

Five New Species of the Genus *Mimela* (Coleoptera, Scarabaeidae, Rutelinae) from Borneo and Java

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Abstract Five new species of Asian *Mimela* (Coleoptera, Scarabaeidae, Rutelinae) are described from Borneo and Java: *Mimela zorni* sp. nov., *M. nozomi* sp. nov., *M. uenoi* sp. nov., *M. mirai* sp. nov. (Borneo); *M. argopuroensis* sp. nov. (Java). *Mimela sawaii* MIYAKE, 1994 and *M. marginipennis* MIYAKE, 1994 are regarded as junior synonyms of *M. pallidicauda* ARROW, 1910 and *M. margarita* ARROW, 1910, respectively.

Approximately 200 species of the genus *Mimela* KIRBY, 1823 have hitherto been known from the Palearctic and Oriental Regions. Of these, about 40 species are distributed in Southeast Asia. The members of this genus possess a compressed laminar prosternum which is elevated behind the front coxae. In my collection, I have some unknown *Mimela* species, which have not been studied for a long time. Recently, I had opportunities to examine the type specimens of Southeast Asian *Mimela* preserved in the collections of the Museum für Naturkunde der Humboldt Universität and of Yoshikazu MIYAKE. After my detailed comparative study, I have concluded that some of my specimens belong to new species. In this paper, I am going to describe them under the names *Mimela zorni* sp. nov., *M. nozomi* sp. nov., *M. uenoi* sp. nov., *M. mirai* sp. nov. and *M. argopuroensis* sp. nov. I have also regarded *Mimela sawaii* MIYAKE, 1994 as a junior synonym of *M. pallidicauda* ARROW, 1910 and *Mimela marginipennis* MIYAKE, 1994 as a junior synonym of *M. margarita* ARROW, 1910.

Before going further, I wish to express my cordial appreciation to Dr. Kimio MASUMOTO of Otsuma Women's University, Tokyo, for his constant encouragement to my entomological studies. Deep indebtedness should be expressed to Dr. Hella WENDT and Mr. Joachim SCHULZE of the Museum für Naturkunde der Humboldt Universität zu Berlin, Dr. Dirk AHRENS of the Staatliches Museum für Tierkunde, Dresden, and Mr. Yoshikazu MIYAKE, Tokyo, for the loan of the types under their care. My deep indebtedness is also due to Mr. Malcolm D. KERLEY of the Natural History Museum, London, and Dr. C. O'TOOL of the Hope Entomological Collections of the University Museum, Oxford, for giving me the opportunity to examine collections of the genus *Mimela*. My thanks are also due to Mr. Carsten ZORN, Dresden, for his helpful advice and loaning the materials, and Mr. Masayuki FUJIOKA, Tokyo, for providing me with the invaluable materials. Finally, I wish to express my deepest appreciation to Dr.

Shun-Ichi UENO, National Science Museum, Tokyo, for his critical reading of the manuscript. The holotypes will be deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Mimela zorni sp. nov.

(Figs. 1, 6, 7)

Body length: 16.1–18.2 mm, width: 9.9–10.6 mm.

Head except clypeus, pronotum except lateral margins, scutellum, elytra, pygidium except marginal portion olive green, clypeus yellowish green, antennae, lateral margins of pronotum, marginal portions of pygidium, ventral surface and legs yellowish brown to reddish brown; dorsal surface except pygidium with strong metallic lustre, pygidium and ventral surface with rather weak metallic lustre.

Head microsculptured, with sparse, erect yellow setae (0.3–0.65 mm in length) along eyes; clypeus widely truncate, 2.0–2.1 times as wide as long, reflexed along margin, densely punctate, the punctures partly coalescent in middle, becoming sparser laterad and ill-defined towards marginal portion; frons and vertex sparsely punctate, the punctures intermixed with minute punctures.

Pronotum 1.7–1.9 times as wide as long, widest at the middle, slightly narrowed apicad, narrowed basad; front angles projected and acute, hind angles slightly rounded; disc with sparse, erect yellowish brown setae (0.75–0.87 mm in length) along lateral margins, sparsely scattered with round punctures, which are intermixed with minute ones; lateral margins with rims extending to hind angles. Scutellum sparsely scattered with round punctures, which are densely intermixed with minute ones.

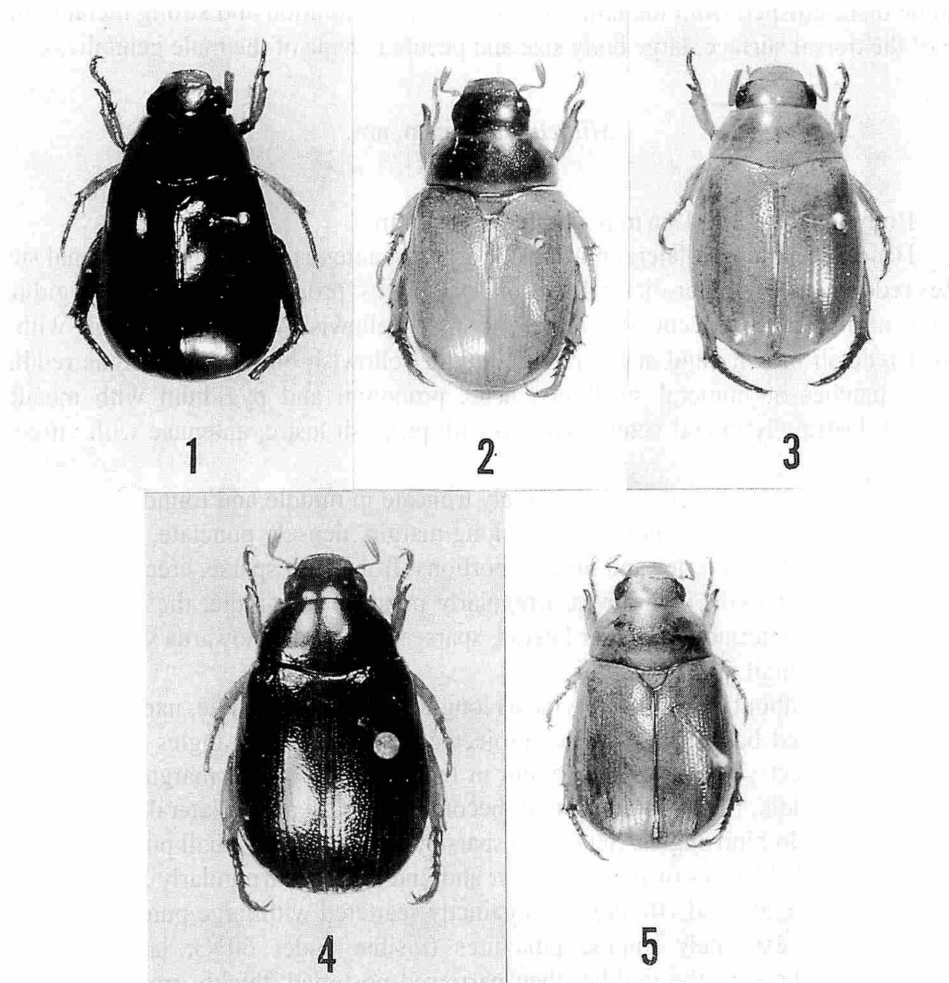
Elytra with 11 rows of small punctures; 1st intervals irregularly scattered with small punctures; lateral margins widened in basal 3/5, narrowed posteriad in apical 2/5, thickly rimmed in basal 3/5, the rims becoming thinner in apical 2/5 and disappearing at hind corners; distal margins almost straight; dorsum moderately convex and highest at the middle; marginal membrane narrow, starting from basal 2/5, and extending to apices.

Pygidium with sparse, suberect yellow setae in lateral portions; disc sparsely punctate, the punctures round and small; outer margins rimmed, nearly straight laterally, weakly rounded at apex.

Prosternal process broad and rectangular at the tip, closely furnished with yellow setae at the sides.

Metasternum with decumbent yellowish brown setae (0.37–0.95 mm in length) in lateral portions, sparsely punctate in middle, the punctures small, becoming larger laterad; mesosternal process very short, with slightly rounded apex in lateral view.

Abdominal sternites irregularly punctate in middle, the punctures large and elongate, becoming denser laterad; each sternite furnished with a transverse row of suberect yellowish brown setae (0.37–1.05 mm in length) in middle, and closely with yellowish brown setae (0.2–0.63 mm in length) in lateral portions.



Figs. 1–5. Habitus of *Mimela* spp. — 1, *M. zorni* sp. nov., holotype, ♂; 2, *Mimela nozomi* sp. nov., holotype, ♂; 3, *M. uenoi* sp. nov., holotype, ♂; 4, *M. mirai* sp. nov., holotype, ♂; 5, *M. argopuroensis* sp. nov., holotype, ♂.

Fore tibiae bidentate; apico-external denticle acute in male, wide and stout in female; inner claw of fore leg and outer claw of middle leg apically incised, forming two branches, the upper branch of fore leg slenderer than the lower one, and almost equal in length; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Near Kinabalu, alt. 1,000–1,400 m, Sabah, Borneo, 9–X–1988, leg. M. ИТОH. Allotype: ♀, same data as for the holotype. Paratypes: 3 ♂♂, same data as for the holotype; 1 ♀, Kinabalu, Sabah, Borneo.

Notes. This new species is closely related to *Mimela catolasia* OHAUS, 1943, but

can be distinguished from the latter by the different coloration and strong metallic lustre of the dorsal surface, large body size and peculiar shape of the male genitalia.

Mimela nozomi sp. nov.

(Figs. 2, 8)

Body length: 13.1–13.6 mm, width: 7.6–8.1 mm.

Head except antero-lateral portions of clypeus, antennae, legs and abdominal sternites reddish brown; antero-lateral portions of clypeus, pronotum, scutellum, pygidium and ventral surface except abdominal sternites yellowish brown; pronotum with a broad reddish brown band at the middle; elytra yellowish brown, with vague reddish brown patches at humeral swellings; head, pronotum and pygidium with metallic greenish lustre, elytra and ventral surface with purplish lustre, antennae with vitreous lustre.

Head microsculptured; clypeus widely truncate in middle and rounded at corners, 2.4–2.5 times as wide as long, reflexed along margin, densely punctate, the punctures partly coalescent in anterior and median portions; frons with sparse, erect yellow setae (0.2–0.5 mm in length) along eyes, irregularly punctate in middle, the punctures becoming denser anteriorly and larger laterally, sparser and smaller towards vertex, and intermixed with small punctures.

Pronotum about 2.0 times as wide as long, widest at the middle, narrowed apically, slightly narrowed basally; front angles projected and acute, hind angles rounded; disc with sparse, erect yellow setae (0.75 mm in length) along lateral margins, irregularly punctate in middle, the punctures small, becoming larger laterally; lateral margins with rims extending to hind angles. Scutellum sparsely scattered with small punctures.

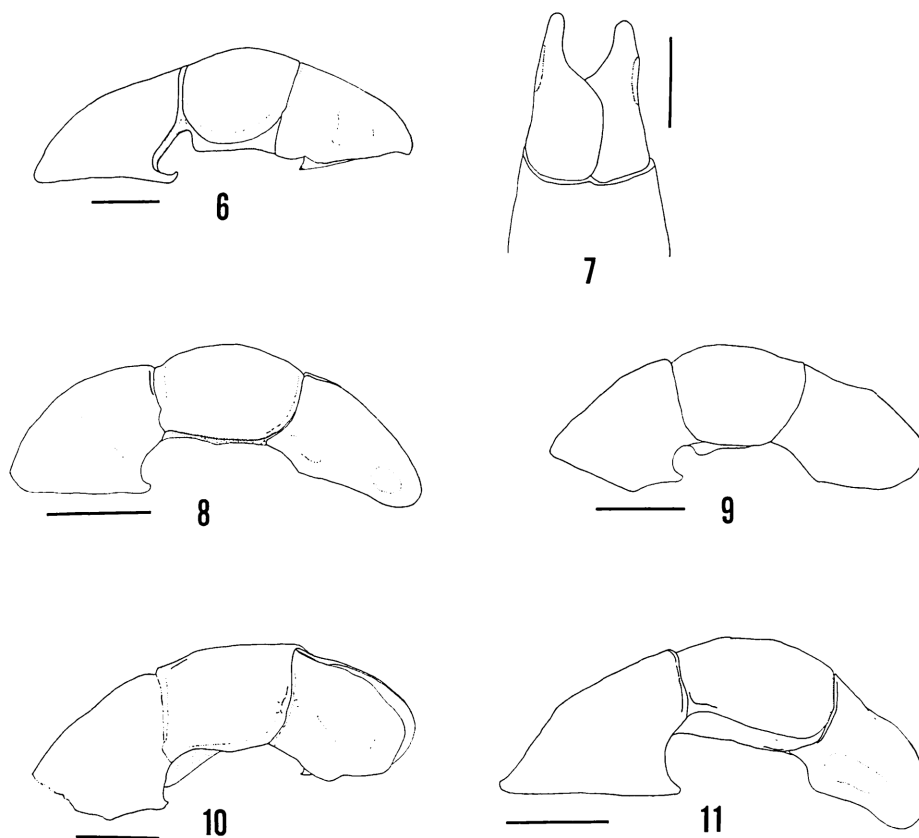
Elytra with 11 rows of punctures; 1st and 2nd intervals irregularly scattered with round punctures, 5th and 7th intervals distinctly scattered with large punctures and intermixed with extremely minute punctures (visible under 60×); lateral margins widened from base to the middle, then narrowed posteriorly, thickly rimmed in basal 2/3, the rims becoming thinner in apical 1/3, and disappearing at hind corners; distal margins slightly rounded; dorsum moderately convex and highest at basal 1/3; marginal membrane narrow, starting from basal 1/8, and extending to apices.

Pygidium with a vague depression near base on each side, furnished with sparse erect yellowish brown setae (0.55–0.88 mm in length) along margins; disc sparsely punctate, the punctures round and small, becoming denser and more transverse anteriorly; outer margins rimmed, nearly straight laterally, slightly rounded at apex.

Prosternal process broad and rectangular at the tip.

Metasternum with a groove in the median portion, scarcely punctate in middle, the punctures setigerous, becoming denser and larger laterally, each with a suberect yellow seta (0.43–0.51 mm in length) in lateral portions; mesosternal process very short, with slightly rounded apex in lateral view.

Abdominal sternites microsculptured, irregularly punctate, the punctures elongate



Figs. 6–12. Male genitalia (scale: 1 mm) of *Mimela* spp. — 6–7, *M. zorni* sp. nov., 6, lateral view, 7, dorsal view; 8, *M. nozomi* sp. nov., lateral view; 9, *M. uenoi* sp. nov., lateral view; 10, *M. mirai* sp. nov., lateral view; 11, *M. argopuroensis* sp. nov., lateral view.

in middle, becoming denser laterad, with sparse, suberect reddish brown setae (0.37–0.55 mm in length) in the middle.

Fore tibiae bidentate; apico-external denticle short and acute in male, long and slightly rounded in female; inner claw of fore leg and outer claw of middle leg apically incised, forming two branches, the upper branch of fore leg slenderer than the lower one in male, almost equal in female; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Mt. Bawang, West Kalimantan, Borneo, IV–1990, native collector. Allotype: ♀, same data as for the holotype. Paratypes: 6 ♂♂, same data as for the holotype, 5 ♀♀, same locality as for the holotype, III–1990, native collector, ♂, same locality as for the holotype, III–1993, native collector, 2 ♂♂, same locality as for the holotype, VI–1993, leg. N. NISHIKAWA.

Notes. This new species is closely related to *Mimela luteoviridis* OHAUS, 1930,

but can be distinguished from the latter by the different coloration of the pronotum and peculiar shape of the male genitalia.

Mimela uenoi sp. nov.

(Figs. 3, 9)

Body length: 12.7–13.5 mm, width: 7.9–8.3 mm.

Antennae, dorsal surface, legs and ventral surface except abdominal sternites yellowish brown, abdominal sternites reddish brown; dorsal surface with strong metallic lustre, legs and ventral surface with rather weak metallic lustre.

Clypeus widely rounded, 2.6–2.8 times as wide as long, reflexed along margin, densely punctate, the punctures large and partly coalescent in middle, becoming sparser laterad; frons irregularly punctate, the punctures becoming smaller towards vertex and densely intermixed with minute punctures; vertex sparsely punctate.

Pronotum 1.9–2.0 times as wide as long, widest at the middle, narrowed apicad, strongly narrowed basad; front angles projected and acute, hind angles rounded; disc with a few, erect yellow setae (0.55–0.75 mm in length) along lateral margins, irregularly punctate, the punctures round, becoming smaller posteriad and intermixed with minute punctures; lateral margins with rims extending to hind angles. Scutellum sparsely scattered with small punctures.

Elytra with 11 rows of punctures; 1st intervals irregularly scattered with round punctures, and each interval with minute punctures (visible under 60×); lateral margins widened at anterior 5/9, narrowed posteriad in posterior 4/9, thickly rimmed in basal 3/10, the rims becoming thinner in apical half and disappearing before hind corners; distal margins almost straight; dorsum moderately convex and highest at basal 1/3; marginal membrane narrow, starting from basal 1/4 and extending to elytral apices.

Pygidium with sparse erect yellowish brown setae at apical margin; disc sparsely punctate in middle, the punctures small, becoming denser laterad; outer margins rimmed, nearly straight laterally, slightly rounded at apex.

Prosternal process broad and rectangular at the tip.

Metasternum with a groove in the median portion, furnished with suberect yellow setae (0.57–0.63 mm in length) in lateral portions, hardly punctate in middle, the punctures dense, large and partly coalescent in lateral portions; mesosternal process very short, with feebly rounded apex in lateral view.

Abdominal sternites irregularly scattered with elongate punctures, each with a transverse row of sparse, suberect yellow setae (0.32–0.5 mm in length).

Fore tibiae bidentate; apico-external denticle short and acute in male, long and slightly rounded in female; inner claw of fore leg and outer claw of middle leg apically incised, forming two branches, the upper branch of fore leg slenderer and shorter than the lower one in male, rather slender and almost equal in female; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Ranau, Sabah, Borneo, II-1998, native collector. Allotype: ♀, Mt. Sepali, 1,700 m alt., 35 km SW Song, Sarawak, Borneo, IV-1999, native collector. Paratypes: 3 ♂♂, Mt. Trus Madi, Sabah, Borneo, 28~29-IV-1998, A. SEKI leg., 1 ♂, 1 ♀, Mt. Goram, 900 m alt., 15 km SW Kapito, Sarawak, Borneo, IV-1997, N. NISHIKAWA leg.

Notes. This new species is closely related to *Mimela insularis* OHAUS, 1908 and *M. luteoviridis* OHAUS, 1930, but can be distinguished from the former by the smaller size of body and from the latter by the different coloration of the pronotum and peculiar shape of the male genitalia.

Mimela mirai sp. nov.

(Figs. 4, 10)

Body length: 14.8–15.5 mm, width: 8.9–9.3 mm.

Dorsal surface except apico-lateral portions of pronotum brilliant metallic green, antennae, apico-lateral portions of pronotum, ventral surface except abdominal sternites, femora and tibia yellowish brown, abdominal sternites and tarsi yellowish brown to reddish brown; dorsal surface with strong metallic lustre, ventral surface and legs with rather weak metallic lustre.

Head with sparse, erect white setae (0.5–1.13 mm in length) along eyes; clypeus widely truncate, 2.2–2.3 times as wide as long, reflexed along margin, rugoso-punctate in middle, sparsely punctate in lateral portions, the punctures elliptical and intermixed with minute punctures; frons irregularly punctate in middle and in lateral portions, the punctures round and intermixed with minute punctures, becoming larger and denser anteriorly, coalescent in anterior portion; vertex scattered with rather small punctures.

Pronotum 1.8–2.0 times as wide as long, widest at the middle, weakly narrowed apicad, rather strongly narrowed basad; front angles projected and slightly rounded at apex, hind angles rounded; disc with a pair of round impressions at the middle of lateral portions, furnished with a few erect reddish yellow setae (0.5–1.12 mm in length) along lateral margins, irregularly punctate, the punctures round (ca. 0.05 mm in width) and intermixed with minute punctures; lateral margins with rims extending to hind angles. Scutellum irregularly scattered with round punctures, which are intermixed with minute punctures.

Elytra with 9 rows of round punctures; 2nd, 4th, 6th and 8th intervals irregularly scattered with round punctures, each interval with small punctures; lateral margins weakly widened in anterior 4/5, then narrowed posteriad, thickly rimmed in basal 1/4, the rims becoming thinner apicad in apical 3/4, and disappearing before hind corners; distal margins almost straight; marginal membrane narrow, starting from the base and extending to apices.

Pygidium with erect yellow setae (0.62–0.88 mm in length) in apical and lateral portions; disc sparsely punctate in middle, the punctures round, becoming denser and larger laterad, elliptical in lateral portions; outer margins rimmed, nearly straight later-

ally, widely rounded at apex.

Prosternal process broad and acute at the tip.

Metasternum with a groove in the median portion, scarcely punctate in middle and densely punctate in lateral portions, the punctures large and setigerous, each with a suberect yellow seta (0.2–0.6 mm in length); mesosternal process very short, with broadly rounded apex in lateral view.

Abdominal sternites irregularly scattered with elongate punctures, each with a transverse row of decumbent yellowish brown setae (0.42–0.58 mm in length).

Fore tibiae bidentate, apico-internal spur acute (ca. 0.37–0.5 mm in length); inner claw of fore leg and outer claw of middle leg apically incised, forming two branches; outer claw of fore leg, inner claws of middle leg and hind leg simple and acuminate.

Holotype: ♂, Mt. Bawang, West Kalimantan, Borneo, V–1990, native collector. Paratypes: 3 ♂♂, same data as for the holotype.

Notes. This new species is very closely related to *Mimela piceoviridana* Y. MIYAKE, 1994, but can be distinguished from the latter by the different coloration and peculiar shape of the male genitalia.

Mimela argopuroensis sp. nov.

(Figs. 5, 11)

Body length: 13.1–14.8 mm, width: 8.7–9.2 mm.

Dorsal surface yellowish brown, ventral surface and legs yellowish brown to dark reddish brown; head, pronotum and pygidium with strong metallic lustre, elytra, legs and ventral surface with rather weak metallic lustre.

Clypeus widely rounded, 2.3–2.6 times as wide as long, reflexed along margin, densely punctate, the punctures large and partly coalescent in middle, becoming sparser laterad; frons irregularly punctate, the punctures partly coalescent in middle, becoming sparser laterad and smaller towards vertex; vertex sparsely punctate.

Pronotum 1.8–2.0 times as wide as long, widest at the middle, narrowed apicad, narrowed basad, with a pair of small depressions in apical half of lateral portions; front angles projected and acute, hind angles rounded; disc with a few, erect yellow setae along lateral margins, irregularly scattered with round punctures, which become smaller posteriad and intermixed with minute punctures; lateral margins with rims extending to hind angles. Scutellum irregularly scattered with round punctures.

Elytra with 11 rows of punctures; 1st intervals irregularly punctate, the punctures round and large; lateral margins slightly widened in anterior 3/4 and widest at posterior 1/4, then narrowed posteriad, thickly rimmed in basal 2/5, the rims becoming thinner in apical halves and disappearing before hind corners; distal margins slightly rounded; dorsum moderately convex and highest at basal 1/4; marginal membrane narrow, starting from basal 1/4, and extending to apices.

Pygidium with sparse erect yellowish brown setae on apical margin; disc irregularly punctate, the punctures elongate; outer margins rimmed, nearly straight laterally,

slightly rounded at apex.

Prosternal process broad and rectangular at the tip.

Metasternum hardly punctate in middle, densely punctate in lateral portions, the punctures large and annulate, furnished with suberect yellow setae (0.25–0.88 mm in length) in lateral portions; mesosternal process not protruded, abrupt at apex.

Abdominal sternites irregularly punctate, the punctures elongate, each with a transverse row of suberect reddish yellow setae (0.25–0.63 mm in length).

Fore tibiae bidentate; apico-external denticle short and acute; inner claw of fore leg and outer claw of middle leg apically incised, forming two branches, the upper branch of fore leg slenderer and shorter than the lower one in male, the upper one slightly longer than the lower in female; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Mt. Argopuro, East Java, II–1998, native collector. Allotype: ♀, same data as for the holotype. Paratypes: 10♂♂, 14♀♀, same data as for the holotype., 43♂♂, 57♀♀, same locality as for the holotype, IX–1998, native collector.

Notes. This new species is closely related to *Mimela luteoviridis* OHAUS, 1930, but can be distinguished from the latter by the different coloration of the pronotum and peculiar shape of the male genitalia.

Mimela pallidicauda ARROW, 1910

Mimela pallidicauda ARROW, 1910, Ann. Mag. nat. Hist., (8), 6: 64.

Mimela sawaii MIYAKE, 1994, Spec. Bull. Essa ent. Soc., (2): 149 (*syn. nov.*).

Material examined. 1♂, near Kinabalu, 1,000–1,400 m alt., Sabah, Borneo, 15–16–X–1988, leg. M. ITOH; 1♂, Mt. Trus Madi, Sabah, Borneo, IV–1998, native collector.

Mimela margarita ARROW, 1910

Mimela margarita ARROW, 1910, Ann. Mag. nat. Hist., (8), 6: 65.

Mimela marginipennis MIYAKE, 1994, Spec. Bull. Essa ent. Soc., (2): 151 (*syn. nov.*).

Material examined. 1♂, Mts. Trus Madi, near Keningau, Sabah, Borneo, 17–30–IV–1993, native collector; 1♂, near Keningau, Sabah, Borneo, IV–1994, native collector; 1♂, near P.H.Q., alt. 1,650 m, Mt. Kinabalu, Sabah, Borneo, 30–VII–2–VIII–1999, leg. H. MATSUDA.

要 約

和田 薫：ボルネオおよびジャワ産の *Mimela* 属コガネムシの5新種。—— 東南アジアの *Mimela* 属コガネムシの研究として、ボルネオ島からの4新種とジャワ島からの1新種を記載した。それらは、*M. zorni* sp. nov., *Mimela nozomi* sp. nov., *M. uenoi* sp. nov., *M. mirai* sp. nov. および *M. argopuroensis* sp. nov. である。また、*Mimela sawaii* MIYAKE, 1994 を *M. pallidicauda* ARROW, 1910

の, *Mimela marginipennis* MIYAKE, 1994 を *M. margarita* ARROW, 1910 のシノニムとした。

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Elytra, Tokyo, **29** (1): 118, June 15, 2001

Occurrence of *Procirrus lewisii* SHARP (Coleoptera, Staphylinidae) on Haha-jima Island of the Ogasawara Islands

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Twenty-two species of staphylinid beetles have been recorded from Haha-jima Island of the Ogasawara Islands in a previous paper of mine (WATANABE, 1978). Through the courtesy of Mr. Keiichi MATSUMOTO, Tokyo, I had an opportunity to examine a short series of staphylinid specimens obtained by himself on Haha-jima Island. One of them agrees with *Procirrus lewisii* SHARP which is new to the fauna of this island. It is recorded below with the collecting data.

2♂♂, Mt. Kensaki-yama, Haha-jima Is., Ogasawara Isls., 10~18-V-2000, Kei. MATSUMOTO leg.

I thank Mr. Keiichi MATSUMOTO for his kindness in giving me the specimens.

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