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MORDELLIDAE (COLEOPTERA: HETEROMERA) FROM PAPUA NEW GUINEA, WITH DESCRIPTIONS OF NEW SPECIES

by

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New records from Papua New Guinea are given for the following species: *Ophthalmoglipa australis* Franciscolo, *Tolidopalpus castaneicolor* Ermisch, *Mordellapygium elongatum* Ray; the following new species are described: *Paratomoxia agathae*, *Mordellistenoda ismayi*, *M. trapezoides*, *Glipostenoda neocastanea*, *Xanthomorda elegantissima*, *X. plazae*, *X. cooteri*, *X. paarlbergi*, *X. papuanica*, *X. aequalis*, *Mordellistena (Mordellistena) multicolorata*, *Mordellina (Pseudomordellistena) bipunctivertex*, *M. (P.) antennalis*, *M. (P.) lucida*, *M. (P.) moresbyensis*, *M. (P.) paramoresbyensis*. Keys are given to the New Guinea species in the genus *Xanthomorda* Ermisch and in the *Mordellistena* subgenus *Pseudomordellistena* Ermisch.

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INTRODUCTION

Dr J. Cooter of Hereford, England, kindly sent me several Mordellidae collected by Dr J. W. Ismay of Port Moresby, Papua New Guinea, the majority from the Central Province. They are recorded below; the novelties are described and illustrated, and two keys are given. Extremely little is known about the mordellid fauna of New Guinea, or, for that matter, other Indo-Australian islands. For a broader context the reader is referred to Ermisch (1949-1950), Franciscolo (1967), and other papers mentioned under the References.

The following abbreviations are used throughout the text: PNG—Papua New Guinea; CP—Central Province. l/w—length/width ratio. w/l—width/length ratio. py/hy—pygidium/hypopygium length ratio.

Formula of tibial and tarsal ridges: 3-4.3.2.2. means: hind tibia (apart from apical ridge) with 3-4, first segment of hind tarsus with 3, second and third segments with 2 ridges each.

Holotypes and allotypes are deposited in the British Museum (Natural History), paratypes in the collections of the author (donated to the Rijksmuseum van Natuurlijke Historie, Leiden) and of Dr Ismay.

DESCRIPTIONS AND RECORDS

***Ophthalmoglipa australis* Franciscolo, 1952**

Material examined. — 1 ♂, PNG-CP, Eilago, 2-vii-1981, rainforest.

Genus and species well described by Franciscolo (1952: 353-357).

***Tolidopalpus castaneicolor* Ermisch, 1951-1952**

(figs. 1-5)

Material examined. — 1 ♂, 2 ♀♀, PNG-CP, Eilago, 8-9-viii-1981, swept, rainforest.

Described by Ermisch (1.c.: 149-151), but without figures. My illustrations may facilitate identification.

***Mordellapygium elongatum* Ray, 1930**

(figs. 6-10)

Material examined. — 1 ♂, PNG-CP, 9-viii-1981, swept, rainforest.

Described from the Philippines (1.c.: 143-144).

***Paratomoxia* (s.str.) *agathae* spec. nov.**

(figs. 11-15)

Material examined. — Holotype, ♂, PNG-CP, 23 km SE Port Moresby, 15-viii-1983, swept, bushes.

Description. — Dimensions of holotype ♂: length of body 2.7, length of

elytra 2.2 mm, width together 1.4 mm, length of pygidium 0.6 mm, hypopygium 0.4 mm.

General shape: parallel, robust, broad. Integument black, middle of pronotum reddish.

Pubescence: on head and pronotum silvery; on pronotum 2 black patches and a large one on the basal medial lobe; on the trapezoid scutellum white, semicircular; on the elytra densely black with a red hue and white patches, an extended humeral and 2 along the suture; pygidium white; underside sparingly with silvery hairs.

Head: transverse w/l 1.7, extremely finely punctured, hind margin straight; eye large, minutely granulated and hairy, reaching the occiput. Antenna: segments 1-4 yellow-brown, the following darkening partly, segments 1 and 2 long and broad 3 and 4 longitudinal, 5 and following serrate (fig. 11).

Maxillary palp: anterior segment slender, securiform (fig. 12), fuscous, anteriorly yellow.

Pronotum: w/l 1.55; slightly broader than elytra at shoulders, basal angle obtuse, widely rounded anteriorly.

Elytra: l/w 1.57, sides \pm parallel, apices separately rounded, punctures slightly asperate, pubescence densely covering integument. Scutellum trapezoid, posterior border straight.

Pygidium: py/hy 1.5; triangle broad at base, evenly attenuated, more or less an equilateral triangle.

Legs: fore leg yellow-red, middle and hind leg fuscous black; spurs red. Fore tibia slightly convex. Hind tibia with a preapical and a dorsal ridge; the first tarsal segment with a dorsal ridge. Middle tibia longer than middle tarsus. The fore and middle penultimate tarsal segment more or less emarginated. Length ratio of tarsal segments: anterior 6.4.2.2.5, middle 11.7.3.3.5, posterior 15.9.7.11.

Parameres, apex of penis and phallobase, figs. 13-15.

Discussion. — This species has a scutellum with a straight posterior edge, like *Paratomoxia straelini* Ermisch. The two other species in the group, *pulchella* Ermisch and *auroscutellata* Ermisch, have a small pointed appendage in the middle of the posterior edge. Chûjô (1957:1-2) created a new subgenus for these species, *Metatomoxia* (type-species *P. pulchella*). The anterior segment of the maxillary palp of the new species is slender, broadly securiform in *P. straelini*.

Etymology. — Named in honour of my deceased wife, who gave me the opportunity to study Mordellidae.

***Mordellistenoda ismayi* spec. nov.**
(figs. 16-21)

Material examined. — Holotype, ♂, PNG-CP, Eilago, 19-vi-1983, in forest; allotype ♀, same data; 1 ♂. 2 ♀♀ paratypes, same locality, 9-viii-1981, rainforest.

Description. — Dimensions of ♂ holotype and ♀ allotype, respectively, length of body, 3.5, 3.9 mm, of elytra 2.4, 2.6 mm, width together 1.0, 1.1 mm, hypopygium 0.3, 0.3 mm.

General shape: moderately elongate, sides anteriorly more or less parallel, posteriorly slightly convex.

Integument, buccal parts, antenna, head (except in middle partly darkening to black), pronotum, a broad stretch on the elytra along the suture from the anterior part till about 0.5 mm before the apices, legs, underside (except the first 3 sternites) yellow to yellow-red, elytra (except the stretch along the suture) and the first 3 sternites black.

Pubescence: on head yellow, on pronotum black, on elytra yellow.

Head: w/l 1.3, strongly arched, finely, densely punctate, hind margin convex. Maxillary palp ♂ and ♀, figs. 16-17.

Eyes: facets coarse, hairy, temporal margin narrow.

Antenna: the segments 1 and 2 broad, rounded, segment 3 slightly longer, almost as long as 5, segments 5-10 nearly parallel-shaped, l/w 2, segment 11 l/w 2.6.

Pronotum: w/l 1.6, broadest just in front of base; anterior lobe protruding, basal lobe prominent; lateral border in dorsal view convex, in lateral view concave; basal angles rectangular with a pointed edge; punctures shallowly impressed. Scutellum triangular, sides straight.

Elytra: l/w ♂ 2.4, ♀ 2.36; sides moderately elongate, slightly convex; apices separately rounded, punctures slightly asperate with a clearly bluish hue, pubescence covering integument. Underside with scarce bright pubescence.

Pygidium: py/hy ♂ 4, ♀ 3.7; in ♂ 0.5 and ♀ 0.4 as long as elytra; in dorsal view very slender, abruptly attenuated to finely needle-like.

Legs: fore tibia in lateral view slightly convex; hind tibia with a short oblique preapical ridge and 2 very oblique ones, the first ending in the middle, the second almost at the knee, fig. 18; ridges 3.3.2.0.; all ridges black. Outer and inner spur about equal, yellow. Length ratio of tarsal segments: anterior 21.11.7.7.6, middle 42.17.10.7.9, posterior 45.25.17.19.

Parameres, apex of penis and phallobase, figs. 19-21.

Discussion. — This new species has the features of the genus *Mordellistenoda* Ermisch, though the maxillary palps, considered by him of primary importance, are different (see *M. fukiensis* Ermisch, 1941: 722-723). With the de-

scription of *M. australiensis* Ermisch (1963: 298) he broadened his concept, enabling me to place the present new species also in *Mordellistenoda*. Clearly the shape of the maxillary palpi is unique, and this applies to the next species as well.

***Mordellistenoda trapezoides* spec. nov.**
(figs. 22-27)

Material examined — Holotype, ♂, PNG-CP, 8-viii-1981, swept, rain forest.

Description. — Holotype ♂, length of body 4 mm, of elytra 2.9 mm, width together 1.2 mm, length of pygidium 1 mm, hypopygium 0.5.

General shape: moderately elongate, from shoulders slightly attenuated posteriorly.

Integument: dark reddish brown, head and pronotum reddish brown, buccal parts, antenna, fore and middle legs yellow-red, hind legs dark brown.

Pubescence: yellow white.

Head: w/l 1.3, finely, densely punctate, hind margin convex; anterior segment of maxillary palp trapezoid (fig. 22).

Eyes: large, coarsely granulated, hairy, temporal margin absent.

Antenna: length ratio segments 1-5: 11.8.9.8.17, segments 5-11 l/w 3 (fig. 23).

Pronotum: w/l 1.7, broadest in front of base, anterior lobe protruding, basal lobe prominent; lateral border in dorsal view slightly concave, basal angles oblique with a rounded edge; punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2.4; sides moderately elongate, punctures slightly asperate, pubescence covering integument; pubescence on abdomen scarce, on sternites dense.

Pygidium: slender, conical, py/hy 2.

Legs: fore tibia in lateral view slightly convex; penultimate tarsal segments of fore and middle leg emarginated, middle tibia and tarsus equal in length, hind tibia with a short oblique preapical ridge, 2 very oblique lateral ones. Ridges 3.4.2.2; ridges black. Spurs yellow, length ratio 2. Length of tarsal segments: anterior 15.8.5.5.5, middle 38.13.6.6.9, posterior 54.25.20.20.

Parameres, apex of penis and phallobase, figs. 25-27.

Discussion. — See under previous species. The shape of the maxillary palp is unique.

***Glipostenoda neocastanea* spec. nov.**

(figs. 28-33)

Material examined. — Holotype, ♂, and allotype, ♀: PNG-CP, Port Moresby, 26-ii-1983, swept, rainforest; paratypes same locality, ♂ 19-iv-1983, ♂ 10-iv-1983, 3 ♂ 20-iii-1983, 12-iv-1983. 2 ♀ 3-iv-1983, 26-ii-1983.

Description. — Dimensions of ♂ and ♀, respectively, length of body 3.5, 3.5 mm, of elytra 2.2, 2.4 mm, width together 1.1, 1.2 mm, length of pygidium 1.1, 1.0 mm, of hypopygium 0.4, 0.5 mm.

General shape: sides convex, attenuated posteriorly.

Integument: brown, buccal parts and antenna yellow.

Pubescence: yellow.

Head: w/l 1.35, finely, densely punctate, hind margin oval, maxillary palp, fig. 28, ♀ second segment not broadened, anterior segment rounded on the inner side, fig. 29; the antennal base is inserted in the eye, temporal margin with an angle.

Antenna: ♂ length ratio of segments 1-5: 11.8.7.16.18, 5-10 l/w ♂ 3, ♀ 2.3, fig. 30.

Pronotum: w/l 1.35, broadest in front of base 0.9 mm, anterior part 0.2, anterior and basal lobe slightly protruding, lateral border in dorsal view convex, at anterior circular, lateral border in lateral view almost straight, basal angles obtuse with a rounded edge, punctures shallowly impressed. Scutellum broadly triangular, posteriorly rounded.

Elytra: l/w 2; sides slightly convex, attenuated from shoulders to apex, apices rounded separately, punctures slightly asperate, pubescence densely covering integument.

Pygidium: slender, conical, py/hy ♂ 2.7, ♀ 2.

Legs: fore tibia in lateral view convex, ♂ broadened with some outstanding hairs. Penultimate tarsal segment of fore and middle leg emarginate. Middle tibia longer than tarsus. Hind tibia with a preapical ridge almost parallel to the apex and 3 oblique ridges, ridges reaching the middle of the tibial side, sometimes a short dorsal one. Ridges: 4.3-4.2.2, all ridges black. Spurs yellow, length ratio 1.5. Length ratio of tarsal segments: anterior 14.8.5.5.12, middle 38.18.10.6.10, posterior 42.22.22.21.

Parameres, apex of penis and phallobase, figs. 31-33.

Discussion. — Externally this *Glipostenoda* is similar to *G. castanea* (Boheman), judged from the key and the illustrations given by Ray (1930). Nomura (1975: 34-35, fig. 5) has figured the parameres and the second segment of the maxillary palp of this species, and these appear to be different (compare with my figures). Consequently, I named the species *G. neocastanea*.

Xanthomorda Ermisch, 1969

The principal characters of this genus include: Terminal segment of ♂ maxillary palpi hammer-like. Eyes and their facets large, hairy; antenna long. Hind tibia with an oblique apical ridge, and two extremely oblique, long lateral ridges, and a fine dorsal one.

Only two middle African species known, described by Ermisch (1969): *X. garambaensis* and *guineensis*.

Key to the species of *Xanthomorda* in Papua New Guinea

1. Fore tibia in ♂ more or less dilated and with a fringe of hairs on the inner border 2
- Fore tibia in male not dilated nor with a fringe of hairs 4
2. Integument brown, fringe of small hairs (antennal segm. 5-10 l/w ca 3) ...
..... *paarlbergi*
- Integument yellow-red, fringe of hairs pronounced 3
3. Length ratio of spurs 1.4 (antennal segm. 5-10 l/w ♂ 2.5) .. *elegantissima*
- Length ratio of spurs 2 (antennal segm. 5-10 l/w ♂ 3, ♀ 2.5) *plazae*
4. Length ratio of spurs 2.4 (antennal segm. 5-10 l/w ♂ 2.8, ♀ 2.5) .. *cooteri*
- Length ratio of spurs 1.0 5
5. Anterior segment of maxillary palp circular (antennal segm. 5-10 l/w ♂ ca 3, py/hy ♂ 3.5, partly broken, ♀ 4) *papuanica*
- Anterior segment of maxillary palp long hammer-like (antennal segm. 5-10 l/w ♂ 2.3, py/hy ♂ 7.3) *aequalis*

***Xanthomorda elegantissima* spec. nov.**

(figs. 34-39)

Material examined. — Holotype, ♂, PNG-CP, near Eilago, 24-vii-1981, swept, rainforest.

Description. — Dimensions of ♂ holotype, length of body 3 mm, of elytra 2.3 mm, width together 0.8 mm, length of pygidium 1.1 mm, hypopygium 0.5 mm.

General shape: slender, attenuated from shoulders.

Integument: yellow-red, elytra darkening posteriorly.

Pubescence: golden.

Head: w/l 1.6, finely, densely punctate, hind margin convex; maxillary palp fig. 34.

Eyes: large, coarsely granulated, hairy, temporal margin absent; antennal base inserted in eye.

Antenna: length ratio segments 1-5: fig. 35, 11.9.5.8.15, segments 5-10 l/w ca 2.5.

Pronotum: w/l 1.6, broadest in front of base, anterior lobe protruding, basal lobe prominent; lateral border in dorsal view convex, in lateral view straight, basal angles oblique with a rounded edge; punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2.9; sides slightly convex, attenuate from shoulders to apex, apices separately rounded, punctures slightly asperate, pubescence covering integument, on underside sparse.

Pygidium: slender conical, py/hy 2.2.

Legs: fore tibia in lateral view slightly convex, a fringe of hairs on inner border; penultimate tarsal segment of fore and middle legs emarginate, middle tibia and tarsus equal in length. Ridges 4.3.2.2, all ridges black, fig. 36. Spurs yellow, length ratio 2. Length of tarsal segments: anterior 15.5.5.5.8, middle 35.14.10.9.10, posterior 46.20.15.20.

Parameres, apex of penis and phallobase, figs. 37-39.

Xanthomorda plazae spec. nov.

(figs. 40-46)

Material examined. — Holotype, ♂, PNG-CP, Eilago, rainforest, 2-vii-1981; ♀, allotype, PNG-CP, 5 km NW Brown River Bridge, 13-iii-1983, forest. Paratypes 5 ♂ all PNG-CP: Eilago, 19-vi-1983, forest, 5 km NW Brown River Bridge, 13-iii-1983, forest; Blaney's Garden nr Rouna, 27-ii-1983, swept, forest; 20 km SE Port Moresby, 20-iii-1983, swept, bushes; Eilago, 19-vi-1983, forest.

Description. — Dimensions of holotype ♂ and allotype ♀, respectively, length of body 3.4, 3.1 mm, of elytra 2.4, 2.2 mm, width together 0.9, 0.9 mm, length of pygidium 1.1, 0.9 mm, hypopygium 0.5, 0.45 mm.

General shape: parallel attenuated posteriorly.

Integument yellow-red, elytra darkening posteriorly, or totally brown-black or yellow-red.

Pubescence: golden.

Head: w/l 1.6, finely, densely punctate, hind margin convex, maxillary palp ♂, fig. 40.

Eyes: large coarsely granulated, hairy, temporal margin absent, antennal base inserted in eye.

Antenna: length ratio segments 1-5: fig. 42, 12.8.6.7.20, segments 5-10 l/w ca ♂ 3, ♀ 2.5.

Pronotum: w/l 1.6, broadest in front of base, anterior lobe protruding, basal lobe prominent, lateral border in dorsal view convex, in lateral view straight, basal angles oblique with a rounded edge; punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2.7; sides ca straight, attenuated at apex, apices separately rounded, punctures slightly asperate, pubescence densely covering integument, on underside sparse.

Pygidium: slender, conical, py/hy ♂ 2.2, ♀ 2.0.

Legs: fore tibia in lateral view slightly convex and broadened, a fringe of hairs on inner border; penultimate tarsal segment of fore and middle legs emarginate, middle tibia and tarsus equal in length; hind tibia with a very oblique preapical ridge, 2 very oblique ones and a thin almost dorsal one, fig. 43. Ridges 4.3.2.2, all ridges black. Spurs yellow, length ratio 1.4. Length ratio of ♂ tarsal segments: anterior 16.6.5.5.10, middle 40. 26.5.5.10, posterior 50.25.25.21.

Parameres, apex of penis and phallobase, figs. 44-46.

Xanthomorda cooteri spec. nov.
(figs. 47-52)

Material examined. — Holotype, ♂, PNG-CP, 20 km SE Port Moresby, 15-iii-1983, swept, bushes; allotype, ♀, PNG-CP, Eilago, 19-vi-1983, forest. Paratypes: 1 ♂, PNG-CP, 20 km SE Port Moresby, 20-iii-1983, swept, bushes; 1 ♂ and 2 ♀ same locality, 15-iii-1983, swept, bushes.

Description. — Dimensions of ♂ holotype and ♀ allotype, respectively, length of body 2.9, 3.4 mm, of elytra 1.9, 2.6 mm, width together 0.8, 1.0 mm, length of pygidium 0.8, 1.0 mm, hypopygium 0.4, 0.5 mm.

General shape: convexly attenuated posteriorly.

Integument yellow-red, elytra darkening posteriorly.

Pubescence: golden.

Head: w/l 1.3, finely, densely punctate, hind margin convex; maxillary palp of ♂, fig. 47 of ♀ anterior segment broadened scalene with rounded sides.

Eyes: large, coarsely granulated, hairy, antennal base inserted in eye; temporal margin absent.

Antenna: ♂ length ratio segments 1-5: 9.7.5.7.12, fig. 48; segments 5-10 l/w ca ♂ 2.8, ♀ 2.5.

Pronotum: w/l 1.7, broadest in front of base, anterior lobe protruding, basal lobe prominent, lateral border in dorsal view convex, in lateral view straight, basal angles oblique with a rounded edge; punctures shallowly impressed. Scutellum triangular.

Elytra: ♂ l/w 2.4; sides slightly convex, attenuated from shoulders to apex, apices separately rounded, punctures slightly asperate, pubescence densely covering integument, on underside at a lower degree.

Pygidium: slender, conical, py/hy 2.

Legs: fore tibia in lateral view slightly convex and broadened, no fringe of hairs; penultimate tarsal segment of fore and middle legs emarginate, middle tibia and tarsus equal in length; hind tibia with a very oblique preapical ridge, 2 very oblique ones and a thin almost dorsal one, fig. 49. Ridges: 4.3.2.2. Spurs yellow, length ratio 2.4. Length ratio of tarsal segments: anterior 11.5.4.5.7, middle 25.10.5.5.7, posterior 35.15.15.15.

Parameres, apex of penis and phallobase, figs. 50-52.

Xanthomorda paarlbergi spec. nov.

(figs. 53-56)

Material examined. — Holotype, ♂, PNG-CP, 20 km SE Port Moresby, 12-iv-1983, swept, rainforest; allotype, ♀, PNG-CP, 5 km NW Brown River Bridge, 13-iii-1983, forest. Paratypes: 1 ♂, PNG-CP, near Eilago, 24-vii-1981, swept, rainforest; 3 ♀ ♀, PNG-CP, 20 km SE Port Moresby, 26-iii-1983, swept, bushes; Eilago, 9-ix-1981, swept, rainforest; Eilago, 19-vi-1983, forest.

Description. — Dimensions of ♂ holotype and ♀ allotype, respectively, length of body 4.1, 4.2 mm, of elytra 2.8, 3.0 mm, width together 1.2, 1.3 mm, length of pygidium 1.4, 1.2 mm, hypopygium 0.5, 0.5 mm.

General shape: slightly convex attenuated posteriorly.

Integument: brown, elytra darkening posteriorly.

Pubescence: yellow.

Head: w/l 1.4, finely, densely punctate, hind margin convex, integument dark brown, ♂ maxillary palp fig. 53, in ♀ scalene.

Eyes: large, coarsely granulated, hairy; the antennal base is inserted in anterior part, temporal margin absent.

Antenna: length ratio segments 1-5: 10.9.8.10.20, segments 5-10 l/w 3. In some specimens the 4th antennal segment is equal to, or twice as long as the 3rd, these specimens are in other respects normal also in the parameres.

Pronotum: w/l 1.2, broadest in front of base which measures 1.2 mm, the anterior part 0.2 mm, slightly attenuating to anterior part; anterior and basal lobe slightly protruding, lateral border in dorsal view convex, in lateral view straight, basal angles obtuse with an almost pointed edge; punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2.3. sides slightly convex attenuated from shoulders to apex, apices rounded separately; punctures slightly asperate, pubescence very densely covering integument, also on underside.

Pygidium: slender, conical, py/hy ♂ 2.8, ♀ 2.4.

Legs: fore tibia in lateral view slightly convex and broadened with a fringe of small hairs, penultimate tarsal segment of fore and middle legs emarginate, middle tibia and tarsus equal in length; hind tibia with a very oblique preapical ridge, 2 very oblique ones and a thin almost dorsal one, all ridges black. Ridges: 4.3.2.2. Spurs yellow, length ratio 2.5. Length ratio of tarsal segments: anterior 15.9.5.6.7, middle 42.17.9.5.7, posterior 55.25.25.26.

Parameres, apex of penis and phallobase, figs. 54-56.

***Xanthomorda papuanica* spec. nov.**

(figs. 57-62)

Material examined.—Holotype ♂, and allotype ♀, both PNG-CP, 20 km SE Port Moresby, 19-vii-1981.

Description.—Dimensions of ♂ holotype and ♀ allotype, respectively, length of body 3.5, 3.2 mm, of elytra 2.5, 2.3 mm, width together 1.2, 1.2 mm, length of pygidium 1.4, 1.2 mm, hypopygium 0.4, 0.3 mm.

General shape: broad, sides convex, attenuated posteriorly.

Integument: ♂ reddish brown, ♀ dark brown.

Pubescence: yellow.

Head: w/l 1.6, finely, densely punctate, hind margin straight, maxillary palp in male, fig. 57, smaller in female.

Eyes: large, coarsely granulated, hairy; the antennal base inserted in anterior part, temporal margin absent.

Antenna: length ratio segments 1-5: 15.10.7.11.20, fig. 58, segments 5-10 l/w ca 3.

Pronotum: w/l 1.6, broad in front of base 1.1 mm, anterior part 0.8 mm, anterior and basal lobe slightly protruding, lateral border in dorsal view convex, in lateral view straight, basal angles obtuse with a rounded edge, punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2; sides slightly convex, attenuated from shoulders to apex, apices separately rounded, punctures slightly asperate, pubescence densely covering integument, on underside less dense.

Pygidium: slender, conical, py/hy ♂ 3.5 (damaged), ♀ 4.

Legs: Fore tibia in lateral view slightly convex, penultimate tarsal segment of fore and middle legs emarginate, middle tibia and tarsus equal in length, hind tibia with an oblique preapical ridge, 2 very oblique ones and a thin almost dorsal one, all ridges black, fig. 59. Ridges: 4.3.2.2. Spurs yellow-red of

about equal length. Ratio of tarsal segments: anterior 12.9.5.5.7, middle 32.15.8.8.10, posterior 40.25.20.23.

Parameres, apex of penis and phallobase, figs. 60-62.

***Xanthomorda aequalis* spec. nov.**

(figs. 63-68)

Material examined. — Holotype, ♂, PNG-CP, 5 km NW Brown River Bridge, 13-iii-1983, forest.

Description. — Dimensions of ♂ holotype, length of body 3 mm, of elytra 1.9 mm, width together 0.8, length of pygidium 1.1 mm, hypopygium 0.15 mm.

General shape: very slender, attenuated from shoulders to apex of elytra.

Integument: reddish brown, buccal parts, antennae and legs light brown, elytra posteriorly dark brown.

Pubescence: yellow, on pronotum brownish.

Head: w/l 1.5, finely, densely punctate, hind margin in middle straight, at the edges more or less bent; maxillary palp of ♂ in ventral view, fig. 63.

Eyes: large, coarsely granulated, hairy, temporal margin smooth.

Antenna: length ratio of segments 1-5: 9.6.7.13.15, fig. 64, 5-10 l/w 2.3.

Pronotum: w/l 1.5, broadest in middle, about rectangular, sides convex, basal lobe protruding, lateral border in lateral view concave, basal angles obtuse with a rounded edge, punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2.4; sides slightly convex, attenuating from shoulder to apex, apices rounded separately, punctures asperate, shagreen bluish, pubescence covering integument.

Pygidium: very short conical, abruptly tapering to needle-like, py/hy 7.3.

Legs: fore tibia almost parallel. Penultimate tarsal segment of fore and middle leg emarginate. Middle tibia and tarsus about equal in length. Hind tibia with a preapical oblique ridge, 2 oblique ridges and a short dorsal one, fig. 65; all ridges black. Ridges 4.3.2.0. Spurs yellow, equal in length, ratio length spurs/length first tarsal segment 0.8. Length ratio of tarsal segments: anterior 20.12.6.6.11, middle 31.19.10.7.11, posterior 50.40.20.20.

Parameres, penis and phallobase, figs. 66-68. Parameres could not be separated, being very fragile; both have a large membranous lobe.

***Mordellistena* (s.str.) *multicolorata* spec. nov.**

(figs. 69-77)

Material examined.—Holotype ♂ and allotype ♀, PNG-CP, 20 km SE Port Moresby, 20-iii-1983, swept, bushes. Paratypes: Eilago, 3 ♀ ♀, 8-viii-1981, 2 ♂ ♂, 1 ♀, 20-iii-1983, 1 ♀ 20-iii-1983; Port Moresby, 1 ♀ 3-iii-1983, 1 ♂, 3 ♀ ♀ 20-iii-1983, 2 ♂ ♂ 15-ii-1983, 1 ♂, 1 ♀ 12-iv-1983, 1 ♀ 15-vii-1983, 1 ♀ 21-iii-1981.

Description.—Dimensions of ♂ holotype and ♀ allotype, respectively: length of body 2.2, 2.1 mm, of elytra 1.5, 1.5 mm, width together 0.6, 0.6 mm, length of pygidium 0.8, 0.7 mm, hypopygium 0.2, 0.25 mm.

General shape: parallel, attenuated posteriorly.

Integument: black and/or reddish brown in different patterns, as there are head and pronotum reddish brown or partly black, elytra with reddish brown patches or wholly black.

Pubescence: yellow, pattern in fig. 69.

Head: in both sexes w/l 1.1, ± circular, finely, densely punctate, hind margin rounded, maxillary palp ♂ fig. 70, ♀ fig. 71.

Eyes: large, finely granulated, hairy, temporal margin and margin of eye touching.

Antenna: 3rd and 4th segments small, length ratio in ♂ segments 1-6: 5.6.5.5.7.7, fig. 72, in ♀ segments 1-5: 4.5.3, 5.4.5, fig. 73.

Pronotum: w/l 1.6, in dorsal view broadest in middle, attenuating to apex, sides convex, basal lobe protruding, lateral border in lateral view concave, basal angles square with a rounded edge; punctures shallowly impressed. Scutellum triangular.

Elytra: w/l ♂ 1.5, ♀ 1.4, parallel, attenuated at apex, apices rounded separately, punctures asperate, bluish shagreen, pubescence covering more or less integument (fig. 69).

Pygidium: reddish brown, in some specimens black or partly black, conical, tapering to needle-like, py/hy ♂ 4, ♀ 2.8.

Legs: penultimate tarsal segment of fore and middle leg transversely truncate at apex. Middle tibia and tarsus about equal in length. Hind tibia with a preapical oblique ridge and 2 oblique ridges, the second reaching the knee, fig. 74: all ridges black. Ridges 3.2.2.0. Legs wholly or partly black or reddish brown. Length ratio of ♂ tarsal segments: anterior 12.6.6.4.10, middle 18.9.9.4.10, posterior 28.18.15.16. Spurs yellow, length ratio 4.

Parameres, apex of penis and phallobase, figs. 75-77.

Discussion.—This species belongs in the nominate subgenus, and has the features of group 1 of Franciscolo (1967: 79). It is the only *Mordellistena* reported from New Guinea. The colour pattern of the pronotum and the elytra, as well as the parameral structure, render *M. multicolorata* easily identifiable.

Mordellina Schilsky, 1908
Subgenus **Pseudomordellistena** Ermisch, 1952

Mordellina differs from *Mordellistena* principally in the eyes being larger, with large hairy facets. *Pseudomordellistena* has two spurs, *Mordellina* s. str. only one.

Key to the species of *Pseudomordellistena* in Papua New Guinea

1. Ridges on 3rd hind tarsal segment (antennal segments 5-10 l/w 2, serrate) *antennalis*
- No ridges on 3rd hind tarsal segment 2
2. Anterior segment of maxillary palp scalene, inner angle in middle, fig. 89. (ridges 3.3.2.0, py/hy ♂ 3.25, ♀ 8.24) *moresbyensis*
- Anterior segment of maxillary palp scalene, inner angle anteriorly, figs. 84, 95. 3
3. Head with 2 fuscous patches, sometimes doubled (pronotum with basal angles straight with a pointed edge) *bipunctivertex*
- No patches on head 4
4. Integument black, on elytra a bright bluish shagreen. (py/hy 4.5). *lucida*
- Integument reddish brown, pronotum yellowish, elytra darkened posteriorly (ridges 3.2.2.0, py/hy 2.7). *paramoresbyensis*

Mordellina (Pseudomordellistena) bipunctivertex spec. nov.
(figs. 78-80)

Material examined.—Holotype ♂ and allotype ♀, PNG-CP, 20 km SE Port Moresby, 20-iii-1983, swept, bushes. Paratypes: 1 ♀, Eilago, 8-viii-1981; 1 ♂, 20 km SE Port Moresby, 20-vi-1983, swept, bushes.

Description.—Dimensions of ♂ holotype and ♀ allotype, respectively: length of body 3.4, 4 mm, of elytra 2.2, 2.5 mm, width together 1.1, 1.2 mm, length of pygidium 0.8, 1.1 mm, hypopygium 0.4, 0.4 mm.

General shape: sides attenuated from shoulders to apices of elytra.

Integument: redish brown, buccal parts, antennae, legs light brown, elytra posteriorly dark brown.

Head: about circular, finely, densely punctate, hind margin broadly oval, vertex with 2 (some doubled) fuscous patches, ♂ maxillary palp, fig. 78.

Eyes: large, coarsely granulated, hairy, temporal margin angular.

Antenna: length ratio of segments 1-5: 9.8.6.10.10, fig. 79, 5-10 parallel l/w 1.6.

Pronotum: w/l 1.15, broadest in front of base 1.2 mm, anterior part 0.2 mm, anterior and basal lobe slightly protruding, lateral border in dorsal view convex, at anterior part about circular, lateral border in lateral view concave, basal angles straight with a pointed edge; punctures shallowly impressed. Scutellum triangular.

Elytra: l/w ♂ 2, ♀ 2.1, sides slightly convex, attenuated from shoulders to apex, apices rounded separately, punctures very slightly asperate, pubescence densely covering integument.

Pygidium: slender conical, soon narrowing to needle like shape, py/hy ♂ 2 (partly damaged), ♀ 3.

Legs: fore tibia in dorsal view convex, slightly broadened with outstanding hairs. Penultimate tarsal segment of fore and middle leg feebly triangularly excised at apex. Middle tibia and tars equal in length. Hind tibia with a preapical oblique ridge and 2 oblique ridges, the first reaching the middle, the second almost the knee. Ridges: 3.2-3.2.0, all ridges black. Spurs yellow with length ratio 2.5. Length ratio of tarsal segments: anterior 15.7.6.6.10, middle 32.13.11.5.8, posterior 42.25.18.22.

Parameres, fig. 80.

***Mordellina (Pseudomordellistena) antennalis* spec. nov.**
(figs. 84-88)

Material examined. — Holotype, ♀, PNG-CP, Eilago, 19-vi-1983, forest.

Description. — Dimensions ♀ holotype, length of body 3.1 mm, of elytra 2.1 mm, width together 0.85 mm, length of pygidium 0.9 mm, hypopygium 0.35 mm.

General shape: sides ca parallel, attenuated posteriorly.

Integument: dark brown, buccal parts, legs, pygidium and the first 3 segments of antenna orange-red.

Pubescence: yellow.

Head: w/l 1.2, finely, densely punctate, hind margin oval, maxillary palp, fig. 81.

Eyes: large, coarsely granulated, hairy; the antennal base is inserted in anterior part, temporal margin angular.

Antenna: length ratio of segments 1-5: 12.8.7.18.16, fig. 82, 5-10 l/w 2, serrate, broadening at apex. The segments 4-11 brownish black with apex light brown.

Pronotum: w/l 1.2, broadest in front of base 0.85 mm, anterior part 0.2 mm, anterior and basal lobe more or less protruding, lateral border in dorsal view convex, anterior part strongly attenuated, lateral border in lateral view almost straight, basal angles slightly obtuse with a rounded edge; punctures shallowly impressed. Scutellum triangular, hairs whitish.

Elytra: l/w 2.5, sides parallel, from 3rd part attenuated to apex, apices rounded separately, punctures slightly asperate, pubescence densely covering integument, white along suture.

Pygidium: conical, py/hy 2.6, pubescence golden.

Legs: fore tibia in lateral view convex, parallel, penultimate tarsal segment of fore and middle leg emarginate at apex, middle tibia hardly longer than tarsus; hind tibia with a preapical oblique ridge, 2 oblique ridges reaching to the middle of the tibial side, and a small almost dorsal ridge, fig. 83, all ridges black. Ridges 4.3.2.2. Spurs yellow, length ratio 2.5. Ratio of tarsal segments: anterior 12.8.5.3.10, middle 28.11.6.4.10, posterior 35.18.18. 20.

***Mordellina (Pseudomordellistena) lucida* spec. nov.**

(figs. 85-88)

Material examined. — Holotype, ♂, PNG: Madang P. (Yabob), 25-vii-1981.

Description. — Dimensions ♂ holotype, length of body 3.4 mm of elytra 2.4 mm, width together 1.05 mm, length of pygidium 0.9 mm, hypopygium 0.2 mm.

General shape attenuated towards apex.

Integument black: buccal part, fore leg, the first 4 antennal segments reddish brown, middle legs darker brown.

Pubescence light against the dark integument, suture white.

Head and pronotum absent. Maxillary palp broadly securiform, fig. 84.

Antenna: length ratio of segments 3-6: 8.13.14.15, fig. 85, 5/10 l/w 2 ca parallel, segments 5-11 brownish black.

Scutellum: triangular.

Elytra: l/w 2.3, sides slowly attenuating from shoulder to apex, apices separately rounded, punctures asperate, bright bluish shagreen, pubescence of fine long hairs leaving integument visible.

Pygidium: conical, py/hy 4.5, posteriorly and anteriorly reddish brown, pubescence posteriorly black.

Legs: fore tibia in lateral and dorsal view convex, almost parallel with outstanding hairs; penultimate tarsal segment of fore and middle leg transversely truncate, middle tibia hardly longer than tarsus; hind tibia an oblique preapical

ridge, 2 oblique ridges, the first short, the second ending just past the middle of the side, fig. 86. Ridges: 3.3.2.0. Spurs yellow, length ratio 2.5. Length ratio of tarsal segments: anterior 17.7.7.6.10, middle 40.15.10.8.15, posterior 50.25.22.27.

Parameres, apex of penis, figs. 87, 88.

***Mordellina (Pseudomordellistena) moresbyensis* spec. nov.**
(figs. 89-94)

Material examined. — Holotype ♂, allotype ♀, and 5 ♂ paratypes: PNG-CP, 20 km SE Port Moresby, 12-iv-1983, swept, bushes.

Description. — Dimensions ♂ holotype and ♀ allotype, respectively, length of body 3.5, 3.6 mm, of elytra 2.3, 2.2 mm, width together 1.0, 1.0 mm, length pygidium 1.3, 1.2 mm, hypopygium 0.4, 0.5 mm.

General shape: attenuated posteriorly.

Integument: reddish brown, apex of elytra black.

Pubescence: yellow.

Head: w/l 1.4, finely, densely punctate, hind margin oval, maxillary palp, fig. 89, 2nd segment in ♂ broad, in ♀ slender.

Eyes: large, coarsely granulated, hairy, temporal margin along temporal margin of head.

Antenna: length ratio of segments 1-5: 10.9.5.10.10, fig. 90, 5-10 parallel l/w 2.

Pronotum: w/l 1.4, broadest in middle, attenuating anteriorly, in dorsal view sidex convex, basal lobe protruding, lateral border in lateral view concave, basal angles obtuse with a pointed edge; punctures shallowly impressed. Scutellum triangular.

Elytra: l/w ♂ 2.3 ♀ 2.2, sides slightly convex, attenuating from shoulder to apex, apices separately rounded, punctures asperate, pubescence densely covering integument.

Pygidium: conical, more or less abruptly tapering to needle-like, py/hy ♂ 3.25, ♀ 2.4.

Legs: ♂ fore tibia convex, broadening posteriorly, with small outstanding hairs. Penultimate tarsal segment of fore and middle leg transversely truncate at apex. Middle tibia and tarsus equal in length. Hind tibia with a preapical oblique ridge and 2 oblique ridges, fig. 91, all ridges black. Ridges 3.3.2.0. Spurs yellow, length ratio 2. Length ratio of tarsal segments ♂ and ♀, anterior 12.7.7.5.10, middle 40.19.12.8.15, posterior 45.24.24.26.

Parameres, apex of penis and phallobase, figs. 92-94.

***Mordellina (Pseudomordellistena) paramoresbyensis* spec. nov.**
(figs. 95-100)

Material examined. — Holotype, ♂, PNG-CP, 20 km SE Port Moresby, 12-iv-1983, swept, bushes.

Description. — Dimensions ♂ holotype, length of body 3 mm, elytra 2 mm, width together 0.85 mm, length of pygidium 0.8 mm, hypopygium 0.3 mm.

General shape: attenuated posteriorly.

Integument: reddish brown, pronotum yellowish, elytra anteriorly darkened.

Pubescence: yellow.

Head: w/l 1.3, finely, densely punctate, hind margin ovally, maxillary palp 2nd segment broadened, fig. 95.

Eyes: large, coarsely granulated, temporal margin along temporal margin of head.

Antenna: length ratio of segments 1-5: 9.9.5.11.11, fig. 96, 5-10, about parallel l/w ca 2.

Pronotum: w/l 1.3, broadest at base, attenuating anteriorly, in dorsal view sides convex, basal lobe protruding, lateral border in lateral view almost straight, basal angles right with a rounded small edge, punctures shallowly impressed. Scutellum triangular.

Elytra: l/w 2.35, sides slightly convex, attenuating posteriorly, apices rounded separately, punctures asperate, pubescence covering integument.

Pygidium: yellow, conical, py/hy 2.7.

Legs: front tibia convex, slightly broadening posteriorly. Penultimate tarsal segment of fore and middle leg transversely truncate at apex. Middle tibia and tarsus equal in length. Hind tibia with a preapical oblique ridge and 2 oblique ridges, fig. 97, all ridges black. Ridges 3.2.2.0. Spurs yellow, length ratio 3. Length ratio of tarsal segments: anterior 13.7.7.5.10, middle 30.15.11.6.10, posterior 38.20.18.21.

Parameres, apex of penis and phallobase, figs. 98-100.

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LEGEND OF FIGS. 1-100

Magnifications: fig. 69 (12×); figs. 11, 15, 18, 23, 24, 26, 35, 36, 41, 42, 43, 45, 46, 49, 51, 52, 59, 65, 74, 83, 86, 91, 97 (48×); all other figs. (120×).

Figs. 1-5. *Tolidopalpus castaneicolor* Ermisch. 1, maxillary palp; 2, antennal segments 1-6; 3, right paramere (left lost); 4, apex of penis; 5, apex of phallobase.

Figs. 6-10. *Mordellapygium elongatum* Ray. 6, maxillary palp; 7, antennal segments 1-7; 8, parameres innerside, right paramere on left hand, left paramere on right hand; 9, apex of penis; 10, apex of phallobase.

Figs. 11-15. *Paratomoxia agathae* spec. nov. 11, antenna; 12, maxillary palp; 13, parameres; 14, apex of penis; 15, apex of phallobase.

Figs. 16-21. *Mordellistenoda ismayi* spec. nov. 16, ♂ maxillary palp; 17, ♀ ditto; 18, hind tibia; 19, parameres; 20, apex of penis; 21, apex of phallobase.

Figs. 22-27. *Mordellistenoda trapezoides* spec. nov. 22, apex of maxillary palp; 23, antennal segments 1-5; 24, hind tibia; 25, parameres; 26, apex of penis; 27, apex of phallobase.

Figs. 28-33. *Glipostenoda neocastanea* spec. nov. 28, ♂ maxillary palp; 29, ♀ left ditto; 30, antennal segments 1-5; 31, parameres; 32, apex of penis; 33, apex of phallobase.

Figs. 34-39. *Xanthomorda elegantissima* spec. nov. 34, maxillary palp; 35, antennal segments 1-5; 36, hind tibia; 37, parameres; 38, apex of penis; 39, apex of phallobase.

Figs. 40-46. *Xanthomorda plazae* spec. nov. 40, maxillary palp; 41, right eye lateral; 42, antennal segments 1-5; 43, hind tibia; 44, parameres; 45, apex of penis; 46, apex of phallobase.

Figs. 47-52. *Xanthomorda cooteri* spec. nov. 47, maxillary palp; 48, antennal segments 1-5; 49, hind tibia; 50, parameres; 51, apex of penis; 52, apex of phallobase.

Figs. 53-56. *Xanthomorda paarlbergi* spec. nov. 53, maxillary palp; 54, parameres; 55, apex of penis; 56, apex of phallobase.

Fig. 57. *Xanthomorda papuanica* spec. nov. 57, maxillary palp.

Figs. 58-62. *Xanthomorda papuanica* continued; 58, antennal segments 1-5; 59, hind tibia; 60, parameres; 61, apex of penis; 62, apex of phallobase.

Figs. 63-68. *Xanthomorda aequalis* spec. nov. 63, maxillary palp ventral; 64, antennal segments 1-5; 65, hind tibia; 66, parameres combined; 67, penis; 68, phallobase.

Figs. 69-77. *Mordellistena multicolorata* spec. nov. 69, pronotum and elytrae; 70, ♂ maxillary palp; 71, ♀ ditto; 72, ♂ antennal segments 1-6; 73, ♀ ditto 1-5; 74, hind tibia; 75, parameres; 76, apex of penis; 77, apex of phallobase.

Figs. 78-80. *Mordellina (Pseudomordellistena) bipunctivertex* spec. nov. 78, maxillary palp; 79, antennal segments 1-5; 80, parameres.

Figs. 81-83. *Mordellina (P.) antennalis* spec. nov. 81, maxillary palp; 82, antennal segments 1-5; 83, hind tibia.

Figs. 84-88. *Mordellina (P.) lucida* spec. nov. 84, maxillary palp; 85, antennal segments 3-6; 86, hind tibia; 87, parameres; 88, apex of penis.

Figs. 89-94. *Mordellina (P.) moresbyensis* spec. nov. 89, maxillary palp; 90, antennal segments 1-5; 91, hind tibia; 92, parameres; 93, apex of penis; 94, apex of phallobase.

Figs. 95-100. *Mordellina (P.) paramoresbyensis* spec. nov. 95, maxillary palp; 96, antennal segments 1-5; 97, hind tibia; 98, parameres; 99, apex of penis; 100, apex of phallobase.









