

Tenebrionidae of East Asia

(II) A New Relative of the Genus *Plamius* with Descriptions of Three New Species

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Abstract A new tenebrionid genus with three new species is described from South-east Asia. It belongs to the tribe Cnodalonini, and is allied to the genus *Plamius*, originally described from South India.

Through the courtesy of Mr. KAORU SAKAI, Tokyo, I had an opportunity of examining many tenebrionid specimens collected on the Cameron Highlands and the neighbouring areas, the Malay Peninsula. I found a strange species among them and asked the late Dr. Zoltán KASZAB, Természettudományi Múzeum, Budapest, for his opinion about its systematic position. After a careful examination, he informed me that the tenebrionid in question should be a new species belonging to a new genus, allied to the genus *Plamius* FAIRMAIRE, 1896. At the same time, he offered me to examine another new species of the same genus from Borneo preserved in the collection of the Museum. Later, I found the other new species from Borneo in my collection. Thus, I am going to describe the new genus and three new species in this paper.

Before going into further details, I wish to express my sincere gratitude to Mr. K. SAKAI for his kind offer of the material. I am also indebted to the late Dr. Z. KASZAB, who not only informed me of invaluable suggestion but also permitted me to examine specimens including the type of the genus *Plamius* for this study, and to Dr. Shun-Ichi UÉNO, National Science Museum (Nat. Hist.), Tokyo, for his constant guidance and reading the original manuscript.

Malayaplamius gen. nov.

Type species: *Malayaplamius sakaii* sp. nov.

Body small, oblong-oval, strongly convex above; either winged or apterous; mostly bluish and strongly shining above.

Head rather large, nearly horizontal against pronotum in repose; frons broad with fronto-clypeal border grooved, the groove extending backwards to occiput, thus forming noticeable \neg - or inverted U-shaped sulcus on head; eyes rather small, strongly produced laterad; interocular space wide; antennae rather short, thickened to apex and somewhat club-like.

Pronotum medium-sized; apical margin not bordered; base clearly bordered, the

border interrupted in middle or not; sides arcuate laterad, with lateral margins bordered and very feebly crenulate; disc strongly convex above and punctate. Scutellum small.

Elytra about 1.5 times as long as broad, slightly broader than pronotum at base; dorsum strongly convex; disc punctate-striate; intervals feebly to moderately convex, scattered with small punctures; sides steeply declined, more or less arcuate laterad, with lateral margins bordered.

Mentum variable in shape; gula mostly triangular; terminal segment of maxillary palpus nearly securiform.

Prosternum medium-sized, rather widely, moderately raised between coxae, with apical margin neither bordered nor edged, prosternal process variable in shape; mesosternum mostly short, depressed anteriorly, raised in V-shape in posterior portion; metasternum medium-sized to rather short and wide, with a median groove. Abdomen medium-sized and punctate, anal sternite with rounded apical margin in both sexes.

Legs short and rather stout; femora simply thickened and not spined; tibiae rather short; tarsi rather long as compared with tibiae; claws medium-sized and falci-form.

Male genitalia mostly simple.

Notes. The present genus is classified into the tribe Cnodalonini and allied to the genus *Plamius* FAIRMAIRE, 1896, described from South India, but can be distinguished from it by the following characteristics: 1) body small and strongly convex above; 2) head noticeably grooved in \cap - or inverted U-shape; 3) eyes rather small and strongly protruded laterad; 4) pronotum with clearly bordered base (the border interrupted in middle in a species); 5) scutellum very small; 6) elytra with lateral margins clearly bordered; 7) antennae rather short; 8) protibiae simple in male, while in *Plamius*, they are noticeably bent in apical portion in some species; 9) male genitalia mostly short and simple; 10) winged or apterous (e.g., *Malayaplamius sakaii* sp. nov.).

Malayaplamius sakaii sp. nov.

(Figs. 1-3)

Body oblong oval, rather strongly constricted between the bases of pronotum and elytra, strongly convex above; apterous; dark blue, with antennae, mouth-parts and tarsi blackish brown, under surface with violet tinge; upper surface strongly shining and under surface moderately so.

Head rather large and a little broader than long, nearly horizontal against pronotum in repose, moderately declined forwards, feebly microshagreened, rather shallowly punctate; frons broad, with fronto-clypeal border nearly straight and noticeably grooved, the groove extending backwards and reaching occiput, thus forming \cap -shaped sulcus; clypeus somewhat transversely elliptic, moderately convex above in middle; genae medium-sized, dilated and finely separated from other portions of head, with outer margin roundly produced laterad; eyes small and rather transverse, notice-

ably protruded laterad, distance between them about 6 times their diameter. Antennae rather short, hardly reaching the middle of pronotum, 5 apical segments noticeably thickened and somewhat club-like, 11th disc-shaped, ratio of the length of each segment from basal to apical: 0.4, 0.2, 0.4, 0.3, 0.3, 0.3, 0.4, 0.4, 0.4, 0.4, 0.5.

Pronotum somewhat shortly barrel-shaped, slightly broader than long, broadest at middle, roundly narrowed towards base and apex; apical margin weakly arcuate, not bordered; base widely V-shaped, very slightly sinuous on each side, clearly bordered; sides rather steeply declined, with lateral margins finely bordered, microscopically, feebly crenulate, barely visible from above, feebly emarginate before base; front angles obtuse and not angulate; hind angles obtusely angulate; disc strongly convex above, rather strongly punctate, the punctures sparsely set in middle. Scutellum small and triangular.

Elytra 1.5 times as long as broad, 2.4 times length and a little more than 1.4 times breadth of pronotum, broadest at middle, moderately roundly narrowed towards bases, strongly, roundly so towards apices, and slightly produced at apices; dorsum strongly convex above, thickest a little behind basal 1/3; disc noticeably punctate-striate, the punctures in striae rather strongly pitted, distance between them about 1–2.5 times their diameter, becoming sparser in lateral portions; intervals feebly to moderately convex, scattered with punctures, which are about 1/4 times size of those in striae; sides steeply declined and enveloping hind body, with lateral margins deeply bordered though invisible from above; humeral portions rather slender.

Mentum nearly semicircular and asperate, raised antero-medially; gula triangular, transversely microreticulate, impressed at apex on each side; terminal segment of maxillary palpus medium-sized and securiform, with outer and inner sides rounded.

Prosternum medium-sized, feebly microshagreened, rather sparsely scattered with large shallow punctures, rather widely, moderately raised between coxae and shallowly depressed longitudinally, with apical margin neither bordered nor edged, prosternal process widely truncate at apex and barely produced posteriad; mesosternum short and very feebly microshagreened, moderately depressed in anterior 2/3, gradually raised in remaining portion and somewhat V-shaped; metasternum rather short and wide, smooth and sparsely scattered with punctures, microshagreened laterally, with fine median groove. Abdomen medium-sized, scattered with punctures (each with a short hair), which become finer towards apex.

Legs short and rather stout, feebly microshagreened and punctate; femora rather thickened; tarsi rather long as compared with tibiae, ratio of the length of each tarsal segment of pro-, meso- and metatarsi from basal to apical: 0.4, 0.2, 0.2, 0.2, 1.5; 0.4, 0.2, 0.2, 0.2, 1.5; 0.8, 0.2, 0.2, 1.7; claws medium-sized and falciform.

Male genitalia simple as shown in Figs. 2 and 3.

Body length: ca. 4 mm.

Holotype: ♂, Tanah Rata, Cameron Highlands, Pahang, Malaysia, 19. III. 1976, K. SAKAI leg. (in National Science Museum (Nat. Hist.), Tokyo). Paratypes: 3 exs.,

same data as the holotype; 1 ex., 3. III. 1976, 1 ex., 16. III. 1976, same locality and collector as the holotype.

Malayaplamius uenoi sp. nov.

(Figs. 4-6)

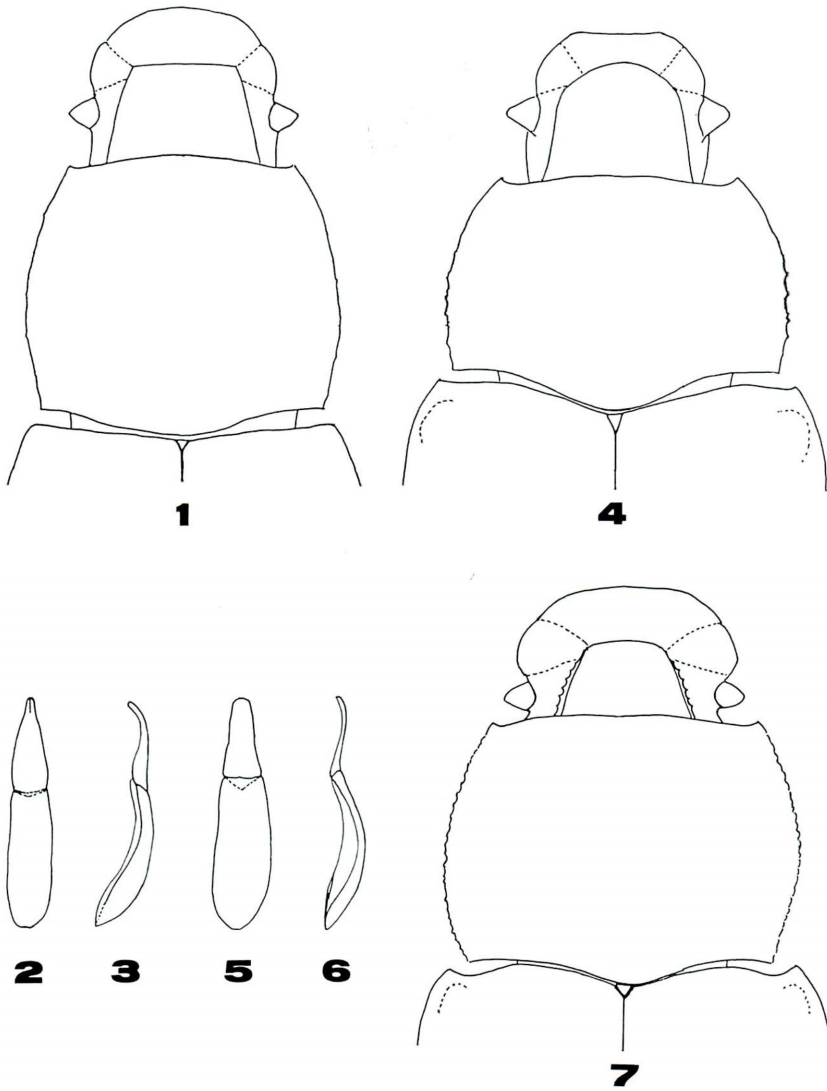
This new species resembles the preceding one, but can be distinguished from the latter by the following characteristics:

Body broader and more noticeably widened posteriad, more strongly convex above, less strongly constricted between the bases of pronotum and elytra; winged; head and pronotum dark blue, elytra metallic purple with violet tinge in humeral portions, under surface rather blackish.

Head narrower, noticeably strongly convex above and microshagreened in inner basal portion, nearly flat and rather horizontal in apical portion and metallically shining, more noticeably punctate; frons a little broader, rather steeply declined, with fronto-clypeal border slightly arcuate and grooved, the groove extending backwards and reaching occiput, forming inverted U-shaped sulcus; clypeus rather short, truncate at apex, weakly convex postero-medially; genae smaller, with outer margin slightly rounded and not so produced as in *M. sakaii*; eyes a little larger, distance between them about 5 times their diameter. Antennae a little shorter, reaching basal 1/4 of pronotum, 6 apical segments more noticeably thickened, 11th rather ovoid, ratio of the length of each segment from basal to apical: 0.6, 0.2, 0.3, 0.3, 0.3, 0.3, 0.4, 0.4, 0.4, 0.5, 0.8.

Pronotum more transverse, a little less than 1.6 times as broad as long, broadest at apical 2/5, rather strongly and roundly narrowed towards apex and weakly so towards base; apical margin more widely and weakly arcuate; base more widely V-shaped, more clearly bordered, and more distinctly sinuous on each side; sides moderately declined and obliquely explanate laterally, with lateral margins more clearly bordered and slightly crenulate, visible from above; front angles with rounded corner; hind angles obtusely angulate; disc moderately strongly, somewhat transversely convex above, feebly microshagreened, more finely and closely punctate. Scutellum isosceles triangular, scattered with a few fine punctures.

Elytra broader and shorter, 1.4 times as long as broad, a little less than 3 times length and 1.4 times breadth of pronotum, broadest at middle, weakly narrowed towards bases, and roundly so towards apices, which are feebly, roundly produced; dorsum more strongly, somewhat semispherically convex above, thickest at middle, weakly depressed obliquely from basal 1/6 of the middle to basal 1/3 of lateral portions; disc more finely punctate-striate, the punctures in striae a little smaller and closely set, often intermixed with smaller ones; intervals less strongly convex, scattered with finer punctures, feebly, irregularly wrinkled; sides nearly vertically declined, not enveloping hind body, noticeably bordered, narrowly explanate and finely rimmed along lateral margins; humeral portions rather distinctly swollen.



Figs. 1-7. — 1-3. *Malayaplamius sakaii* gen. et sp. nov.; 1, fore body; 2, ditto, male genitalia (dorsal view); 3, ditto, male genitalia (lateral view). — 4-6. *Malayaplamius uenoi* sp. nov.; 4, fore body; 5, ditto, male genitalia (dorsal view); 6, ditto, male genitalia (lateral view). — 7. *Malayaplamius kaszabi* sp. nov.; fore body.

Mentum widely subcordate and asperate, ridged medially, with basal margin rimmed; gula triangular, microscopically alutaceous, impressed in a crescent-shape near apex; terminal segment of maxillary palpus more strongly dilated and securiform.

Prosternum a little shorter, coarsely punctate and rather tuberculate, sparsely covered with fine hairs, moderately raised between coxae and weakly depressed medial-

ly, with prosternal process obtusely pointed; mesosternum rather short and coriaceous, strongly depressed in anterior 2/3, raised in remaining portion and ridged in V-shape along hind border; metasternum medium-sized, scattered with punctures (each with a hair), which become larger to lateral portions, rather smooth in middle and microshagreened laterally, with median groove in posterior 2/3. Abdomen shorter, more closely punctate, each puncture bearing a hair, more feebly microshagreened.

Legs shorter, more noticeably, coarsely punctate and sculptured; ratio of the length of tarsal segment from basal to apical: 0.3, 0.2, 0.2, 0.2, 1.3; 0.4, 0.3, 0.2, 0.2, 1.4; 0.6, 0.3, 0.3, 1.5, respectively.

Male genitalia wider, truncate at apex.

Body length: 3.6 mm.

Holotype: ♂, 15 miles northwest of Keningau (900 m alt.), Borneo, East Malaysia, 15–19. VIII. 1983, Y. NOTSU leg. (in Natn. Sci. Mus. (Nat. Hist.), Tokyo).

Malayaplamius kaszabi sp. nov.

(Fig. 7)

This new species also resembles *M. sakaii* sp. nov., but can be distinguished from it by the following characteristics:

Body slightly larger, less convex above, less strongly constricted between the bases of pronotum and elytra; winged; upper surface indigo-bluish, under surface blackish brown with weak bluish tinge; upper surface more metallically shining.

Head more closely punctate and microshagreened, more strongly raised in inner basal portion, gradually declined forwards to apex; frons a little narrower, with fronto-clypeal border more shortly and more finely grooved, the groove roundly curved to rear and reaching occiput, thus forming inverted U-shaped sulcus, which becomes much deeper and feebly serrated in lateral portions; clypeus broader, flattened on each side, truncate at apex, with outer margin roundly, continuously extending to genal margin; genae larger and more strongly dilated, flattened, with outer margin roundly produced laterad; eyes nearly of the same shape and size as those of *M. sakaii*, distance between them 7 times their transverse diameter. Antennae slightly shorter, reaching basal 1/4 of pronotum, 5 apical segments more strongly thickened to apex, 11th rather transverse-elliptic, ratio of the length of each segment from basal to apical: 0.7, 0.3, 0.6, 0.4, 0.4, 0.4, 0.5, 0.5, 0.6, 0.6, 0.8.

Pronotum clearly transverse, a little less than 1.2 times as broad as long, broadest at middle, roundly narrowed towards base and apex; apical margin more widely, weakly arcuate forwards; base more noticeably V-shaped and bisinuous, with medial 1/3 roundly produced to rear and not bordered though lateral 1/3 is clearly bordered on each side; sides less steeply declined and narrowly, obliquely explanate, with lateral margins finely rimmed and microscopically, bluntly crenulate, visible from above, very slightly emarginate before base; front angles rather obtuse, with corner not angulate; hind angles obtuse and clearly angulate; disc less strongly convex above, more closely,

a little coarsely punctate, microshagreened in lateral portions. Scutellum smaller, triangular.

Elytra about 1.5 times as long as broad, 2.4 times length and a little less than 1.3 times breadth of pronotum, broadest a little behind basal 1/3, feebly narrowed towards bases, feebly so towards rear, then roundly narrowed to apices; dorsum rather strongly, somewhat semispherically convex above, thickest at middle, slightly depressed obliquely in basal 1/5 of lateral portions; disc more strongly, noticeably punctate-striate, the punctures in striae nearly equidistantly and rather closely set, strongly notching intervals; intervals feebly to moderately convex above, scattered with microscopic punctures; sides nearly vertically declined and not enveloping hind body, clearly bordered, narrowly, obliquely explanate and finely rimmed along lateral margins; humeral portions rather prominent.

Mentum widely subcordate and truncate at apex, coriaceous and sparsely pubescent, raised antero-medially; gula rather triangular, transversely microreticulate; terminal segment of maxillary palpus nearly securiform, with outer and inner sides rounded.

Prosternum a little broader, microshagreened, rugose and sparsely pubescent, moderately and more widely raised between coxae and shallowly bisulcate, with prosternal process slightly, obtusely produced to rear; mesosternum short and feebly microshagreened, depressed in major anterior portion, raised in wide V-shape at middle of hind border; metasternum short and wide, sparsely scattered with punctures, microshagreened laterally. Abdomen a little broader, hardly microshagreened, more strongly punctate, the punctures becoming finer towards apex (each with a hair).

Legs a little more slender, rather coarsely sculptured; tibiae nearly straight (more or less curved in *M. sakaii*); tarsi shorter and slightly thicker, ratio of the length of tarsal segments from basal to apical: 0.4, 0.2, 0.2, 0.3, 1.3; 0.2, 0.2, 0.2, 0.3, 1.4; 0.5, 0.3, 0.3, 1.4, respectively.

Body length: 3.9–4.1 mm.

Holotype: ♀, Sandakan, Borneo, (no collecting data), BAKER leg. (in Természettudományi Múzeum, Budapest). Paratype: 1 ex., near Kuala Kubu Bahru, Selangor, Malaysia, 27. III. 1976, K. SAKAI leg.

摘 要

ゴミムシダマシ科 Tenebrionidae のニジゴミムシダマシ族 Cnodalonini に属する新属 *Malayaplamius* とそれに含まれる新種, *M. sakaii*, *M. uenoi*, *M. kaszabi* を記載した。本属は当初, 南インドから記載され, 東アジアに広く分布するヒメキマワリモドキ属 *Plamius* に近縁と考えられる。