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Review of the [*Cyphogastra* DEYR.]-supergenus (Col.: Buprestidae) Supplementary notes

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Introduction

The work on **Part IX** of the **Review** progresses, unfortunately, much slower than originally planned and expected, but from time to time, mostly thanks to the kindness of some Colleagues, new material appears, allowing to introduce minor but important corrections, additions and/or partial re-interpretations to the already published **Parts I-VIII**. Thus, some specimens which have recently become available for examination enabled me to clarify the identity of hitherto enigmatic nominal taxon *Cyphogastra fruhstorferi* NFR., what urged me to write this paper, to which – avoiding superfluous multiplication of separate “contributions” – I decided to include also new records of some recently described and/or poorly known taxa, as well as the long contemplated reinterpretation of the subgeneric structure of *Cyphogastra* DEYR.

***Cyphogastra* DEYR.**

Cyphogastra DEYROLLE 1864: 36-37

[type-species: *Buprestis foveicollis* BOISDUVAL 1835]

The content of the subgenus *Guamia* THY.

Cyphogastra (*Guamia*) THÉRY 1930: 50)

[type-species: *Cyphogastra auripennis* SAUNDERS 1867]

Remarks: Contrary to the original concept of THÉRY (1930), who defined his newly established subgenus as containing only the Mariana Is. group of *Cyphogastra* DEYR., the Marquesan lineage shows evident affinity to it and, consequently, I (HOLYŃSKI 1992, 2016) considered both of them as members of *Guamia* THY. However, re-checking and re-evaluation

(on grounds of detailed study of the extent and pattern of morphological variability) of diagnostic characters in the course of preparation of **part IX** (systematic recapitulation and conclusions) of my **Review**, made it evident that the differences between the two are nevertheless sufficiently important to separate them at the subgeneric level, while a performed series of preliminary partial phylogenetic analyses has conclusively corroborated the dominant opinion that similarities of the Marquesan species to *Pleiona tayauti* (GUÉR.) result from phylogenetic affinity, not being – as one might suppose – of but purely convergent (mimetic?) nature. In other words, THÉRY (1930) was partly (explicitly excluding *C. bedoci* THY. [= *C. similis* KERR.] – and, by implication, the entire Marquesan group – from his new subgenus) right, but partly (in so leaving them in *Cyphogastra* DEYR. s.str.) wrong: they are definitely still less closely related to the nominotypical taxon than the Mariana Is. clade. Thus, *Guamia* THY. must be treated in accord to THÉRY's (1930) original concept, as containing only the *C. [auripennis* SND.] superspecies (*C. auripennis* SND., *C. longueti* THY., *C. latro* KERR.) from Mariana Archipelago, whereas the Marquesan *C. taitina* KERR. and *C. similis* KERR. must be separated into a subgenus of their own:

***Hivaia* sg.n.**

Taitina-circle: HOLYŃSKI 2016

[type-species: *Cyphogastra taitina* KERREMANS 1919]

General characteristics: Moderately large (♂ 22.5×6.5 – 29.5×9; ♀ 24×7.5 – 38×12 mm.), somewhat flattened, lustrous, usually [sometimes bluish-]green with cupreous elytral margins and purplish or purplish-green ventral side; antennae (except 2 or 3 basal joints) and tarsi (except claw-joint) yellow. Dfp areas small, sparse, irregular even on ventral side, only in pronotal fossae and more or less in proepisterna conspicuous. Pronotum roughly rectangular; basal margin shallowly bisinuate; sides somewhat sinuately subparallelsided; anterolateral angles well marked but not protruding; anterior margin sinuate to both sides of narrowly, rather deeply emarginate median lobe. Lateral carinae (including narrow, indistinct, rather irregular prehumeral reliefs) covered with moderately coarse but not very dense punctures, otherwise pronotal surface looks almost impunctate; medial furrow distinct but shallow and narrow, fossae moderately broad, c-shaped. Elytra not or but very indistinctly caudate, no subhumeral protrusion, elytral side with 4-6 prominent long denticles shortly before spiniformly acuminate apex; punctulation of elytral surface almost imperceptible to moderately fine and dense. Median sulcus of prosternal process deep, narrow in female, broader in male; incipiences of abdominal plaque barely indicated; middiscal dfp stripes on abdomen inconspicuous, perimarginal almost nonexistent; anal sternite normally coloured in both sexes, apex rather broadly and deeply subparaboloidally emarginated in male, narrowly rounded in female.

Included species: *C. taitina* KERR., *C. similis* KERR.

Geographical distribution: Fatu Hiva, Ua Pou and Nuku Hiva islands of the Marquesas Archipelago; both included species described from Tahiti, but this seems based either on mislabelling or artificial introduction.

Remarks: From superficially similar *Pleiona* DEYR. differs in ventral profile culminating – like in all *Cyphogastra* DEYR. – at apex of 1. sternite rather than at anterior margin of metasternum; from the related *Guamia* THY. in yellow antennae, subparallelsided pronotum, denticulated elytral apices, &c.; and from the nominotypical subgenus in practically non-existent (indiscernible in profile: barely marked on sides but not even indicated along midline) abdominal plaque.

The identity of *Cyphogastra fruhstorferi* NFR.

Cyphogastra Fruhstorferi NONFRIED 1894: 30-31

=*dohertyi* KERREMANS 1911: 296

Material examined: “INDONESIEN || Java” “CYPHOGASTRA s.str. || fruhstorferi Lansberge 1894 || det. Barries 2017” [2♂ (RBH: BPmcw, mcx)]; “INDONESIEN || Java || K. Snyder” [1♂ (RBH: BPmcy)]; “Indonesia || Java März 1991 || leg. Snyder” “CYPHOGASTRA s.str. || fruhstorferi Lansberge 1894 || det. Barries 2017” [1♀ (RBH: BPmcy)]

Remarks: *C. fruhstorferi* NFR. has not been included in any of the “descriptive” (I-VIII) parts of my **Review** (HOLYŃSKI 2016, 2020a,b,c, 2021b, 2022a,b, 2024) because – having never seen the types (nor any other so determined specimen) I was unable to develop a reliable opinion as to its possible placement in the system: originally NONFRIED (1894) considered it a relative of *C. wallacei* DEYR. (“*Cyph. Wallacei affinis*”, “*Zu Cyph. Wallacei zu stellen*”), what would mean its belonging to the *Bruyni*-circle, but e.g. the shape of pronotum (“*thorace subquadrato*”; “*Thorax länglich[???]-viereckig*”) and pronotal fossa (“*una magna [plagula] C-formi postice*”, “*eine C-förmige Make*l”) seemed to contradict such classification, suggesting rather affinity to some members of the *Satrapa*-circle, while the geographical origins (“*Java*”) looked very improbable for a representative of either of the above (and, indeed, for any other except morphologically quite dissimilar *C. semipurpurea* group...).

It was only recently that I received four specimens determined by W. BARRIES as “*Cyphogastra fruhstorferi* Lansberge [*sic!*] 1894”, and indeed rather well corresponding with the original description: the only apparently significant seems to be the difference in size (23-28 mm. vs. “*Long. 32-37 mm.*”). In accord with NONFRIED’s (1894) suggestion they evidently belong to the *Bruyni*-circle [contrary to my initial (mentioned above) reservations the shape of pronotum (sides varying from definitely convergent to almost parallel) and fossa (only in female somewhat broader and more regular than usual) – even if in extreme cases might give the impression of subquadrangular/C-shaped – fit nevertheless well within the range of the within-circle variability]; indeed, closer examination revealed their perfect identity with *C. dohertyi* KERR. [cf. **Fig. 1** with **2-3** and **4** with **5**!] It is not easy to explain so astonishing conclusion: natural occurrence on Java of a species otherwise narrowly distributed (see **Map 2** in **Part II** – HOLYŃSKI 2020a – of the **Review**) at middle of the northern coast of New Guinea (Huon Gulf area) and nowhere in between seems rather impossible (even if naïve suggestions of parallel evolution, allegedly leading to the formation of taxonomically indistinguishable forms in widely separated localities, from time to time reappear...), so two possibilities remain: artificial introduction or mislabelling [to me the latter seems much more likely, the more so that none of my “Javanese” examples bears a label indicating any exact (beyond “Java”) locality and, moreover, the collector of at least two of them (including female found in “*März 1991*”) was... K. SNYDER who at that very time (1990-1991) collected many specimens of *C. dohertyi* KERR. near Jayapura, 3000+ km. apart!].

Anyway, my Javanese specimens are evidently conspecific with New Guinean *C. dohertyi* KERR. – but are they also conspecific with *C. fruhstorferi* NFR.? Two aspects of the original description – unfittingly large size of the type specimens, and their origin from Java (if – as argued above – my specimens originated in fact from New Guinea) – apparently preclude such possibility. However, the hiatus in size (23-28 mm. in my Javanese specimens, 32-38 mm. according to NONFRIED 1894) may be insignificant [10 ex. in W. BARRIES’ collection measure 22-32 mm. (pers. inf.), the range of variability in New Guinean *C. dohertyi* KERR. as measured by me in various collections is 20-34 mm. (HOLYŃSKI 2020a)] or even simply sham (22-28 misread as 32-38 – not so rare type of mistake.). On the other hand,



Fig. 1

Cyphogastra dohertyi KERR.
♂ [BPftf], NG: Jayapura



Fig. 2

Cyphogastra fruhstorferi LSB.
♂ [BPmcv], Java



Fig. 3

Cyphogastra fruhstorferi LSB.
♂ [BPmcw], Java



Fig. 4

Cyphogastra dohertyi KERR.
♀ [BPftc], NG: Jayapura

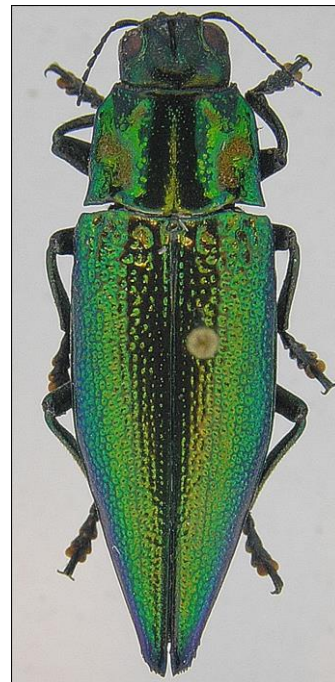


Fig. 5

Cyphogastra fruhstorferi LSB.
♀ [BPmcy], Java

geographical origins of described specimens are in XVIII-XIX c. publications very often glaringly erroneously indicated, and especially schematic, generalized localities like “India” or “Java” (and some popular end-points of shipping lines: “Bombay”, “Batavia”, “Manila”) must be treated with caution; indeed, specimens of definitely not Javanese [*e.g.* Moluccan *Cyphogastra satrapa* (SCHH.) or (eastern) New Guinean *C. albertisi* GST.] species labelled “Java” can be found in some collections (southern Moluccan – apparently endemic to Key Is. – *C. javanica* SND. has been, like *C. fruhstorferi* NFR., originally described as from there!). Wanting other contradicting evidence it seems impossible to avoid the apparently only justifiable (even though its final confirmation by examination of types remains highly desirable) conclusion: my “Javanese” specimens are conspecific as well with New Guinean *C. dohertyi* KERR. as with “Javanese” *C. fruhstorferi* NFR., *i.e.* the former is a junior synonym of the latter, whose true *terra typica* is not Java but the vicinities of Jayapura at middle of the northern shore of New Guinea.

***Cyphogastra (s.str.) maura* HOL.**

Cyphogastra maura HOLYŃSKI 2020a: 41

Material examined: N-Moluccas: Gébé I., II 2014 [1♀ (RBH: BPmcq)]

Remarks: The third known (to me – apparently several more have recently been collected) specimen of this species, also a female; virtually identical to the other two (*cf.* HOLYŃSKI 2020a, 2023), differs only in minor details: size 34×11 mm.; collar barely discernible; pronotal fossa very irregularly c-shaped and but narrowly dfp; anterolateral foveola lacking; subhumeral protuberances on elytra barely marked; apical incision of anal sternite rather deep.

***Cyphogastra (s.str.) cribrata* DEYR.**

Cyphogastra cribrata DEYROLLE 1864: 45

=*Cyphogastra tevorensis* OBENBERGER 1922: 66

Material examined: Moluccas: Watu Bela Is.: Kesui I., IX 2015 [1♀ (RBH: BPmcr)]

Remarks: Hitherto known (HOLYŃSKI 2020c, 2021a) from the southern (Tevor) island of the Matabillia [=Watu Bela (HOLYŃSKI 2021a)] group, the present specimen allows to extend the known distribution of the species to the northern, Kesui I. Somewhat smaller (25.5×8 mm.) than female HT of *C. tevorensis* OBB., pronotum dull bronzed with some greenish reflections, ventral side bright cupreous, proepisterna dfp, middiscal and perimarginal dfp stripes on abdomen well developed but widely separated (in both known males almost totally blent). Hitherto examined material (2♂, 2♀) seems to suggest that in males pronotum and ventral side are entirely or predominantly green while in females cupreous and/or bronzed colours prevail – but of course verification on statistically more representative sample is needed.

***Cyphogastra (s.str.) domeykoi* HOL.**

Cyphogastra domeykoi HOLYŃSKI 2023b: 28-30

Material examined: N-Moluccas: Gébé I., I 2024 [1♀ (RBH: BPmct)]

Remarks: Second known (published) specimen (also a female) of this recently described species apparently endemic to the remote Gébé I. Somewhat smaller (27×8.5 mm.) than the holotype, pronotal sides less convergent, otherwise apparently no worth mentioning difference.

Acknowledgements:

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