

Two new species (Coleoptera: Mordellidae) of Guadalcanal Island (Solomon Islands)

Jan HORÁK^{1,2}

¹K Hádku 567, Dubeček, CZ 107 00 Praha 10-Dubeč, Czech Republic

²Czech University of Life Sciences Prague, Faculty of Forestry and Wood Sciences

Kamýčká 129, CZ-165 21 Prague 6, Czech Republic

e-mail: janho_cz@yahoo.com

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Abstract. The following two new species are described: *Pulchrimorda juliae* sp. nov. and *Mordellistena* (s. str.) *solomonica* sp. nov. from Guadalcanal Is. (Solomon Islands).

INTRODUCTION

Mordellidae of the Solomon Islands was firstly studied by Montrouzier (1855), who described two species placed in the genus *Mordella*. Further contributions to the mordellid fauna of the Solomon Islands represent the papers by Ray (1944, 1948), who described several species of the genera *Dellamora* Normand, 1916 and *Mordellistena* Costa, 1854 (tribe Mordellistenini). Contribution by Franciscolo (1991) was based on results of the Danish mission to the islands Rennel and Bellona; both species described so far as *Glipostenoda* Ermisch, 1950 belong in fact to the genus *Falsomordellina* Nomura, 1966.

The present paper includes descriptions of two species of the genus *Pulchrimorda* Ermisch, 1968 and of a genuine species of *Mordellistena* Costa, 1854, thus supplementing the concept of the generic diversity in the area concerned. Next to the present work, the author intends to continue studying Mordellidae of the Solomon Islands with summarizing all the data available and describing further new species.

MATERIAL AND METHODS

The specimens are deposited in the following collection: CHPC - private collection Jan Horák, Prague, Czech Republic.

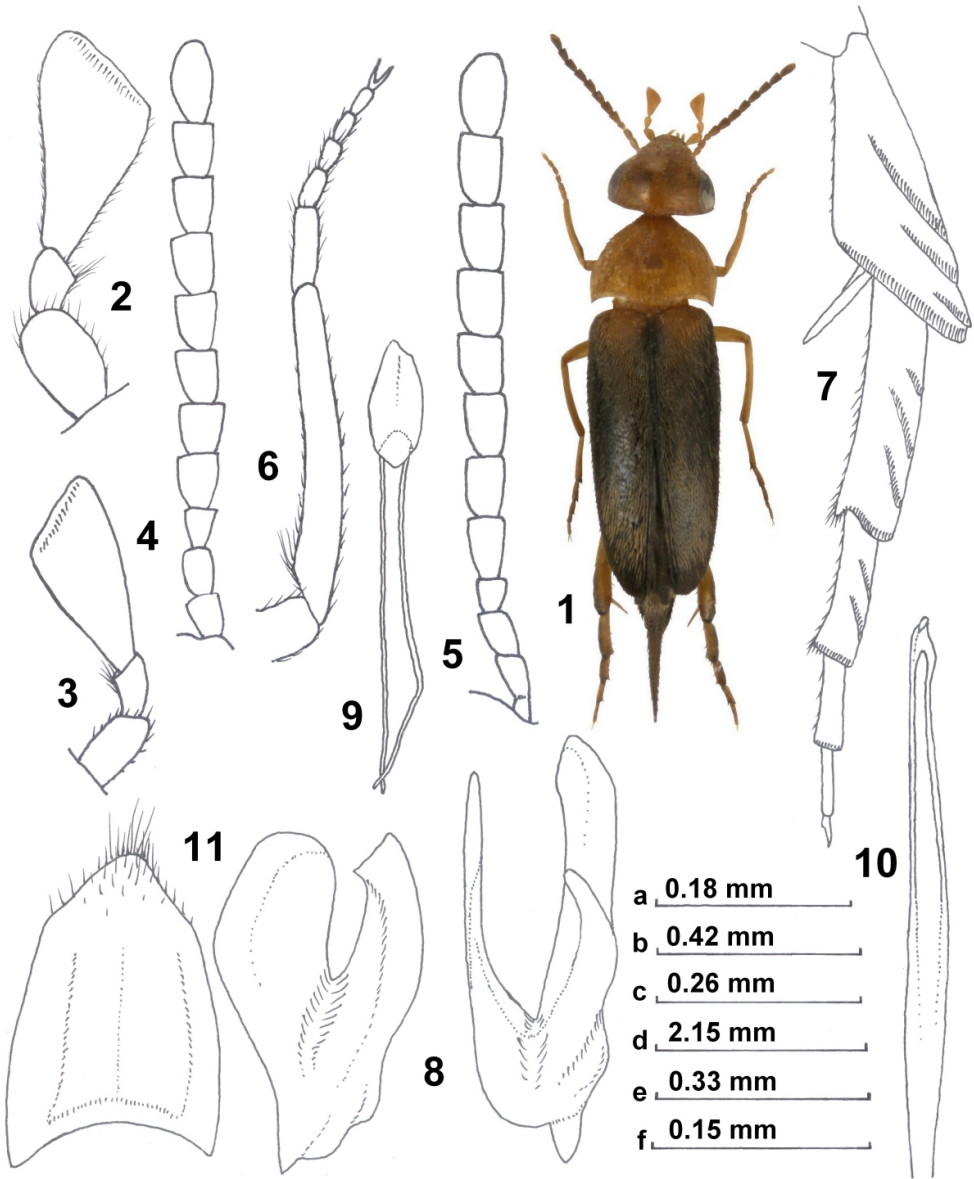
SYSTEMATIC

***Mordellistena* (s. str.) *solomonica* sp. nov.**

(Figs. 1-11)

Type locality. Solomon Isls., Guadalcanal Is.

Type material. Holotype ♂: Solomon Isls., Guadalcanal Is., Barana vill. env., 190 m, 09°29.8'S 159°59.5'E, 20.xi.-3.xii.2018, J. Horák leg., (CHPC); Allotype ♀, the same data, (CHPC). Paratypes: 3 ♂♂, 6 ♀♀; the same data, (CHPC); 1 ♀, Solomon Isls., Guadalcanal Is., Bokopoli, Barana vill. env., 190 m, 09°29.8'S 159°59.5'E, 13.-16.xii.2017, J. Horák leg., (CHPC); 1 ♀, Solomon Isls., Guadalcanal Is., Barana vill. env., 190 m, 09°29.8'S 159°59.5'E, 2.xii.2017, J. Horák leg., (CHPC); 1 ♀, Solomon Isls., Guadalcanal Is., cca. 3 km SSE of Barana vill., 190 m, 09°29.8'S 159°59.5'E, 23.xi.-15.xii.2013, J. Horák leg., (CHPC).



Figs. 1-11. *Mordellistena* (s. str.) *solomonica* sp. nov., holotype (♂): 1-general view; 2-maxillary palpus; 3-maxillary palpus (Allotype, ♀); 4- antenna; 5- antenna (Allotype, ♀); 6- anterior tibia and tarsus; 7- hind tibia and tarsus; 8- paramere; 9- phallobasis; 10- apical part of penis; 11- 8° internal sternite. Scale: a-2, 3; b-7; c- 11; d- 1; e- 4, 5, 6, 9, 10; f- 8.

Description of holotype (♂). Ground colour yellow-brown; only elytra except basal portion, antennae from antennomere 5 and whole abdomen black (Fig. 1). Terminal spurs of posterior tibia yellow. Pubescence golden-yellow, on black portions blackish with faint violet lustre.

Head as long as wide (as 12 : 12), narrower than pronotum (as 12 : 14.5). Eyes rounded and distinctly emarginated at insertions of antennae, finely faceted and very sparsely and shortly pubescent. Posterior margin of eyes with very narrow temporal border, temporal angles not developed. Maxillary palpus (Fig. 2) with dilated second palpomere, almost by one third wider than third one, terminal palpomere elongate securiform, inner angle situated at its distal third. Antennae medium-sized (Fig. 4), third antennomere small, by one third shorter and by one fifth narrower than fourth one, fifth antennomere equally broader and only slightly longer than fourth one, fourth to tenth antennomeres almost twice as long as wide terminal one, two times longer than wide, long oval.

Pronotum distinctly wider than long (as 14.5 : 12), anterior margin with slightly neck-shaped protuberance. Lateral margin of pronotum in lateral view slightly emarginate, posterior angles rectangular and sharp. Dorsal surface with dense rasp-like puncturation.

Scutellum broadly triangular with rather pointed apex.

Elytra distinctly convex, in basal third almost parallel-sided, 2.7 times longer than combined width separately rounded at the apex, with dense and slightly rasp-like punctures. Pygidium long and narrowly conical, 2.5 times as long as hypopygium, reaching nearly third of the length of elytra.

Protibiae distinctly longer than protarsi (Fig. 6), gently curved inwards, with a calf-like swelling and longer blackish hairs at the base and distinctly longer than protarsi (as 9 : 7). The first tarsomere of protarsi as long as two following ones combined, the fourth one of protarsi longer than wide and truncate anteriorly, fifth tarsomere about two times longer than wide and approximately fourth longer than fourth tarsomere. Intermediate tibiae shorter than intermediate tarsi (as 11 : 12). Metatibiae (Fig. 7) besides oblique apical ridge with two very oblique lateral ridges, the upper ridge by one third longer than the lower one. Posterior first tarsomere with three very oblique ridges, the second with two ridges. Outer terminal spur of posterior tibia by one half of the length of the inner one.

Length from tips of mandibles to apex of elytra 3.4 mm, to apex of pygidium 4.3 mm.

Genitalia as figured (Figs. 8-10), the shape of the urosternite 8 as in Fig. 11.

Sexual dimorphism. Female (allotype). Body larger and sides rounded. Antennae shorter (Fig. 5), 4.-10. antennomere 1.3 times as long as wide, terminal antennomere only 1.5 times longer than wide. Terminal palpomere (Fig. 3) narrowly securiform, its inner angle situated at distal third. Body length from tips of mandibles to tips of elytra 3.7 mm, to tip of pygidium 4.8 mm.

Variability. The yellow-brown spot on the base of the male elytra between the shoulders varying in size (from a small spot to a short strip), but being always distinct.

Differential diagnosis. Its size is closest to that of *M. micheli* Pic, 1952, described in North Vietnam. It differs at first sight in the narrow shape of the terminal segment palpomere, basal spot on each elytron (*M. micheli* with whole elytra black) and the shape of the male genitalia.

Etymology. The name refers to the distribution of the new species - Solomon Islands.

Distribution. Solomon Islands.

***Pulchrimorda juliae* sp. nov.**

(Figs. 12-19)

Type locality. Solomon Isls., Guadalcanal Is.**Type material.** Holotype ♂: Solomon Isls., Guadalcanal Is., Barana vill. env., 190 m, 09°29.8'S 159°59.5'E, 23.xi.-15.xii.2013, J. Horák leg., (CHPC).**Description of holotype (♂).** Body long (Fig. 12), rather parallel-sided and little convex. Ground colouration black, only head, pronotum, maxillary palpi, four basal antennomeres and terminal spurs of posterior tibiae yellowish-brown. The area of metasternum around the hind legs is light brownish. Pubescence on the yellow-brown portions golden-yellow, otherwise blackish.

Head wider than long (as 8 : 7), narrower than pronotum, flatly convex, with posterior margin only slightly truncate. Eyes large oval, slightly emarginate at insertions of antennae, finely faceted and glabrous. Temples very narrow, but distinct. Temporal angles very indistinct. Second segment of maxillary palpus (Fig. 14) almost by one fourth wider than the third; terminal palpomere almost by one fourth than the third one, elongate securiform with inner angle situated almost at its distal third. Antennae (Fig. 13) very long; antennomere 1 is distinctly larger than 2, which have the same size as antennomere 3; 4 slightly wider, approximately half the length of antennomere 3; antennomere 5 three times longer and by one third wider at the apex than antennomere 4; 5th-10th antennomeres 2.5–2.7 times longer than wide, antennomere 5 only 2.3 times longer than wide; terminal antennomere approximately 3 times longer than wide and only slightly longer than penultimate one.

Pronotum distinctly wider than long (as 9.5 : 5.5), anterior margin with slightly neck-shaped protuberance. Lateral margins of pronotum in lateral view straight, posterior angles obtuse.

Scutellum small, red-brown and triangular.

Elytra long, parallel-sided, 3 times as long as their combined breadth at shoulders, strongly narrowed at 2/3 length. The elytral epipleuron narrow and ending just behind the shoulders.

Pygidium narrowly conical, very small, about twice as long as hypopygium and reaching approximately one fourth of the length of elytra; in apical third brownish.

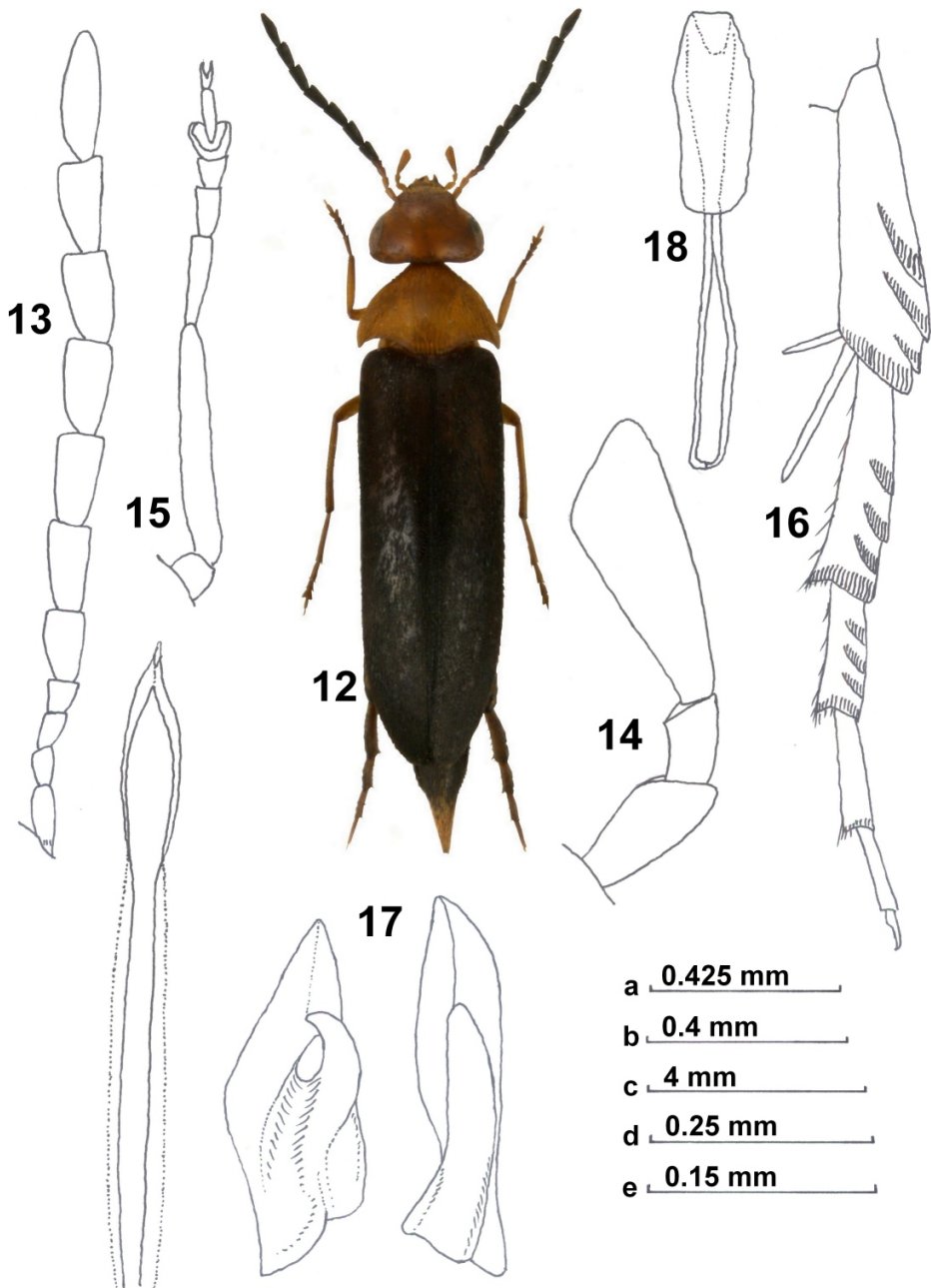
Metaepisterna long, only slightly narrowed behind, in the apical part, a blunt but distinct top is formed.

Protibia (Fig. 15) longer than protarsi (ratio of tibia length to tarsus length as 7 : 5.5), straight, without swelling and longer hairs at base. Protarsi narrower than protibiae. Anterior tarsomere 1 approximately two times as long as tarsomere 2; tarsomere 3 half as short as tarsomere 2; 4 tarsomere square-shaped, deeply bilobed and with slightly truncate onychium on ventral side; tarsomere 5 more than 2 times longer than 4 one. Mesotibiae nearly as long as middle tarsi (as 11 : 11.5). Metatibiae (Fig. 16) besides an oblique apical ridge, with two very oblique lateral ridges, approximately equal in length. The first posterior tarsomere with four oblique ridges (the uppermost one strongly rudimentary), the second with two ridges. Outer terminal spur of metatibia reaching one third of the length of the inner one.

Genitalia as figured (Figs. 17-19).

Length from tips of mandibles to tip of elytra 6.8 mm, to tip of pygidium 8 mm.

Sexual dimorphism. Unknown.**Differential diagnosis.** The species is most related to *P. fusca* Horák, 2017 and can be distinguished according to the following key (Horák & Farkač, 2017, modified):



Figs. 12-19. *Pulchrimorda juliae* sp. nov., holotype (♂): 12- general view; 13- antenna; 14- maxillary palpus; 15- anterior tibia and tarsus; 16- hind tibia and tarsus; 17- paramere; 18- phallobasis; 19- apical part of penis. Scale: a- 13, 16, 18, 19; b- 15; c- 12; d- 14; e- 17.

- 4 (3) Whole elytra black. The third posterior tarsomere without ridges.
- a (b) Head, pronotum and all legs black. Antennae longer, antennomeres 5-10 three times as long as wide. The left paramere cut to a third of the length, right paramere with distinct dorsal branch. The penis is only slightly dilated at the top. Malaysia. *P. fusca* Horák, 2017
- b (a) Head, pronotum and all legs golden-brown, elytra completely black. Antennae short, antennomeres five to ten 2.5-2.7 times as long as wide. The left paramere very wide, cut only up to a quarter of the length, right paramere without dorsal branch. The penis has a long and widespread top. Solomon Isls. (Guadalcanal Is.) *P. juliae* sp. nov.

Etymology. Named after the botanist Julia Aimaea, who has a great deal of credit for studying the fauna of the island of Guadalcanal.

Distribution. Solomon Islands.

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