

A contribution to the genus *Lomaptera* Gory & Percheron, 1833, with descriptions of new species (Coleoptera: Scarabaeidae: Cetoniinae)

Stanislav JÁKL

Geologická 1218/2c, CZ-152 00 Praha 5, Czech Republic
email: stanley.jakl@seznam.cz

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Abstract. The *Lomaptera pulchella* Janson, 1905 species group is studied. Species from Papua New Guinea are compared with species flying in western (Indonesian) part of the island, their distributional areas are discussed and three sp. nov. from the Indonesian part of New Guinea Island are described: *Lomaptera aurea* sp. nov. from Bugalaga and *Lomaptera mapia* sp. nov. from Mapia in Enarotali District and *Lomaptera arfakiana* sp. nov. from Arfak Mountains in north-western part of the island. The newly described species are compared with their historically known congeners and a dichotomical key to all representatives of the group is given. All species of *pulchella* species group including illustrations of male parameres are pictured. Additionally tiny and strange *Lomaptera grandipenis* sp. nov. from southern lowland of Indonesian Papua, which cannot be attributed to any of known groups, is described and illustrated.

INTRODUCTION

The genus *Lomaptera* was established by Gory & Percheron in 1833. Together with other six genera, it belongs to the subtribe Lomapterina. The distributional area of this subtribe encompasses south-eastern Asia, all transitional areas between Oriental and Australian Regions and reaches western parts of the Pacific. Approximately 80% of species occurs in Papua New Guinea Island mainland. *Lomaptera* Gory & Percheron is one of the most diverse genus in Cetoniinae, number of valid described taxa currently stays on 116 species and 32 subspecies. Black, brownish, reddish, orange or bicolored species used to be accommodated in subgenus *Melanoptera* Schurhoff, 1935 but it was officially synonymised with the nominotypical subgenus by Krajčák (2016). The genus *Lomaptera* Gory & Percheron, 1833 was revised by Schurhoff (1935), Valck Lucassen (1961) and Allard (1997). In general, species recognised by Valck Lucassen were significantly reduced by the last reviser.

Anyway some distinct groups can be recognised. The present study is focused on the *Lomaptera pulchella* Janson, 1905 species group. Four species are currently recognised, *Lomaptera pulchella* Janson, 1905, *Lomaptera pseudopulchella* Valck Lucassen, 1961 and *Lomaptera gracilis* Valck Lucassen, 1961 from the eastern part of New Guinea Island (PNG) and *Lomaptera bonnardi* Delpont, 2009 from the western part of the island (West Papua and Papua Provinces, Indonesia). All belong to smallest species of Lomapterines, with body size 14-18 mm (excluding head and pygidium) and rather uniform appearance with yellow to reddish dorsal side and greenish parts of head, pronotum and elytra. Both body sides of all known species have strong or very strong reflection. Species occurring in eastern part

of New Guinea Island are distinctly larger, males with symmetrical or only very slightly asymmetrical parameres and distinctly developed abdominal impression. Single species from western part of the island is smaller with extremely asymmetrical parameres.

Several species of *Lomaptera* belonging to the *pulchella* species group which have been collected in western part of New Guinea Island entirely cannot be attributed to any known taxa. All 160 specimens (4 species) collected in the Indonesian part of the island in several different regions having indistinctly developed or completely absent abdominal impression in males and slightly to distinctly asymmetrical parameres. Some specimens belong to species described by Delpont (2009), other three species, one from Arfak Mountains in north-western part of the island, second and third from Enarotali District lying in central part of Indonesian Papua, are described in this article.

At the end of the article, a tiny *Lomaptera* Gory & Percheron which cannot be attributed to any known group is described and illustrated.

MATERIAL AND METHODS

The following codens of institutional and private collections are used in the text:
CSIRO Commonwealth Scientific and Industrial Research Organisation, Canberra, Australia;
RMNH Rijksmuseum van Natuurlijke Historie, Leiden, the Netherland;
SJCP Stanislav Jákł, private collection, Praha, Czech Republic;
ZMHB Museum für 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. Jákł det. Label data are cited for the material examined, individual labels are indicated by a double slash (//), individual lines by a single slash (/).

RESULTS

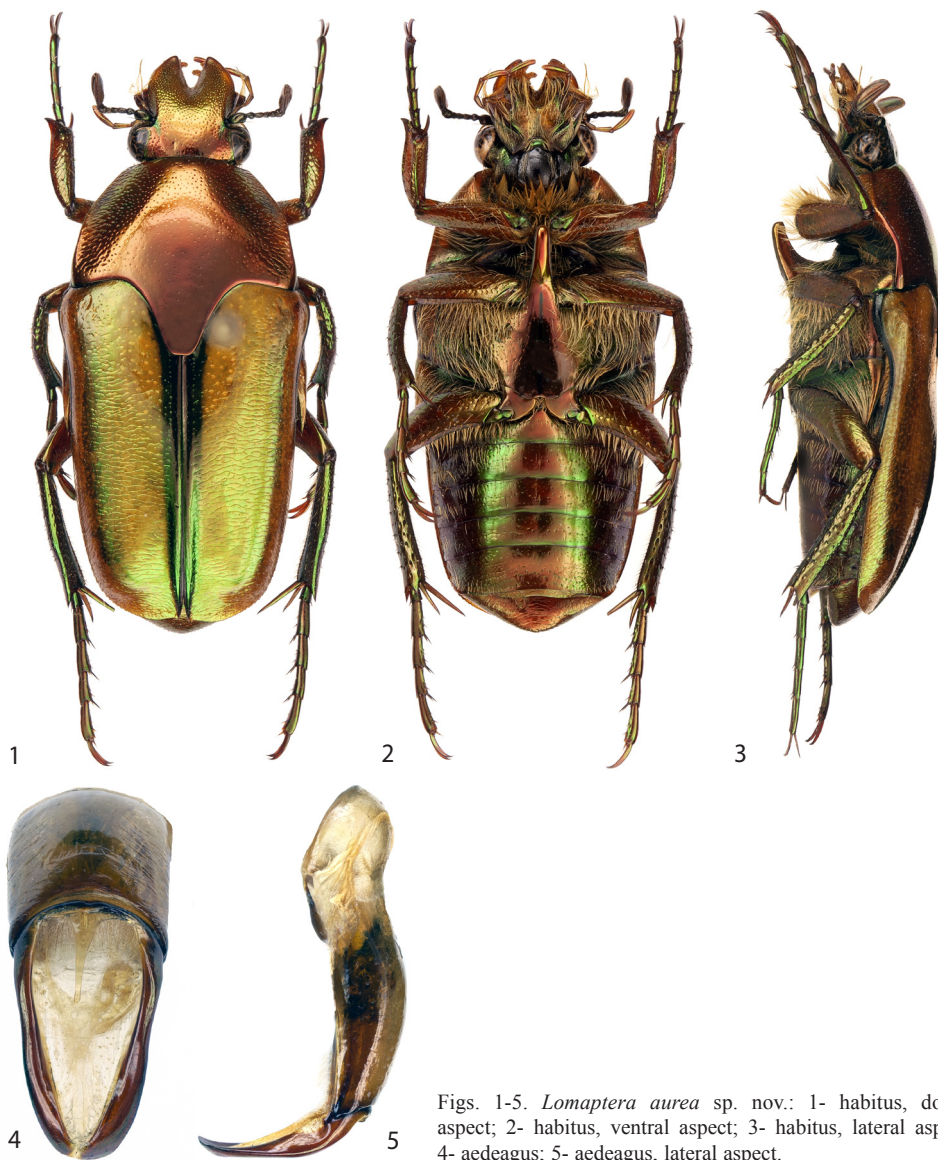
Lomaptera aurea sp. nov. (Figs. 1-5)

Type locality. Indonesia, West Papua Province, Enarotali District, Bugalaga village environment (east of Enarotali).

Type material. Holotype (♂) labelled: INDONESIA, W. Papua pr. / BUGALAGA v. env., E of/ Enarotali XI. 2010/ local collector leg. (SJCP). Paratypes: (Nos. 1-9 ♂♂, Nos. 10-13 ♀♀) labelled: same as holotype, (SJCP).

Description of the holotype. Body size 19.2 mm (excluding pygidium). Yellowish with very strong golden reflection, head and pronotum completely brownish with extremely developed lustre.

Head. Brownish with very strong green-golden reflection. Punctuation in clypeus rather dense, diameters of punctures and interspaces approximately same, concentration of punctures in frons much lower. Incision of clypeal apex deep and sharp. Lateral declivities



Figs. 1-5. *Lomaptera aurea* sp. nov.: 1- habitus, dorsal aspect; 2- habitus, ventral aspect; 3- habitus, lateral aspect; 4- aedeagus; 5- aedeagus, lateral aspect.

rather wide. Antennae short, club shorter than pedicel, coloration green in scapus, brownish in antennal rest.

Pronotum. Coloration brownish, but due to extremely developed lustre, looking greenish. Pronotal disc very finely punctured, basal lobe impunctate, sides with dense and rather broad striolation. Lateral border developed only in anterior, pronotal half. Apex of basal lobe with shallow emargination.

Scutellum. Absent.

Elytra. Coloration straw yellowish with green sutural ridge. Very extreme lustre developed throughout total elytral length. Beside pronotal, basal lobe and sutural area impunctate, rest of elytra with transversally developed striolation. Humeral calli completely flat, calli very obtuse in apex. Sutural ridge not exceeding elytral apex. Elytral apex obtusely rounded.

Pygidium. Green, conically developed with dense, circularly shaped striolation.

Ventrum. Coloration dark green, moderately reflected. Abdominal impression completely absent, abdomen even not flattened, but arched as in females. Whole metasternum and prosternum nearly completely covered with long white setation. Abdominal setation reduced to upper margin in first two abdominal segments, rest of abdomen nearly glabrous. Mesometasternal process similar with other species in group, long, heading downwards, in apex rounded.

Legs. Femora brownish with very strong greenish lustre and striolated surface. Tibia brownish, but due to extreme reflection looking greenish. Tarsi dark green to black. Protibia unidentate. Mesotibia curved to inner side in posterior half.

Genitalia. Similar with *Lomaptera arfakiana* sp. nov., but not so robust and slightly less asymmetrical (Figs. 4-5).

Variability. Size of paratypes 18.5-19.5 mm (excluding pygidium). In other aspects very similar to each other.

Sexual dimorphism. Size of females 19-20 mm. Body slightly wider, protibia bidentate and more robust, anal segment with dense punctation. In other respects similar with males.

Differential diagnosis. The newly described species stays close to *Lomaptera arfakiana* sp. nov. It can be separated from it in three main characters. Dorsal surface of *Lomaptera aurea* sp. nov. with extremely developed lustre, therefore it seems that coloration of head and pronotum is green, but actually is brownish. Lustre in *Lomaptera arfakiana* sp. nov. not that extreme. Mesotibia curved inwards in posterior half of tibial length in *Lomaptera aurea* sp. nov. but only slightly curved or nearly straight in *Lomaptera arfakiana* sp. nov. Abdomen arched in both sexes in *Lomaptera aurea* sp. nov. but flattened in males of *Lomaptera arfakiana* sp. nov. Male parameres similar in both species, but in *Lomaptera arfakiana* sp. nov., both branches are more robust and slightly less asymmetrical than in its congener. From all other species in the *Lomaptera pulchella* species group sp. nov. can be characterised by the following combination of characters: size 18.5-20 mm (excluding pygidium); dorsal side with extremely developed reflection causing that brownish head and pronotum looks green; legs with extremely developed lustre; antennae brownish with green scapus; pronotal basal lobe with emargination; abdomen arched in both sexes, male parameres slightly asymmetrical.

Etymology. Named after extreme golden reflection on the dorsal side.

Distribution. INDONESIA: West Papua Province, Bugalaga village environment, east of Enarotali.

***Lomaptera bonnardi* Delpont, 2009**

(Figs. 6-10)

Lomaptera bonnardi Delpont, 2009: 313, fig. 2 (original description).

Type locality. “Mapia, Paniai Province, Irian Jaya“ (= Mapia village, Paniai district, West Papua Province, Indonesia).

Type material. Holotype (♂), Allotype (♀), (CSIRO). Paratypes: (2 ♂♂, 1 ♀) MNHN (ex coll. Antoine); (3 ♂♂, 3 ♀♀) coll. S. Breton, E. Bonnard, M. Delpont, G. Hangay, J.-M. Mille.

Additional material examined: 9 ♂♂, 2 ♀♀ labelled: Indonesia, West Papua/ KALADIRI env., cca 20 km S / of Nabire, 300 m alt. / 1.2009, local collector lgt., (SJCP); 10 ♂♂, 7 ♀♀ labelled: Indonesia, SW Irian Jaya/ FAK DISTR., 12. 2002/ Local collectors, (SJCP); 1 ♂ labelled: Indonesia, Irian Jaya centr. / Enarotali distr., MAPIA env. / 6.2004, local collectors lgt., (SJCP); 1 ♂ labelled: Indonesia, S Irian Jaya, centr. / TIMIKA REGION, 10. 2002 / local collectors lgt., (SJCP).

Distribution. INDONESIA: West Papua Province: Nabire, Enarotali, Mapia, Fak; Papua Province: Timika.

***Lomaptera arfakiana* sp. nov.**

(Figs. 11-15)

Type locality. INDONESIA, West Papua Province, Arfak Mountains, Duebei env., 1200 m, 20 km S of Warmere.

Type material. Holotype (♂) labelled: Indonesia, West Papua pr. / ARFAK MTS., 10.-28. 2. 2008/ Duebei env., cca 20 km S / of Warmere, 1200 m alt. / St. Jákl leg., (SJCP). Paratypes: (Nos. 1-2 ♂♂, No. 3 ♀) labelled: same as holotype, (SJCP); (Nos. 4-5 ♂♂) labelled: Indonesia, West Papua / ARFAK MTS., 4. 2008 / local collectors leg., (SJCP); (No. 6 ♂) labelled: IND., IRIAN JAYA / ARFAK MOUNTAINS/ Local collector, 10.0, (SJCP); (No. 7 ♀) labelled: Indonesia, NNW Irian Jaya / ARFAK MOUNTAINS, 4. 2002/ local collectors lgt., (SJCP); (Nos. 8-40 ♂♂, Nos. 41-58 ♀♀) labelled: Indonesia, West Papua / ARFAK MTS., Duebei env. / 20 km S of WARMERE/ 5.2008, St. Jákl leg., (SJCP).

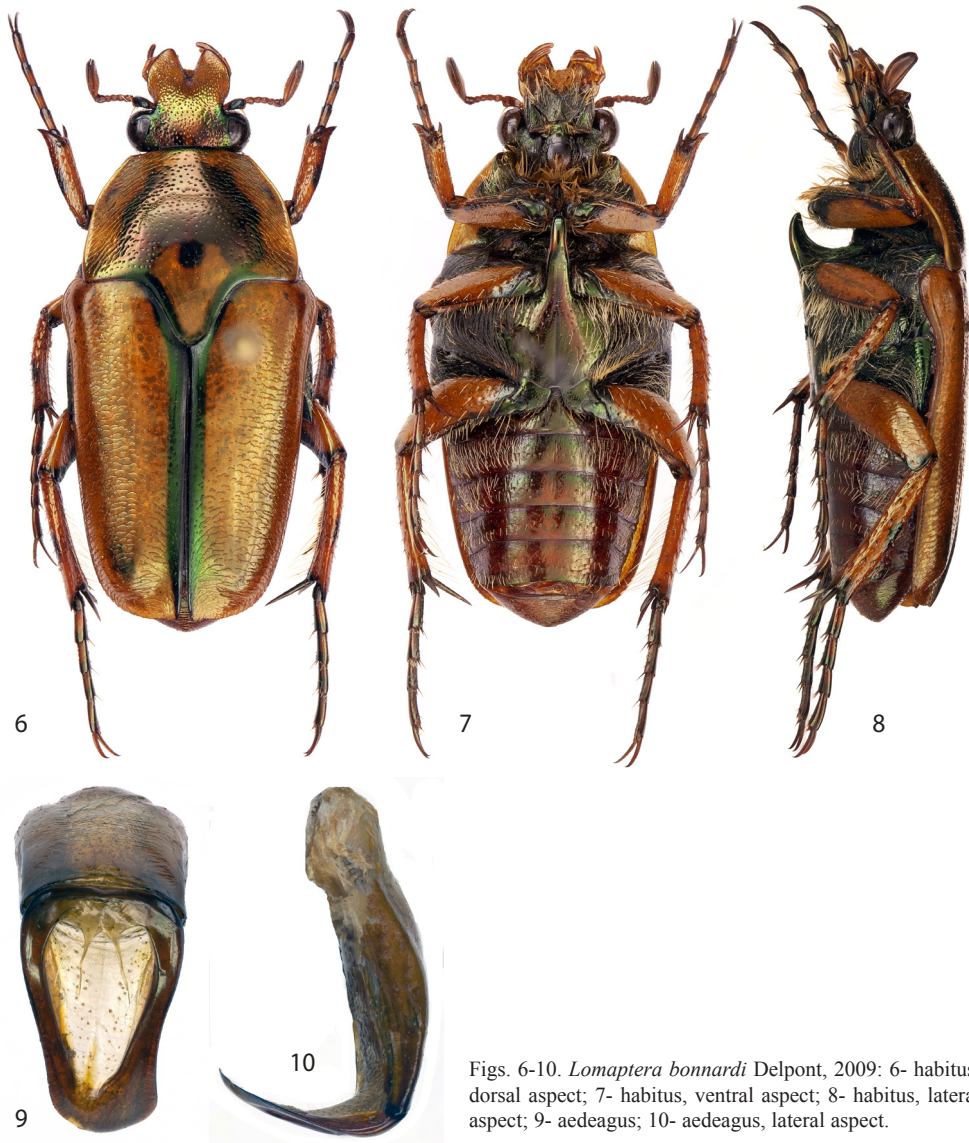
Description of the holotype. Body elongate, sides nearly parallel. Head and pronotum green, elytra yellow with green suture, pygidium yellowish. Size 19.1 mm (excluding pygidium).

Head. Completely green with golden reflection. Clypeus twice longer than frons. Clypeal apex sharply and deeply incised. Lateral declivities and clypeus gradually merging. Punctuation simple, but rather deep, in frons sparser. Antennae brownish, scapus greenish, club shorter than pedicel.

Pronotum. Coloration completely olive green. Yellowish lateral vittae absent. Disc very finely punctured, basal lobe nearly impunctate. Pronotal sides with rather broad and dense striolation, broader in posterior half. Lateral margins bordered throughout total length, but in anterolateral margins rather vague.

Scutellum. Absent.

Elytra. Yellowish with green sutural ridge. Near pronotal basal lobe and elytral base impunctate, rest of elytra with transversally developed striolation. Sides gradually merging into lateral margins. Subhumeral emargination rather shallow. Humeral calli missing, apical

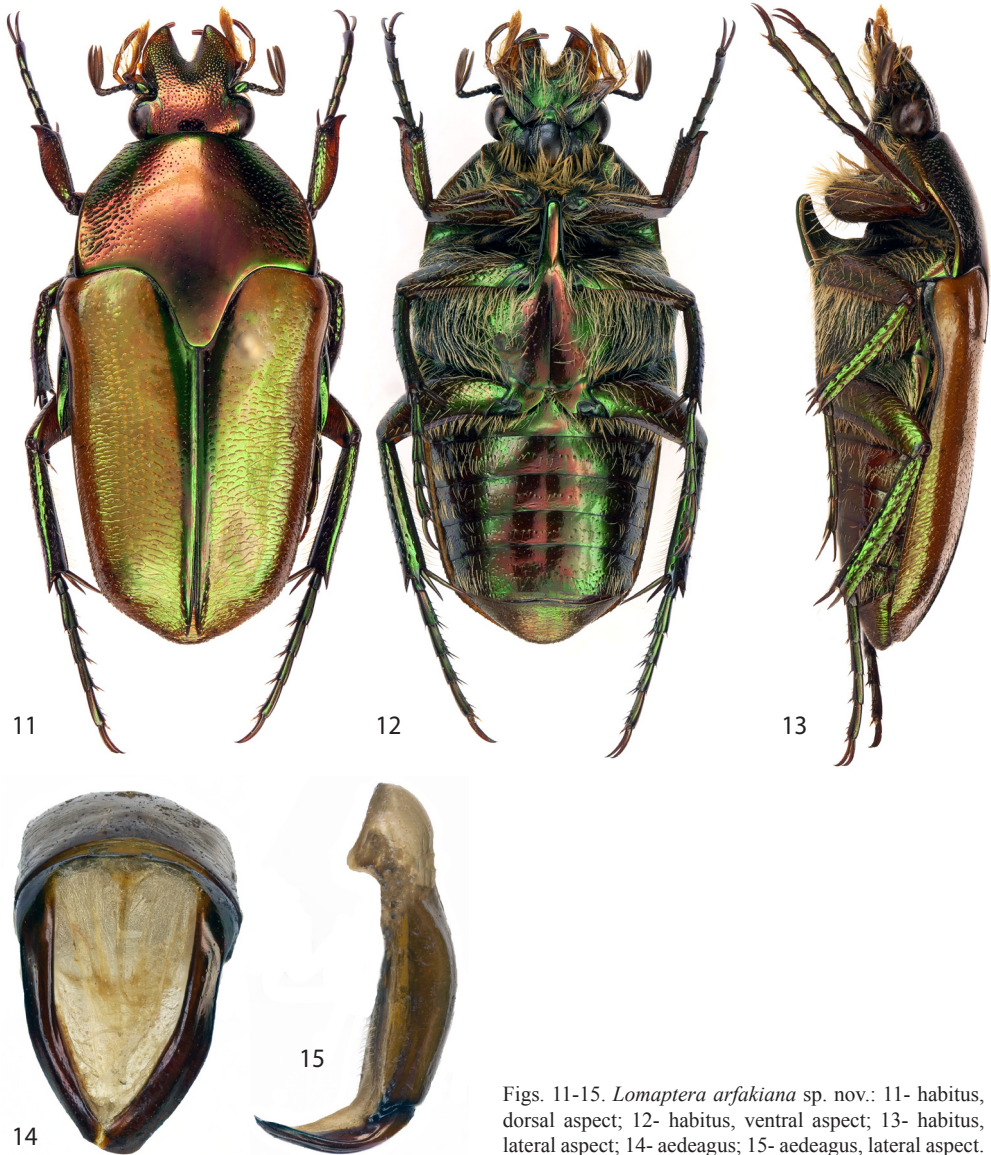


Figs. 6-10. *Lomaptera bonnardi* Delpont, 2009: 6- habitus, dorsal aspect; 7- habitus, ventral aspect; 8- habitus, lateral aspect; 9- aedeagus; 10- aedeagus, lateral aspect.

calli visible, but obtuse. Elytral apex very obtusely rounded, but not straight. Sutural ridge slightly expanding over elytral apex.

Pygidium. Brownish with deep striolation, in apex obtusely rounded.

Ventrum. Green, abdomen with metallic lustre, in metasternum more or less with lighter, golden reflection. Abdominal impression indistinctly present, not arched. Setation white, longer in metasternum and prosternum. Each abdominal segment with transversally running striolate line. Striation of metasternum and prosternum much deeper and denser.



Figs. 11-15. *Lomaptera arfakiana* sp. nov.: 11- habitus, dorsal aspect; 12- habitus, ventral aspect; 13- habitus, lateral aspect; 14- aedeagus; 15- aedeagus, lateral aspect.

Metasternal plate impunctate, strongly shining, mesometasternal process long, its apex rounded and moderately heading downwards.

Legs. Femora brownish, striolated. Tibia reddish with strong greenish reflection. Protibia unidentate. Tarsi greenish.

Genitalia. Parameres slightly asymmetrical, basal half nearly parallel (Figs. 14-15).

Variability. Size 17.0-19.5 mm (excluding pygidium). Excepting width of sutural, green vitta and body size, nearly without any distinctly expressed variability.

Sexual dimorphism. Size 17-19 mm. Body of female wider, abdomen arched, protibia bidentate. Coloration, setation and punctuation similar to males.

Differential diagnosis. *Lomaptera arfakiana* sp. nov. differs from its PNG relatives (*Lomaptera pulchella* Janson, *L. pseudopulchella* Valck Lucassen and *L. gracilis* Valck Lucassen) in absence of yellowish, lateral vitta of pronotum and usually also completely green coloration of head (bicolored in congeners). Males of sp. nov. are missing abdominal furrow (if present, very vague) and their parameres are asymmetrically developed. In all three congeners abdominal furrow of males very distinct and rather deep and parameres in males symmetrical. From *Lomaptera bonnardi* Delpont, the new species can be easily distinguished by larger size (15-17 mm in *L. bonnardi*) and also by absence of abdominal impression of males (present in *L. bonnardi*). Males of *L. bonnardi* also with asymmetrical type of parameres, but much more expressed than in sp. nov. Head and pronotum bicolored in *L. bonnardi*, but completely green in new species. From both species also described in this study it differs by the following complex of characters: coloration of head and pronotum completely green; pronotal sides with border (sometimes reduced or fragmentally developed); abdomen arched in females, flattened in males (abdominal impression of males missing); male parameres only slightly, but distinctly asymmetrical.

Etymology. Named after Arfak Mountains, type locality of newly described species.

Distribution. INDONESIA: West Papua Province, Arfak Mountains.

***Lomaptera gracilis* Valck Lucassen, 1961**

(Figs. 16-20)

Lomaptera (Lomaptera) gracilis Valck Lucassen, 1961: 251, figs. 90, 698-701 (original description); Krajčůk 1999: 25 (catalogue).

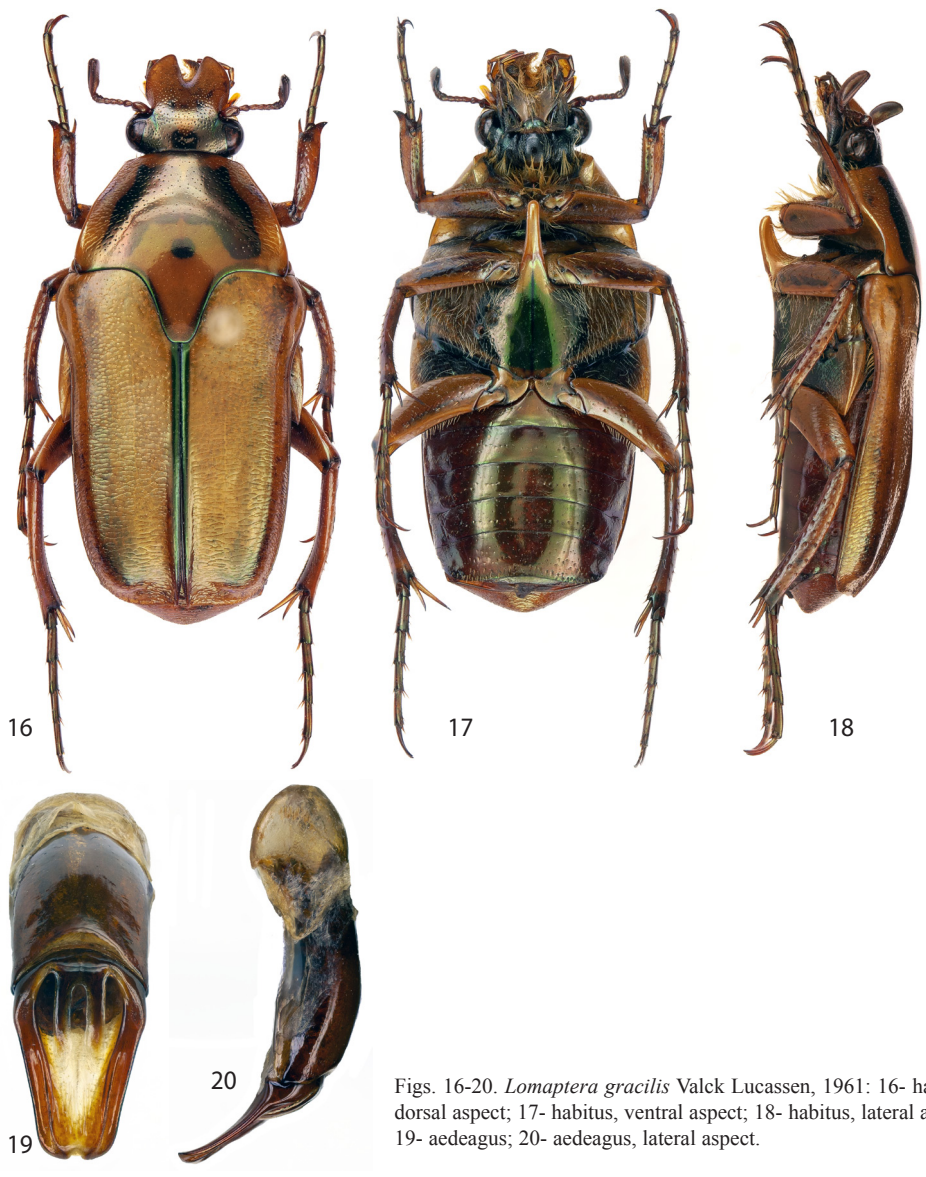
Lomaptera gracilis Valck Lucassen: Allard 1997: 115 (monograph); Sakai & Nagai 1998: 199, pl. 24, fig. 430-1 male, 430-2 female (iconography).

Type locality. “Nouvelle Guinée: Territoire de Papou: Owgarrá“ (= Papua New Guinea, Owgarrá, Angabunga River).

Type material. Holotype (♂) labelled: d'Owgarrá, Fl. Angabunga, A. S. Meek, 1905, (RMNH).

Additional material examined: 1 ♂ labelled: N. Guinea / Wau, (SJCP); 1 ♂ labelled: Aseki M. P. / Papua Newguinea / 20.XII. 1994 / Y. Kusakabe leg., (SJCP); 1 ♂ labelled: Hyiewini Village/ Aseki Subdistrict / Morobe, PNG / 19.II. 1998, (SJCP); 1 ♀ labelled: Wau Village, 1200 m / Morobe Prov. / PNG/ 30.I.1998, (SJCP); 1 ♀ labelled: Hyiwini Village / Aseki Subdistrict / Morobe, PNG / 19.II. 1998, (SJCP).

Distribution. PAPUA NEW GUINEA: Morobe Province, Owgarrá.



Figs. 16-20. *Lomaptera gracilis* Valck Lucassen, 1961: 16- habitus, dorsal aspect; 17- habitus, ventral aspect; 18- habitus, lateral aspect; 19- aedeagus; 20- aedeagus, lateral aspect.

***Lomaptera mapia* sp. nov.**
(Figs. 21-25)

Type locality. INDONESIA, West Papua Province, Enarotali District, Mapia village environment.

Type material. Holotype (♂) labelled: Indonesia, Irian Jaya centr. / Enarotali distr., MAPIA env. / 1. 2004, local collectors lgt., (SJCP). Paratypes: (Nos. 1-2 ♂♂) labelled: same as holotype, (SJCP); (No. 3 ♂) labelled: same as

holotype, but 2. 2004, (SJCP); (Nos. 4-5 ♂♂, Nos. 6-8 ♀♀) labelled: same as holotype, but 3. 2004, (SJCP); (No. 9 ♂) labelled: same as holotype, but 6. 2004, (SJCP); (No. 10 ♀) labelled: same as holotype, but 1. 2004, (SJCP); (Nos. 11-18 ♂♂) labelled: same as holotype, but 1.-2. 2004, (SJCP).

Description of the holotype. Body size 19.5 mm (excluding pygidium). Coloration straw yellow with green tinge, pronotum and head completely green.

Head. Completely green with golden-metallic lustre. Clypeus twice longer than frons. Punctuation simple, moderately dense, base of frons nearly impunctate. Incision of clypeus very deep and sharp. Lateral declivities in clypeus clearly visible. Antennae greenish to brownish.

Pronotum. Green, strongly reflected, lateral yellowish vitta absent. Pronotal disc and basal lobe very finely punctured, in some parts impunctate. Sides in posterior half without border, in anterior, pronotal half with very indistinctly developed border. Transversal striolation in sides moderately developed.

Scutellum. Absent.

Elytra. Coloration straw yellowish with very extensive greenish tinge. Sutural ridge green. Elytral base, beside pronotal, basal lobe impunctate. Rest of elytra with transversally developed striolation. Humeral calli missing, apical calli very obtuse. Elytral disc gradually merging into lateral margins. Sutural ridge not expanding over elytral apex. Elytral apex nearly straight, in sides slightly rounded.

Pygidium. Light brownish with green tinge. Striation present throughout total length.

Ventrum. Green to brownish with strong lustre. Abdominal impression very indistinct. Yellowish setation present mainly in metasternal sides, in prosternum and mentum, in abdomen setation reduced, shorter, distributed mainly at sides. Punctuation simple in abdominal segments (each segment with one transversally running line), dense in metasternal sides (here with striolation) and also in prosternum and mentum. Metasternal plate glabrous. Mesometasternal process long, slender, its apex rounded and heading downwards.

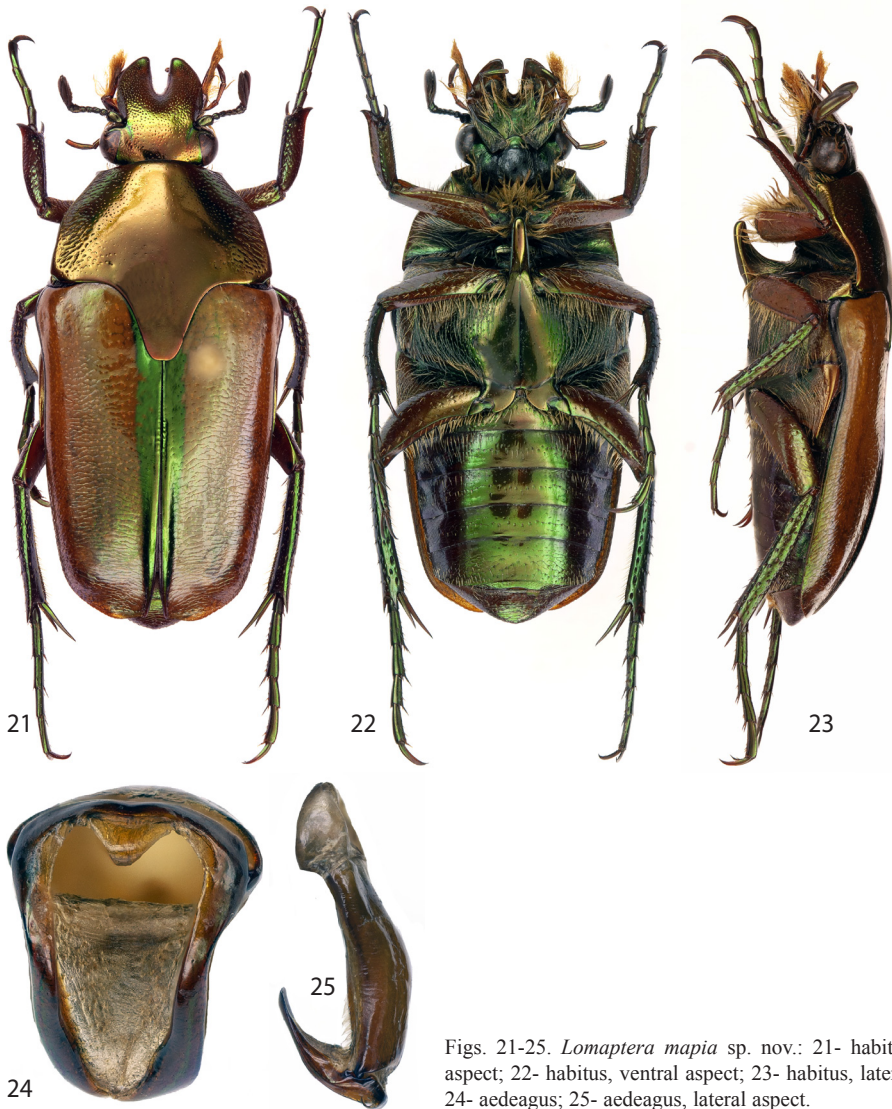
Legs. Femora brownish to reddish bearing yellowish setation, simply striolated. Tibia greenish, protibia unidentate. Meso- and metatibia with short setation in inner side. Tarsi dark green with lustre.

Genitalia. Male parameres similar with *Lomaptera arfakiana* new species, but longer and more parallel (Figs. 24-25).

Variability. Size 19-20 mm. In all other aspects all paratype males without significant differences.

Sexual dimorphism. Size of females 18.5-19.5 mm. Body slightly shorter and wider, abdomen arched, protibia bidentate. In other respects similar with males.

Differential diagnosis. *Lomaptera mapia* sp. nov. reminds of *Lomaptera arfakiana* sp. nov. and *Lomaptera aurea* sp. nov. It can be separated from it in three main characters. Pronotal border in its posterior half not present, but distinctly developed in its congeners. Elytra straw yellow with greenish tinge, but with yellow elytra and more or less golden or extremely strong golden reflection in its congeners. Male parameres asymmetrical in all three species,



Figs. 21-25. *Lomaptera mapia* sp. nov.: 21- habitus, dorsal aspect; 22- habitus, ventral aspect; 23- habitus, lateral aspect; 24- aedeagus; 25- aedeagus, lateral aspect.

but in *L. arfakiana* sp. nov. and *L. aurea* sp. nov. shorter and more sharply narrowing to its apex, but long and more parallel in the newly described species. From other representatives of the *pulchella* species group, the newly described species can be easily separated by the following combination of characters: size 18.5-19.5 mm, coloration of elytra straw yellow with strong greenish tinge, head and pronotum completely green, abdominal impression very vague, male parameres slightly asymmetrical.

Etymology. Named after Mapia village, type locality of new species.

Distribution. INDONESIA: West Papua Province, Enarotali District, Mapia village environment.

***Lomaptera pseudopulchella* Valck Lucassen, 1961**

(Figs. 26-30)

Lomaptera (Lomaptera) pseudopulchella Valck Lucassen, 1961: 249, figs. 694-697 (original description); Krajčič 1999: 25 (catalogue).

Lomaptera pseudopulchella Valck Lucassen: Allard 1997: 116 (monograph).

Lomaptera (Lomaptera) suturalis Valck Lucassen, 1961: 255 (original description).

Lomaptera suturalis Valck Lucassen: Allard 1997 (= *Lomaptera pseudopulchella* Valck Lucassen); Type locality.

“Nouvelle Guinée néerlandaise“ (= Dutch New Guinea, recently Indonesian Papua Province); Type material.

Holotype female is deposited in ZMHB.

Type locality. “Nouvelle Guinée néerlandaise: Mts. Neigeuses (Sneeugebergte) ‘(Mts. Oranje)’ (= Snow Mountains, Dutch New Guinea, recently Indonesia, Papua Province).

Type material. Holotype and one paratype (♀), (RMNH).

Additional material examined. 1 ♂ (SJCP) labelled: PAPUA NEW GUINEA / MOROBE PR., XI. 2002 / Aseki/ local collector leg; 1 ♂ (SJCP) labelled: PAPUA, NG / TEKADU – WAU / 2 – 93.

Distribution. PAPUA NEW GUINEA: Morobe Province: Aseki, Tekadu.

***Lomaptera pulchella* Janson, 1905**

(Figs. 31-35)

Lomaptera pulchella Janson, 1905: 16 (original description); Allard 1997: 115 (monograph).

Lomaptera (Lomaptera) pulchella Janson: Valck Lucassen 1961: 248, figs. 89, 689-693 (revision); Schurhoff 1935: 86 (in key); Krajčič 1999: 25 (catalogue)

Type locality. “Babooni, British New Guinea“ (= Papua New Guinea, Babooni).

Type material. Holotype (♂), allotype (♀) and paratypes (2 ♂♂, 1 ♀), (RMNH).

Additional material examined: 1 ♂ labelled: PAPUA NEW GUINEA / Morobe Prov. / XII. 2004 / local collector leg., (SJCP); 1 ♂, 1 ♀ labelled: PAPUA NEW GUINEA/ Morobe Prov. / V. 2004, ASEKI / local collector leg., (SJCP).

Distribution. PAPUA NEW GUINEA: Morobe Province.



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Figs. 26-30. *Lomaptera pseudopulchella* Valck Lucassen, 1961: 26- habitus, dorsal aspect; 27- habitus, ventral aspect; 28- habitus, lateral aspect; 29- aedeagus; 30- aedeagus, lateral aspect.



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Figs. 31-35. *Lomaptera pulchella* Janson, 1905: 31- habitus, dorsal aspect; 32- habitus, ventral aspect; 33- habitus, lateral aspect; 34- aedeagus; 35- aedeagus, lateral aspect.

DICHOTOMICAL KEY TO MALES OF *LOMAPTERA PULCHELLA* SPECIES GROUP

- 1 (8) Pronotum bicolored, abdominal groove rather deep and wide.
2 (7) Parameres symmetrical or very slightly asymmetrical.
3 (4) Parameres very slightly asymmetrical, two anterior parameral thirds nearly parallel. Parameral tongue reaching apical half total length. Pronotum with yellowish sides (sometimes very unclear), pronotal M shaped macula always absent *Lomaptera pulchella* Janson, 1905
4 (3) Parameres symmetrical, gradually narrowing from base to apex.
5 (6) Size 16-19 mm (excluding pygidium). Greenish sutural vitta usually broad. Pronotum green with broad yellowish sides. Inner tongue of parameres reaching half length or more. Species from Papua New Guinea *Lomaptera pseudopulchella* Valck Lucassen, 1961
6 (5) Size 19-21 mm (excluding pygidium). Pronotum with M shaped greenish macula. Sutural green vitta usually narrow. Inner tongue of parameres short, not reaching half of total length. Species from Papua New Guinea *Lomaptera gracilis* Valck Lucassen, 1961
7 (2) Parameres distinctly asymmetrical, left paramere in apical part extremely enlarged. Size 16-18 mm. Pronotum usually with M shaped greenish macula. Species from central part of Indonesian Papua.
..... *Lomaptera bonnardi* Delpont, 2009
8 (1) Pronotum unicolored, greenish or brownish, lateral yellowish vitta absent or very indistinct. Abdomen with shallow impression, flattened or arched, abdominal groove absent.
9 (10) Parameres moderately long, nearly parallel. Abdomen flattened, its impression very shallow. Species with greenish reflection from Mapia in Enarotali District (central Indonesian Papua). Size 18-20 mm
..... *Lomaptera mapia* sp. nov.
10 (9) Parameres short, narrowing from base to apex. Abdomen flattened or arched, abdominal impression absent. Species with golden-green or extremely strong golden reflection.
11 (12) Abdominal disc flattened, but not arched. Left paramere thickened throughout whole parameral length. Dorsal reflection rather strong. Mesotibia moderately curved inwards. Species from Arfak Mountains in north-western part of Indonesian Papua *Lomaptera arfakiana* sp. nov.
12 (11) Abdominal disc arched. Left paramere thickened only in anterior half. Dorsal reflection extremely strong, giving to insect golden appearance, lustre very strong also in legs. Curvature of mesotibia sharper. Species from Bugalaga (east of Enarotali) in central part of Indonesian Papua. *Lomaptera aurea* sp. nov.

Note. The author was not able to examine *Lomaptera insularis* Valck Lucassen, 1961 described from Goodenough Island. This species also belongs to the *Lomaptera pulchella* species group. According to Allard (1997) species is similar with *Lomaptera gracilis* Valck Lucassen.

Lomaptera grandipenis sp. nov. (Figs. 36-40)

Type locality. Timika environment, Papua Province, Indonesia.

Type material. Holotype (♂) labelled: INDONESIA, Papua Prov./TIMIKA env. / XI.2001 / local collector leg., (SJCP). Paratypes: (Nos. 1-2 ♀♀) labelled: same as holotype, but XII. 2001, (SJCP).

Description of holotype. Dark blue to ultramarine with reddish legs. Size 16.2 mm (excluding pygidium).

Head. Dark blue with ultramarine tinge. Punctuation deep and dense, in clypeus diameters of punctures larger than interspaces, punctuation in frons sparser. Lateral declivities of clypeus steep, wrinkled. Clypeal apex deeply incised, clypeal lobes in apex brownish. Antennae reddish with greenish scapus, rather short, club shorter than stalk.

Pronotum. Dark blue with ultramarine tinge. Transversally wrinkled almost throughout total length, excepting impunctate apex of basal lobe and posterior margins. Sides with border, which is not reaching anterolateral margins. Apex of basal lobe with tiny emargination.

Elytra. Dark blue with ultramarine tinge, particularly in posterior half. Wrinkled transversally throughout total length, excepting sutural ridge and parts near pronotal basal lobe. Elytral lateral ridge very steep, subhumeral emargination nearly absent. Humeral calli flattened, apical calli moderately developed. Sutural ridge elevated in its apical half. Apex of elytron slightly overwhelmed by sutural ridge.

Pygidium. Coloration reddish with blueish tinge. Whole pygidial surface circularly striolate. Pygidial apex sharply developed.

Ventrum. Abdomen brownish with green tinge. Metasternum and prosternum dark green. Abdominal impression moderately deep and wide. Sides of abdomen finely striolate, striolation of metasternal sides much denser. Metasternal disc glabrous, mesometasternal process long, its apex rounded. Setation not abundant, reduced in row of setae in anterior and posterior margins of metasternum and few setae in abdominal sides. Prosternum and mentum with more abundant brushes of reddish setae.

Legs. Femurs striolated, its coloration dark green, strongly reflected. Tibia and tarsi reddish with green lustre, particularly in tibia. Protibia bidentate, but posterior tooth considerably reduced.

Genitalia. Huge, size of aedeagus is over 7 mm, which is nearly the length of whole abdomen. Parameres very wide, parallel. Inner tongue of parameres missing, but instead of it with sclerotised inner fork parallel with inner parameral rim (Figs. 39-40).

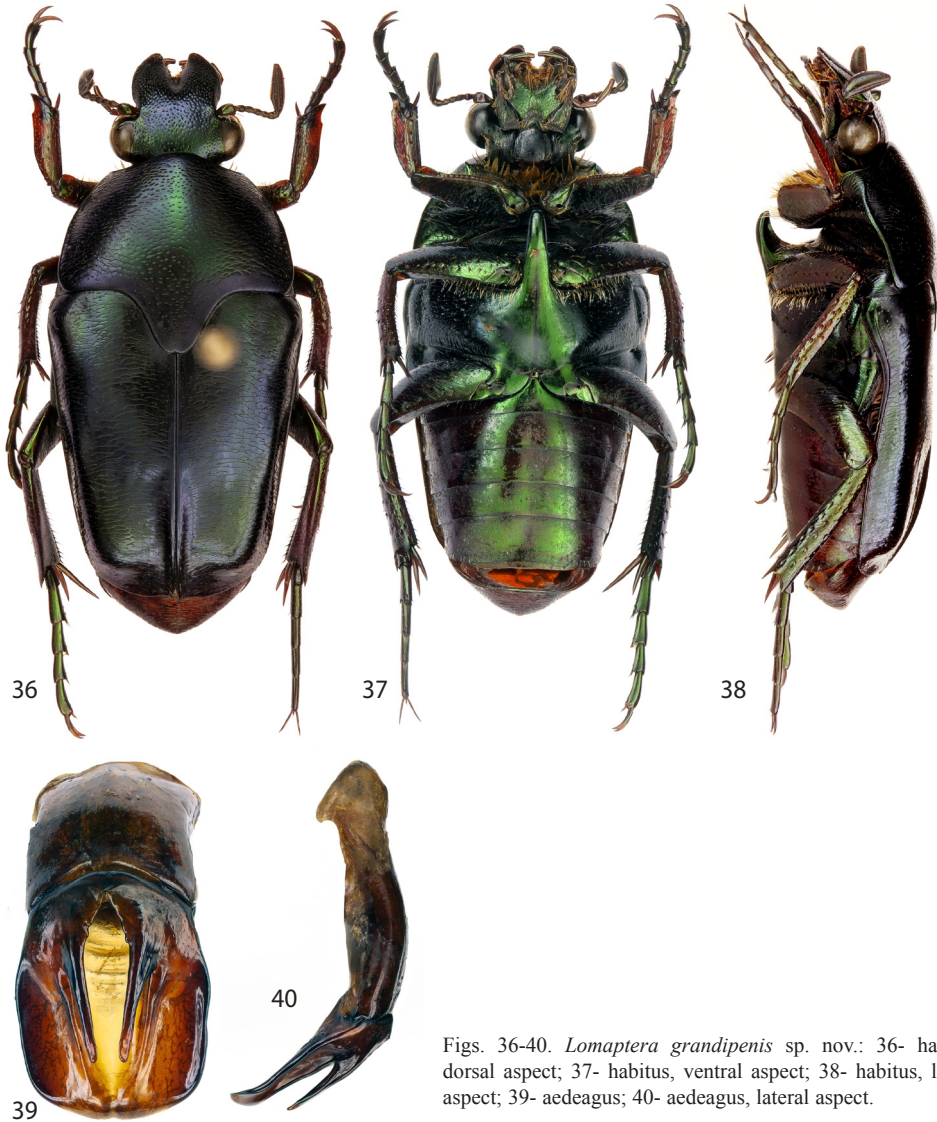
Variability. Only one male was available for this study.

Sexual dimorphism. Size of females same as male, 16.2 mm. Pronotal punctation (very untypically) less developed than in male. Pronotal disc and posterior sides nearly impunctate, lateral sides of pronotum with sparser striolation than in male. Protibia tridentate. Pygidial apex sharply terminated. In all other aspects same or similar with holotype male.

Differential diagnosis. This newly described species (*Lomaptera grandipenis* sp. nov.) is similar to *Lomaptera ribbei* Kraatz, 1885. However, the size and shape of aedeagus and the strange fork of parameres differentiates the insect from all known *Lomaptera* species.

Etymology. Named after big size of male aedeagus.

Distribution. INDONESIA: Papua Province, environment of Timika.



Figs. 36-40. *Lomaptera grandipenis* sp. nov.: 36- habitus, dorsal aspect; 37- habitus, ventral aspect; 38- habitus, lateral aspect; 39- aedeagus; 40- aedeagus, lateral aspect.

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REFERENCES

ALLARD V. 1997: Etude du genre *Lomaptera*. Pp.: 49-123. In: RIGOUT J. & ALLARD V.: *The Beetles of the World. 25. Schizorhinini 3: Vols. 1 & 2 Supplement & Lomaptera*. Canterbury: Hillside Books, 128 pp.

- DELPONT M. 2009: Nouveau Cetoniidarum Specierum Lexicon Fiche 4. *Lomaptera bonnardi* sp. nov. *Lambillionea* 109(3): 313-314.
- JANSON O. E. 1905: Descriptions of new Coleoptera of the Family Cetoniidae from British New Guinea. *The Annals and Magazine of natural History, including Zoology, Botany and Geology* 7(16): 11-18.
- KRAJČÍK M. 1999: *Cetoniidae of the world - Part II. Zlatohlávkovití světa, Katalog - Část II*. Most: Krajččík (published privately by author). 72 pp. + 23 pp.
- SAKAI K. & NAGAI S. 1998: The Cetoniine beetles of the World. Pp. 1-6 + 7-150 unpag. [pls. 1-144] + 151 + 421 + 3 unpag. In: FUJITA H. (ed.): *Mushi-Sha's iconographic series of insects* 3. Tokyo: Mushi Sha, 2 unpag + 342 + 5 unpag. (in Japanese and English).
- SCHURHOFF P. N. 1935: Beitrage zur kenntnis der Cetoniden. V. Revision der Gattung *Lomaptera*. *Stettiner Entomologische Zeitung* 96: 68-90.
- VALCK LUCASSEN F. T. 1961: *Monographie du genre Lomaptera*. De Nederlandse Entomologische Vereniging, 299 pp.

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