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# Supplementary review of the genus *Philocteanus DEYR. s.l.* (Coleoptera: Buprestidae: Buprestini: Chrysochroina CAST.)

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#### Introduction

The S- and SE-Asian buprestid fauna contains an interesting group, traditionally classified as a series of separate genera divided between the "subfamilies" **Chrysochroinae CAST.** and **Chalcophorinae LAC.**, but recently (HOŁYŃSKI 2009) – as a result of several rearrangements [see HOŁYŃSKI (2016) for the history] – recognized as subgenera of the single genus *Philocteanus Deyr.* of the subtribe **Chrysochroina CAST.** (tribe **Buprestini LEACH**). General characteristics of the subtribe, genus, and subgenera can be found in my (HOŁYŃSKI 2009) comprehensive elaboration of the **Chrysochroina CAST.**, also some of the subgenera [*Micropistus Thy.* (Kurosawa 1990), *Szentendreya Hoł.* (Hołyński 1981, 2016), *Cyalithus Ths.* (Hołyński 2014)] have been specially treated in earlier publications – the aim of the present paper is to supplement them with species-level review [keys, description of new species, short diagnoses of other species-group taxa, data on geographical distribution, remarks, photographs] of the remaining ones: *Pseudocallopistus OBB.*, *Philocteanus Deyr. s.str.*, *Chrysopistus Thy.*, *Epidelus Deyr.* and *Asemochrysus Deyr.*; I also use the occasion to introduce a replacement name for a homonym in *Cyalithus Ths.* 

### 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. Determination- and type-designation labels added by me to the newly described taxa are not cited: the former are white, in the form like "*Philocteanus masbatensis HoŁ*., det. R. HoŁYŃSKI" with year of determination written vertically on the left side; the latter red (primary types, *e.g.* "*Philocteanus masbatensis HoŁYŃSKI*, HOLOTYPE") or green (paratypes, in the same format).

#### Collection names are abbreviated as follows:

BMNH =Natural History Museum, London

EONMP = Entomologické Oddělení Národního Muzea, Prague

KBIN =Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussel

NNHM = Nationaal Natuurhistorisch Museum, Leiden

RBH =Roman B. HOŁYŃSKI, Milanówek;

SB =Svatopluk BíLÝ, Prague;

TTM =Természettudományi Múzeum, Budapest

USNM = Smithsonian Institution: National Museum of Natural History, Washington

ZIRAN =Зоологический Институт Русской Академии Hayk, Petersburg

#### Terms and abbreviations used in description:

Typoid = specimen labelled as, but not being, a type

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

Convergent/divergent (unless expressly stated otherwise) = towards apex or (front) downwards

[issp] = infrasubspecific, nomenclaturally unavailable name

L = lengthW = width

BW = basal (upper in case of front) width AW = apical (lower in case of front) width

HW = width of head with eyes VW = width of vertex between eyes

EL = length of elytra EW = width of elytra

 $\approx$  = approximately equal to

 $\phi$  = sex unknown

= a label glued onto another label

### B U P R E S T I N A E L E A C H BUPRESTINI LEACH

## CHRYSOCHROINA CAST. Philocteanus DEYR.

Philocteanus DEYR.
Philocteanus DEYROLLE 1864: 10-11

Type-species: Chrysochroa leucophthalma CASTELNAU et GORY 1835 [=Buprestis rubroaurea DEGEER 1778]

Remarks: An interesting representative of the chrysochrooid lineage (HOŁYŃSKI 2009) showing a remarkable disposition to develop (in various combinations) features strikingly atypical for the Chrysochroina CAST. or even for the Buprestidae LEACH as a whole: secondarily developed (although minute) visible scutellum, lack of sexual dimorphism in anal sternite, 10-joined antennae, bladelike mandibular lobes or non-metallic testaceous elytra in males; it would be highly interesting to clarify the functional significance of the curious tendency to swelling of *alternately* (like in the *Pleiona DEYR.-Cyphogastra DEYR*. pair) anterior end of metasternum (sg. *Pseudocallopistus OBB.*) or first sternite (sg. *Micropistus THY.*) – are they independent features, only accidentally developed just in closely related taxa, or two variants of solution of the same evolutionary problem? The closest relative of this Asian taxon seems to be preliminarily African – but occurring also on the Arabian Peninsula or even (HADIAN & al. 2012) northern Persia – *Steraspis DEJ*. See

HOŁYŃSKI (2009) for the systematic position, general characteristics, and evolutionary history of the genus.

**Geographical distribution:** The distribution area of *Philocteanus DEYR*. includes the the entire classical Oriental (Indian, Indochinese, Sundan, Wallacean and Philippinean provinces of the Indo-Pacific) Region.

### Pseudocallopistus OBB.

Pseudocallopistus OBENBERGER 1942: 59

Type-species: Pseudocallopistus platynotus OBENBERGER 1942 [=Chrysochroa resplendens Gory 1840] =Callopistus DEYROLLE 1864: 9 [nec SAY 1831: 9 (Curculionidae)]

Type-species: Callopistus Castelnaudii DEYROLLE 1864]

=Descarpentriesia Kurosawa 1982: 182-183 [nec Ruter 1964: 266-267 (Scarabaeidae)]

Type-species: Callopistus resplendens (GORY 1840)]
=Eucallopistus BELLAMY 2003: 32
[replacement name for Callopistus DEYR.]
=Holynskiella BELLAMY 2004: 65-66

[replacement name for Descarpentriesia KUR.]

Big (30-50 mm.), bluish-green to purplish-cupreous. Front trapezoidal, sides strongly divergent; V:H $\approx$ 0.3; antennae effectively 11-jointed. Pronotum trapezoidal (AW:BW $\approx$ 0.5), laterally very densely punctate-granulate. Scutellum invisible [but see the note on *Callopistus atrovirens NFR*. in **Remarks** to *P. (P.) nigripes (THY.)*!]. Elytra more or less conspicuously costate. Prosternal process not striate laterally; metasternum elevated between mesocoxae into bulbous projection resembling *Sternocera ESCH*. or *Pleiona DEYR*.; anal sternite broadly and deeply emarginated in male, simply rounded in female.

The geographical distribution includes Malay Peninsula and Greater Sunda Is.

### Key to the species of sg. *Pseudocallopistus OBB*:

- 1 (6) Elytra with four markedly elevated costae without distinct intercostae
- 2 (5) Bluish- to golden-green
- 4 (3) Puncturation of pronotal disk conspicuously finer and sparser along midline ............

### Philocteanus (Pseudocallopistus) nigripes (THY.)

Callopistus nigripes THÉRY 1923: 200-201 ?=Callopistus atrovirens NONFRIED 1895:296-297

### Material examined:

Typoids: "Cotype" [red circle] "Java, Staudinger" "Callopistus nigripes Théry, Type, Théry det." "ex coll. A. Théry, B.M.1923-364" [1 ø (BMNH)]; "Bogor, ±1000, 5&6 '96, I.Z.Kannegieter" "Coll. Dr.A.Frh.v.Hoscheck" "ParaTypus" "nigripes Théry paratype Théry det." "nigripes, Det Hoschek 194" "n'est pas un paratype, TYPE=Java Mount Gede" [1 ♂ (KBIN)]

**Additional material:**  $2 \circlearrowleft, 6 \circlearrowleft, 1 \varnothing$ .

#### **Characters:**

Males 36.5×13.5-39.5×15, females 40×15.5-41.5×16 mm. [ø 42×17 – Théry 1923] Dorsal side bluish- or golden-green, front purplish-brown margined cupreous, below bright purplish-cupreous. Pronotal margins very slightly, almost evenly arcuate, dorsally accompanied with deep, narrow dfp sulcus in basal ½; sculpture very coarsely and densely granular-tuberculate on sides, graduating into somewhat less coarse and not so dense simple,

irregular puncturation on middle of disk. ytral sides almost imperceptibly sinuate, subparallel to  $\it ca.$  midlength, then narrowly paraboloidally converging to jointly rounded apices; costae prominent, intercostae absent. Anal sternite in male very broadly but shallowly (L:W $\approx$ 0.2) arcuately emarginated

### Geographical distribution: Java.

Remarks: Bellamy (2008) lists *Eucallopistus nigripes (THY.)* as a simple synonym of *E. castelnaudi (DEYR.)*, but the main character quoted by Théry (1923) – lack of [nearly] smooth space along pronotal midline – seems indeed diagnostic of the Javanese beetles, which apparently differs also in some other, less clear-cut features [see Remarks under *P. (P.) castelnaudi (DEYR.)*]. *Callopistus atrovirens NFR.* (unknown to me in nature) has been characterized by Kerremans (1908) as no more than a variety of *C. castelnaudi Deyr.*, "bleu verdâtre obscur en dessus, sans autres charactères differentiels"; however 1) "Thorax ... überall dicht punktiert" suggests rather the identity with later described *P. (P.) nigripes (THY.)*, and 2) exposed scutellum ["Schildchen klein, glatt"], if true, raises doubts as to the very belonging of that form to sg. *Pseudocallopistus OBB.*, or at least makes it necessary to check whether it is but an individual anomaly or taxonomically important peculiarity of the populations inhabiting Nias?

### Philocteanus (Pseudocallopistus) castelnaudi (DEYR.)

Callopistus castelnaudi DEYROLLE 1864: 9-10 =Callopistus quedenfeldti RICHTER 1890:133-134

### **Material examined:**

6  $\Diamond$ , 5 ♀, 8  $\emptyset$ .

#### **Characters:**

Males  $34.5 \times 13.5 - 38.5 \times 14.5$ , females  $37 \times 14.5 - 44 \times 17$  mm. [ø  $48 \times 18.5$  – KERREMANS 1908] Dorsally green, ventrally purplish-cupreous. Pronotal margins sensibly angular somewhat behind midlength, where but slightly convergent basal part meets markedly more oblique apical portion; no perimarginal dfp sulcus; very coarse and dense granular-tuberculate lateral sculpture becomes finer and sparser on disk, and almost disappears on somewhat irregular but clearly appreciable median stripe. Elytral sides subparallel to ca. basal third, then regularly paraboloidally converging to jointly rounded apices; costae slight but well developed. Anal sternite in male rather deeply (L:W $\approx$ 0.3) subtriangularly emarginated

### Geographical distribution: Malay Peninsula, Borneo, Sumatra

**Remarks:** Somewhat wider but flatter than *P. (P.) nigripes (THY.)*; sculpture sensibly finer, elytral costae less elevated; pronotal sides less convergent in basal part, more so apically; elytra more conspicuously cuneate; apical emargination of male anal sternite deeper, subtriangular.

### Philocteanus (Pseudocallopistus) carteri (KERR.)

Callopistus carteri Kerremans 1908: 189-190

### **Characters:**

"Long.  $0^m$ ,038; larg.  $0^m$ ,013. ... entièrement d'un cuivreux pourpré éclatant, ... Pronotum moins de deux fois aussi large que long; ... les côtés obliques en avant et largement arrondis après le milieu; ... la suface ... au milieu ... vaguement sillonné en arrière et presque lisse, mais non caréniforme en avant. Élytres ... à côtés nettes et bien marquées." – KERREMANS (1908).

### **Geographical distribution:** Celebes.

**Remarks:** An enigmatic taxon, unknown to me and apparently not only to me: as far as I am aware no specimen except the holotype nor any data beyond the original description have ever been mentioned in literature. Distinctive colouration and (if true...) exceptional

distribution (no other exscutellate Philocteanus DEYR. has been known to have crossed the WALLACE's Line) suggest that it may indeed be a "good" species, but it seems equally possible that the only known specimen represents simply a mislabelled colour variety of either (depending upon the exact meaning of rather vaguely formulated characters) P. (P.) castelnaudi (DEYR.) or P. (P.) resplendens (GY.).



Fig. 1 P. (P.) nigripes (THY.)



Fig. 2 P. (P.) castelnaudi (DEYR.) 3 Java: Mons Gede [RBH: BPbb-] 3 Malaya: Cameron Highl. [RBH: BPlhf]



Fig, 3 P. (P.) r. triangularis (KERR.) ♀ Borneo [RBH: bba]



Fig. 4 P. (P.) nigripes (THY.) ♂ Java: Mons Gede [RBH: BPbb-]



Fig. 5 P. (P.) r. triangularis (KERR.) ♀ Borneo [RBH: bba]

## Philocteanus (Pseudocallopistus) resplendens (GY.)

Chrysochroa resplendens GORY 1840: 61

### **Characters:**

Large, relatively slender, slightly flattened; dorsal side green, ventral purplishcupreous, front golden-green to cupreous. Vertex narrow. Pronotum widely trapezoidal, ca. twice wider at base than long, lateral margins strongly, almost straightly convergent (AW:BW≈0.5); median impunctate stripe narrow but almost regular. Elytra elongately paraboloidal, sides convergent from humeral protrusions; costae not much more prominent than slightly but distinctly marked intercostae. Metasternal projection not very prominent but well developed.

Geographical distribution: Malay Peninsula and Borneo.

Remarks: Two subspecies of unclear validity, described (as separate species) under four different names.

#### Key to the subspecies of *Philocteanus (Pseudocallopistus) resplendens (GY.)*:

- 2 (1) Costae more elevated. Body more robust ..... P. (Pseudocallopistus) resplendens triangularis KERR.

#### Philocteanus (Pseudocallopistus) resplendens (GY.) s.str.

Chrysochroa resplendens GORY 1840: 61

#### Material examined:

1 ♀, 2 ø.

#### **Characters:**

Female  $34\times12.5$  [ø  $32-35\times12-13$  – KERREMANS 1908] mm. Relatively slender form with conspicuous costae.

Geographical distribution: Apparently endemic to the Malay Peninsula.

Remarks: One specimen in BMNH has been labelled as "from Shorea sp.".

#### Philocteanus (Pseudocallopistus) resplendens triangularis (KERR.)

Callopistus triangularis KERREMANS 1909: 596

=Callopistus Moultoni KERREMANS 1910: 275-276

=Callopistus perpuriceps [sic! (err.)] Théry 1923: 202

=Pseudocallopistus platynotus OBENBERGER 1942: 60

#### **Material examined:**

 $2 \, \mathcal{Q}$ ,  $3 \, \emptyset$ .

#### **Characters:**

Females  $34-34.5\times12.5$  [ø  $33\times13$  (KERREMANS 1909) –  $37\times14$  (KERREMANS 1910)] mm. Rather robustly built, costae weakly developed.

### Geographical distribution: Borneo.

**Remarks:** According to the descriptions (KERREMANS 1908, 1909, 1910; THÉRY 1923; OBENBERGER 1942) Bornean beetles differ in the characters mentioned in the key from those inhabiting Malaya, but the quoted differences are too indefinite to take the taxonomic distinction at its face value; the only opportunity I have ever had for direct comparison was in BMNH 40 years ago, at the very beginning of my studies on the Indo-Pacific buprestid fauna, and my notes from that time are not sufficiently detailed to form a reliable opinion, what leaves me no better option than to tentatively accept the differentiation at the subspecific level.

### Sg. indet.

Among the material borrowed many years ago from Dr. S. Bílý there was an enigmatic beetle I was not able to identify; I supposed it to be a new species and have prepared its description, but as it was only a single specimen and seemed unnaturally deformed, I did not decide to formally name it, hoping to find some another example, better preserved and so more suitable for the holotype. Unfortunately, no such specimen has been hitherto discovered (or recognized as conspecific?), therefore the publication of the description – even without formal naming – seems warranted to make students aware of the case.

### Philocteanus (sg. indet.) sp. indet.

#### **Material examined:**

"Mentawai Isls., 100 m, S. Siberut Isl, 1. 2005, Salappa Vill. env." "Callopistus sp., not resplendens (comp. T), not castelnaudi (comp. T)" "Genus ???, near Callopistus, but see ventral side!!!" [1  $\subsetneq$  (SB)]

### **Characters:**

Female 28×10.5 mm. Dorsal side and antennae dark plumbeous-bronzed with some dull-greenish shine, ventral dark cupreous-bronzed, tibiae and tarsi dull green. Pubescence conspicuous, ochreous-white, semierect (twice longer and denser along eye-margins) on front; rather dense but very short, recumbent on episterna and sides of sternites; very short and sparse on median parts of sternum and abdomen; pronotum and elytra glabrous; meso- and meta-femoral brushes well developed.

Epistome broadly and rather deeply arcuately emarginate, epistomal ridge inconspicuous; transverse clypeofrontal depression shallow; no trace of supraepistomal carina. Front trapezoidal, nearly as wide as long, sides markedly divergent (F:V $\approx$ 1.50); frontal depression very shallow, extending from one eye to another (no distinct periocular ridges or striae, only shallow longitudinal depressions on sides of upper half), demarcated from vertex

by inconspicuous irregular transverse ridge below upper margins of eyes; frontal puncturation fine and shallow, evenly moderately dense on strongly microsculptured surface; median groove deep, extending from upper limit of clypeofrontal depression to frontovertex ridge and prolonged as somewhat finer and shallower but still distinctly depressed furrow far behind; vertex narrow (V:H $\approx$ 0.38), puncturation moderately dense and coarse. 1. antennal joint clubshaped, rather slender, ca. 3× longer than thick; 2. globular, slightly narrower and ca. 4× times shorter; 3. elongately triangular, as wide as but shorter than 1., ca. twice longer than wide; 4. nearly as long as 3. but somewhat more robust; 5.-10. trapezoidal, progressively shorter and thinner, somewhat longer than wide (5.) to isometric (10); 11. fusiform, 1.5× longer than 10.

Pronotum transverse, strongly trapeziform (BW:AW:L≈1.9:1.1:1); basal margin very broadly V-shaped: halves nearly straight, meeting at very obtuse angle (no trace of prescutellar "denticle" wedging in elytral suture); basal angles right, not protruding; sides strongly rounded in basal third, then almost straight (very slightly arcuate) to hardly perceptible collar; anterior angles somewhat obtuse; anterior margin deeply paraboloidally sinuate. Disk broadly, shallowly but distinctly depressed (concave in profile); "collar"-sulcus along sides of anterior margin hardly appreciable; sides of disk with but very indistinct irregular foveolate depressions. Puncturation coarse; on sides very dense, reticulately confluent; at middle dense but punctures separate; median line impunctate; micropunctulation very fine but dense and conspicuous. Scutellum invisible, but elytral suture at base widened and deepened into distinct fovea.

Elytra  $\approx 2.05 \times$  longer that wide. Sides straightly obliquely truncated at humeri, with distinctly indicated and slightly protruding subhumeral angularities, then subparallel to basal  $^2$ /s, and narrowly semiparaboloidally converging to apices; lateroapical margin rather strongly denticulate on posterior  $^2$ /s, sutural denticle somewhat isolated, much larger than others. Costae entire but (esp. in basal half) low and inconspicuous, punctures in striae somewhat irregular, rather fine (not much coarser than on interstriae); puncturation very dense on sides, sparse towards suture; micropunctulation distinct.

Proepisterna regularly dfp; prosternal process regularly convex and coarsely, sparsely, evenly punctured without lateral distinctively sculptured stripes or sulci. [Meso-metasternal border (apex of sternal cavity) very difficult to interprete: arcuate posteromedian margin of mesosternum entirely (from one mesocoxal cavity to another), narrowly but deeply "bashed in", similar (but broader, oblique, narrowest and deepest - there separated only by narrow median ridge – anteriorly) dishes run along anterolateral margins of intermesocoxal part of metasternum (and yet another oblique pair between each mesocoxa and middle of metacoxa), so that anterior margin of metasternum remains only as sharp carina between deep furrows and actual meso-metasternal suture is untraceable; all this looks unnatural, being probably a result of some developmental disturbance]. Median parts of meso- and metasternum very finely and sparsely punctured, puncturation of sides also fine but much denser, of metepisterna very dense; metacoxae rather deeply transversely depressed; median suture of metasternum with deep pit at point of intersection with arcuate intrametasternal suture and another just before the posterior margin, between these pits metasternum shallowly longitudinally depressed. Abdomen very strongly flattened, straight or even slightly concave in profile; intercoxal process of 1. sternite impunctate, otherwise median parts of 1.-4. segments finely and sparsely, lateral portions and all anal sternite finely but densely punctulate; lateral depressions on each very broad and rather deep; apical margin of 1. segment conspicuously sinuate to both sides of very shallowly arcuate median lobe; that of anal sternite regularly broadly rounded.

Geographical distribution: Known only from single specimen collected on Siberut I.

**Remarks:** Shape of body almost identical to that of *P. (Micropistus) dilatatus (KUR.)*, but narrow vertex, regularly convex and evenly punctured prosternal process, maximum height of body at meso-metasternal border, and flat abdomen with not inflated 1. sternite suggest rather its affinity to sg. *Pseudocallopistus OBB*. The only character seemingly distinguishing it from the latter is apparent lack of swelling at middle of meso-metasternal border; however, the structure of that area does not look natural and (together with some less conspicuous, not always symmetrical, dishes and perhaps even the "excessively" flat – reminiscent rather of *Belionota ESCH*. – abdomen) is probably the result of some developmental disorder or accident (dorsoventral pressure shortly after hatching?); "reconstruction" of the "natural state" in mental experiment suggests indeed the existence of meso-metasternal swelling comparable to that in *P. (P.) resplendens (GY.)*!

### Micropistus THY.

Micropistus Théry 1923: 203
Type-species: Micropistus microcephalus Théry 1923
?=Kolleria Théry 1925: 3
Type-species: Kolleria costata Théry 1925 [?=Micropistus dilatatus Kurosawa 1982]

See KUROSAWA (1990) for the review. *Kolleria costata THY*. remains a somewhat enigmatic animal, most probably to be classified among *Micropistus THY*. [perhaps closely related to, or even a variety – *i.e.* nomenclaturally senior synonym – of, *P. (M.) dilatatus KUR*.]; strangely enough, THÉRY (1925) does not even mention that subgenus, described by himself just two years earlier (THÉRY 1923), comparing *Kolleria THY*. only to *Philocteanus DEYR*., but the quoted differences are just those characteristic of *Micropistus THY*.! Also *Philocteanus strandi OBB*. does not seem different from *P. (M.) dilatatus KUR*.

#### Philocteanus DEYR. s. str.

Philocteanus DEYROLLE 1864: 10-11

Type-species: Chrysochroa leucophthalma CASTELNAU et GORY 1835 [=Buprestis rubroaurea DEGEER 1778]

Medium sized to big (14-34 mm.), green to purplish-cupreous or bronzed, rather finely sculptured beetles covered with dense but very short pubescence on ventral and much sparser, almost indiscernible on dorsal side. Front as wide or wider than long, trapezoidal, sides strongly divergent, V:H≈0.3; surface flat, uneven, coarsely punctured. Antennae effectively 10-jointed due to fusion (in females often incomplete!) of two distal antennomeres. Scutellum invisible. Elytral costae (usually except 1-2 outermost) inconspicuous. First sternite usually slightly but distinctly swollen. Sexual dimorphism very slight in anal sternite (apex narrowly (often indistinctly) subtruncated or incised in male, regularly rounded in female), conspicuous in structure of mandibulae (with blade-like lobe along outer margin in male) and shape of epistome (rather broadly emarginated between rounded lateral angles in female, emargination being still much broader and lateral angles much sharper in males) – however, like other sexually dimorphic structures (e.g. horns in various lamellicorns: Lucanidae LATR., Dynastinae McL., Onthophagus LATR. &c.) these peculiarities show distinct allometric gradation from bizarre development in some males ("f. major") to barely discernible in others ("f. minor").

Widely distributed from India (from where, unfortunately, only very few exact localitis are known to me) to HUXLEY's (excluding Philippines) modification of WALLACE's Line and from southernmost China to Java. Sixteen published species-level names seem to refer in fact to altogether seven subspecies in two really distinct, [almost?] totally allopatric, species — and even these are difficult to monothetically define: the most reliable distinguishing character is size, but some (even if very narrow) overlapping zone exists also here.

### **Key to the species of sg.** *Philocteanus DEYR. s.str.*:

- 2 (1) Smaller and usually narrower: <25.5×9.5 mm. Epipleura not clearly demarcated or at least anteriorly not continuously sulcate. Elytral micropunctulation (between primary puncture rows) relatively coarse. Pronotum almost always cupreous or purplish, this colouration frequently appears also on (esp. lateral parts of) elytra ......

  \*\*Philocteanus (s.str.) rubroaureus (DEG.)\*\*

### Philocteanus (s.str.) maitlandi LSB.

Philocteanus Maitlandi LANSBERGE 1883: 22-23

### **Characters:**

Rather big (rarely below 25, up to *ca.* 35 mm. long), bluish- or golden-green to (partly or entirely) bronzed, robustly built but – with rare exceptions – finely sculptured beetles of cuneately tapering apical partsof elytra and well developed, continuously sulcate epipleura.

Geographical distribution: Malay Peninsula and Greater Sunda Is. (incl. Palawan).

**Remarks:** Four subspecies somewhat better differentiated than those of *P.* (*s.str.*) rubroaureus (*DEG.*) but also not easy to exactly diagnose – the more so that range of their variability remains very poorly known: all except the nominotypical being rare in collections. The wide geographical separation could suggest full reproductive isolation (*i.e.* the species "rank") but very slight differences between and almost unknown range of variability within the taxa call for caution.

### Key to the subspecies of *Philocteanus (s.str.) maitlandi LSB.*:

- 2 (1) Bluish-green to greenish-cupreous. Sculpture very fine; discal costae of elytra poorly marked, almost flat. Pronotal foveae rather shallow, rounded or but indistinctly prolonged anterad

- 5 (6) Pronotal sides strongly convergent: BW:AW≈1.5. Impunctate (only microsculptured) median stripe of pronotum without or (rarely) with but very fine stria along middle. Median furrow of front not abruptly widened at upper end. Emargination of female epistome narrower but deeper, trapezoidal

#### Philocteanus (s.str.) maitlandi aereicolor ssp.n.

#### Material examined:

Holotype: "near Quezon, Palawan Is., Philippines, I 1995" "Philocteanus ♀ subcupreus KERREMANS 1896, Det. K. Akiyama, 1995" [♀ (RBH: BPhtl)]
Additional material: none.

#### Characters

Female  $27 \times 10.5$  mm. Robustly built; uniformly bright bronzed above and below with more cupreous lower half of front, only vertex and legs greenish. Emargination of epistome moderately wide, rather deep, trapezoidal, without median denticle, tips of lateral angles rounded; median furrow of front rather wide at middle, regularly tapering to both ends; frontal surface coarsely and densely, in lower half confluently punctured; eyes prominent; vertex rather wide (V:H $\approx$ 0.5). Pronotum trapezoidal, basal angles distinctly acute, sides slightly regularly arcuate; collar well defined laterally but broadly interrupted at middle; laterobasal depressions deep, markedly elongated, becoming shallower and narrower anterad but traceable to ca. anterior third; puncturation moderately coarse, very dense on sides but less so at middle, leaving almost regular impunctate median stripe; micropunctulation fine and dense. Elytral sides distinctly widened behind humeri,

sinuate at the level of metacoxae, and almost regularly arcuately tapering to apices; lateroapical margins sharply denticulate (*ca.* 10 denticles on each, sutural pair distinctly longer); puncturation moderately fine; costae rather prominent, markedly elevated, almost smooth (with but some widely spaced fine punctures), each accompanied on both sides with of somewhat depressed rows of inconspicuous, coarser but shallow punctures. Prosternal process convex, smooth along middle, rather coarsely but sparsely punctured on sides; first sternite almost imperceptibly swollen; 2.-4. with deep lateral depressions; apex of anal segment broadly regularly rounded.

**Geographical distribution:** Known only from the holotype collected on Palawan; the easternmost representative of the subgenus.

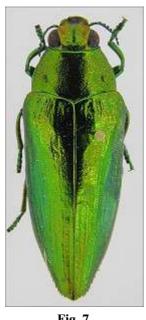
**Remarks:** Bronzed colouration, relatively robust proportions, coarser sculpture and prominent elytral costae make together the appearance of distinct species, but all these differences are in fact very slight and perhaps not truly diagnostic; with but a single specimen known, and almost equally scarce material of closest relatives to compare, the degree of character-overlap (if any) cannot be evaluated, so subspecific rank seems justifiable.



Fig. 6

P. (s.str.) m. aereicolor ssp.n.

♀ Palawan: ad Quezon [RBH: BPhtl]





Fig, 8

P. (P.) m. capitatus (KERR.)  $\bigcirc$  Borneo: Kina Balu [RBH: bah]



Fig. 9 Fig. 10

P. (s.str.) maitlandi LSB. s.str.Nias [RBH: BPhto]  $\bigcirc$  Nias [RBH: BPciv]



#### Philocteanus (s.str.) maitlandi harmandi KERR.

Philocteanus Harmandi Kerremans 1908: 195-197 =Philocteanus malayicus Kurosawa 1982: 175-177 =Philocteanus laticollis Kurosawa 1982: 177

### Material examined:

1 ♀.

#### **Characters:**

Female  $32 \times 11.5$  ( $\bigcirc$  32  $\times 11$  – Kerremans 1908;  $\bigcirc$  31.5-35.8 $\times 11$ -13.5 – Kurosawa 1982) mm. Elytra more elongated than in other races, barely expanded at humeri and very slightly sinuated behind, their puncturation somewhat coarser but costae less distinct. In my specimen distal (10.-11.) antennomeres not fully fused.

**Geographical distribution:** Probably restricted to Malay Peninsula: the type-locality of *P. harmandi KERR*. is "Bangkok" what, however, does not necessarily mean that the specimen has actually been captured there: labels in old collections frequently mean the port ("Malacca", "Batavia", "Manila") or island ("Java", Tahiti") from which the parcel with specimens had been sent rather than the actual collecting site; both *P. malayicus KUR*. and *P. laticollis KUR*. have been described from Cameron Highlands and Tapah Hills in Malaysia, the latter is also the locality of the only example seen by me – as far as I am aware, these are all specimens hitherto known of this species.

### Philocteanus (s.str.) maitlandi capitatus KERR.

Philocteanus capitatus KERREMANS 1893: 504 =Philocteanus subcupreus KERREMANS 1896: 367-368 =Philocteanus elegans Théry 1898: 364

### Material examined:

Holotype: "Type" [red circle] "Borneo, Staudinger" "capitatus Kerr., Type" "Kerremans 1903-59" [3" (BMNH)]

Holotype [of *Philocteanus subcupreus Kerr.*]: "Type" [red circle] "Kinabalu, Stauding." "subcupreus Kerr., Type" "Kerremans 1903-59" [\$\times\$ (BMNH)]

**Additional material:**  $1 \circlearrowleft, 6 \circlearrowleft, 3 \varnothing$ .

#### **Characters:**

Male 26×9.5-31×11, females 27.5×10.5-33.5×13 mm. Relatively slender, bluish-green to greenish-cupreous. Emargination of epistome broadly trapezoidal in male, narrowly so in female.

**Geographical distribution:** All specimens examined by me, except one [probably mis-]labelled as "Celebes", came from Kinabalu (NE-Borneo).

**Remarks:** *P. strandi OBB.* has been described as *Philocteanus DEYR.* and compared by its author to *P. elegans THY.*, but its description allows to suspect that it belongs rather to *Micropistus THY.* [?=*P.* (*M.*) *dilatatus* (*KUR.*)?]

### Philocteanus (s.str.) maitlandi LSB. s.str.

Philocteanus Maitlandi LANSBERGE 1883: 2-23 =Philocteanus rutilans KERREMANS 1883: CXXVIII-CXXIX Philocteanus Maitlandi ab. cupreus OBENBERGER 1928: 1833 [issp]

#### Material examined:

Holotype: "Type" [red circle] "Nias, Lansb." "Maitlandi Lansberge, Type" "Kerremans 1903-59" [& (BMNH)]

**Holotype** [of *Philocteanus rutilans Kerr.*]: "Type" [red circle] "*Nias, Meyer-D.*" "rutilans Kerr., Type" "Kerremans 1903-59" [♀ (BMNH)]

Holotype [of *Philocteanus cupreus OBB*.]: "Ile Nias" "TYPUS" "Philocteanus Maitlandi var. cupreus m. <u>Typ.</u> Det. D¹ Obenberger" [♂ (EONMP)]

Additional material: 93 ♂, 101 ♀, 12 ø.

#### The restores

Male 23.5×9-29×11, females 26×9.5-32.5×12.5 mm. Robustly built, green to bronzed-cupreous. Epistomal emargination broadly arcuate in female, broadly trapezoidal in male. Upper end of median groove of front abruptly expanded into deep, rounded (in female) or triangular (in male) fovea, in male at lower end accompanied with pair of small but deep pits.

**Geographical distribution:** Seems endemic to Nias I. off the western coast of Sumatra; records from mainland Sumatra are probably based on inexact labelling.

**Remarks:** Despite the restricted distribution, by far the most common (at least in collections) subspecies.

### P. (s.str.) rubroaureus (DEG.)

Buprestis rubro-aurea DEGEER 1778: 635-636

#### **Characters:**

Medium-sized, variously (from green to dark purplish above, green to cupreous below) coloured representatives of the subgenus. On the average more elongated, more cylindrical (less flattened) and coarser sculptured than *P.* (*s.str.*) *maitlandi LSB*.

### Geographical distribution: India, Indochina, Malay Peninsula.

**Remarks:** The differences between subspecies seem to exceed the "standard" 75%, but are slight, difficult to describe, and – taken separately – widely overlapping.

### Key to the subspecies of *Philocteanus (s.str.) rubroaureus (DEG.*):

- 2 (1) Emargination of epistome in male with minute denticle at middle. Dorsal colouration cupreous to purplish, typically with at most traces of green. Body more elongated ......



**Fig. 11** *P.* (*s.str.*) *r. moricii FRM.*♀ Laos: Phou Khao Khouay [RBH: BPdpz]



Fig. 12
P. (s.str.) rubroaureus (DEG.) s. str.

♀ India: Kanara [RBH: BPbas]

### Philocteanus (s.str.) rubroaureus moricii FRM.

Philocteanus Moricii FAIRMAIRE 1878: 270 ?=Philocteanus incisifrons Théry 1923: 204-205 =Philocteanus humeralis OBENBERGER 1928: 133

#### Material examined:

**Holotype:** "Type" [red circle] "Cochinchine Fairmaire" "Philocteanus Moricii Fairm." "Moricii Fairmaire Type" "Kerremans 1903-59" [ $\subsetneq$  (BMNH)]

**Holotype** [of *Philocteanus humeralis OBB*.]: "Dawna Hills, Ind." "TYPUS" "Philocteanus humeralis m.  $\underline{Type}$   $\circlearrowleft$ , Det. D<sup>I</sup> Obenberger" "Mus. Nat. Pragae, Inv. 20005" [ $\circlearrowleft$  (EONMP)] **Additional material:** 116  $\circlearrowleft$ , 65  $\circlearrowleft$ , 9  $\varnothing$ .

#### **Characters:**

Males 14.5×4.5-22.5×8, females 17.5×5.5-25.5×9.5 mm. Elongated to rather robust, pronotum golden to cupreous, elytra typically green with more or less conspicuously golden to golden-cupreous sides, rarely (usually in Burma) entirely cupreous or even purplish-bronzed. Epistomal emargination without median denticle.

Geographical distribution: Indochina and Malay Peninsula.

Remarks: The taxonomic position of Burmese and easternmost Indian populations (showing intermediate and/or incongruent character combinations) needs more detailed study based on more

representative, exactly labelled material. In the original description (OBENBERGER 1928) the type locality of *Philocteanus humeralis OBB*. has been cited as "Dawara Hills" – this is a misreading of Dawna, a mountain range running along the Siamese border in Burma between *ca.* 16° and 17°30'N. The placement of *P. incisifrons THY*. is unclear: I have not seen the type, and the original description is not decisive (type-locality and colouration suggest rather the Indian race, while deep emargination of epistome is more characteristic of Indochinese populations – the best distinguishing trait, presence or absence of median denticle on epistomal emargination, has not been mentioned...). In this situation I tentatively retain the prevailing "current custom": most specimens determined as *P. incisifrons THY*. in collections belong to the eastern race, and hitherto (having considered *P. moricii FRM*. a separate, Cochinchinese race) I myself so labelled Siamese, Laotian &c. beetles.

### Philocteanus (s.str.) rubroaureus (DEG.) s.str.

Buprestis rubro-aurea DEGEER 1778: 635-636 =Chrysochroa plutus CASTELNAU et GORY 1835: 18 =Chrysochroa leucophthalma CASTELNAU et GORY 1835: 18 =Philocteanus buphthalmus THOMSON 1878: 13-14

#### Material examined:

16 ♂, 22 ♀, 20 ø

#### **Characters:**

Male 18.5×6-24×8.5, females 18.5×6.5-25×9.5 mm. Elongated, cupreous (sometimens with narrowly green suture) to purplish above, golden-green below. Epistomal emargination semicircular in female, broadly trapezoidal in male, with minute denticle at middle.

**Geographical distribution:** Endemic to Indian subcontinent, Burmese populations – here tentatively considered as belonging to *P. (s.str.) moricii FRM.* – look somewhat intermediate.

**Remarks:** On the average the smallest, darkest, and most coarsely sculptured form of the subgenus.

### Szentendreya HoŁ.

Szentendreya HOŁYŃSKI 1981: 273-275
Type-species: Szentendreya gezai HOŁYŃSKI 1981 [=Asemochrysus vitalisi BOURGOIN 1922]

Remarks: See HOŁYŃSKI (2016) for the review.

### Chrysopistus THY.

Chrysopistus THÉRY 1923: 205-206 Type-species: Chrysopistus deyrollei THÉRY 1923

Distinctive, medium sized (14-26 mm.), cupreous to purplish-bronzed microscutellate species. Front narrow, distinctly depressed; eyes moderately prominent; vertex narrow (V:H≈0.3 or less); antennae serrate from 3. joint. Pronotum with distinct "collar". Minute scutellum (sometimes only an inconspicuous "pinhole" in suture) visible at some distance from pronotal base. Elytra distinctly (especially in larger specimens) costate, punctures irregularly disposed (sometimes traces of rows along costae), surface finely micropunctulated and almost imperceptibly pubescent; epipleura not reaching beyond metacoxae; lateroapical elytral margins very prominently denticulate, sutural denticle sharp and long. Pro-metasternal profile regularly convex, maximum height at middle of metasternum. Legs slender. Anal sternite rounded or narrowly and indistinctly incised at apex in female, deeply but rather narrowly emarginated between broadly rounded lateral lobes in male; anal plate metallic, dfp.

Known from Borneo, Sumatra, Malaya and Laos.

### **Key to the species of sg.** *Chrysopistus THY.*:

### Philocteanus (Chrysopistus) savangvattanai (BD.)

Chrysopistus Savang-Vattanai BAUDON 1962b: 70-74

### **Material examined:**

1 ♀

#### **Characters:**

Female 24×7.5 mm. (male 20×6.3; females 24×7.5, 26×8 – BAUDON 1962a). Body above purplish-cupreous, below golden-green, legs green; no apparent sexual dimorphism in colour. Pronotum transversely trapezoidal; sides straight, very slightly convergent in basal half, markedly so apically; collar well developed. Elytra 2.3x longer than wide, slightly sinuately widened to midlength. Femora without unusually long and dense pilosity otherwise characteristic of the subgenus.

Geographical distribution: Described from Laos: Tha-Ngon.

Remarks: Described from a single male and two females, otherwise only one unlabelled female from CLB collection known to me. The type-series has been collected "à grande hauteur sur différentes feuillages en forêt clairière" (BAUDON 1962a), what probably explains the rarity of the species in collections.



Fig. 13 P. (C.) savangvattanai (BD.) ♀ unlabelled [CLB]



**Fig. 14** P. (C.) f. deyrollei (THY.)



Fig. 15 P. (P.) flammeus (THS.) s.str. ♀ Borneo: ad Trus Madi [RBH: BPkff] ♀ Borneo: Mt. Merinjak [RBH: bah]

## Philocteanus (Chrysopistus) flammeus (THS.)

Chalcophora (Evides) flammea THOMSON 1857: 110

### **Characters:**

Dark, cupreous to purplish-bronzed. Pronotum trapezoidal, sides straight, subparallel in basal <sup>2</sup>/<sub>3</sub>, distinctly convergent in apical third; collar interrupted at middle. Elytra without dark spots. Prosternal process usually with smooth, rather regular ridge along midline, bordered with coarsely punctured stripes.

Geographical distribution: Malay Peninsula, Sumatra, Borneo

Remarks: Clarification of the true status of various forms described as separate species would need simultaneous examination of more representative (and more exactly labelled) material than that currently available to me – the specimens from Sabah, somewhat darker coloured than others, may perhaps deserve the rank of subspecies, but all the others seem to be most reasonably treated as simple varieties.

### Key to the subspecies of *Philocteanus (Chrysopistus) flammeus (THS.*):

#### Philocteanus (Chrysopistus) flammeus deyrollei (THY.)

Chrysopistus Deyrollei Théry 1923: 206-207

#### Material examined:

"Cotype": ,,Cotype" [red ring] "M¹ Marapok, Dent Province, Br. North Borneo, coll. Van de Pool" "Chrysopistus deyrollei Théry, Type, Théry det." "ex coll. A.Théry, BM 1923-364" [1 ø (BMNH)]

Additional material: 1 ♂, 7 ♀, 1 ø.

#### Characters:

Male 16.5×5, females 17.5×5.5-21.5×7 mm. Dark, purplish-bronzed. Basal half of pronotal sides straight. Elytra with two pairs of small inconspicuous dfp depressions on disk. Femora in both sexes with extraordinarily long dense pilosity.

**Geographical distribution:** Seems to be endemic to Sabah (NE-Borneo), but one so determined female in KBIN has – according to the label – been collected in western Borneo: Pontianak.

**Remarks:** The distinguishing characters are slight and with more adequate material may prove not truly diagnostic.

### Philocteanus (Chrysopistus) flammeus (THS.) s.str.

Chalcophora (Evides) flammea THOMSON 1857: 110 =Chrysopistus minimus THÉRY 1923: 207-208 =Chrysopistus sumatrensis OBENBERGER 1928: 133-134 =Chrysopistus aeneoviridis FISHER 1930: 29-30

#### Material examined:

Holotype [of *Chrysopistus sumatrensis OBB.*]: "Sumatra" "TYPUS" "*Chrysopistus sumatrensis m.* ♂ <u>Type</u>, Det. D¹ Obenberger" "Mus. Nat. Pragae, Inv. 19999" [♂ (EONMP)]

Holotype [of *Chrysopistus aeneoviridis FISH*.]: "PERAK F.M.S., Perak Museum, Taiping" "Type No 57402 USNM" [red label] "HOLOTYPE *CHRYSOPISTUS aeneoviridis* FISHER" [border and HOLOTYPE red] [\$\times\$ (USNM)]

"Cotype" [of *Chrysopistus minimus THY.*]: ,,Cotype" [red ring] "Pengaron, Martapoera, Z.O.Borneo" "Chrysopistus minimus Théry, Type, Théry det." "ex coll. A. Théry, BM 1923-364" [1 ø (BMNH)] Additional material: 5 ♂, 14 ♀, 11 ø.

#### **Characters:**

Male 17.5×6, females 18.5×6-23×8 mm. Body dorsally bright cupreous. Pronotal sides basally straight. Elytra often without any spots or dfp depressions. Femora strikingly pilose only in males.

Geographical distribution: Widely distributed subspecies, known from Borneo, Malay Peninsula and Sumatra.

**Remarks:** The allegedly diagnostic characters quoted by THÉRY (1923) and OBENBERGER (1928) seem purely idividual, while the strange oily-greenish-bronzed colouration of the type of *Chrysopistus aeneoviridis FISH*. seems artifactual (chemicals?).

### Cyalithus THS.

Aprosopus DEYROLLE 1864: 50-51 [nec GUÉRIN-MÉNEVILLE 1844: 247-248 (Cerambycidae)]
Type-species: Aprosopus rugifrons DEYROLLE 1864
Cyalithus THOMSON 1878: 23 [replacement name]

See HoŁyński (2014) for the review.

### Philocteanus (Cyalithus) bellamyi n.n.

=Philocteanus (Cyalithus) philippinensis HOŁYŃSKI 2014: 378-380 [nec SAUNDERS 1874]

**Remark:** Few years ago (HOŁYŃSKI 2014) I described a new species under the name *Philocteanus (Cyalithus) philippinensis sp.n.*, having overlooked the fact of its homonymy with *Evides Wallacei var. Philippinensis SAUNDERS 1874* which, with inclusion of *Epidelus DEYR*. as a subgenus into *Philocteanus DEYR*., had become also a member of this genus. The replacement name is given in commemoration of my late Friend and eminent Colleague, Charles L. Bellamy, for his invaluable contribution to buprestid systematics, crowned with the monumental World Catalogue.

### Epidelus DEYR.

Epidelus DEYROLLE 1864: 49-50

Type-species: Chalcophora wallacei THOMSON 1857 Epidelomorphus THÉRY 1925: 65-66

Type-species: Epidelomorphus borneensis Théry 1925 [=Chalcophora wallacei Thomson 1857]

Small group of four strictly allopatric, rather robustly built microscutellate species, three of them characteried by unusual type of sexual dimorphism: males with non-metallic, testaceous, distinctly pubescent and (when fresh) pulverulent elytra; antennae slenderer and somewhat longer in females. Anal sternite in male broadly and deeply arcuately emarginated, anal plate metallic, dfp.

One species seems endemic to Ceram, two inhabit Philippines, and one is widely distributed on Borneo, Sumatra and Malay Peninsula.

### Key to the species of sg. *Epidelus DEYR*.:

- 2 (1) EL:EW<2.0. Midlateral foveae before pronotal midlength deep. Male elytra testaceous with or without distinct metallic shine
- 4 (3) Vertex and prosternum green or cupreous. Elytra in female bronzed or (blackish-) green

### Philocteanus (Epidelus) ceramensis (THY.)

Evides ceramensis Théry 1934: 137-138 =Szentendreya barbarae Hołyński 1981: 276

#### **Material examined:**

Holotype: "Mansela. C. Ceram. 2500 ft." "Szentendreya barbarae HoŁ., det. R. Hołyński, 1978" "Szentendreya barbarae HoŁyński 1978, HOLOTYPE" [red label] "Epidelus ceramensis THY., det. R. HoŁyński, 2002" [♀ (RBH: BPbag)]

**Additional material:**  $1 \circlearrowleft$  in my collection and several ex. seen many years ago in coll SB.

#### **Characters:**

Male 18.5×7 (holotype 17.5×6.5 – Théry 1934), female 23.5×8.5. Body dorsally golden-cupreous, ventrally golden-green, front, legs and antennae golden- to bluish-green; no apparent sexual dimorphism in colour. Pronotum transversely trapezoidal, sides moderately convergent in basal ¾, much more strongly so apically; collar markedly developed except narrow interruption at middle; anterior midlateral foveae absent. Elytra more than twice longer than wide, subparallelsided or slightly sinuately widened to midlength. Prosternal process broad, somewhat widened behind procoxae, slightly convex, rather sparsely, irregularly, not very coarsely punctured.

Geographical distribution: As far as currently known, seems to be endemic to Ceram.

**Remarks:** More elongated elytra and lack of sexual colour dimorphism (plesiomorphous characters?) make this species somewhat unusual for *Epidelus DEYR*.(to which it nevertheless unambiguously belongs), resembling rather representatives of sg. *Szentendreya HoŁ*.

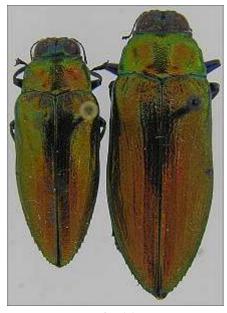


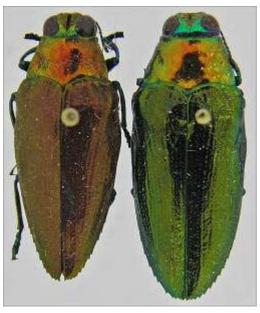
Fig. 16

P. (E.) ceramensis (THY.  $\circlearrowleft$  +  $\circlearrowleft$  Ceram [RBH: BPint, BPbag]



Fig. 17

P. (E.) masbatensis sp.n. ? + ? Philippines: Masbate: Aroroy [RBH: BPlgh, BPlgk]



**Fig. 18** *P.* (*s.str.*) *philippinensis* (*SND.*)

♂ + ♀ Philippines: Mindanao [RBH: BPlgu, BPlgy]



Fig. 19
P. (s.str.) wallacei (THS.)  $\lozenge$  +  $\lozenge$  Borneo: Sarawak [RBH: BPbab, BPbac]

### Philocteanus (Epidelus) masbatensis sp.n.

### Material examined:

**Holotype:** "Philippinen: *Masbate: Aroroy*" [♀ (RBH: BPlgk)]

**Paratypes:** "Philippinen: *Masbate: Aroroy*" [3\(\displaystyle (RBH: BPlgg, lgh, lgj); 4\(\phi\) (RBH: BPlgl-lgo)];

"Koll. D<sup>r</sup> A.Frh.v.Hoschek | Philippinen: *Masbate: Aroroy* | " "*Epidelus Wallacei*, det. Hoschek 194" [2♂ (KBIN: 3701, 3702); 4♀ (KBIN 3695-3698)];

"Philippinen: Masbate: Aroroy" "Museum Leiden, coll C J Dixon" [1 \( \text{(NNHM)} \)];

"Philippinen: Masbate: Aroroy" "philippinensis" "Museum Leiden, coll C J Dixon" [18] (NNHM)];

"Philippinen: Masbate: Aroroy" "Epidelus wallacei v. philippinensis" "coll. Solman" [13" (RBH: BPlge)]

```
"Philippinen: Masbate: Aroroy"
                                     "Epidelus wallacei var. ph."
                                                                    "coll. Solman" [13 (RBH:
   BPlgf)]
   "Philippinen: Masbate: Aroroy"
                                      "Epidelus philippinensis, det.W.N.Stepanov" [13] (RBH:
   BPlgi)]
   "Philippinen,
                  Masbate,
                                        "Epidelus ♂ philippinensis, det.W.N.Stepanov" [1♂
                             Aroroy"
   (ZIRAN)]
   "Philippinen,
                                       "Epidelus ♀ philippinensis, det.W.N.Stepanov" [1♀
                  Masbate,
                             Arorov"
   (ZIRAN)]
   "Philippinen, Masbate, Aroroy" "60." "Epidelus ♀ philippinensis, det.W.N.Stepanov" [1♀
   (ZIRAN)]
                                           "названи.
    Philippinen,
                   Masbate,
                                Aroroy"
                                                        N 62
                                                                   филиппи."
   philippinensis, det. W.N. Stepanov" [1 2: (ZIRAN)]
   "Philippinen: Masbate: Aroroy" "wallacei Thms., coll. Apt Ödön" [2♂, 7♀ (TTM)]
   "Philippinen: Masbate: Aroroy" "coll. Dr.J.Erdős" "Ep. wallacei Thoms. \, \,
   (\overline{TTM})
   "Philippinen: Masbate: Aroroy" "coll. Dr.J.Erdős" [12 (TTM)]
   "Island Sibuyan, \overline{Baker}" "wallacei, THERY det." [1\stackrel{\frown}{\downarrow} (RBH: BPlgp)}
   "Island Sibuyan, Baker" [1 \( \text{(RBH: BPlgq)}; 1 \( \text{(USNM)} \)]
   "N.W. Panay, Baker" [1 d (USNM)]
   "Philippi sz." "Epid. philippinensis" [13: (ZIRAN)]
Additional material: 8♂, 8♀
```

### **Characters**

**Holotype:** Female 18.5×7 mm. Front bluish-green, vertex bluish-violaceous; pronotum cupreous-bronzed with green anterior margin; elytra plumbeous-black; prosternum blackosh-violaceous, metasternum and abdomen golden-cupreous; legs and antennae bluish-violaceous. Pubescence hardly appreciable on sides of pronotum and abdomen, ventral side laterally pulverulent.

Epistome broadly emarginate, carinate along basal margin, separated from front by deep groove. Front trapezoidal, ca. as long as wide, depressed between ocular margins, coarsely grooved along midline, finely and sparsely punctured. VW:HW $\approx$ 0.4. Antennae slender, reaching to slightly behind midlength of pronotal sides; 1. joint fusiform, ca.  $3\times$  longer than thick; 2. globular, slightly narrower and ca.  $3\times$  times shorter; 3. subcylindrically triangular with broadly rounded outer angle, as long as 1. but somewhat narrower; 4. similar to 3. but slightly shorter; 5.-10. triangular, progressively shorter; 11. ovate, somewhat longer than wide.

Pronotum transverse, trapezoidal (BW:AW:L≈1.7:1.2:1); basal margin deeply bisinuate with with angular prescutellar lobe; basal angles definitely acute; sides almost straightly convergent from base to well developed apical "collar"; anterior margin nearly straight. Disk almost evenly convex, preapical ("collar"-) sulcus practically interrupted at middle, lateral pair of foveae at basal third very large and deep, midlateral at apical third smaller but also deep, prescutellar fovea not much smaller, basal pair to both sides of it very shallow and inconspicuous; puncturation on disk fine and rather sparse, on sides coarser and denser, spaces between punctures conspicuously densely micropunctulate; median line impunctate (except micropunctulation) in basal and apical thirds, normally punctured and slightly depressed (sulcate) in between. Marginal carinae sharp, practically entire, almost straight and clearly visible from above to just before midlength, curved downwards apically. Scutellum minute, hardly appreciable, narrowly separated from pronotal base.

Elytra almost exactly twice longer than wide, widest at basal fourth, very shallowly arcuate from humeri to apical fourth and more strongly so in sharply but rather sparsely denticulate apical part; apices narrowly jointly rounded. Costae appreciable almost all along but only slightly elevated; discal ones separated from one another by three rows of moderately

coarse punctures, on sides puncturation somewhat less regular; micropunctulation very fine near suture, much coarser laterally.

Anterior margin of prosternum straight, bordered with deep stria; prosternal process wide, sides markedly sinuate, apex trilobate with median lobe broadly and lateral ones narrowly rounded; surface flat, covered with sparse coarse punctures, surface between them lustrous, no marginal striae or rims but median line anteriorly with indication of smooth carina. Median parts of metasternum finely and very sparsely punctured, sides dfp; metacoxae without denticle, rather broadly and deeply transversely depressed across midlength. First sternite regularly convex; abdomen medially with sparse and moderately coarse puncturation becoming denser and finer backwards, sides of abdominal segments dfp; apex of anal sternite rounded.

**Variability:** In (on the average smaller:  $15.5 \times 5.5 - 19.5 \times 7.5$  mm.) males apex of anal sternite is deeply paraboloidally emarginated; elytral colouration testaceous, non-metallic; prosternal process densely and rather finely punctulate between narrow but distinct smooth marginal rims and often well developed median carina; pubescence of entire ventral side dense, rather long, semierect, on prosternal process still longer and erect. Female paratypes vary mainly in size ( $17 \times 6.5 - 22 \times 8$ ); median smooth carina on prosternal process is in some almost regular and entire. Interestingly, the four non-Masbatean specimens are among the largest (6 Sibuyan  $18 \times 7$ , 6 Panay  $19 \times 7$ ; 9 Sibuyan  $21 \times 8$ ,  $22 \times 8$  mm.), but of course more material from these islands is needed to clarify whether this difference is of geographical or purely individual nature.

**Geographical distribution:** The overwhelming majority of the specimens seen by me in various museums have been collected by BÖTTCHER in Masbate, but three specomens from Sibuyan and one from Panay (all collected by BAKER) suggest that the species is wider distributed – perhaps occurring throughout the western Visayas?

**Remarks:** Females of P. (E.) masbatensis sp.n. are on the average smaller than those of other three species; neither so robustly built as P. (E.) philippinensis (SND.) nor so slender as P. (E.) ceramensis (THY.), with suture and apices of male elytra concolorous, they seem closest to P. (E.) wallacei (THS.). The most conspicuous characteristic of the new species is the blackish colouration of female elytra, but in some specimens of P. (E.) philippinensis (SND.) and - especially -P. (E.) wallacei (THS.) they are also blackish, differing from those of P. (E.) masbatensis sp.n. only in very strong green lustre.

## Philocteanus (Epidelus) philippinensis (SND.)

Evides Wallacei var. Philippinensis SAUNDERS 1874: 314

### Material examined:

Syntypes: "Syntype" [encircled red] "Philippine 160" "Saunders 74-18" "Epidelus philippinensis (Type) ♂ Saund." [1♂ (BMNH)]
"Syntype" [encircled red] "Philippine 160" "Saunders 74-18" "Epidelus philippinensis (Type) ♀

Saund." [1 $\stackrel{\frown}{}$  (BMNH)] Additional material: 138  $\stackrel{\frown}{}$ , 51  $\stackrel{\frown}{}$ , 13  $\stackrel{\frown}{}$ .

.

#### Characters:

Males 13.5×5-24×10, females 17.5×6.5-25.5×10.5 mm. In females head and pronotum usually cupreous, elytra from green through golden to cupreous-bronzed, ventral side goldenor bronzed-green with prosternum sometimes bluish, legs green, antennae bluish-green to violaceous; in males elytra non-metallic, testaceous, head, pronotum and ventral side sometimes green, otherwise colouration as in females. Pronotum trapezoidal, sides almost straightly convergent to apices; collar markedly developed on sides, interrupted at middle; anterior midlateral foveae deep. Elytra less than twice longer than wide, widest before

midlength. Prosternal process coarsely, irregularly, punctured in females, finely and very densely so in males, usually with smooth, irregular ridge along midline.

**Geographical distribution:** Except for a single male from SE-Negros, all specimens examined by me have been collected on the eastern chain of Philippine Islands, from Luzon through Samar to Mindanao and Basilan.

**Remarks:** The differences – practically restricted to nuances of the shape of elytra and details of colouration – between *P. (E.) philippinensis (SND.)* and *P. (E.) wallacei (THS.)* are very slight and difficult to reliably interpret, so it is quite possible that new material (especially from the hitherto not or insufficiently sampled intermediate islands: Sulu Arch., southwestern Visayas, Palawan, Mindoro) allowing better evaluation of geographical and individual variability would reveal that both taxa (and, perhaps, even *P. (E.) masbatensis sp.n.*) intergrade, *i.e.* represent geographical races of single species; however, at the present state of knowledge they seem to be reproductively isolated.

### Philocteanus (Epidelus) wallacei (THS.)

Chalcophora (Evides) wallacei THOMSON 1857: 109-110 =Epidelus Wall. var. tricolor NONFRIED 1894: 31-32 [issp.] =Epidelus wallacei var. borneensis OBENBERGER 1916: 98 [issp.] =Epidelomorphus borneensis THÉRY 1925: 66-67

#### **Material examined:**

41 ♂, 14 ♀, 72 ø

#### **Characters:**

Males 16×6-20.5×8.5, females 15.5×5.5-23×8.5. Head and pronotum dark cupreous, elytra cupreous-bronzed to blackish-green in female, testaceous in male; ventral side goldengreen to cupreous, legs bluish-green, antennae violaceous. Pronotum almost regularly trapezoidal; collar well marked on sides, interrupted at middle; anterior midlateral foveae deep. Elytra in female subparallelsided to midlength, in males usually narrowed from humeri. Prosternal process coarsely and very irregularly punctured in both sexes, usually with marked (at least anteriorly) smooth median ridge.

**Geographical distribution:** Widely distributed on Malay Peninsula and Greater Sunda Islands.

**Remarks:** Pronotum usually darker, elytra more parallelsided, puncturation of prosternal process in male coarser and sparser than in P. (E.) philippinensis (SND.), but the differences slight and unclear.

### Sg. Asemochrysus DEYR.

Asemochrysus DEYROLLE 1864: 47-48 **Type-species:** Asemochrysus rugulosus DEYROLLE 1864

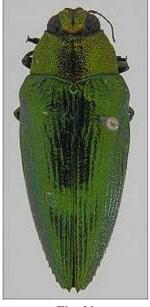
Mrazia OBENBERGER 1928: 134 **Type-species:** Mrazia zoufali OBENBERGER 1928

The subgenus contains two very inadequately known allopatric species of not firmly established validity, similar and probably related to *Epidelus DEYR*., but differing in markedly flattened body, much coarser dorsal sculpture, not or almost imperceptibly depressed front, lack of any distinct pronotal foveae, regularly and rather deeply striate elytra, wide almost regular smooth median stripe of prosternal process, shallowly but distinctly sulcate intercoxal process of 1. sternite. I have never seen a male *Asemochrysus DEYR*., and also all specimens described (DEYROLLE 1864, OBENBERGER 1928) or illustrated (BELLAMY 2003) in literature were apparently females, so nothing can be said of sexual dimorphism.

Two poorly known species from Borneo, ?Malay Peninsula and Indochina, but very scarce information does not allow to clarify the true extent of distribution.

### Key to the species of sg. Asemochrysus DEYR.:

- 1 (2) Dorsal side green. Elytra without dfp depressions ........... P. (A.) rugulosus (DEYR.)



**Fig. 20** *P. (A.) rugulosus (DEYR.)*♀ Borneo: Pengaron [RBH: BPb-x]



Fig. 21
P. (A.) zoufali (OBB.)

♀ Laos: Vientiane [RBH: BPinu]

### Philocteanus (Asemochrysus) rugulosus (DEYR.) Asemochrysus rugulosus DEYROLLE 1864: 47-48

**Material examined:** 

2 ♀

### **Characters:**

Females 23×8.5-24×9 [27×10.5 – DEYROLLE 1864]. Body dorsally dull green (front and pronotum with some golden hue), ventrally cupreous. Front shallowly but distinctly depressed in dorsal aspect. Pronotum almost twice as wide as long; sides very slightly convergent to just before midlength, then angularly bent to moderately conspicuous collar; disk regularly convex except broad but shallow and not conspicuous midlateral depressions; puncturation moderately coarse and dense at middle, becoming coarser and very densely "crowded" on sides; smooth stripe along middle not quite regular but entire; marginal carinae straight and prominently visible from above in basal half, abruptly turning downwards at midlength. Elytra somewhat sinuately subparallelsided in basal <sup>2</sup>/<sub>5</sub>, then arcuately-cuneately tapering to narrowly jointly rounded apices; lateroposterior margins sharply denticulate, sutural denticles somewhat longer, subspinose; surface with ca. 10 regularly depressed striae separated by convex intervals; coarser puncture rows in striae shallow and inconspicuous among dense, evenly distributed finer punctulation. Prosternal process broad, somewhat widened behind procoxae, sides with pair of coarsely and densely punctured stripes separating rather wide smooth (except very fine micropunctulation) median zone from very narrow marginal rims; anal sternite regularly rounded.

**Geographical distribution:** Described from Penang I. at the western coast of Malay Peninsula, but this may be a case of mislabelling, as otherwise the species has been known only only from Borneo.

Remarks: see under P. (A.) zoufali (OBB.)

### Philocteanus (Asemochrysus) zoufali (OBB.)

Mrazia zoufali Obenberger 1928: 134-135

#### **Material examined:**

```
Holotype: "Cochinchine" "TYPUS" [red label] "Mrázia Zoufali m. Type, Det. D<sup>r</sup> Obenberger" "Mus. Nat. Pragae, Inv. 20 000" [♀ (EONMP)]

Additional material: 1♀
```

#### **Characters:**

Females  $22.5\times8.5-28.5\times10.5$ . Body entirely cupreous-bronzed. Front flat, deeply grooved along midline. Pronotal sides distinctly convergent to near anterior third; smooth ridge along midline poorly developed, irregular; marginal carinae straight and prominently visible from above in basal  $\frac{2}{3}$ . Elytra with two pairs of poorly developed dfp depressions: small, closer to suture at anterior third and more extensive at *ca.* apical  $\frac{2}{5}$ . Otherwise almost identical to *P.* (*A.*) rugulosus (DEYR.).

**Geographical distribution:** Known from Cochinchine (*terra typica*) and Laos (BAUDON 1962a).

**Remarks:** I am unable to grasp the true meaning of BAUDON's (1962a) remark on "2 *immatures présentant une forme concave très curieuse, qui semble caractéristique*", but generally the extremely small number of examined, or even known from descriptions, specimens of both species does not allow reliable evaluation of the extent of individual or geographic variability, and thence the respective taxonomic "status" of Bornean, Malay, and Indochinese populations: the arrangement accepted here – two monotypic species – is poorly supported but in the present state of knowledge the most reasonable hypothesis.

\*\*\*\*\*

Thus, the genus *Philocteanus DEYR*., according to my current knowledge, contains the following subtaxa (names of those known to me only from descriptions written in *red*): *Philocteanus DEYROLLE* 

```
Pseudocallopistus Obenberer
=Callopistus DEYROLLE
=Descarpentriesia KUROSAWA
=Eucallopistus BELLAMY
=Holynskiella BELLAMY
        nigripes (THY.)
        ?= atrovirens (NFR.)
        castelnaudi (DEYR.
        =quedenfeldti (RICHT.)
        carteri (KERR.)
        resplendens (GY.)
                 resplendens s.str.
                 triangularis (KERR.)
                 =moultoni (KERR.)
                 =purpuriceps (THY.)
                 =platynotus (OBB.)
Micropistus THY.
?=Kolleria THY.
        hirashimai (KUR.)
        microcephalus (THY.)
        igneiceps (SND.)
        =toyamai (KUR.)
        strandi (OBB.)
        ?=costatus (THY.)
        =dilatatus (KUR.)
Philocteanus s.str.
        maitlandi LSB.
                 aereicolor ssp.n.
```

harmandi KERR.

```
=malayicus KUR.
                 =laticollis KUR.
                 capitatus KERR.
                 =subcupreus KERR.
                 =elegans THY.
                 maitlandi s.str.
                 =rutilans KERR.
                 =cupreus OBB (issp.)
        rubroaureus (DEG.)
                 moricii FRM.
                 =incisifrons THY.
                 =humeralis OBB.
                 rubroaureus s.str.
                 =plutus (C.G.)
                 =leucophthalmus (C.G.)
                 =buphthalmus THS.
Szentendreya HOŁ.
        bilyi HOŁ.
        vitalisi (BRG.)
        =gezai (HOŁ.)
        amicorum HOŁ.
Chrysopistus THY.
        savangvattanai (BD.)
        flammeus (THS.)
                 deyrollei FRM.
                 flammeus s.str.
                 =minimus THY.
                 =sumatrensis OBB.
                 =aeneoviridis FISH.
Cyalithus THS.
=Aprosopus DEYR.
        fouqueti (BRG.)
        bellamyi n.n.
        =philippinensis HOŁ.
        rugifrons (THS.)
                 rugifrons s.str.
                 continentalis HOŁ.
        escutellatus HOŁ.
        cohici (DESC.)
Epidelus DEYR.
=Epidelomorphus THY.
        ceramensis (THY.)
        =barbarae (HOŁ.)
        philippinensis (SND.)
        wallacei (THS.)
        =tricolor (NFR.) [issp.]
        =borneensis (OBB.) [issp.]
        =borneensis (THY.)
        masbatensis sp.n.
Asemochrysus DEYR.
=Mrazia OBB.
        rugulosus (DEYR.)
        zoufali (OBB.)
```

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