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Notes on Three Species of the Genus *Oxynopterus* (Coleoptera, Elateridae) from Southeast Asia, with Description of a New Species

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Abstract Three elaterid beetles belonging to the genus *Oxynopterus* are dealt with. *Oxynopterus palawanensis* ÔHIRA, 1974, which has been regarded as a subspecies of *Oxynopterus audouini* (HOPE, 1842), is raised to an independent species. *Oxynopterus harmseni* CANDÈZE, 1885, is briefly redescribed and illustrated for the first time. A new species of the genus is described from Borneo under the name of *O. kurosawai* W. SUZUKI. It is related to *O. harmseni*, but differs from it in the structure of the antennae and male genitalia.

The genus *Oxynopterus*, along with the genus *Tetralobus*, forms a group of Elateridae composed of giant species which can exceed 40 mm in length. This genus is distributed throughout Africa and Southeast Asia, and at the present time, six species are known from the former region and six species and two subspecies from the latter. No satisfactory taxonomic study has been made on the genus *Oxynopterus*, in spite of the fact that it includes such well-known and large species as *Oxynopterus mucronatus* (OLIVIER) and *O. candezei* FLEUTIAUX. In addition to the fact that there are many areas which have not yet been carefully surveyed or are lacking in specimens (particularly in the latter region, *e.g.*, islands of the Philippines and Indonesia), considerable local variation is observed within the respective species. Careful collecting methods and taxonomic re-examination are therefore necessary for determining exactly how many species there are in the areas concerned.

In the course of collecting specimens of beetles inhabiting the Southeast Asian regions, I was able to examine three interesting species of the genus from Palawan, Sumatra and Borneo islands. I soon identified one species with the one described by ÔHIRA (1974) under the name *O. audouini palawanensis* from Palawan Island of the Philippines. However, a comparison with the so-called nominotypical subspecies from Luzon Island revealed significant differences between the two in the shape of the male genitalia, and in this report I am going to regard it as an independent species. It has also become clear that another species from Sumatra belongs to *O. harmseni*, which has never been recorded again since its original description 116 years ago, and that the other species found on Borneo Island is, though related to *O. harmseni*, actually a new

species. In the present paper, I am going to introduce these three species, one of which will be newly described under the name *Oxynopterus kurosawai* to the memory of the late Dr. Yoshihiko KUROSAWA.

Oxynopterus palawanensis ÔHIRA, 1974, stat. nov.

(Figs.1–2, 9–11)

Oxynopterus audouini palawanensis ÔHIRA, 1974, Steenstrupia, Copenhagen, **3**: 167, fig. 24 (Palawan Is.: Pinigisan: 2♂♂). —— SAKAGUTI, 1981, Insects of the World, Osaka, **2**: 74–75, figs. 2(♂), 3(♀) (Palawan Is.). —— ÔHIRA, 1996, Gekkan-Mushi, Tokyo, (299): 16–17, fig. 3 B (Palawan Is.).

Male. Length: 48.8–58.4 mm (from front margin of head to elytral apices); width: 17.8–20.3 mm. Body somewhat robust, subparallel-sided. Color brown to dark brown, trochanters, outer halves of femora, and antennae light brown. Surface densely covered with golden recumbent pubescence, which is usually waved on pronotum and elytra (in *O. audouini*, the pubescence is minute and sparse or almost absent on the elytra).

Head broadly and markedly excavated. Surface densely punctured. Antennae not so long, apex of 10th segment barely reaching posterior angle of pronotum; 3rd to 10th segment pectinate, branch of 3rd segment long, about 5.7 times as long as the length of the 3rd, evidently shorter than pronotum (0.65 : 1.00), branch of 10th segment slightly longer than that of 3rd one (1.14 : 1.00), 11th with a short branch on outer margin near the apex.

Elytra 2.24 times as long as the greatest width, almost parallel in basal two-thirds, then gently narrowed apicad; apex of each elytron spinate.

Male genitalia (Figs. 9–11) 2.0 mm long, 2.9 times as long as basal piece; lateral lobe slender, about 5 times as long as basal width, outer margin distinctly sinuate in middle, apico-lateral margin nearly straight but widely and shallowly emarginate, apico-lateral hook strongly projected outwards and sharply pointed at the apex (in *O. audouini*, the hook is bluntly pointed).

Female. Length: 63.3 mm; width: 22.8 mm. Similar to the male, but the body is larger and robuster.

Antennae not so long, barely reaching the apex of posterior angle of pronotum, 2nd segment small, 3rd triangular, 1.75 times as long as 2nd, 1.7 times as long as width, 4th similar to 3rd in shape, 1.37 times as long as the latter, 3rd to 10th segments serrate though weaker than in *O. audouini*, 11th slender, 3.35 times as long as width and 1.44 times as long as 10th. Pronotum with lateral portions distinctly impressed.

Elytra robust, 2.1 times as long as the greatest width.

Specimens examined. 1♂, Puerto Princesa City, Palawan Is., Philippines, 11–IX–1983, J. KANEKO leg.; 7♂♂, 1♀, Brooke's Point, Palawan Is., Philippines, III–1996, native collector.

Distribution. Philippines (Palawan Is.).

Notes. Based upon two male specimens collected on Palawan Island, ÔHIRA

(1974) described this elaterid beetle as a subspecies of *Oxynopterus audouini* (HOPE), which is widely distributed in the Philippine Islands. Though SAKAGUTI (1981) gave color illustrations of male and female specimens of this elaterid beetle and ÔHIRA (1996) published further review of the subspecies, no taxonomic change has ever been proposed. When I received a male Palawan specimen of *O. a. palawanensis* from Mr. Junichiro KANEKO in 1984, I first suspected its taxonomic status as a subspecies of *O. audouini*, in view of the difference in body size. At that time, however, no female specimens were available, and I was unable to obtain adequate series of *O. audouini* for comparison. Recently, numerous specimens of *Oxynopterus* collected on Palawan and Luzon Islands became available for my study, which enabled me to confirm that my previous view was sound. In this paper therefore I regard it as an independent species.

Oxynopterus harmseni CANDÈZE, 1885

(Figs. 5–6, 15–16)

Oxynopterus Harmseni CANDÈZE, 1885, Notes Leyden Mus., **7**: 120–121 (Sumatra: pays des Battaks). ——— CANDÈZE, 1891, Catalogue méthodique de Élatérides connus en 1890, 46 (Sumatra). ——— SCHENKLING, 1925, Coleopt. Cat., pars 80: 68 (Sumatra). ——— FLEUTIAUX, 1926, Annls. Soc. ent. Fr., **95**: 111.

Oxynopterus harmseni: VAN ZWALUWENBURG, 1936, Philipp. J. Sci., **59**: 403(Sumatra).

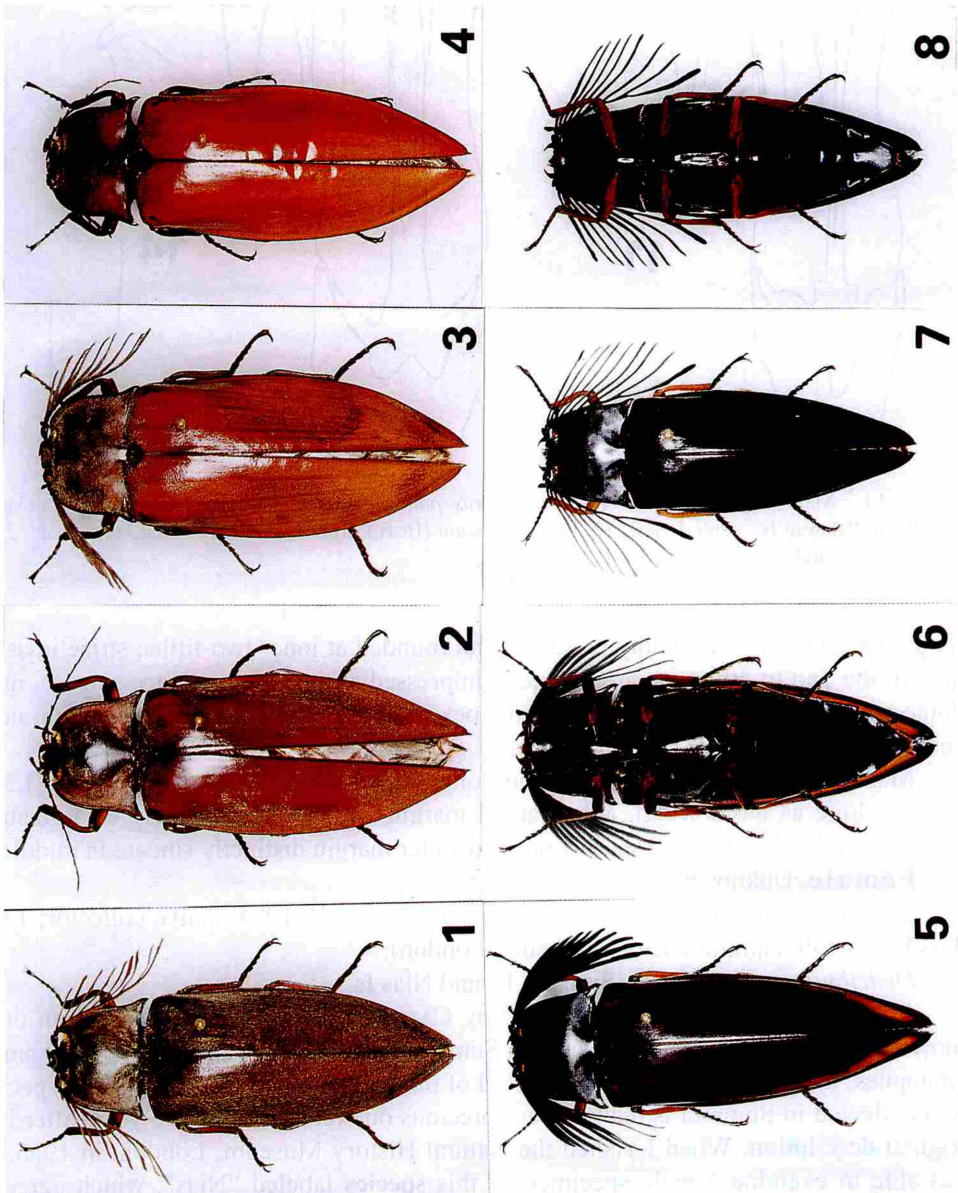
Male. Length 55 mm; width 17 mm.

Body elongate, moderately convex above and shining. Color black, elytra dark reddish brown, with anterior margin and sutural margin at the base dark brown, trochanters, and most parts of femora and tibiae reddish brown. Pubescence at the base of pronotum reddish golden. Head broadly and markedly excavated. Surface coarsely and densely punctured. Antennae somewhat long, reaching the basal sixth of elytra; basal three segments polished; 1st segment strongly robust; 2nd slightly longer than 3rd, which is the shortest and evidently broader than long, 3rd to 10th segments strongly pectinate, the branch of 3rd segment long, as long as that of the 10th, a little longer than pronotum in middle (1.22 : 1.00), 11th long, with a small but distinct denticle on outer margin.

Pronotum trapezoidal, evidently broadest across posterior angles (1.73 : 1.00); sides sinuate before posterior angles which are bill-shaped; surface densely and coarsely punctured; disc gently convex above; lateral margin finely and densely punctured. Scutellum densely covered with coarse punctures.

Elytra elongate, 2.58 times as long as the greatest width and 2.75 times as long as humeral width; sides nearly parallel in basal halves, then convergent apically; basal

Figs. 1–9. Habitus of *Oxynopterus* spp. —— 1–2. *O. palawanensis* ÔHIRA, stat. nov., dorsal view ; 1, ♂ from Brooke's Point, Palawan Is.; 2, ♀, from Brooke's Point, Palawan Is. —— 3–4. *O. audouini* (HOPE), dorsal view; 3, ♂ from Luzon Is.; 5, ♀ from Mindanao Is. —— 5–6. *O. harmseni* CANDÈZE, ♂ from Padang, W. Sumatra; 6, dorsal view; 7, ventral view. —— 7–8. *O. kurosawai* W. SUZUKI, sp. nov., ♂, holotype, from Tawau, NE. Borneo; 7, dorsal view; 8, ventral view.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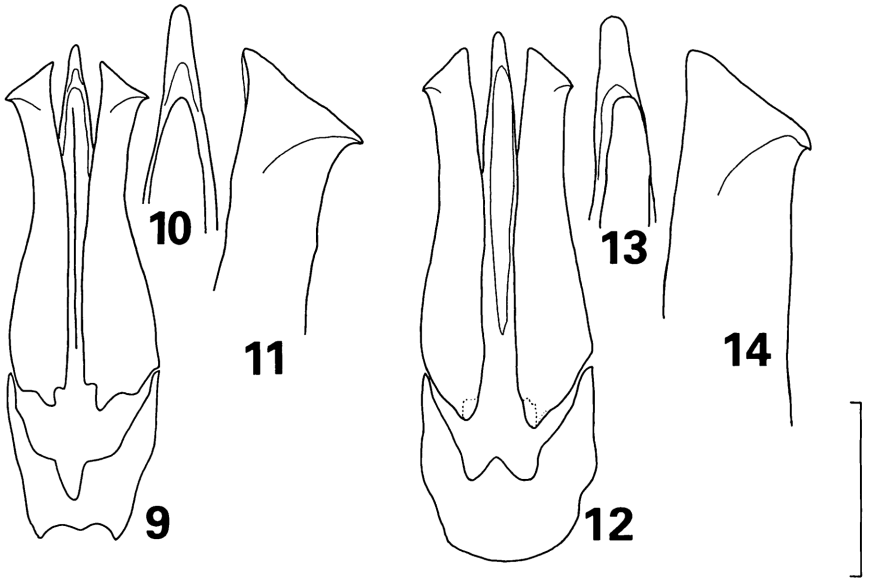


Figs. 9–14. Male genitalia. —— 9–11, *Oxynopterus palawanensis* ÔHIRA, stat. nov., from Brooke's Point, Palawan Is., ventral view; 12–14, *O. audouini* (HOPE), from Luzon Is., ventral view. Scale: 2.6 mm for 9 and 12; 1.0 mm for 10–11 and 13–14.

margin of each elytron broadly produced and rounded at inner two-fifths; striae invisible, but the 2nd to 4th striae are distinctly impressed at the bases; surface smooth, not alutaceous, densely and finely punctured; apex of each elytron sharply pointed but not spinate.

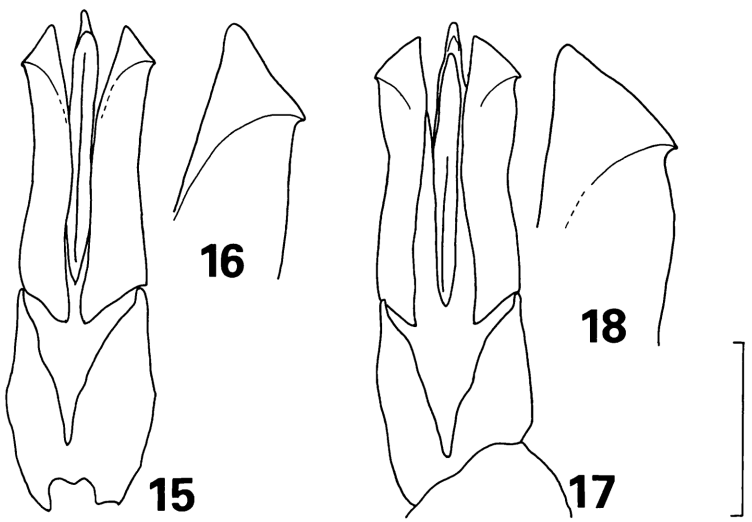
Male genitalia (Figs. 15–16) 7.2 mm long; lateral lobes nearly parallel, each 4.53 times as long as basal width, apico-lateral margin widely and shallowly emarginate, apico-lateral hook small and sharply pointed, outer margin distinctly sinuate in middle.

F e m a l e. Unknown.

Specimens examined. 1♂, Padang, W. Sumatra, VII–1994, native collector; 1♂, Nias Is. (in coll. Natural History Museum, London).

Distribution. Indonesia (Sumatra Is. and Nias Is.).

Notes. This species was described by CANDÈZE (1885) on the basis of an unknown number of specimens collected in Sumatra Island. Though it was listed in some catalogues, there has been no further record of the species since then. The above specimen collected in Sumatra is really a very precious one rediscovered 116 years after its original description. When I visited the Natural History Museum, London, in 1985, I was able to examine a male specimen of this species labeled "Nias", which agreed characteristically with the body form and color of this species, though unfortunately lacking both the antennae. I will record it herewith as a new addition to the fauna of Nias Island.



Figs. 15–18. Male genitalia. —— 15–16, *Oxynopterus harmseni* CANDÈZE, from Padang, W. Sumatra, ventral view; 17–18, *O. kurosawai* W. SUZUKI, sp. nov., holotype, from Tawau, NE. Borneo, ventral view. Scale: 2.6 mm for 15 and 17; 1.0 mm for 16 and 18.

Oxynopterus kurosawai W. SUZUKI, sp. nov.

(Figs. 7–8, 17–18)

Male. Length: 49.2 mm (from front margin of head to elytral apices); width: 16.1 mm.

Body elongated fusiform, more or less convex above and shining. Color black, with trochanters, femora and tibiae yellowish brown. Dorsal surface almost glabrous, except for the base of pronotum which is clothed with fine pale-yellow pubescence.

Head broadly and markedly excavated; surface coarsely and irregularly punctured, the punctures becoming sparser laterally and basally; coriaceous ground sculpture visible but weak. Antennae long, but barely reaching basal fourth of elytra; basal two segments polished but the remainings opalecent; 1st segment pear-shaped, robust, 1.18 times as long as wide; 2nd strongly transverse, 2.25 times as broad as long; 3rd slightly shorter than 2nd; 3rd to 10th segments strongly pectinate, the branch of 3rd segment very long, slightly longer than that of the 10th (1.16 : 1.00), a little longer than pronotum in middle (1.2 : 1.0); 11th slender, without any denticle on outer margin.

Pronotum trapezoidal, evidently broader across posterior angles than long (1.63 : 1.00); sides gently convergent anteriad, scarcely arcuate at middle, and feebly sinuate before posterior angles; anterior margin deeply emarginate, distinctly bordered throughout; each anterior angle strongly produced, broadly rounded at the apex; lateral margin distinctly bordered throughout; posterior angle narrow bill-shaped, projected postero-laterally; disc somewhat convex above; basal margin bisinuate, somewhat

lobed backwards and truncate at middle, distinctly emarginate inside posterior angles; surface densely and finely punctured. Prosternum sparsely covered with both fine and large punctures; epipleuron densely and finely pubescent. Scutellum cordate, distinctly impressed; anterior margin weakly impressed at middle; surface covered with fine and indistinct punctures.

Elytra well convex above, 2.45 times as long as the greatest width and 2.66 times as long as humeral width; sides gradually divergent from base to basal third, then distinctly convergent apicad; apex of each elytron pointed but not spinate; basal margin of each elytron broadly produced and strongly rounded at inner three-sevenths; surface weakly alutaceous, more strongly at the base, densely and coarsely punctured; striae hardly visible; 5th sternite subtriangular, with the apex abruptly truncate, preapical area deeply and somewhat coarsely punctured.

Male genitalia (Figs. 17–18) 7.0 mm long, well sclerotized, subparallel-sided, 2.19 times as long as basal piece; lateral lobe 6.25 times as long as basal width, apico-lateral margin scarcely arcuate, not emarginate, apico-lateral hook small and pointed, outer margin distinctly sinuate in middle; basal piece elongate, 1.43 times as long as broad.

Female. Unknown.

Holotype: ♂, Tawau, Sabah, East Malaysia, 5–V–1998.

The holotype will be deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Distribution. East Malaysia (Northeast Borneo).

Notes. Although it is surprising that a species of this large size has not been discovered before, we may conclude that researches on the Southeast Asian Elateridae are far from sufficiency. The specimen used for preparing the above description is the one obtained through an insect dealer in Japan, so that only the locality name "Tawau" is attached to it without any other details. Since females of this remarkable species remain unknown, it is hoped that future researches in this region will bring forth additional material.

The present species is very closely related to *O. harmseni* CANDÈZE, 1885, from Sumatra, but can be easily dintinguished from the latter by the smaller body, the longer antennae which reach the basal fourth of the elytra, the entirely black elytra, and the differently shaped male genitalia.

The specific name is given in honor of the late Dr. Yoshihiko KUROSAWA, who was the former president of the forerunner of our society.

Acknowledgements

My interest in the genus *Oxynopterus* stems from the words given to me by the late Dr. Yoshihiko KUROSAWA: "The apices of the elytra are different in shape between the Bornean specimens of *O. candezei* FLEUTIAUX and those found in the Malaysian Peninsula. I think this is worth scrutinizing." Dr. KUROSAWA kindly gave me a Bornean

specimen and valuable advice about the subject. Recently, my study approached completion by receiving specimens of *O. harmseni* CANDÈZE, but unfortunately, Dr. KUROSAWA unexpectedly passed away before seeing the result. Due to lack of comparative material, I was unable to discuss on *O. candezei* from Borneo, but I would like to dedicate this paper to the late Dr. Yoshihiko KUROSAWA in gratitude for his kind teaching for many years. I also wish to extend my gratitude to Mr. Junichiro KANEKO, Mr. Nobuo KASHIWAI, Mr. Tetsuo MIYASHITA and Mr. Shinji NAGAI for their kind help in locating precious specimens. I wish to express my sincere thanks to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the original manuscript of this paper.

要　　約

鈴木　亙：東南アジアのオオヒゲコメツキ属3種について．—— 東南アジアのオオヒゲコメツキ属には，これまでに6種2亜種が記録されていた．今回，フィリピンのパラワン島，インドネシアのスマトラ島，そしてマレーシアのサバ州（ボルネオ島北東部）で採集された3種のオオヒゲコメツキの標本を調べた結果，いままで*Oxynopterus audouini* (HOPE)の亜種として扱われてきたパラワン島の*O. a. palawanensis* ÔHIRAは，雄交尾器の形状の違いにより別種と判断された．また，スマトラ産の個体は，原記載以来116年間も記録のなかった*O. harmseni* CANDÈZEであることが判明したので，形態記載と全形図を付けて紹介した．そして，ボルネオ島北東部で採集された個体は，学界未知の新種であることが明らかになったので，*O. kurosawai* W. SUZUKI と命名して記載した．本種は，*O. harmseni* CANDÈZEによく似ているが，より小型で，触角が長いこと，翅鞘全体が黒色を呈すること，また，雄交尾器の形状が異なることによって容易に識別することができる．

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