# Results of entomological expeditions to Misool Island, Part III. (Coleoptera: Scarabaeidae: Cetoniinae: Schizorhinini: Schizorhinina)

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Taxonomy, new species, new subspecies, Scarabaeidae, Cetoniinae, Schizorhinini, Schizorhinina, Anacamptorrhina, Digenethle, Dilochrosis, Microlomaptera, Platedelosis, Poecilopharis, Indonesia, Southwest Papua Province, Rajah Ampat Archipelago, Misool Island

Abstract. Representatives of subtribe Schizorhinina Burmeister, 1842 (Cetoniinae, Schizorhinini) collected by numerous, recent expeditions to Misool Island are studied. All together six genera, each with a single representative, have been collected during several trips; *Anacamptorrhina* Blanchard, 1842; *Digenethle* J. Thomson, 1877; *Dilochrosis* J. Thomson, 1878; *Platedelosis* Kraatz, 1880; *Microlomaptera* Kraatz, 1885 and *Poecilopharis* Kraatz, 1880. All six species are illustrated, including illustration of male aedeagus (if male available). *Dilochrosis balteata* J. Thomson, 1878; *Digenethle antoinei* Allard, 1995 represents a new island record for Indonesia, *Poecilopharis* sp. and *Platedelosis* sp. can't be currently identified at species level, two other species are new and are described in this article. *Microlomaptera misoolica* sp. nov. and *Anacamptorrhina ignipes misoolica* ssp. nov. are compared with their closest congeners occurring on the mainland of New Guinea Island.

#### INTRODUCTION

To complete the list of all known species of Schizorhinini occurring on remote Misool Island (Indonesia, Rajah Ampat Archipelago), representatives of subtribe Schizorhinina Burmeister, 1842 collected in Island are studied in this third part of contributions to the Cetoniinae of Misool.

All together the author identified six species belonging to six different genera. In Digenethle J. Thomson, 1877 only Digenethle antoinei Allard, 1995 was found. Specimens are identical with the mainland population, this species with an overall distribution in large part of western indonesian part of New Guinea Island seems to be rather common also in Misool. In Dilochrosis J. Thomson, 1878 only Dilochrosis balteata Snellen van Vollenhoven, 1871 has been found. The species was described from Waigeo Island and is nowhere common, but it has rather large distribution encompassing all of New Guinea Island and there are also records known to the author from Aru, Salawati, Japen and Batanta Islands and the Australian Cape York. In Poecilopharis Kraatz, 1880 one species has been found in rather large numbers. The species can't be properly identified at the moment due to the need of a revision of the complex of brownish species with yellow maculation distributed across all of New Guinea and also some surrounding islands. Additionally, a single female of australian genus Platedelosis Kraatz, 1880 which can't be properly identified was discovered on Misool.. A single male of Microlomaptera Kraatz, 1885 and several specimens of Anacamptorrhina Blanchard, 1842 can't be attributed to any of known species and both will be described in this work.

Krikken (2018) doesn't recognise *Digenethle* J. Thomson, 1877 and *Microlomaptera* Kraatz, 1885 as representatives of the subtribe Schizorhinina Burmeister, 1842 due to the presence of membranous flaps on aedeagi of males (in some species) and due to the structure of the scutellum, which in large part is covered by the pronotal basal lobe (also only in some species). Both mentioned characters are shared by representatives of subtribe Lomapterina Burmeister, 1842. The author follows the opinion of Krikken (1972).

### MATERIAL AND METHODS

The following codens of institutional and private collections are used in the text:

DEIC Deutsches Entomologisches Institut, Eberswalde, Germany;

KSCP Kaoru Sakai private collection, Tokyo, Japan;

MNHN Muséum National d'Histoire Naturelle, Paris, France;

RMNH Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands;

SJCP Stanislav Jákl private collection, Praha, Czech Republic;

ZMHB Museum fur Naturkunde, Leibniz-Gemeinschaft, Berlin, Germany.

Specimens of newly described species are provided with red and yellow printed labels, red for HOLOTYPUS, yellow for PARATYPUS. Each holotype or paratype label is provided with sex symbol, number of paratype (in paratype label) and words St. Jákl det. Label data are cited for the material examined, individual labels are indicated by a double slash (//), individual lines by a single slash (/).

#### RESULTS

### Genus Anacamptorrhina Blanchard, 1842

Anacamptorrhina Blanchard, 1842: 20 (original description); Schenkling 1921: 175 (catalogue); Krikken 1984:
50 (generical checklist); Allard 1995a: 11 (in French): 105 (in English) [monograph]; Sakai & Nagai 1998: 195 (iconography); Krajčík 1999: 18 (catalogue); Krikken 2018: 5 (generical checklist): 13 (generical key).
Type species: Anacamptorrhina ignipes Blanchard, 1842 (by monotypy).

# Anacamptorrhina ignipes misoolica ssp. nov.

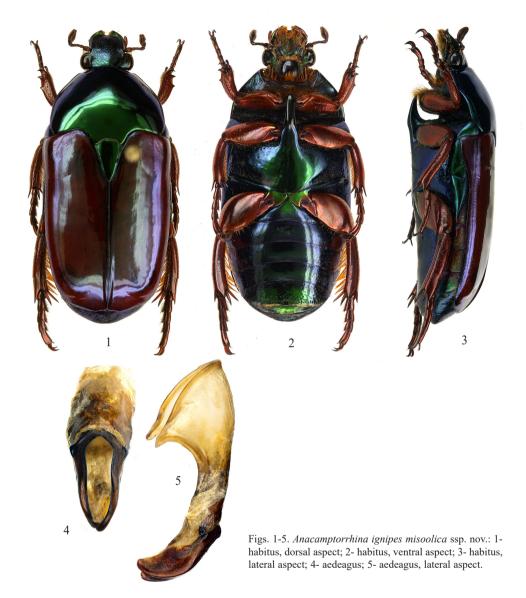
(Figs. 1-5)

Type locality. Indonesia, Southwest Papua Province, Rajah Ampat Archipelago, Misool Island.

**Type material.** Holotype (3) (SJCP) labelled: INDONESIA, West Papua / pr., Misool Island / XI. 2016 / local collector leg. Paratypes: (Nos. 1-2  $\lozenge \circlearrowleft$ , Nos. 3-4  $\lozenge \circlearrowleft$ ) (SJCP) labelled: same as holotype; (No. 5  $\circlearrowleft$ ) (SJCP) labelled: INDONESIA, E Moluccas / MISOOL I., 0-300 m / XII. 2016; (No. 6  $\circlearrowleft$ , No. 7  $\lozenge$ ) (SJCP) labelled: INDONESIA, E Moluccas / MISOOL I., 0-300 m / XII. 2017 / local collector leg.

**Description of holotype.** Dorsal side bicolored. Head, pronotum, scutellum and pygidium green/blue with strong metallic lustre, elytra brownish with metallic lustre. Venter green/blue, legs red to reddish with golden reflection. Body size (excluding pygidium) 22.5 mm.

Head. Green to blue, shining. Punctation simple, but rather dense, specially on clypeus, base of head nearly impunctate. Lateral sides sharply bordered, lateral declivities distinctly



visible from above. Apex of clypeus nearly vertically elevated, very deeply incised, clypeal lobes sharply elongated. Antennae brownish, club shorter than stalk.

Pronotum. Green, very strongly shining, completely impunctate. Lateral border developed and running throughout total length. Base of basal lobe deeply semicircularly incised.

Scutellum. Triangularly shaped, green, strongly shining, completely impunctate. Anterolateral margins with few indistinctly developed striolae.

Elytra. Coloration chestnut brownish with blue/green tinge. Entire elytral surface completely impunctate, except for a few, short, horisontally running striolae on posterior third of lateral margins. Sutural ridge flat on basal two thirds, on apical third very slightly elevated, its ending not drawn out over elytral apex. Subhumeral emargination very indistinct, not well developed. Apical and humeral calli very obtuse, not well developed.

Pygidium. Green, shining, circularly developed rather dense and deep striolation present throughout total length. Pilosity absent.

Venter. Coloration green to blue, very strongly shining. Abdomen without impression, more or less arched. Both posterior ventrites with mixture of fine punctation and striolation, mainly on sides. Punctation of first to fourth ventrites reduced to lateral sides only, remainder of surface only with micropunctation. Posterior margin of fifth ventrite with row of short brownish setae. Metacoxae with few rather deep short striolae. Metasternum with few deep, short striolae bearing reddish setae on posterior margin, remainder of metasternum and metasternal plate glabrous, impunctate. Mesometasternal process long and sharp, reaching nearly the level of posterior margin of mentum. Parts of prosternum and specially mentum with deep and moderately dense striolation and cover of reddish setation.

Legs. Femora, tibiae, tarsi reddish with strong golden lustre. Protibia tridentate, slightly not equidistant. Carina on mesotibia absent, on metatibia very obtuse, but present. Inner sides of meso- and metatibiae with brush of reddish setation.

Aedeagus (Figs. 4-5).

**Variability.** Body size slightly different ranging from 21.5-22.5 mm (excluding pygidium). In all other characters all five males available for study identical.

**Sexual dimorphism.** Body size same as in males 21.5-22.5 mm (excluding pygidium). Dorsal side of females with much stronger green to blue tinge, not as the distinctly bicolored dorsum in males. Punctation of head and venter slightly coarser than in males. Protibiae wider and slightly more robust, its inner, apical spur shorter and less curved than in males.

Differential diagnosis. The newly described subspecies from Misool Island differs mainly in the coloration of dorsal side of body, which is bicolored (reddish elytra with green head, pronotum, scutellum and pygidium), but unicolored on mainland population (with green or blue head, pronotum, scutellum, elytra and pygidium). Punctation of head and venter and striolation of meso- and metafemora sparser in population from Misool Island. Male aedeagi in *Anacamptorrhina* Blanchard, 1842 are very similar, but in population from Misool both branches of aedeagus distinctly longer and narrower than in mainland population. (Figs. 4-5). For comparison with Misool Island population the author examined specimens from the following localities on the mainland of New Guinea: Sorong, Arfak Mountains, Nabire, Kaladiri, Kaimana and Karas Island.

**Ethymology.** Named after the Misool Island, type locality of newly described subspecies.

Distribution. Indonesia, Southwest Papua Province, Rajah Ampat Archipelago, Misool Island.

## Genus Digenethle J. Thomson, 1877

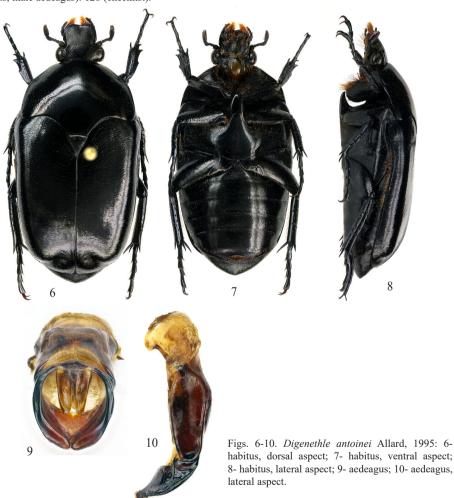
Digenethle J. Thomson, 1877: 246 (original description); Schenkling 1921: 128 (catalogue); Valck Lucassen 1961: 4 (monograph): 5 (generical key); Krikken 1984: 50 (generical checklist); Allard 1995a: 50 (in French, : 144 (in English) [monograph]; Rigout 1997: 28 (Supplement to Schizorhinini 1 & 2); Sakai & Nagai 1998: 187 (iconography); Krajčík 1999: 17 (catalogue); Jákl 2017: 102 (new records, new descriptions, indonesian part of New Guinea Island).

Type species Digenethle ramulosipennis J. Thomson, 1877 (= Digenethle caelata Gestro, 1874).

# Digenethle antoinei Allard, 1995

(Figs. 6-10)

Digenethle antoinei Allard, 1995: 52 (in French): 146 (in English), pl. 19, fig. 11 (original description); Sakai & Nagai 1998: 187, pl. 17, fig. 328 female (Numfor Island); Krajčík 1999: 17 (catalogue); Jákl 2017: 103, figs. 1-5 (habitus, male aedeagus): 126 (checklist).



Digenethle allardi Rigout, 1997: 28 (original description); Krajčík 1999: 17 (catalogue); Jákl 2017: 103 (= Digenethle antoinei Allard, 1995). Type locality: "environs of Pusppenssat" (= Indonesia, West Papua Province, Pusppenssat field station, S of Nabire).

Type locality. "Irian Jaya, Arfak" (= Indonesia, West Papua Province, Arfak Mountains).

**Type material.** Holotype (♂), (MNHN).

**Material examined:** 15  $\circlearrowleft$   $\circlearrowleft$  10  $\circlearrowleft$   $\circlearrowleft$  (SJCP) labelled: Indonesia, WEST PAPUA PROV. / KALADIRI ENV., cca 25 km S of/ Nabire, 150-400 m / local collector leg; 1  $\circlearrowleft$ , 1  $\circlearrowleft$  (SJCP) labelled: Indonesia, W Irian Jaya / ARFAK MTS., 5. 2005 / local collectors lgt; 5  $\circlearrowleft$   $\circlearrowleft$ , 5  $\circlearrowleft$   $\circlearrowleft$  (SJCP) labelled: Indonesia, NNW Irian Jaya/ARFAK MOUNTAINS, 11. 2003 / local collectors lgt; 3  $\circlearrowleft$   $\circlearrowleft$  2  $\circlearrowleft$  (SJCP) labelled: Indonesia, W Irian Jaya / ARFAK MTS., 2. 2002 / local collectors lgt; 6  $\circlearrowleft$   $\circlearrowleft$  2  $\circlearrowleft$  (SJCP) labelled: Indonesia, W Irian Jaya / ARFAK MTS., 3. 2006 / local collectors lgt; 2  $\circlearrowleft$  (SJCP) labelled: INDONESIA, West Papua / WASIOR / XII. 2019 / local collector leg; 1  $\circlearrowleft$ , 2  $\circlearrowleft$  (SJCP) labelled: Indonesia, W Irian Jaya / SORONG DISTRICT, 11. 1999 / local collectors lgt; 2  $\circlearrowleft$   $\circlearrowleft$  1  $\circlearrowleft$  (SJCP) labelled: Indonesia, Irian Jaya centr. / NABIRE REGION, 12. 2003 / local collectors lgt; 3  $\circlearrowleft$  (SJCP) labelled: INDONESIA, West Papua Pr. / FAK FAK env. / XI. 2014 / local collectors leg; 2  $\circlearrowleft$   $\circlearrowleft$  3  $\circlearrowleft$  (SJCP) labelled: Indonesia, West papua pr. / KAIMANA env. / III. 2009 / local collector lgt; 1  $\circlearrowleft$  3  $\circlearrowleft$  (SJCP) labelled: INDONESIA, W Papua / YAHUKIMO env. N of / Asmat area, V. 2010 / local collector leg; 1  $\circlearrowleft$  1  $\circlearrowleft$  (SJCP) labelled: Indonesia, CN Irian Jaya / Schouten isls., JAPEN ISL. / 7. 2003, local collectors lgt; 1  $\circlearrowleft$  (SJCP) labelled: IND.- IRIAN JAYA/ BATANTA ISL. / Local collector; 1  $\circlearrowleft$  (SJCP) labelled: Indonesia, West Papua / pr., Misool Island/ XI. 2016 / local collector leg.

**Distribution.** Indonesia: West Papua and Papua provinces, Numfor Island, Batanta Island, Salawati Island, Japen Island (new island record), Misool Island (new island record).

#### Genus Dilochrosis J. Thomson, 1878

Dilochrosis J. Thomson, 1878: 18 (original description); Schenkling 1921: 178 (catalogue); Krikken 1984: 50 (generical checklist); Allard 1995a: 22 (in French): 116 (in English) [monograph]; Sakai & Nagai 1998: 188 (iconography); Krajčík 1999: 17 (catalogue).

Evanides J. Thomson, 1880: 294 (original description). Type species Schizorhina bakewellii White, 1859 (by original designation).

Phaeopharis Kraatz, 1880: 184 (original description). Type species Cetonia brownii Kirby, 1818 (by original designation).

Type species Cetonia flammula Blanchard, 1853 (subsequent designation by Allard, 1995a).

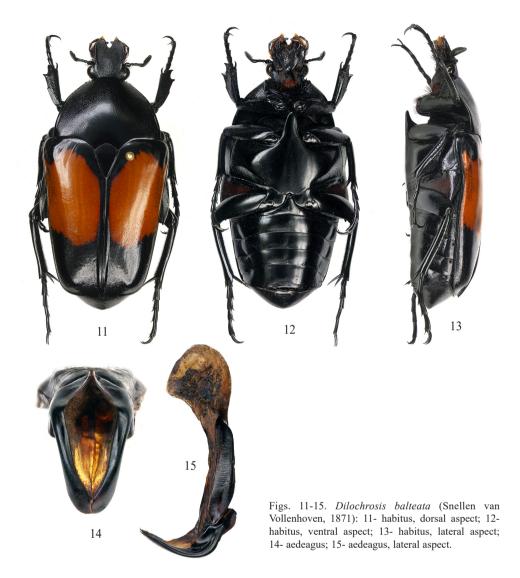
# Dilochrosis balteata (Snellen van Vollenhoven, 1871) (Figs. 11-15)

Eupoecila balteata Snellen van Vollenhoven, 1871: 277 (original description).

Dilochrosis balteata (Snellen van Vollenhoven): Allard 1995: 23 (in French): 117 (in English), pl. 6, figs. 11 male, 12 female (monograph); Sakai & Nagai 1998: 189, pl. 18, fig. 340-1 male (Papua New Guinea), 340-2 female (Papua New Guinea), 340-3 male (Papua New Guinea); Krajčík 1999: 17 (catalogue); Krikken 2018: 6 (generical checklist): 13 (generical key).

Dilochrosis bennigseni Kraatz, 1900: 74 (original description): Allard 1995a: 23, 117 (= Dilochrosis balteata Snellen van Vollenhoven, 1871). Type locality. Stephansort (Neu-Guinea). 2 Syntypes (DEIC).

Dilochrosis meyeri Heller, 1895: 4 (original description): Allard 1995a: 23, 117 (= Dilochrosis balteata Snellen van Vollenhoven, 1871). Type locality. Kaiser Wilhelms - Land, Bongu (= Papua New Guinea, Kaiser - Wilhelm Mts., Bongu). Type material. Holotype male (ZMHB).



**Type material.** Holotype ( $\mathcal{P}$ ), (RMNH).

**Material examined:**  $1 \circlearrowleft (SJCP)$  labelled: IND., IRIAN JAYA/ FAK FAK REGION / Local collector, 12/00;  $1 \circlearrowleft (SJCP)$  labelled: Indonesia, SW Irian Jaya / FAK FAK REGION, 3. 2003 / local collectors lgt;  $1 \circlearrowleft (1 \circlearrowleft (SJCP))$  labelled: Indonesia, W. Papua pr. / Fak Fak env., I. 2010 / local collectors lgt;  $1 \circlearrowleft (SJCP)$  labelled: Indonesia, SW Irian Jaya / FAK FAK REGION, 4. 2002 / local collectors lgt;  $1 \circlearrowleft (SJCP)$  labelled: IND., IRIAN JAYA / TIMIKA, 3/2001 / Local collector;  $1 \circlearrowleft (2 \circlearrowleft (SJCP))$  labelled: INDONESIA, E Moluccas/ MISOOL I. / XII. 2017 / local collector leg;  $1 \circlearrowleft (SJCP)$  labelled: Papua-New Guinea/ Morobe prov. ASEKI, 6.4. / YAMAYA VILL. env., 1999/ local collectors lgt.

**Distribution.** Papua New Guinea; Indonesia: West Papua and Papua provinces, Waigeo Island, Misool Island (new island record).

### Genus Microlomaptera Kraatz, 1885

Microlomaptera Kraatz, 1885: 88 (original description); Schenkling 1921: 128 (catalogue); Valck Lucassen 1961: 3 (monograph): 5 (generical key); Krikken 1984: 51 (generical checklist); Allard 1995b: 44 (in French): 131 (in English) [monograph]; Sakai & Nagai 1998: 194 (iconography); Krajčík 1999: 18 (catalogue).

Type species Microlomaptera aenea Kraatz. 1885 (original designation).

# Microlomaptera misoolica sp. nov.

(Figs. 16-20)

Type locality. Indonesia, Southwest Papua Province, Rajah Ampat Archipelago, Misool Island, Tip village vicinity.

Type material. Holotype ( $\circlearrowleft$ ) (SJCP) labelled: INDONESIA, E Molucca Islands / N. MISOOL I., IV. 2023/ Tip vill. env., at light / local collector leg.

**Description of holotype.** Both body sides bronze, very shining, specially in dorsal side. Legs chestnut brown. Body size 14.5 mm (excluding pygidium).

Head. Head, bronze with very strong golden luster. Clypeus glabrous, impunctate, frons with few very fine punctures. Sides of clypeus gently bordered, running in parallel. Lateral declivities from above nearly invisible. Apex of clypeus rather deeply incised. Antennae brownish, club darker than stalk. Club shorter than stalk.

Pronotum. Bronze with strong golden lustre. Punctation very sparse with mixture of very fine and much larger punctures distributed mainly on anterior half and sides. Basal margin and basal lobe impunctate. Lateral border running throughout total length, on anterior half much wider. Apex of basal lobe moderately emarginated.

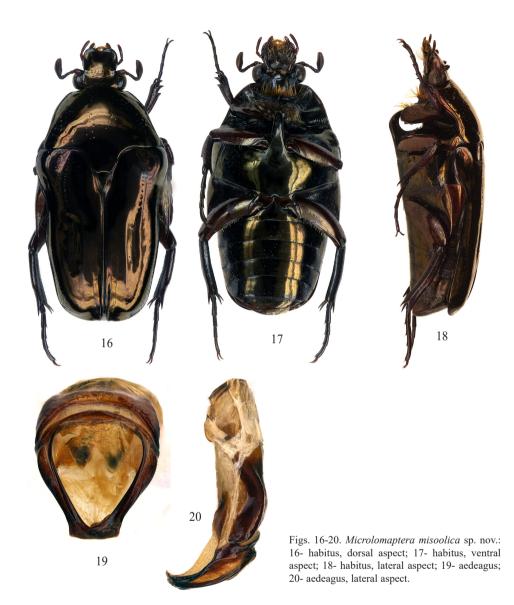
Scutellum. Uncovered part of scutellum triangularly shaped, coloration bronze, strongly reflecting, impunctate.

Elytra. Coloration bronze, with very strong golden lustre. Punctation very reduced. Each elytron with few irregularly shaped punctures beside inner side of humeral callus. Disc with two striolae lines running longitudinally, outer striola much longer running fragmentally to margin of elytral base. Apical third with two striolae lines beside sutural ridge reaching the level of apical callus. Lateral sides with short striolation developed approximately in apical third. Remainder of elytra completely impunctate. Sutural ridge slightly elevated on posterior third. Subhumeral emargination moderately sharp, apical and humeral calli obtuse.

Pygidium. Coloration of flat pygidium bronze with golden lustre. Circularly developed striolation rather dense and deep.

Venter. Bronze, with golden lustre, excepting only brownish metepimeron, mesepimeron and sides of metacoxae. Abdomen, metepimeron, mesepimeron and metasternum impunctate. Inner side, anterior and posterior margins of metacoxae striolated. Parts of prosternum and mentum with dense and deep striolation. Mesometasternal process long with apex sharply curved downwards.

Legs. Femora, tibiae and tarsi chestnut brownish, tibiae and tarsi darker than femora.



Anterior margins of meso- and metafemora striolated. Protibiae tridentate, equidistant. Meso- and metatibia carinate on posterior half.

Genitalia. Base of aedeagus broad, sharply narrowing to apex. Apex of each rim with hook (Figs. 19-20).

Variability and sexual dimorphism. Only the holotype male was available for study.

**Differential diagnosis.** The newly described species belongs to the same group with *Microlomaptera aenea* Kraatz, 1885, *M. antoinei* Allard, 1995, *M. nisbeti* Heller, 1897 and *M. pyidialis* Krikken, 1979. The habitus is very similar to the last two species. It differs from them by the completely impunctate clypeus with sides of clypeus running in parallel, but punctured clypeus in both congeners, with clypeal sides widening from eye canthus to clypeal midlength; by the very reduced punctation of the pronotum and elytra, which is much more expressed in its congeners; by the extremely elongated posterolateral angle of the hind coxae, which are elongated (but not extremely elongated) in *M. pygidialis* Krikken, 1979 and short in *M. nisbeti* Heller, 1897, and by the differently structured male aedeagus (Figs. 19-20).

Characters used by Krikken (1979) to separate species in the genus, the yellow pronotal border, mesepimeron, parts of metacoxae and parts of legs is probably not good character. The author has examined a series of specimens of *Microlomaptera pygidialis* Krikken, 1979 from the area of Nabire, and some specimens have yellow body parts, while a few specimens are completely black and one intermediate.

**Etymology.** Named after Misool Island, type locality of newly described species.

**Distribution.** Indonesia, Southwest Papua Province, Rajah Ampat Archipelago, Misool Island.

**Note.** In the series of *Microlomaptera pygidialis* Krikken, 1979 examined, there are two completely black specimens looking exactly the same as *Microlomaptera antoinei* Allard, 1995 described from one female. This species will be probably considered conspecific with a very variable species described by Krikken in 1979.

## Genus Platedelosis Kraatz, 1880

Platedelosis Kraatz, 1880: 198 (original description); Krikken 2018: 7 (raised from synonymity with Lyraphora Kraatz, 1880), (generical checklist): 14 (generical key).

Dichrosoma Kraatz, 1885: 89, pl. 1, fig. 6, 6a (original description); Schenkling 1921: 188 (catalogue). Type locality. Aru Islands.

Type species Dichrosoma lansbergei Kraatz, 1885 (by monotypy).

Type species Schizorhina bassii White, 1847 (by original designation).

# *Platedelosis* **sp.** (Figs. 21-23)

Material examined: 1 ♀ (KSCP) labelled: Misool Is. / Irian Jaya Barat / Indonesia / XII. 2016.

**Note.** This very surprising catch is unfortunately a single female. It is surely different than its sister species *Platedelosis bassii* White, 1847 known from Australia, but the author was not able to examine the type of *Platedelosis pinguis* described by Janson in 1881 from Port Moresby in the eastern part of Papua New Guinea or the type of *Dichrosoma lansbergei* Kraatz, 1885 described from the Aru Archipelago. Another obstacle to a



Figs. 21-23. Platedelosis sp.: 21- habitus, dorsal aspect; 22- habitus, ventral aspect; 23- habitus, lateral aspect.

definitive identification might be that both latter mentioned species were described from male specimens.

### Genus Poecilopharis Kraatz, 1880

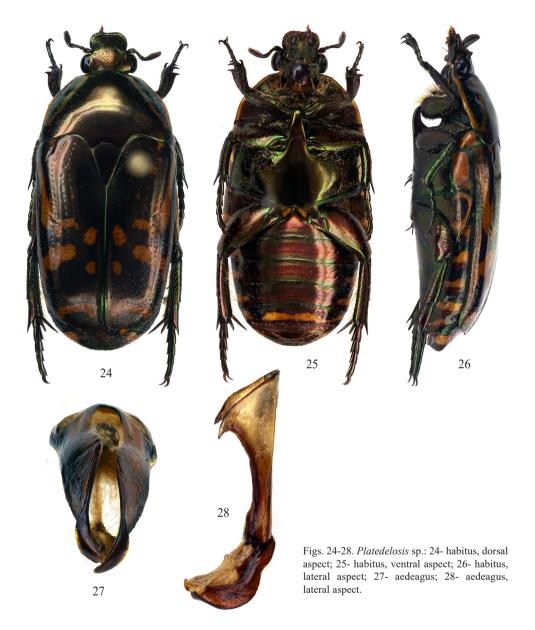
Poecilopharis Kraatz, 1880: 182 (original description); Schenkling 1921: 176 (catalogue); Krikken 1984: 51 (generical checklist); Allard 1995a: 13 (in French): 107 (in English) [monograph]; Rigout 1997: 16 (Supplement to Schizorhinini 1 & 2); Sakai & Nagai 1998: 191 (iconography); Krajčík 1999: 18 (catalogue); Krikken 2018: 7 (generical checklist): 13 (generical key).

Type species Schizorhina bouruensis Wallace, 1867 (by original designation).

# *Poecilopharis* sp. (Figs. 24-28)

**Material examined:** 25 33, 20 99 (SJCP) labelled: INDONESIA, West Papua / pr., Misool Island / XI. 2016 / local collector leg.

**Note.** Several species of this brownish, spotted genus *Poecilopharis* Kraatz, 1880 occur on mainland New Guinea Island and also on some nearby islands. Proper identification of this very difficult and unclearly described and studied group will require taxonomical revision, perhaps molecular analysis.



ACKNOWLEDGEMENT. I am deeply obliqued to Arnošt Kudrna (Rudolfov, Czech Republic) for his help with digital photography.

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