

## 論文 (Original article)

# A new *Hemiops*, genus new to Japan, species of Elateridae (Coleoptera) from Okinawa Island of the Ryukyu Islands, Japan

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### Abstract

A new species of elaterid beetles, *Hemiops ireii*, is described and illustrated from Okinawa Island of the Ryukyu Islands. The genus *Hemiops* is also newly recorded from Japan.

**Key words** : New taxon, Genus new to Japan, Elateridae, Okinawa Is.

### Introduction

In the present paper, we describe a new species *Hemiops ireii* from Okinawa Island of the Ryukyu Islands. *Hemiops* species are widely distributed in China, Taiwan and South-East Asia (Fig. 1; Schenkling, 1927; Fleutiaux, 1940), and have not been recorded from Japan including the Ryukyu Islands. Between October and November in 2002, four specimens of the genus were collected by the Malaise trap set in a natural forest of northern part of Okinawa Island. We investigated them morphologically in detail,

and regarded them as a new species which is allied to *Hemiops flava* Castelnau, 1836, distributing in China, Taiwan and South-East Asia (Jiang & Wang, 1999; Suzuki, 1999) and *H. substriata* Fleutiaux, 1902 (Jiang & Wang, 1999). The genus *Hemiops* is also newly recorded from Japan.

***Hemiops ireii* sp. nov. (Oestodinae; Oestodini)**  
(Japanese name: Okinawa-kubimaruki-kometsuki)  
(Figs. 2A-N)

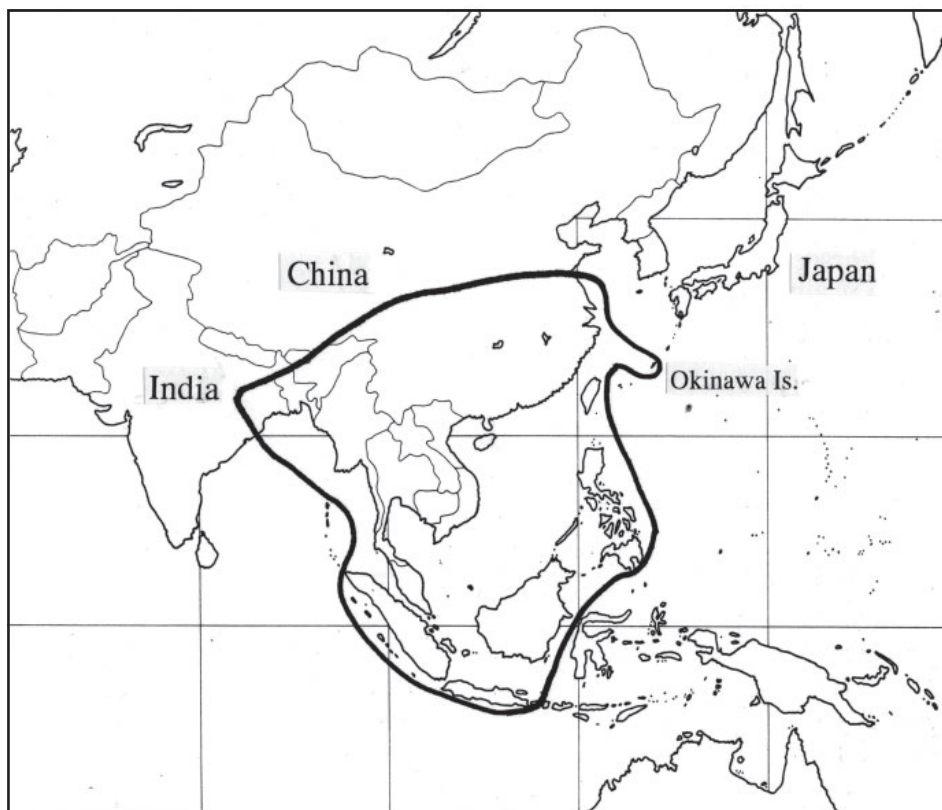


Fig. 1. Distribution map of *Hemiops* spp.

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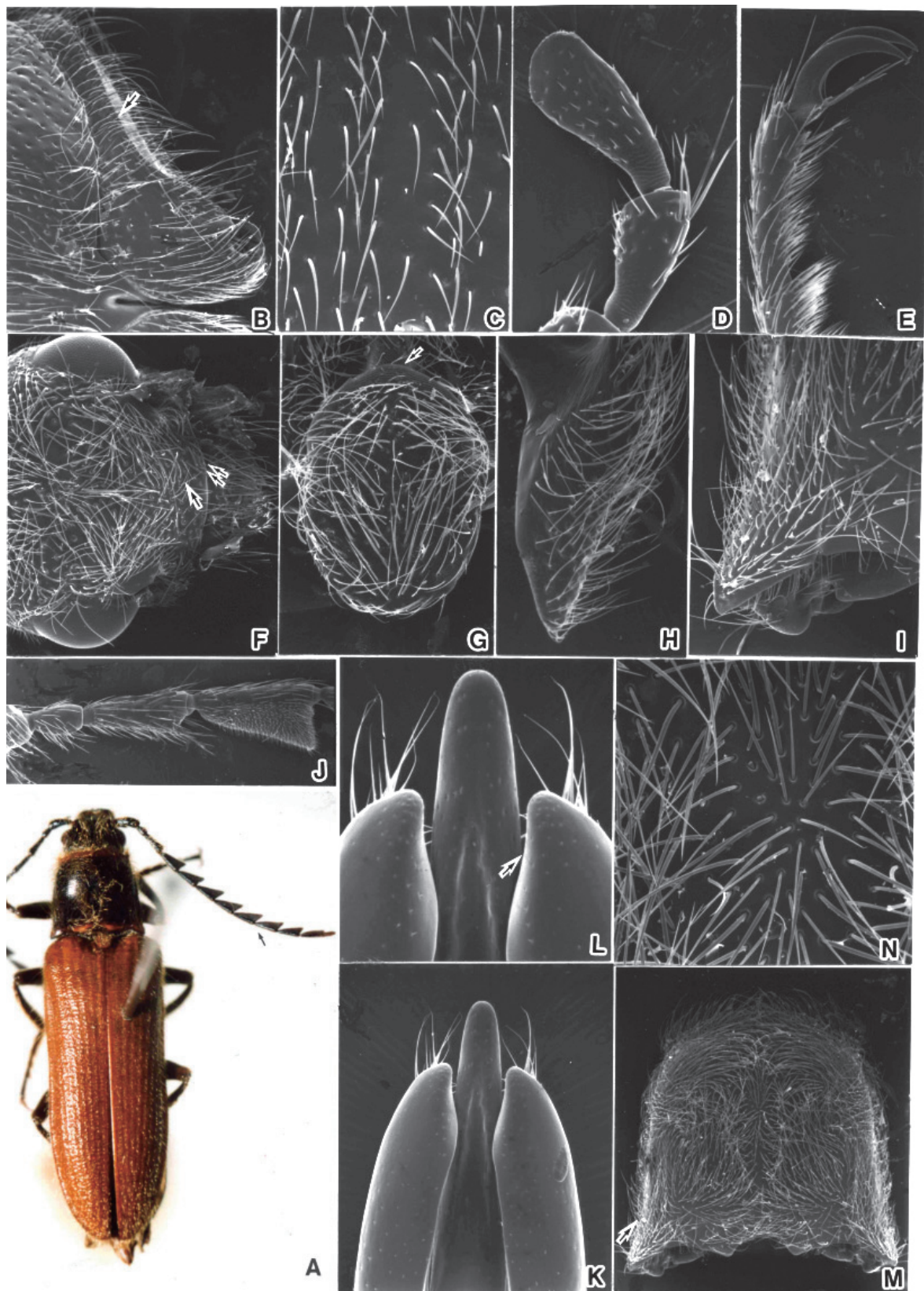


Fig. 2. *Hemiops ireii* sp. nov., male.

A. Adult, body length 13 mm (Holotype); B. Left basal plate, ventral aspect; C. 2<sup>nd</sup> and 3<sup>rd</sup> intervals of right elytron; D. 3<sup>rd</sup> and apical most segment of right maxillary palpus; E. Apical tarsal segment and claw of hind leg; F. Head, dorsal aspect; G. Scutellum; H. Prosternal process, lateral aspect; I. Left hind corner of pronotum; J. 2<sup>nd</sup> to 4<sup>th</sup> segments of left antenna; K and L. Apical portion of male genitalia, dorsal aspect; M. Pronotum, dorsal aspect; N. Some punctures on the disc of pronotum.

Male. Length 11-12 mm, width about 3 mm. Body elongate and almost parallel-sided and normally convex above; surface rather shining; antennae, maxillary palpi, mandibles, labrum, pro-, meso- and metasterna and legs black to blackish brown; scutellum, elytra, margins of pronotum and pro-, meso- and metasterna and most parts of abdomen more or less dusky brown to yellowish brown. Vestiture pale yellow, semidecumbent, noticeably longer on head and pronotum.

Head almost flattened between antennae, broadly and transversely depressed along inside of clypeal margin (Fig. 1F↑); surface coarsely, deeply and somewhat irregularly punctate; clypeal margin obliterated and not ridged (Fig. 1F↑). Maxillary palpus slender and elongate, with apical segment weakly expanded and depressed apicad (Fig. 1D). Antenna extending beyond posterior angle of pronotum at least by apical four segments; basal segment robust and subclavate, 2<sup>nd</sup> small and subcylindrical, 3<sup>rd</sup> subtriangular and 2.2 times as long as 2<sup>nd</sup>, 4<sup>th</sup> almost as long as 2<sup>nd</sup>, from 4<sup>th</sup> to 10<sup>th</sup> clearly serrate (Figs. 1A and J).

Pronotum subquadrate, a little longer than its broadest width at posterior angles, with sides slightly sinuate just before posterior angles, weakly rounded at middle (Fig. 1M); disc dome-like, evenly and rather densely punctate (Fig. 1N), usually bearing a shallow median longitudinal channel in basal third; posterior angles short and produced posteriad, each without carina above (Fig. 1I). Prosterno-pleural suture double, not grooved at anterior portion and clearly incurved at middle. Prosternal process in lateral aspect subtriangular, slightly excavated just behind procoxal cavities, with outer surface not dentate and pointed apicad (Fig. 1H).

Scutellum flattened and lingulate, with basal margin rounded and not excavated (Fig. 1G↑).

Elytra about 2.6 times as long as its basal width, with sides almost parallel in basal two-thirds, thence weakly rounded and gradually convergent towards apices which are ordinarily rounded; striae rather shallowly defined, deeply and coarsely punctate; intervals weakly elevated, punctate and irregularly rugose (Fig. 1C). Basal plate distinctly broad in basal area, narrow and almost parallel sided in lateral area (Fig. 1B↑). Legs slender, with tarsal segments not lobed beneath. Claws simple (Fig. 1E).

Male genitalia as illustrated; median lobe subcylindrical, gradually narrowed towards rounded apex (Fig. 1K); each apical portion of lateral lobes spatulate-like shaped, with inner side weakly incurved as illustrated (Fig. 1L↑).

Female. Unknown.

Type specimens. Holotype. ♂ (Type No. 15, FFPRI), Oku, Okinawa Island of the Ryukyu Islands, 25. X~7. XI. 2002, H. Irei leg., captured by Malaise trap. Paratypes, 2♂♂, same data and locality as the holotype.

Type depository. The holotype is preserved in the collection

of the FFPRI. Paratypes are preserved in Ôhira's collection and the FFPRI.

Habitat. Good conditioned forest of northern part of Okinawa Island in the Ryukyu Islands, Japan.

Note. This new species is similar to *Hemiops flava* and *H. substriata*, but can be distinguished from the latter two by the black to blackish brown head, pronotum and legs, shorter 3<sup>rd</sup> segment of antennae and spatulate-like shaped apical portion of lateral lobes of male genitalia. The genus *Hemiops* belongs to a primitive group of Elateridae (Stibick, 1979). It implies that this species is a relict from when Okinawa Is. had connected with the Asian continent by a land bridge in the middle to lower Miocene sequence, about 15 to 10 million years ago (Kizaki, 1980). To illuminate passage of evolution and speciation for the congeners, we need to discover the female adults of this new species in Okinawa Is., also investigate detailed morphological characters and various ecological information.

This species is named in honour of collector Hideki Irei for his effort and cooperation.

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## 沖縄島から日本未記録のコメツキムシ科の属、*Hemiops* の 1 新種

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### 摘要

*Hemiops* 属の種は、近隣の中国や台湾を始め東南アジア地域に広く分布するが、琉球列島を含む日本からは未知の属であった。このたび、沖縄島北部、奥の天然林に設置したマレーズトラップで 2002 年 10 ~ 11 月に捕獲された種は体長 11 ~ 12 mm で黒色を呈し、上翅が黄橙色で、触角は第 4 節から先の節は鋸歯状をしており、雄交尾器の外形は図示したように先端部が、医者が用いるスパーテルのような形状をしている。本新種の一般外形は中国内陸、台湾や東南アジア地域に分布する *H. flava* Calstelnau, 1836 (クビマルキコメツキ) にやや類似するが、体色や触角第 2 ~ 4 節、雄交尾器の形状に明瞭な差が見出される。また、この属はコメツキムシ類の中では原始的な属で、このような種が沖縄島から発見されたことは、この島が大陸と陸続きであった中新世中・後期 (1500 ~ 1000 万年前) に大陸から移動してきた遺存種ではないかと考えられる。今後は雌の発見に努めて、より詳しい形態の比較や生態調査を行い、この属の進化の道筋を探りたいと考えている。なお、本新種の名前は採集者である伊禮英毅氏の尽力に感謝して、献名をした。

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