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Review of the subgenus *Metamroczkowskia HOŁ.* of *Metataenia THY.* (Coleoptera: Buprestidae) (with remarks on paraphyly)

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This paper is dedicated to Dr. Svatopluk BÍLÝ, our untimely deceased Colleague, one of the few leading authorities in the study of the ***Buprestidae****, and – last not least – for many years my Friend.*

Introduction

Metataenia Thy. is a rather polymorphous genus composed of several clearly differentiaed groups formally defined by HOŁYŃSKI (1997, 2009), sg. *Metamroczkowskia HOŁ.* being one of the most distinctive. It contains 15 (4 of them described herein) known species-level taxa of (due, as usual, to scarcity of reliably labelled material...) not always solidly supported status, distributed (with but a single exception) allopatrically between Vogelkop Peninsula, New Hannover and San Cristobal I. The revision of this group had been planned, and some preliminaries published (NYLANDER 2008, 2010), by Ulf NYLANDER, but disease and then death pevented him from bringing the work to a close – in this sense the present paper is a continuation of his efforts. Besides keys, descriptions, distribution map and taxonomic remarks an attempt at the reconstructon of phylogenetic history is presented, with a comment on the apparently frequent species-level paraphyly.

Conventions

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 [sub-]generic ones (*Buprestina OBB.*, *Melobasina KERR.*, *Coraebina KERR.*)]

Labels of type-specimens are quoted as exactly as possible, including *italics* and *handwriting* (both represented in my text by *italics*), CAPITAL LETTERS, SMALLCAPS, framing, colour of text and approximate colour of the label. Individual labels are cited in quotation marks "". Determination (white, in the form like "*Metataenia marcsikae* HOŁ., det. R. HOŁYŃSKI" with year of determination written vertically on the left side) and type-designation [red for primary types, *e.g.* "*Metataenia nylanderi* HOŁYŃSKI, HOLOTYPE", green for paratypes, *e.g.* "*Metataenia bilyi* HOŁYŃSKI, PARATYPE"] labels added by me are not cited.

New species will be described in detail, other descriptions restricted to traits potentially helpful in identification.

Length of body measured from anterior margins of eyes to elytral apices; length of elytra from anterior margin of scutellum; width of pronotum where it is the widest, width of elytra just behind subhumeral protuberances; with of head with eyes, in dorsal aspect; width of vertex between internal margins of eyes.

As usual, my phylogenetic reconstruction has been performed with MICSEQ – see HOŁYŃSKI (2001) for the general outline of the algorithm with presentation and justification of basic assumptions, and HOŁYŃSKI (2016a) for the present state of its development and discussion of some aspects of the procedure.

Explanation of terms

Convergent/divergent: Unless specially stated otherwise, always from base to apex
Midlateral: lying at *ca.* mid-distance between median line and side margins
Fossae: laterobasal ddfp areas of pronotum
Laterobasal lobe: short, somewhat bulbously elevated protrusion at basal angles of pronotum, behind more or less distinct sinuation of lateral margins
Subhumeral protrusion/denticle: moderately salient/prominent angularly protruding epipleural margin at humeri
Caudate elytra: of concave lateroapical margins and dorsal profile
Elytral dfp areas: 5 pairs of depressed dfp spots
Perihumeral dfp spot: dfp foveola midlaterally at elytral base
Subhumeral dfp spot: dfp depression placed at lateral margin of elytra behind humeri
Anterodiscal dfp spot: dfp depression placed midlaterally at *ca*. anterior third of elytra
Posterodiscal dfp spot: small dfp depression near apex between 1. and 3. interstria
Apical dfp spot: dfp depression placed midlaterally at *ca*. anterior third of elytra
Phenun (pu): unit of the "cost of transformation" between character states, *i.e.* of phenetic distance between analysed taxa: **1 pu** = distance between two neighbour traits in the transformation chain if the weight has been settled as 1
Support quotient [SQ=**x/y** (in phenuns)]: rough estimator of "robustness" of particular pairing, where **x** is the "corrected distance" (at the relevant stage of analysis, *i.e.* when the pairing is being performed) between the paired taxa, and **y** – the shortest distance between any of them and any other remaining "in game".

Abbreviations:

L	=	length
W	=	width
H	=	width of head with eyes
V	=	width of vertex between eyes
ø	=	sex unknown
HT	=	holotype
LT	=	lectotype
ST	=	syntype
PT	=	paratype
BP***	=	(*e.g.* BPeip): specimen-identifying signature in my collection
≈	=	approximately equal
[ʘ],[ʘ]	=	round type-label with coloured frame in BMNH
[abc]	–	in square brackets (without quotation marks) data not specified on labels

Collection acronyms:

BMNH	=	Natural History Museum, London, ENGLAND
BPBM	=	Bernice P. Bishop Museum, Honolulu, USA
EONMP	=	Entomologické Oddelení Národního Musea, Praha, CZECHIA
HUB	=	Humboldt Universität, Berlin, GERMANY]
KBIN	=	Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, BELGIUM
MCGD	=	Museo Civico di Storia Naturale „Giacomo Doria", Genova, ITALY
MNHN	=	Muséum National d'Histoire Naturelle, Paris, FRANCE
RBH	=	Roman B. HOŁYŃSKI, Milanówek, POLAND
UN	=	Ulf NYLANDER, Valbo, SWEDEN
USNM	=	Smithsonian Institution: National Museum of Natural History, Washington, USA

Systematic review

BUPRESTIDAE LEACH
BUPRESTINAE LEACH
BUPRESTINI LEACH
CHRYSOCHROINA CAST.
Metataenia THY.

Metataenia THÉRY 1923: 216

[type-species: *Metataenia meeki* THÉRY 1923 (=*Paracupta meecki* KERREMANS 1919)]

Remarks: BELLAMY (1998), arguing that "*Two of the original four species* [mentioned in THÉRY (1923) as belonging to his new genus] *are now junior synonyms: M. capitata (Kerremans (= M. insulicola Théry) and M. mecki* [*sic*! – RBH] *(Kerremans) (= M. meeki Théry), leaving only two viable choices for the type species*", selected *Metataenia quadrimaculata* THÉRY 1923 as the type of *Metataenia* THY. However, his argumentation is invalid (synonymization does not preclude the eligibility of a nominal taxon for type-species), and indeed one year before (HOŁYŃSKI 1997) just *M. meeki* THY. was validly designated.

Metamroczkowskia HOŁ.

Metamroczkowskia HOŁYŃSKI 1997: 183

[type-species: *Iridotaenia clotildae* GESTRO 1876]

Remarks: Characterized by elongated, lustrous body; medially furrowed, finely and sparsely punctulate pronotum; pattern of rounded or transverse (except small preapical), brightly coloured elytral dfp spots, not or but slightly sulcate prosternal process and 1. sternite, *&c*. Almost strictly allopatric distribution of included species **[Map 1]** extends over New Guinea and its offshore islands, Bismarck Archipelago and Solomon Is.

Map 1

Geographical distribution of the sg. *Metamroczkowskia* HOŁ.

● *M. woodlarkiana sp.n.*; ● *M. capitata* (KERR.); ● *M. hudsoni* NYL.; ● *M. bilyi sp.n.*
■ *M. hauseri* (OBB.); ■ *M. nylanderi sp.n.*; ■ *M. matrismeae* HOŁ.; ■ *M. loriai* (KERR.); ■ *M. sp.*; ■ *M. purpurascens* THY.
▲ *M. pagdeni* THY. ▲ *M. clotildae* (GESTRO); ▲ *M. cupreosplendens* (KERR.); ▲ *M. aurora* (OBB.); ▲ *M. marcsikae sp.n.*

Key to the identification of species of the sg. *Metamroczkowskia* HOŁ.

1(20) Ventral side blackish with more or less distinct metallic shine
2(19) Dorsal side blackish with more or less distinct metallic shine
3 (4) Third interstria runs apically parallel to first (perisutural), apical dfp spot between them inconspicuous, narrowly ortogonal ..... ***M. (M.) woodlarkiana sp.n.***

4 (3) Third interstria bent apically aside, diverging from perisutural, apical dfp spot contrastingly coloured, cuneate

5(10) 4.-7. striae at middle of elytra continuously depressed, interstriae between them convex

6 (7) Subhumeral and anterodiscal dfp spots combined into one ..... ***M. (M.) capitata (KERR.)***

7 (6) Subhumeral and anterodiscal dfp spots separate

8 (9) Pronotum contrastingly cupreous-bronzed ..... ***M. (M.) hudsoni NYL.***

9 (8) Pronotum concolorous with elytra, black ..... ***M. (M.) bilyi sp.n.***

10 (5) Striae at elytral midlength more or less disrupted into separate punctures

11(14) Subhumeral and anterodiscal dfp spots combined into one

12(13) Elytral sides (somewhat sinuously) converging from base to apex. Sides of pronotum nearly straight: no prehumeral lobe ..... ***M. (M.) hauseri (OBB.)***

13(12) Elytral sides shallowly sinuate behind humeri, width of body at elytral midlength equal to that at humeri. Sides of pronotum distinctly bulbously lobate at basal angles ..... ***M. (M.) nylanderi sp.n.***

14(11) Subhumeral and anterodiscal dfp spots separate

15(16) Prosternal process flat. Almost entire tibiae pale ferrugineous, only sharply delimited basal fifth contrastingly blackish-green ..... ***M. (M.) matrismeae HOŁ.***

16(15) Prosternal process distinctly depressed in apical half. Colour of tibiae gradually transgressing from metallic blue basal to ferrugineous apical half ..... ***M. (M.) loriai (KERR.)***

17 (2) Dorsal side bright purplish

18(19) Subhumeral and anterodiscal dfp spots separated ..... ***M. (M.) sp.***

19(18) Subhumeral and anterodiscal spots joined into one ..... ***M. (M.) purpurascens THY.***

20 (1) Ventral side more or less bright metallic

21(22) Elytra not caudate ..... ***M. (M.) pagdeni THY.***

22(21) Elytra caudate

23(24) Body golden-green ..... ***M. (M.) clotildae (GESTRO)***

24(23) Body golden-cupreous to cupreous-red

25(26) Metatibiae ferrugineous ..... ***M. (M.) cupreosplendens (KERR.)***

26(25) Metatibiae dark metallic

27(28) Epistome green. Anterodiscal dfp spot widely separated from subhumeral, posterodiscal extending only to 8. stria ..... ***M. (M.) aurora (OBB.)***

28(27) Epistome cupreous. Anterodiscal dfp spot joining subhumeral; posterodiscal extending to lateral margin ..... ***M. (M.) marcsikae sp.n.***

Metataenia (Metamroczkowskia) woodlarkiana sp.n.

Material examined:

Holotype: "NEW GUINEA: PAPUA, Woodlark I. (Murua), Kulumadau Hill, Jan. 28-30, 1957" "W.W.Brandt Collector" [♀ (USNM)]

Additional material: None

Holotype: Female 18×5.5 mm. Black with very slight purplish shine, labrum clayey-brown, antennae black, tibiae black aperaring somewhat ferrugineous towards tips, tarsi yellow; dfp depressions golden, covered with dense ochraceous pulverulence. Pilosity of prosternal sulcus short, sparse, erect; pubesence of dfp areas very short, recumbent white; otherwise body practically glabrous.

Epistome deeply emarginate, impunctate; frontoepistomal border marked only by shallow arcuate depression. Front parallelsided, much wider than long; frontal depression deep, broadly triangular, reaching barely behind upper margins of eyes, coarsely but sparsely punctured; anterior cavity inconpicuous; lateral ridges poorly developed; no periocular sulci. V:H≈0.5.

Pronotum trapezoidal, shallow sinuation of sides in basal fifth accentuates acute-angled laterobasal lobes, basal margin almost inappreciably, apical more conspicuously bisinuate; marginal carina distinct only on basal third; median line deeply sulcate but not distinctively sculptured; narrowly triangular lateral dfp fossae extend from just before base to nearly apical margin; puncturation of disk moderately fine and sparse. Scutellum semicircular, micropunctulate.

Elytra *ca.* 2.4× longer than wide. No subhumeral protrusion; sides obliquely truncated at humeri, parallel to *ca.* midlength, and subsinuato-cuneately (slightly caudate) tapering to sharply acute apices; lateroapical denticulation coarse and sharp. Striae deep, continuous, only at sides somewhat confused, 3. interstria subparallel to others also apically; subhumeral and anterodiscal dfp foveae confluent, extending from 3. stria to lateral margin; posterodiscal smaller, somewhat transverse, between 3. and 8. stria; preapical barely noticeable, represented by shallow parallelsided depression between 1. and 3. stria; interstriae convex, sparsely inconspicuously micropunctulate.

Proepisterna coarsely and rather densely punctured; prosternal process shallowly depressed in apical half, covered with fine and moderately dense punctulation; median parts of metasternum and first sternite broadly sulcate; surface of ventral side almost uniformly, neither very densely nor very finely punctured, without distinct dfp aeas. Apex of anal sternite narrowly semicircularly incised (♀).

Geographical distribution [Map 1]: Woodlark I. (known only from the holotype).

Remarks: Deep striae with third interstria remaining parallel to apex seem unique among the sg. *Metamroczkowskia*.

Metataenia (Metamroczkowskia) capitata (KERR.)

Paracupta capitata KERREMANS 1903: 84
Metataenia insulicola THÉRY 1923: 218

Material examined:

Lectotype: "Syntype"Θ "Sud-Est I., April 98 (Meek)" "*capitata Kerrem., Type*" "Kerremans 1903-59" "Lectotype, U.Nylander 2010" [♀ (BMNH) – only photo seen]

Paralectotype: "Syntype"Θ "Sud-Est I., April 98 (Meek)" "*capitata Kerrem., Type*" "Kerremans 1903-59" "Paralectotype, U.Nylander 2010" [1♀ (BMNH) – only photo seen]

Holotype [of *M. insulicola THY.*]**:** "Mt. Rossel, 2100 ft., Rossel Isl., Nov. 1915-Jan. 1916., [W. F. Eichhorn]" "*Metataenia insulicola Thery, Type*" "*Chrysodema Hoschecki Obb.*, Comp. au type par Théry 1931" "MUSÉUM PARIS, 1935, Coll. A. THÉRY" [♂ (MNHN)]

Additional material: 1 ♀

Characters: Male [1] 17.5×5.5, females [2] 19.5×6 – 19.5×6.5 [20×6.5 – NYLANDER 2010] mm. Black with distinct green or aeneous shine on elytra and ventral side; dfp depressions on pronotum and elytra bright cupreous-bronzed, those on ventral side almost concolorous; labrum and tarsi ferrugineous, antennae dark ferrugineous basally (1. joint with dull-green shine), becoming darker piceous-brown towards apices. Frontal depression with short, not dense, semirecumbent whitish pubescence, dfp depressions similarly but more densely pubescent and covered with ochraceous pulverulence, otherwise dorsal side glabrous and ventral with short, sparse pubescence. Epistome deeply emarginated, not clearly separated

Fig. 1
Metataenia woodlarkiana sp.n.
♀ HT [BPBM],
Woodlark I.: Kulumadau Hill

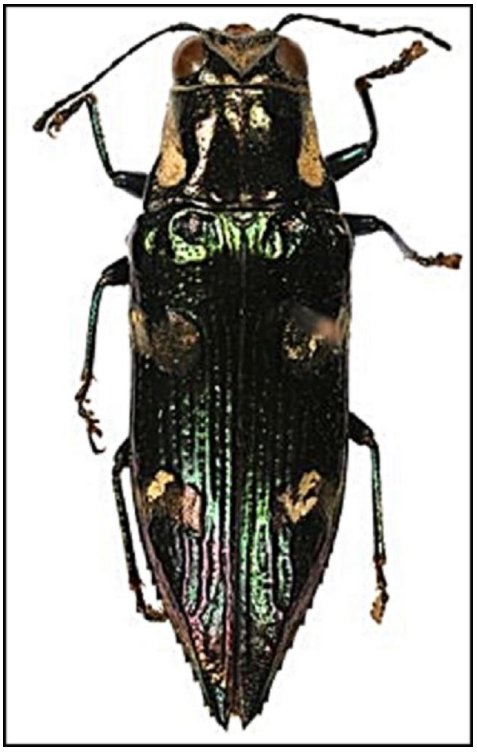

Fig. 2
Metataenia capitata (KERR.)
♀ HT [BMNH], Sud-Est Is.
[fot. U.NYLANDER]

Fig. 3
Metataenia hudsoni NYL.
♀ HT [UN 1209], Misima I.
[fot. U.NYLANDER]

Fig. 4
Metataenia bilyi sp.n.
♀ HT [BPBM],
Solomon Is.: Sta.Ysabel I.: Kolotuve

Fig. 5
Metataenia hauseri (OBB.)
♀ HT [HUB], N.Guinea Sattelberg
[fot. U.NYLANDER]

Fig. 6
Metataenia nylanderi sp.n.
♀ HT [BPlxf], PNG: Popondetta

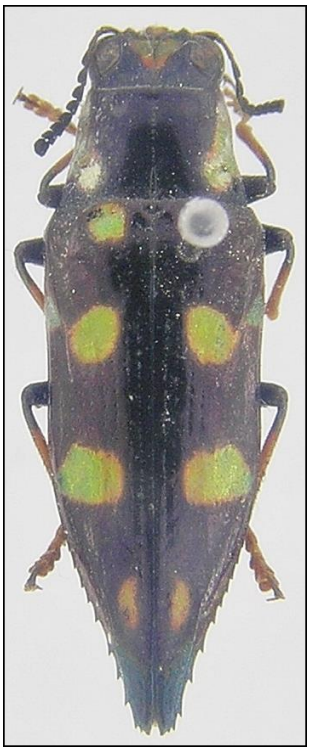

Fig. 7
Metataenia matrismeae HOŁ.
♀ HT [BPepr]
NG: Cyclops Mts.: Sabron

Fig. 8
*Metataenia loriai (*KERR.*)*
♀ HT [MCGD], PNG: Paumomu riv.
[fot. U.NYLANDER]

Fig. 9
Metataenia purpurascens THY.
♀ [BPlxg], N.Guinea: Arfak

Fig. 10
*Metataenia cupreosplendens (*KERR.*)*
♀ [BPeps], N.Hannover

Fig. 11
*Metataenia aurora (*OBB.*)*
♀ [KBIN], Solomon Is.: Bougainville I.: Buin

Fig. 12
Metataenia marcsikae sp.n.
♀ HT [BPlxh]
Solomon Is.: S.Cristobal I.

from front; supraantennal carinulae short, directed obliquely upwards, meeting ocular margins at *ca.* their lower thirds; no distinct oculofrontal furrows; frontal depression deep, subtriangular, finely and sparsely punctulated; median stria sharp.Antennae reaching somewhat (by *ca.* two joints) beyond pronotal base. Pronotum trapezoidal, basal margin distinctly bisinuate, posterior angles acute, sides conspicuously sinuate between posterior fourth and anterior third, apical margin shallowly trisinuate with nearly right anterior angles. Lateral dfp depressions drop-shaped, extending between anterior and posterior eighth, wider basally and there well delimited, very poorly so in anterior half; medial stria sharp, rather densely and not very finely punctured, ending in large and profound prescutellar fovea at middle of shallow transverse depression across the median third of base; puncturation of disk sparse, moderately coarse; lateral carina short, reaching to *ca.* ¼ of pronotal length. Elytra subparallelsided in anterior half, then sinuately tapering (distinctly "caudate") to sharply acutely tipped apices; subhumeral denticles moderately prominent; lateroapical margins sharply denticulate. Three pairs of dfp spots: small, slightly transverse basal; large composed of smaller subhumeral and larger anterodiscal placed slightly further backwards, both parts connected by narrow isthmus; and large rounded behind midlength extending between 3. stria and almost (but not quite) lateral margin; preapical inconspicuous. Striae rather deep and regular medially, less regular and disrupted into puncture rows towards sides. Proepisterna rather coarsely and sparsely punctured anteromedially, finely and densely towards basal angles; puncturation of prosternal process dense but moderately coarse; metasternum and abdomen finely and densely punctured on sides, coarser and sparser along middle; anterolateral dfp areas on sternites moderately differentiated. Apex of anal sternite rather broadly triangularly (at *ca.* right angle) emarginated between also rather sharply right-angled apical corners in male, with small but conspicuous semilunar fovea just before narrower, more paraboloidal incision in female.

Female differs in distinct puncturation and longer denser pubescence of frontal depression, sparser puncturation of prosternal process, lack of meso- and metafemoral brushes, and somewhat narrower, more apical emargination of anal sternite, rather broadly rounded apical corners.

Geographical distribution [Map 1]: Apparently endemic of Rossel I. (Louisiades).

Remarks: Closely related to *C. hudsoni* NYL. – see **Remarks** on that species for differences. KNOWLES' photo of an unidentified specimen labelled as "S. Johnstone Riv. Qld.", sent some years ago to me by Ulf NYLANDER, seems to be very closely related or even taxonomically identical to *M. capitata (KERR.).*

Metataenia (Metamroczkowskia) hudsoni NYL.

Metataenia (Metamroczkowskia) hudsoni NYLANDER *2010: 58-59*

Material examined:

Paratype: "*Misima Is, MBP. PNG, 4/80*" "1210, U. Nylander" [1♀ (UN 1210)]

Additional material: None

Characters [*compiled from original description (NYLANDER 2010), my short notes on examined (in 2010) paratype, and photographs: I have no access now to any specimen*]**:** Female [1] 20×6.5 [21.5×6 – 23×6.5 (NYLANDER 2010 – but see **Remarks** below)] mm. Head and pronotum cupreous-bronzed, elytra and ventral side black with some bluish shine; dfp depressions on pronotum and elytra bright cupreous, those on ventral side inconspicuous; tarsi and antennae (incl. basal joints) piceous-black (1. antennomere with dark blue shine); dfp depressions densely pubescent and covered with ochraceous pulverulence, metasternum and

abdominal sides covered with sparse grayish pilosity, body otherwise glabrous. Frontal depression deep, subtriangular; median stria sharp. Antennae reaching pronotal base. Pronotum trapezoidal, basal margin distinctly bisinuate, posterior angles acute, apical margin shallowly trisinuate with nearly right anterior angles. Lateral dfp depressions extending between anterior and posterior eighth, wider basally and there well delimited, very poorly so in anterior half; medial stria sharp, deepening towards base; puncturation of disk relatively coarse and dense; no lateral carina. Elytra subparallelsided in anterior half, then sinuately tapering (distinctly "caudate") to sharply acutely tipped apices; lateroapical margins sharply denticulate. Basal dfp spots small, rounded; larger subhumeral and somewhat smaller anterodiscal clearly separated; posterodiscal extending from 3. stria to lateral margin; preapical inconspicuous; also perimarginal interstria dfp and pulverulent. Striae rather deep, interstriae convex, 3. interstria bent outwards at apical sixth. Anterolateral dfp areas on sternites poorly differentiated. Apex of anal sternite narrowly triangularly incised in female; male unknown.

Geographical distribution [Map 1]: Seems to replace *M. capitata (KERR.)* on Misima I.

Remarks: The closest relative of *M. hudsoni NYL.* is apparently *M. capitata (KERR.)*, differing in darker (almost concolorous with elytra) pronotum, subhumeral dfp spot joining anterodiscal, and somewhat finer sculpture. There are some problems with NYLANDER's (1910) measurements of this species: the resulting proportions (L:W=3.5-3.8) do not agree either with those of the paratype measured by me (20×6.5 instead of 21.5×6 mm.) nor with his published photographs, all consistently showing L:W≈3.05!

Metataenia (Metamroczkowskia) bilyi sp.n.

Material examined:

Holotype: "SOLOMON IS., Santa Ysabel, Kolotuve, 21.VI.60" "G.W.O'Brien Collector" [♀ (BMNH)]

Paratypes: "SOLOMON IS., Santa Ysabel, Kolotuve, 21.VI.60" "G.W.O'Brien Collector" "*METATAENIA sp., det. C.L.Bellamy*" [1♀ (RBH: BPlxd)]; "SOLOMON IS., Guadalcanal: Gold Ridge-Suta (Jonapau) 1100 m, VI-26-1956" "J.L.Gressitt Collector" [1♀ (BMNH)]; "SOLOMON IS., Guadalcanal: Gold Ridge 50 m, VI-24-1956" "J.L.Gressitt Collector" [1♀ (EONNMP)]; "SOLOMON IS., Guadalcanal: Lame nr. Mt. Tatuve, 300 m, 18.V.1960" "G.W.O'Brien Collector" [1♀ (RBH: BPlxe)]

Additional material: None

Holotype: Female 19×6 mm. Black with some brassy shine, labrum clayey-brown, antennae black, tibiae and tarsi ferrugineous; main dorsal dfp depressions cupreous, only small basal foveolae golden-green; ventral golden-green bordered with cupreous to purplish. Pilosity of prosternal sulcus short, sparse, erect, inconspicuous, that of metasternum and abdomen barely discernible; pubesence of dfp areas very short, recumbent white; otherwise body practically glabrous.

Epistome very short, almost linear, broadly trapezoidally emarginate; separated from front by deep transverse furrow accompanied by distinct frontoepistomal ridge. Front wider than long, sides slightly divergent; frontal depression deep, sharply delimited, equilaterally triangular, reaching barely behind upper margins of eyes; bottom dfp, contrastingly cupreous; anterior cavity not individualized; lateral ridges rather sharp; no distinct periocular sulci. V:H≈0.5.

Pronotum trapezoidal, sides shallowly S-shaped, laterobasal lobes sharply acute-angled, basal margin almost inappreciably, apical markedly (with arcuately prominent median lobe) bisinuate, lateroapical angles nearly right; marginal carina distinct only on basal third;

median line deeply linearly sulcate, prescutellar foveola elongately triangular; narrowly lateral dfp fossae extend from *ca.* basal seventh to nearly apical margin; puncturation of disk moderately fine and sparse. Scutellum roundedly subtrapezoidal, deeply sulcate along midline, impunctate.

Elytra moderately caudate. No subhumeral protrusion; sides obliquely truncated at humeri, subparallel to *ca.* midlength, and subsinuately tapering to acute apices; lateroapical denticulation coarse and sharp. Striae deep, continuous, only at sides somewhat confused, 3. interstria markedly bent outwards at *ca.* apical fifth to enclose relatively large, cuneate, golden-cupreous preapical dfp spot; basal dfp foveae also rather large; smaller subhumeral and larger anterodiscal rounded, widely separated; posterodiscal somewhat transverse, between 4. and 9. stria, angularly bent at 7. interstria; interstriae convex, sparsely irregularly punctulate.

Proepisterna sparsely, rather coarsely punctured; prosternal process distinctly widened to *ca*. right lateroapical angles, with long median apical denticle, surface depressed in apical half, covered with rather coarse and dense punctulation; first sternite with very faint traces of median sulcus; abdominal dfp depressions green bordered with purplish, elevated parts of sternites rather coarsely but sparsely punctured. Apex of anal sternite semicircularly incised.

Variability: Females 19×6 – 23×7 m. Dorsal side with bronzed or purplish lustre, dfp depressions golden or cupreous-red; ventral surface usually greenish-black, dfp somewhat brighter green. Metasternum sometimes medially broadly sulcate.

Geographical distribution [Map 1]: Solomon Is. – hitherto known only frm Bougainville and Sta. Ysabel islands.

Remarks: The combination of blackish colouration, bronzed- or purplish elytral lustre, definitely caudate elytra with almost regularly grooved striae separated by convex interstriae, anterodiscal dfp fovea widely separated from subhumeral, 3. interstria bent preapically outwards, preapical dfp spot conspicuous and contrastingly cupreous, &c., distinguishes the new species from all known members of the sg. *Metamroczkowskia* HOŁ.

Metataenia (Metamroczkowskia) hauseri (OBB.)

Paracupta Hauseri OBENBERGER *1928: 155-156*

Material examined:

Holotype: "D.N.Guinea, Sattelberg" "*Paracupta Hauseri m. Type*, Det. Dr Obenberger" "*P. Hauseri Ob.*, *N.Guinea*" [♀ (HUB) – only photos seen]

Additional material: None

Characters [*compiled from original description (*OBENBERGER *1928), photographs published by* NYLANDER *(2010), and my short note on MNHN specimen examined long ago: currently I have no access to any specimen*]**:** Female [1] 19.5×5.5 [MNHN specimen measured by me; original description gives 22.5×6 for the holotype – but see **Remarks** below] mm. Very slender, narrowed backwards (widest at humeral protuberances), violaceous-black above, blackish below, tarsi ochraceous-yellow, tibiae become ferrugineous distalwards, antennae black; cordate frontal spot and dorsal dfp depressions bright golden, ventral inconspicuous. Pronotum trapezoidal, sides very shallowly regularly (no distinct laterobasal lobe) sinuate, basal angles acute. Lateral fossae deeply foveolate in basal half; medial stria sharply linear; puncturation of disk relatively fine and sparse. Elytra obliquely truncated at humeri, shallowly sinuately narrowed to midlength and arcuately-subsinuately so to apices; lateroapical margins sharply denticulate. Basal dfp spots small, rounded; subhumeral and anterodiscal combined into large obliquely transverse band extending from 4.

stria to lateral margin; posterodiscal large, rounded, between 3. and 9. stria; preapical narrowly cuneate between 1. and 3. interstria; striae rather shallow, interstriae slightly convex, 3. interstria bent somewhat outwards at apical sixth. Apex of anal sternite narrowly triangularly incised.

Geographical distribution [Map 1]: Described from Sattelberg (N.Guinea: Huon Pen.), where also the only other specimen known to me has been collected.

Remarks: *M. nylanderi sp.n.* has been hitherto determined as *M. hauseri (OBB.)* and indeed seems to be its closest relative (see **Remarks** on the former for differences). There are some problems with the measurements given in the original description (OBENBERGER 1928): the resulting proportions (L:W=3.75) sharply disagree with those (≈3.05) of the holotype photograph published by NYLANDER (2010)! I am unable to find out what (perhaps the strikingly narrow body?) had convinced the Swedish author that "*From the examination of the photographs (Figs. 4, 5) of the type specimen, it is apparently male*": based on the examination of the same photographs, I have arrived at just the opposite conclusion: in my opinion the holotype is a female.

Metataenia (Metamroczkowskia) nylanderi sp.n.

Material examined:

Holotype: "*Popondetta, N.P. PNG, IV-1981*" "1506, U.Nylander" "*Metataenia (Metamroczkowskia) hauseri (OBB.)*, det. R. HOŁYŃSKI 2010" [1♀ (RBH: BPlxf)]

Additional material: 2 ♀

Holotype: Female 21×6.5 mm. Violaceous-black with cupreous dfp depressions, labrum clayey-brown, antennae black, tibiae distally and tarsi ferrugineous. Pilosity of prosternal sulcus short but dense, erect, that of metasternum and abdomen barely discernible; pubesence of dfp areas very short, recumbent white; otherwise body practically glabrous.

Epistome broadly and deeply arcuately emarginate; separated from front only by indefinite transverse convexity. Front wider than long, sides distinctly divergent; frontal depression deep, broadly paraboloidal, reaching to the level of upper margins of eyes; bottom dfp, contrastingly cupreous; anterior cavity not individualized; median furrow coarse; lateral ridges moderately sharp; no distinct periocular sulci. V:H≈0.47.

Pronotum trapezoidal, sides narrowly sinuate before distinct laterobasal lobe, somewhat arcuately convergent in apical $^{2}/_{3}$; basal angles but slightly acute, basal margin almost straight, apical bisinuate; marginal carina discernible only on basal third; median line deeply linearly sulcate, prescutellar foveola elongately triangular; lateral dfp fossae deepened into small foveola at base, extending to apical $^{1}/_{4}$ only as superficial dfp area; puncturation of disk very fine and sparse. Scutellum slightly transverse, deeply and broadly depressed along midline.

Elytra markedly caudate. No subhumeral protrusion but sides rather deeply sinuate just behind humeri, then subparallel to *ca.* midlength, and sinuately tapering to acute apices; lateroapical denticulation coarse and sharp. Striae shallow, partly disrupted into separate punctures, at sides somewhat confused; interstriae almost flat, practically impunctate, third distinctly bent outwards at *ca.* apical fifth to enclose cuneate, golden-cupreous preapical dfp spot; basal dfp foveae also rather large; subhumeral and anterodiscal merged into slightly transverse spot between 3. stria and lateral margin; posterodiscal angularly bent, extending only to 9. stria.

Proepisterna lustrous, finely and sparsely punctured; prosternal process distinctly widened to broadly obliterated lateroapical angles, with long median apical denticle, surface with very faint traces of median sulcus, covered with fine but rather dense punctulation; first

sternite narrowly and very shallowly depressed along midline; abdominal dfp depressions roundedly foveolate, elevated parts of sternites rather finely and very sparsely punctulate. Apex of anal sternite with relatively (as for ♀) wide semicircular incision.

Variability: Females 21×6 – 22.5×7 m. Ventral dfp areas may be brassy-greenish, inconspicuous. Male unknown.

Geographical distribution [Map 1]: All known specimens collected in Popondetta (SE-New Guinea: Northern Pr.)

Remarks: Hitherto always determined as *M. hauseri (OBB.)*, also NYLANDER's (2010) redescription of the latter refer in fact to this species. I have never had any opportunity to study the holotype of OBENBERGER's species and could not make direct comparison, but distinct laterobasal lobe on pronotum and parallelsided anterior halves of elytra, in combination with apparent difference in colour and geographical disjunction seem to justify the taxonomic separation [contrary to NYLANDER's (2010) opinion Popondetta is – at least as regards the subtribe **Chrysochroina CAST.** – definitely ***not*** "*the same* (bio-)*geographic region*" as Sattelberg: in fact, I canot think of any species whose distribution area would include ***both*** the Huon Pen. ***and*** SE-New Guinea: Huon Gulf and Markham Vy. apparently make an efficient biogeographic boundary!].

Metataenia (Metamroczkowskia) matrismeae HOŁ.

Metataenia matrismeae HOŁYŃSKI 1994: 2-3

Material examined:

Holotype: "*N-NEW GUINEA, CYCLOPS MTS., Sabron , 2000 ft., VII 1936*" "*Metataenia matrismeae HOŁ., det. R. Hołyński, 1978*" "*Metataenia matrismeae HOŁYŃSKI 1978, HOLOTYPE*" [♀ (RBH: BPepr)]

Additional material: None

Characters: Female [1] 23×7 mm. Very dark (almost black) purplish violaceous, tips of elytra bluish-black, tibiae (except dark blue basal fourth) and tarsi testaceous, antennae black; broadly triangular frontal spot and ventral dfp areas cupreous, dorsal dfp depressions bright golden-green bordered with cupreous. Body lustrous and – except for short dense recumbent pubescence of dfp areas, short and rather dense erect pilosity of prosternal process, and barely noticeable sparse erect setulae along midlength of metasternum – glabrous. Front wider than long, sides markedly divergent, eyes strongly protruding, V:H≈0.5. Pronotum trapezoidal, sides shallowly sinuate before barely noticeable laterobasal lobe, basal angles acute. Lateral fossae not touching basal margin, deeply foveolate in basal third, prolonged as triangular superficial dfp area to near apical angles; medial stria deep, puncturation of disk rather fine and very sparse. Elytra obliquely truncated at humeri, shallowly sinuately narrowed to midlength and arcuately-subsinuately so to apices; lateroapical margins sharply denticulate. Basal dfp spots relatively large, rounded; small subhumeral separated by half of its diameter from much larger (extending from 3. to 7. stria) anterodiscal; posterodiscal still somewhat larger, between 3. and 9. stria; preapical small but conspicuous, elongated; striae mostly not depressed between puntures; interstriae flat, very sparsely micropunctulated, 3. interstria bent markedly outwards at apical third. Proepisterna lustrous, sparsely covered with moderately coarse punctures; prosternal process distinctly widened in apical half, coarsely and rather densely punctured; otherwise puncturation of ventral surface (except dfp areas in anterolateral angles of metasternum, metacoxae, and sternites) rather fine and sparse. Apex of anal sternite rather shallowly incised in female; male unknown.

Geographical distribution [Map 1]: The only known specimen has been collected in Cyclops Mts., at middle of northern coast of New Guinea.

Remarks: Apparently closely related to – and considered (temporarily also by myself) synonymous with – *M. loriai (KERR.)*, but as well geographical distribution as subtle but significant morphological differences suggest specific distinction.

Metataenia (Metamroczkowskia) loriai (KERR.)

Paracupta Loriae KERREMANS 1896: 353-354

Material examined:

Holotype: "N.GUINEA S.E., *Paumomu riv.*, LORIA, IX-XII 92" "*Loriae Kerr., Type*" [KERREMANS' label] "Typus" "*Loriae Kerrem.*" "HOLOTYPUS, *Paracupta loriae Kerremans, 1896*" "Museo Civico do Genova" [♀ (MCGD)]

Additional material: 1♀

Characters [*compiled from original description (KERREMANS 1896), photographs provided by NYLANDER (2010), and my short notes made long ago in MCGD: currently I have no access to any specimen*]**:** Females [2] 22×7 – 23×7 mm. Greenish- or violaceous-black above, blackish below; tibiae dark metallic at base, become gradually ferrugineous distalwards; tarsi yellow; antennae black; triangular frontal spot and other dfp depressions bright golden-cupreous. Pronotum trapezoidal, no distinct laterobasal lobe, basal angles acute. Fossa rather broadly separated from basal margin, foveolate in basal half. Elytra obliquely truncated at humeri, shallowly sinuately narrowed to midlength and arcuately-subsinuately so to apices; lateroapical margins sharply denticulate. Basal dfp spots small, rounded; subhumeral and anterodiscal more or les distinctly separated; posterodiscal large, rounded; preapical cuneate; striae represented by rows of punctures, interstriae flat, 3. interstria bent somewhat outwards before apex. Prosternal process sparsely punctulate, depressed in apical half. Apex of anal sternite shallowly incised in female; male unknown.

Geographical distribution [Map 1]: Southern coastal areas of SE-New Guinea

Remarks: At first glance almost identical to the type of *M. matrismeae HOŁ.* (BPepr), but darker (almost black), with golden (practically without greenish tinge) dfp depressions, narrower frontal spot, darker tibiae only gradually becoming somewhat ferrugineous towards apices, prosternal process distinctly longitudinally depressed in apical half.

Metataenia (Metamroczkowskia) sp.

Metataenia loriae: NYLANDER 2010: 58-59 [nec KERREMANS 1896: 353]

Material examined: 1 photo and 1 ♀

Remarks: "*After comparing my specimen* [allegedly '*collected at Angabunga River, Aseki, Morobe Province, Papua New Guinea 2005.iv.*'] *with the types of Paracupta loriae Kerr. and Metataenia matrismeae Holysnki* [*sic*!] *I could state that the three specimens all belong to the same species*" – so NYLANDER (2008) justified the synonymization of *M. matrismeae HOŁ.* with *M. loriai (KERR.)*. The specimen used for comparison – despite the partly erroneously quoted label data [month, locality: Angabunga is a river in Central – not Morobe – Pr., synonymous with Paumomu Riv., where the type of *M. loriai (KERR.)* had been collected] – was evidently the same as that [labelled "**Metataenia** loriae, Papua New Guinea" "PNG. Kamanea Vill., Aseki Subd., Morobe P., 2005.VI. Hudson leg" "1820, U.Nylander"] illustrated in his later work (NYLANDER (2010), which he also attributed to *M. loriai (KERR.)* not mentioning any differences. Somewhat later I have examined a female from R.L.WESTCOTT collection, making the following remarks: "*New Guinea: Gulf Pr.: Ivimka Res. Station, Lakekamu Basin, 7^{0}44'S 146^{0}30'E, 120 m., 24 IV 2000. 1♀. 23×7 mm. Bright purplish-violet (somewhat darker, more violet than on NYLANDER's picture, so bluish-black apices almost not contrasting); shape (except minimally less caudate elytra), sculpture, and dfp pattern (but spots distinctly bordered darker cupreous) also virtually identical to that picture. Distal parts of (esp. meso- and meta-) tibiae somewhat more contrastingly but less extensively ferrugineous. Cupreous spot on front equilaterally triangular, very sharply defined, reaching low but sharp, straight supraepistomal carina and separated from rather broad sides by low but steep, very sharply defined "step". Differences from orig. descr. of M. matrismeae HOŁ.: elytral tips bluish-black; posthumeral dfp spot reaching marginal stria and (narrowly) connected to anterodiscal (divided from it only by somewhat*

careniform elevation, but not by colour); [epistomal ridge regularly arcuate, parallel to anterior margin, fine but conspicuous]; supraepistomal carina narrow and almost impunctate; sides of pronotum practically straight; punctures in median stria distinct only in apical half." Having initially also considered it as *M. loriai (KERR.)* I have, unfortunately, neither made exact comparison with the MNHN specimen of the latter (then also as a loan with me) nor described the beetle in more detail. However now, considering the strikingly different colouration, almost confluent subhumeral and anterodiscal elytral dfp spots, and some minor details suggested by the photo and my brief remarks, together with apparently limited geographical distribution (I have been unable to locate Kamanea Vill., but it seems the same as Kamanahai, only some 35 km. NW from Iwimka St.), I am rather inclined to suggest its taxonomical distinction – alas! now I have no access to any specimen of either genuine *M. loriai (KERR.)* or the bright purplish form from NYLANDER's and WESTCOTT's collections, so I must leave the question unresolved.

Metataenia (Metamroczkowskia) purpurascens THY.

Metataenia purpurascens THÉRY 1923: 218-219

Material examined:

Holotype: "*Arfak Mts., 5100 ft. Pratt, D.N.Guinea*" "*Metataenia purpurascens Thery, Type*""MUSÉUM PARIS, 1935, Coll. A.THÉRY" [♀ (MNHN)]

Additional material: 2 ♀

Characters: Females [3] 19.5×5.5 – 23×7 mm. Dark purplish above, bronzed-black below, tips of elytra bluish-black, tibiae greenish-black becoming gradually somewhat ferrugineous apically, tarsi ferrugineous, antennae piceous-brown; broadly triangular frontal and cuneate preapical elytral spots cupreous-red, other dorsal dfp depressions golden-cupreous, ventral brassy-green. Body lustrous and – except for short dense recumbent pubescence of dfp areas and short and rather dense semierect pilosity of prosternal process – glabrous. Front nearly as wide as long, sides markedly divergent, eyes moderately protruding, V:H≈0.5. Pronotum almost ideally trapezoidal, sides very slightly arcuate, no trace of laterobasal lobe, basal angles acute. Lateral fossae deeply foveolate in basal third, broadly touching basal margin, prolonged as triangular superficial dfp area to near apical angles; medial sulcus deep with sharp bottom stria, puncturation of disk fine and sparse. Elytra definitely caudate, obliquely truncated at humeri, shallowly sinuately subparallelsided to midlength and arcuately-cuneately so to apices; lateroapical margins sharply denticulate. Basal dfp spots deep but small, slightly elongated; subhumeral merged with anterodiscal to form obliquely transverse band between lateral margin and 3. stria; posterodiscal broad medially but much narrower laterally, narrowly separated from lateral margin; preapical relatively large but inconspicuous, elongated; striae barely depressed between puntures; interstriae almost flat, very sparsely micropunctulated, 3. interstria bent markedly outwards at apical third. Proepisterna sparsely covered with moderately coarse punctures; prosternal process distinctly widened in apical half, coarsely and densely punctured; metasternal and abdominal dfp rather broad but poorly delimited and inconspicuous; otherwise puncturation of ventral surface fine and sparse. Apical incision of female anal sternite shallow; male unknown.

Geographical distribution [Map 1]: All known specimens has been collected in Arfak Mts. (Vogelkop Peninsula), at the northwesternmost end of the subgenus distribution area.

Remarks: Combination of dark purplish colouration, pronotal fossa broadly touching basal margin, and confluent subhumeral and anterodiscal elytral dfp spots, distinguish *M. purpurascens THY.* from all the remaining representatives of the sg. *Metamroczkowskia HOŁ.*

Metataenia (Metamroczkowskia) pagdeni THY.

Metataenia Pagdeni THÉRY 1943: 651-652

Material examined:

Holotype: "Type"Θ "SOLOMON IS., Vella Lavella, nr. Dobeli, Liangi, H.T.Pagden, 20.V.1934., Jungle" "Pres. by Imp. Inst. Ent., B.M. 1935-357" "*Metataenia Pagdeni Théry* TYPE" [ø (BMNH)]

Additional material: None

Characters [*according to the original description: presently I have no access to the specimen*]**:** 17×6.5 mm. [but see **Remarks** below!]. Entirely dark green with bluish elytral apices and golden dfp spots; antennae black, tibiae and tarsi testaceous except claws.

Epistome emarginated, eyes protruding, antennae reaching behind pronotal base. Pronotum trapezoidal, sides slightly sinuate at midlength, no discernible laterobasal lobe, basal angles acute, base very shallowly bisinuate, apical margin somewhat more distinctly so; marginal carina discernible towards base, median furrow more depressed before scutellum and at apical end; fossa narrowly separated from basal margin. Elytra obliquely truncated at humeri, sides very slightly divergent to apical third [see **Remarks**!] and then cuneately tapering to apices; lateroapical margins sharply dentate; striae poorly defined, consisting of rows of coarse punctures; interstriae very sparsely punctulate, 3. bent around relatively large preapical dfp spot; large basal dfp spot rounded; subhumeral widely separated from much larger anterodiscal; posterodiscal broad, irregularly transverse. Prosternal process slightly depressed, coarsely punctured; 1. sternite shortly sulcate along midline; abdomen sparsely punctured, pex of anal sternite incised.

Geographical distribution [Map 1]: Vella Lavella I. (northwesternmost member of the New Georgia group of Solomon Islands).

Remarks: Unique within the subgenus with its dark green colouration and non-caudate elytra. Measurements given in the original description evidently erroneous: L:W≈2.6 incredible for a *Metamroczkowskia HOŁ.*; L:W of the picture published in internet (*World of Jewel Beetles*) is *ca.* 3.33 and direct (the same picture!) comparison with the type of *M. capitata (KERR.)* – whose measurements are, according to NYLANDER (2010), 20.2×6.5 (L:W≈3.11) – suggest that the true values for the type of *M. pagdeni THY.* are *ca.* 20×6 mm. Also obviously inexactly is the description of shape of elytra: the picture shows that sides are divergent only to midlength rather than to apical third.

Metataenia (Metamroczkowskia) clotildae (GESTRO)

Iridotaenia Clotildae GESTRO 1876: 518

Material examined:

Holotype: "N.Guinea, *Korido*, Beccari V.1875." "Typus" "*Clotildae Gestro*" "HOLOTYPUS, *Iridotaenia clotildae Gestro, 1876*" "Museo Civico di Genova" [1♀ (MCGD)]

Additional material: None

Characters: Female [1] 21.5×6.5 mm. [*I had examined the type specimen many years ago, and unfortunately did not made any notes beyond measurement and transcription of the labels; having never seen any other specimen attributable to this taxon, I can only copy below the original description*]:

"*Elongata, viridi aurea, nitidissima, antennis nigro-violaceis, elytrorum apice cyaneo. Protorace utrinque foveato; elytris levissime et irregulariter striato-punctatis, singulo foveis quinque latis viridi-glaucis minutissime punctulatis et parce pubescentibus; abdominis segmentis lateraliter foveatis, tarsis testaceis. Long. 22 mill.*"

Geographical distribution [Map 1]: Described from "*ad Korido (Ins. Misori)*" [Misori = Mysore was the name used for Biak I.; Korido is a locality on the western (Supiori) part of the island, at $0^0$50'S-135º34'E].

Remarks: Green (*teste* HELFER 1951) colouration is the only apparent diagnostic character of this form, but wide geographic separation from closest relatives strongly suggests its taxonomic distinctness. However, just the locality of the only known specimen so far away from its relatives, especially in view of apparently minimal or no morphological differentiation, raises serious suspicion: I am rather inclined to suppose that BECCARI's label has been mistakenly attached to a beetle collected on some island of Bismarck or Solomon Archipelagoes – but if so, what about those "*Deux exemplaires du Muséum de Paris (par Raffray et Maindron), provenant de l'île Korido*", which – according to KERREMANS (1910) – "*se rattachent au cupreosplendens*"?

Metataenia (Metamroczkowskia) cupreosplendens (KERR.)

Paracupta cupreosplendens KERREMANS 1900: 64

Material examined:

Holotype: "Type"Θ "New Hannover, II. III. 97 (Webster)" "*cupreosplendens Kerr. Type*" "Kerremans 1903-59" [ø (BMNH)]

Additional material: 4 ♀

Characters: Females [4] 20.5×6.5 – 21.5×7 mm. Bright golden (with blue elytral tips) above, greenish below; dfp depressions golden-green, not or but slightly contrasting with elevated parts; tibiae at very base metallic green or blue, otherwise ferrugineous like tarsi; antennae piceous-brown. Body lustrous and – except for short dense recumbent pubescence of dfp areas, short sparse erect pilosity of prosternal process, and still shorter and sparser semierect setulae of metasternum and abdomen – glabrous. Front wider than long, sides markedly divergent, eyes not distinctly protruding, V:H≈0.5. Pronotum trapezoidal, sides sinuate behind middle, laterobasal lobe distinct, basal angles acute, basal margin almost straight, apical shallowly bisinuate; median furrow shallow except triangular prescutellar fovea; fossa deeply foveolate in basal part, not touching basal margin, limited laterally in basal third by high careniform ridge, prolonged as triangular superficial dfp area to near apical angles; puncturation of disk fine and sparse. Elytra but slightly caudate, obliquely truncated at humeri, subparallelsided to midlength and arcuately-subsinuately so to apices; lateroapical margins sharply denticulate. Basal dfp spots rather large, rounded; subhumeral widely separated from anterodiscal; posterodiscal transverse, angularly bent at 7. interstria; preapical cuneate; striae barely depressed between fine puntures; interstriae almost flat, densely micropunctulated, 3. interstria bent outwards at apical third. Proepisterna rather coarsely but not densely punctured, narrowly dfp along posterior margin; prosternal process flat or with slight indication of medial depression, densely but not coarsely punctured; metasternal and abdominal dfp well developed; otherwise puncturation of ventral surface very fine and sparse. Apical incision of female anal sternite shallow; male unknown.

Geographical distribution [Map 1]: Bismarck Archipelago: known from New Hannover and New Britain [but see **Remarks**!].

Remarks: Characterized by sharp delimitation between ferrugineous middle-to-distal part of tibiae and short metallic basal part. Specimens from New Britain perhaps deserve [sub-]specific distinction (basal parts of tibiae are somewhat more extensively metallic, puncturation of pronotum sparser and leaving inconspicuous rounded impunctate space midlaterally at anerior fourth, elytral striae consist of coarser punctures), but the available material is insufficient for the decision.

Metataenia (Metamroczkowskia) aurora (OBB.)

Paracupta aurora OBENBERGER 1932: 211-212
Metataenia clotildae refulgens HELFER 1951: 94-96
Metataenia clotildae ab. ignea THÉRY i.l. [*issp.*]

Material examined:

Holotype *i.l.*: "Ile de BOUGAINVILLE, Arch. Salomon" "*Clotildae v. ignea Théry mss, THERY det.*" "*Metataenia clotildae, ab. ignea mihi*, TYPE" "collection Dr. LOTTE" [♀ (KBIN)]
Additional material: 3 ♂, 23 ♀

Characters: Males [3] 17×5 – 18×5.5, females [24] 18×5.5 – 23×7.5 mm. [26 ♂♀ 19×6 – 25.5×8.5 mm. (HELFER 1951)]. Variable in colour from (excepionally) golden-green (pronotum) and golden-bronzed (elytra) through cupreous-bronzed to carmine-red; elytral tips bluish-black; ventral side bluish- or golden-green with dark blue, violaceous or purplish lateroposterior angles of sternites; dorsal dfp depressions contrastingly golden-green, ventral similar in colour but often poorly defined; tibiae dark blue, becoming indefinitely ferrugineous towards apices, tarsi ferrugineous; antennae piceous-brown. Body lustrous and – except for short dense recumbent pubescence of dfp areas, relatively long but sparse erect pilosity of prosternal process and (less distinct) on metasternum – glabrous. Front wider than long, sides markedly divergent, eyes not distinctly protruding, V:H≈0.5. Pronotum trapezoidal, sides sinuate behind middle, laterobasal lobe distinct, basal angles acute, basal margin almost straight, apical shallowly bisinuate; median furrow shallow except triangular prescutellar fovea; fossae deeply foveolate and limited laterally in basal third by high careniform ridge, not touching basal margin, prolonged as triangular superficial dfp area to near apical angles; puncturation of disk fine and sparse. Elytra but slightly caudate, obliquely truncated at humeri, subparallelsided to midlength and arcuately-subsinuately so to apices; lateroapical margins sharply denticulate. Basal dfp spots rather large, rounded; small subhumeral widely separated from larger anterodiscal; posterodiscal largest, transversely triangular or arrowhead-shaped; preapical cuneate; striae barely discerible, punctures in irregular rows mostly fine; interstriae almost flat, indistinctly irregularly microsculptured, 3. interstria bent outwards at apical third. Puncturation of proepisterna moderately coarse and dense; prosternal process very shallowly depressed apically, rather coarsely and densely punctured; 1. sternite shortly sulcate bewen metacoxae; metasternal and abdominal dfp well developed but inconspicuous; otherwise puncturation of ventral surface fine and sparse. Apical incision of female anal sternite small, shallowly arcuate; in male it is very widely but not deeply (somewhat deepened at middle) subtriangular.

Geographical distribution [Map 1]: Solomon Archipelago: almost all reported or examined by me specimens originate from Bougainville I., I have seen only one ex. from Santa Isabel [where – provided that no mislabeling or artificial introducion has been involved – it seems to represent the only case of sympatry (with *M. bilyi sp.n.*) in the sg. *Metamroczkowskia HOŁ.*].

Remarks: Characterized by dark cupreous-red colouration – variable but almost always definitely darker than in *M. cupreosplendens (KERR.)* (from which it differs also in lack of distinct contrast between dark basal and ferrugineous distal parts of tibiae) or *M. marcsikae sp.n.* (clearly recognizable by cupreous epistome and only shallowly depressed but very broad dfp spots). I have not seen the type of *Paracupta aurora OBB.*, described from "*Neuguinea*" (what, however, in old labels frequently meant no more than "New Guinean region"), but as the description does not offer any palpable difference from that of *Metataenia clotildae refulgens HELF*. I consider them synonymous.

Metataenia (Metamroczkowskia) marcsikae sp.n.

Material examined:

Holotype: "SOLOMON Is., SAN CRISTOBAL, Manowiriwiri, 0-50 m, 20.XI.1964" "R.Straatman Collector, BISHOP" "*METATAENIA Clotildae Gestro, CLBellamy '81*" [1♀ (RBH: BPlxh)]

Additional material: None

Holotype: Female 20×6.5 mm. Cupreous above with blue elytral tips and golden dfp depressions; labrum clayey-brown, antennae black, tibiae blue with slight ferrugineous tranlucence, tarsi dark ferrugineous; below predominantly golden-green. Pilosity of prosternal sulcus short but dense, erect, that of metasternum barely discernible; pubesence of dfp areas very short, recumbent white; otherwise body practically glabrous.

Epistome deeply arcuately emarginate; separated from front by smooth transverse careniform ridge. Front much wider than long, sides markedly divergent; frontal depression deep, broadly subtriangular, reaching somewhat beyond upper margins of eyes; bottom dfp, contrastingly greenish-golden; anterior cavity not individualized; median furrow coarse; lateral ridges obliterated; no distinct periocular sulci. V:H≈0.53.

Pronotum trapezoidal, sides sinuate at midlength, laterobasal lobe conspicuous; basal angles moderately acute, basal margin very shallowly, apical markedly bisinuate; marginal carina discernible only on basal fourth; median line fine and shallow at middle, deeper and coarser at base and apex; fossae deepened at base into somewhat elongated foveola, extending to apical margin as broad but superficial dfp area; puncturation of disk moderately fine and sparse. Scutellum slightly transverse, deeply and broadly depressed along midline.

Elytra markedly caudate. Subhumeral protrusion slightly indicated, sides obliquely truncated at humeri, then subparallel to *ca.* midlength, and sinuately tapering to acute apices; lateroapical denticulation coarse and sharp. Striae shallow, at sides somewhat confused; interstriae slightly convex, almost imperceptibly micropunctulate, third distinctly bent outwards at *ca.* apical fifth to enclose cuneate, golden-cupreous preapical dfp spot; all dorsal dfp areas large but almost superficial; subhumeral and anterodiscal merged into irregularly transverse spot extending medially to 3. stria and widely spead along lateral margin; posterodiscal very broad, extending from 2. stria to marginal carinula.

Proepisterna finely and sparsely punctured; prosternal process distinctly widened to broadly lateroapical angles, with long median apical denticle, surface covered with moderately coarse and dense puncturation, apical half with very faint traces of median sulcus; first sternite shallowly depressed between metacoxae; abdominal dfp depressions broad but poorly individualized, elevated parts of sternites finely and sparsely punctulate. Apex of anal sternite with relatively (as for ♀) wide subtriangular incision.

Geographical distribution [Map 1]: Solomon Arch.: San Cristobal I.

Remarks: Relatively pale golden-cupreous dorsal colouration, cupreous epistome, ferrugineous colour of tibiae barely indicated, dfp areas very broad but almost superficial, allopatric occurrence at the remote end of the subgenus' distribution area, *&c.* justify the taxonomic separation of *M. marcsikae sp.n.* despite of only single specimen being known.

Phylogenetical reconstruction

The relations among outgroups [*Mroczkowskia HOŁ.*, *Cyphogastrella THY.*, *Chalcomroczkowskia HOŁ.*, *Papuodema OBB.*, and two widely different (possibly not truly consubspecific) species of *Metataenia THY. s.str.*], included with the only purpose to root the cladogram, have not been reconstructed herein.

The common ancestor **[N]** of the target subgenus *Metamroczkowskia HOŁ.* appears as markedly elongated, lustrous black beetle with concolorous front, brightly contrasting golden dorsal dfp markings, dark antennae and femora, diffusely ferrugineous tibiae and yellow tarsi, distinct laterobasal pronotal lobe, no collar, sparse punctures on pronotal disk, sulcate median line, deep laterobasal but no trace of lateroapical foveola, fossa entire, no subhumeral protrusion of moderately caudate elytra, striae represented by rows of fine punctures, large perihumeral dfp depression, subhumeral separated from rounded anterodiscal, posterodiscal transverse, 3. interstria preapically inflected, proepisterna non-dfp, prosternal process and 1. sternite nearly flat, no abdominal tubercle, and sides of abdomen with extensive dfp areas; it is difficult to formulate any realistic hypothesis as to the geographical distribution of that ancestral species; the three descendant groups occupy three almost non-overlapping areas! The representatives of one of these inhabit the Louisiade and Woodlark islands archipelagoes, with – rather unexpectedly – one species on Solomon Islands. Their common acestor **[M]** (dorsal side less bright, basal fovea extended anterad as shallower but distinct sulcus, striae deep, continuous, perihumeral dfp foveola small), having apparently inhabited Louisiades, invaded Woodlark I. as the distinctive (tibiae entirely dark, elytra markedly caudate, subhumeral and anterodiscal dfp connected, lateral dfp depression on sternites inconspicuous) *M. woodlarkiana sp.n.* Meanwhile the barely changed (third interstria preapically inflected) sedentary population **[L]** expanded to Solomon Arch. to evolve into *M. bilyi sp.n.* (sculpture coarser, perihumeral foveola large), whereas the residents remained on Louisiades diverged into eastern (Rossel I.) *M. capitata (KERR.)* (subhumeral dfp spot connected to anterodiscal) and western (Misima I.) *M. hudsoni NYL.*(tibiae entirely dark).

The common ancestor **[J]** (dorsal side dark purplish, elytral puncturation finer) of the remaining two main clades expanded to the mainland New Guinea (**[I]**: no appreciable laterobasal lobe on pronotum) on the one hand, and to the Solomon Arch. (**[F]**: body cupreous) on the other. One of the descendants of **[I]** reached as far northwest as the Vogelkop Peninsula, evolved into **[H]** (large preihumeral dfp fovea, subhumeral dfp joined to anterodiscal) and remained there apparently unchanged as *M. purpurascens THY.*, while its more eastern population diverged into *M. hauseri (OBB.)* on Huon Pen. (pronotal fossae only basally dfp, subhumeral protrusion discernible) and eastern (Popondetta) *M. nylanderi sp.n.* (elytra markedly caudate). The other (**[C]**: elytra strongly caudate) daughter-branch of **[I]** seems to have inhabited highlands of the Gulf Pr., where a part of the population remained as not changed *M. sp.*, while the other part **[B]** – apparently identical to *M. loriai (KERR.)* (colouration greenish- or violaceous-black) – spread over the southern coast of Gulf and Central Provinces; at last, **[B]** expanded also to the northern coast, to evolve there (Cyclops Mts.) into *M. matrismeae sp.n.* (ferrugineous main part of tibiae sharply contrasting with shortly dark blue bases).

The last common ancestor of the third main clade inhabited Solomon Islands **[F]**; its southeasternmost (San Cristobal) population evolved (finer striae, subhumeral and anterodiscal dfp joint) into *M. marcsikae sp.n.*, while the apparently unchanged remainder **[E]**, in terms of the present analysis taxonomically identical to still unaltered *M. aurora (OBB.)* from Bougainville and Sta. Ysabel islands, invaded Bismarck Arch. to evolve there in to pale golden **[D]**, the ancestor of *M. cupreosplendens (KERR.)* (dark proximal end of tibiae contrasting with ferrugineous middle-to-distal parts), and more greenish **[A]**, apparently identical in morphology to *M. clotildae (GESTRO)* described from the remote Mafor (=Biak) island in Geelvink Bay; this, in turn, having [?re]invaded Solomon Is. (Vella Lavella I.), developed (no laterobasal lobe of pronotum, non-caudate elytra) into *M. pagdeni THY.*

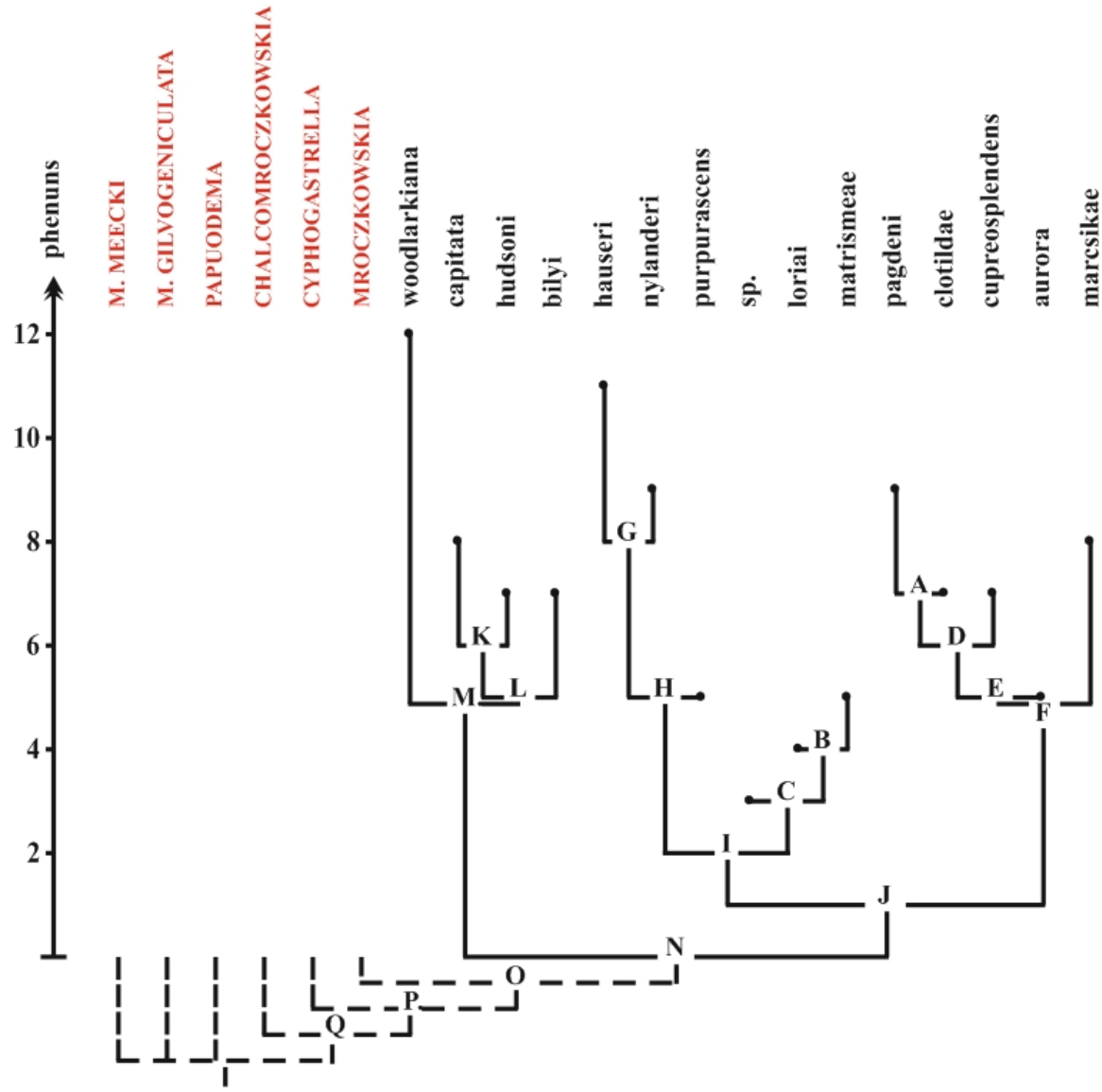

Fig. 13
Cladogenetical relations within the subgenus *Metamroczkowskia* HOŁ.

The results the analysis are graphically summarized in the cladogram **[Fig. 13]** above. A striking phenomenon is the repeatedly reappearing situation when one of the descendants (*e.g.* **[L]**) appears identical to its immediate ancestor (**[M]**), what, in fact, makes it the "mother" rather than "sister" taxon of the other descendant (*M. woodlarkiana sp.n.*). So, we have here effectively a polytomy: the taxon **[M=L]** is the ancestor of three "daughter" taxa (*M. woodlarkiana sp.n.*, **[K]**, and *M. bilyi sp.n.*); indeed, in some cases even a recent (currently living) species turn out to be the ancestor of another recent species [so, *e.g.*, **[C]**=*M. sp.* is the ancestor of **[B]**=*M. loriai (KERR.)*, itself ancestral to *M. matrismeae* HOŁ.]! This evidently contradicts the popular cladistic dogma that paraphyletic taxa cannot exist ("*no taxon can be ancestor of another taxon*"; in ***real*** world ***every*** non-terminal taxon is ***by definition*** paraphyletic! – *e.g.* HOŁYŃSKI 2005, 2010, 2011, 2016b), but dogmas are binding only in religion: in science decisive are observable or reconstruable facts, and these

convincingly suggest the "mother"-to-"daughter" relationship between, *e.g. M. loriai (KERR.)* and *M. matrismeae HOŁ.*, so dogmatic insistency on their being "sister"-species would be unjustifiable preconception! Naturally, any apparent identity between the ancestor and its descendant is only a hypothesis – we can never exclude the possibility that what appears indistinguishable ***based on the characters used here*** to reconstruct phylogeny, might have in fact been taxonomically distinct, differing in some other traits – but ***any*** result of ***any*** study is always only a hypothesis, and we must accept the best supported one! Its graphical representation shows the phylogram **[Fig. 14]** below.

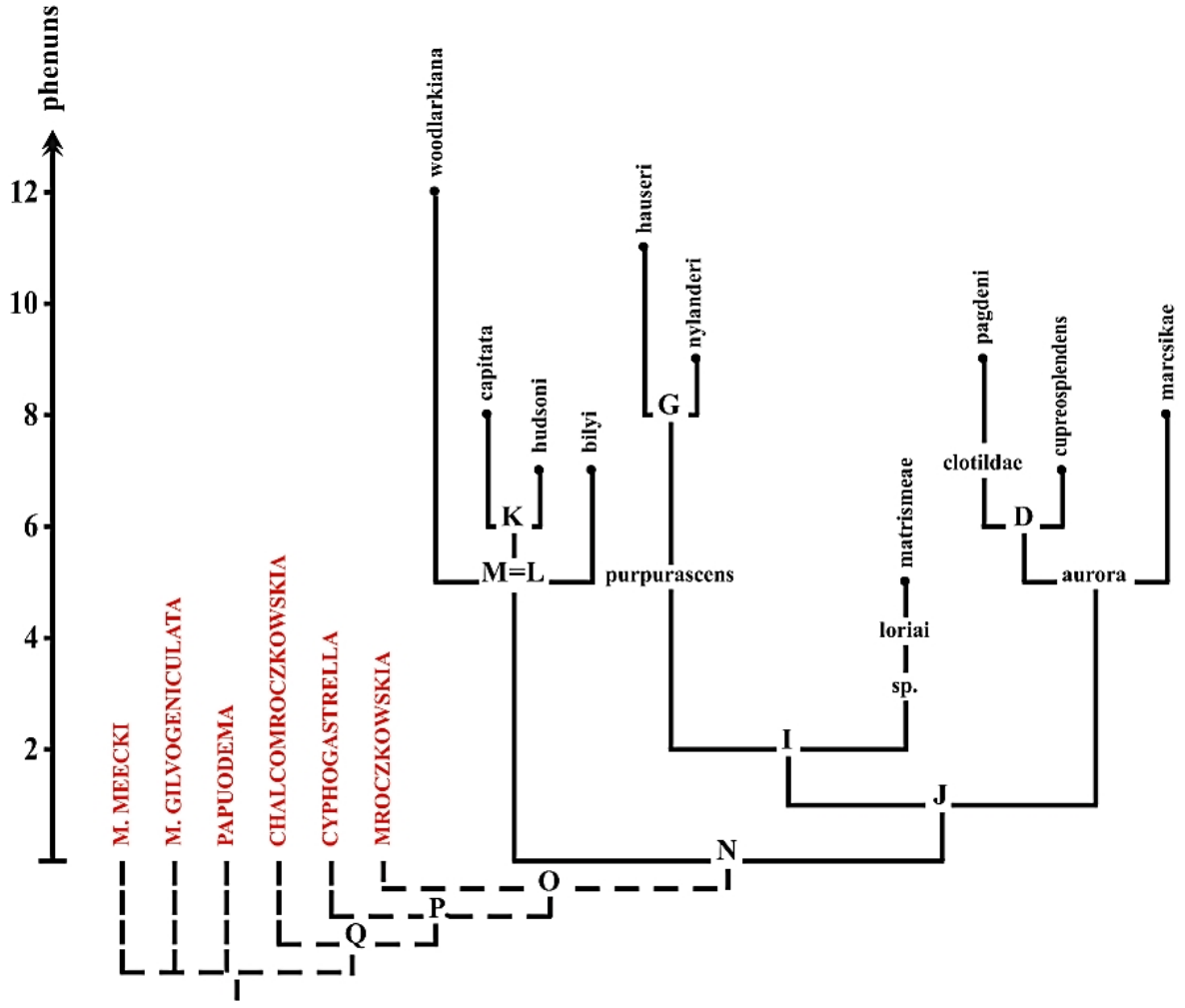

Fig. 14
Phylogenetical relations within the subgenus *Metamroczkowskia HOŁ.*

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Character definitions

Upper line – codes of traits ["character-states"]; ***[bold italics]*** – terminals of a transformation chain
Lower line – weights (costs of transformation) [0↔1↔2=1: additively equidistant (distance between 0 and 1 the same (=1) as between 1 to 2, that between 0 and 2 = 1+1 = 2; (abc)=1: equidistant [distance a↔b=b↔c=c↔a=1]; a↔(xy)=2: alternatively equidistant [a↔x=a↔y=2]

Proportions & colour

1. Body proportions (L:W): ***[0]*** <2.9; [1] ≈2.9-3.2; ***[2]*** >3.2
   0↔1↔2=1
2. Dorsal side: ***[0]*** bright; [1] intermediate; ***[2]*** [dull
   0↔1↔2=1
3. Dorsal side: [g] green; [a] golden; [c] cupreous; [p] purplish; [v] violaceous-black; [b] [bronzed- or brownish-]black
   g↔a↔c=1; p↔v=1; (gac)↔(pv)=2; (pv)↔b=1
4. Ventral side: ***[0]*** bright; ***[1]*** blackish
   0↔1=2
5. Front: ***[0]*** concolorous; ***[1]*** contrastingly cupreous
   0↔1=2
6. Elytral dfp spots: ***[0]*** poorly distinguished; ***[1]*** contrastingly coloured
   0↔1=1
7. Femora: ***[0]*** dark; ***[1]*** partly ferrugineous
   0↔1=2
8. Tibiae: [d] entirely dark; [t] transparently ferrugineous; [b] base dark; [a] base ferrugineous
   d↔t↔b =1; t↔a=1
9. Tarsi: ***[0]*** dark; ***[1]*** ferrugineous
   0↔1=3
10. Antennae: ***[0]*** dark; ***[1]*** ferrugineous
    0↔1=3

Pronotum

11. Side margins: ***[0]*** straight/regularly arcuate; ***[1]*** distinct laterobasal lobe
    0↔1=1
12. Collar: ***[0]*** none; ***[1]*** distinct
    0↔1=2
13. Sculpture: ***[0]*** sparse; ***[1]*** dense
    0↔1=1
14. Median line: ***[0]*** furrowed; ***[1]*** not marked or ridged
    0↔1=3
15. Fossae (fovea): ***[0]*** none; [1] basal; ***[2]*** entire
    0↔1↔2=2
16. Fossae (dfp): ***[0]*** none; [1] basal; ***[2]*** entire
    0↔1↔2=1
17. Fossae (apical fovea): ***[0]*** none; ***[1]*** present
    0↔1↔2=2

Elytra

18. Subhumeral protrusion: ***[0]*** none*;* [1] discernible; ***[2]*** prominent
    0↔1↔2=1
19. Apical half: ***[0]*** not caudate; [1] moderately caudate; ***[2]*** strongly caudate
    0↔1↔2=1
20. Striae: ***[0]*** deep, continuous; [1] moderate; ***[2]*** puncture rows
    0↔1↔2=1
21. Puncturation: ***[0]*** coarse; [1] moderate; ***[2]*** very fine
    0↔1↔2=1
22. Dfp perihumeral: ***[0]*** none; [1] small; ***[2]*** large
    0↔1↔2=1
23. Dfp subhumeral: ***[0]*** none; [1] separate; ***[2]*** joined to anterodiscal
    0↔1↔2=2
24. Dfp sulci – anterodiscal: ***[0]*** none; [1] punctiform; [2] rounded; ***[3]*** elongate
    0↔1↔2↔3=1
25. Dfp sulci – posterodiscal: ***[0]*** none; [1] punctiform; [2] transverse; [3] short; ***[4]*** elongate
    0↔1↔2↔3↔4=1
26. 3. interstria: ***[0]***; straight; ***[1]*** apically inflected
    0↔1=2

Ventral side

27. Proepisterna: ***[0]*** entirely dfp; [1] partly dfp; ***[2]*** entirely lustrous & reliefed
    0↔1↔2=1
28. Prosternal process: ***[0]*** nearly flat; ***[1]*** sulcate
    0↔1↔2=2
29. 1. sternite: ***[0]*** nearly flat; ***[1]*** sulcate
    0↔1↔2=2
30. Abdominal tubercle: ***[0]*** none; ***[1]*** prominent
    0↔1=3
31. Lateral dfp depressions on abdomen: ***[0]*** none or inconspicuous; ***[1]*** extensive
    0↔1=1

Character matrix

red italics – apomorphies

blue columns – distance from immediate ancestor and support quotient [S/Q]

```
                              1           2           3
                        12345 67890 12345 67890 12345 67890 1
                          222   2 33   2 32   2       2   2 223
=============================================================
 1. M. MEECKI           22b10 00d10 11101 00111 01111 01110 0
 2. M. GILVOGENICULATA  12b10 01a11 00100 00220 10122 00110 1
 3. PAPUODEMA           22g10 10d10 01010 20020 01111 01101 1
 4. CHALCOMROCZKOWSKIA  11v11 10t11 01001 20111 11124 01110 0
 5. CYPHOGASTRELLA      10g01 00d00 00002 20212 00223 01110 1
 6. MROCZKOWSKIA        10b11 11d10 00001 01012 22133 01000 1
 7. M. woodlarkiana     21b11 10d10 10002 20020 01222 02000 0= 5
 8. M. capitata         21b11 10t10 10002 20110 01222 12000 1= 2
 9. M. hudsoni          21b11 10d10 10002 20110 01122 12000 1= 1
10. M. bilyi            21b11 10t10 10002 20010 12122 12000 1= 2
11. M. hauseri          21b11 10t10 00001 10111 11222 12000 0= 3
12. M. nylanderi        21b11 10t10 00001 20021 11222 12000 1= 1
13. M. purpurascens     20p11 10t10 00001 20012 11222 12000 1= 0
14. M. sp.              20p11 10t10 00001 20022 12122 12000 1= 0
15. M. loriai           20v11 10t10 00001 20022 12122 12000 1= 0
16. M. matrismeae       20v11 10b10 00001 20022 12122 12000 1= 1
17. M. pagdeni          20g01 10t10 00001 20002 12122 12000 1= 2
18. M. clotildae        20g01 10t10 10001 20012 12122 12000 1= 0
19. M. cupreosplendens  20a01 10b10 10001 20012 12122 12000 1= 1
20. M. aurora           20c01 10t10 10001 20012 12122 12000 1= 0
21. M. marcsikae        20c01 10t10 10001 20011 12222 12000 1= 3

A                       20g01 10t10 10001 20012 12122 12000 1= 1 [ 1/ 2]
B                       20v11 10t10 00001 20022 12122 12000 1= 1 [ 1/ 1]
C                       20p11 10t10 00001 20022 12122 12000 1= 1 [ 1/ 4]
D                       20a01 10t10 10001 20012 12122 12000 1= 1 [ 1/ 1]
E                       20c01 10t10 10001 20012 12122 12000 1= 0 [ 2/ 3]
F                       20c01 10t10 10001 20012 12122 12000 1= 4 [ 3/ 6]
G                       21b11 10t10 00001 20011 11222 12000 1= 3 [ 4/ 4]
H                       20p11 10t10 00001 20012 11222 12000 1= 3 [ 4/ 4]
I                       20p11 10t10 00001 20012 12122 12000 1= 1 [ 4/ 6]
J                       20p11 10t10 10001 20012 12122 12000 1= 1 [ 6/ 8]
K                       21b11 10t10 10002 20110 01122 12000 1= 1 [ 5/ 5]
L                       21b11 10t10 10002 20010 01122 12000 1= 2 [ 5/ 6]
M                       21b11 10t10 10002 20010 01122 02000 1= 3 [ 8/10]
N                       20b11 10t10 10001 20012 02122 02000 1= 5 [ 9/11]
O                       10b11 10d10 00001 20012 02123 01000 1
P                       10b11 10d10 00001 20112 01123 01110 1
                          g
Q                       10b11 10d10 00001 20012 02123 01110 1
                         1g     t 1  1      2 1 10  4       0
                          v                 1    1
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