Elytra, Tokyo, **13** (2): 69–74. November 20, 1985

Two New Species of the Mordellid Beetles from the Ryukyus

Masatoshi TAKAKUWA

Kanagawa Prefectural Museum,
Minaminaka-dôri 5–60, Naka-ku, Yokohama City 231, Japan

Abstract Two new mordellid species, *Tomoxia ryukyuana* sp. nov. and *Mordella kanpira* sp. nov., are described from the Ryukyu Archipelago of Japan.

Tomoxia ryukyuana sp. nov.

(Figs. 1–2)

Tomoxia formosana: NOMURA, 1963, Icon. ins. japon. Col. nat. ed., **2**: 248, pl. 124, fig. 15; 1966, Ent. Rev. Japan, **18**: 47. (Nec CHÛJÔ.)
Tomoxia sp.: TAKAKUWA, 1976, Elytra, Tokyo, **3**: 16, fig. 4.

Male. Body blackish; mouth-parts brownish yellow except for mandibles, each of which has an arcuate reddish brown band before apex; maxillary palpi with segments 1–2 brown, last castaneous; antennae with segments 1–4 castaneous, the remainder blackish castaneous; abdomen dusky brown to castaneous; fore and middle legs dark brown except for yellowish brown fore femora; spurs of hind tibiae slightly reddish brown; claws yellowish brown.

Head densely clothed with golden to whitish golden pubescence. Pronotum densely clothed with golden pubescence, with ten vague darkened maculations of blackish pubescence with cupreo-purpureous tinge as follows: a median longitudinal vitta, three pairs of lateral to latero-median small spots, three apical small spots which are transversely arranged. Scutellum clothed with golden hairs. Elytra densely clothed with blackish pubescence with cupreo-purpureous tinge, each bearing maculations of golden pubescence as follows: a short basal marginal fascia, a large humeral quadrate spot (with deep golden pubescence near humeral angle) which joins the former fascia, a sutural fascia just behind scutellum to apical fifth which is gradually attenuate posteriorly, a median transverse fascia which reaches lateral margin but not the former fascia, and an uncinate maculation just before apex which is connected with the sutural fascia at its apex. Pygidium densely clothed with whitish golden pubescence on less than basal half, with blackish pubescence with cupreo-purpureous tinge on the remainder. Mesosternum clothed with very short whitish golden pubescence. Metasternum densely clothed with golden pubescence on lateral sides, with a pair of small darkened spots of blackish hairs with cupreo-purpureous tinge near lateral margins. Abdomen clothed with whitish golden pubescence, with a pair of darkened spots of blackish hairs with cupreo-purpureous tinge near lateral margins of lst segment. Fore and middle legs with very minute golden hairs. Hind legs with femora clothed with

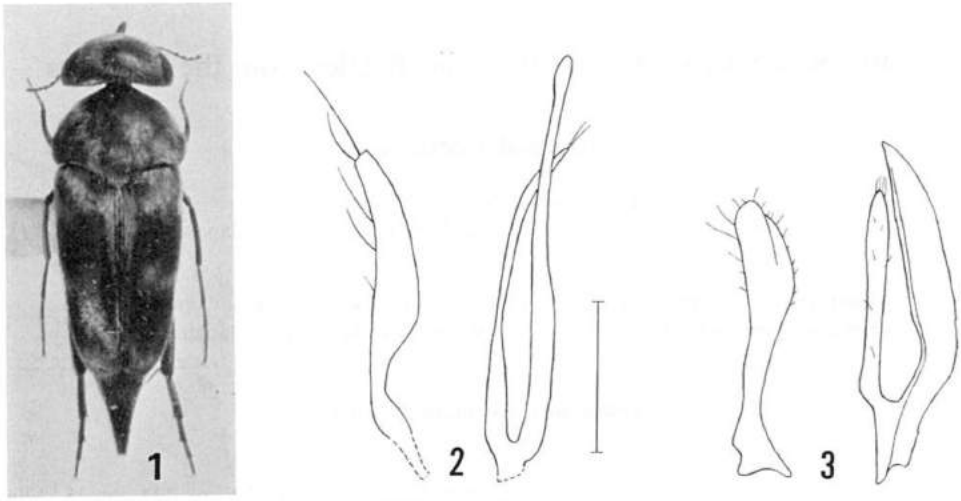


Fig. 1. *Tomoxia ryukyuana* sp. nov. (♂ holotype).
Figs. 2–3. Male genitalia. —— 2. *Tomoxia ryukyuana* sp. nov. 3. *T. formosana* CHÛJÔ. (Scale: 0.25 mm.)

somewhat fine golden pubescence; tibiae densely with reddish golden pubescence; tarsi densely with very minute reddish golden pubescence.

Head very densely and minutely punctate, rather weakly convex; eyes oval, somewhat densely with hairs; tempora very narrow. Last segment of maxillary palpus triangular with inner angle rectangular; apical margin the longest, slightly longer than the outer one, about 1.8 times as long as the inner one. Antenna short, about 0.7 times as long as the width of head; relative lengths of segments in the holotype as follows: 1.4: 1: 1.7: 1.4: 1.5: 1.8: 1.4: 1.2: 1.1: 1.0: 1.4; segments 1–2 cylindrical, 3–4 claviform, 5–10 serrate, each longer than wide, 10th about 1.4 times as long as wide; terminal segment somewhat oval with outer margin distinctly emarginate at the apical third, about twice as long as wide. Pronotum transverse, about 1.42 times as wide as long, widest behind middle; disc densely and shallowly punctate; lateral margins strongly arcuate in dorsal view, slightly curved downwards in lateral view; hind angles dully angulate. Scutellum subquadrate, wider than long. Elytra densely punctate, narrower than pronotum, about 1.7 times as long as wide; sides gradually and nearly straightly convergent posteriorly, arcuately so before apices, which are rather widely rounded. Pygidium short, about 1.66 times as long as wide, about twice as long as anal sternite; sides abruptly and straightly convergent posteriorly, rather gradually so at apical portion; apex transversely and narrowly truncate in dorsal view, obliquely and narrowly so in lateral view. Anal sternite a little wider than long, abruptly attenuate apically; apex widely and straightly truncate. Front tibiae moderately arcuate in dorsal view, slightly curved downwards in lateral view. Middle leg comparatively short; tibia about 1.7 times as long as the lst segment of middle tarsus; relative lengths of segments of tarsus as follows: 4.2: 2.4: 1.6: 1: 1.5. Hind tibia almost equal in

length to the lst and 2nd segments of hind tarsus combined; inner spur about 1.9 times as long as the outer one. Genitalia slender; left piece of paramere subfalcate; right piece of paramere simple in shape and very slender.

Female. Antenna shorter, about 0.63 times as long as the width of head; 10th segment about as long as wide; last segment about 1.3–1.4 times as long as wide. Anal sternite shorter, a half wider than long. Front tibia nearly straight or very feebly arcuate in dorsal view. Middle tarsus somewhat shorter; relative lengths of segments as follows: 4.5: 2.5: 1.6: 1: 1.6.

Body length: 5.3–6.2 mm (incl. head and excl. pygidium).

Type series. Holotype, ♂, Mt. Omoto, Ishigaki Is., Yaeyama group of the Ryukyus, 25. IV. 1974, H. IRIE leg. Paratypes: same locality as the holotype: 1 ♀, 15. VI. 1973, J. KOMIYA leg.; 1 ♂, 26. IV. 1974, H. IRIE leg.; 1 ♀, 16. V. 1975, M. FUKAMACHI leg.; 1 ♀, 1. VI. 1976, N. MORISHIMA leg. Holotype is deposited in the National Science Museum (Nat. Hist.), Tokyo.

Variation. Pronotal blackish maculations with a lateral pair often connected with a sublateral pair, and the latter often connected with a latero-median pair. Elytra more or less reddish all over in one specimen.

Range. Ishigaki Is., Okinawa Is. and Amami-Oshima Is.

This new species is very closely allied to *T. formosana* CHÛJÔ from Taiwan, but is distinctly different from that species in the male genitalic features. It differs from *T. formosana* also in the following points: 1) elytra shorter, 1.70–1.72 times in male, 1.62–1.71 times in female as long as wide (1.80–1.81 times in male, 1.70–1.77 times in female in *formosana*), and more densely clothed with finer pubescence, 2) pygidium with apex more narrowly truncate in dorsal and lateral views, 3) lst segment of middle tarsus more or less shorter, 1.05–1.07 times in male, 1.09–1.10 times in female as long as the following two combined (1.12–1.23 times in male, 1.11–1.38 times in female in *formosana*), 4) abdominal segments dusky brown to castaneous (blackish all over in male, blackish at each base in female in *formosana*), and so on.

Mordella kanpira sp. nov.

(Figs. 4–9)

Mordella sp.: TAKAKUWA, 1976, Elytra, Tokyo, **3**: 17, fig. 10.

Male. Body steely black; maxillary palpi and antennal segments 1–4 castaneous; mandible with transverse reddish brown fascia at apical third; fore femora dusky yellowish brown beneath; spurs of hind tibiae dark fuscous; claws reddish brown.

Head clothed with short pale yellow to golden yellow pubescence. Pronotum, elytra and pygidium densely clothed with golden yellow to cupreous golden yellow pubescence. Scutellum densely clothed with whitish yellow pubescence. Meso- and metasterna clothed with whitish yellow pubescence except for yellowish cupreous one on the sides of metasternum. Abdomen clothed with whitish yellow pubescence except for cupreous yellow one at the sides of segments 1–4 and in apical half of segment

5. Legs clothed with minute whitish yellow to cupreous yellow pubescence.

Head very minutely punctate, moderately convex; eye oval with anterior margin faintly emarginate, very sparsely with minute hairs; tempora narrow. Last segment of maxillary palpus securiform; outer margin the longest, about 1.6 times as long as the anterior, about 1.3 times as long as the inner. Antenna with segments 1–2 cylindrical, 3–4 claviform, 5–10 fully serrate, each slightly longer than wide; terminal segment elongate, somewhat quadrate with angles more or less rounded, about twice as long as wide; relative lengths of segments in the holotype as follows: 1.25: 1: 1: 1: 1.45: 1.5: 1.4: 1.25: 1.2: 1.2: 1.8. Pronotum transverse, about 1.4 times as wide as long, widest at basal third, minutely punctate; lateral margins arched in dorsal view, slightly curved downwards in lateral view; hind angles rounded; basal margin comparatively weakly bisinuate. Scutellum triangular with apex rounded, wider than long. Elytra densely and shallowly punctate, narrower than pronotum, about 2.0 times as long as wide; sides nearly parallel behind humeral angles to basal fourth, then straightly convergent posteriorly; apex separately rounded. Pygidium distinctly slender, about 4.2 times as long as wide, 0.58 times as long as elytra, about 2.3 times as long as anal sternite, slightly curved downwards, without median cicatrix; sides abruptly convergent to basal third, very gradually so apicad for the remainder; apex extremely narrowly truncate in dorsal view, somewhat obliquely so in lateral view, the truncation being longer in the latter view than in the former. Anal sternite about 1.35 times as long as wide; apex rather narrowly rounded. Legs slender; 4th segment of fore tarsus longer than wide, the apex distinctly emarginate; inner spur of hind tibia about 1.8 times as long as the outer one; hind tarsus about twice as long as hind tibia, slightly longer than pygidium.

Genitalia. Left piece of paramere stout, somewhat claviform in ventral view; apical margin deeply and asymmetrically cleft. Right piece of paramere about half longer than the left one, slightly swollen at basal 3/10; branch rather short, with the apical truncation almost vertical.

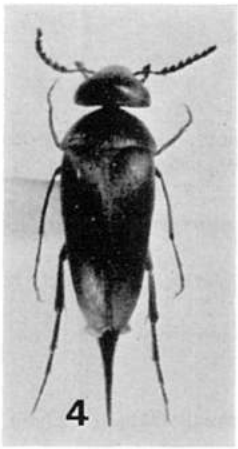
Female. Maxillary palpus with lst segment narrower, 2nd shorter; last segment blackish, with inner margin the shortest, about half shorter than the outer one. Antenna shorter; each of 7–10th segments more or less wider than long; last segment somewhat oval, 1.3–1.4 times as long as wide. Elytra as wide as pronotum, about 1.9 times as long as wide; sides slightly arcuate in basal third, then straightly convergent posteriorly. Pygidium shorter, about 3.6 times as long as wide, about 0.55 times as long as elytra, about 2.6 times as long as anal sternite. Anal sternite shorter, about as long as wide.

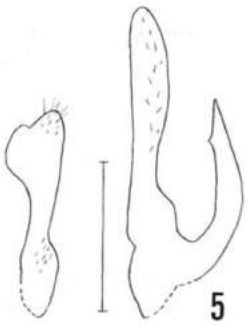
Body length: 4.0–5.2 mm (incl. head and excl. pygidium).

Type series. Holotype, ♂, near Kanpira Fall, Iriomote Is., Yaeyama group of the Ryukyus, 8. IV. 1973, H. IRIE leg. Paratypes: 1 ♂ 2 ♀♀, same data as the holotype. Holotype is deposited in the National Science Museum (Nat. Hist.), Tokyo.

Range. Iriomote Is. and Okinawa Is.

This new species closely resembles *M. ochrotricha* NOMURA from Taiwan, but is





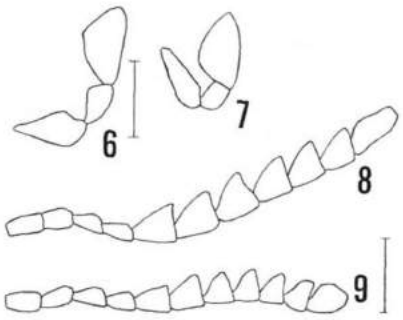


Fig. 4. *Mordella kanpira* sp. nov. (♂ holotype).

Figs. 5–9. Male genitalia, maxillary palpi and antennae of *Mordella kanpira* sp. nov. —— 5. Male genitalia. 6. Maxillary palpus of male. 7. Maxillary palpus of female. 8. Antenna of male. 9. Antenna of female. (Scale: 0.25 mm.)

distinguished from that species by the following respects: 1) pronotum and elytra more densely clothed with longer pubescence, 2) abdomen generally clothed with whitish yellow pubescence (clothed with cupreous yellow pubescence except for each basal whitish yellow one in *ochrotricha*), 3) pygidium slenderer, about 0.58 times in male, 0.55 times in female as long as elytra (about 0.52 times in male, 0.42–0.50 times in female in *ochrotricha*), 4) male antenna wider, for example, 10th segment nearly as long as wide (10th segment about 1.4 times as long as wide in *ochrotricha*), and so on.

Acknowledgement

The author wishes to express his deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kindness in critically reading the original manuscript of this paper. Deep thanks are also due to Mr. Takeichiro HATAYAMA for his kind help in the studies of mordellids, to Dr. N. MORISHIMA, Messrs. J. KOMIYA, H. IRIE, H. MAKIHARA, M. FUKAMACHI, M. KUBATA and T. MATSUMOTO for their kindness in supplying with valuable materials, and to Mr. H. MATSUKA for taking photographs inserted in this paper.

摘　　要

次の琉球産ハナノミの2新種を記載した.

1. *Tomoxia ryukyuana* TAKAKUWA リュウキュウモンハナノミ
2. *Mordella kanpira* TAKAKUWA ヒメキンケクロハナノミ

前種は台湾の *T. formosana* に斑紋が酷似するが♂交尾器が顕著に異なり，後種は台湾の *M. ochro-*

tricha に似るが微毛の状態やより細長い尾節板等から区別は難しくない.

References

CHŪJŌ, M., 1935. Descriptions of three new mordellid-species from Formosa. *Sylvia*, **6**: 72–75.

KÔNO, H., 1936. Family Mordellidae. In OKADA, Y., *et al.* (eds), *Fauna Nipponica*, **10** (8–1): i+1–4+1–79. Sanseido, Tokyo. (In Japanese.)

NOMURA, S., 1958. Zur Kenntnis der Gattung *Mordella* aus Japan und dessen Umgebung (Coleoptera, Mordellidae). *Tôhô-Gakuhô*, (7): 1–24, 3 pls.

——— 1963. Family Mordellidae. In NAKANE, T., *et al.* (eds), *Icon. ins. japon. Col. nat. ed.*, **2**: 247–255, 3 pls. (In Japanese.)

——— 1966. Mordellid-fauna of the Loocho Islands, with descriptions of some new forms. *Ent. Rev. Japan*, **18**: 41–53, 1 pl.

——— 1967. The Mordellidae from Formosa. *Ibid.*, **19**: 5–34.

TAKAKUWA, M., 1976. List of the tribe Mordellini from the Yaeyama Islands (Japan). *Elytra, Tokyo*, **3**: 15–17, 1 pl. (In Japanese.)