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Taxonomic notes about the rarely collected genus *Microlomaptera* Kraatz, 1885, with description of new species from the Arfak Mountains in westernmost New Guinea Island (Coleoptera: Scarabaeidae: Cetoniinae)

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Abstract. Morphological characters of the rarely collected genus *Microlomaptera* Kraatz, 1885 are discussed. *Microlomaptera georgei* sp. nov. is described from the Arfak Mountains laying in the westernmost part of New Guinea Island. The new species is compared with other representatives of the genus occurring in the central and eastern parts of New Guinea and its offshore islands. Six currently known species, four from the mainland and two species from nearby Aru and Misool Islands (Indonesia) are compared with the new species, including genitalia of males (if the male is known). An updated checklist of all species, with type localities and distribution of species is provided. The generic placement of *Microlomaptera clarki* Allard, 1995 and *Microlomaptera hudsoni* Allard, 1995 and subtribal placement of *Microlomaptera* Kraatz, 1885 are briefly discussed.

INTRODUCTION

The genus *Microlomaptera* was described by Kraatz in 1885 in his work about flower beetles collected in the Aru islands by C. Ribbe. In the same work, the author described *Microlomaptera aenea*, which became the type species of the genus. The species was described from a single male; the female of this species still remains unknown. A second species, *Microlomaptera nisbeti* was described ten years later also from a single male by Heller from the eastern part of New Guinea Island. In 1979, Krikken revised both known species and described a third species *Microlomaptera pygydialis* from Wissol Lakes (Paniai Lakes) laying in the Enarotali district belonging currently to the Papua Province in the indonesian part of New Guinea Island. The habitus of all three species is very similar and the main characters for separation are the shape of the protrusion of the posterolateral margins of the metacoxae, the punctation of the head, pronotum and elytra, the structure of elytral depressions and ribs, the setation of the inner side of the metatibiae, the shape of the pygidium, the presence or absence of an abdominal impression in males and the structure of the male genitalia. The character used by Krikken (1979), the yellow parts of the body (pronotal sides, mesepimeron, metepimeron, femora, etcetera) is in author's opinion not distinctive. A number of specimens of *Microlomaptera pygidialis* Krikken, 1979 were examined and especially a population from the Nabire area differs specimen by specimen, from specimens completely matching with Krikken's description with partially developed yellow parts of the body to specimens without any yellow parts.

Allard (1995) in his Shizorhinini 2 listed all three historically described species and described three new species, all from the mainland of New Guinea Island. Subsequently, Allard, 1995, described *Microlomaptera antoinei* from a single female. This species is habitually very similar to the three species already known, their coloration varying from black to green or blue with very strong lustre and glabrous appearance. The other two new species described by Allard, 1995, *Microlomaptera clarki* Allard and *Microlomaptera hudsoni* Allard look habitually very different, being brownish to black, opaque or only slightly shining, with rugose pronotum and even more rugose elytra.

Jákl (2024) added a new species occurring on Misool Island. This species is similar to species with a glabrous appearance and very strong lustre.

Some historical authors placed *Microlomaptera* Kraatz, 1885 in the subtribe Schizorhinina. Due to the structure of the pronotal lobe and the presence of membranous flaps between the parameres of males, Krikken (2018) placed the genus in the subtribe Lomapterina. The author follows the opinion of Krikken (2018).

In the author‘s opinion *Microlomaptera clarki* Allard and *Microlomaptera hudsoni* Allard, 1995 are not typical representatives of the genus *Microlomaptera* Kraatz, 1885. Morphology of both mentioned species differs significantly in several dorsal and ventral characters and both species deserve to be assigned to a new subgenus or genus of Lomapterina. This new assigment should be part of possible future taxonomic revisionary work on *Microlomaptera* Kraatz, 1885.

The distribution area of *Microlomaptera* Kraatz, 1885 currently encompasses New Guinea Island with Aru and Misool Islands in the indonesian Molucca Islands. These species occur in very low altitude (on the Moluccan islands), but also in the highlands of New Guinea (*M. pygidialis* Krikken and *M. hudsoni* Allard are described from altitude 1760 and 1600 m). Until now no species was known from the Arfak Mountains in the westernmost part of New Guinea. The species of *Microlomaptera* Kraatz, 1885 recently examined from the lowlands of the Arfak Mountains, from altitude 300-400 m,belong to the ‘‘ aenea‘‘ group. All four species differ from all congeners by the completely glabrous and impunctate head, the pronotum and elytra and by the extremely sharpened and elongated protrusion of the posterolateral margins of the metacoxae. This finding enlarges the distribution of the entire genus across the entirety of New Guinea Island. The new species is compared with other congeners from ‘‘*M. aenea*‘‘ group and description of both sexes is provided in the taxonomic part of this paper.

MATERIAL AND METHODS

The following code of private collection is used in text:

SJCP Stanislav Jákl private collection, Praha, Czech Republic.

Specimens of newly described species are provided with rec and yellow printed labels, red for HOLOTYPUS, yellow for PARATYPUS. Each holotype and 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 (/).

TAXONOMY

Tribe Schizorhinini Burmeister, 1842
Subtribe Lomapterina Burmeister, 1842
Genus *Microlomaptera* Kraatz, 1885

Microlomaptera Kraatz, 1885: 88 (original description); Schenkling 1921: 128 (catalogue); Valck Lucassen 1961: 3 (monograph): 5 (generic key); Krikken 1971: 240 (suprageneric key); Krikken 1984: 51 (generic key); Allard 1995: 44 (in French): 131 (in English) [monograph]; Sakai & Nagai 1998: 194 (iconography); Krajčík 1999: 18 (catalogue); Krikken 2018: 8 (subtribal position); Jákl 2024: 90 (Cetoniinae of Missol Island, Part III.)
Type species *Microlomaptera aenea* Kraatz, 1885 (original designation).

Microlomaptera georgei sp. nov.
(Figs. 1-8)

Type locality. Indonesia, West Papua Province, Arfak Mountains, Manokwari District, Nenei village vicinity, 300-400 m alt.

Type material. Holotype (♂) (SJCP) labelled: INDONESIA, West Papua Pr. / ARFAK MTS., 300-400 m / Nenei vill. env., XII. 2023/ Manokwari region/ local collector leg. Paratypes (No. 1 ♂, Nos. 2-3 ♀♀) (SJCP) labelled: same as holotype.

Description of holotype. Both body sides and also legs completely black and very strongly shining. Dorsal side nearly impunctate. Body size (excluding pygidium) 14.6 mm.

Head. Black, strongly shining. Frons with few minute and simple punctures, clypeus impunctate (sparse micropunctation present). Apex of clypeus rather deeply incised. Lateral declivities narrow, but visible. Sides very obtusely rounded, nearly parallel. Antennae black, club distinctly shorter than stalk.

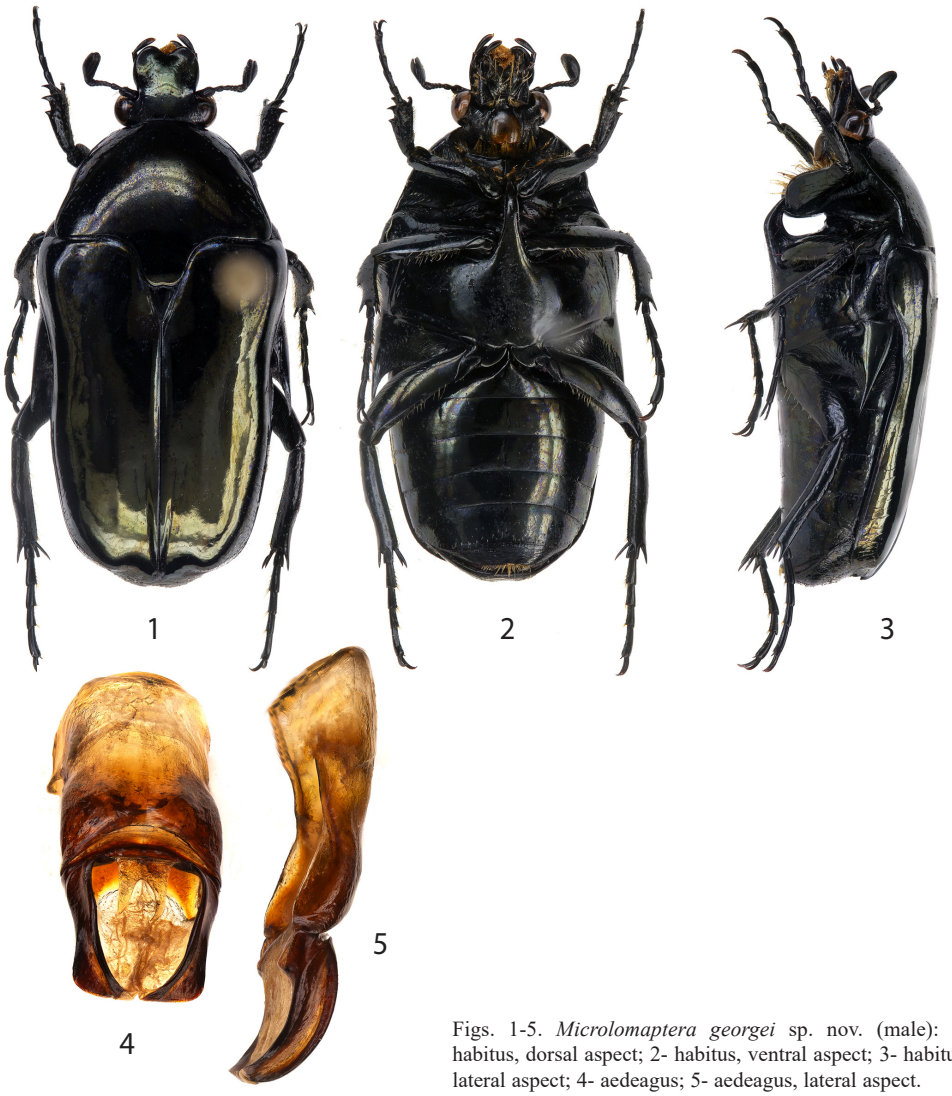
Pronotum. Black, with very glabrous appearance, strongly reflected. Sides with moderately developed border running throughout total length. Posterior third of pronotal sides with emargination. Punctation completely absent, excepting only few irregularly shaped punctures on sides. Large part of scutellum covered by basal lobe of pronotum. Apex of basal lobe slightly emarginated.

Scutellum. Uncovered part black, strongly shining. Scutellar punctation absent, anterior half of sides with one fine striolate line.

Elytra. Black, very strongly shining. Elytral punctation not developed. Each elytron with one short striolate line on disc, shortly beside lateral ridge, one shorter striola beside sutural ridge on apical third, few very short striolate lines present below humeral calli and few short and fine striolae on posterior third of lateral sides. Elytral ribs absent. Sutural ridge slightly elevated on posterior third, but not drawn out over elytral apex.

Pygidium. Black with moderate metallic lustre. Concentric striolation developed throughout total length.

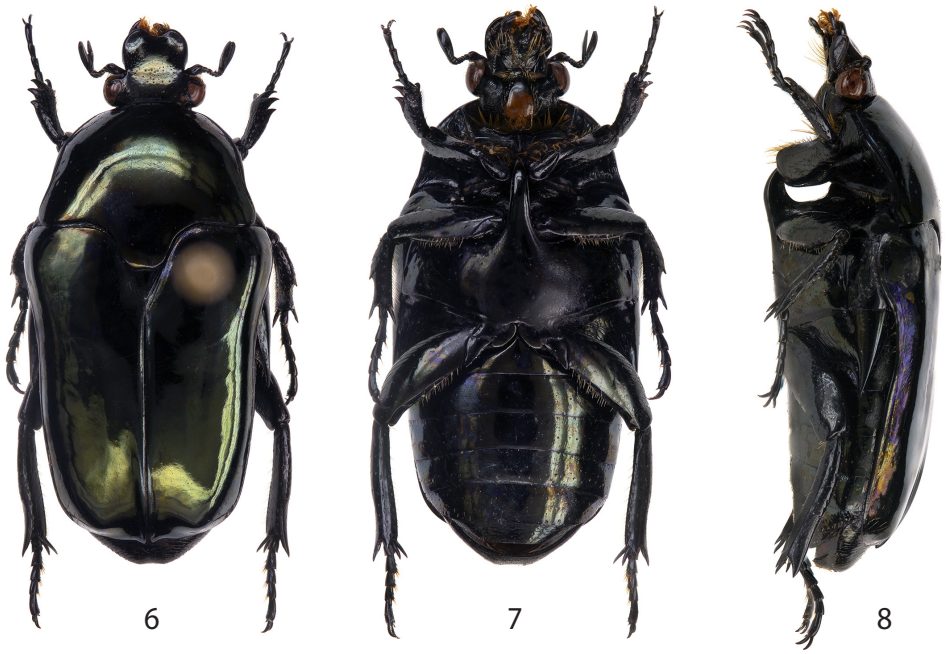
Ventrum. Completely black, shining. Abdomen flat, central impression not developed. Punctation reduced to few punctures near posterior margin of fifth ventral segment, fine, horisontally developed striolation of anal segment, few punctures on posterior margin of metasternum and striolated part of prosternum and large part of metacoxae. Remainder of



Figs. 1-5. *Microlomaptera georgei* sp. nov. (male): 1- habitus, dorsal aspect; 2- habitus, ventral aspect; 3- habitus, lateral aspect; 4- aedeagus; 5- aedeagus, lateral aspect.

ventrum glabrous, impunctate. Mesometasternal process long, its apex sharp and recurved, nearly reaching level of base of mentum. Protrusion of posterolateral margins of metacoxae extremely elongated and very sharply terminated. Mentum with reddish setation, remainder of ventrum without any setae.

Legs. Completely black, rather long. Posterior half of metacoxae and anterior half of mesocoxae striolated. Posterior margins of meso- and metacoxae with moderately dense



Figs. 6-8. *Microlomaptera georgei* sp. nov. (female): 6- habitus, dorsal aspect; 7- habitus, ventral aspect; 8- habitus, lateral aspect.

white setation. Protibia tridentate, teeth not equidistant. Mesotibia with carina on posterior half. Carina on metacoxae indistinct.

Genitalia. Outer sides of parameres slightly emarginated, apex of parameres truncate, inner membranous flaps narrow and short (Figs. 4-5).

Variability. Second male available for study is smaller, 13.8 mm (excluding pygidium). The morphology of the second available male is identical with the holotype male.

Sexual dimorphism. The size of two females is 15.0 mm (excluding pygidium). The dorsal punctation and striolation is very sparse, similarly developed as in males. The ventral punctation of the females is slightly more developed, especially on the abdomen. The protibia are tridentate, but wider and more robust, the teeth are equidistant. The abdomen is arched. The apex of pygidium has an obtuse impression.

Differential diagnosis. *Microlomaptera georgei* sp. nov. differs from all representatives of the genus by being completely black, with a glabrous and nearly impunctate head, pronotum and elytra, and by extremely drawn out and very sharply developed posterolateral margins of the metacoxae. The elytral ribs and impressions in the newly described species are not developed, but present in all ‘‘ aenea‘‘ group species. Also the male parameres are distinctive (Figs. 4-5).

Etymology. Named after my javanese friend and organiser of several trips to the Arfak Mountains, George Mambo Octavianus.

Distribution. Indonesia, West Papua Province, Arfak Mountains.

UPDATED CHECKLIST OF *MICROLOMAPTERA* KRAATZ, 1885 SPECIES

Microlomaptera aenea Kraatz, 1885	Indonesia, Aru Islands (female unknown)
Microlomaptera antoinei Allard, 1995	‘‘NW Guinea‘‘ (male unknown)
Microlomaptera clarki Allard, 1995	Papua New Guinea, Morobe Province, Aseki
Microlomaptera georgei sp. nov.	Indonesia, West Papua Province, Arfak Mountains
Microlomaptera hudsoni Allard, 1995	Papua New Guinea, Morobe Province, (female unknown)
Microlomaptera misoolica Jákl, 2024	Indonesia, Southwest Papua Province, Rajah Ampat Archipelago, Misool Island (female unknown)
Microlomaptera nisbeti Heller, 1895	‘‘Nova Guinea meridionalis: inter montes Alexander et Nisbet‘‘ (= Papua New Guinea, between Alexander and Nisbet Mountains) (female unknown)
Microlomaptera pygidialis Krikken, 1979	Indonesia, Paniai Lakes, Araboebivak

Note. All species of *Microlomaptera* Kraatz, 1885 are rarely collected beetles. Both sexes are known only in 3 species. Females of *Microlomaptera aenea* Kraatz, 1885; *Microlomaptera hudsoni* Allard, 1995; *Microlomaptera misoolica* Jákl, 2024 and *Microlomaptera nisbeti* Heller, 1895 are not yet described. *Microlomaptera antoinei* Allard, 1995 is known only from the holotype female.

Most of these species are known only from a single type locality and their distribution stays nearly unknown. From data available to the author only two species have been collected again after their description; *Microlomaptera clarki* Allard, 1995 and *Microlomaptera pygidialis* Krikken, 1979. The author examined several specimens of *Microlomaptera clarki* from a few different localities in Morobe Province (PNG) and several specimens of *Microlomaptera pygidialis* Krikken, 1979 from the Nabire and Fakfak districts (not that far from type locality) in the indonesian part of Papua.

Also, the biology of *Microlomaptera* Kraatz, 1885 stays unknown. But it seems that these insects are not attracted to flowers. *Microlomaptera georgei,* new species was collected on rotten fruits and *Microlomaptera misoolica* Jákl, 2024 was collected at light.

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