

## Additional Notes on the Stenopterine Fauna (Coleoptera, Cerambycidae) of the Island of Lombok, Indonesia

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**Abstract** The stenopterine fauna of Lombok Island of Indonesia is re-examined based on our recent survey. A new species of the genus *Microdebilissa* PIC is described as the southernmost representative of the genus as well as the first one from Lombok Island. The males of *Kunbir lumbokiana* NIISATO et YOKOI and *Merionoeda wayani* NIISATO et YOKOI are described for the first time with the illustration of their genital organs. *Kunbir ikuoi* YOKOI et NIISATO from Bali Island of Indonesia is downgraded as a subspecies of *K. lumbokiana* NIISATO et YOKOI.

### Introduction

Lombok Island belonging to the Lesser Sunda Islands is the eastern neighbor of Bali Island across Lombok Strait which makes the southernmost part of the WALLACE Line. It is well known that the biota of the eastern side of the WALLACE Line is different in many respects from that of the islands westward as Borneo, Sumatra, Java and Bali Islands. As for the stenopterine fauna of Lombok, three endemic species have so far been recorded, namely, *Kunbir lumbokiana*, *Merionoeda wayani* and *M. lumbokiana* in our recent publication (NIISATO & YOKOI, 2008).

In the following paragraphs, we will supplement the existing knowledge of the stenopterine fauna of Lombok Island based on the recent observations. First, the genus *Microdebilissa* PIC is recorded for the first time in Lombok, with the description of a new species. The unknown males of two previously described species, *Kunbir lumbokiana* and *Merionoeda wayani* are also newly recorded.

### Material and Method

The specimens examined including the type specimen of new taxon were obtained by the recent exploration on December 15–16, 2010 by Nobuo OHBAYASHI and Yaheita YOKOI. The holotype designated herein is preserved in the National Museum and Nature and Science, Tsukuba, and other specimens examined are in the private collection of NIISATO, OHBAYASHI and YOKOI.

The abbreviations used for the ratio of the measurement in the descriptions are explained in our previous paper (YOKOI & NIISATO, 2014, p. 164).

### Taxonomy

*Microdebilissa postimeraena* sp. nov.

(Figs. 1, 7–10)

Closely similar to *Microdebilissa constans* HÖLZSCHUH from South India, can be however distinguished by the infuscate middle segments of antennae, more transverse pronotum with more or less

rugose discal punctuation, and larger punctuation in irregular rows on elytra.

**Male.** Length 5.4 mm (from apical margin of clypeus to abdominal apex).

Colour reddish yellow, more or less shiny especially in elytra, black in eyes, abdominal ventrites 1–4, apical halves of elytra, mid and hind tibiae, apical 2/3 of femur; antennae with segments 4–11 dark brown, except for yellowish basal parts of segments 4–5 and apical 3/7 of terminal segment.

Head a little wider than the apical width of or almost as wide as pronotum, HW/PW 1.02, wholly convex and markedly raised near occiput, slightly convergent posteriad behind eyes; surface closely shallowly punctured, clothed with thin short light yellow pubescence, except for a smooth median part near vertex; eyes moderately prominent, with upper lobe small, separated one another by 2/5 distance of its own diameter. Antennae rather long, surpassing apical fourth of elytra; scape arcuately raised on dorsum, three times as long as segment 2; segment 5 the longest, 1.2 times as long as the preceding segment and a little longer than the following one; segments 4–9 more or less serrate.

Pronotum distinctly transverse, 1.33 times as wide as long, weakly sinuate on sides, gently arcuate near middle, moderately constricted at base, PL/PW 0.75, PA/PW 0.83, PA/PB 0.94; disc moderately convex though almost flattened above, strongly declivous in a transverse triangular shape on sides near basal margin; surface closely, shallowly and more or less rugosely punctured except for a median longitudinal smooth area, pubescent as on head. Scutellum small, rounded triangular, smooth on surface.

Elytra long and slender, EL/EW 3.40, arcuately emarginate widely along sides, transversely rounded at conjoined apical part, provided with minute dents along apical 3/4 of external margin and apical part of sutural margin; disc gently concave near suture behind scutellum and near median line of basal fourth, provided with medium-sized punctures in irregular rows, the punctuation becomes shallower in apical third, very thinly pubescent.

Ventral surface very sparsely provided with small punctures, thinly with pale yellow pubescence; prosternal process relatively wide, parallel-sided near middle; mesosternal process very wide, almost as long as wide, subparallel-sided though dilated latero-apically at apex; anal ventrite weakly emarginate on apical margin.

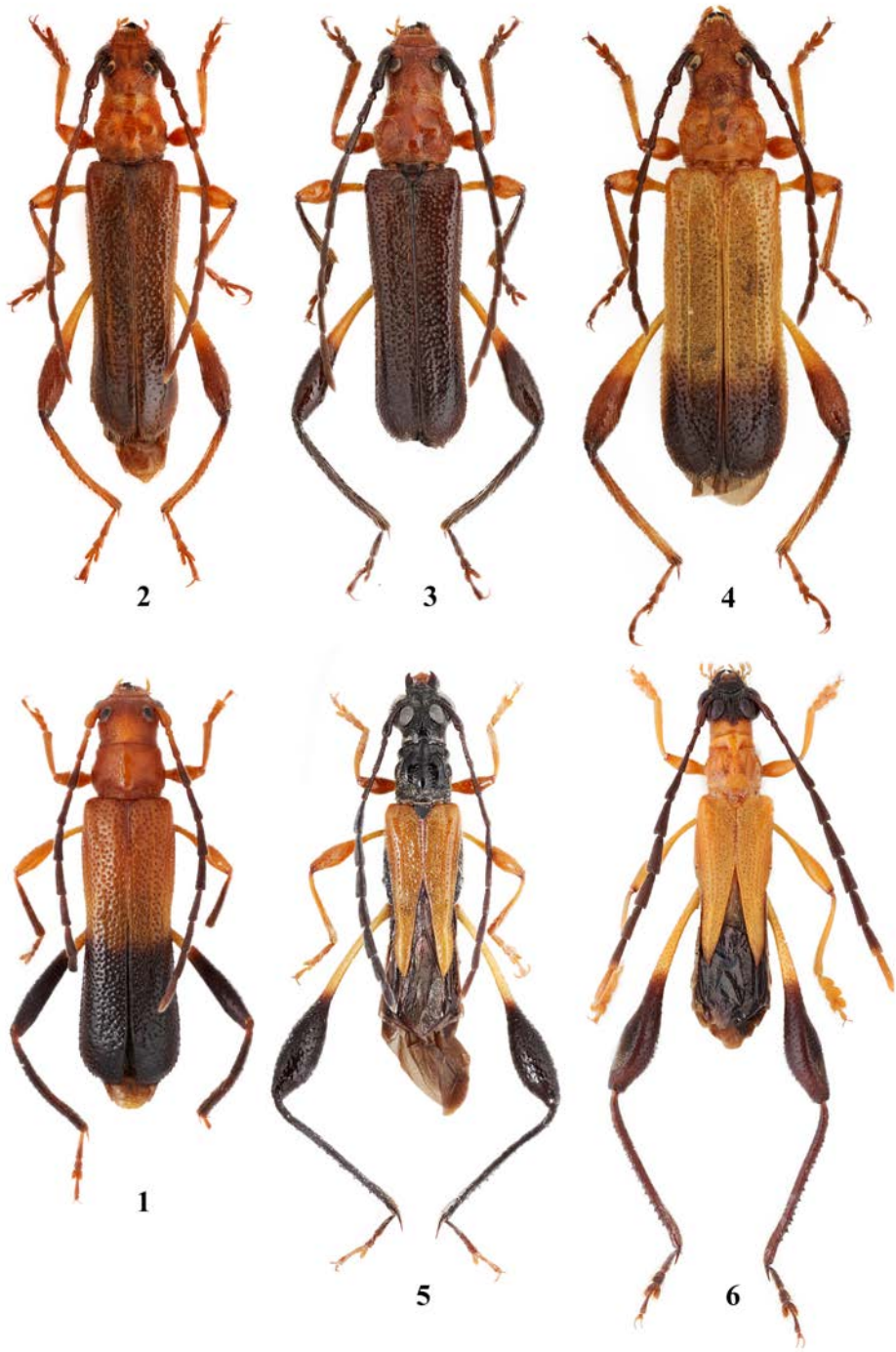
Legs relatively long; hind leg with femur very weakly clavate, tibia weakly arcuate, 1st tarsal segment 1.5 times as long as the following two segments combined.

Male genital organs. Median lobe almost spindle-shaped, 1/4 the length of elytra, moderately arcuate in profile, well convex; dorsal plate with narrow aperture located at a level between apical fifth and basal third, provided with large semicircular lateral walls on the sides, supplemented with a pair of conjoining semicircular walls along midline of basal 2/3 of the aperture; median struts 5/8 the length of median lobe, longitudinally broad. Tegmen half the length of median lobe; parameres 1/4 the length of tegmen, moderately constricted at base, bilobed, rounded at each apex which is provided with five long setae; ring part large and subovate, with almost transverse basal margin. Eighth tergite with a pair of large subtriangular lobes.

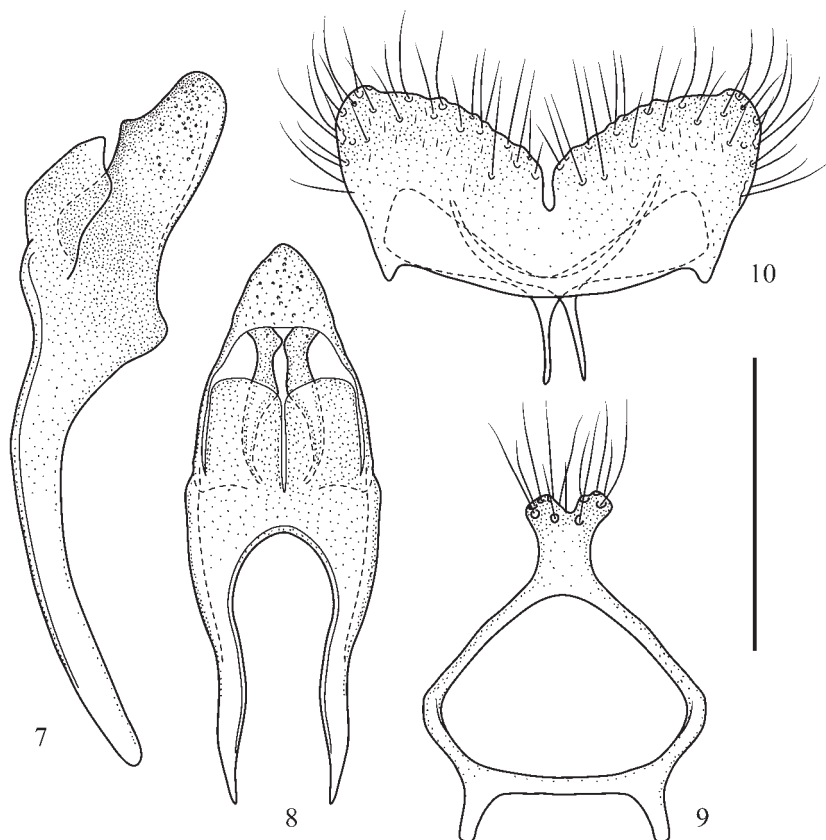
**Type specimen.** Holotype: ♂, Sangkareang, Belanting, Lombok Is., Indonesia, 15–16.XII.2010, Y. YOKOI leg. The single male holotype was collected from tree blossoms with *K. lombokiana lombokiana*.

**Distribution.** Lombok Is., Indonesia.

**Notes.** This new species is very similar regarding the coloration and external structure to *Microdebilissa constans* HOLZSCHUH from Tamil Nadu of India, in spite of the great geographical distance between Lombok Island of the Lesser Sunda Islands and South India (HOLZSCHUH, 2007). Both taxa could be better considered as two geographical races of a single species. However, we describe



Figs. 1–6. Stenopterini from Lombok Is., Indonesia. — 1, *Microdebilissa postimeraena* sp. nov., holotype ♂; 2, *Kunbir lombokiana lombokiana* NIISATO et YOKOI, ♂, blight form; 3, ditto, dark form; 4, ditto, ♀; 5, *Merionoeda wayani* NIISATO et YOKOI, ♂; 6, *Merionoeda lombokiana* NIISATO et YOKOI, holotype ♂.



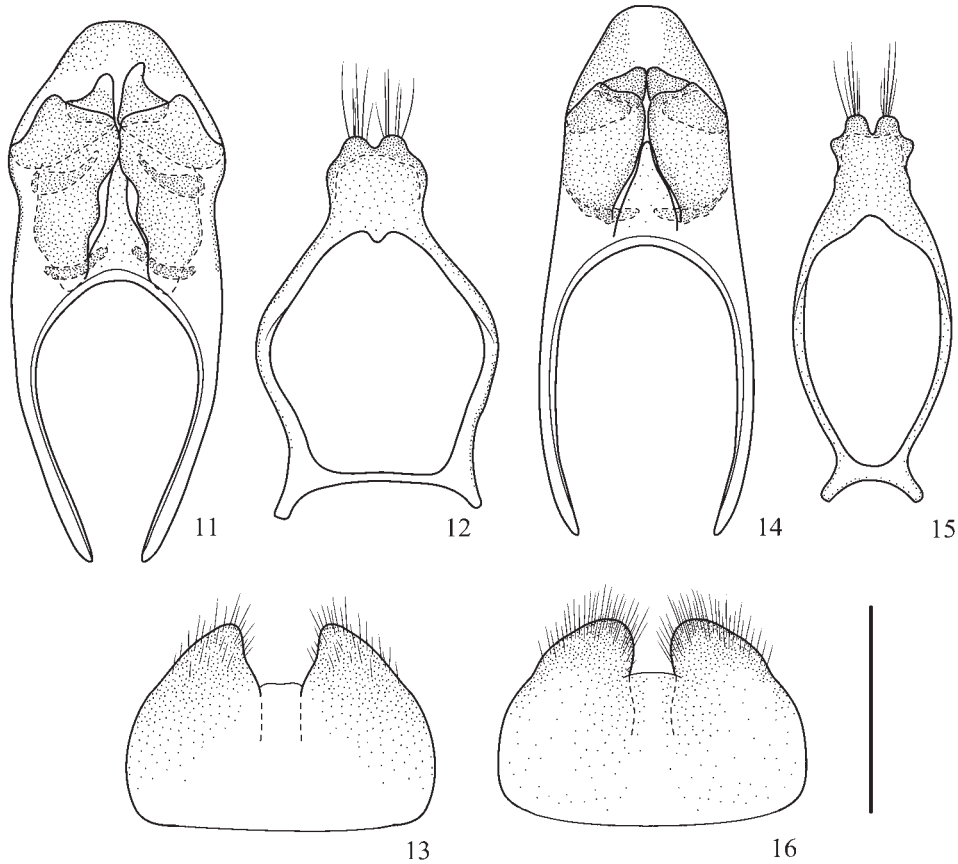
Figs. 7–10. Male genital organs of *Microdebilissa postimeraena* sp. nov. — 7, Median lobe, lateral view; 8, ditto, dorsal view; 9, tegmen, dorsal view; 10, 8th tergite, dorsal view. Scale 0.5 mm.

the Lombok race as an independent species, since it is clearly distinguished from *M. constans* firstly by eight instead of two apical antennal segments infusate, secondly by more transverse pronotum with the rugose disc, and lastly by the medium-sized punctures in irregular rows on the elytral disc. This similarity between these two species seems to correspond to the resemblance between *Kunbir lombokiana* NIISATO et YOKOI from Lombok Island on one hand and *K. atriapicalis* GRESSITT et RONDON from Laos (YOKOI & NIISATO, 2008) on the other.

Compared to *M. bicolor* (GRESSITT et RONDON) from Indochina, this new species is easily distinguished firstly by the mid femur entirely reddish yellow in colour in place of the blackish peduncle in the latter, secondly by shiny elytra with dense small punctures and lastly by the subparallel-sided prosternal process (GRESSITT & RONDON, 1970).

*Microdebilissa bicolor* has so far been known only by the holotype male from Vientiane Province of Laos (“Km 17, Route Ta Ngone” in the original description). We had an occasion to examine a female collected in northern Thailand, which we now record as an additional specimen for the species as follows: 1 ♀, Doi Suthep, Chiang Mai Province, Thailand, 9.V.1999, Local collector leg.

*Etymology.* The new specific name “*postimeraena*” means “post” = posterior + “melaena” = infusate in Latin, since the new species has the black apical halves of elytra.



Figs. 11–16. Male genital organs of *Kunbir lombokiana* ssp. — 11–13, *K. lombokiana lombokiana* NIISATO et YOKOI from Lombok Is., Indonesia; 14–16, *K. l. ikuoi* YOKOI et NIISATO from Bali Is., Indonesia. — 11, 14, Median lobe excluding endophallus, dorsal view; 12, 15, tegmen, dorsal view; 13, 16, 8th abdominal segment, dorsal view. Scale 0.5 mm.

***Kunbir lombokiana lombokiana* NIISATO et YOKOI, 2008**

(Figs. 2–4, 11–13)

*Kunbir lombokiana* NIISATO et YOKOI, 2008: 2, figs. 5–8; type locality: Puncak Pusuk, Lombok Is., Indonesia.

*Additional description.* Male. Length 6.6–9.5 mm (from apical margin of clypeus to abdominal apex).

Colour varied in yellowish brown to dark reddish brown, brownish to blackish in antennae (with the apical part of terminal segment more or less yellowish), scutellum, elytra (always more infuscate in apical third than in the rest), basal part of prosternum, mid and hind thoraces and abdomen, all tarsi, tibia and femoral club of hind leg, usually in the apical 2/3 of fore and mid tibia.

Head including eyes broader than in ♀, HW/PW 0.95–1.04 (M 0.99). Antennae almost reaching to elytral apices, very weakly serrate in segments 5–10. Pronotum slightly longer than that of ♀ in average, with lateral tubercles strongly produced in large specimens, PL/PW 0.89–1.00 (M 0.94), PA/PW 0.73–0.79 (M 0.76), PA/PB 0.83–0.91 (M 0.88). Elytra narrower than in ♀, weakly though clearly

emarginate in arcuate line on sides, EL/EW 2.72–2.94 (M 2.83). Hind femora attaining elytral apices.

Male genital organs almost identical with those of *K. lombokiana ikuoi*, though markedly broadened in general appearance, apical part of median lobe moderately emarginate on sides, bluntly tuberculate at apical third of sides, and ring parts of tegmen strongly widened towards middle, with transversal apical margin.

**F e m a l e.** Length 6.2–9.6 mm (from apical margin of clypeus to abdominal apex). No characteristic which should be added to the original description. Standard ratios of body parts are as follows: HW/PW 0.88–0.99 (M 0.92), PL/PW 0.85–0.99 (M 0.91), PA/PW 0.65–0.81 (M 0.74), PA/PB 0.72–0.89 (M 0.84), EL/EW 2.82–2.94 (M 2.87).

*Additional specimens examined.* 7 ♂♂, 5 ♀♀, Sangkareang, Belanting, Lombok Is., Indonesia, 15–16.XII.2010, N. OHBAYASHI leg.; 4 ♂♂, 7 ♀♀, same data as the preceding but Y. YOKOI leg.

*Distribution.* Lombok Is., Indonesia.

### ***Kunbir lombokiana ikuoi* YOKOI et NIISATO, 2008**

(Figs. 14–16)

*Kunbir ikuoi* YOKOI et NIISATO, 2008: 268, figs. 1–5; type locality: Gunung Prada, Jembrana, Western Bali, Indonesia.

*Additional specimen examined.* No additional specimen is examined after the male holotype collected from Gunung Prada, Jembrana, Western Bali in 2005 (YOKOI & NIISATO, 2008).

*Distribution.* Bali Is., Indonesia.

*Notes.* *Kunbir ikuoi* YOKOI et NIISATO was originally described as the sibling species of *K. atripicalis* GRESSITT et RONDON from Laos on account of the similar coloration and male genital organs. In the original description by YOKOI and NIISATO (2008), the close relationship between *K. ikuoi* and *K. lombokiana* was not properly considered, since each taxon was described based on a single male and a female, respectively. The mutual relationship of the two species was referred as “only moderately resemble each other” in the notes of the description of *K. ikuoi*. According to a careful examination including the males of *K. lombokiana* as mentioned in the previous paragraphs however, the two taxa are basically identical regarding both the external and male genital organs. They should be therefore considered as two geographical races of a single species. Original description of *K. ikuoi* was published on November 22, 2008, about half year after the publication of *K. lombokiana* on May 30, 2008. We proposed herein that *K. ikuoi* should be downgraded as a subspecies of *K. lombokiana*.

Though almost agreed in many respect with each other, the two subspecies of *K. lombokiana lombokiana* from Lombok and *K. l. ikuoi* from Bali Islands are distinguished in the coloration of mid femur and the structure of male genital organs as follows:

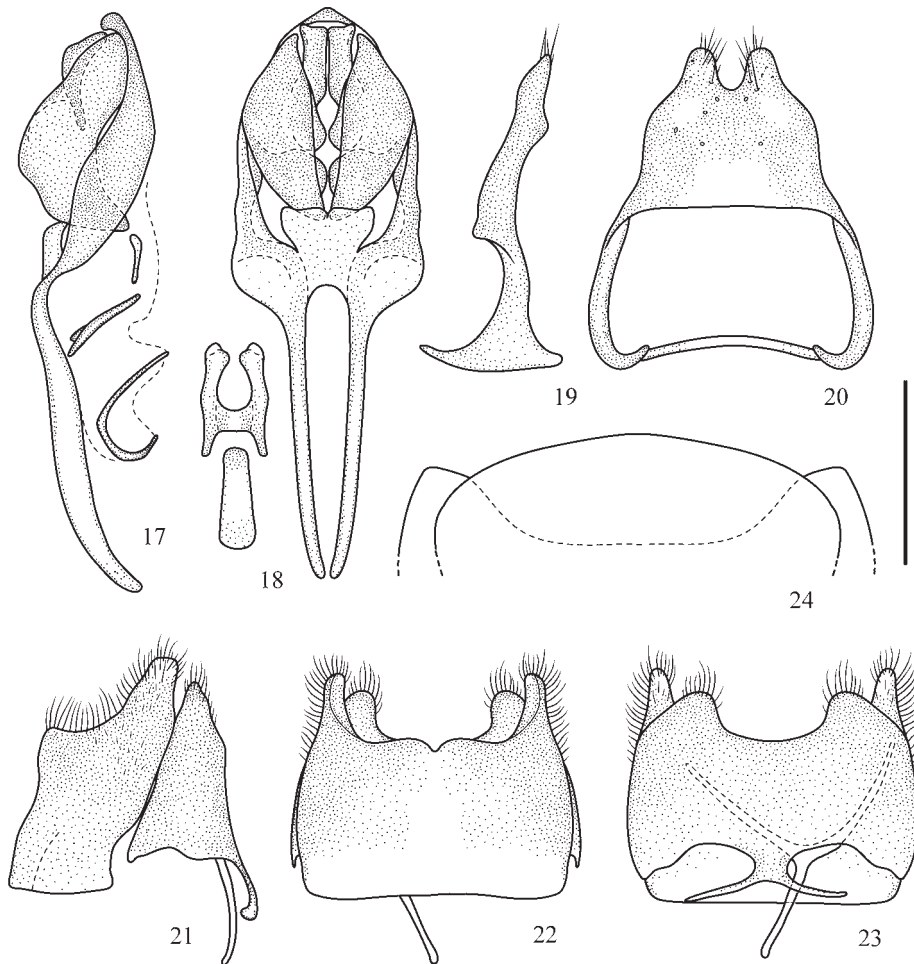
*Kunbir lombokiana lombokiana:* Mid femur wholly reddish yellow; apical part of median lobe bluntly tuberculate at apical third of sides; tegmen with ring part strongly widened towards middle, with transversal apical margin.

*Kunbir l. ikuoi:* Mid femur reddish yellow with blackish club; apical part of median lobe completely rounded at apical third of sides; tegmen with ring part elongate ovate, with rounded apical margin.

### ***Merionoeda wayani* NIISATO et YOKOI, 2008**

(Figs. 5, 17–24)

*Merionoeda wayani* NIISATO et YOKOI, 2008: 6, figs. 2, 9–12; type locality: Margsit, Lombok Is., Indonesia.

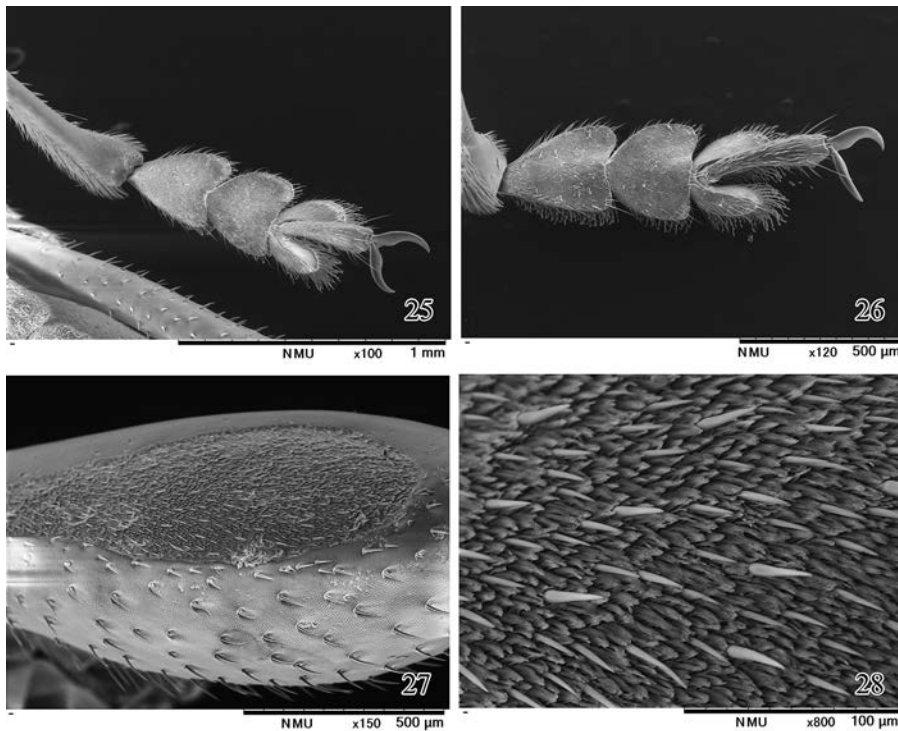


Figs. 17–24. Male genital organs and abdominal segments of *Merionoeda wayani* NIISATO et YOKOI. — 17, Median lobe, lateral view; 18, ditto, dorsal view; 19, tegmen, lateral view; 20, ditto, dorsal view; 21, 8th abdominal segment, lateral view; 22, ditto, dorsal view; 23, ditto, ventral view; 24, 7th abdominal segment, dorsal view. Scale 0.5 mm.

*Additional description.* Male. Length 6.5–9.2 mm (from apical margin of clypeus to abdominal apex).

Colour as in ♀. Body slenderer than in ♀. Antennae as long as body, with apical seven segments not abbreviated as those in ♀. Hind femora surpassing elytra apices by about apical third. Abdomen subparallel-sided in ventrites 2–4; anal tergite arcuately rounded on apical margin; anal ventrite concave in transverse trapezoidal in apical half. Standard ratios of body parts are as follows: HW/PW 0.97–1.14 (M 1.05), PL/PW 0.99–1.09 (M 1.03), PA/PW 0.71–0.80 (M 0.75), PA/PB 0.84–0.88 (M 0.86), EL/EW 2.17–2.32 (M 2.24).

Male genital organs. Median lobe half the length of abdomen, almost spindle-shaped, hardly arcuate in profile; aperture of dorsal plate provided with a pair of large plates, which is parallel and conjoining in basal fourth, and narrowly dilated one another from basal fourth to apex, supplemented with a



Figs. 25–28. *Merionoeda (Merionoeda) lombokiana* NIISATO et YOKOI, ♂. — 25, Mid tarsus and apical part of mid tibia; 26, mid tarsus, enlarged; 27, femur with velvety maculation; 28, ditto, enlarged.

pair of conjoining, small plates between the large plates in apical third; ventral plate narrowly sinuate on sides, roundly produced at apex; median struts nearly half the length of median lobe, compressed. Tegmen nearly half the length of median lobe; parameres  $2/3$  the length of tegmen, moderately narrowed apicad, with sides more or less emarginate before and behind weak lateral tubercles near apical third, bilobed by a deep V-shaped concavity at apical margin, clothed with a few medium-sized setae near inner side of each lobe; ring parts transverse, provided with long, arcuate dorsal projections at sides of posterior margin. Eighth tergite transverse quadrate, slightly bisinuate on apical margin which is provided with long projections at sides. Eighth sternite semicircular, deeply concave in trapezi-form on apical margin which is provided with short projections at sides.

**F e m a l e.** Length 6.8–9.1 mm (from apical margin of clypeus to abdominal apex). No characteristic which should be added to the original description. Standard ratios of body parts are as follows: HW/PW 0.96–1.07 (M 1.00), PL/PW 1.00–1.07 (M 1.04), PA/PW 0.70–0.84 (M 0.77), PA/PB 0.82–0.85 (M 0.84), EL/EW 2.08–2.36 (M 2.21).

*Additional specimens examined.* 2 ♂♂, Pusuk, W. slope of Mt. Rinjani, Lombok Is., 18.XI.2008, Y. YOKOI leg.; 9 ♂♂, 6 ♀♀, Mangsit, Lombok Is., Indonesia, 22–23.XI.2008, Y. YOKOI leg.

*Distribution.* Lombok Is., Indonesia.

*Notes.* True affinity of *M. wayani* NIISATO et YOKOI is still uncertain though its male was now available for examination. However, regarding the structure of male genital organs, *M. wayani* seems to have a close relationship with *M. takakuwai* YOKOI et NIISATO from South Kalimantan of Borneo, with an almost similar basic structure of median lobe, tegmen and 8th abdominal segment (YOKOI & NIISATO, 2009).



***Merionoeda (Merionoeda) lombokiana* NIISATO et YOKOI, 2008**

(Figs. 6, 25–28)

*Merionoeda (Ocytasia) lombokiana* NIISATO et YOKOI, 2008: 9, figs. 3, 4, 13–21; type locality: Puncak Gn. (Mt.) Dusk, Pusuk, W. slope of Mt. Rinjani, W. Lombok Is., Indonesia.

*Additional specimens examined.* 6 ♂♂, 4 ♀♀, Mangsit, Lombok Is., Indonesia, 22–23.XI.2008, Y. YOKOI leg.; 1 ♂, Pusuk, W. slope of Mt. Rinjani, Lombok Is., 18.XI.2008, Y. YOKOI leg.

*Distribution.* Lombok Is., Indonesia.

*Notes.* *Merionoeda lombokiana* NIISATO et YOKOI was originally described under the subgenus *Ocytasia* PASCOE by the reason of the dilated mid tarsus in male. However, this taxon should be placed in the nominotypical subgenus, since it has a very close relationship with *M. (M.) puella* from Sulawesi Island, the type species of the genus *Merionoeda* PASCOE as well as with *M. (M.) baliana* YOKOI et NIISATO from Bali Island even regarding the structure of mid tarsus in male (NIISATO, 2013; YOKOI & NIISATO, 2014).

**Discussion**

Four species belonging to three genera of the Stenopterini have so far been known from Lombok Island. Three of them are endemic to this island, and the last one, *Kunbir lombokiana* NIISATO et YOKOI is commonly shared with Bali Island in the western neighborhood.

The last one, *K. lombokiana* is considered as the sibling species of *K. atriapicalis* GRESSITT et RONDON from Laos (YOKOI & NIISATO, 2008). *Microdebilissa postimeraena* sp. nov. described from Lombok is a similar case as above, having a close relationship with *M. constans* HOLZSCHUH from South India. The second one, *Merionoeda wayani* NIISATO et YOKOI is possibly also a similar case with Southeast Asian affiliation. Though this species has an unusual habitus compared to other Asian members of the genus, its male genital organs are very similar in the structure to those of *M. takakuwai* YOKOI et NIISATO from Borneo. Furthermore, the third one, *Merionoeda lombokiana* NIISATO et YOKOI may be an exception within the stenopterine fauna of Lombok. This species has namely a close relationship with *M. puella* PASCOE, the type species of the genus, and its relatives, all of which are endemic in Sulawesi, Bali and Lombok Islands across the WALLACE Line (NIISATO, 2013; YOKOI & NIISATO, 2014).

As a conclusion, the stenopterine fauna of Lombok Island consists of mainly Oriental Region elements of the west of WALLACE Line, and added by an endemic species belonging to a group occurring across the WALLACE Line.

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**要 約**

新里達也・横井彌平太：ロンボク島のモモプトコバナカミキリ族(鞘翅目カミキリムシ科)に関する追加知見。——— 小スンダ列島に位置するロンボク島からは、これまでに *Kunbir lombokiana*, *Merionoeda*

wayani および *M. lombokiana* の2属3種のモモブトコバナカミキリ族が記録されていた。その後実施した調査によって、本群の追加標本が比較的多数得られたため、詳細に検討を行ったところ、同島より未記録の *Microdebilissa* 属の1新種、ならび原記載時には未知であった *K. lombokiana* と *M. wayani* の雄が見出された。本論文ではこれらを新たに記載するとともに、既知3種についての追加記録を行った。今回、*Kunbir lombokiana* の雄が発見され、その形態学的特徴が明らかにされたことにより、バリ島から記載された *Kunbir ikuoi* は同種の一地域集団(亜種)として扱うのが妥当と判断し、分類学的処理を行った。さらに、ロンボク島のモモブトコバナカミキリ族について、生物地理学上の特性について短く考察した。

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