Three new species-group taxa of the subgenus *Cyalithus* Ths. of the genus *Philocteanus* DEYR. (Coleoptera: Buprestidae)

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ABSTRACT. Two new species and one new subspecies of the subgenus *Cyalithus* Ths. are described.

Key words: entomology, taxonomy, new taxa, Indo-Pacific Region, Philocteanus DEYR.

The name *Aprosopus* Deyr. was given (Deyrolle 1864) to a new genus erected to include the simultaneously described new Bornean species. The name has been later (Thomson 1864) changed (due to homonymy), but the "genus" (currently known as *Cyalithus* Ths., and only recently – Hołyński 2009 – recognized as a subgenus of *Philocteanus* Deyr.) was considered monotypic for several decades, until Bourgoin (1925) provided a "diagnose péliminaire" for the second species (*Aprosopus fouqueti* Brg.) [somewhat earlier – Bourgoin 1922 – described *Aprosopus vitalisi* Brg. does not belong here and has been later (Hołyński 1981) made (under synonymous name *Szentendreya gezai* Hoł.) the type-species of *Szentendreya* Hoł.] and then Descarpentries (1948) supplemented the list with *Cyalithus cohici* Desc. Thus, together with the originally included *Aprosopus rugifrons* Deyr., the subgenus has been hitherto known to contain three monotypic species, and its area of distribution to extend from Borneo to Cochinchine and Laos.

Some time ago C.L. Bellamy sent me for study various SE-Asian buprestids including – among other very interesting material, partly elaborated in my earlier publication (Holyński 2011) – 12 specimens of *Cyalithus* Ths. Closer examination revealed that they represent four taxa, three of them new; these, supplemented with some additional material from other collections, are described below.

CONVENTIONS AND ABBREVIATIONS

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:

CLBC = Charles L. Bellamy, Sacramento, USA;

CSCA = California State Collection of Arthropods, Sacramento, USA;

KBIN = Koninklijk Belgisch Instituut voor Natuurwetenschappen, Bruxelles, Belgium;

RBH = Roman B. Hołyński, Milanówek, POLAND:

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

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;

L = length;

W = width;

BW= basal width;

AW= apical width:

LW = width below:

UW= width above;

H = width of head with eyes;

V = width of vertex between eyes;

 \approx = approximately equal to.

DESCRIPTIONS

Philocteanus (Cyalithus) philippinensis Holyński sp. n. (Fig. 3)

MATERIAL EXAMINED

Holotype: "Samar, Baker, Island" [*sic!*] "CYALITHUS RUGIFRONS (H. Deyrolle) det. FISHER, cf. KINGSOLVER 1983" "Ex. Coll. C.L.Bellamy (CLBC)" [purplish label] [CSCA].

Paratypes: "Island Samar, Baker" [1° RBH: BPkib]; "Island Sibuyan, Baker" [1° USNM]; "Dapitan, Mindanao, Baker" [1° USNM].

Additional material: none.

DESCRIPTION

Holotype: Male 11.5×4 mm. Dorsal side dark bronzed-brown with some purplish shine (especially on front), only mandibles at base, epistome, sides of front before eyes, sides and (less bright) median line of pronotum and outermost intercosta of elytra

(separated from disk with a cupreous stripe) green; ventral side entirely green, only anteriormost part of metasternum (between mesocoxae) and apical part of intercoxal process of 1. sternite non-metallic testaceous; legs green; antennae piceous-brown with greenish shine on basal joints; labrum piceous-brown. Pronotum glabrous, head, elytra and ventral side with very short, dense, erect (head and prosternal process) or semirecumbent (otherwise), rather inconspicuous (especially on prosternum) whitish pubescence; femoral brushes not prominent.

Epistome very broadly arcuately emarginate, microsculptured, impunctate at middle and rather coarsely punctured on sides, separated from front by transverse (deep on sides, totally vanishing at middle) sulcus. Front trapezoidal, nearly as long as wide (LW:UW:L. \approx 1.1:1.0:1); shallowly depressed at middle, longitudinally convex on outer fourths (biconvex in dorsal aspect), median striola very fine; supraantennal carinae practically lacking; frontal punctation moderately coarse but very dense (subconfluent); vertex moderately wide (V:H \approx 0.6). Antennae long, reaching pronotal base; 1. joint somewhat fusiform, ca. $4\times$ longer than thick; 2. globular, slightly narrower and nearly equidimensional; 3. triangular, slightly wider than 1. and ca. $3\times$ longer than 2., not quite twice longer than wide; 4. -10. of similar width but progressively shorter (10. ca. as wide as long); 11. of similar dimensions to 10. but obovate with somewhat pointed inner distal angle.

Pronotum transverse, trapezoidal (BW:AW:L≈1.6:1.3:1); basal margin broadly arcuate on median 2/3, meeting lateral, obliquely backwards directed portions at obtuse but distinct angle; basal angles definitely acute; sides biarcuately convergent from base to very well developed apical "collar"; anterior margin nearly straight. Disk almost evenly convex except for deep (but interrupted at middle) preapical ("collar"-) sulcus, deep and broad transverse depression centered at basal third on each side, pair of deep punctiform pits delimiting central fourth of base, and another very small and inconspicuous pair accentuating angular bend between median arcuate and lateral oblique part of basal margin. Punctation fine, very dense at sides, rather sparse on disk, leaving impunctate stripe along midline; spaces between punctures conspicuously densely micropunctulate. Lateral carina straightly inclined in basal half, then bent arcuately downwards, sharp in basal 3/4. Scutellum minute but touching pronotal base.

Elytra $ca. 2.1 \times$ longer that wide. Sides rounded at humeri, without subhumeral angularities, then subparallel to basal fifth, shallowly sinuate to midlength and arcuately converging to narrowly separately rounded apices; lateroapical margin distinctly, sharply denticulate (sutural denticle rather prominent but not larger than others). 1. (sutural) and 2. costa distinct in apical half, 3. and 4. almost imperceptible, 5. well developed from basal fifth to near apex; punctation rather fine, in irregular rows, with interspersed finer punctures; microsculpture very fine, inconspicuous.

Anterior margin of prosternum straight; proepisterna almost smooth except for fine microsculpture; prosternal process broad, slightly convex, coarsely and sparsely punctured without lateral distinctively sculptured stripes or sulci. Metasternal punctation moderately coarse at middle, finer on sides, median stria almost imperceptible; metacoxae without denticle, transversely (deeply in median, shallowly in lateral part) depressed across midlength. Punctation of first sternite moderately coarse, sparse

at middle, otherwise abdomen finely (only apical part of anal segment coarser) and rather densely punctulated, extensive spaces on sides dfp; 3.-5. sternites with deep lateral depressions; apical margin of anal segment broadly rounded with very small but conspicuous indentation at middle.

Variability: Paratypes (female) somewhat larger (13-14.5×4.5-5 mm.); antennae shorter (reaching only to *ca*. basal third of pronotal sides); green colouration of head, pronotum and elytra almost totally reduced (in specimen from Sibuyan also ventral side almost totally dark-bronzed), with sides of elytra broadly cupreous; parts of metasternum and 1. sternite, testaceous in male holotype, in female paratypes are less extensive and dark-bronzed; apex of anal sternite narrowly to subacuminately rounded without incision

GEOGRAPHICAL DISTRIBUTION

Philippines: Sibuyan, Samar, Mindanao.

REMARKS

Deceptively similar to *P.* (*C.*) rugifrons (Deyr.) which differs mainly in colouration (epistome and anterior part of front bright cupreous-red, elytra reddish-bronzed – only in one specimen of the nominotypical race approaching dark brown colouration of Philippinean species, but even there the purplish-cupreous tinge is appreciable) and some details of structure (front less deeply depressed, pronotum somewhat more transverse, 5. elytral costa poorly developed).

Philocteanus (Cyalithus) rugifrons ssp. continentalis Hołyński ssp. n. (Fig. 5)

MATERIAL EXAMINED

Holotype: "LAOS Vientiane, Lao Pako, 28-30.v.2002, D. Farbiak" "Cyalithus fouqueti (Bourgoin, 1925), det. C.L. Bellamy 2003" "Ex. Coll. C.L.Bellamy (CLBC)" [purplish label] [\updownarrow (CSCA)].

Additional material: $1 \circ 1$.

DESCRIPTION

Holotype: Female 14.5×5 mm. Epistome dark golden; front dark (almost black, only side margins brighter) bluish-green; pronotum cupreous (darker at base) with blackish-green "collar", narrow lateral margins and bottoms of some punctures; elytra rather dark bronzed with green epipleura and very narrow (somewhat wider apically) lateral margin and inconspicuous cupreous lateroapical stripe; ventral side aeneous-

green; antennae (with bronzed-brown lobes) and legs green; labrum testaceous-brown. Pronotum glabrous; elytra with very short, recumbent, hardly discernible white pubescence; that on ventral side somewhat more apparent; on head very short but conspicuous, dense, erect; no femoral brushes but hind edge of metatibiae with dense row of short erect yellowish setae.

Epistome broadly arcuately emarginate, microsculptured, impunctate at middle and coarsely punctured on sides, separated from front by rather inconspicuous (deeper on sides, totally vanishing at middle) transverse sulcus. Front trapezoidal, nearly as long as wide (LW:UW:L.1.2:1.0:1); shallowly transversely depressed in lower half, biconvex in dorsal aspect, median sulcus coarse, smooth at bottom; supraantennal carinae practically lacking; frontal punctation moderately coarse but very dense (subconfluent); vertex rather wide (V:H \approx 0.5). Antennae moderately long, not reaching pronotal base; 1. joint somewhat fusiform, ca. $4 \times$ longer than thick; 2. globular, slightly narrower and nearly equidimensional; 3. triangular, slightly wider than 1. and ca. $3 \times$ longer than 2., not quite twice longer than wide; 4. -10. somewhat wider and progressively shorter (10. ca. as wide as long); 11. of similar dimensions to 10. but obovate.

Pronotum transverse, trapezoidal (BW:AW:L≈1.6:1.3:1); basal margin broadly arcuate on median 2/3, meeting lateral, obliquely backwards directed portions at obtuse but distinct angle; basal angles definitely acute; sides almost straightly convergent from base to apical fourth, then narrowly rounded to very well developed apical "collar"; anterior margin nearly straight. Disk almost evenly convex except for deep (but interrupted at middle) preapical ("collar"-) sulcus, broad but shallow and inconspicuous depression on each side, prescutellar pit, and pair of very small and inconspicuous pits at angular bend between median arcuate and lateral oblique part of basal margin. Punctation rather fine, very dense at sides, much sparser on disk, leaving almost impunctate stripe along midline; spaces between punctures conspicuously densely microsculptured. Lateral carina straightly inclined in basal half, then bent arcuately downwards, sharp in basal 3/4. Scutellum minute but touching pronotal base.

Elytra $\approx 2.1 \times$ longer that wide. Sides rounded at humeri, without subhumeral angularities, then subparallel to basal fifth, shallowly sinuate to midlength and arcuately converging to almost jointly rounded apices; lateroapical margin distinctly, sharply denticulate (sutural denticle rather prominent but not larger than others). Costae distinct, 1.-4. very slightly, 5. markedly elevated; punctation rather coarse in basal and lateral parts, much finer to very fine medioapically, inner rows regular, outer confused with interspersed not much finer punctures; microsculpture very fine, inconspicuous.

Anterior margin of prosternum straight; proepisterna almost smooth except for fine microsculpture; prosternal process broad, slightly convex, finely and sparsely punctured without lateral distinctively sculptured stripes or sulci. Metasternal punctation very fine and sparse at middle, somewhat coarser and denser on sides, median stria fine; metacoxae without denticle, transversely depressed across midlength. Punctation of abdomen fine and sparse at middle, denser laterally; lateral depressions rather shallow, no distinct dfp spaces; lateroapical margin of anal sternite distinctly explanate, apex acuminate.

Variability: Paratypes (all females) vary mainly in size (12.5-16×4-5.5 mm.) and elytral colouration (from bright cupreous to dark plumbeous-brown, with or without cupreous latero- and suturo-apical stripe); apex of anal sternite in some subacuminately rounded.

GEOGRAPHICAL DISTRIBUTION

Known from mid-western Laos and Peninsular Malaya, so probably occurs throughout Malay and southern part of Indochinese Peninsulae. A specimen (not included among paratypes) labelled "Borneo" but showing characteristics of this rather than the Bornean (nominotypical) race and almost identical to one from Laos, has been probably mislabelled.

REMARKS

Somewhat larger on the average than P. (C.) rugifrons (DEYR.) s.str., which differs also in darker (cupreous-red) epistome, predominantly blackish-green pronotum, conspicuous purplish tinge of elytra, deeper and larger pronotal depressions, finer pronotal sculpture, and some minor details. To this taxon may belong some or all Laotian specimens recorded by BAUDON (1966) as Cyalithus cohici Desc., although much larger size (21.5×7.7 mm.), details of colouration (vertex "rouge feu", "dessous ... a reflets cuivreux"), pronotum with regularly rounded lateral margins and maximum width at basal third, of the Cochinchinean type of the latter (according to the original description – Descarpentries 1948), makes its taxonomic identity with P. (C.) r. continentalis ssp. n. very unlikely. Yet another indochinese [terra typica Cochinchine, BAUDON (1966) reports it also from Laos] species is the (also unknown to me in nature and very poorly described – Bourgoin 1925) small (12.5×4.2 mm.) P. (C.) fouqueti (Brg.) whose "elytris nigro-violaceis, lateribus stricte viridi-metallicis" also seem to preclude the synonymy with the hereby described race, but the fact that all three specimens recorded are males makes the taxon somewhat suspect (generally in this subgenus males are much rarer than females).

Philocteanus (Cyalithus) escutellatus Holyński sp. n. (Fig. 2)

MATERIAL EXAMINED

Holotype: "MALAYSIA: Sabah, Crocker Range, Mt. Trus Madi, 1000m., N05°33'00" E116°31'00", vi. 2007, S. Chew, coll. "Ex. Coll. C.L.Bellamy (CLBC)" [purplish label] [δ (CSCA)].

Additional material: none.

DESCRIPTION

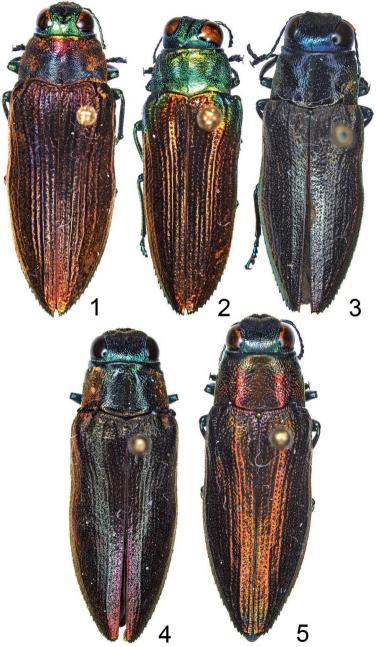
Holotype: Male 15.5×5 mm. Head (except blackish bottom of median groove), pronotum, humeral region and very narrow (almost vanishing behind midlength but again more conspicuous at apex) lateral margin of elytra, epipleura, ventral side, legs and antennae (except blackish lobes of triangular joints) bright green with some bluish tinge; elytra otherwise bright cupreous-red; labrum brown. Dorsal (including front) pubescence extremely short and hardly discernible, ventral not much more distinct except for sparse, long but very thin, erect additional setae on abdomen; no femoral brushes.

Epistome deeply emarginate with acutely protruding lateral angles, microsculptured, impunctate, separated from front by rather inconspicuous and irregular (because of coarse punctation) transverse sulcus. Front trapezoidal, definitely longer than wide (LW: UW:L.0.8:0.6:1); frontal depression rather deep, angular as seen from above, sharply delimited by paraboloidal furrow, very coarsely and densely irregularly punctured; median groove very coarse and deep; vertex narrow (V:H \approx 0.3), finely and not very densely punctulate. Antennae moderately long, reaching somewhat behind midlength of pronotal sides; 1. joint fusiform, ca. $3\times$ longer than thick; 2. subconical, slightly narrower than 1. and somewhat longer than wide; 3. triangular, as long and wide as 1.; not quite twice longer than wide; 4. -10. of the same width but progressively shorter (10. ca. as wide as long); 11. ovate, somewhat smaller than 10.

Pronotum transverse, trapezoidal (BW:AW:L≈1.7:1.4:1); basal margin rather deeply bisinuate; basal angles slightly acute; sides almost straight and subparallel (very slightly rounded and very slightly convergent) in basal 3/5 (up to this point lateral carinae clearly visible from above, here abruptly turning roundedly inwards), immediately again turning subparallel and roundedly convergent to very sharply marked "collar"; anterior margin nearly straight. Disk almost evenly convex except for deep (discernible even at middle) preapical ("collar"-) sulcus, conspicuous depression on each side, and pair of very small and inconspicuous prescutellar pits. Punctation rather coarse, very dense, irregularly confluent at sides, much finer and sparser on disk, impunctate stripe along midline very narrow and inconspicuous, slightly elevated; microsculpture very fine. Lateral carina slightly (more strongly at anterior end) bent arcuately downwards, sharp to apical sixth. Scutellum invisible.

Elytra 2.2× longer that wide. Sides rounded at humeri, without subhumeral angularities, then subparallel to basal fifth, shallowly sinuately convergent to midlength and arcuately so to jointly rounded apices; lateroapical margin distinctly, sharply denticulate. Costae 1. -4. inconspicuous, slightly elevated, 5. rather prominent; each elytron with 10 (scutellar not counted, 9. and 10. anteriorly confluent) not very coarsely punctured striae (inner 5 regular and continuously depressed, outer shallower and partly confused); interstriae impunctate; suture carinately elevated from basal fourth to apex; micropunctulation hardly appreciable at middle, very conspicuous on sides.

Anterior margin of prosternum straight; proepisterna almost smooth except for fine microsculpture; prosternal process broad, slightly convex, finely and sparsely punctured without lateral distinctively sculptured stripes or sulci. Metasternal punctation fine and very sparse at middle, still finer but denser on sides, median stria fine; metacoxae



1. Philocteanus (Cyalithus) escutellatus sp.n. PT $\ \ \, \hookrightarrow \ \ \,$ Borneo: Sabah ; 2. P. (C.) escutellatus sp.n. HT $\ \ \, \circlearrowleft \ \,$ – Borneo: Sabah ; 3. P. (Cyalithus) philippinensis sp.n. HT $\ \ \, \circlearrowleft \ \,$ – Philippines: Samar; 4. P. (Cyalithus) rugifrons (Deyr.) s.str. $\ \ \, \hookrightarrow \ \, \hookrightarrow \ \,$ – Borneo: Sabah ; 5. P. (Cyalithus) rugifrons continentalis ssp.n. HT $\ \ \, \hookrightarrow \ \,$ – Laos: Prov. Vientiane

without denticle, deeply transversely depressed across midlength. Intercoxal process of 1. sternite smooth, otherwise punctation of abdomen moderately fine and not very dense at middle, almost totally vanishing laterally; lateral depressions deep; anal sternite with conspicuous subtriangular depression before apex, apical margin deeply arcuately emarginated; small anal plate medially depressed.

Variability: Paratypes (females) differ in size (16-18.5×5.5-6.5 mm.), proportions (L:W≈2.9 vs. ca. 3.1 in male holotype), colouration (front with indefinite blackish spot at middle; no green on pronotum – except sides of "collar" – and elytra; pronotum concolorous with elytra or darker, purplish-black in basal half); less sharply – but still clearly – delimited frontal depression; width of vertex (V:H≈0.4); smooth median line on pronotum lacking or almost so; apically wider (as wide at midlength as in basal fifth) elytra; distinct dense, recumbent, short golden pubescence of ventral side but less conspicuous, shorter and sparser erect setae on abdomen; rounded apex of anal sternite.

GEOGRAPHICAL DISTRIBUTION

Known only from type-series collected in Sabah (NE-Borneo).

REMARKS

Lack of visible scutellum, depressed elytral striae, and narrow vertex make P. (C.) escutellatus sp.n. unmistakable among representatives of the subgenus [except, perhaps, P. (C.) fouqueti (Brg.), known to me only from the original "diagnose péliminaire" and to my knowledge never redescribed]; also very distinctive is the contrasting colouration of [unfortunately, unknown for P. (C.) r. continentalis ssp. n. and P. (C.) cohici (Desc.)] male and entirely or at least predominantly green head with well delimited frontal depression; deeply emarginated epistome with acutely protruding lateral angles.

With the addition of the new taxa described herein, the subgenus *Cyalithus* Ths. is currently considered to comprise 5 species (\pm 1 non-nominotypical subspecies) known from scattered (reflecting rather the distribution of collectors than that of the beetles) localities in Laos (prov. Sayaboury, Vientiane, Borikhane), Cochinchine, Malay Peninsula, Borneo (Sabah, Upper Mahakam Vy.) and Philippines (Sibuyan, Samar, Mindanao). Two of these taxa -P. (C.) fouqueti (BRG.) and P. (C.) cohici (DESC.) – remain unknown to me and clarification of their true identity needs examination of the types; I hope to get access to them before having finished the review of the entire genus *Philocteanus* DEYR. (now in the moderately advanced stage of preparation)

KEY TO SPECIES AND SUBSPECIES OF THE SUBGENUS CYALITHUS

- 1(8) Length of body below 19 mm.
- 3(2) Dorsal side (or at least elytra) predominantly cupreous-bronzed, rarely blackishbrown but without violaceous tinge
- 4(7) Scutellum visible; vertex wide: V:H≈0.5; elytral striae superficial

5(6) Dorsal side blackish-brown with cupreous lateral bands, front violaceous-black	5(6)
with (esp. in males) narrowly green anterior margin and midline	
philippinensis sp.n.	
6(5) Dorsal side predominantly cupreous-bronzed; front above epistome cupreous	6(5)
rugifrons (Ths.)	
a(b) Pronotum blackish, with more or less developed traces of smooth median	
carinula	
b(a) Pronotum cupreous-bronzed, no traces of median carinula	
rugifrons continentalis ssp.n.	
7(4) Scutellum invisible; V:H≈0.3; elytral striae deeply depressed <i>escutellatus</i> sp.n.	7(4)
8(1) Length of body above 20 mm	8(1)

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