

Four new species of Buprestidae (Coleoptera) from the Louisiade Archipelago

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Introduction



Louisiade Archipelago, the insular extension of the southeastern end of New Guinea, consists of multitude of islands, islets, and atolls of which the largest are Tagula, Rossel and Misima (of them Rossel being the farthest from, Misima the closest to, New Guinea). Their buprestid fauna is very poorly known: my (admittedly cursory and superficial) survey of literature (DEYROLLE 1864, KERREMANS 1900, NYLANDER 2010, OBENBERGER 1932, THÉRY 1923a,b) has resulted in the list of but 7 species recorded from there: two from Misima [*Metataenia* (*Metamroczkowskia*) *hudsoni* NYL. and *Chrysobothris* (*s.str.*) *chrysonota* DEYR.] and five from Rossel [*Metataenia* (*Parachrysodema*) *rothschildi* (THY.), *M.* (*Metamroczkowskia*) *insulicola* THY., *Haplotrinchus* (*Transwallacea*) *aurocupreus* (KERR.), *Melobasis* (*Diceropygus*) *rothschildi* THY., *M.* (*D.*) *eichhorni* THY. (probably synonymous with the previous one)]; of course I could have overlooked one or two, but even so the paucity of documented “biodiversity” is striking! That this paucity reflects lack of knowledge, rather than really low number of species inhabiting the islands, is evident already from the fact that not a single species has been reported from the largest Island (Tagula), and all those buprestids known to occur on Misima and Rossel are relatively big (above 12-15 mm.)

beetles, while representatives of smaller taxa, usually the most numerous, are completely lacking from the list: *e.g.* CURLETTI (2003, 2006) in his comprehensive review of the genus *Agrilus* CURT. (abundantly represented in the neighbouring areas: 77 spp. from New Guinea, 20 from Solomon Is.) has not found a single species from Louisiades! The material available to me originates also from old collections and so, not surprisingly, includes only representatives of “higher weight-categories”, what makes the addition of 4 new species to 6 or 7 known hitherto especially persuasive indication of the amount of work remaining to be done with this fauna.

Conventions and abbreviations

Like in my other publications (unless “corrected” by editors...), I follow the very useful conventions of applying (of course, except wordly citations, where the original form must be retained) SMALL CAPS to *all* [irrespective of context and full *vs.* abbreviated version: inconsistent use deprives the display of any sense!] personal family- (*not* given-) names, *italicizing* species- and genus-group names (as well as citations and words in languages different from that of the main text), and writing the suprageneric taxon-names in **Bold** [the latter is not a generally accepted custom, but is often important, as some of such names (*e.g.* of the subtribes **Buprestina** LEACH, **Melobasina** BÍLÝ or **Coraebina** BED.) are (or may easily become) “homonymous” (but valid!) with generic or subgeneric ones (*Buprestina* OBB., *Melobasina* KERR., *Coraebina* KERR.)]: we must make possibly unequivocal what we have in mind, and possibly easy for the reader to “optically” spot the “wanted” name in the (especially longer) text!

Labels of type-specimens are quoted as exactly as possible, including *italics* and *handwriting* (both represented in my text by *italics*), CAPITAL LETTERS, SMALLCAPS and framing.

Collection names are abbreviated as follows:

BMNH	=	Natural History Museum, London, GREAT BRITAIN
BPBM	=	Bernice P. Bishop Museum, Honolulu, USA
CLB	=	Charles L. BELLAMY, Sacramento, USA
MCGD	=	Museo Civico di Storia Naturale „Giacomo Doria”, Genova, ITALY
RBH	=	Roman B. HOLYŃSKI, Milanówek, POLAND;
TT	=	Takeshi TERABAYASHI, Shiotsu, JAPAN
UN	=	Ulf NYLANDER, Valbo, SWEDEN
WK	=	Willy KRONBLAD, Ekenässjön, SWEDEN

Besides, the following abbreviations are used in morphological descriptions:

dfp = “dense-and-fine punctulation” or “densely-and-finely punctulate”; refers to the type of sculpture occurring mainly in depressed areas (foveae, sulci), and consisting of fine, dense, regular punctulation on usually distinctly microsculptured background, covered with dense pubescence and frequently pulverulent.

Midlateral = placed between midline and lateral margin, at *ca.* equal distance from both

Convergent/divergent = towards apex or (front) downwards

L = length

W = width

BW = basal width

AW = apical width

H = width of head with eyes

V = width of vertex between eyes

≈ = approximately equal to

Cyphogastra (s.str.) mincik sp.n.

Material examined:

Holotype: "Misima, Papua, N. Guinea, 2. 81" "Cyphogastra sp." [both labels yellow] "Museo Civ. Genova, ex coll. B. Bari, (acquist. 1994)" [♀ (MCGD)]

Paratypes: "ROSSEL ISL., MILNE Bay Prov., P.N.G. X.81" "Museo Civ. Genova, ex coll. B. Bari, (acquist. 1994)" [1 ♀ (MCGD), 1 ♀ (RBH: BPj-r)]; "PNG: NEW GUINEA, Milne Bay Prov., Rossel Is., IV 1979" [6 ♀ (BPBM), 2 ♀ (RBH: BPj-p, BPj-q)]; "Rossel I., IV. 79" [1 ♀ (RBH: BPekp)]

Additional material: 1 ♀

Characters

Holotype: Female 29.5×9 mm. Dorsal side bright green, lustrous, with cupreous median stria of pronotum and cupreous-red (transgressing into golden and evanescent at *ca.* apical margin of 3. sternite) lateroapical spot of elytra; sternum green with golden shine, abdomen cupreous-green; antennae piceous-black except green basal joint; tarsi dull bronzed. Dfp areas on ventral side covered with rather dense, short, white pubescence and traces of ferruginous pulverulence; body otherwise glabrous.

Epistome arcuately emarginate, with conspicuous roundedly trapezoidal epistomal ridge; deep and broad, transverse, sparsely but rather coarsely punctured groove extends between this ridge and prominent (transverse on sides, protruding deeply downwards at middle) supraepistomal carina. Front very much wider than long, sides slightly divergent, V:H≈0.55; frontal depression deep, elongately triangular, reaching distinctly behind upper margins of eyes, impunctate; anterior cavity rather inconspicuous; lateral ridges broadly rounded off, only just at anterior ends somewhat sharper, very fine and sparse punctulation becomes coarser and denser behind eyes; periocular sulci and median groove very deep. 1. antennal joint club-shaped, robust, *ca.* 2.5× longer than thick; 2. globular, almost as wide as long, *ca.* 5× times shorter and definitely thinner than 1.; 3. very elongately triangular, slightly shorter than 1. distally as wide as 2.; 4. somewhat shorter than 3. but as wide as 1.; 5.–10. progressively slightly narrower but distinctly shorter (10. *ca.* 1.5× longer than wide); 11. slightly longer, elongately D-shaped.

Pronotum transverse (BW:AW:L≈1.5:1.0:1), sides distinctly straightly convergent from acute basal angles to midlength, then divergent to somewhat swollen but not protruding anterolateral angles and abruptly obliquely truncated to conspicuous collar; base angularly bisinuate, broadly arcuate prescutellar lobe moderately prominent; anterior margin deeply sinuate on both sides of broadly subsinuate truncated median lobe. Median depression rather deep, stria at its bottom contrastingly coloured but otherwise hardly discernible; fossae deep, angular ("half T"-shaped), impunctate (no trace of dfp areas); deep but narrow sulcus runs from anterolateral corner of each fossa to reentrant angle between collar and truncation; shallow but distinct narrow transverse depression on each side behind apical margin separates collar from disk, but anterior foveae practically absent. Disk very finely and sparsely inconspicuously punctulate, punctures on prehumeral relief and towards anterior angles coarser. Scutellum convex, trapezoidal, as wide (apically) as long.

Elytra 2.3× longer than wide. Sides inconspicuously truncated at humeri, slightly protruding between truncation and short sinuation just behind, subparallel on basal $\frac{2}{5}$, then cuneately convergent to indistinctly caudate apices; lateroapical margin with few (5–6) rather inconspicuous denticles. Intercostal foveae at very base irregular, shallow, poorly developed; otherwise no trace of costae; elytral puncturation very coarse on basal fourth of disk, becoming progressively finer (but everywhere distinct) backwards and sideways; rows more or less regular over most of surface.

Proepisterna almost entirely, very regularly dfp; prosternal process narrowly, deeply sulcate and rather coarsely but sparsely punctured along midline, almost impunctate laterally (without clear-cut border between depressed and elevated parts); median parts of meso- and metasternum rather finely and sparsely punctured and medially grooved. Abdominal plaque rather low (*ca.* half of length of 2. sternite) but prominent, markedly protruding backwards, its punctulation fine and sparse; abdomen otherwise sparsely but rather coarsely punctured, with but inconspicuous traces of midlateral dfp stripes; apex of anal sternite narrowly, not deeply (at slightly obtuse angle) triangularly emarginated between broadly rounded lobes.

Variability: Paratypes vary in size (26.5×8.5 – 32.5×10.5 mm.), colouration (from somewhat bluish to strongly bronzed-golden on dorsal and from pure-green to definitely – especially on abdomen – cupreous-green on ventral side), abdominal plaque (often more elevated, up to subequal to length of 2. sternite, but right-angled in profile), form of apical incision of anal sternite (from shallowly sinuate to more or less deeply triangular; in one of two largest specimens deeply paraboloidal between distinctly angular lobes); otherwise, except for some trifling details of shape and sculpture, virtually identical. Male unknown.

Geographical distribution: Louisiade Archipelago: holotype is labelled as from Misima I., but all the remaining known specimens come from Rossel I., and the discovery on Misima of the closely related *C. misimana* sp. n. makes the real occurrence there of its apparent sister-species rather improbable. Unfortunately, I noticed this problem only long after having sent back the HT (labelled as such) to Genova, and now attempts to replace it with another specimen could result in serious confusion, so I decided to leave things as they are.



Fig. 1. *Cyphogastra mincik* sp.n.
Rossel I., PT ♀ (RBH: BPj-r)

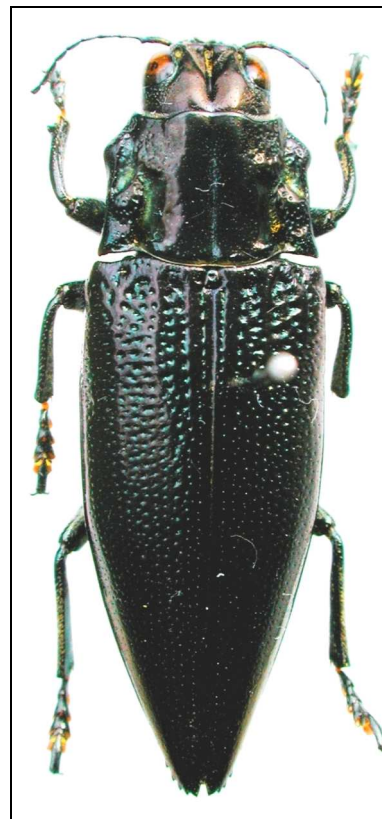


Fig. 2. *Cyphogastra misimana* sp.n.
Misima I., HT, coll. & phot. T. TERABAYASHI

Remarks: *C. mincick sp. n.* is apparently the “sister species” of *C. misimana sp. n.* which, however, besides colouration is easily distinguishable by low and (in profile) broadly rounded abdominal plaque, and densely punctured, pubescent, sharply delimited median sulcus of prosernal process. On the other hand, green body, dark tarsi and similar ventral dfp pattern characterize several representatives of the *Gloriosa*-circle, esp. *C. praeclara KERR.* to which the new species also shows remarkable similarity – these, however, have anterior foveae on pronotum more or less developed, fossae extensively dfp, median sulcus of prosternal process densely punctured and sharply delimited, apex of female anal sternite regularly rounded or but indistinctly, shallowly incised, &c. The species is dedicated, with deep gratitude for 30+ years of love and support, to my Wife: Mincik is one of her nicknames.

Cyphogastra (s.str.) misimana sp.n.

Material examined:

Holotype: “Misima Is., E. P.N.G” [♀ (TT)]

Additional material: None

Characters

Holotype: Female 28.5×9 mm. Dorsal side black with very slight bronzy shine, only poorly delimited but distinct lateroapical stripe definitely bright-bronzed and pronotal fossae dull blackish-plumbeous; ventrally black with somewhat brassy dfp. Ventral surface covered with short, erect, white (dense in median sulcus of prosternal process, sparse elsewhere) pilosity, only dense pubescence in dfp areas is recumbent.

Epistome arcuately emarginate, with conspicuous roundedly trapezoidal epistomal ridge; deep and broad, transverse, sparsely but rather coarsely punctured groove extends between this ridge and prominent (transverse on sides, protruding deeply downwards at middle) supraepistomal carina. Front very much wider than long, sides slightly divergent; frontal depression deep, elongately triangular, reaching distinctly behind upper margins of eyes, impunctate; anterior cavity rather inconspicuous; lateral ridges broadly rounded off, only just at anterior ends somewhat sharper, very fine and sparse punctulation becomes coarser and denser behind eyes; periocular sulci and median groove very deep, smooth; V:H≈0.55. 1. antennal joint club-shaped, *ca.* 3× longer than thick; 2. globular, almost as wide as long, *ca.* 5× times shorter and definitely thinner than 1.; 3. very elongately triangular, slightly shorter than 1., distally as wide as 2.; 4. somewhat shorter than 3. but as wide as 1.; 5.–10. progressively somewhat narrower and definitely shorter (10. *ca.* 1.5× longer than wide); 11. missing.

Pronotum transverse (BW:AW:L≈1.4:1.0:1), sides distinctly, almost straightly convergent from acute basal angles to midlength, then divergent to protruding anterolateral angles and abruptly obliquely truncated to distinctly marked collar; base angularly bisinuate, broadly arcuate prescutellar lobe moderately prominent; anterior margin deeply sinuate on both sides of broadly, somewhat sinuately truncated median lobe. Median depression moderately deep, stria at its bottom discernible; fossae deep, impunctate but distinctly microsculptured, axe-shaped, almost totally divided by acute-angularly produced prehumeral relief into elongately tetragonal “shaft” and triangular “blade”; irregular depression runs from anterolateral corner of each fossa to reentrant angle between collar and truncation; shallow, densely and irregularly but not coarsely punctured transverse depression on each side behind apical margin separates collar from disk, but anterior foveae not individualized. Disk finely and sparsely punctulate, punctures on prehumeral relief much coarser. Scutellum convex (with deep foveola at middle), trapezoidal, as wide (apically) as long.

Elytra 2,2× longer than wide. Sides inconspicuously truncated at humeri, slightly protruding between truncation and short sinuation just behind, very slightly divergent on basal third, arcuately convergent to not caudate apices; lateroapical margin with few (5–6) sharp denticles. Intercostal foveae at very base irregular, shallow, poorly developed; otherwise no trace of costae; elytral puncturation very coarse on basal fourth of disk, becoming progressively finer (but everywhere distinct) backwards and sideways; rows more or less regular on median part, practically disappear at sides.

Sides of sternum almost entirely, very regularly dfp; prosternal process narrowly, deeply sulcate and very densely irregularly punctured along midline, almost impunctate laterally (with clear-cut border between depressed and elevated parts); median parts of ventral surface (including abdominal plaque) rather sparsely but not very finely punctured; sternum medially grooved. Abdominal plaque low, not prominent, outline in lateral aspect flatly S-shaped (both – re-entrant at base and convex at top – angles, formed by its posterior slope with ventral profile of abdomen, broadly rounded); midlateral dfp stripes on abdomen distinct and rather wide but poorly delimited; apex of anal sternite deeply, somewhat trapezoidally notched.

Geographical distribution: Known only from Misima Island.

Remarks: The new species is evidently the closest relative of *C. mincik sp. n.*, which clearly differs only in bright green colouration, poorly delimited glabrous sulcus of prosternal process, and prominently angular abdominal plaque – other differences being not reliably diagnostic. In dorsal colouration and general habitus it resembles *C. tuberculata THS.*, but purplish ventral side, very prominent abdominal plaque, and unicolorous (without bronzed lateroapical patch) elytra of the latter make it easy to distinguish between them. At last, sympatric (though apparently unrelated) *C. atroazurea sp. n.* can be recognized by conspicuous bluish or (especially on ventral side) bluish-green shine, low and irregular supraepistomal carina, much coarser puncturation of front and (laterally as coarse as, or still coarser than, at middle) elytra, well developed anteromedian pronotal fovea, definitely caudate elytral apices, shallow incision on female anal sternite, &c.

Cyphogastra (s.str.) atroazurea sp.n.

Material examined:

Holotype: „P.N.G. MOROBE, MISIMA ISL, VII. 1974” [♂ (RBH: BP:emu)]

Paratypes: “New Guinea, Bwagadia, Misma [sic!], XII. 1991” “COLL., W.KRONBLAD., SWEDEN.” “COLL., W.KRONBLAD., SWEDEN.” [sic!: 2 identical labels] “*Cyphogastra cyanipes* Kerr.” [1♂ (WK)]; „Papua N. Guinea, Milne Bay Prov., Misima I. Jan. Feb. 1978, Coll. per P. Clark” [1♀ (RBH: BP:emt)]; „APRIL 78, BOIOU, MISIMA” [1♀ (CLB)]

Additional material: None

Characters

Holotype: Male 30.5×9.5 mm. Dorsal side black with distinct (less so in artificial light!) violaceous-blue shine, dfp depressions more or less golden-green; ventral surface brighter bluish-violaceous with green sides of sternum and (partly) first sternite; antennae and legs (with tarsi) black. Prosternal process and median parts of metasternum with short, erect, rather sparse white pilosity, dfp areas covered with dense recumbent pubescence, otherwise body glabrous.

Epistome arcuately emarginate, with conspicuous epistomal ridge running parallel to anterior margin; deep and broad transverse groove separates epistome from front. Front wider

than long, sides definitely divergent; frontal depression deep, elongately triangular, reaching far behind upper margins of eyes, almost impunctate except for rather deep, irregularly transversely quadrangular anterior cavity; lateral ridges not individualized, with but few punctures anteriorly, puncturation becoming denser behind eyes; periorcular sulci and median groove deep, somewhat irregular due to relatively coarse punctures; V:H \approx 0.55. 1. antennal joint club-shaped, *ca.* 2.5 \times longer than thick; 2. globular, almost as wide as long, *ca.* 5 \times times shorter and definitely thinner than 1.; 3. very elongately triangular, as long as 1., distally as wide as 2.; 4. somewhat shorter than 3. but as wide as 1.; 5.–10. progressively somewhat narrower and definitely shorter (10. *ca.* 1.5 \times longer than wide); 11. elongately subovoid, almost as long as two preceding together.

Pronotum transverse (BW:AW:L \approx 1.45:1.0:1), sides somewhat wavyly convergent from acute basal angles to midlength, then divergent to protruding anterolateral angles and abruptly obliquely truncated to distinctly marked collar; base bisinuate, broadly arcuate prescutellar lobe moderately prominent; anterior margin rather shallowly sinuate on both sides of broadly, somewhat sinuately truncated median lobe. Median depression deep, stria at its bottom not very sharp, indistinctly dfp; fossae deep, regularly C-shaped, rounded in cross-section, bottom narrowly dfp; anterior foveae deep, obliquely elongated, dfp at bottom. Disk very finely and sparsely, sides densely and very coarsely punctured. Scutellum convex, roundedly tetragonal, as wide (apically) as long, deeply grooved along midline.

Elytra 2,35 \times longer than wide. Sides obliquely truncated at humeri, slightly sinuately divergent on basal sixth, parallelsided to *ca.* basal third, and narrowly cuneately tapering to distinctly caudate and sharply denticulate (7 denticles on each) apices. Traces of costae hardly discernible; elytral puncturation very coarse on basal fourth of disk, becoming progressively finer (but everywhere distinct) backwards and to some extent sideways; rows more or less regular on basal and median parts, practically disappear posterolaterally.

Proepisterna almost entirely, very regularly dfp; prosternal process narrowly, deeply sulcate and densely irregularly punctured along midline, with but very few fine punctures laterally; metasternum furrowed along midline, finely and very sparsely punctured on sides of median part, mostly dfp laterally, with broad zone of coarse puncturation between median and lateral areas. Abdominal plaque rather low, its outline in lateral aspect flatly S-shaped (both – re-entrant at base and convex at top – angles broadly rounded), with moderately coarse and dense puncturation on disk; midlateral dfp stripes on abdomen distinct and rather wide but poorly delimited; apex of anal sternite broadly paraboloidally emarginated.

Variability: Male paratype smaller (27,5 \times 8.5), females larger (35 \times 11 and 38 \times 12.5 mm.), the largest specimen somewhat more robust; colouration of ventral side usually predominantly greenish, but at least lateroapical margins of anal sternite bordered violaceous. Otherwise practically identical.

Geographical distribution: Known only from Misima Island.

Remarks: The closest relative of *C. atroazurea sp. n.* is *C. punctatissima KERR.* (or at least what I consider to be *C. punctatissima KERR.* – see below remarks on that name), differing from the new species in several – rather apparent “at glance” albeit difficult to formulate or quantify – characters: plainly black (with no distinct metallic shine) elytra and also black, with or without plumbeous-bronzed (never green or blue) hue, pronotal and ventral colouration; somewhat more robust body with elytra more or less distinctly widened to near midlength, more broadly cuneate, more coarsely punctured apically; abdominal dfp stripes more regular and better developed; anal sternite with short (rarely absent) preapical carinula along midline; &c. Somewhat less closely related seems to be *C. woodlarkiana MTR.*, which

however is dorsally piceous brownish-black, much coarser sculptured, with broader and less regular pronotal fossae, perimarginal furrow behind elytral humeri deep and conspicuously deep, wide (wider than smooth lateral parts) median furrow of prosternal process, abdominal plaque prominent and definitely angular in lateral aspect, &c.



Fig. 3. Misima I., HT ♂ (RBH: BPemu) Fig. 4. Misima I., PT ♀ (RBH: BPemt)

Fig. 5. *Cyphogastra punctatissima* KERR. Karkar I.: Kevasop, ♀ (RBH: BPemq)

***Cyphogastra (s.str.) punctatissima* KERR.**

Cyphogastra punctatissima KERREMANS 1895: 203-204.

Cyphogastra Froggathi v. *nigra* THÉRY i.l.

Material examined:

Syntype: „[Type]” „N.Guinée, Stauding.” “*punctatissima* Kerr. Type” “Kerremans 1903-59” [1♂ (BMNH)]

Type: „[Type]” „New Guinea, Coll. No. 9364, J.L.Froggatt” “C.2816” “*Froggathi* v. *nigra* Théry Type” “Pres. by Imp. Inst. Ent., B.M. 1947.105” “=*Cyphogastra punctatissima* Kerr., B.Levey det. 1970” [1♂ (BMNH)]

Additional material: 11 ♀

Remarks: My concept of *C. punctatissima* KERR. has been based on the examination (done long ago...) of the “Type” [apparently *syntype*: KERREMANS (1895) gives a *range* of sizes, so evidently had more than one type-specimen] in BMNH. However, the original description (repeated in KERREMANS 1910 and matching the characters used in the key therein) reads “*tête verdâtre, sombre; pronotum vert sur le disque, noirâtre sur les côtés; élytres d’un vert bleuâtre peu brillant, la suture postérieure et l’apex sombres; dessous noirâtre à reflets d’un cuivreux obscur*”, while all specimens I have seen are black with or without slight plumbeous or bronzed (*not* green) hue, with no discernible contrast between disk and sides, and elytra uniformly black without any metallic shine or distinctive sutural or

apical colouration! It is not clear how to interpret that disparity: has KERREMANS erroneously described his type-series? or the description reflects the characteristics of a syntype different from that in BMNH (whose whereabouts remain unknown)? or the BMNH specimen has been erroneously marked as “Type”? or I have inexactly made the comparison of the BMNH “Type” with my specimen? – anyway for the moment I cannot think of better solution than acceptance of my specimens, directly or indirectly compared to the BMNH “Type”, as true *C. punctatissima* KERR. The geographical distribution of this species seems rather narrowly restricted: the locality label of the “Type”, in accord with the *terra typica* given by KERREMANS (1895), reads only “*Nouvelle Guinée*”, but all but one (from Wasu on the north coast of Huon Pen.) more exactly labelled specimens seen by me originated from Karkar I.

Cyphogastra (s.str.) inconscita sp.n.

Material examined:

Holotype: “PNG: NEW GUINEA: Milne Bay Prov., Rossel I., IV. 1979” “Native Collector, BISHOP” [♀ (BPBM)]

Paratypes: “PNG: NEW GUINEA: Milne Bay Prov., Rossel I., IV. 1979” “Native Collector, BISHOP” [6♀ (BPBM)]; “Pap. New Guinea, Luisiade, Rossel, XII 1981” [Museo Civ. Genova, ex coll. B. Bari, (acquist. 1994)]” [1♀ (MCGD)]; “Pap. New Guinea, Luisiade, Misima, Milne Bay, II 1982” [Museo Civ. Genova, ex coll. B. Bari, (acquist. 1994)]” [1♀ (MCGD)]; 2♀ (RBH: Bpkhc, khd); “Pap. New Guinea, Luisiade, Misima, Milne Bay, XII 1982” [Museo Civ. Genova, ex coll. B. Bari, (acquist. 1994)]” [1♀ (MCGD)]; “Rossel I., IV. 1979” [1♀ (RBH: Bpkhe)]

Additional material: None

Characters

Holotype: Female 30.5×9.5 mm. Dorsal side deep black, bottoms of median line and laterobasal fossae of pronotum and elytral sulci inconspicuously golden-green; ventral surface dull plumbeous-greenish. Median furrow of prosternal process with rather long, semierect pubescence, that on abdominal dfp stripes short and recumbent, otherwise body practically glabrous.

Epistome arcuately emarginate, with conspicuous epistomal ridge running parallel to anterior margin; deep and broad transverse groove and widely and deeply bisinuate sharp ridge separate epistome from front. Front much wider than long, sides definitely divergent; frontal depression deep, elongately triangular, reaching far behind upper margins of eyes, almost impunctate; lateral ridges not individualized, without punctures anteriorly, puncturation becoming distinct behind eyes; periocular sulci and median groove deep but also practically impunctate; V:H≈0.55. 1. antennal joint club-shaped, swollen, only *ca.* 2.5× longer than thick; 2. as wide as long, *ca.* 4× times shorter and by half thinner than 1.; 3. very elongately triangular, as long as 1., distally as wide as 2.; 4. distinctly shorter than 3. but nearly as wide as 1.; 5.–10. rhomboidal, progressively somewhat narrower and definitely shorter (10. *ca.* 1.5× longer than wide); 11. elongately subovoid, *ca.* as long as 4.

Pronotum transverse (BW:AW:L≈1.6:0.95:1), sides somewhat wavyly convergent from acute basal to protruding anterolateral angles and abruptly obliquely truncated to indistinctly marked collar; base bisinuate, prescutellar lobe broadly arcuate; anterior margin rather deeply sinuate on both sides of broadly, somewhat sinuately truncated median lobe. Median depression deep, at bottom very narrowly dfp; fossae in form of deep, elongately pear-shaped sulci running midlaterally from basal to apical pronotal margin, including what in most *Cyphogastra*-species is median portion of fossa as well as anteromedian fovea; lateral portion of fossa represented only by small fovea widely separated from midlateral sulcus.

Disk (pair of broad elevated ridges to both sides of median depression) with but very few fine punctures, sides between midlateral sulci and lateral margins very coarsely irregularly sculptured. Scutellum roundedly trapezoidal, as wide (apically) as long, grooved along midline.

Elytra 2.3× longer than wide. Sides obliquely truncated at humeri, parallelsided to *ca.* midlength, and sinuately tapering to distinctly caudate and sharply denticulate (3-5 denticles on each) apices. Traces of 1. and 2. costa distinct in basal third; deep sulcus starting between them reaches practically to elytral apex; poorly developed lateral one, separated by subcostately elevated interval from narrow marginal furrow, traceable from behind humeral protuberance to apical fourth; slight indication of third, mid-discal sulcus between them hardly discernible at base. Puncturation very coarse, irregularly confluent around humeri, becoming progressively much finer (but everywhere distinct) backwards, predominantly irregular (only in anterolateral part arranged into 2-3 rows).

Proepisterna, sides of metasternum, and metacoxae uneven, with foveolate, inconspicuously dfp depressions not clearly delimited by irregularly reticulate smooth elevations; prosternal process and metasternum rather broadly, deeply sulcate and densely irregularly punctured along midline, lateral rims with but few fine punctures. Abdominal plaque rather high (but its height distinctly lesser than length of 2. sternite behind it) roundedly right-angled in profile, finely and sparsely punctulate on disk; midlateral dfp stripes on abdomen rather narrow but well defined; apex of anal sternite regularly rounded.



Fig. 6. *Cyphogastra inconscita* sp.n.
Rossel I., PT ♀ (BPBM)



Fig. 7. *Cyphogastra canaliculata* THY.
D.N.Guinea: Sattelberg, ♀ (RBH: BPegs)

Variability: Male unknown, females rather stable in size (28,5×9 – 33×11 mm.); in some specimens mid-discal (in addition to perisutural and perilateral ones) furrow is more or less discernible along middle of basal half of elytra; otherwise practically identical.

Geographical distribution: Known from Misima and Rossel Islands.

Remarks: Evidently a member of the *C. [canaliculata THY.]*-superspecies, whose other representatives differ in having well developed, practically entire (reaching to near apex) lateral elytral furrow, which in *C. kerremansi THY.* is, at that, very broad (in basal half extending laterally to the very elytral margin) and regularly dfp; while in *C. canaliculata THY.* ventral colouration is more (♀) or less (♂) conspicuously violaceous-blue, lateral pronotal fossae are very broad and extensively regularly dfp, extending – also laterally – far anterad (almost or quite to the “collar”), including both medio- and latero-apical foveae; mid-discal elytral stria well developed and reaching definitely beyond midlength.

Melobasis (Diceropygus) misimana sp.n.

Material examined:

Holotype: „APRIL 78, BOIOU, MISIMA” [?♀ (RBH: Bpkjh)]

Additional material: none

Characters

Holotype: ?Female 13.5×5.2. Short, robust, body somewhat “hump-backed” (prothorax markedly inclined downwards, dorsal profile strikingly convex at elytral base, ventral decidedly concave at mesocoxae). Head, pronotum, scutellum, sternum and legs blackish-blue with some purplish reflexes, elytra cupreous-bronzed (somewhat paler and tinged golden-greenish towards base) with elevated part of elytral suture and pair of small spots on 4. interstria just behind midlength bluish-black, abdomen (except bluish median part of 1. sternite) bronzed-black with strong (especially on sides) cupreous shine; labrum piceous, antennae blue except purplish two basal joints;. Pronotum, elytra and median parts of sternum almost glabrous, head and sides of ventral side covered with short but dense, recumbent whitish pubescence, becoming sparser and semierect at middle of sternites.

Epistome broadly but shallowly emarginated between very obtuse lateral angles, not separated from front and not differing in sculpture; front broadly trapezoidal, rather coarsely and very densely subconfluently punctured and very finely microsculptured, puncturation becoming finer and still denser in uppermost part but again coarser and definitely sparser on vertex; V:H≈0.5; eyes moderately convex, protruding from the outline of head. Antennae not very long, reaching somewhat beyond midlength of pronotal sides; 1. antennomere fusiform, *ca.* 3× longer than thick; 2. shortly subcylindrical, somewhat thinner and twice shorter than 1.; 3. somewhat flattened, distinctly thickened towards apex, slightly longer but still thinner than 2.; 4. definitely triangular, not much longer than 3.; 5. similar; 6.-10. of width subequal to 5. but progressively shorter (10. slightly longer than wide); 11. elongately fusiform, thinner but 1.5× longer than 10.

Pronotum very wide, subtrapezoidal (BW:AW:L≈1.9:1.5:1), basal margin almost straight (prescutellar lobe hardly indicated); basal angles definitely acute; sides strongly straightly convergent; apical margin straight at middle and very shallowly sinuate on each lateral third. Pronotal surface regularly convex except for deep prescutellar pit and very faintly marked traces of median sulcus; puncturation of disk rather fine and sparse, becoming somewhat coarser and much denser (anteriorly subconfluent) on sides; microsculpture very fine but distinct; lateral carinae sharp, straight, reaching to *ca.* anterior fourth. Scutellum

rather large, twice wider than long, of very slightly divergent sides and shallowly arcuate apical margin; surface sparsely, very finely punctulate.

Elytra (L:W \approx 2.0) subparallelsided in basal third, then slightly widened to midlength, and arcuately tapering to narrowly rounded apices; lateroapical margins sharply denticulate. Punctuation rather fine, arranged into regular, not depressed (except perisutural and perimarginal) rows; interstriae flat, impunctate, microsculpture extremely fine; suture from basal fourth to apex markedly elevated between perisutural striae, transverse depression behind base rather deep but irregular; epipleura narrow basally, practically non-existent behind metacoxae; no trace of epipleural denticle.

Apical margin of prosternum straight, accompanied with transverse groove and swollen behind it; proepisterna finely and very densely punctured; prosternal process markedly convex, wide, widened towards apex, apical margin straightly truncated in lateral thirds and strongly triangularly protruding at middle; surface finely and rather sparsely punctulate basally, becoming almost smooth near apex; no marginal stria or rim. Metasternum deeply grooved along midline, finely and very sparsely punctulate on median part, much coarser and denser on sides, very densely on metepisterna; no metacoxal denticle. Sternites almost regularly convex (with but very shallow and inconspicuous lateral depressions), sides broadly dfp, punctuation of median parts moderately fine and dense, confluent into longitudinal subparallel strigae; apex of anal sternite with broad, transversely (3 \times wider than long) tetragonal, separated anteriorly with fine striola, almost smooth (with only few punctures along very apex) lamella between long, sharp, carinate (carinae extend anterad to near midlength of sternite) lateral spines.



Fig. 6. *Melobasis misimana* sp.n.
Misima I., HT (RBH: Bpkjh)

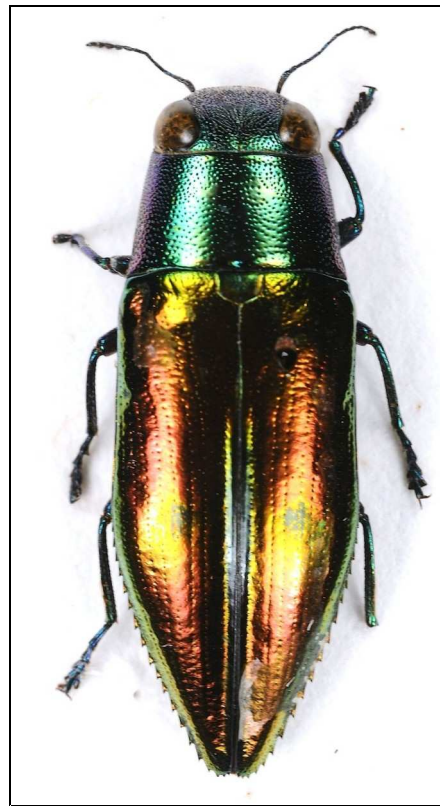


Fig. 7. *Melobasis rothschildi* THY.
Rossel I. (UN 1208); phot. U. NYLANDER

Geographical distribution: Misima Is. in the Louisiade Archipelago at the southeastern end of New Guinea. Known only from the holotype.

Remarks: The closest relatives of *M. misimana* sp.n. are two species from the nearby Rossel I.: *M. rothschildi* THY. and *M. eichhorni* THY. The former differs in being definitely slenderer (14.7×5.0 mm. in specimen – of apparently the same sex – measured by me), much less distinctly (almost imperceptibly) “hump-backed”, brighter coloured (head and pronotum bluish-green, elytra bright cupreous-red, anterior margin of epistome, femora and lateral parts of ventral side contrastingly bronzed-cupreous), having front more strongly trapezoidal and – consequently – vertex narrower ($V:W \approx 0.45$), prosternal process almost flat anteriorly. The second Rosselian species, according to the original description (it is unknown to me in nature) has the colouration similar to *M. rothschildi* THY. but without dark elytral spots, sides of pronotum distinctly rounded, prosternal process densely punctulate and laterally striate, carinae of lateroapical spines of anal sternite not extending anterad beyond spines themselves, &c.

Chrysobothris ESCH.

Chrysobothris ESCHSCHOLTZ 1829: 8.

[type-species: *Buprestis chrysostigma* LINNAEUS 1758: 409]

Barriesion sp.n.

[type-species: *Chrysobothris superba* DEYROLLE 1864:91-92]

General characteristics: A group of large, broad ($L:W < 2.2$), bronzed-brown or blue-and-green species with typically three discal and often one humeral green to cupreous elytral spots, similarly coloured anterior part of suture, and usually more or less distinctly cupreous-red basal pronotal angles; punctulation generally fine and not very dense, somewhat coarser in frontal depression and on sides of pronotum. Front very broadly (*ca.* equilaterally) triangular, oculo-frontal margins regularly convex; frontal depression broad and deep, bound from above by formidable arcuate wall; vertex very narrow, almost linear (subequal in width to 3. antennomere). Pronotum wide; basal angles strongly produced; sides definitely convergent, distinctly sinuate at middle. Apex of scutellum prolonged in form of very narrow, acute, much longer than basal part, “spine”. Elytra broadly regularly ovate; lateral margins conspicuously denticulate from just behind humeri to apices; disk with no or but traces of costae. Prosternal process very wide, median and – especially – lateral apical dents strikingly long; anal sternite prominently, sharply carinate along median line, sides deeply emarginate preapically, apex narrowly incised; sexual dimorphism inconspicuous.

Remarks: Very well defined subgenus: coarsely denticulate basal half of elytral margins is, to my knowledge, unique among Indo-Pacific representatives of *Chrysobothris* ESCH. (and probably in the entire genus); very broad ($L:W < 2.2$) body, extremely narrow ($VW:HW < 0.1$) vertex, spiniform scutellum and preapically deeply emarginate sides of very narrowly incised anal sternite also never occur together (and one by one also rarely). The closest relative is apparently the *C. ellyptica* DEYR.-group, where scutellum is also spiniformly prolonged and colouration resembles that of *C. (B.) superba* DEYR., but vertex is distinctly wider, elytral margins smooth anteriorly, sides of anal sternite shallowly S-shaped, its apex widely emarginated, &c. In colour and – to some degree – shape some Neotropical species look similar, but examination of concrete characters (head, scutellum, elytral sides, anal sternite) leave no serious doubts as to the purely superficial nature of this resemblance. It is my pleasure to name this subgenus in honour of Wolfgang BARRIES, the leading authority in the taxonomy of Indo-Pacific *Chrysobothris* ESCH.

Included species: *C. andamana* KERR., *C. cyanipennis* DEYR., *C. hobsoni* BD., ?*C. cyanescens* DEYR., *C. superba* DEYR., ?*C. umbrosa* KERR., *C. cavifrons* DEYR., *C. papua* OBB., *C. maciejewskii* sp.n., *C. montrouzieri* KERR., *C. bennigseni* KERR. [I have not seen the respective types, but – contrary to BELLAMY (2008) – neither *C. papua* OBB., nor *C. bennigseni* KERR. seem to be synonyms of *C. cavifrons* DEYR.: the former is apparently a separate species (all my specimens from New Guinea, rather well fitting OBENBERGER’s 1932 diagnosis, differ markedly from those collected by WALLACE on “Morty”=Morotai I. in Moluccas), while the description of the latter, from Shortland Is. (a group of islets between Bougainville and Choiseul) – **not** Admiralty Is.: as I have shown some years ago (HOŁYŃSKI 2011) in remarks on *Melobasina fossicollis* (KERR.), the sequence of pages in KERREMANS (1906) had been confused, resulting in “substitution” of the end of description (with type-locality) of *M. fossicollis* (KERR.) with that of *C. bennigseni* KERR. – fits perfectly my series from Solomon Arch. identified by BARRIES as *C. montrouzieri* KERR. and also different from both *C. cavifrons* DEYR. and *C. papua* OBB. To be sure, there are problems also with this synonymy: *C. montrouzieri* KERR. is a replacement name for *Buprestis sexpunctata* MTR. “*qui ... se trouve à Woodlark et à San Cristoval*”; MONTROUZIER has not designated the holotype (it was no such custom in his time), and to my knowledge lectotype has also never been selected – if somebody decides to do this, and (as seems preferable in the absence of serious arguments to the contrary) selects one from the island being the focus of the original paper, then in the case of the populations from both localities being **not** conspecific according to our current species-concepts – the valid name for Solomonese beetles will be *C. bennigseni* KERR.; as such situation seems highly probable (I have never seen any of MONTROUZIER’s syntypes, but one unlabelled specimen in my collection directly compared to one collected on



Fig. 6. *Chrysobothris superba* DEYR.
Malaya: Negri Sembilan, ♀ (RBH: BPhoz)



Fig. 7. *Chrysobothris maciejewskii* sp.n.
Rossel I., HT ♀ (RBH: BPlcm)

Woodlark shows some slight but well-marked differences from my New Georgian series), pending the final solution of this question, I have tentatively accepted here the two taxa as (?sub-)specifically different].

Geographical distribution: Representatives of this subgenus seem to occur everywhere from Andamans and Indochina, through Malay Archipelago, to New Guinea and Solomon Is.

Chrysobothris (Barriesion) maciejewskii sp.n.

Material examined:

Holotype: "Rossel Is., New Guinea." "*cavifrons*, THERY det." [♀ (KBIN)]

Additional material: none

Characters

Holotype: Female 17.5×7.5. Short, robust, above bronzed-brown, front with slight purplish tinge towards sides and narrow bright-green periocular margins, narrowly bright-green also elytral margin around humeri, elytral spots golden-green at bottom encircled with cupreous, inner side of humeral protuberances golden-cupreous; ventral side bright-green on "disk" and blackish-brown with some purplish hue on sides and entire anal sternite. Pubescence sparse, recumbent, white on front, more conspicuous on (especially sides of) ventral side, long semierect on legs, not appreciable on pronotum and elytra.

Epistome not separated nor appreciably differing in sculpture from front; apical margin with broadly obtuse-angled, roundedly subtriangular median emargination; front almost equilaterally triangular, sculpture coarse and very dense, punctures somewhat confluent into oblique (subparallel to distinctly arcuate ocular margins) rugae; frontal depression deep and broad, occupying almost entire surface below prominent, broadly ^-shaped, perpendicularly sloping scarp at upper third; fine carinulae at fronto-vertical border marked only as deep pit at middle; vertex very narrow (V:H≈0.07), above the pit finely medially furrowed. 1. antennal joint slightly club-shaped, almost 4× longer than thick; 2. somewhat thinner, as long as thick, conical; 3. as thick as 2. but 3× longer; 4. *ca.* as long as 2., roundedly rhomboidal, flattened; 5.-10. subequal in length but progressively thinner; 11. fusiform.

Pronotum very wide, subtrapezoidal (BW:AW:L≈2.3:1.6:1), basal margin deeply bisinuate (prescutellar lobe also shallowly emarginated); basal angles very prominent, acute; sides conspicuously rounded in basal half, rather deeply sinuate before midlength, definitely though obtusely angular at anterior third, and straightly oblique to obtuse apical angles; apical margin almost straight; surface distinctly narrowly transversely depressed along anterior margin, with shallow foveola near midlength of each side, otherwise almost regularly convex; sculpture denser and somewhat coarser on sides, consists of fine and dense transverse strigosity with deep punctulation in between. Scutellum rather large, concavely triangular, short anterior part smoothly turning into long spiniform projection wedging between elytra, surface smooth and lustrous, unsculptured.

Elytra very wide (L:W≈1,6) subparallelsided in basal third, then arcuately tapering to narrowly rounded apices; lateral margins sharply denticulate all along. Surface almost regularly convex, with but traces of costae, rather densely but finely punctate, each with three (just behind base, at anterior ²/₅, and just behind midlength – progressively displaced sideways) rounded golden dfp spots.

Apical margin of prosternum straight, accompanied with narrow transverse furrow and swollen behind it; proepisterna finely punctured; prosternal process very wide, slightly convex, very prominently tricuspidate (with median projection sharply acute, lateral strongly divergent, narrow but strikingly long (reaching nearly as far backwards as median). Metasternal punctulation fine and sparse, simple at middle, denser and somewhat reticulate-rugose on sides; 1. sternite rather deeply, 2. shallowly longitudinally depressed at middle; abdominal punctulation moderately fine and sparse at middle, finer but much denser on purplish-brown triangular lateral spaces, elongated on “disks” of 2.-4. sternites, simple elsewhere. Anal sternite sharply carinate along midlength, lateral margins deeply sinuated to both sides of narrow, minutely incised apical protrusion.

Geographical distribution: Known only from the holotype, collected on Rossel I.

Remarks: The new species belongs to the *C. [cavifrons DEYR.]*-superspecies, a complex of 5 or 6 deceptively similar taxa, usually mixed in collections under the name of its type-species (see above: **Remarks** under subgenus) – also the holotype of *C. maciejewskii sp.n.* had been determined by THÉRY as “*cavifrons*”. The closest relative of the new species is apparently western New Guinean (a specimen from Huon Peninsula may represent a still another taxon) *C. papua OBB.*, differing in being sensibly narrower, darker (blackish-brown with brassy rather than bronzed shine) dorsal colouration, golden-green to cupreous scutellum, smaller (especially the posterior usually very small) elytral spots, and deeper apical incision of anal sternite. *C. cavifrons DEYR.* in shape, elytral colouration and size of elytral spots resembles *C. papua OBB.*, but is otherwise more brightly coloured (sides of epistome, scutellum and elytral spots bright-green, frontal cavity purplish-brown, front above the scarp and pronotum green with cupreous reflexes, lateral triangles on sternites bright purplish, anal sternite at middle extensively green), has frontal puncturation simple (without oblique rugosity) and apex of anal sternite much more broadly, semicircularly incised. At last, *C. montrouzieri KERR.* and *C. bennigseni KERR.* differ from all the remaining representatives of the *C. [cavifrons DEYR.]*-superspecies in cupreous scutellum and basal angles of pronotum, very broad elytral spots, and narrowly triangular apical incision of anal sternite. The new species is named after Andrzej MACIEJEWSKI, geologist and lover of tiger-beetles (**Cicindelidae**), my friend since first year of secondary school, companion in travels to the Land of 1001 Nights and other “missions impossible”.

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