

**Contribution to the fauna of *Taenioderini* with descriptions of five new species  
and two new subspecies (Coleoptera: Scarabaeidae: Cetoniinae)**

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**Taxonomy, new species, new subspecies, Coleoptera, Cetoniinae, Taenioderini, *Taeniodera*, *Euselates*, *Ixorida*, *Mecinsonota*, *Aurelia*, Indonesia, Sumatra, Weh, Nias, Sulawesi, Aru, Philippines, Mindoro, Laos, Xieng Khouang Province**

**Abstract.** Five new species and two new subspecies, *Taeniodera fujiokai* sp. nov. from Weh Island (Indonesia), *Taeniodera corticalis insularis* subsp. nov. from Nias Island (Indonesia), *Euselates* (s.str.) *kubani* sp. nov. from NE Laos, *Ixorida* (*Mecinsonota*) *subalpina* sp. nov. from West Sumatra (Indonesia), *Ixorida* (*Mecinsonota*) *mindoroana* sp. nov. from Mindoro Island (the Philippines), *Ixorida* (*Mecinsonota*) *venerea wokamana* subsp. nov. from Aru Archipelago (Indonesia), *Ixorida* (*Aurelia*) *gloriosa* sp. nov. from Sulawesi (Indonesia) of the Asian tribe *Taenioderini* are described, discussed and illustrated.

## INTRODUCTION

The tribe *Taenioderini* currently comprises two subtribes of mainly Oriental species of Cetoniinae. Sixteen genera with approximately 256 species are accommodated in the subtribe *Taenioderina*. A smaller number of taxa, approximately 75 species, are accommodated in the subtribe *Chalcotheina*. Main revisional work on Palearctic and Oriental *Taenioderini* was published by Mikšič (1976). After this, several authors added new taxa, from which the following works have been used for the present study: Antoine (1986, 1998, 2000), Jákl & Krajčik (2004, 2006), Jákl (2008a, 2008b, 2009), Krikken (1982), Legrand (2000, 2004), Legrand & Chew Kea Foo (2010), Sakai & Nagai (1998).

Representatives of the cetoniine tribe *Taenioderini* are restricted to the Oriental Region. The distribution starts in northwest India and west Nepal, encompasses all southeast-Asian countries including Bhutan, Sri Lanka, Myanmar, Bangladesh, Thailand, Laos, Cambodia, Vietnam, Malaysia. High species diversity is reached in Indonesia and Philippines. Northern border of distribution goes across central and southern parts of China (including Taiwan) and south-eastern parts of Tibet. The tribe is absent in desert and semidesert parts of west and southwest India, Tibet (except southeast), Korean Peninsula and Japan. Two species of *Mecinsonota* Kraatz, 1892 reached Papuan Subregion of the Australian Region, including the Indonesian Moluccas, Papua New Guinea and the Solomon Islands.

## MATERIAL AND METHODS

All specimen sizes are from anterior margin of the clypeus to the apex of the elytra. Types are provided with red printed labels that give the name of the taxon, HOLOTYPUS or yellow

printed labels for PARATYPUS, sex symbol, number of the paratype and St. Jákl det. 2014. Genitalia of all available males were dissected. Exact label data are cited for the material examined, individual labels are indicated by double slash (//), individual lines of every label by a single slash (/). All specimens are deposited in the author's collection.

## TAXONOMY

### *Taeniodera fujiokai* sp. nov.

(Figs 1-8)

**Type locality.** Indonesia, N Sumatra, Aceh Province, Weh Island.

**Type material.** Holotype (♂) labelled: Aceh/N.Sumatra/INDONESIA/VI.1990. Paratypes: (Nos. 1-3 ♂♂) labelled: WE Is./INDONESIA/MAR. 1996; (No.4 ♂) labelled: We Is.(handwritten)/N. Sumatra/INDONESIA/AUG.1986; (No. 5 ♀) labelled: We Is./ N.Sumatra/Indonesia/Jan. 1991.

**Description of holotype.** Body length (excluding pygidium) 20.3 mm, maximum humeral length 10.1 mm. Black reddish species, pronotum completely black, elytra almost parallel.

Head. Completely black, punctured, widest point in anterior half. Frons with mild silver tinge, covered with short yellowish setation. Punctures of frons larger than on clypeus, but density thinner. Clypeus shining, its punctation denser than on frons. Apical margin of clypeus deeply incised. Antenna black with yellowish to brown setation, club brownish. Length of flagellum and club approximately same.

Pronotum. Black, matte, covered with bassalic tomentum. Antero-lateral margin with one, tiny, almost indistinct longitudinal yellowish patch. Sides and anterior half with semicircular punctures, disc and base almost impunctate. Lateral border reaching posterolateral angles. Basal lobe rather obtuse, unbordered, impunctate.

Scutellar shield. Black, large, almost impunctate, its base and posterior margin covered with yellowish tomentum.

Elytra. Both basal thirds brick to reddish, apical third black. Yellowish tomentum absent, except of one laterally placed, tiny, narrow, transversally running patch on each elytron. Subhumeral incision moderately developed. Humeral calli obtuse, apical calli indistinctly developed. Apical half with three fine longitudinally running striae. Sutural ridge obtuse, except of low elevation in apical quarter, protrusion of suture over elytra apex very short. Apical third with few laterally placed wrinkles.

Pygidium. Semicircular, its colouration dark plum to brown. Wrinkles abundant, apex with short ochre setation.

Ventrum. Abdomen black, decorated with yellowish tomentum. Each abdominal segment with rather dense, yellowish setation, more abundant laterally than on disc. Lateral sides of each abdominal segment decorated with yellow tomentum placed on posterior margin of each segment. Punctation of abdomen fine, punctures simple circularly or wavyly shaped. Metasternum black, its punctation and yellowish setation denser than on abdomen. Anterolateral margins decorated with yellow tomentum. Mesometasternal process keel-shaped. Prosternum black to brownish, its yellowish setation and tomentum abundant. Mentum black, covered with ginger setation.



Figs 1-8. *Taeniodera fujiokai* sp. nov.: 1- habitus dorsal aspect, male; 2- habitus ventral aspect, male; 3- habitus lateral aspect, male; 4- aedeagus; 5- aedeagus lateral aspect; 6- habitus dorsal aspect, female; 7- habitus ventral aspect, female; 8- habitus lateral aspect, female.

Legs. Black, moderately elongate. Setation of tibia yellowish, tarsi with not so abundant reddish setae. Protibia tridentate, its apical spur long and sharp. Meta- and especially mesotibia with sharply developed carina placed in posterior half and three sharply developed terminal spurs. Tarsi black, moderately long.

Genitalia. Parameres narrowing to apex rather sharply, apical hook very sharp and wide (Figs 4-5)

**Variability.** Size rather uniform, 19.8-21.1 mm. Three paratype males with more developed black colouration of elytra, black patch present in subscutellar part and along sutural ridge. One male with extremely developed black, subscutellar patch almost reaching lateral margins in basal half of elytra. Yellow tomentum patch of elytra similarly placed and shaped, but tiny yellow patch of pronotum in two paratype males completely missing. Ventrally males similar.

**Sexual dimorphism.** Single available female is smaller, body size (excluding pygidium) 18.2 mm. Body shorter, but more robust, protibia tridentate as in males, but legs shorter. Punctuation of head and especially pronotum much denser, pronotum disc and basal lobe with punctuation. Scutellar shield without yellow tomentum, yellow patch of elytra positioned as in male, but almost indistinctly developed. Pygidium black. Ventral setation thinner, but punctuation strongly developed. Yellowish tomentum of ventrum almost absent, except of short transversal patches of abdominal segments, which are present but considerably reduced.

**Differential diagnosis.** The newly described species flying in tiny Weh Island is staying rather far from all representatives of the genus occurring in Malaysia and the Great Sundas. Combination of almost absent dorsal yellow tomentum, abundant ventral tomentum and hook shaped apex of male parameres distinguish species from its main congeners *Taeniodera borneensis* Kraatz, 1892 from Borneo and its subspecies *Taeniodera borneensis* ssp. *puncticollis* Kraatz, 1892 from Sumatra, *Taeniodera egregia* Gory et Percheron, 1833 from Java and *Taeniodera haematica* Perty, 1831 also from Java. Other representatives of *Taeniodera* flying in Sumatra or neighbouring islands have differently shaped parameres (without apical hook or at least without sharp and long hook) and in most cases abundant dorsal tomentum. Surprisingly similar parameres shape can be found in *Taeniodera nigrithorax* Mikšič, 1972 very variable species common in Sulawesi, but it differs mainly in absence of pronotal tomentum, more abundant tomentum of elytra and more robust and wide parameres. Completely different type of fauna between N. Sumatra and Sulawesi must be also considered.

**Etymology.** Named after generous donor of specimens and great specialist mainly in oriental Rutelinae Masayuki Fujioka (Tokyo, Japan).

**Distribution.** Indonesia, North Sumatra, Aceh Province, Weh Island.

***Taeniodera corticalis insularis* ssp. nov.**

(Figs 9-13)

**Type locality.** Indonesia, N. Sumatra, Nias Island.

**Type material.** Holotype (♂) labelled: Nias Is./ N.W. Sumatra/ Indonesia/ X. 1992. Paratypes: (Nos. 1-2 ♂♂) labelled: INDONESIA/ Nias Island/ VII.1994 (handwritten)/ native collectors; (No.3 ♂) labelled: Indonesia/ Nias island/ I. 1996 (handwritten)/ native collectors.

**Description of holotype.** Velvet black with abundant, golden-ochre tomentum. Body size 16.1 mm, maximum humeral width 8.8 mm.

Head. Long, narrow, widest in approximately half length of clypeus. Black, matte, except of medial line and lateral margins covered with golden-ochre tomentum. Yellowish setation present throughout total length. Mid line of frons highly elevated. Apex of clypeus sharply elevated, its margin almost straight. Antenna moderately long, stalk black, club dark brown. Length of club and stalk same. Yellowish to ginger setation present.

Pronotum. Black, matte, decorated with dark golden- ochre tomentum. Setation absent. Lateral borders with tomentum, almost reaching margin of basal lobe. Other two, longitudinal patches of tomentum placed between two obtuse longitudinally running keels in mid of disc, those patches reaching anterior margin, adjoining lateral tomentum patches. Punctuation dense, punctures diameters very big, especially in mid and in front of basal lobe. Basal lobe distinctly emarginate.

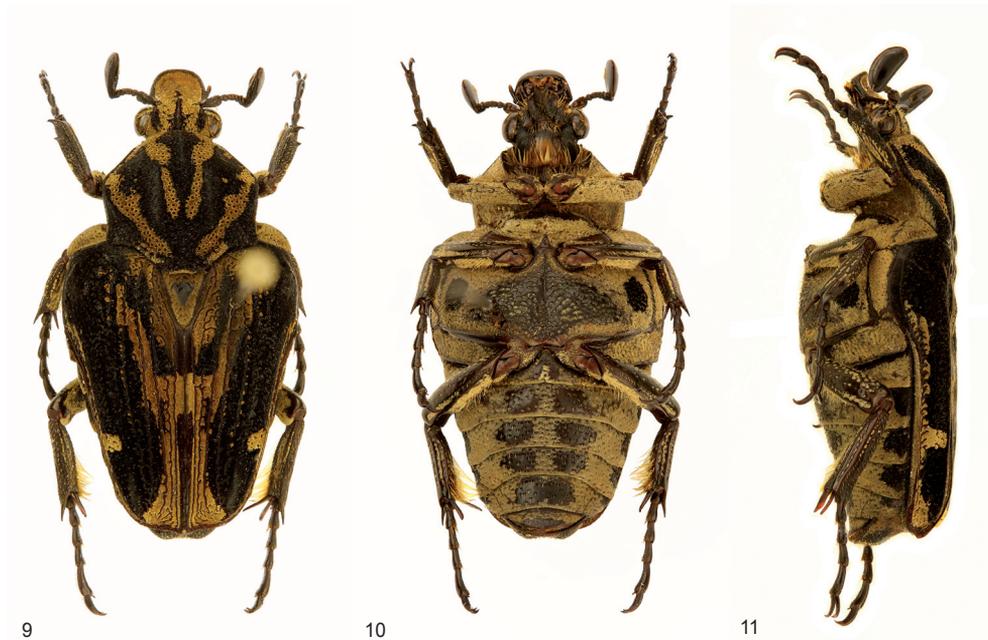
Scutellar shield. Black, elongate, almost completely covered with ochre tomentum, leaving black only small mid part.

Elytra. Velvet black coloured, decorated with golden-ochre tomentum, sutural ridge, lateral and apical margins brownish. Base very wide, narrowing to apex very sharply, apex more than twice narrower than elytra base. Subhumeral emargination almost indistinct. Striolate lines forming 4-5 intervals, mostly covered with ochre tomentum. Sides also bordered with tomentum, except of anterolateral margins. Humeral calli obtuse, apical calli more distinctly developed. Lateral ridge obtusely bordered. Sutural ridge obtusely elevated in apical half, its termination slightly protruding over apex of elytra. Setation not developed.

Pygidium. Black, semicircular, except of mid part covered with golden-ochre tomentum. Central part with shallow, longitudinally developed impression. Yellowish setation present throughout total length.

Ventrum. Colouration dark plum to brownish. Tomentum very abundant, its colouration paler than in dorsum. Abdomen with dense punctuation, diameters of punctures semicircular, each bearing seta, ochre tomentum present laterally (very wide) and in mid part. Metasternum darker than abdomen, almost whole area covered with tomentum, its punctuation very dense, punctures diameters very big, circular, mostly covered with tomentum. Sides of metasternum completely covered with ochre tomentum, yellowish setation abundantly developed. Mesometasternal process with sharp keel protruding slightly downwards. Prosternum brown to reddish, whole surface covered with golden-ochre tomentum and moderately long yellow setation. Mentum brownish, its setation reddish to dark yellow.

Legs. Rather short, colouration brownish with mild metallic lustre. Femora and tibiae



Figs 9-13. *Taeniodera corticalis insularis* ssp. nov.: 9- habitus dorsal aspect, male; 10- habitus ventral aspect, male; 11- habitus lateral aspect, male; 12- aedeagus; 13- aedeagus lateral aspect.

with numerous, miniature patches of yellowish tomentum and yellow setation. Protibia bidentate, transversal carina of meso- and metatibia not developed. Terminal spurs of meso- and metatibia moderately long, slightly curved. Terminal spur of protibia very short.

Genitalia. Parameres obtusely narrowing from base to apex, apical hook more developed than in other subspecies (Figs 12-13).

**Variability.** Body size 15.9-17.1 mm. In all other respects almost identical.

**Sexual dimorphism.** Female unknown.

**Differential diagnosis.** The newly described subspecies differs from the nominotypical subspecies occurring in Malay Peninsula and Sumatra mainly in dorsal and ventral ochre tomentum, which is much more abundant in the nominotypical subspecies, covering almost whole body except of small part of lateral ridge of elytra, disc of pronotum and two midlines of the abdomen. In the newly described subspecies, the golden-ochre tomentum covers only small part of the pronotum in the form of longitudinal patches, inner part of elytra and smaller parts of the ventrum. The nominotypical subspecies differs also in more incised margin of clypeus, which is almost straight in the newly described taxa. Parameres of the nominotypical subspecies are ending with almost square-shaped apical lobe, which is slightly rounded in the newly described insect.

**Etymology.** Remoteness and isolation of Nias Island from the mainland of Malay Peninsula and large Sumatra Island gives the name to new taxa.

**Distribution.** Indonesia, N. Sumatra Province, Nias Island.

***Euselates (s. str.) kubani sp. nov.***

(Figs 14-21)

**Type locality.** NE LAOS, Xieng Khouang Province, Phonsavan region.

**Type material.** Holotype (♂) labelled: LAOS – NE, Xieng Khouang/ prov., 19 38 20N 103 20 20E/ Phonsavan, (30 km NE)/ PHOU SANE Mt., 1420m/ 10.-30.v.2009, V. Kubáň leg// Secondary mountain forest/ *flightintercepttrap*/ Laos 2009Expedition/ NHMB Basel/ NMPC Prague. Paratypes: (No. 1 ♀) labelled: the same as holotype; (No. 2 ♂) labelled: LAOS-NE, Xieng Khouang prov./ 19 37 8N 103 20 1 E 30km NE/ Phonsavan : Ban Na Lam/ Phou Sane Mt., 1300-1700m/ 10.-30.v.2009, M.Geiser leg//NHMB Basel, NMPC Prague/ Laos 2009 Expedition/ M. Brancucci, M. Geiser/ Z. Kraus, D. Hauck, V. Kubáň.

**Description of holotype.** Body parallel, size 13.1 mm, maximum humeral width 5.5 mm. Colouration black/red with yellowish tomentum ornamentation.

Head. Black, with deep and strong granulation, medially reflected. Widest in front of apex. Laterally with two yellowish tomentum stripes, not bordering with lateral margin and not reaching apical margin. Lateral border and frons mid line not developed. Apical margin of clypeus moderately deeply incised. Long yellowish setation covers total length. Antennae ginger to brownish, reddish setation long and abundant. Length of stalk and club approximately same.

Pronotum. Black, almost without reflection, parallel-sided. Punctuation very dense, punctures circular, almost confluent. Interspaces between punctures very narrow or almost absent. Posterior margin and basal lobe impunctate. Long yellow to reddish setation present throughout total length, except of posterior margin and basal lobe. Sides with golden-yellow tomentum stripe, not reaching posterolateral and anterolateral margins. Mid part with very wide (almost 30 % of total width) yellow tomentum stripe, reaching to anterior and posterior margin.

Scutellar shield. Small, black, triangular, its antero-lateral sides indistinctly curved, impunctate. Apex and most of mid part decorated with yellowish tomentum. Yellow setation abundant.



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Figs 14-21. *Euselates* (s. str.) *kubani* sp. nov.: 14- habitus dorsal aspect, male; 15- habitus ventral aspect, male; 16- habitus lateral aspect, male; 17- aedeagus; 18- aedeagus lateral aspect; 19- habitus dorsal aspect, female; 20- habitus ventral aspect, female; 21- habitus lateral aspect, female.

Elytra. Brick red with patches of black, mainly in anterior half. Yellowish tomentum present, but much reduced. Anterior half with two black, longitudinal stripes, one in subscutellar area, second, longer laterally placed stripe starts from humeral calli and stretches slightly over anterior half. Apical, circularly shaped patch is placed between sutural ridge and apical calli. Pair of tiny, yellow, tomentum patches placed on sutural ridge approximately in mid part of each elytron. Pair of very small lateral patches are placed in anterior half between lateral ridge and lateral margins. Long, yellowish setation developed throughout total length, but on apex longer and denser. Each elytron with four fine striolate lines beside sutural ridge. Sutural ridge flat throughout total length. Humeral and apical calli obtuse.

Pygidium. Colouration blackish, deeply wrinkled, lustre very mild. Base and mid part with golden-yellow tomentum. Ochre setation rather long and abundant.

Ventrum. Black, moderately reflected. Abdominal sides with long, yellowish setation, each abdominal segment with golden-yellow tomentum placed laterally beside posterior margin. Midline impression not developed. Mid part of metasternum punctured, laterally with more or less developed striolation and covered with long yellowish setation. Mesometasternal process small, obtusely keel-shaped. Lateral sides and anterolateral margins of metasternum decorated with yellow tomentum. Prosternum black, laterally with very long setation and yellow tomentum. Mentum black, punctation very dense, mid part covered with yellowish setae.

Legs. Moderately long, gracile. Femora dark brown to black, tibiae dark reddish. Protibia tridentate, posterior dent small, but rather sharp. Meso- and metatibia simple, its posterior carina not developed. Tarsi moderately long, colouration blackish with mild lustre.

Genitalia. As in most representatives of genus, asymmetrically developed (Figs 17-18).

**Variability.** Second available male in all respects similar to holotype male.

**Sexual dimorphism.** As in most *Euselates* species, females are very different from males. Body size larger 19.2 mm (excluding pygidium). Granulation of pronotum deeper and denser. Mid tomentum stripe of pronotum much narrower. Elytra darker, red to brown with patches of black, not brick to reddish as in males. Yellowish ornamentation of elytra more marked. Striolation of elytral lateral ridge and apex deeper and denser. Pygidium with reduced tomentum, its wrinkles deeper. Ventral, tomentum decoration more abundant. Protibia is tridentate as in males, but all teeth are more robust, the protibia is shorter and more robust.

**Differential diagnosis.** Very densely and deeply granulate head, extremely broad tomentum stripe of pronotum, differently composed red and black areas of elytra, small body size and unique shape of male parameres distinguish the newly described species from all its congeners.

**Etymology.** Named after Vít Kubáň (Praha, Czech Republic), well known Buprestidae specialist and my friend, who collected the type specimens.

**Distribution.** NE Laos, Xieng Khouang Province, Phonsavan region, Mt. Phou Sane.

***Ixorida (Mecinonota) subalpina* sp. nov.**  
(Figs 22-26)

**Type locality.** Indonesia, West Sumatra Province, Mt. Sanggul, 1200-2000m alt.

**Type material.** Holotype (♂) labelled: INDONESIA, West Sumatra/ MT.SANGGUL, 1200-/ 1900m, V.2012, Landai/ v.env., cca 35 km N of/ Payakumbuh, St. Jákl leg. Paratypes: (Nos. 1-3 ♂♂ and No.4 ♀) labelled: the same as holotype; (Nos. 5-8 ♂♂ and No. 9 ♀) labelled: INDONESIA, West Sumatra/ MT. SANGGUL, 1200-2000m/ Landai v. env., cca 35 km N of/ Payakumbuh, VI. 2012/ St. Jákl leg., (No. 10 ♂) labelled: INDONESIA, WEST Sumatra/ MT. SANGGUL, 1800m alt./ VI. 2013, Landai v./ env., cca 35 km N of Payakumbuh/ local collector leg., (Nos. 11-15 ♂♂, Nos. 16-21 ♀♀) labelled: same as paratype No. 10, but 10.-28.v.2014.

**Description of holotype.** Oval, black-reddish with yellow tomentum. Body size (excluding pygidium) 13.4 mm, maximum humeral width 6.5 mm.

Head. Frons completely black, posterior half of clypeus black, anterior half brownish to reddish. Punctuation denser in posterior half, punctures moderately large, but dense. Interspaces between punctures very narrow. Yellowish setation developed uniformly throughout total length. Glabrous posterior mid line short, but developed. Two lateral, golden-yellow tomentum stripes running from base to clypeus apex, but shortly not reaching apical margin. Apex of clypeus unbordered, not elevated, in middle deeply incised. Antenna light brown, club darker. Length of stalk and club approximately same.

Pronotum. Black, shining, decorated with three longitudinally running yellowish tomentum stripes. Punctuation fine and simple, but deep and dense. Interspaces between punctures same wide as diameters or smaller. Laterally with rather high border reaching anterolateral and posterolateral margins. Anterior and posterior margins unbordered. Central tomentum stripe reaching posterior margin of basal lobe, but not anterior margin. Lateral stripe runs from mid of anterior margin almost to posterolateral margin, near anterolateral margin shortly interrupted. Setation short, but dense, its colouration black.

Scutellar shield. Black, triangular, slightly curved in basal half. Disc with punctuation, laterally glabrous, impunctate. Mid line decorated with golden-ochre tomentum band stretching from base to apex.

Elytra. Tricoloured, black-red with yellow tomentum. Body narrowing sharply to apex, which is more than two times narrower than base. Subscutellar part blackish, rest of mid part reddish. Between lateral ridge and lateral margins black. Sutural ridge and apical margin bordered with yellow tomentum, Anterior half with two transverse patches between lateral ridge and lateral margins. Humeral calli distinctly developed, impunctate. Apical calli flattened, indistinct. Sutural depression with 5-6 fine striolate lines. Intervals transversally wrinkled. Tomentum patches bearing yellowish setation, rest of surface with blackish to dark brown setation. Between lateral ridge and lateral margin with densely developed granulation.

Pygidium. Semicircular, densely granulate throughout total length. Colouration black, mid part with yellow tomentum patch. Setation long, black on sides, yellowish in mid part.

Ventrum. Black with mild metallic lustre. Abdomen with longitudinally elongate simple punctures bearing blackish setae. Sides of each segment decorated with golden-ochre tomentum, two first anterior segments completely covered at sides, other only near posterior



Figs 22-26. *Ixorida (Mecionota) subalpina* sp. nov.: 22- habitus dorsal aspect, male; 23- habitus ventral aspect, male; 24- habitus lateral aspect, male; 25- aedeagus; 26- aedeagus lateral aspect.

margins. Metasternum black, shining, its punctation thinner and finer than on abdomen. Sides of metasternum with more abundant yellow tomentum. Mid line indistinctly developed. Mesometasternal process with round termination, which is protruding slightly over level of mesocoxae. Prosternum black, wrinkled, its sides with abundant yellow tomentum. Epimeron completely covered with tomentum. Mentum black with darker, long setation.

Legs. Moderately long, gracile. Femora dark brown to brown, tibia light brown, tarsi darker than tibia. Distance between posterior and mid tooth approximately double than distance between two anterior teeth. Transverse carina of mesotibia reduced, carina of metatibia sharply developed. Terminal spurs of metatibia long and sharp, inner spurs slightly curved.

Genitalia. Parameres sharply narrowing to apex, apical width approximately three times narrower than base. Terminal hook moderately long, rather sharp (Figs 25-26).

**Variability.** Size range 13.1-13.9 mm. In other aspects same.

**Sexual dimorphism.** Size 13.9-14.1 mm. Females are very similar to males. The protibia is more robust and slightly shorter, teeth of the protibia are more developed. Abdomen wider and more arched. In other aspects similar or same.

**Differential diagnosis.** From the commonest species of the group, flying in Sumatra, *Ixorida (Mecinsonota) regia* ssp. *sumatrana* Mikšič, 1972, the newly described insect differs in several aspects: I. punctuation of pronotum and head is several times denser in the new species, II. the lateral band of the pronotum is differently shaped and interrupted near the anterolateral margin, III. the completely black pronotum in the new species, but laterally brown in *I. (Mecinsonota) regia* ssp. *sumatrana*, IV. between lateral ridge and lateral margins of elytra two transverse tomentum patches are present in the newly described species, but there is an only single transversal patch in *I. (Mecinsonota) regia* ssp. *sumatrana*, V. the striolation and punctuation of elytra are deep and dense in the newly described species, but fine and simple in *I. (Mecinsonota) regia* ssp. *sumatrana*, VI. the mesometasternal process is narrowed to the apex in the newly described species, but widened to the apex in *I. (Mecinsonota) regia* ssp. *sumatrana*, VII. the protibia teeth are approximately equidistant in *I. (Mecinsonota) regia* ssp. *sumatrana*, but in the newly described species the protibia posterior tooth twice more far from mid tooth than is distance between anterior and mid teeth, VIII. the genitalia of the new species are completely different. *Ixorida (Mecinsonota) subalpina* sp. nov. stays closer to *Ixorida (Mecinsonota) rataji* Mikšič, 1972 flying in Malay Peninsula and its subspecies flying in north of Sumatra and *Ixorida (Mecinsonota) gordonii* Mikšič, 1972 occurring in Borneo, but both mentioned taxa can be easily distinguished by different composition of tomentum on pronotum and elytra and differently positioned teeth of protibia; genitalia of both species also differ from the newly described taxa.

**Etymology.** The name is derived from the altitude at which most specimens were collected, subalpine moss forest over 1700 m.

**Distribution.** Indonesia, West Sumatra Province, Mt. Sanggul, 1200-1900 m.

***Ixorida (Mecinsonota) mindoroana* sp. nov.**

(Figs 27-31)

**Type locality.** The Philippines, Mindoro Island, Mt. Halcon.

**Type material.** Holotype (♂) labelled: Mt.Halcon/ Mindoro Is./ Philippines/ 2.iv.2003. Paratypes: (No. 1 ♂) labelled: Mt. Halcon/ Mindoro Is./ Philippines/ V.2007/ Mohagan leg.; (No.2 ♀) labelled: PHILIPPINES/ MINDORO IS./ IV.2009/ local collector leg.; (No. 3 ♀) labelled: the same as holotype.

**Description of holotype.** Black, moderately shining, decorated with beige coloured tomentum. Body length (excluding pygidium) 15.0 mm, maximum humeral width 6.5 mm.

Head. Black with mild lustre, sides with beige tomentum band, not reaching apical

margin. Punctuation dense, diameters of punctures much wider than interspaces. Laterally bordered. Apical margin of clypeus straight, mid part incised. Setation long and abundant, its colouration black or yellow (area of tomentum band). Antennae short, its colouration black, except of brownish inner sides of club lamellae. Club slightly longer than stalk.

Pronotum. Semioval, colouration black, decorated with beige tomentum. Punctuation dense, puncture diameters bigger than interspaces. Setation moderately long, rather dense, colouration black. Disc with narrow, longitudinally running beige tomentum band not reaching anterior and posterior margins. Sides with two beige tomentum longitudinal patches, both placed in anterior half. Basal lobe with rather wide, shallow impression. Laterally bordered, posterior margin completely impunctate and shining.

Scutellar shield. Black, moderately big, triangular. Mid part wrinkled, basal half with beige tomentum.

Elytra. Black with medially developed lustre, each elytron decorated with six beige-golden tomentum patches. Three tomentum patches are placed in anterior half, three in posterior half (Fig. 27). Setation rather long, blackish. Setation in tomented parts yellowish. Disc with five to six striolate lines, which are rather deep. Subscutellar area with medially dense simple punctuation. Between lateral ridge and lateral margins with dense more or less transversal wrinkles. Humeral and apical calli distinctly developed, both obtuse, impunctate. Sutural ridge elevated throughout total length, except of subscutellar part. Elytra apex almost straight, bearing long, black setation.

Pygidium. Semicircular, black. Mid part covered with circular, beige-gold tomentum patch. Setation dense and long, its colouration black or beige-golden.

Ventrum. Abdomen black with metallic lustre, covered with long yellowish setation (especially at sides). First, second and fourth abdominal segments with beige-golden tomentum placed laterally beside posterior margins. Third abdominal segment only with tiny patch placed laterally. Central abdominal furrow absent. Metasternum black, its punctuation simple, but deep. Sides of metasternum decorated with two large patches of beige tomentum. Setation rather long, its colouration blackish or beige. Mesometasternal process black and shining, its termination keel-shaped, protruding slightly over level of mesocoxae. Prosternum black, wrinkled, sides with abundant beige tomentum. Mentum black, sides wrinkled, setation reddish.

Legs. Black, rather short. Protibia tridentate, posterior tooth very reduced. Distance between protibia teeth approximately same. Meso- and metatibia carinate in posterior half. Metatibia spurs short, robust, sharply developed.

Genitalia. Parameres wide at base, narrowing sharply to apex, apical hook anchor-shaped (Figs 30-31).

**Variability.** Size of second available male 14.2 mm. In all other aspects identical with holotype.

**Sexual dimorphism.** Two paratype females (13.5 mm and 15.0 mm) are very similar to males. Protibia also tridentate, but slightly shorter and more robust, teeth of protibia bigger with rather big posterior tooth. Abdomen more arched. In other aspects same as males.



Figs 27-31. *Ixorida (Mecinsonota) mindoroana* sp. nov.: 27- habitus dorsal aspect, male; 28- habitus ventral aspect, male; 29- habitus lateral aspect, male; 30- aedeagus; 31- aedeagus lateral aspect.

**Differential diagnosis.** *Ixorida (Mecinsonota) vidua* Wallace, 1867 flying in Mindanao can be regarded as a closest congener of the newly described species. It can be distinguished from *Ixorida (Mecinsonota) mindoroana* sp. nov. by several characteristics: I. punctuation of pronotum thinner with puncture diameters same or smaller than interspaces, but bigger than interspaces in the newly described species. II. pronotal lateral tomentum band of *I. vidua* not interrupted, but consisting of two separated patches in the newly described species, III.

elytron of *I. vidua* with five silver-bluish patches, but with six beige-golden patches in the new species, IV. ventral tomentum colouration white-bluish in *I. vidua*, but ochre in the newly described insect, V. setation shorter and thinner in *I. vidua*, but long and abundant in the new species, VI. termination of mesometasternal process narrower in *I. vidua*, but much wider in the new species, VII. hook of paramere apex bigger and more robust in *I. vidua*, but more reduced in the newly described species.

**Etymology.** Named after Mindoro Island, type locality of species.

**Distribution.** Philippines, Mindoro Island, Mt. Halcon.

***Ixorida (Mecinonota) venerea wokamana* ssp. nov.**

(Figs 32-36)

**Type locality.** Indonesia, SE Moluccas, Aru Archipelago, Wokam Island.

**Type material.** Holotype (♂) labelled: Indonesia, SE Moluccas/ ARU ISLS., Wokam Isl./ 0-50 m, II.2009/ local collectors lgt. Paratypes (Nos. 1-2 ♂♂ and Nos. 3-10 ♀♀) labelled: the same as holotype.

**Description of holotype.** Body size (excluding pygidium) 13.1 mm, maximum humeral width 5.4 mm. Tricoloured, oval, with mild lustre, legs reddish.

Head. Frons black, clypeus reddish. Lateral tomentum band running from base of frons to clypeal margin, not reaching margin of clypeus. Punctuation of frons fine and simple, punctuation of clypeus much denser with puncture diameters larger than interspaces. Antenna reddish, its setation also reddish.

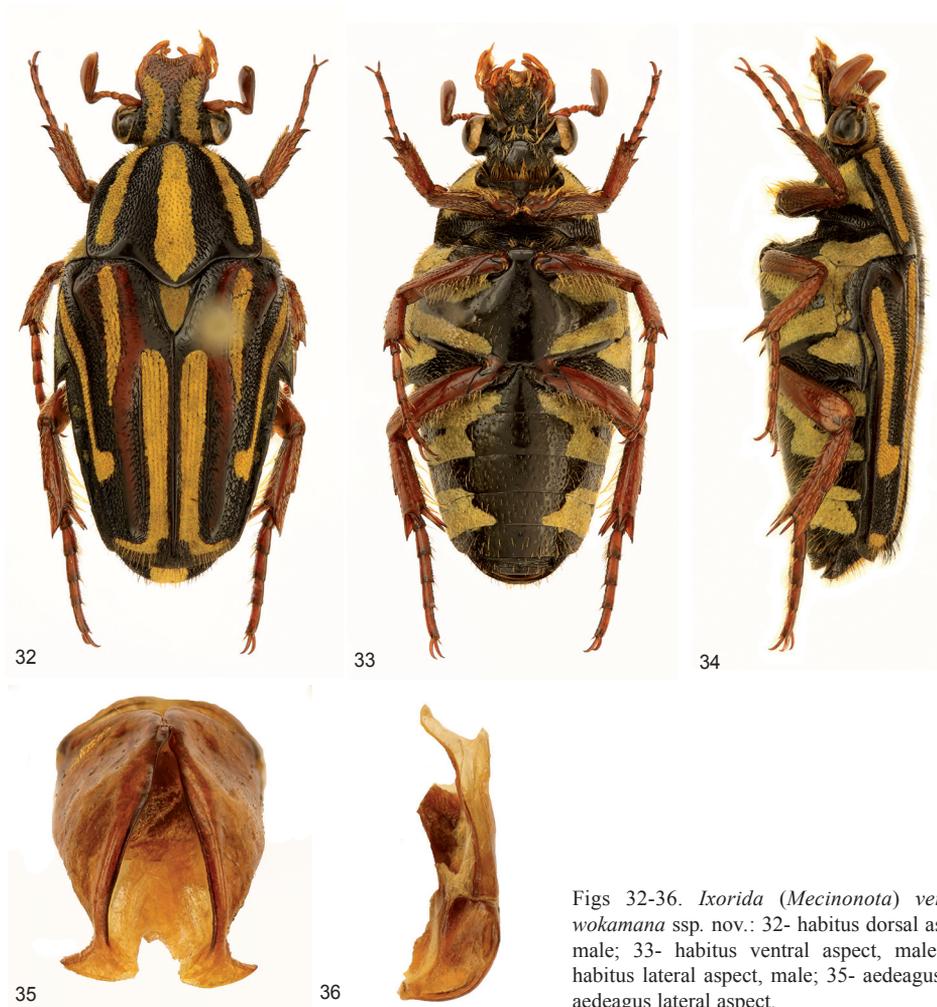
Pronotum. Completely black with two laterally and one medially running broad yellow-golden tomentum bands. Punctuation very dense, punctures almost confluent, except of glabrous basal lobe and posterior margin. Laterally bordered, setation black and yellowish (in areas of yellow-golden tomentum).

Scutellar shield. Large, black, triangular. Most of scutellum covered with yellowish tomentum, leaving black only lateral sides.

Elytra. Tricoloured, with mild metallic lustre. Lateral ribs and humeral calli brownish, rest of elytra black. Composition of yellow-golden tomentum similar to other subspecies. Discal impression with irregularly running striolate lines completely covered with yellow tomentum. Between lateral ridge and lateral margin with transversal wrinkles. Humeral and apical calli developed. Sutural ridge elevated in posterior half, its termination slightly protruding over elytra apex.

Pygidium. Semicircular, black, arched. Centre of base and disc with one tomentum patch. Dense setation present throughout total length.

Ventrum. Abdomen black, arched, medial impression absent, medially dense setation yellowish. Punctuation of abdomen dense, but simple. Sides decorated with yellow-golden tomentum, except of posterior segment. Metasternum black, shining, almost impunctate. Sides of metasternum with abundant yellow tomentum. Mesometasternal process flat, widening to apex, protruding slightly over level of mesocoxae. Prosternum black, wrinkled, sides and epimeron covered with yellow tomentum. Mentum black, wrinkled, long setation reddish.



Figs 32-36. *Ixorida (Mecinonota) venerea wokamana* ssp. nov.: 32- habitus dorsal aspect, male; 33- habitus ventral aspect, male; 34- habitus lateral aspect, male; 35- aedeagus; 36- aedeagus lateral aspect.

Legs. Rather short, completely reddish. Protibia tridentate, posterior tooth small. Distance of posterior and medial teeth slightly shorter than distance between medial and anterior teeth. Meso- and metatibia carinate in posterior half. Terminal spurs of meso- and metatibia short and sharp.

Genitalia. Similar to other subspecies (Figs. 35-36).

**Variability.** Size of two additional available males 12.9 mm and 13.0 mm. In all aspects similar to holotype.

**Sexual dimorphism.** Size range 11.5-13.3 mm. Protibia of females shorter and slightly more robust. Abdomen more arched. In one female, the reddish colouration of elytra is more spread, the whole area between lateral ridge and lateral margin is reddish. In other aspects females are very similar to males.

**Differential diagnosis.** The newly described subspecies is easily distinguished from others by the combination of the following characteristics: very small size, tricoloured elytra, tricoloured head, completely black pronotum (except of yellow tomentum), reddish legs. From its congener described from nearby Papua New Guinea mainland *Ixorida (Mecinsonota) venerea* ssp. *papuana* Mikšič, 1972, the new subspecies differs by its tricoloured elytra and smaller size. From *Ixorida (Mecinsonota) venerea* ssp. *keyensis* Mikšič, 1972, the newly described subspecies differs by its smaller size and tricoloured elytra. Elytra of *I. venerea* ssp. *keyensis* have only a small patch of brown colour in area of the discal impression, therest of elytra is black. From the subspecies described from Tanimbar Archipelago, *Ixorida (Mecinsonota) venerea* ssp. *yamdena* Jákl, 2008, the newly described subspecies differs by its smaller size and completely black pronotum, which is black with reddish margins in *I. venerea* ssp. *yamdena*.

**Etymology.** Named after one of Aru Archipelago islands, Wokam Island, type locality of new subspecies.

**Distribution.** Indonesia, SE Moluccas, Aru Archipelago, Wokam Island.

***Ixorida (Aurelia) gloriosa* sp. nov.**  
(Figs. 37-41)

**Type locality.** Indonesia, CW Sulawesi, Palolo Palu.

**Type material.** Holotype (♂) labelled: "Palolo Palu/ SULAWESI, 1994 JAN".

**Description of holotype.** Black/reddish species with abundant yellowish tomentum. Body size (excluding pygidium) 15.8.mm, maximum humeral width 7.0.mm.

Head. Frons black, clypeus reddish. Laterally with broad yellowish tomentum band, reaching apical margin of clypeus. Elevated mid line of frons clearly developed. Punctuation thin, punctures large, circular, interspaces bigger than puncture diameters. Yellowish setation thin, but rather long. Apical margin of clypeus slightly elevated, middle part incised. Antenna and its setation reddish. Club shorter than stalk.

Pronotum. Completely covered with yellowish tomentum, leaving black only two longitudinal bands running from base to anterior half of length and small patch near apex of basal lobe. Punctuation of black areas deep, but simple, interspaces as big as diameters of punctures. Dense and rather long yellowish setation present throughout total length including untomented black areas. Finely bordered lateral margins parallel.

Scutellar shield. Black, triangular, elongate. Yellowish tomentum covers most surface, leaving black only impunctate lateral margins.

Elytra. Oval, colouration black/reddish decorated with abundant yellow tomentum. Between lateral rib and lateral margins completely black. Sutural ridge and subscutellar area also black. Lateral ridge and anterior third of inner part of elytra reddish. Discal impression dark brown to blackish. Anterior half of discal impression and whole elytra apex covered with yellowish tomentum. Between lateral rib and lateral margins with two large tomentum patches, one in anterior half, second in posterior half of elytra. Discal impression with four striolate lines, intervals broad. Punctuation fine, rather deep, thin. Intervals striolate. Lateral



37



38



39



40



41

Figs 37-41. *Ixorida (Aurelia) gloriosa* sp. nov.: 37- habitus dorsal aspect, male; 38- habitus ventral aspect, male; 39- habitus lateral aspect, male; 40- aedeagus; 41- aedeagus lateral aspect.

rib almost impunctate. Lateral sides densely granulate. Humeral calli big, high and rather sharp. Apical calli much more obtuse. Yellowish setation long and dense.

Pygidium. Semicircularly shaped, completely covered with yellow tomentum and long setation.

Ventrum. Abdomen black with simple, longitudinal punctures bearing yellow setae. Four anterior segments laterally decorated with yellow tomentum bearing dense setation. Tomentum of first and second anterior segments much more abundant. Metasternum black, its punctation moderately dense, except of glabrous mid line. Sides of metasternum covered with yellowish tomentum bearing dense setation. Mesometasternal process small, narrow,

elongate, behind transversal furrow sharply narrowing to apex, which protrudes over level of mesocoxae. Prosternum black, striolate, almost completely covered with yellow tomentum and dense setation. Epimeron completely covered with yellow tomentum. Mentum black with ginger setation, its sides covered with tomentum.

Legs. Moderately long. Coxae dark brown, femurs and tibia reddish. Tarsi blackish, except of posterior tarsomere of mesotarsi and two posterior tarsomeres of metatarsi, which are reddish. Protibia tridentate, distance between posterior and medial teeth slightly shorter than distance between medial and anterior teeth. Meso- and metatibia carinate in its posterior half, carina of mesotibia clearly developed and rather sharp.

Genitalia. Paramere base very broad, anterior third almost parallel, and from here narrowing very sharply (Figs 40-41).

**Variability and sexual dimorphism.** Additional males or female unknown.

**Differential diagnosis.** After the first examination, the newly described species looks like small and paler *Ixorida (Aurelia) thoracica* Wallace, 1867. It can be distinguished by the complex of the following characteristics: I. pronotum of *I. thoracica* completely covered with yellow-greenish tomentum with ginger to brown pilosity, but incompletely covered with yellow-golden tomentum bearing yellowish setation in newly described species, II. in *I. thoracica* lateral rib of elytra entirely black, discal impression of elytra completely black, but in new species lateral rib reddish, elytra discal impression entirely brown, III. protibia in *I. thoracica* tridentate, but posterior tooth very reduced staying very close to medial tooth, tridentate protibia of newly described species with all three teeth rather big and posterior tooth staying rather far from medial tooth, IV. mesometasternal process in *I. thoracica* sharp, but short, in the newly described species more elongate and protruding over the level of mesocoxae, V. in *I. thoracica* base of parameres approximately twice wider than apex and apical hook sharply heading back, but in the new species base of parameres more than three times wider than apex and apical hooks heading to sides.). Other two representatives of subgenus *Aurelia*, respectively *Ixorida (Aurelia) decorata* Antoine, 1986 and *Ixorida (Aurelia) philippeii* Sakai et Nagai, 1998 have completely different pattern of pronotum and elytra and also different genitalia.

**Etymology.** Named after the beauty of the species.

**Distribution.** Indonesia, CW Sulawesi, Palu Palolo.

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