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Review of the [Cyphogastra DEYR.]-supergenus (Col.: Buprestidae) II-VI Addenda & corrigenda

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Introduction

Among the material kindly sent me for examination by Dr. Lukáš SEKERKA (National Museum Prague) I found several interesting specimens (including two new species, additional representatives of taxa known hitherto only from holotypes, &c.) whose examination significatly supplements or modifies our knowledge concerning the *Bruyni-*, *Satrapa-*, *Javanica-* and *Ventricosa-*circles published in, respectively, parts II, III, IV and VI of the **Review** – the aim of this contribution is to present the respective descriptions and comments. The new species have been named for the memory of two Polish XIX/early XX c. scientists who – like so many others... – had not the privilege of working in and/or for their Motherland (Poland at that time "officially" did not exist, having been torn up between members of the "alliance of three black eagles": Russia, Prussia and Austria).

Abbreviations:

H = width of head with eyes V = width of vertex between eyes

 \emptyset = sex unknown

BP*** = (e.g. BPeip): specimen-identifying signature in my collection

 \approx = approximately equal

= sign separating data in different rows on the quoted labels

Collection acronyms:

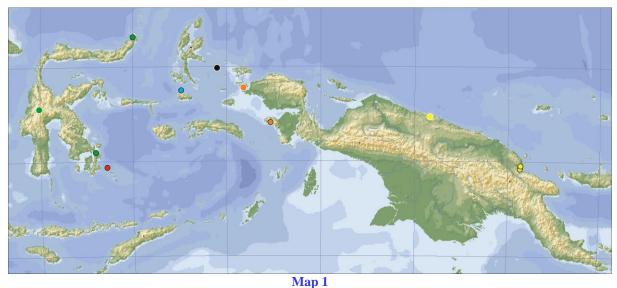
EONMP = Entomologické Oddelení Národního Musea, Praha, CZECHIA

RBH = Roman B. HOŁYŃSKI, Milanówek, POLAND

[for other followed conventions, explanations of terms, abbreviations &c. please – if needed – consult earlier parts of the Review].

Cyphogastra DEYR. Cyphogastra DEYR. s. str.

Cyphogastra DEYROLLE 1864: 36-37 [type-species: Buprestis foveicollis BOISDUVAL 1835]



Geographical distribution of the discussed taxa

C. minahassae Hol.;
C. kubaryi sp.n.;
C. pilsudskii sp.n.;
C. maura Hol.
C. sulcipennis GST.;
C. dissimilis GST.

[symbols encircled with white − general area, exact loality unkown]

Bruyni-circle

[cf. HOŁYŃSKI 2020b]

Cyphogastra (s.str.) dissimilis KERR.

Cyphogastra dissimilis Kerremans 1895: 208

= clara Kerremans 1910: 168 (key) [nec Kerremans 1896: 356, non Kerremans 1910: 232 (text)]

Material examined:

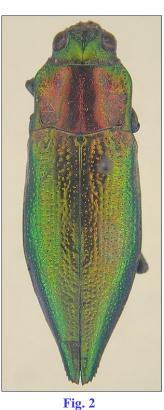
Additional material: $5 \circlearrowleft 1 \varnothing$

Remarks: C. dissimilis KERR. is a somewhat enigmatic nominal taxon: I have never seen the type; KERREMANS' (1895) description vaguely suggests affinity to the Bruyni-circle but does not refer to several characters potentially diagnostic at the species-level; "Sulo" quoted as type-locality looks strongly suspect, the more so that some specimens marked as "syntypes" of other New Guinean species described by the Belgian author have also been labelled as "Sulo" [C. apicalis KERR. (=C. pisciformis DEYR.), C. aereiventris KERR.] or "Borneo" (C. aereiventris KERR., C. violaceiventris KERR.); the "syntype" of C. dissimilis KERR. in the BMNH collection bears the label "Waigiou" and belongs to C. pisciformis DEYR.; comparison to "la précédente" [C. cupricollis KERR. (=C. nitida KERR. - Albertisi-circle, by the way also described from "Bornéo"!] further increased the confusion! So, I considered C. dissimilis KERR. as a nomen dubium impossible to reliably interpret without examination of the type, and consequently left it unmentioned in the hitherto published parts of the **Review**. However, among the beetles recently sent me for study by L. SEKERKA (EONMP) there is one [Fig. 1] labelled by OBENBERGER as "Cyphogastra dissimilis KERR.?" and almost perfectly matching the characters mentioned in the original description, what prompted me to reconsider the question. The specimen evidently belongs to the Bruyni-circle, and prominently developed circum-humeral dfp sulcus on elytra evidences the affinity to C.

bruyni LSB. and C. sulcicollis KERR. [Fig. 3]. KERREMANS (1895) does not mention that circum-humeral dfp, but having now consulted his Monographie (KERREMANS 1910) I realised that, although the main text is but an exact copy of the original diagnosis, there is one important additional remark I had overlooked hitherto: "les impressions ... des élytres absentes, sauf celle de la base, qui forme deux fossettes pulvérulentes et un sillon huméral à peu près semblable à celui de C. Bruyni Lansb., mais moins accusé" [boldface mine: RBH], what removes any serious doubt as to the affinity to the C. bruyni LSB./C. sulcicollis KERR. clade. The status of C. dissimilis KERR. remains somewhat questionable: "dessous" vert doré très brilliant à reflets cuivreux" precludes synonymy with C. bruyni LSB., but it can be (and very likely is) taxonomically identical to C. sulcicollis KERR. (exactly: a variety – occurring also in C. bruyni LSB. – characterized by form of pronotal fossae); however, in each

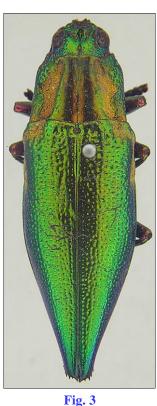






C. "clara" KERR.

[KBIN], NG: Astrolabe Bay



specimen available now to me for examination (including the above-mentioned "bruyni-coloured" specimen from EONMP), this character is invariably accompanied by subparallel sides of pronotum (definitely convergent in other representatives of the Bruyni-circle) and relatively small but robust body with usually less caudate elytra, what suggests taxonomic validity, thus – in accord with my frequently stated opinion that erroneous acceptation of distinctness is much less harmful than unjust synonymization – I tentatively consider C. dissimilis KERR. a separate species currently known from the vicinities of Humboldt and Astrolabe Bays [Map 1], in apparent sympatry with C. bruyni LSB. and/or C. sulcicollis KERR. (but it must be noted that now I have access to – and thus am able to verify the identifications of – only a small part of the specimens listed in my database as C. bruyni LSB. and C. sulcicollis KERR: some of those examined earlier may also prove to belong to C. dissimilis

KERR., and so the distribution maps of all the three species may need modification!); anyway, apparently sympatric occurrence of three – or even, in the Humboldt Bay area, four (with *C. dohertyi Kerr.*) – so closely related and deceptively similar species would be extremely interesting phenomenon worth of a special detailed study and explanation! By the way, if *C. dissimilis Kerr.* is indeed valid (distinct from *C. sulcicollis Kerr.*) species, then the specimen [Fig. 2] I (HOŁYŃSKI 2020a) supposed to be the same on which Kerremans (1910, not Kerremans 1896) based his key (not the respective description!) leading to *C. "clara Kerr."* and Théry (1926) his synonymization of *C. clara Kerr.* with *C. bruyni Lsb.*, belongs in fact to *C. dissimilis Kerr.* rather than to *C. sulcicollis Kerr.* (as I – Hołyński 2020a,b – believed).

Cyphogastra (s.str.) maura HoŁ.

Cyphogastra maura HOŁYŃSKI 2020b: 41

Material examined: N-Moluccas: Gébé I., III 2014



Fig. 4 *Cyphogastra maura HoŁ.*♀ [EONMP], Gébé I.

Remarks: *C. maura Hoł*. **[Fig. 4]** has been described and hitherto known only from the female holotype collected almost 150 years ago (1877) on Gébé island (*ca.* midway between Waigeo and Halmahera [Map 1]). The material sent from EONMP contains second known specimen, from the same island, also a female, somewhat smaller (30.5×9.5 as compaed to 35×11 mm.) but otherwise virtually identical to the type. This insular species shows the set of characters intermediate between those of the *C. bruyni Lsb.* and *C. viridis Kerr.* groups, and seems to belong – contrary to my earlier (Hołyński 2020b) opinion – to the former rather than to the latter of them.

Satrapa-circle

[cf. HOŁYŃSKI 2020c]

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

Material examined:

Holotype: "Indonesia, NC. Moluccas || BISA ISLAND, 0-50 m alt || N of Obi isl., 3.2008 || local collector lgt" "ex coll. S. Bilý || National Museum || Prague, Czech Republic" [♀ (EONMP)]

Paratype: "Indonesia, NC. Moluccas || BISA ISLAND, 0-50 m alt || N of Obi isl., 3.2008 || local collector lgt" "ex coll. S. Bilý || National Museum || Prague, Czech Republic" [1♀ (RBH: BPm-t)]

Additional material: none

Holotype [Fig. 6]: Female 27×8.5 mm. Dorsal side entirely black, ventral green with golden-cupreous reflexions. Pilosity of prosternal sulcus dense, white, moderately long, semierect; dfp areas covered with very short and dense, recumbent yellowish pubescence; otherwise body glabrous.

Epistome deeply emarginate, epistomal ridge inconspicuous; transverse groove below wavily transverse supraepistomal carina deep. Front much wider than long, sides slightly divergent; frontal depression broad, reaching distinctly behind upper margins of eyes; anterior cavity (rather coarsely) and vertex behind eyes (finely) not densely punctured, otherwise punctulation of head fine and very sparse; periocular sulci and median groove deep, prominent. V:H \approx 0.55. 1. antennal joint club-shaped, ca. 3× longer than thick; 2. globular, as long as wide, ca. 4× shorter and definitely thinner than 1.; 3. thickened towards apex, as long as 1. but as wide as 2.; 4. elongately triangular, slightly shorter but much wider, as wide as 1.; 5.-10. subrhomboidal, progressively somewhat shorter; 10.-11. missing.

Pronotum transverse, sides shallowly sinuate, subparallel; base bisinuate; basal angles acute; anterolateral angles well marked but not protruding; collar indistinct; anterior margin rather shallowly sinuate on both sides of broadly truncated median lobe. Median depression moderately deep, finely and densely punctulate at bottom, otherwise diskal punctures somewhat coarser and much sparser, space near anterior angles coarsely and densely sculptured; fossae deep, broad, obliquely ovate, extensively dfp; no distinct anterior foveae; prehumeral reliefs narrowly elongately triangular, finely punctulate. Scutellum small, trapezoidal, *ca.* as wide (apically) as long.

Elytra subparallel to before midlength, then almost straightly convergent to narrowly jointly rounded apices, very slightly cuneate; lateroapical margin with some moderately prominent denticles. No trace of costae or depressions; puncturation rather dense, coarse basally, progressively finer backwards but not very fine even near apices; rows confused anteriorly and apically, more or less regular in between.

Proepisterna entirely dfp; prosternal process narrowly sulcate, sulcus rather densely and finely punctured; punctulation of lateral rims, as well as median parts of meso- and metasternum, very fine and sparse; sides of sternum and metacoxae extensively dfp; metasternum finely grooved along midline. Abdominal plaque low, somewhat roundedly right-angled in profile, surface covered with very fine, sparse, elongate punctures; otherwise puncturation of abdomen moderately coarse but sparse, with well delimited perimarginal and middiscal dfp stripes; apex of anal sternite with – as for female – very large triangular incision.

Variability: Paratype somewhat smaller (24.5×7.5 mm.), with proepisterna only partly dfp, but otherwise practically identical to the holotype.

Geographical distribution [Map 1]: Both known specimens collected on Bisa island Moluccas: N of Obi I.).

Remarks: Black dorsal colouration makes *C. pilsudskii sp.n.* similar to *C. carbonaria Thy.* [Fig. 5] an dark varieties (*m. halmaheirae OBB.* [Fig. 7] and *m. ludekingi OBB.*) of *C. satrapa (SCHH.)*, but it differs from the former in green ventral side, from the latter in coarser puncturation and lack of bluish shine, and from both in broad, extensively dfp fossae and narrowly elongately triangular prehumeral reliefs on pronotum. Named in honour of Polish anthropologist Bronisław PIŁSUDSKI (elder brother of Józef, the "father of Polish independence"), exiled by Russian Tsar to Sachalin where he became famous for his pioneering studies on the indigenous Orok, Nivkha, and especially Ainu people.



Fig. 5

Cyphogastra carbonaria THY.

♀ [BPcjk], Halmahera



Fig. 6Cyphogastra pilsudskii sp.n.
HT ♀ [EONMP], Bisa I.



Cyphogastra satrapa (SCHH.) var.

♀ [Bpdxr], Halmahera

Updated key to the identification of species of the Satrapa-circle

- 2 (1) Dorsal side either entirely metallic or entirely black
- 3 (16) If body bright green, then cupreous-red streak on elytra more or less distinct and pronotal fossae without or with only rudimental dfp spots
- 4 (15) Elytra not or but slightly caudate, dorsal profile at most indistinctly concave
- 5 (8) Elytra definitely not caudate, apices rather broadly jointly rounded

- 8 (5) Elytra usually slightly but distinctly caudate, very narrowly rounded or subtruncate at apices
- 10 (9) Dorsal side variously coloured, if bronzed than puncturation at least moderately coarse
- 12 (11) Fossae c-shaped, at most partly dfp, prehumeral reliefs more or less distinctly quadrangular. if dorsal side black then either with discernible bluish hue or ventral also black

13 (14)	Body entirely black	C. (s.str.) carbonaria THY.
14 (13)	Ventral side metallic (cupreous, green or blue)	. C. (s.str.) satrapa (SCHH.)
15 (4)	Elytra markedly caudate	C. (s.str.) augustini THY.
16 (3)	Body green with no trace of cupreous-red on elytra. Fossae extensive	ly dfp
17 (18)	Fossae in basal half more extended inwards: inner margin closer to n	nidline than to pronotal side;
	base of prescutellar lobe elevated as smooth rim widened sidewards	s; apical half of lateral ridge
	distinctly widened anterad	C. (s.str.) sulana H0Ł.
18 (17)	Basal half of fossae narrower: their inner margin ca. as distant fro	m pronotal midline as from
	lateral margin; basal margin of prescutellar lobe undifferentiated; an	nterior half of lateromarginal
	ridge of pronotum parallelsided	C. (s.str.) minahassae HOŁ.

Cyphogastra (s.str.) minahassae HOŁ.

Cyphogastra minahassae HOŁYŃSKI 2020c: 89-90

Material examined: Celebes: Seko, III 2003 (2°); Butung I., VI 2000 (6°); Butung I.: Walue, III 1998 (1°)

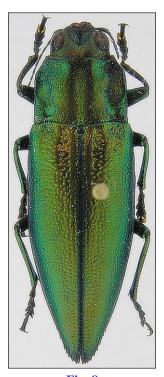


Fig. 8

Cyphogastra minahassae HOŁ.

♀ [EONMP], Butung I. Walue

Remarks: *C. minahassae Hoł.* [Fig. 8] has been hitherto known only from the holotype collected in (or at least labelles as) Menado [Map 1] at the northeastern end of the northern peninsula of Celebes; the new EONMP material not only significantly increases the "factual base" for *e.g.* understanding of the range of variability (confirming the stability and, thence, the diagnostic value of the characers distinguishing *C. minahassae Hoł.* from otherwise deceptively similar *C. sulana Hoł.*, so supporting their taxonomic validity), but also widely extends the range of geographical distribution of the former – Seko is an area at midle of Celebes, Butung an island off its southeastern peninsula – making highly probable its wide occurrence throughout Celebes, what is rather unfrequent for the island of so complex build and geological history.

Javanica-circle

[cf. HOŁYŃSKI 2020d]

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

Material examined:

Holotype: "WANCEH || WANGIWANGI || TUKANGBESI || ARCHIPEL || SO-SULAWESI || APRIL 1998" "ex coll. V. Kabourek || National Museum || Prague, Czech Republic" [& (EONMP)]

Additional material: none

Holotype [Fig. 9]: Male 26×8.5 mm. Head greenish-black, pronotum greenish-bronzed, elevated parts of ventral side golden-green, elytra green with triangular blackish-blue periscutellar patch extending to apical fourth and narrowly prolonged along suture to apices and along lateral margin back to *ca.* apical eighth, epipleura partly purplish, dfp areas cupreous, antennae and tarsi piceous brown. Dfp areas covered with dense, recumbent pale yellowish pubescence and ochraceous pulverulence; median sulcus of prosternal process filled with very dense erect pubescence, that of metasternum somewhat less so; body otherwise glabrous.

Epistome broadly trapezoidally emarginate; sharply elevated epistomal ridge also trapezoidal; supraepistomal carina low, rather inconspicuous, transverse depression below it moderately deep and very coarsely punctured. Front wider than long, sides divergent; frontal depression deep, triangular, reaching distinctly behind upper margins of eyes; lateral ridges and periocular sulci hardly distinguishable; median groove fine, sharply defined; front irregularly, rather coarsely punctured; V:H \approx 0.5. 1. antennal joint club-shaped, robust, *ca.* 2.5× longer than thick; 2. somewhat wider than long, *ca.* 5× shorter and much thinner than 1.; 3. flattened, elongately triangular, slightly shorter and narrower than 1.; 4. still shorter but apically as wide as 1., 1.5× longer than wide; 5.— 10. progressively shorter and narrower; 11. definitely longer than 10., narrowly asymmetrically subovate.

Pronotum transverse, sides straight, almost inappreciably divergent; basal angles slightly acute, anterolateral well marked, very inconspicuously protruding; collar poorly defined; base bisinuate, prescutellar lobe moderately prominent; anterior margin deeply sinuate on both sides of broadly truncated median lobe. Median depression moderately deep, not distinctly striated but very finely and densely punctulated at bottom; laterobasal fossae very irregular, c-shaped, subdivided into narrowly longitudinal basal and somewhat broader foveolate mediolateral part, both coarsely sculptured and but indistinctly irregularly dfp; anterolateral fovea prominent, anteromedian barely distinguishable; prehumeral relief rhomboidal with acute anteromedian angle (almost completely separating midlateral from basal part of fossa), coarsely and densely punctured; puncturation of elevated parts of disk rather coarse and sparse at middle, much coarser and denser on sides. Scutellum trapezoidal, as long as wide, impunctate.

Elytra without subhumeral protrusion, sides very slightly concavely subparallel to near basal half, then sinuately convergent to definitely caudate, jointly rounded apices; lateroapical margin with 8-9 sharp prominent denticles. Elytral puncturation irregular, very coarse on basal fourth, fine and sparse on apical half; scutellar stria deep, continuous, distinctly though not coarsely punctured, extending to basal fourth; no trace of dfp depressions or sulci.

Proepisterna almost entirely dfp; median sulcus of prosternal process broad, finely and very densely punctulate; lateral rims very narrow, almost impunctate; metasternum deeply sulcate along midline, disk finely and sparsely punctured, sides almost entirely dfp. Abdominal plaque finely and sparsely punctulate, prominent, rather high but in profile

broadly rounded; sides of abdomen entirely dfp (lateral dfp bands not separated from middiscals), midline rather coarsely but sparsely punctured; apex of anal sternite neither very deeply nor very broadly angularly emarginated.

Geographical distribution [Map 1]: Wangiwangi island of the Tukangbesi group (SE of Celebes).

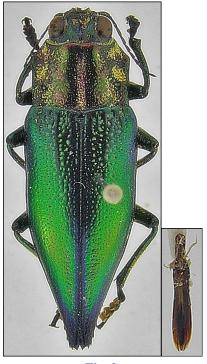


Fig. 9 *Cyphogastra kubaryi sp.n.*HT ♂ [EONMP], Wangiwangi I.

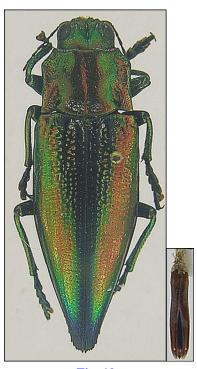


Fig. 10
Cyphogastra cribrata DEYR.

\$\trianglerightarrow{\text{GPi-ol}, Tevor I.}\$

Remarks: C. kubaryi sp.n. is deceptively similar to C. cribrata THY. [Fig. 10] from Matabello (Watu Bela) island group SE of Ceram [cf. HOŁYŃSKI 2021), which differs but slightly in colouration (cupreous elytral patch), very low and densely punctured abdominal plaque, perimarginal dfp stripe on abdomen separated from middiscal, somewhat more robust aedoeagus with almost straightly convergent sides of apical half of parameres, &c.; based on the morphological differences alone it could be considered an individual variety, but wide geographical separation makes such interpretation very unlikely. The discovery of an apparent "sister"-species of C. cribrata THY. at the extreme northwest of the hitherto known limits of the Javanica-circle's distribution range, in close proximity of rather remotely related C. transmarina HOL. but very far from the closest relative, is rather surprising and not easily explainable biogeographically – the most likely interpretation sems to be passive dispersal: "travel" on a host-tree floated by the westerly north Banda Sea current (responsible, perhaps, also for the occurrence – if real... – of C. javanica SND. and C. angulicollis DEYR. on Banda Is.) [see e.g. HOŁYŃSKI (2016) for the discussion of the probabilities of such dispersal]. The name is intended to honour Polish XIX c. ethnographer and naturalist Jan Stanisław KUBARY, who – having escaped from partitioned Poland after suppression of the "January Uprising" – spent a great part of his remaining life in Oceania studying ethnography and natural history of Samoa, Fidji, Marshall Is., and especially Ponape (=Pohnpei).

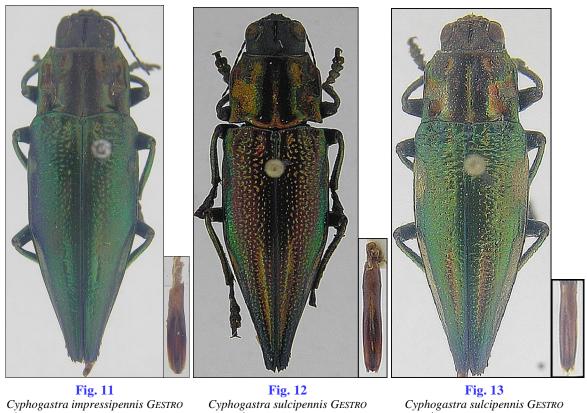
Ventricosa-circle

[cf. HOŁYŃSKI 2020d]

Cyphogastra (s.str.) sulcipennis GST.

Cyphogastra sulcipennis GESTRO 1877: 352-353

Material examined: W-New Guinea: Fakfak, V 2000 (13)



♂ [BPeii], W-N.Guinea: Mansinam

(EONMP), Fakfak

♂ [EONMP], Salwatti I.

Remarks: The geographical distribution of C. sulcipennis GST. [Fig. 12, 13] is very poorly understood: although originally described from single female labelled "Ansus" (on Jobi I. in the Geelvink Bay), in fact its only reasonably certain homeland seems to be Salwatti I.: Jobi is also a terra typica of – indeed apparently common there – C. impressipennis GST. [Fig. 11], whose close affinity and deceptive similarity makes their sympatric occurrence on not so large island highly improbable; this holds good as well to the single specimen labelled "Sorong" (northern areas of the Vogelkop Peninsula seem also inhabited by C. impressipennis GST.), whereas "Goram" or "Selangor" are certainly mislabellings. Thus, the occurrence in Fakfak – if confirmed as indigenous – would be a very interesting extension of the known distribution range.

Acknowledgements:

I am greatly indebted to Dr. Lukáš SEKERKA for kindly sending me this interesting material for examination and study.

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