (17) head and prothoracic hypomeron, ventral; (18) abdomen, female, ventral; (19) hypomeral fovea; (20, 26) meso- and metathorax, ventral; (22) head, antero-dorsal; (23) elytral epipleuron; (24) prosternum and mesoventrite; (25) head, ventral.



Figures 27–38. (27–32) *Orcus nigricollis* Weise, (33–38) *Orcus viridulus* sp. nov. (27) Head and prothorax, ventral; (28) habitus, ventral; (29) head and pronotum anterior view; (30, 33) maxillary palp and antenna; (31, 37) tarsal claws; (32) metaventricle and abdomen, male, ventral; (34) prosternum; (35) head, ventral; (36) meso- and metathorax, ventral; (38) abdomen, female, ventral.

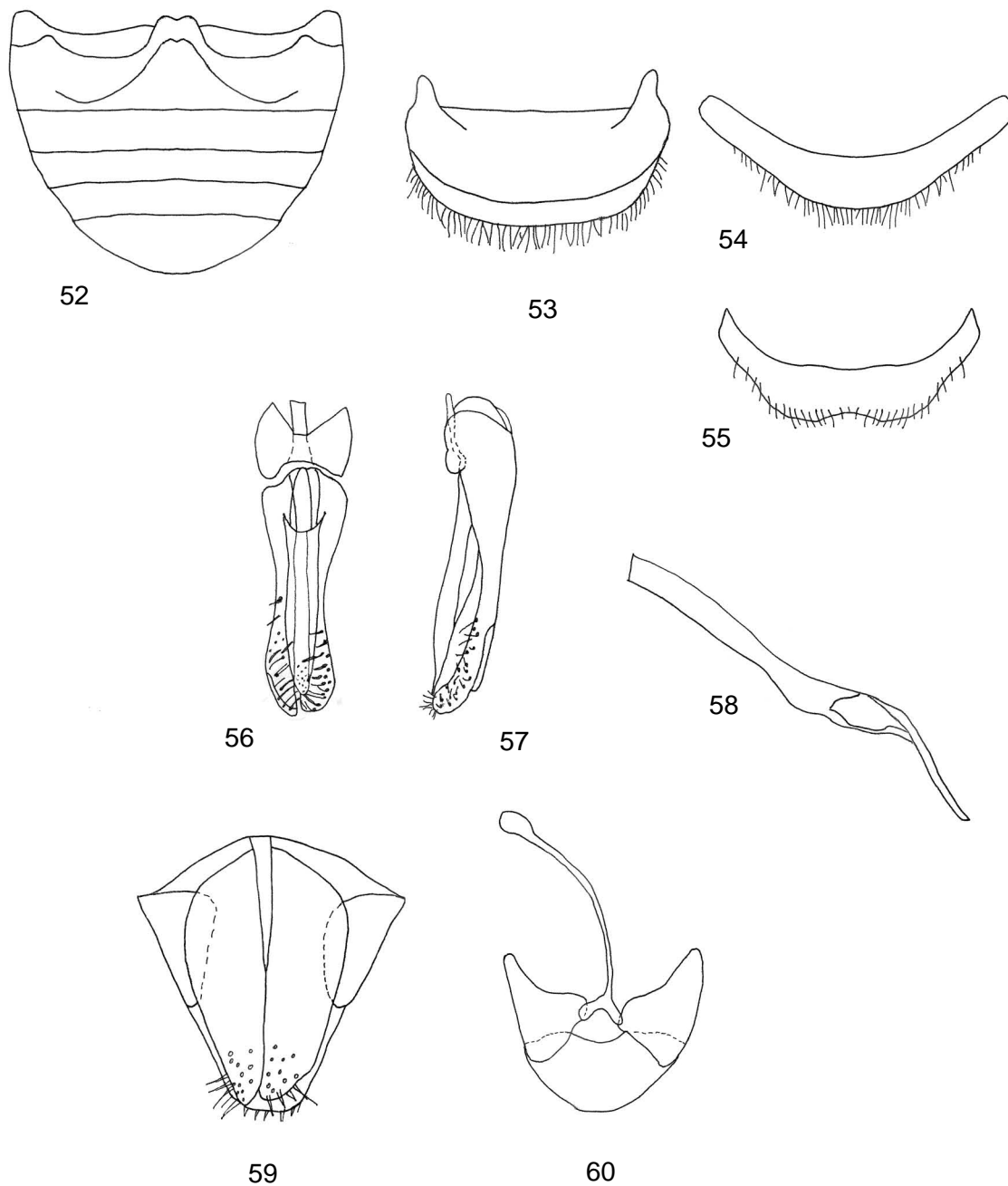


Figures 39–51. (39–45) *Orcus tetrafasciatus* sp. nov., (46–51) *Orcus cordiformis* sp. nov. (39) Head, pro- and mesothorax, ventral; (40) habitus, ventral; (41, 47) antenna; (42, 50) tarsal claws; (43) head and pronotum antero-dorsal; (44) meso- and metathorax, ventral; (45) abdomen, male, ventral; (46) abdomen, male, ventral; (48) prosternum, meso- and metathorax, ventral; (49) head and prothorax, ventral; (51) habitus, dorsal.



(1: ISNB). **Australian Capital Territory**, E. of Aerodrome, in woodland, 11.VIII.1971, S. Misko (3: ANIC). **Tasmania**, D. A. Breyer, Coll. Camille Van Voixem., Coll. R.I.Sc.N.B., *Orcus australasiae* (1: ISNB);

A. Simson, Coll. R.I.Sc.N.B., *Orcus australasiae* (1: ISNB); same but C. Allport (1: ISNB); Coll. Chapuis, Coll. R.I.Sc.N.B., *Orcus australasiae* (1: ISNB).  
**Distribution.** Australia.



Figures 52–60. *Orcus artensis* Crotch. (52) Abdomen, female; (53) tergite VIII, female; (54) sternite VIII, female; (55) sternite VIII, male; (56) tegmen, inner; (57) tegmen, lateral; (58) apex of penis; (59) ovipositor; (60) male genital segment, ventral.

*Orcus bilunulatus* (Boisduval, 1835)

*Coccinella bilunulata* Boisduval, 1835: 594.

**Diagnosis.** This is the only species of *Orcus* with single, prebasal orange macula decorating each (black) elytron.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 282.

**Material examined.** **Australia: Queensland,** Cairns, VII–VIII.1904, R.C.L. Perkins, 1942–95 (1: BMNH); Rockhampton, Pitcher, Ex. Coll. Steel, Acc. No. 1960, ex Museum Manchester B.M. 1992–8 (3: BMNH); Brisbane, det. ex. coll. 12/45 (1: MIZ); Westridge, March 1941, F.T. Gray, coccinellids atracking Scale (2: ANIC). **Australian Capital Territory,** E. of Aerodrome, in woodland, 11.VIII.1971, S. Misko (2: ANIC); Aust. Nat. Univ. Canberra, J.F. Lawrence & E.C. Zimmerman (1: ANIC); Canberra, nr. Div. of Entomology, 21.VIII.75., E. Britton, feeding on scales on *Casuarina*, more specimens in spirit tube, *Orcus bilunulatus* Boisd., E.B. Britton, det. 1975 (1: ANIC); 3.12.48, *Orcus bilunulatus* Boisd., det. R.D. Pope (1: ANIC). **Tasmania,** Punch Bowl RD., Laun. XI.1981, S. Fearn (1: ANIC); Frankford Lea., R.C.L. Perkins, B. M. 1942–95, *Orcus bilunulatus* Boi. (1: BMNH); Lea, *Orcus bilunulatus*, Coll. R.I.Sc.N.B., Ex coll. Roelofs I.G.: 18.743 (2: ISNB); Australia, Coll. Chapuis, Coll. R.I.Sc.N.B., *Orcus bilunulatus* (1: ISNB).

**Distribution.** Australia.

*Orcus biroi* Weise, 1902  
(Figs 1–7, 61–70)

*Orcus biroi* Weise, 1902: 507.

*Orcus biroi* var. *ruficollis* Weise, 1902: 507. **Syn. nov.**

**Diagnosis.** This species is most similar to *Orcus nigricollis* by size, shape and colouration of elytra, but *O. biroi* can be separated from that species in having the head yellow and the pronotum blackish at most along disk or entirely yellow.

**Description.** Length 2.6–3.3 mm; TL/EW = 0.92–1.1; PL/PW = 0.35–0.43; EL/EW = 0.83–0.93. Head yellow; pronotum blackish along disk with bluish metallic sheen and with yellow lateral margins and anterior angles, or completely yellowish; elytra predominantly blackish or dark reddish with various degree of blue shine; venter yellowish to brownish except for metaventrite and lateral extremity of hypomera, which are dark brownish or black.

Head, pronotum and elytra without apparent microreticulation between punctures; punctation shallow about as large as eye facetes, 1 diameter apart; interocular distance about 0.55 times as wide as head (Fig. 2); inner margins of eyes almost straight and

moderately convergent anteriorly. Anterior clypeal margin moderately emarginate (Fig. 2). Antenna about 0.50 times as long as width of head capsule, 9-segmented (Figs 1, 2); antennomere 3 obconical, at base about 0.55 times as wide as at apex; antennomere 4 subquadrate; antennomere 5–6 similar in shape; antennomere 8 about 1.5 times longer than 7; antennomere 9 as long as 8, slightly tapering to the apex. Labium with terminal palpomere at base about 0.7 times as wide as penultimate at apex. Terminal maxillary palpomere about 1.6 times as long as wide (Fig. 1); outer margin about 2 times as long as inner. Labrum visible from above, about 0.30 times as wide as head width.

Prothorax about 0.85 times as wide as base of elytra; hypomeral foveae distinct (Fig. 1); prosternal process subtruncate at apex (Figs 1, 3, 4), at base about 0.38 times as wide as longest coxal diameter (Fig. 4); prosternum in front of coxae about as long as basal width of prosternal process (Fig. 4). Mesoventral process almost as wide as mesocoxal diameter (Figs 3, 6); meso-metaventral junction straight; metaventral postcoxal lines joined medially, before junction each recurving posteriorly (Figs 3, 6); epipleuron with visible foveae (Fig. 3).

Legs moderately stout; tarsal claws with large, subtriangular basal tooth (Fig. 5).

Abdomen with ventrite VI in male partially visible, subtruncate at apex (Fig. 62); ventrite I about 3 times longer than ventrite II; postcoxal lines each running parallel to posterior margin of ventrite I for a short distance; ventrite V rounded apically in both sexes but in female more produced posteriorly (Fig. 61); sternite VIII in female rounded at apex (Fig. 63); male genital segment as illustrated (Fig. 69).

Male genitalia: apical part of penis long, straight and thin (Figs 67, 70); penis guide about 0.9 times as long as parameres (Figs 65, 66).

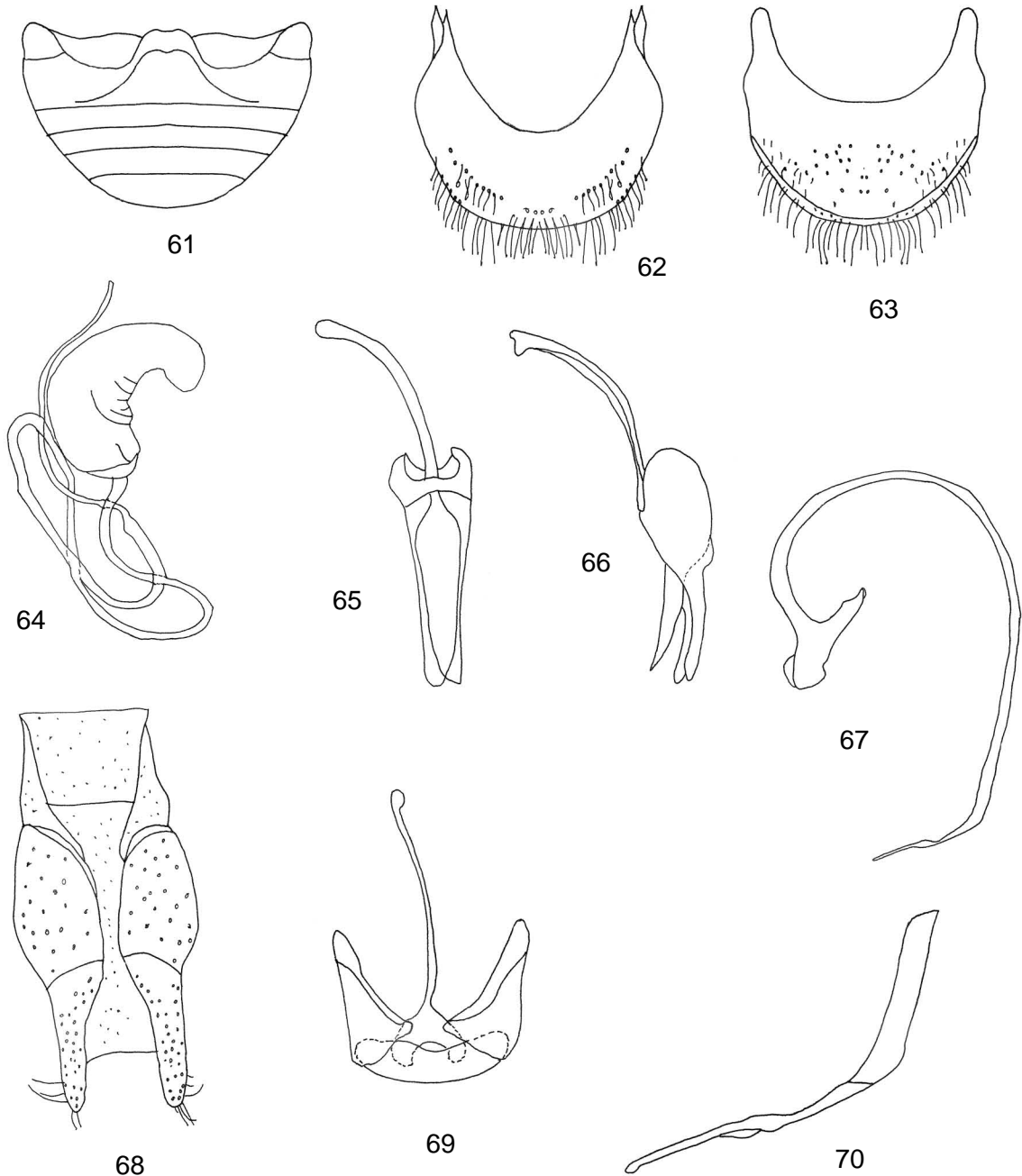
Female genitalia with coxites elongate and slender (Fig. 68); spermatheca as illustrated (Fig. 64); sperm duct long, of the same diameter throughout the length.

**Types.** **Lectotype** of *Orcus biroi*, “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ *Orcus biroi*/ Syntypus, *Orcus biroi* Weise, 1902, labeled by MNHUB 2009” (MNHUB). **Paralectotypes:** “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Holotypus 1902, *Orcus biroi* Weise/ Typus, *Orcus biroi* Weise, Term. Füz. 25.1902.507/ *Orcus biroi* Weise” (1: HNHM); “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Paratypus 1902, *Orcus biroi* Weise/ Typus, *Orcus biroi* Weise, Term. Füz. 25.1902.507.” (2: HNHM); “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Typus, *Orcus biroi* Weise, Term. Füz. 25.1902.507. Inst. Zool. P.A.N., Warszawa, 27/55.” (1: MIZ). **Present designation.**

**Lectotype** of *Orcus biroi* var. *ruficollis*, “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ *Orcus biroi* var *ruficollis*/ SYNTYPUS, *Orcus biroi* var *ruficollis*

Weise, 1902, labeled by MNHUB 2009" (MNHUB). **Paralectotypes:** "N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Holotypus 1902, *Orcus biroi* v. *ruficollis* Weise/ Typus *Orcus biroi* var. *ruficollis* Weise, Term. Füz. 25.1902.507." (HNHM); "N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Paratypus 1902 *Orcus*

*biroi* v. *ruficollis* Weise/ Typus, *Orcus Biroi* var. *ruficollis* Weise, Term. Füz. 25.1902.507." (HNHM); "N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Typus, *Orcus biroi* var. *ruficollis* Weise, Term. Füz. 25.1902.507./ Inst. Zool. P.A.N., Warszawa, 57/63." (MIZ). **Present designation.**



Figures 61–70. *Orcus biroi* Weise. (61) Abdomen, male; (62) sternite VIII, female; (63) sternite VIII, male; (64) spermatheca; (65) tegmen, inner; (66) tegmen, lateral; (67) penis, lateral; (68) ovipositor; (69) male genital segment, ventral; (70) apex of penis.

**Other material examined.** Misima I., Papua, Rev. H.K. Bartlett, comp. with LT *Orcus biroi* Weise, S.A. Ślipiński (1: ANIC).

**Note.** Despite of presence of some museum labels "holotype and paratypes", type series of *Orcus biroi* and *Orcus biroi* var. *ruficollis* have represented syntypes, and the lectotypes and paralectotypes are designated here.

**Distribution.** New Guinea.

***Orcus chujoi*** Bielawski, 1962  
(Figs 8–12, 71–73)

*Orcus chujoi* Bielawski, 1962: 3.

**Diagnosis.** The elytra pale yellow with long black stripe along middle of each elytron and black narrow stripe along suture in combination with the pronotum black along middle with pale yellow lateral margins and anterior angles, distinguish this species from other *Orcus*.

**Description.** Length 3.3–3.5 mm; TL/EW = 1.0–1.1; PL/PW = 0.26–0.28; EL/EW = 0.9–1.0.

Head black with reddish labrum. Pronotum black along middle from anterior margin to base, lateral margins and anterior angles yellow. Elytra pale yellow with two black stripes on each elytron; first one, narrow running along suture; second placed parallel to first, running along middle part of elytron from basal margin to about apical 5<sup>th</sup>, converging towards and sometimes touching sutural stripe before elytral apex. Venter dark brownish except for yellowish prothoracic hypomera and elytral epipleura.

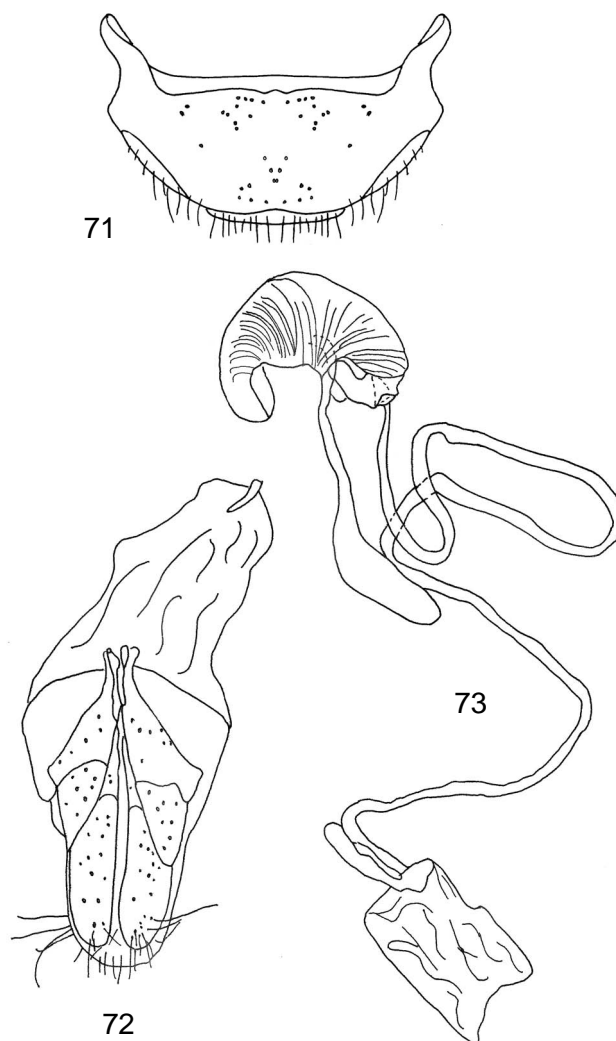
Head, pronotum and elytra with apparent microreticulation between punctures. Punctation shallow about as large as eye facetes, 2 diameter apart. Interocular distance about 0.60 times as wide as head width. Inner margins of eyes slightly rounded and moderately convergent anteriorly. Anterior clypeal margin emarginate (Fig. 8). Antennae about 0.45 times as long as width of head capsule, 9-segmented (Figs 11, 12); antennomere 3 obconical, at base about 0.60 times as wide as at apex; antennomere 4 subquadrate; antennomere 5–6 similar in shape; antennomere 8 about 1.5 times longer than 7; antennomere 9 as long as 8, slightly tapering to apex. Labium with terminal palpomere base about 0.60 times as wide as penultimate at apex (Figs 11, 12). Terminal maxillary palpomere about 1.5 times as long as wide; outer margin about 2 times as long as inner (Fig. 12). Mandible with distinct subapical tooth (Fig. 12). Labrum visible from above, about 0.35 times as wide as head width.

Prothorax about 0.85 times as wide as base of elytra; hypomeral foveae vestigial (Fig. 11); prosternal process truncate at apex, at base about 0.32 times as

wide as longest coxal diameter; prosternum in front of coxae about 0.80 times as long as basal width of prosternal process (Figs 9, 11). Mesoventral process about 0.52 times as wide as mesocoxal diameter; meso-metaventral junction arcuate anteriorly; metaventral postcoxal lines joined medially, before junction each recurving posteriorly (Figs 9, 11); epipleuron with vestigial foveae.

Legs rather slender; tibia weakly angulately produced at extremity of tarsal groove; tarsal claws with large, subtriangular basal tooth (Fig. 10).

Abdomen with 5 ventrites in female; ventrite I about 2 times longer than ventrite II; postcoxal lines running parallel to posterior margin of ventrite I; ventrite V truncate medially at apex; sternite VIII in female with weakly emarginate apex (Fig. 71).



Figures 71–73. *Orcus chujoi* Bielawski. (71) Abdominal segment VIII, female, ventral; (72) ovipositor; (73) apex of bursa copulatrix, spermduct and spermatheca.

Female genitalia: coxites slender, elongate and subtriangular in shape (Fig. 72); sperm duct long, of same diameter throughout (Fig. 73); spermatheca as illustrated (Fig. 73).

Male not studied.

**Material examined.** New Caledonia: Mt. Aoupinie, 700 m, 18.IV.1996, M.S. Moulds (1: ANIC); Forest Plate, 600 m, 22.VI.1996, M.S. Moulds, *Orcus chujoi* Biel., det. A. S. Ślipiński (1: ANIC); Yambi, NE, 500–700 m, 14.X.1967, J. & M. Sedlacek, Collectors, Bishop (1: BPBM); 10km S. of Koh, 31.I.1963 (1: BPBM).

**Distribution.** New Caledonia.

*Orcus cinctus* Weise, 1902  
(Figs 13–18, 74–85)

*Orcus cinctus* Weise, 1902: 508.

**Diagnosis.** This is a very distinctive species of *Orcus* by its colouration – the head, pronotum and lateral margins of elytra yellowish brown and the rest of elytra dark chestnut brown with additional weak bluish metallic sheen.

**Description.** Length 2.7–3.2 mm; TL/EW = 0.9–1.1; PL/PW = 0.26–0.33; EL/EW = 0.8–0.86. Head and pronotum yellowish brown. Elytra predominantly dark chestnut brown with weak bluish metallic sheen, each elytron yellowish along outer margin. Venter yellowish to pale brownish except for metaventrite and epipleura which are brownish or black.

Head, pronotum and elytra without apparent microreticulation between punctures. Punctuation shallow about as large as eye facetes, 1.5 diameter apart on elytra and about 1 diameter apart on head and pronotum. Interocular distance about 0.50 times as wide as head width; inner margins of eyes almost straight and moderately convergent anteriorly (Fig. 14). Anterior clypeal margin weakly emarginate. Antennae about 0.45 times as long as width of head capsule, 9-segmented (Figs 13, 17); antennomere 3 obconical, at base about 0.75 times as wide as at apex; antennomere 4 subquadrate; antennomere 5–6 similar in shape; antennomere 8 about 1.5 times longer than 7; antennomere 9 as long as 8, weakly tapering to apex. Labium with terminal palpomere at base about 0.80 times as wide as penultimate at apex (Fig. 17). Terminal maxillary palpomere about 1.7 times as long as wide (Figs 13, 17); outer margin about 2.5 times as long as inner. Labrum visible from above, about 0.38 times as wide as head width.

Prothorax about 0.80 times as wide as base of elytra; hypomerall foveae well developed (Fig. 13); prosternal process subtruncate at apex, at base about 0.3 times as wide as longest coxal diameter; prosternum in front of coxae about 0.8 times as long as basal width of

prosternal process (Fig. 13). Mesoventral process about 0.82 times as wide as diameter of mesocoxal cavity (Fig. 16); meso-metaventral junction straight; metaventral postcoxal lines joined medially, before junction each recurving posteriorly (Fig. 16); epipleuron with moderately deep foveae (Fig. 16).

Legs moderately stout; tarsal claw with distinct, subtriangular basal tooth (Fig. 15).

Abdomen with ventrite VI in male partially visible, truncate at apex (Fig. 79); ventrite I about 2.5 times longer than ventrite II; postcoxal lines running parallel to posterior margin of ventrite I; ventrite V rounded in both sexes but in female more produced posteriorly (Figs 18, 74); sternite VIII in female rounded (Fig. 80); tergite VIII in male and female as illustrated (Figs 75, 76); male genital segment as in Fig. 84.

Male genitalia: apical part of penis slightly twisted with long thin and straight apex (Figs 83, 85); penis guide about as long as parameres (Figs 77, 78).

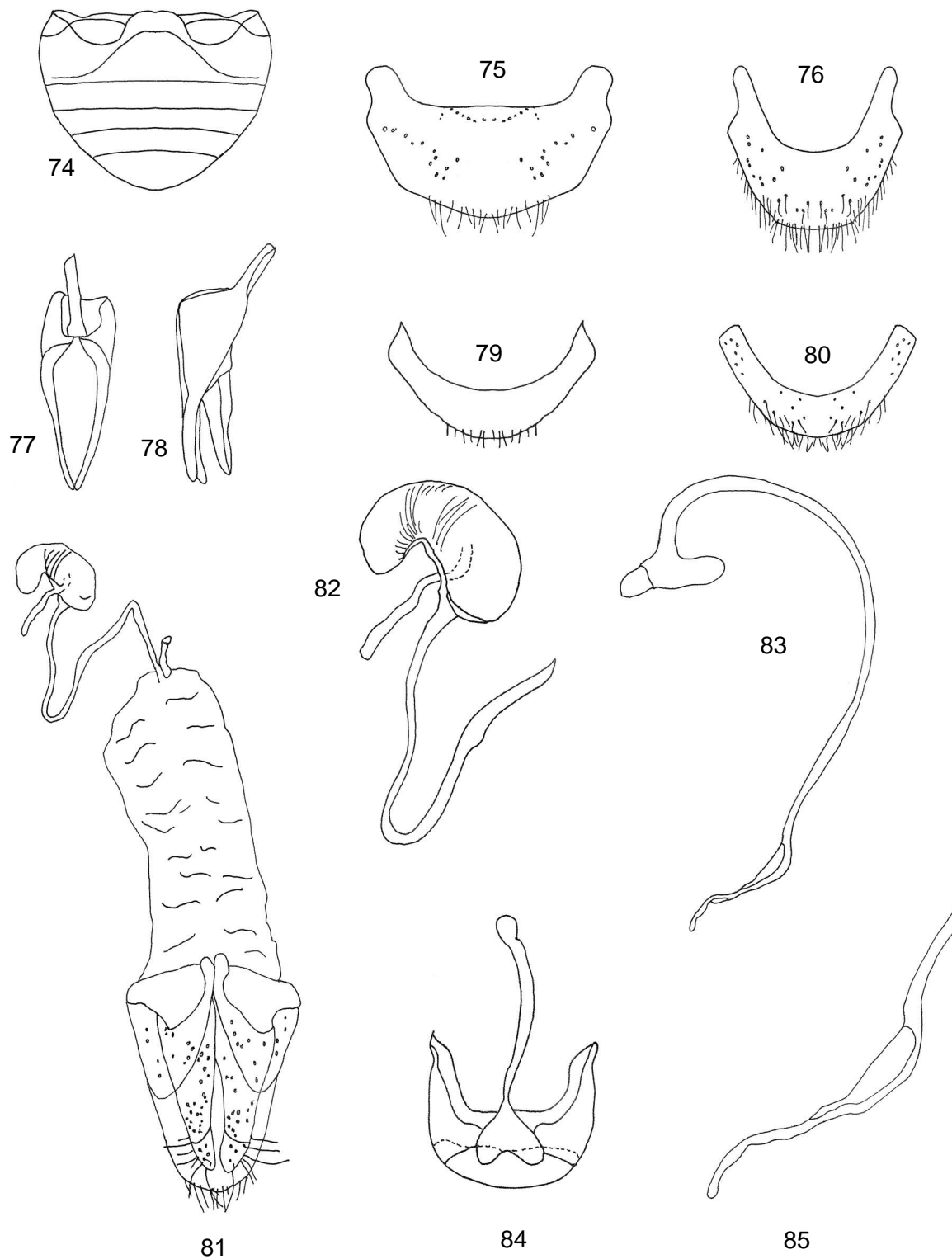
Female genitalia with coxites subtriangular in shape (Fig. 81); sperm duct rather short, of same diameter throughout; spermatheca as in Fig. 82.

**Types.** Lectotype of *Orcus cinctus*, “N. Guinea, Biro 96/ Friedrich Wilh.-hafen/ *Orcus cinctus* m/ SYNTYPUS, *Orcus cinctus* Weise, 1902, labeled by MNHUB 2009” (MNHUB). Paralectotypes: “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Holotypus 1902, *Orcus cinctus* Weise/ *Orcus cinctus* Weise/ Typus, *Orcus cinctus* Weise, Term. Füz. 25.1902.508.” (HNHM); “♀, N. Guinea, Biro 96/ Friedrich Wilh.-hafen/ Paratypus 1902, *Orcus cinctus* Weise/ Typus, *Orcus cinctus* Weise, Term. Füz. 25.1902.508.” (2: HNHM); “N. Guinea, Biro 1899/ Sattelberg Huon-Golf./ Typus, *Orcus cinctus* Weise, Term. Füz. 25.1902.508./ Inst. Zool. P.A.N., Warszawa, 27/55.” (1: MIZ). **Present designation.**

**Other material examined.** Papua New Guinea, Wau, 4000 ft., 24–30.VI.1974, H.F. Howden, comp. with LT, *Orcus cinctus* Weise, S. A. Ślipiński 2004” (1: CNC); W. Neuguinea, IR 7, Cyclops Mts., 600 m, 4km nördl. Sentani, 8.–13.ix.1990, leg. Balke & Hendrich (19: MNHUB); New Guinea: Wau, Bishop Museum, Field Station, 15.–25. IV. 1965., Coll. Dr. J. Balogh et, Dr. J. J. Szent-Ivany” (1: HNHM); NE, Lae, 4–6.IX.1968.” (7: HNHM); Wau, McAdam, park, 18.–21.IV.1965., Coll. Dr. J. Balogh et, Dr. J. J. Szent-Ivany ”(5: HNHM); WAU, 1972, IX. 19., M.cs., Jeg: Moczar L.”(1: HNHM); NE, Baiyer River, Sanctuary, 1–5.IX.1969/No.NGB-U.21., leg. Dr. J. Balogh” (1: HNHM); NE, Baiyer River, Sanctuary, 1–5.IX.1969, No.NGB-U.24., leg. Dr. J. Balogh” (1: HNHM).

**Note.** Despite of presence of some museum labels “holotype and paratypes”, type series of *Orcus cinctus* has represented syntypes, and the lectotype and paralectotypes are designated here.

**Distribution.** New Guinea.



Figures 74–85. *Orcus cinctus* Weise. (74) Abdomen, female, ventral; (75) tergite VIII male; (76) tergite VIII, female; (77) tegmen, inner; (78) tegmen, lateral; (79) sternite VIII, male; (80) sternite VIII, female; (81) female genitalia, ventral; (82) spermatheca; (83) penis, lateral; (84) male genital segment, ventral; (85) apex of penis.

*Orcus citri* Lea, 1902

*Orcus citri* Lea, 1902: 490.

*Orcus coxalis* Weise, 1917: 221. Synonymised by Ślipiński & Giorgi, 2006.

**Diagnosis.** The antenna 8-segmented in combination with small size of the body and the elytra metallic brownish, and the pronotum yellow except for central area which is brownish separate easily this species from all other *Orcus*.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 283.

**Material examined.** Australia: Queensland, Biggenden, (25.31S, 152.03E), Degilbo Ck., 7.V.72, H. Frauca, *Orcus citri* Lea, det. S.A. Ślipiński (1: ANIC); Mt. Tambourine, A.M. Lea (1: ANIC).

**Distribution.** Australia.

*Orcus cordiformis* sp. nov.

(Figs 46–51, 125–131, 135)

**Diagnosis.** This species of *Orcus* is very distinctive, immediately recognizable by its heart-shaped body in combination with weakly bluish dorsum and very dense and deep punctation on the elytra.

**Description.** Length 5.1–5.7 mm; TL/EW = 1.02–1.03; PL/PW = 0.34–0.36; EL/EW = 0.83–0.85. Dorsal surfaces deeply black with weak bluish metallic sheen; labrum dark brownish. Venter black or brownish with or without bluish sheen. Body heart-shaped (Fig. 51).

Head, pronotum and elytra with apparent microreticulation. Punctuation about as large as eye facetes or slightly larger, 0.2–0.5 diameter apart, deep on base of pronotum and on elytra, shallower on head and anterior  $\frac{2}{3}$  of pronotum. Interocular distance about 0.6 times as wide as head width; internal margins of eyes slightly rounded. Anterior clypeal margin weakly emarginate. Antennae about 0.48 times as long as width of head capsule, 9-segmented (Fig. 47); antennomere 3 obconical, at base about 0.70 times as wide as at apex; antennomere 4–6 similar in shape; antennomere 8 about 1.3 times as long as 7; antennomere 9 about 1.4 times as long as 8, slightly tapering to apex. Labium with terminal palpomere at base about 0.75 times as wide as penultimate at apex. Maxillary terminal palpomere about 1.25 times as long as wide; outer margin about 2.2 times as long as inner (Fig. 49). Labrum visible from above, about 0.5 times as wide as head width.

Prothorax about 0.80 times as wide as base of elytra; hypomeron with foveae vestigial (Fig. 49); prosternal process truncate at apex, at base about 0.25 times as wide as longest coxal diameter (Fig. 49); prosternum in front of coxae about 0.80 times as long as basal width of prosternal process. Mesoventral process

about 0.65 times as wide as mesocoxal diameter (Fig. 48); meso-metaventral junction weakly arcuate anteriorly; metaventral postcoxal lines weakly descending posteriorly, joined medially, before junction each recurving posteriorly (Fig. 48). Elytra with moderately reflexed margins, with clear bead; epipleuron with visible foveae.

Legs slender; tarsal claw with distinct, subrectangular basal tooth (Fig. 50).

Abdomen 5 visible ventrites in both sexes; ventrite I about 2.2 times longer than ventrite II; postcoxal lines running parallel, close to posterior margin of ventrite I and recurving anteriorly, extending to more than half length of ventrite I (Fig. 125); ventrite V in male subtruncate at apex (Figs 46, 125) in female arcuate; sternite VIII in male emarginate apically (Fig. 126); male genital segment as illustrated (Fig. 131). Male genitalia: apical part of penis slightly twisted with thin and straight apex (Figs. 129, 130); penis guide slightly longer than parameres (Figs 127, 128). Female not dissected.

**Types.** Holotype of *Orcus cordiformis*, ♂ “Irian Jaya: Jayawi-jaya, Kono-Pinji, 6.10.1993, 2600 m, leg. A. Riedel” (SMNS). Paratype: ♀ „New Guinea, Lae, Mar 20. 1971, R. E. Parrott” (CNC).

**Etymology.** Named after its heart-shaped body.

**Distribution.** New Guinea.

*Orcus cyanocephalus* Mulsant, 1850

*Orcus cyanocephalus* Mulsant, 1850: 467.

*Orcus lecanii* Blackburn, 1895: 239. Synonymised by Ślipiński & Giorgi, 2006.

*Orcus purpureotinctus* Lea, 1902: 490. Synonymised by Ślipiński & Giorgi, 2006.

**Diagnosis.** This species is similar to *Orcus lafer-tei* but is separable from it by having the elytra black with weak bluish, purple or greenish sheen instead of strong metallic purple or green reflections as present in *O. lafer-tei*.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 284.

**Material examined.** New Guinea: Biro 1898, Sattelberg, Huon-Golf., *Orcus cyanocephalus* Muls., det. Weise (1: HNHM); Biro 96, Erima, Astrolabe B., *Orcus cyanocephalus* Muls., det. Weise (2: HNHM); Biro 96, Erima, Astrolabe B., *Orcus cyanocephalus* Muls., det. Weise, Inst. Zool. P.A.N., Warszawa, 27/55 (1: MIZ); *Orcus cyanocephalus* Muls (1: HNHM); D. N. Guinea, Sattelberg (1: MNHUB). Australia: Western Australia, 14.49S 126.49E, Carson escarpment, 9–15 Aug.1975, I.F.B. Common and M.S. Upton, *Orcus cyanocephalus*, det. S. A. Ślipiński (1: ANIC). Northern Territory, 12.31S 132.54E, 9km N by E of Mudginberri H.S., 10.vi.1973, T. Weir & A. Allwood (1: ANIC);

Kakadu NP, Sorcery Rocks nr, Cannon Hill, 25 Jun 1980, M.B. Malipatil (1: ANIC). **Queensland**, from Culture Nambour, X.1994 (2: ANIC); *Orcus cyanocephalus* Muls., R.D. Pope det. 1981, Hot Springs, K.H. Halfpapp. (1: ANIC).

**Distribution.** Australia, New Guinea.

***Orcus janthinus*** Mulsant, 1850  
(Figs 19–26, 86–94)

*Orcus janthinus* Mulsant, 1850: 466.

**Diagnosis.** The 8-segmented antenna in combination with large body size and black dorsal surface with blue or purple metallic sheen, distinguish *O. janthinus* from its congeners.

**Description.** Length 5.5–7.0 mm; TL/EW = 0.95–1.12; PL/PW = 0.23–0.35; EL/EW = 0.78–0.96. Head, pronotum and elytra black with blue and/or purple metallic sheen. Venter dark brown to pale brown or yellowish except for prosternum, mesoventrite and epipleura which are blackish. Epipleura with bluish metallic sheen.

Head, pronotum and elytra without apparent microreticulation between punctures. Punctuation shallow about as large as eye facetes, 1 diameter apart. Interocular distance about 0.55 times as wide as head width; inner margins of eyes almost straight and moderately convergent anteriorly. Anterior clypeal margin moderately emarginate (Fig. 22). Antennae about 0.42 times as long as width of head capsule, 8-segmented (Fig. 25); antennomere 3 obconical, at base about 0.75 times as wide as at apex; antennomere 4–5 similar in shape; antennomere 7 about 1.5 times longer than 6; antennomere 8 almost as long as 7 slightly tapering to apex. Labium with terminal palpomere at base about 0.60 times as wide as penultimate at apex (Fig. 25). Maxilla with terminal palpomere about 1.25 times as long as wide; outer margin about 2.5 times as long as inner (Fig. 25). Labrum visible from above, about 0.35 times as wide as head width.

Prothorax about 0.85 times as wide as base of elytra; anterior pronotal angles with clearly visible submarginal line; hypomerale foveae deep (Fig. 19); prosternal process truncate at apex, at base about 0.35 times as wide as longest coxal diameter (Fig. 24); prosternum in front of coxae about 0.65 times as long as basal width of prosternal process. Mesoventral process about 0.55 times as wide as mesocoxal diameter (Fig. 26); meso-metaventral junction straight; metaventral postcoxal lines joined medially, before junction each recurving posteriorly (Fig. 26). Epipleuron with deep foveae (Fig. 23).

Legs moderately stout; tarsal claw with distinct, subtriangular basal tooth (Fig. 21).

Abdomen with 5 visible ventrites in both sexes (Fig. 86); ventrite I about 2.5 times longer than ventrite II; postcoxal lines running parallel to posterior margin of ventrite I; ventrite V rounded apically in both sexes; sternite VIII in female rounded at apex (Fig. 88) and in male truncate (Fig. 87); male genital segment as illustrated (Fig. 94).

Male genitalia: apical part of penis straight with rounded apex (Fig. 93); penis guide about as long as parameres (Figs 90, 91).

Female genitalia: coxites triangular in shape (Fig. 89); sperm duct consist of two parts, thinner portion slightly longer than thick portion (Fig. 89); spermatheca as in Fig. 92, cornu with distinct “beak”.

**Types.** **Lectotype** of *Orcus janthinus*, “Type/Type *janthinus*/ Lectotype *Orcus janthinus* Muls. 1850, Gordon 1987” (UMZ).

**Other material examined.** **Java:** Semarang, Drescher, 12.05. *Orcus janthinus* Muls., det. S.A. Ślipiński (1: ANIC); Febr. 1911, R.I. Woglum (1: ANIC); centr. Java, Nglirip., M.E. Walsh., *Orcus janthinus* Muls., det. A. S. Ślipiński (1: ANIC); Cibodas Kebun, Raya ca. 4km SW of Cipanas 14–16 Oct., 1991 C. Reid, D. Subasli, sweeping grassy stream, ca. 1350 m (1: ANIC); *Orcus janthinus* Muls., Java, Inst. Zool. P.A.N., Warszawa, 41/58. (2: MIZ); Java Orient, M. Ardjoeno, *Orcus janthinus* Muls., det. R.Korschefsky, 1939, Inst. Zool. Polonicom, Warszawa, 12/45., prep. genit. ♀, N 2216, R. Bielawski 1957 (1: MIZ); Java, I.–II. 1925, C.T. McNamara (1: ANIC); Java, Coll. R.I.Sc.N.S., *Orcus janthinus* (1: ISNB); same and coll. Chapuis (1: ISNB); *Orcus janthinus* Muls., det. R. Korschefsky 1938, Inst. Zool. Polonicom, Warszawa, 12/45., prep. genit. ♂, N 2215, R. Bielawski 1957 (1: MIZ); Java, Boemi Ajoie (6: MNHUB); Java, 19.9.21., *Orcus janthinus* (1: MNHUB). **Papua New Guinea**, Morehead, Western Distr., 8.43S 141.38E., 30.viii.1970, Key & Balderson (1: ANIC); A200, Goroka E.H. TNG., 10.I.56. Coffee., J.H. Barrett., *Orcus* sp. (1: MIZ); Laloki, Central Dist., Papua 17.I.57, on Rosella Leaves., Coll. E. Kanjiri, Ex. Coll. Dept. Agr. No. 2643, *Orcus* sp. (4), R.D. Pope det., 1960 (1: MIZ); Oct., Cookloun, *Orcus janthinus* Muls. (1: ANIC); **O. Sumba**, Baing, 24.6.1949, Dr. Brühler, Dr Sutter, *Orcus janthinus* Muls., det. R. Bielawski 1957, prep. genit. ♀, N. 2357, Inst. Zool. P.A.N., Warszawa, 113/57. (1: MIZ).

**Distribution.** Java, Sumba, New Guinea.

***Orcus lafertei*** Mulsant, 1853

*Orcus lafertei* Mulsant, 1853: 190.

**Diagnosis.** *O. lafertei* resembles *O. cyanocephalus*, but can be distinguished by having elytra covered with strong purple or greenish metallic reflection.



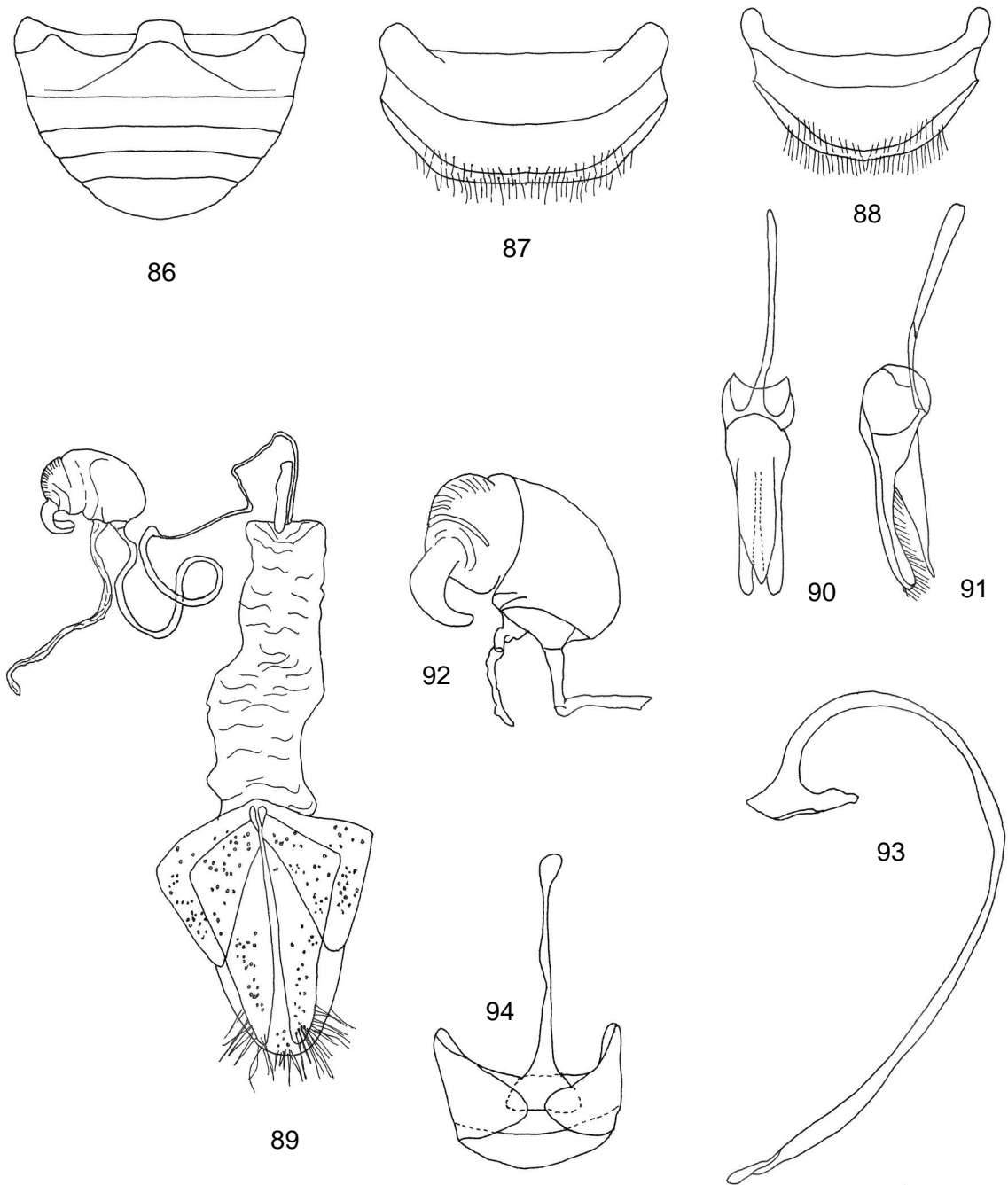
**Description.** For detailed description see Ślipiński and Giorgi, 2006: 285.

**Types.** Lectotype of *Orcus lafertei*: "Type/ 75.36./ *Orcus lafertei* Muls./ T. Moreton Bay/ Named by Mulsant/ Lectotype *Orcus lafertei* Muls., S.A. Ślipiński" (BMNH).

**Other material examined.** Australia: Queensland, 10 km SW Clairview, 8.I.1992 C. Reid, beating

flowering Acacia (1: ANIC); *O. lafertei* Muls., R.D. Pope, det. 1975, Laura Stn., Laura N., 4 April 1983, A. Wal-ford-Huggins at M.V. light (1: ANIC); N. Hall, (1: ANIC); Burpengary CK., 14.5.1933, J.G. Brooks, Bequest, 1976, ANIC, *Orcus lafertei* Muls, R.D. Pope, det. 1971 (1: ANIC). **New South Wales**, (French) (1: ANIC).

**Distribution.** Australia.



Figures 86–94. *Orcus janthinus* Mulsant. (86) Abdomen, female, ventral; (87) abdominal segment VIII, male, ventral; (88) abdominal segment VIII, female, ventral; (89) female genitalia, ventral; (90) tegmen, inner; (91) tegmen, lateral; (92) spermatheca; (93) penis, lateral; (94) male genital segment, ventral.

*Orcus nigricollis* Weise, 1902  
(Figs 27–32, 95–104)

*Orcus nigricollis* Weise, 1902: 509.

**Diagnosis.** This species is most similar to *O. biroi* but can be distinguished from it by having dorsal surfaces dark chestnut brown to blackish (with at least weak blue metallic sheen on the elytra), with only lateral margins of elytra and lateral margins, and anterior angles of pronotum somewhat paler.

**Description.** Length 3.0–3.3 mm; TL/EW = 1.0–1.1; PL/PW = 0.19–0.35; EL/EW = 0.76–0.95. Head pale brown. Pronotum dark chestnut to blackish except for anterior angles pale brown. Elytra predominantly blackish with blue metallic sheen, lateral flattened margins pale brown to dark reddish. Venter pale brown except for meso- and metaventrite dark brown or completely dark brown.

Head, pronotum and elytra with apparent microreticulation between punctures. Punctuation shallow, about as large as eye facets or slightly larger, on pronotum 2 diameters apart, on elytra 1–2 diameters apart. Interocular distance about 0.50 times as wide as head width; inner margins of eyes almost straight and moderately convergent anteriorly (Fig. 29). Anterior clypeal margin deeply emarginate. Antenna about 0.43 times as long as width of head capsule, 9-segmented (Figs 27, 30); antennomere 3 obconical, at base about 0.65 times as wide as at apex; antennomere 4–6 similar in shape; antennomere 8 about as long as 7; antennomere 9 almost as long as 8 slightly tapering to the apex. Labium with terminal palpomere at base about 0.70 times as wide as penultimate at apex (Fig. 27). Maxillary terminal palpomere about 1.5 times as long as wide; outer margin about 2.5 times as long as inner (Figs 27, 30). Labrum visible from above, about 0.32 times as wide as head width.

Prothorax about 0.90 times as wide as base of elytra; hypomerale foveae distinct (Fig. 27); prosternal process truncate at apex, at base about 0.35 times as wide as longest coxal diameter; prosternum in front of coxae about 0.65 times as long as basal width of prosternal process (Fig. 27). Mesoventral process almost as wide as mesocoxal diameter (Fig. 28); meso-metaventral junction weakly arcuate anteriorly; metaventral postcoxal lines joined medially as on Figs 28, 32; epipleuron with shallow foveae (Fig. 28).

Legs moderately stout; tarsal claw with large, subtriangular basal tooth (Fig. 31)

Abdomen with ventrite VI in male partially visible (Figs 28, 32); ventrite I about 2.5 times longer than ventrite II; ventrite V rounded in both sexes (Figs 32, 95); postcoxal lines running parallel to posterior

margin of ventrite I and angulately recurving anteriorly extending to about half length of I ventrite (Fig. 95); sternite VIII in female rounded apically (Fig. 96) and subtruncate in male (Fig. 97); male genital segment as illustrated (Fig. 102).

Male genitalia: apical part of penis with long, thin and needle-shaped (Figs 103, 104); penis guide about 0.9 times as long as parameres (Figs 98, 99).

Female genitalia with coxites elongate, slender and subtriangular in shape (Fig. 100); spermatheca as in Fig. 101.

**Types.** Lectotype of *Orcus nigricollis*, “Key-Is/ *Orcus nigricollis* m./ Syntypus, *Orcus nigricollis* Weise, 1902, labeled by MNHUB 2009” (MNHUB).

**Paralectotypes:** „Key-Ins/ Syntypus, *Orcus nigricollis* Weise, 1902, labeled by MNHUB 2009” (14: MNHUB). **Present designation.**

**Other material examined.** Key Ins., Inst. Zool. Polonicom, Warszawa, 12/45. ”(1: MIZ PAN); Ins. Key, *Orcus nigricollis* Weise, Ins. Key” (1: HNHM); Ins. Key, *Orcus nigricollis* Ws.” (1: MNHUB).

**Distribution.** Key Islands, New Guinea.

*Orcus nummularis* (Boisduval, 1835)

*Coccinella nummularis* Boisduval, 1835: 594.

**Diagnosis.** This is the only species of *Orcus* with 4 orange maculae on each elytron.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 285.

**Material examined.** Australia: Queensland, westwood, 18.II.71, D.P. Sands, *Orcus nummularis* Boisd., E.B. Britton det. 1972 (1: ANIC); Bundaberg, Austr. 1904, R.C.L. Perkins Coll. B.M. 1942-95 (1: BMNH). New South Wales, Boian R., J. Armstrong, 969 (1: ANIC); 1904, W.W. Froggatt Collection, *Parapriasmus nummularis* (Boisd), R.D. Pope det. 1980 (1: ANIC); Sydney, R.C.L. Perkins, 1942-95, *Parapriasmus nummularis* (Boisd.), R.D. Pope det. 1979 (1: BMNH). Australian Capital Territory, Narrabundah, Stevenson Orchard ex trapbands on apple trees, 2.VII.66 (2: ANIC); W.W. Froggatt Coll. (2: ANIC).

**Distribution.** Australia.

*Orcus obscurus* Blackburn, 1892

*Orcus Australasiae* var. ? *obscurus* Blackburn, 1892: 241.

*Orcus obscurus*: Blackburn 1895: 240.

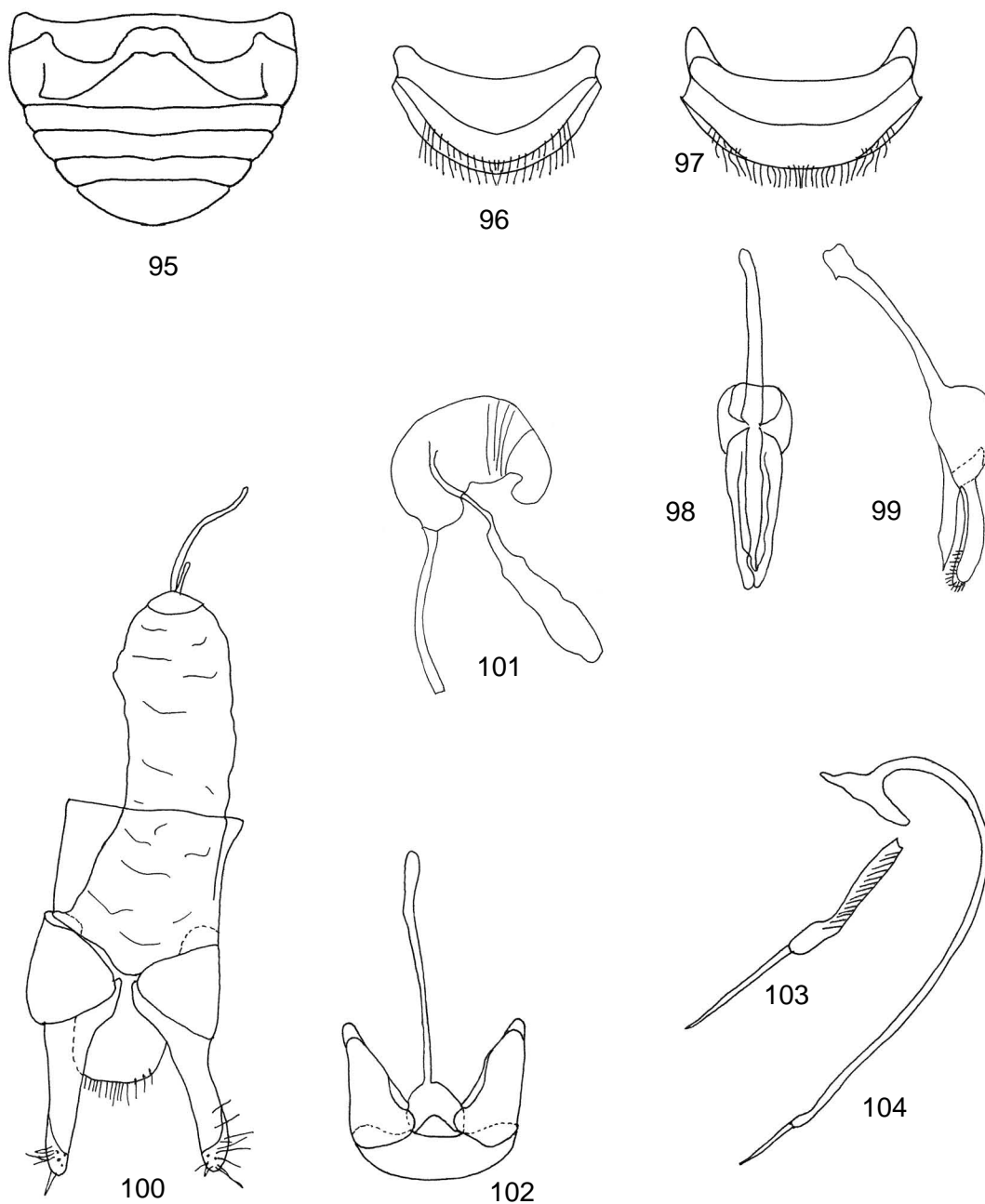
**Diagnosis.** This species resembles *Orcus australasiae* by its colouration – dorsum black with 3 orange maculae on each elytron. *O. obscurus*, however, can be separated by having the body smaller and more elongate, and the tarsal claws simple.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 286.

**Material examined. Types. Lectotype** of *Orcus obscurus*: "T 7545, Yilg/ Type/ var? obscurus Blackb./ Australia, Blackburn Coll., B.M. 1910-236., *Orcus obscurus* Blackburn var? *Australasiae*/ Lectotype left, *O. obscurus* Bl., S.A. Ślipiński/ *Orcus obscurus* Bl., det. A. S. Ślipiński" (BMNH).

**Other material. Australia: Western Australia**, 5 km S Norseman, 25.XII.1985, C. Reid, on *Melaeuca*, *Orcus obscurus* det. A. S. Ślipiński (1: ANIC); **Queensland**, *Orcus australasiae* var. *obscurus*, Nat. Mus. Victoria, C. French's Coll, 6.I.08, Mus. Vic. Ent-1041, comp. with LT, *Parapriasmus obscurus* (Bl.), R.D. Pope, det. 1981, *Orcus obscurus* Bl., S. A. Ślipiński (1: ANIC).

**Distribution.** Australia.



Figures 95–104. *Orcus nigricollis* Weise. (95) Abdomen, male, ventral; (96) abdominal segment VIII, female, ventral; (97) abdominal segment VIII, male, ventral; (98) tegmen, inner; (99) tegmen, lateral; (100) female genitalia, ventral; (101) spermatheca; (102) male genital segment, ventral; (103) apex of penis; (104) penis, lateral.

*Orcus punctulatus* Blackburn, 1892

*Orcus punctulatus* Blackburn, 1892: 240.

*Orcus beneficus* Weise, 1913: 444. Synonymised by Ślipiński & Giorgi, 2006.

**Diagnosis.** This species resembles *O. cyanocephalus* and *O. lafertei* but can be separated from both these species in having hypomeral foveae vestigial, lateral margins and anterior angles of pronotum with visible submarginal line and well developed elytral bead.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 286.

**Types. Lectotype** of *Orcus punctulatus*: "Type/4430, Qu. T./ Australia, Blackburn Coll., B.M. 1910-236./ *Orcus punctulatus* Blackb./ Lectotype, *Orcus punctulatus* Bl., S. A. Ślipiński/" (BNHM); **Lectotype** of *Orcus beneficus*: "Merauke, Dr Koch 1904/ *Orcus beneficus* Ws./ Syntypus, *Orcus beneficus* Weise, 1913, labeled by MNHUB 2009/ *Orcus beneficus* Weise, 2004, det. S.A. Ślipiński/" (MNHUB).

**Other material examined. Australia:** 11.45S 142.36E, Heathlands, QLD, 15–26 Jan. 1992, T.A. Weir, I.D. Naumann, sweeping heath., *Orcus punctulatus* Blackburn, det. A. Ślipiński, 2005, ANIC Database No. 25 046956 (1: ANIC); Mataranka H'stead, M.T. 22 Aug. 1981, B.B. Lowery coll., thermal springs, palm leaf, ANIC Database No. 25 046954, *Orcus punctulatus* Blackburn, det. A. Ślipiński, 2005 (1: ANIC); WT, Winnellie, Sadgroves gras, IS Mar 2000, L. Zhang, feeding on *Silvestraxis* sp., on *Pandanus* sp., *Coccinellidae*, *Orcus* sp., det. G.R. brown, 2000, 43780, ANIC Database No. 25 046945, *Orcus punctulatus* Blackburn, det. A. Ślipiński, 2005 (1: ANIC); C. York, L. Wassell, 1930, *Orcus punctulatus* Bl., R.D. Pope det. 1980 (1: ANIC); **New Guinea:** Biro 96, Erima, Astrolabe B, *Orcus cyanocephalus* Muls., *Orcus punctulatus* Bl., det. A.S. Ślipiński (1: ANIC); Merauke, Dr Koch 1904 (1: ANIC); Merauke, Dr. Koch 1904 (1: ANIC); N Guinea (1: ANIC); T. Falmin, Feb. 1970, H. Ohlmus, collector (2: ANIC); Basavi, Oct 1975, H. Ohlmus, Collector (1: ANIC); same but Jan 1976, (1: ANIC); Hagen, Aug 1976, H. Ohlmus, Collector (3: ANIC); 4.4.1970, H. Ohlmus, Collector (1: ANIC); Wau, Bishop, Museum, Field Station, 15.–25. IV. 1965., Coll. Dr. J. Balogh et, Dr. J.J. Szent-Ivany (16: HNHM); NE, Wau, Wt. Kaindi, 19–24. VIII.1969, No. NGW-U.16, leg. Dr. J. Balogh (5: HNHM); NE, Wau, Wt. Kaindi, 22–30.IX.1969, No. NGW-U.16, leg. Dr. J. Balogh (1: HNHM); Wau, 1972-IX.22. M. cs, leg. Moczar L. (1: HNHM); Morobe District, Wau Gorge, 878 m, 30, xii, 70, B.B. Lowery (1: ANIC).

**Distribution.** Australia, New Guinea.

*Orcus quadrimaculatus* Gadeau de Kerville, 1884

*Orcus quadrimaculatus* Gadeau de Kerville, 1884: 72.

**Diagnosis.** This is a very distinctive species of *Orcus* by having 2 orange maculae on each (black) elytron.

**Description.** For detailed description see Ślipiński and Giorgi, 2006: 287.

**Material examined. Australia:** New South Wales, Sydney, E. W. Ferguson Collection, ANIC, *Orcus quadrimaculatus* de Kerv. (1: ANIC); Sydney, desiderata ex., Austral. Mus. Sydney, *Orcus quadrimaculatus* de Kerv., det. R.G. Booth 2002, Brit. Mus. 1981-230 (2: BMNH); Mosl Bay, Froggatt 1892, W.W. Froggatt, *Orcus quadrimaculatus* (1: ANIC); Australia, Coll. R.I.Sc.N.B, Coll. Chapuis, *Orcus 4-maculatus* (1: ISNB); Australia, *Orcus 4-maculatus* Kerv., det. A.S. Ślipiński (1: ANIC).

**Distribution.** Australia: NSW.

*Orcus tetrafasciatus* sp. nov.

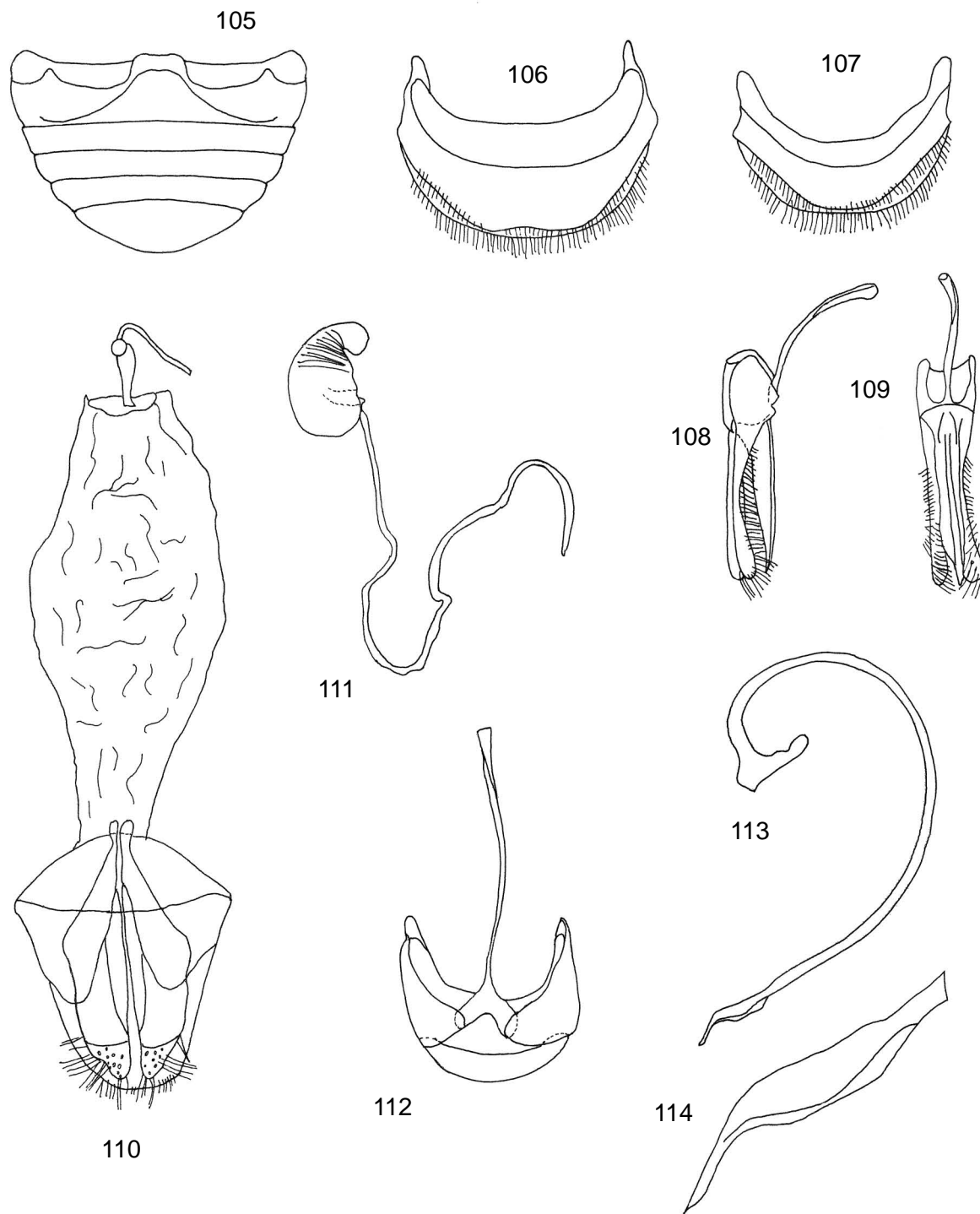
(Figs 39–45, 115–124, 134)

**Diagnosis.** This species is easily recognized by its reddish dorsum and each elytron decorated with two black stripes.

**Description.** Length 3.1–3.4 mm; TL/EW = 1.03–1.09; PL/PW = 0.29–0.37; EL/EW = 0.83–0.93. Dorsum reddish, and each elytron covered with two black stripes; first stripe broad, placed on disk, second longer and narrower than first, running continuously around outer margin of elytron. Venter pale brown to reddish.

Head, pronotum and elytra with apparent microreticulation between punctures. Punctuation about as large as eye facetes or slightly larger, on pronotum 1.0–1.5 diameter apart, on elytra 1 diameter apart and deeper than on pronotum. Interocular distance about 0.5 times as wide as head width; inner margins of eyes weakly rounded and moderately convergent anteriorly (Fig. 43). Anterior clypeal margin moderately emarginate. Antenna about 0.50 times as long as width of head capsule, 9-segmented (Fig. 41); antennomere 3 obconical, at base about 0.72 times as wide as at apex; antennomere 4–6 similar in shape; antennomere 8 about 1.15 times as long as 7; antennomere 9 almost as long as 8, slightly tapering to the apex. Labium with terminal palpomere base about 0.75 times as wide as penultimate at apex. Terminal maxillary palpomere about 1.9 times as long as wide; outer margin about 3.0 times as long as inner (Fig. 39). Labrum visible from above, about 0.45 times as wide as head width.

Prothorax about 0.75 times as wide as base of elytra; hypomeral foveae vestigial (Fig. 39); prosternal process truncate at apex, at base about 0.35 times as wide as longest coxal diameter (Figs 39, 40); prosternum in front of coxae about as long as basal width of prosternal process. Mesoventral process about 0.85



Figures 105–114. *Orcus viridulus* sp. nov. (105) Abdomen, male, ventral; (106) abdominal segment VIII, male, ventral; (107) abdominal segment VIII, female, ventral; (108) tegmen, lateral; (109) tegmen, inner; (110) female genitalia, ventral; (111) spermatheca; (112) male genital segment, ventral; (113) penis, lateral; (114) apex of penis.

times as wide as mesocoxal diameter (Fig. 44); meso-metaventral junction arcuate anteriorly; metaventral postcoxal lines joined medially, before junction each recurving posteriorly (Fig. 44); epipleuron with distinct foveae.

Legs moderately stout; tarsal claws with large, subtriangular basal tooth (Fig. 42).

Abdomen with 6 ventrites in male (although 6<sup>th</sup> ventrite, Fig. 116, not very obvious – suture between 5<sup>th</sup> and 6<sup>th</sup> ventrites looks poorly marked) and 5 in female (Figs 45, 115); ventrite I about 2 times longer than ventrite II; ventrite V in female rounded at apex, in male somewhat truncate; postcoxal lines running parallel to posterior margin of ventrite I and abruptly recurving anteriorly extending to about  $\frac{1}{3}$  length of ventrite I (Fig. 115); sternite VIII in female rounded apically (Fig. 117); male genital segment as illustrated (Fig. 124).

Male genitalia: apical part of penis slightly twisted with thin and straight apex (Figs 122, 123); penis guide about 0.90 times as long as parameres (Figs 118, 119).

Female genitalia with coxites elongate, slender and subtriangular in shape (Fig. 120); sperm duct long and of same diameter throughout (Fig. 120); spermatheca as in Fig. 121.

**Types.** **Holotype** of *Orcus tetrafasciatus* ♂ “New Guinea: (NE), Bulolo 900 m., Aug. 20. 1956; E. J. Ford, Jr. Collector” (BPBM); **Paratypes** “New Guinea: (NE), Bulolo 1020 m., Aug. 22. 1955; E. J. Ford, Jr. Collector” (1: MIZ); “New Guinea: Neth. Biak I.: Mangrowawa 50–100 m, V-29-1959; T.C. Maa Collector, Bishop” (1: MIZ); “New Guinea: Neth. Biak I.: Kampong Landbouw, 50–100 m., May 28, 1959/ J. L. Gressitt, Collector/ T.C. Maa, Collector, Bishop” (1: BPBM). “New Guinea: NE, Wau, Morobe Distr., 1200 m, 1.II.1963/ J. & M. Sedlacek, Collectors, Bishop” (1: BPBM); “New Guinea: NE, Port Morseby, Boroko, 40 m/ 1500–1600 m, 9.XI.71/ Bishop Museum, N. L. H. Krauss” (1: BPBM); “New Guinea: (NE), Wau, Morobe Distr., 1150 m, 16.X.1961/ J. Sedlacek, Collector, Bishop/ Native Collector, Bishop” (1: BPBM).

**Etymology.** The name of this new species refers to four black stripes on the elytra.

**Distribution.** New Guinea.

*Orcus viridulus* sp. nov.  
(Figs 33–38, 105–114, 132, 133)

**Diagnosis.** Strongly reflexed margins of elytra in combination with dark green and purple metallic sheen on the elytra and metallic dark greenish venter distinguish this species from other *Orcus*.

**Description.** Length 5.6–8.0 mm; TL/EW = 0.97–1.05; PL/PW = 0.27–0.36; EL/EW = 0.82–0.92. Dorsal surfaces black with strong metallic sheen, greenish on head, bluish and greenish on pronotum and greenish

and purple on elytra. Venter metallic dark green to bluish.

Head, pronotum and elytra with apparent microreticulation between punctures. Punctuation as large as eye facetes or slightly larger, on pronotum 1.0–1.5 diameter apart, on elytra 0.5–1.0 diameter apart and deeper than on pronotum. Interocular distance about 0.6 times as wide as head width; inner margins of eyes almost parallel. Anterior clypeal margin moderately emarginate. Antennae about 0.43 times as long as width of head capsule, 9-segmented (Figs 33, 35); antennomere 3 obconical, at base about 0.58 times as wide as at apex; antennomere 4 slightly longer than 3; antennomeres 5–6 similar in shape; antennomere 8 about 2.0 times as long as 7; antennomere 9 as long as 8 slightly tapering to apex. Labium with terminal palpomere at base about 0.70 times as wide as penultimate at apex (Fig. 34). Terminal maxillary palpomere about 1.3 times as long as wide; outer margin about 2.2 times as long as inner (Fig. 33). Labrum visible from above, about 0.4 times as wide as head width.

Prothorax about 0.75 times as wide as base of elytra; anterior pronotal angles with clearly visible submarginal carina; hypomeral foveae visible (Fig. 35); prosternal process truncate at apex, at base about 0.32 times as wide as longest coxal diameter; prosternum in front of coxae about 0.65 times as long as basal width of prosternal process (Fig. 34). Mesoventral process about 0.5 times as wide as mesocoxal diameter (Fig. 36); meso-metaventral junction straight; metaventral postcoxal lines joined medially, before junction each recurving posteriorly (Fig. 36); elytra with strongly reflexed margins, with clear bead; epipleuron with deep foveae.

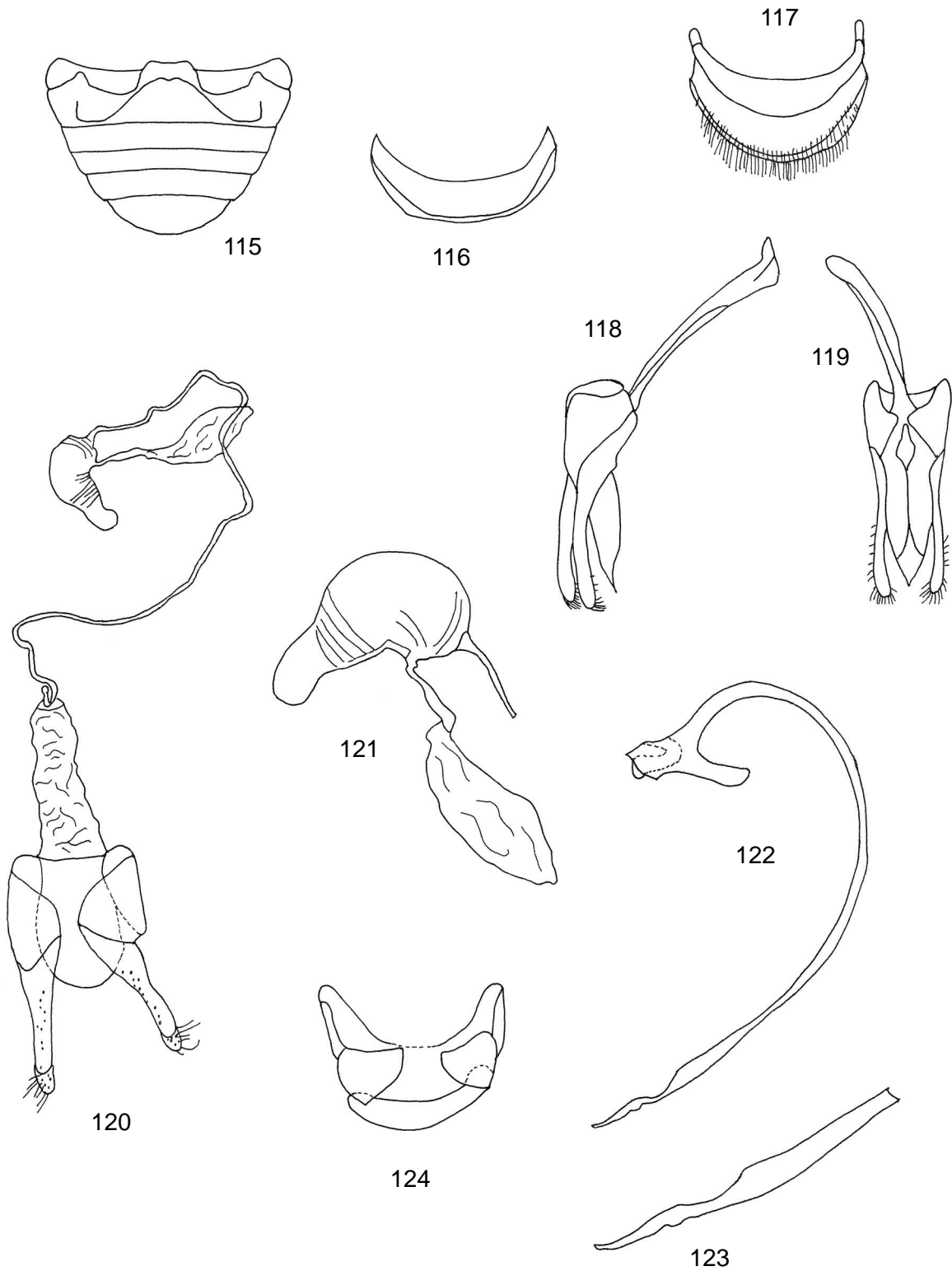
Legs moderately stout; tarsal claws with large, subrectangular basal tooth (Fig. 37).

Abdomen with 5 ventrites in both sexes; ventrite I about 2 times longer than ventrite II; ventrite V rounded apically in both sexes (Figs 38, 105); postcoxal lines reaching almost hind margin of ventrite I and weakly recurving anteriorly; sternite VIII in female narrowly rounded and tergite truncate at apex (Fig. 107), sternite VIII in male emarginate (Fig. 106); male genital segment as illustrated (Fig. 112).

Male genitalia: apical part of penis slightly twisted with thin and straight apex (Fig. 113, 114); penis guide almost as long as parameres (Figs. 108, 109).

Female genitalia with coxites elongate and subtriangular in shape (Fig. 110); sperm duct long and of same diameter throughout; spermatheca as in Fig. 111.

**Types.** **Holotype** of *Orcus viridulus*, ♂ “New Guinea, MDU, Aug 1975/H. Ohlms, Collector” (ANIC). **Paratypes:** “New Guinea, MDU, Aug 1975/H. Ohlms, Collector” (1: MIZ); “New Guinea, Aseki, Feb. 1972/ H. Ohlms, Collector” (1: MIZ); “New Guinea, Wabag, 1.1976/ H. Ohlms, Collector” (1: ANIC); “N. G. Mekino,



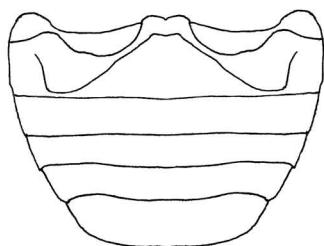
Figures 115–124. *Orcus tetrafasciatus* sp. nov. (115) Abdomen, female, ventral; (116) abdominal segment VIII, male, ventral; (117) abdominal segment VIII, female, ventral; (118) tegmen, lateral; (119) tegmen, inner; (120) female genitalia, ventral; (121) spermatheca; (122) penis, lateral; (123) apex of penis; (124) male genital segment, without apophysis, ventral.

30 km SSW, Lufa, 11.III.1973, Ex: K. W. Stroeder" (1: CNC); "Irian-Jaya: PNG, Prov. Moroba, Asaki 1500–1650 m, 14.10.1992, leg. A. Riedel" (1: SMNS); "New Guinea, Rev. L. Wagner" (1: SAM); "New Guinea: Neth., Wamena, 1700 m. II . 10.25.1960; T. C. Maa Collector" (1: BPBM); "New Guinea: (Neth.) Wissolmeren: Duroto, E. of Emarotadi, 1800 m.,

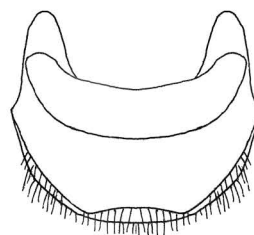
VIII.21.55 Above Kabebe" (1: BPBM); "New Guinea (NE) Mt. Otto, 2200 m., June 25.1955; J. L. Gressitt coll." (1: MIZ).

**Etymology.** The species name is formed from Latin adjective *viridulus* meaning greenish, referring to prevailing greenish coloration of this beetle.

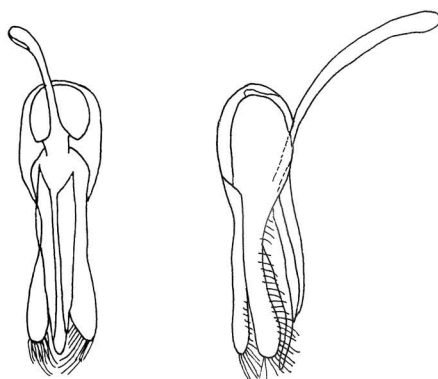
**Distribution.** New Guinea.



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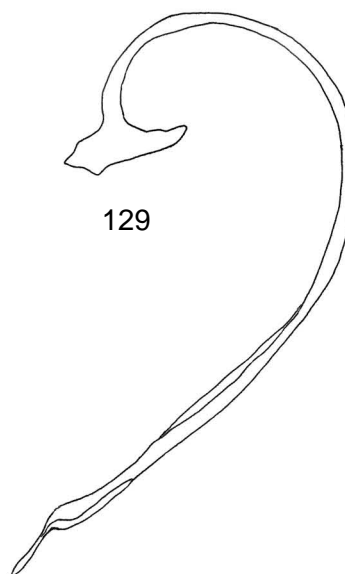


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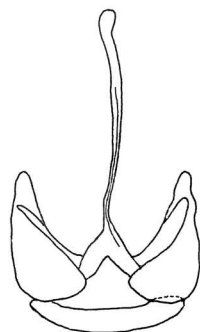


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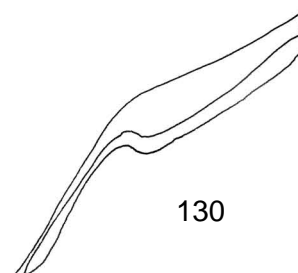
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129



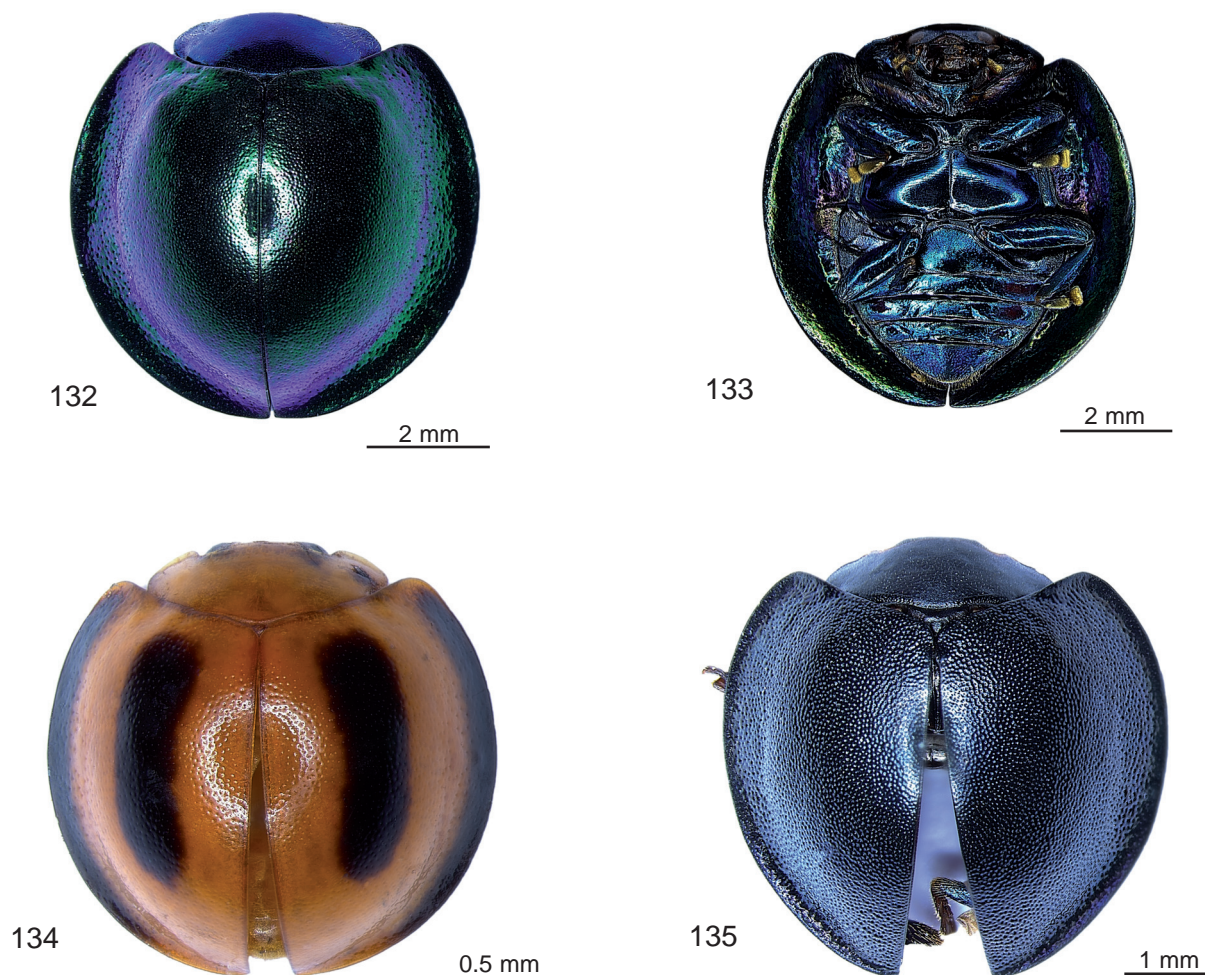
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Figures 125–131. *Orcus cordiformis* sp. nov. (125) Abdomen, male, ventral; (126) abdominal segment VIII, male, ventral; (127) tegmen, inner; (128) tegmen, lateral; (129) penis, lateral; (130) apex of penis; (131) male genital segment, ventral.





Figures 132–135. (132) *Orcus viridulus* sp. nov., habitus, dorsal; (133) and habitus, ventral; (134) *Orcus tetrafasciatus* sp. nov., habitus, dorsal; (135) *Orcus cordiformis* sp. nov., habitus, dorsal.

## SPECIES EXCLUDED FROM *ORCUS*

### *Sticholotis carinica* (Gorham) comb. nov.

*Orcus carinicus* Gorham, 1895: 688.

**Type material.** Holotype, Myanmar “Carin Cheba, 900–1100 m., L. Fea V-XII-88/ Gorham type/ Typus/ *carinicus* Gorh./ *Orcus carinicus* Gorh./ *O. carinicus* Gorh. Typus!/ Holotypus, *Orcus carinicus*, Gorham, 1895/ Museo Civico di Genova” (MCSN).

### *Sticholotis bipunctata* (Gorham) comb. nov.

*Orcus bipunctatus* Gorham, 1895: 689.

**Type material.** Syntypes: Myanmar “Tenasserim Meetan, Fea. Apr. 1887/ Gorham type/ *Orcus*

*bipunctatus* Gorham/ Syntypus, *Orcus bipunctatus* var. Gorham, 1895/ Museo Civico di Genova” (1: MCSN); “Bhamo Birmania, Fea VIII 1886/ Gorham type/ Typus/ *bipunctatus* Gorh./ *O. bipunctatus* Gorh. typus!/ Syntypus, *Orcus bipunctatus* Gorham, 1895/ Museo Civico di Genova” (1: MCSN).

### *Sticholotis quadriguttata* (Gorham) comb. nov.

*Orcus quadriguttatus* Gorham, 1895: 689.

**Type material.** Syntypes: Myanmar, “Rangoon Birmania, Fea V 1885/ Typus/ *quadriguttatus* Gorh./ *Orcus quadriguttatus*/ *O. quadriguttatus* Gorh. typus!/ Syntypus, *Orcus quadriguttatus* Gorham, 1895/ Museo Civico di Genova 1895” (1: MCSN).

*Sticholotis discoidea* (Gorham)

*Orcus discoideus* Gorham, 1895: 688.

*Sticholotis discoideus* Weise: 1902: 512.

**Type material.** Syntypes: Myanmar “Carin Ghecu, 1300–1400 m, L. Fea, II–III.88./ Syntypus, *Orcus? discoideus* Gorham, 1895/ Museo Civico di Genova” (1: MCSN); “Carin Ghecu, 1300–1400 m, L. Fea, II–III.88./ Gorham type/ Typus/ *discoideus* Gorh./ *Orcus discoideus* Gorh./ *Orcus? discoideus* Gorh. typus!/ Syntypus, *Orcus? discoideus* Gorham, 1895/ Museo Civico di Genova” (2: MCSN); “Carin Asciiui Cheba, 1200–1300 m L. Fea. I–88./ Syntypus *Orcus discoideus*, Gorham, 1895/ Museo Civico di Genova” (2: MCSN); “Carin Cheba, 900–1100 m., L. Fea V–XII-88/ Syntypus, *Orcus discoideus* Gorham/ Museo Civico di Genova 1895” (1: MCSN).

**Comments.** In 1894 Gorham described *Orcus ferrugineus* from India and a year later (Gorham, 1895) four new species from Birma: *O. discoideus*, *O. carinicus*, *O. bipunctatus*, *O. quadrimaculatus*. The placement of those species in *Orcus* was based mainly on the shape of the thorax, which “is three times as wide as long, the sides deflexed, the base obliquely so, as in *Chilocorus*...” (Gorham, 1894) or “the thorax ... short, of the usual *Chilocorid* form...” (Gorham, 1895). However, Gorham himself had doubts about generic placement of these species. In the original descriptions of *O. ferrugineus* and *O. discoideus* he put question mark next to the generic name (“*Orcus? ferrugineus*, n. sp.” and “*Orcus? discoideus*, n. sp.”), emphasizing that these species “are placed provisionally in the genus *Orcus*”.

Weise (1895) moved *O. ferrugineus* to the genus *Sticholotis* after he noticed that it apparently did not belong to *Orcus* or to *Chilocorini*. He wrote, “*Orcus? ferrugineus* Gorh. nach der Beschreibung sicher zur Gattung *Sticholotis* Crotch gehört...”. Similarly he (Weise, 1902) changed the generic placement of *Orcus discoideus*.

Surprisingly to us the remaining three Gorham’s species, *O. carinicus*, *O. bipunctatus* and *O. quadriguttatus* were classified in *Orcus* till present, listed in this genus in Korschefsky’s catalogue of Coccinellidae (Korschefsky, 1932) or Poorani’s checklist of Coccinellidae of the Indian subregion (Poorani, 2002).

A detailed study of the type specimens of *O. carinicus*, *O. bipunctatus*, *O. quadriguttatus* and *O. discoideus* leaves no doubts that these species belong to the genus *Sticholotis* (Coccinellidae, Sticholotidini), diagnosed and redefined by Ślipiński (2004).

Redescriptions of these species and lectotypes designations will be a subject of separate paper (Tomaszewska & Łączyński, in prep.).

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