

## Notes on the Genus *Hoplomaladera* (Coleoptera, Scarabaeidae) from Taiwan

**Hirokazu KOBAYASHI**

3–16, Kamishakujii-minamichô, Nerima-ku, Tokyo, 177–0043 Japan

**Abstract** Two new sericid beetles, *Hoplomaladera hualiensis* and *H. kurosawai*, and a new subspecies *H. monticola anmashana*, are described from Taiwan. A key to the Taiwanese species of the genus is provided.

**Key words:** Scarabaeidae, *Hoplomaladera*, Taiwan, new species.

In this paper, the author will describe two new species and one new subspecies of the genus *Hoplomaladera* from Taiwan. The holotypes to be designated in this study will be deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist), Tokyo (NSMT). Other specimens are preserved in the author's collection.

Before going further, the author wishes to express his sincere gratitude to Messrs. Ching-Kin YU, Jiin-chi LO, Shusei SAITO and Tôru SHIMOMURA for their kind offer of materials for this study.

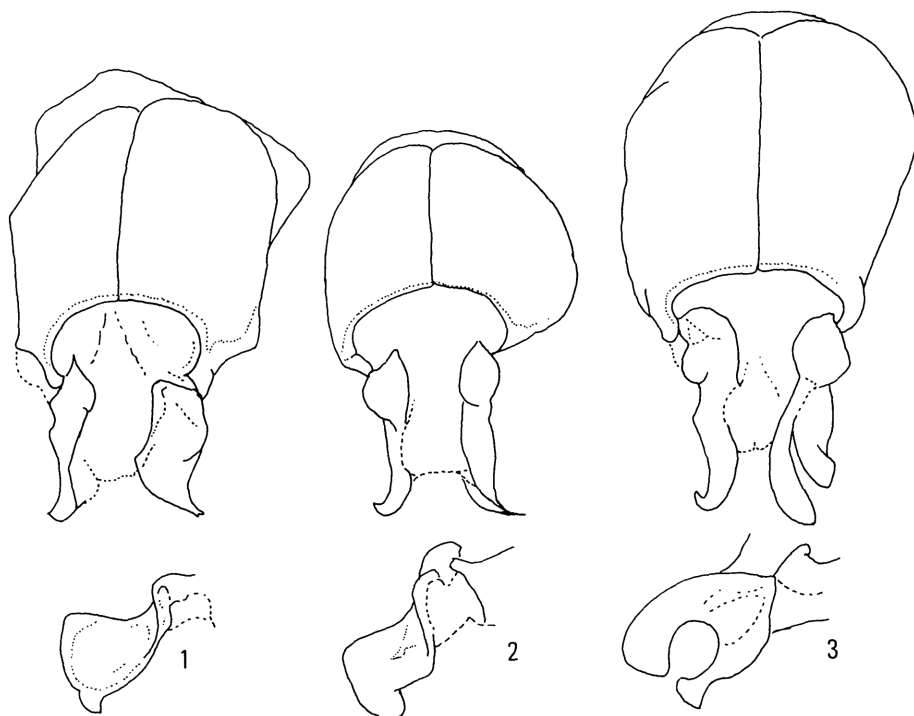
The author was deeply grieved on hearing the death of Dr. Yoshihiko KUROSAWA, a great entomologist in Japan, and is going to dedicate the specific name *Hoplomaladera kurosawai* to the memory of the late Dr. KUROSAWA.

### Genus *Hoplomaladera* NOMURA, 1974

*Hoplomaladera* NOMURA, 1974, Tôhō-Gakuhô, Kunitachi, (24): 92. Type species: *Hoplomaladera shibatai* NOMURA, 1974

The genus *Hoplomaladera* is established by S. NOMURA in 1974 for *Hoplomaladera shibatai* NOMURA, 1974. Until now, only one species, *H. monticola*, was added to the genus by H. KOBAYASHI in 1991 from Taiwan.

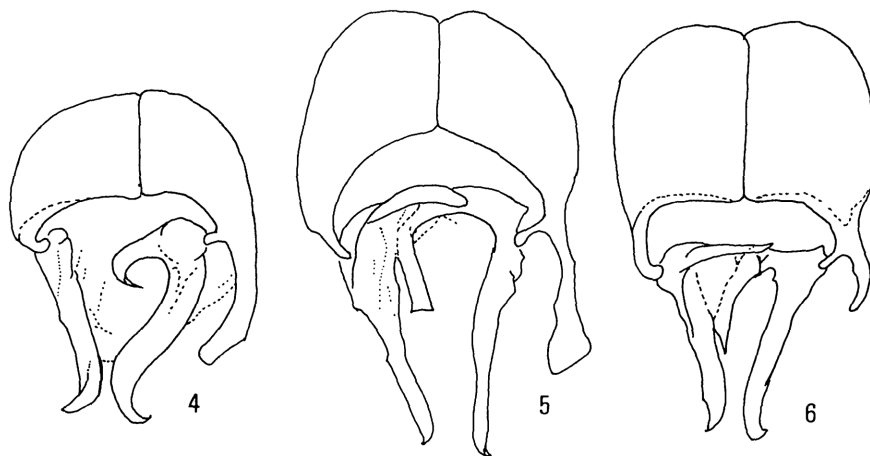
The genus *Hoplomaladera* is allied to the genera *Gastroserica* BRENSKE, 1897, *Gastromaladera* NOMURA, 1973 and *Trichomaladera* NOMURA, 1974, because of the fact that their propleuron has a transverse groove receiving the anterior femur, but the former genus is characterized by the well developed mesosternum which protrudes forwards between the middle coxae. Posterior tarsi impunctate. Antennae 10-segmented, club composed of three lamellae in both sexes.



Figs. 1–3. Male genitalia; 1, *Hoplometopon monticola monticola* H. KOBAYASHI; 2, *H. monticola an-mashana* subsp. nov.; 3, *H. hualiensis* sp. nov.; above, dorsal view; below, right paramere from lateral view.

### Key to the Species

1. Body large (8.5–10.5 mm), yellowish brown. Dorsal surface opaque, sometimes faintly opalescent. Posterior tarsi with one to three short setae on ventral side. . . . . 2
- Body somewhat small (7.5–8.0 mm), light reddish brown or reddish brown. . . . . 3
2. Posterior femur normal in shape, without dentation on posterior margin. Abdominal sternites feebly convex. . . . . *H. shibatai* NOMURA
- Posterior femur with two or three denticulations in basal third of posterior margin. Fourth abdominal sternite rather convex at the middle in male. . . . . *H. kurosawai* sp. nov.
3. Pronotum fringed with sparse, rather long hairs along anterior margin. Elytra with apico-sutural angles shortly pointed or rectangular. . . . . *H. monticola* H. KOBAYASHI
- (a) Dorsal surface dully shining. Posterior tarsi without setae on ventral side. . . . . *H. monticola monticola* H. KOBAYASHI



Figs. 4-6. Male genitalia; 4, *Hoplomaladera kurosawai* sp. nov.; 5-6, *H. shibatai* NOMURA: 5, from Fenchihu; 6, from Tienchih.

- (b) Dorsal surface opaque. Posterior tarsi with a few short setae on ventral side...  
 ..... *H. monticola anmashana* subsp. nov.  
 — Pronotum without hairs along anterior margin. Elytra with apico-sutural angles rounded. .... *H. hualiensis* sp. nov.

***Hoplomaladera hualiensis* H. KOBAYASHI, sp. nov.**

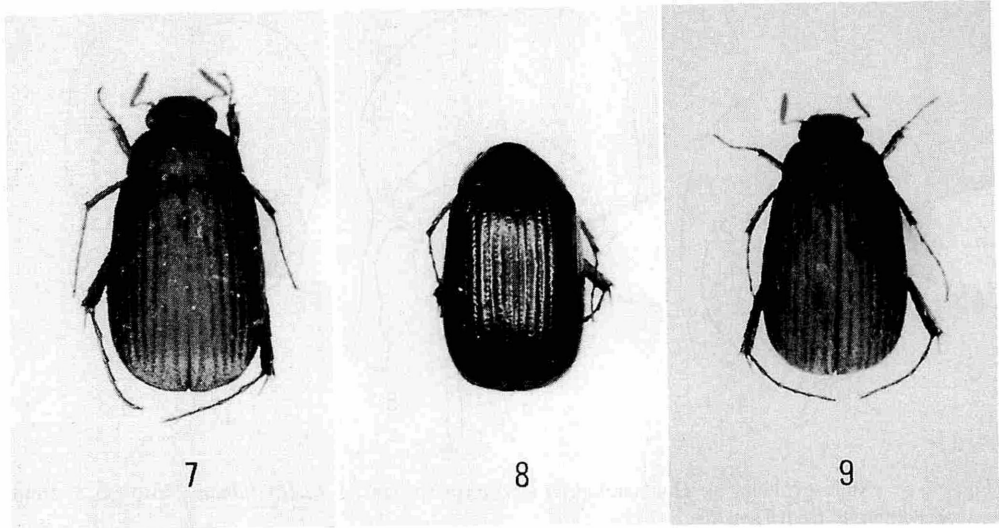
[Japanese name: Karen-mizo-biroudo-kogane]

(Figs. 3, 7)

Oblong-oval, dorsal surface dark reddish brown, with antennae yellowish brown, clypeus reddish brown, margins of middle and posterior tibiae dark-colored. Surface of body opaque, clypeus, antennae, tibiae and tarsi shining.

Clypeus subtrapezoidal, with anterior margin widely sinuate, very densely and somewhat rugosely punctate, with a feeble transverse impression and a row of sparse erect hairs in front. Fronto-clypeal suture somewhat angulate at the middle. Frons finely and sparsely punctate, with a feeble longitudinal line at middle, bearing several rather long hairs near eyes. Antennae 10-segmented, with club composed of three lamellae, 1.6 times as long as footstalk in male.

Pronotum twice as broad as its length, broadest at the base, rather sparsely punctate, lateral margins gradually convergent to front and feebly arcuate near anterior angles, anterior angles protruded, posterior ones subrectangular, sides of anterior margin and lateral ones fringed with short sparse hairs. Scutellum almost of the same length as its breadth, very finely, sparsely punctate at the sides, impunctate at the middle. Elytra with scattered rather long or short hairs, striae rather densely punctate, intervals moderately convex, smooth, apico-sutural angles rounded. Pygidium broadly triangular,



Figs. 7–9. — 7, *Hoplomaladera hualiensis* sp. nov.; 8, *H. monticola monticola* H. KOBAYASHI; 9, *H. monticola anmashana* subsp. nov.

feebly convex, sparsely punctate, somewhat densely bearing hairs at the sides and apical half of the middle.

Mesosternal process protruding, rounded at the tip. Abdominal sternites finely and rather densely punctate, each with a row of short hairs. Posterior femur 2.6 times as long as its breadth, broadened at the middle and very sparsely punctate. Middle and posterior femora with each posterior margin feebly sinuate and finely serrate in apical third. Posterior tibia rather slender, feebly sulcate and longitudinally punctate, outer terminal spur a little shorter than basal tarsal segment. Posterior tarsi impunctate, without setae on ventral side.

Length: 7.5 mm; breadth: 4.5 mm.

*Type series.* Holotype ♂, Hsinpaiyang, Hualien Hsien, 23–V–1993, C. YU leg.

*Distribution.* Taiwan (eastern mountain range).

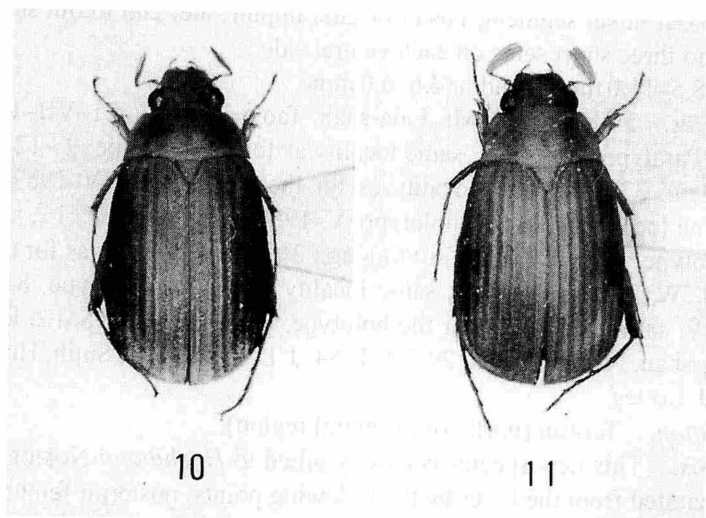
*Diagnosis.* This species is very closely allied to *H. monticola* H. KOBAYASHI, 1991, but may be separated from the latter by the following points: pronotum rather sparsely punctate; anterior margin of pronotum bearing short sparse hairs on each side; elytra with apico-sutural angles rounded.

***Hoplomaladera kurosawai* H. KOBAYASHI, sp. nov.**

[Japanese name: Kurosawa-mizo-biroudo-kogane]

(Figs. 4, 10)

Elongated oval, yellowish brown, with head, tibiae and tarsi reddish brown, mid-



Figs. 10-11.— 10, *Hoplomaladera kurosawai* sp. nov.; 11, *H. shibatai* NOMURA.

dle of pronotum, meso- and metasterna and abdomen dark reddish brown or dark yellowish brown. Surface of body opaque, somewhat opalescent in certain light, with anterior part and sides of clypeus, antennae, tibiae and tarsi shining.

Clypeus subtrapezoidal, roundly emarginate at anterior margin, somewhat densely punctate, with a transverse impression and several erect hairs in front. Frons somewhat sparsely punctate and pubescent. Antennae 10-segmented, with club 1.4 to 1.5 times as long as footstalk in male, almost of the same length in female.

Pronotum twice as broad as its length, with broadest part across base, surface rather sparsely punctate, lateral margins gradually convergent to front, feebly arcuate in front, scarcely sinuate, nearly straight behind, front angles protrudent and acute, hind ones subrectangular, sides of front margin and lateral margins fringed sparsely with short hairs. Scutellum triangular, as broad as its length, sparsely punctate. Each elytron scattered with several short hairs, striae rather densely punctate, intervals convex, smooth. Pygidium broad triangular, very convex, rather densely and shallowly punctate, bearing sparse long hairs in apical half.

Mesosternal process narrowed anteriorly, rounded at tip. Abdominal sternites each with a row of short hairs, 4th sternite rather convex at the middle in male, flattened in female. Anterior tibiae bidentate, shorter than tarsus. Posterior femur opalescent, with broadest part across basal third and tapered apically from there, surface sparsely punctate, with two rows of sparse hairs, posterior margin with two or three denticulations in basal third. Posterior margins of middle and posterior femora finely serrate in apical half. Posterior tibia rather slender, and with broadest part across apex, feebly sulcate and longitudinally punctate, with two oblique spinose ridges on outer side, but the basal one is very short and inconspicuous, outer terminal spur a little

shorter than basal tarsal segment. Posterior tarsi impunctate, 2nd to 5th segments usually with one to three short setae on each ventral side.

Length: 8.5–11.0 mm; breadth: 4.6–6.0 mm.

*Type series.* Holotype: ♂, Mt. Lala-shan, Taoyuan Hsien, 21–VII–1978, T. SHIMOMURA leg. Paratypes: 1 ♂, 4 ♀♀, same locality as for the holotype, 9–12–V–1978, T. SHIMOMURA leg.; 37 exs., same locality as for the holotype, 3–IV–1987, J. LO leg.; 2 ♂♂, 1 ♀, same locality as for the holotype, V–1988, J. LO leg.; 1 ♂, 1 ♀, same locality as for the holotype, 4–V–1981, S. TSUYUKI leg.; 2 ♀♀, same locality as for the holotype, 21–VII–1978, W. SUZUKI leg.; 1 ♂, same locality as for the holotype, 8–V–1978, S. SAITO leg.; 1 ♀, same locality as for the holotype, 27–V–1978, S. SAITO leg.; 1 ♂, 1 ♀, Mt. Herwang-shan, Nantou Hsien, 29–VI–1984, J. LO leg.; 6 ♂♂, Sujih, Hualien Hsien, 8–VI–1994, J. LO leg.

*Distribution.* Taiwan (northern to central region).

*Diagnosis.* This new species is closely allied to *H. shibatai* NOMURA, 1974, but it may be separated from the latter by the following points: posterior femur with two or three denticulations in basal third of posterior margin; 4th abdominal sternite rather convex in the middle.

***Hoplomaladera monticola monticola* H. KOBAYASHI, 1991**

[Japanese name: Miyama-mizo-biroudo-kogane]

(Figs. 1, 8)

*Hoplomaladera monticola* H. KOBAYASHI, 1991, Elytra, Tokyo, **19**: 219.

*Hoplomaladera monticola*: YU, KOBAYASHI & CHU, 1998, Scarab. Taiwan, 83, 144, 221.

*Specimen examin.* Holotype ♂, Mt. Guandao-shan, Nantou Hsien, 10–IV–1984, J. LO leg.

*Distribution.* Taiwan (central mountain range).

***Hoplomaladera monticola anmashana* H. KOBAYASHI, subsp. nov.**

[Japanese name: Anmasan-mizo-biroudo-kogane]

(Figs. 2, 9)

Oblong-oval, dorsal surface reddish brown, ventral surface dark reddish brown, with antennal club dark reddish brown, legs reddish brown (middle and posterior tibiae dark-colored). Ventral surface of body with dull lustre, dorsal surface opaque, clypeus, antennae, tibiae and tarsi shining.

Clypeus subtrapezoidal, with anterior margin widely sinuate, very densely and somewhat rugosely punctate, with a feeble boss like an elevation and a row of sparse erect hairs in front. Fronto-clypeal suture not so angulate at the middle. Frons finely and sparsely punctate, without any longitudinal line at middle, bearing several rather long hairs near eyes. Antennae 10-segmented, with club composed of three lamellae, 1.4 times as long as footstalk in male.

Pronotum twice as broad as its length, broadest at the base, somewhat densely punctate at sides, rather sparsely punctate at the middle, lateral margins gradually convergent to front and feebly arcuate near anterior angles, anterior angles dully protruded, posterior ones subrectangular, anterior margin (except for the middle) and lateral ones fringed sparsely with short hairs. Scutellum almost of the same length as its breadth, very finely, sparsely punctate at the sides, almost impunctate at the middle. Elytra scattered with rather long or short hairs, striae rather densely punctate, intervals moderately convex, smooth, apico-sutural angle almost rectangular. Pygidium broadly triangular, feebly convex, somewhat densely punctate at the sides, sparsely so at the middle, bearing somewhat dense hairs at the sides and apical half of the middle.

Mesosternal process protruding, rounded at the tip. Abdominal sternites finely and somewhat sparsely punctate (punctures of sides somewhat dense), each with a row of short hairs. Posterior femur 2.8 times as long as its breadth, broadened at the middle and scarcely punctate. Middle and posterior femora each with posterior margin feebly sinuate and finely serrate in apical two-thirds. Posterior tibia rather slender, feebly sulcate and longitudinally punctate, outer terminal spur a little shorter than basal tarsal segment. Posterior tarsi impunctate, with a few short setae on ventral side.

Length: 8.0 mm; breadth: 4.5 mm.

*Type series.* Holotype: ♂, Mt. Anma-shan, Taichung Hsien, 29-IV-1992, C. YU leg.

*Distribution.* Taiwan (central mountain range).

*Diagnosis.* This new subspecies is different from the nominotypical one in the following points: dorsal surface of body opaque; apico-sutural angle of elytra almost rectangular; posterior tarsi with a few short setae on ventral side.

### *Hoplomaladera shibatai* NOMURA, 1974

[Japanese name: Mizo-biroudo-kogane]

(Figs. 5, 6, 11)

*Hoplomaladera shibatai* NOMURA, 1974, Tōhō-Gakuhō, Kunitachi, (24): 92.

*Hoplomaladera shibatai*: YU, KOBAYASHI & CHU, 1998, Scarab. Taiwan, 52, 83, 144, 221.

*Specimens examined.* 1 ♂, Mt. Guandao-shan, Nantou Hsien, 7-V-1986, J. LO leg.; 1 ♂, Tienchih, Kaohsiung Hsien, 11-V-1978, H. SAKAINO leg.; 1 ♂, 1 ♀, Fenchihu, Chiaï Hsien, 24-IV-1975, K. AKIYAMA leg.

*Distribution.* Taiwan (central to southern region).

### 要 約

小林裕和：台湾産ミゾビロウドコガネ属について。——台湾産のミゾビロウドコガネは、今まで基準種である *H. shibatai* のほかには *H. monticola* が知られているに過ぎなかった。今回、調査をした結果、*monticola* とは亜種の関係にあると考えられる鞍馬山で採集された種に、*an-mashana* という亜種名を与えた。また、*H. monticola* に非常に近縁の別種には *H. hualiensis* とい

う新種名を与えた。さらにもう1種, *H. shibatai*によく似ているが後腿節の形状が明らかに異なる種には, この度, 逝去された故黒澤良彦博士の名前を冠して *H. kurosawai* と命名した。

ここに改めて, 故黒澤先生の偉業を称えご冥福をお祈り申し上げる次第である。

### References

- KOBAYASHI, H., 1975. Description of new species of the genus *Hoplomaladera* NOMURA from the Loochoo Archipelago (Coleoptera, Scarabaeidae). *New Entomologist, Ueda*, **24**: 9–10.
- 1991. Some new sericid beetles (Coleoptera, Scarabaeidae) from Taiwan. *Elytra, Tokyo*, **19**: 211–220.
- NOMURA, S., 1974. On the Sericini of Taiwan (Col., Scarabaeidae). *Tôhō-Gakuhô, Kunitachi, Tokyo*, (24): 81–115.
- YU, C. K., H. KOBAYASHI & Y. I. CHU, 1998. The Scarabaeidae of Taiwan. *Mu-Sheng Ent. Corp., Taipei, Taiwan*, 1–263.