

## A New Species of the Rhagophthalmid Genus *Menghuoius* (Coleoptera, Rhagophthalmidae) from Myanmar

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**Abstract** A new species of the rhagophthalmid genus *Menghuoius* is described and illustrated from Myanmar under the name of *M. kusakabei*. It is related to *M. ingens* (FAIRMAIRE) but distinguished by the small size and differently shaped male genitalia

### Introduction

The genus *Menghuoius* was established by myself (KAWASHIMA, 2000) as a member of the family Rhagophthalmidae. Recently, several specimens of this genus were collected by Mr. Yoshiyasu KUSAKABE in western Myanmar and submitted to me for taxonomic study. Since the material proved to belong to a new species, it will be described and illustrated in the present paper.

### Materials and Methods

The materials used in the present study are enumerated under the heading “*Type series*” following the description. For dissection, dried materials were relaxed in hot water, and then, male genitalia were removed from body, mounted on a slide glass with glycerol, observed under an optical microscope (OLYMPUS CH–2, max. magnification  $\times 1,000$ ), and sketched with the aid of an attached drawing tube. External characters were observed and sketched with a stereoscopic microscope (OLYMPUS SZH10, max. magnification  $\times 140$ ) equipped with a drawing tube. The abbreviations used herein are the same as those explained in a previous paper of mine (KAWASHIMA, 2000).

### Description

*Menghuoius kusakabei* KAWASHIMA, sp. nov.

(Figs. 1–5)

Male. Body moderately shiny, covered almost all over including appendages with golden subrecumbent pubescence. Head capsule entirely blackish on dorsum, brown on venter; antennae yellowish brown; eyes black; labrum yellowish brown; mandibles blackish brown, paler towards the bases, which are tinged with reddish

brown; maxillae and labium yellowish brown including palpi; pronotum blackish to blackish brown, becoming feebly paler towards the sides; scutellum dark yellowish brown; elytra dark brown, entirely tinged olive, narrowly margined throughout in yellow including suture; legs almost wholly yellowish; claws yellowish, darker towards the apices, which are tinged with dark brown; ventral surface of thoraces and abdomen constantly yellowish brown. Male genitalia shiny, pigmented; external surface almost yellowish to reddish brown; inner margins of both parameres blackish on venter; inner surface and distal marginal areas of parameres pale brownish.

Body (Fig. 1) elongated oval, gradually dilated towards the middle of elytra, sides not parallel.

Head (Fig. 2) large and transverse, evidently wider than long, strongly depressed above and longitudinally concave along mid-line, rather smooth or minutely punctate on dorsal surface; antennal sockets located on both sides of frontal area just before eyes, widely separated from each other, oriented laterad, and easily visible in dorsal view. Antennae (Fig. 3) 12-segmented but very short, only reaching anterior margin of pronotum; scape thick and clavate, about twice as long as wide; pedicel short cylindrical or barrel-shaped; 3rd and 4th (1st and 2nd flagellar) segments clearly dilated and

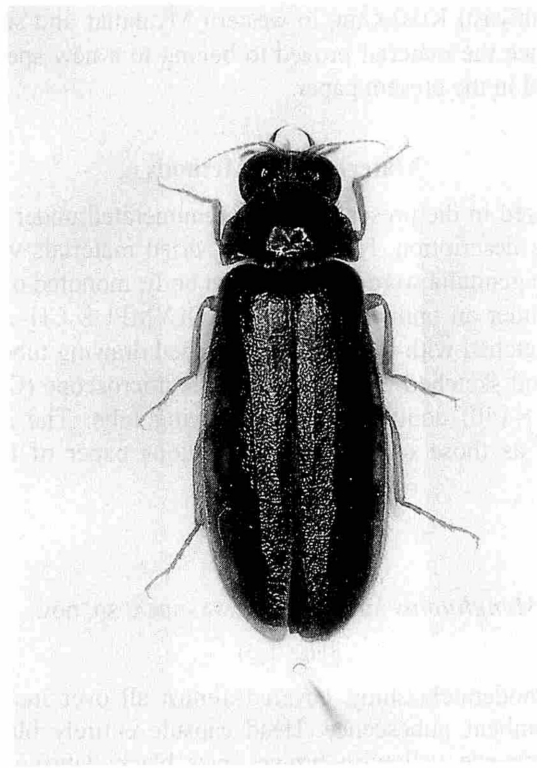
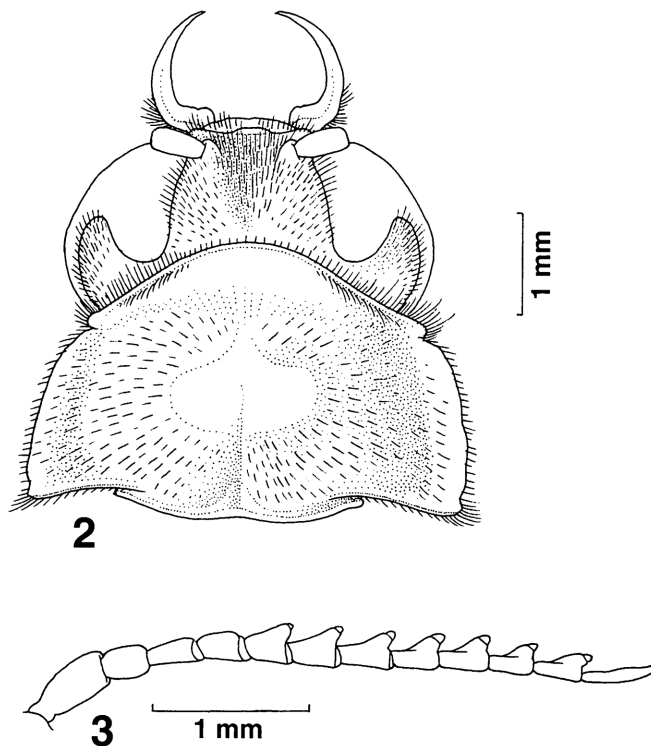


Fig. 1. *Menghuoius kusakabei* KAWASHIMA, sp. nov., holotype male, dorsal view.



Figs. 2-3. *Menghuoius kusakabei* KAWASHIMA, sp. nov., male, dorsal view: 2, head and pronotum; 3, right antenna.

becoming wider towards the apices, 5th to 11th (3rd to 9th flagellar) segments serrated continuously, each with a sensillum at the evidently protruded anterior portion; 12th (10th flagellar) segment spindle-shaped and the most slender; relative length of each segment from scape in the holotype as follows:— 10: 6: 6: 5: 4.9: 5: 5: 5: 5: 4.9: 5: 7. Eyes (Fig. 2) globular, large and prominent laterally, each with a deep posterior excavation on dorsal side, separated from each other by about 1.5 times of the diameter of an eye on dorsal side and distinctly separated by 0.46 to 0.5 times of the radius of eye even on ventral side. Labrum (Fig. 2) moderately membraneous, evidently transverse and extremely flattened spindle-shaped, without any emargination at the centre of anterior margin. Mandibles (Fig. 2) large and slender, wholly seen from dorsal side, internally forming a rounded angle near the bases, and then constantly incurved and gradually tapered towards acute apices.

Pronotum (Figs. 1, 2) relatively large but short, transversely semicircular or trapezoidal in dorsal view, more or less variable in shape individually, widest at or just before the base; anterior margin widely arcuate and produced anteriorly, both exteriormost portions of the margin minutely protruded and forming minute angles; both sides fee-

bly arcuate or sinuate, almost without margin, reflexed and forming widely flattened areas along almost whole length, and very faintly constricted just before basal angles; dorsal surface feebly wrinkled; basal angles very faintly projected outwards; basal margin sinuate on both sides, narrowly bordered throughout; disc weakly depressed, minutely and constantly punctate, the punctures being relatively small or minute; very shallow medio-longitudinal furrow running along the mid-line at the basal half, but almost disappearing on the disc and the anterior parts; PW/HW 1.26–1.33; PW/PL 1.66–1.70; PW/PA 1.30–1.38; PW/PB 1.01–1.02; PL/PW 0.59–0.60; PW/EHW 0.96–0.97.

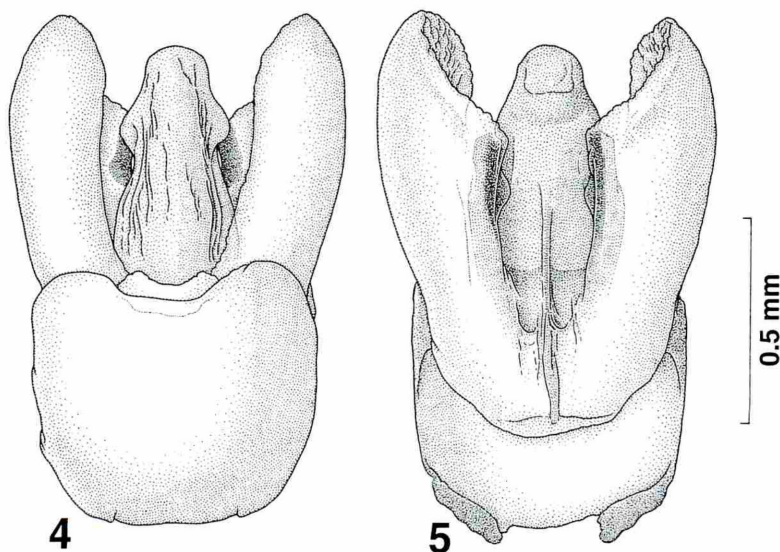
Scutellum triangular with rounded apex, closely punctate on dorsal surface.

Elytra (Fig. 1) fairly broad, but more or less curled longitudinally in dried condition, sides divergent posteriad, most widely separated at the middle, and then gradually convergent to rounded apices, distinctly dehiscent in apical parts, narrowly marginated throughout including suture, the margin being concealed by humeri, which are weakly prominent antero-laterad; dorsal surface rugulose, irregularly and closely punctate; each elytron with three vague costae, of which the middle one is the longest and clearest, running throughout the length of elytra; exteriormost one not reaching anterior part and disappearing; innermost one short, very weak and more obsolete. Each costa obliquely running inwards near the elytral apices; EL/PL 4.39–4.66; EL/EHW 2.53–2.70; EHW/PW 1.02–1.04.

All legs (Fig. 1) not so long but slender; femora fusiform and moderately flattened dorso-ventrally; tibiae almost straight though incurved at the bases, each with one small tibial spur; tarsi relatively long, almost of the same length or only a little longer than tibiae; tarsal formula 5–5–5; tarsomeres except for the apical one each with membranous lingulate lamella on ventro-apical portion, but those of basal two segments are very weakly developed or almost disappear.

Abdomen broad and flattened dorso-ventrally in dried condition, with seven visible segments in ventral view; sides almost parallel in basal two segments, and then gradually convergent posteriad from third segment to anal end.

Male genitalia as shown in Figs. 4–5, strongly sclerotized, symmetrically trilobed, weakly depressed dorso-ventrally, broad and crown-shaped as a whole, more or less variable in general shape with individuals; external surface smooth and glabrous though the distal and inner marginal areas of parameres are granulate. Basal plate large, rounded quadrate in dorsal view, widely open on venter, distal margin widely bisinuate, shallowly concave in central part. Aedeagus stout and wide arrow-shaped with rounded apex, wide and rather flattened dorso-ventrally, gradually bent ventrad in about distal third; sides gradually convergent towards the apical portion, though expanded triangularly at about distal 2/5, clearly shorter than the length of parameres. Parameres spatulate, embracing aedeagus from left and right, joining at the bases on ventral side; the joining area with a pair of fairly clear and longitudinal grooves; external sides more or less arcuate, gradually divergent towards the apices, widely separated from each other on dorsal side, and then the basal halves of the margins on dorsum



Figs. 4–5. *Menghuoius kusakabei* KAWASHIMA, sp. nov., male genitalia; dorsal view (4); ventral view (5).

gradually divergent towards the apices; distal halves of inner margins obliquely truncated outwards on venter before apices, forming an angle, and then the basal halves of the margins almost subparallel or weakly arcuate, very shallow projections seen at the distal third, internally expanded.

*Measurement in mm.* BL: 18.10 (in the holotype) (range 17.10–18.30); HW: 3.90 (3.75–3.90); PL: 3.05 (2.80–3.00); PA: 3.90 (3.60–3.70); PB: 5.10 (4.70–4.98); PW: 5.20 (4.75–5.10); EL: 13.40 (12.90–13.70); EHW: 5.30 (4.90–5.30); HTL: 3.30 (2.90–3.00).

*Female.* Unknown (probably wingless larviform).

*Type series* (all dried). Holotype: 1♂, Mt. Victoria (Natma Taung National Park), ca. 2,000 m in alt., near Kanpetlet, Chin State, W. Myanmar, 6–8–VI–2001, Y. KUSAKABE leg. *Paratypes*: 3♂♂, same data as for the holotype; 1♂, same locality as above, 3–VI–2002, Y. KUSAKABE leg.

The holotype is preserved in the insect collection of Nagoya Women's University, Nagoya (Laboratory of Nature Conservation, Dr. Masataka SATÔ). The paratypes are preserved in the author's collection, Yokosuka-shi, Kanagawa.

*Range.* W. Myanmar.

*Remarks.* This new species is relatively similar to the type species of the genus, *M. ingens* (FAIRMAIRE, 1896), but the body is fairly small and has slenderer appendages, and the pronotal width is narrower than the humeral width of the elytra; clearly distinguished from the latter by the difference in shape of the male genitalia. At a glance, the male genitalia look very similar to those of *M. ingens*, but the aedeagus is clearly shorter than the parameres.

All the specimens of the type series flew to a light trap just after the sunset, between 7:30 and 8:30 pm. (Y. KUSAKABE, pers. comm.).

### Acknowledgement

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### 要 約

川島逸郎：イリオモテボタル科 *Menghuoius* 属の1新種の記載。—— イリオモテボタル（オオメボタル）科 *Menghuoius* 属は、同科の基準属である *Rhagophthalmus* 属から頭胸部の形質の特化・発達を根拠に分離され、KAWASHIMA (2000) によって創設された一群である。今回その第2番目とみなされる種がミャンマーから新たに発見されたので、本論文において *M. kusakabei* と命名して記載した。この種は、本属の基準種である *M. ingens* (FAIRMAIRE, 1896) と比較するとかなり小型で、より繊細な外部形態をもち、前胸の最大幅が上翅肩部の幅より狭いこと、雄交尾器は全体的にはよく類似するものの、中片においてその形状や側片との相対長が異なることなどで区別される。

### Reference

- KAWASHIMA, I., 2000. A redescription of *Rhagophthalmus ingens* FAIRMAIRE (Coleoptera, Rhagophthalmidae) from northern Vietnam, with establishment of a new genus in the family. *Elytra*, Tokyo, **28**: 131–140.