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New *Kunbir* and *Merionoeda* (Coleoptera, Cerambycidae) from the Island of Lombok, Indonesia

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Abstract Three new species of the genera *Kunbir* LAMEERE and *Merionoeda* PASCOE are described as the first representatives of the genera from Lombok Island of Indonesia. *Kunbir lombokiana* sp. nov. is characterized by the black apical third of elytra and may have closer relationship to *K. teleporoides* LAMEERE of the type species from India. *Merionoeda wayani* sp. nov. may be an isolated species of the genus from tropical Asia near the equator, and is similar in coloration to *M. africana africana* DISTANT from Transvaal of northern South Africa. *Merionoeda lombokiana* sp. nov. may have some relationship to *M. puella* PASCOE from Sulawesi Island and *M. baliana* YOKOI et NIISATO from Bali Island, and doubtless belongs to the same lineage. The female genitalia of *M. baliana* are described as a supplement.

In November 2007, we made a short collecting trip to Lombok Island, just east of Bali Island beyond Wallace's line, for the purpose of researching the cerambycids fauna there. Our main aim was to discover new *Merionoeda* species from Lombok, since we had already found a new species of the genus from Bali, and expected that some unknown members could be found on this adjacent island. Our collecting trip was a success. We found one single male of *Merionoeda* species in the forest on the northwestern slope of Mt. Duduk, where guided by I WAYAN Guphu a local collector we tried to collect cerambycid species on tree blossoms . After our trip, WAYAN tried further to collect in localities near the mountain and succeeded in obtaining not only some additional specimens of the species already collected but also another unknown species and a new species of *Kunbir*, a genus related to *Merionoeda*, together with a small series of interesting cerambycid beetles.

According to our previous knowledge, the *Merionoeda* fauna in the Wallacea is

rather poorly represented since only eight members of the genus have been recorded so far from the extensive transversal area stretching from Mindanao through Sulawesi to northern Australia (PASCOE, 1858, 1869; GESTRO, 1877; JORDAN, 1894; HELLER, 1916; LEA, 1917), while *M. baliana* was only recently recorded from Bali Island south of the equator (YOKOI & NIISATO, 2007) and additionally two new taxa will be described from Seram Island and Biak Island in our cooperative paper (YOKOI & NIISATO, 2008). Most of the previous authors examined only one single or a very few specimens for their descriptions, lacking sufficient material in the collections available to them. In fact, the *Merionoeda* beetles are rather hard to find in the forests of the Wallacea, since we seldom encounter the tree blossoms, to which the adult beetles are attracted and fly for feeding. The good result in Lombok was achieved largely because the seasonal factor was favorable, as many trees were just blooming in the forest of the island. It is expected that the *Merionoeda* fauna of the Wallacea will be gradually uncovered with the help of field surveys during a suitable season such as we experienced when the adult beetles appear. In the following paragraphs, we will describe a new species of the genus *Kunbir* and two new species of the genus *Merionoeda* based on the specimens collected in our very recent survey of Lombok Island.

We would like to thank Mr. I WAYAN Guphu and his assistants of Lombok, Indonesia, for their kind help in the field. Thanks are also due to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo for his continuous guidance and Mr. Theodore L. CHILDERS for his critical reading of the original draft of this paper.

The abbreviations used in the ratios of measurement are already explained in our previous and parallel paper (YOKOI & NIISATO, 2007, 2008).

Kunbir lombokiana sp. nov.

(Figs. 1 & 5–8)

Body length: (from apical margin of clypeus to abdominal apex) 8.9 mm in ♀.

F e m a l e. Colour yellowish red, partly black or brownish black, strongly shiny in general; head yellowish red, black in eyes, antenna except for more or less reddish appendicle of terminal segment, and apex of mandibles; pronotum yellowish red; elytra reddish yellow, black in apical third; ventral surface yellowish red, brownish black in metathorax including coxae though slightly reddish at apical margin of metasternum; legs yellowish red though paler in peduncles of all femora, brownish black in fore tarsus, apical half of external side of fore tibia, mid tarsus and mid tibia except for reddish basal part, black in hind legs except for reddish yellow basal half of femur.

Head moderately projected forwards, flattened though wholly raised behind, a little narrower than the maximum width of pronotum, HW/PW 0.96, provided with large

Figs. 1–4. —— *Kunbir* and *Merionoeda* species from Lombok Island, Indonesia. —— 1, *K. lombokiana* sp. nov., holotype ♀; 2, *M. wayani* sp. nov., holotype ♀; 3, *M.* (*Ocytasia*) *lombokiana* sp. nov., holotype ♂; 4, same species, allotype ♀.



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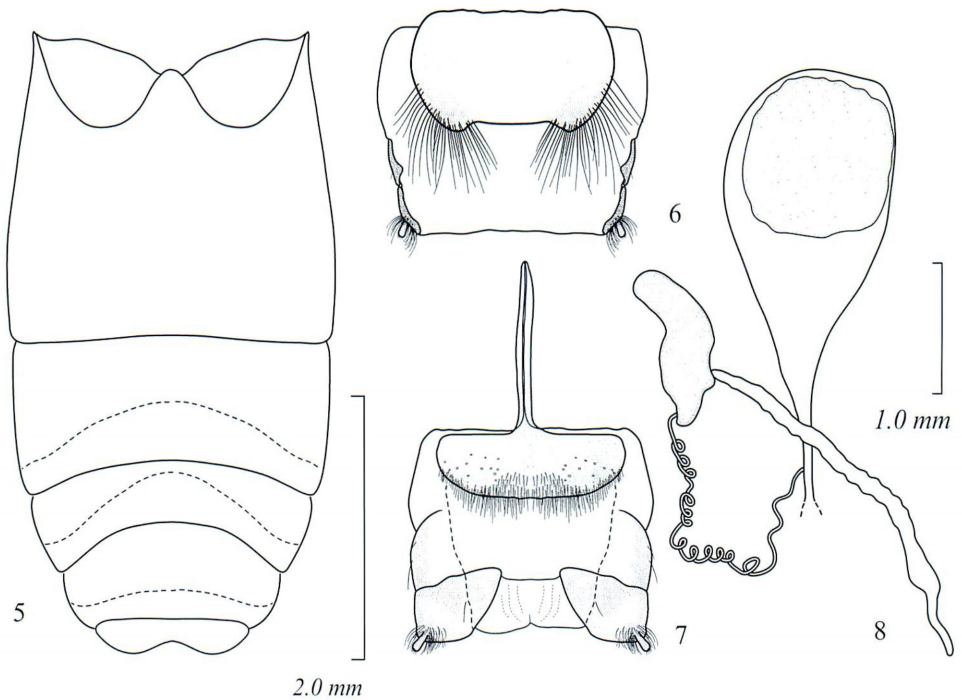
2



3



4



Figs. 5–8. —— Female abdomen and genital organ of *Kunbir lombokiana* sp. nov. from Lombok Island, Indonesia. —— 5, Abdominal sternites; 6, ovipositor (dorsal view) and tergite 8; 7, ovipositor (ventral view) and sternite 8; 8, bursa copulatrix and spermatheca.

shallow punctures on occiput except near the middle, sparsely clothed with erect pale yellow hairs; frons strongly transverse quadrate, 1/3 the length of the basal width, weakly declivous towards the median groove, scattered with a few punctures, FA/FB 1.00; clypeus large and long, 4/7 the length of basal width, weakly narrowed to apex, flattened, slightly emarginate at apex, with a few small punctures and pale hairs, front-clypeal suture indistinct; genae 3/7 the depth of lower eye-lobes; eyes medium-sized and weakly prominent, separated from one another by 3/7 the width of occiput, widely and very deeply emarginate like the other members of the genus. Antennae moderate in length, attaining middle of tergite 3, clothed with minute silvery pubescence except for scape, additionally with flying long reddish yellow hairs on basal four segments, and sparse row of same colored long hairs on undersides of segments 2–5; scape rather long, flattened, strongly thickened near apex, gently arcuate, segments 3 distinctly thickened at apex, segment 4 a little less so, and slightly longer than segment 3 and 3/4 the length of scape, apical seven segments more or less flattened, of which segments 5–10 are obtusely serrate externally, and terminal segment bluntly teethed at apex.

Pronotum slightly wider than the maximum width at middle, slightly convergent to apex, PL/PW 0.86, PA/PW 0.79, PB/PW 0.90, with sides rounded just behind apex,

moderately arcuate in basal 3/4, with a pair of small oblique swelling just before middle; disc wholly moderately convex though transversely impressed before and behind large median callosity which is highest at basal 3/8 and interrupted by a pair of deep longitudinal grooves at sides of basal half, shagreened and silvery pubescent except for the smooth callosities, clothed with flying pale yellow hairs. Scutellum very small, rounded triangular, thinly pubescent.

Elytra long and moderate in width, EL/EW 2.86, with sides gently prominent at humeri, parallel from base to middle, then slightly arcuate to apices which are simply rounded; disc evenly flattened, longitudinally depressed near suture behind scutellum and middle, moderately provided with medium-sized punctures and pale yellow hairs throughout.

Venter of thoraces shiny, very sparsely punctured, rather sparsely clothed with erect pale yellow hairs; prosternum coarsely shagreened near middle, with distinctly compressed inter-coxal process; mesosternum shagreened near middle, with inter-coxal process broad and arcuately emarginate at sides; metasternum sparsely punctured. Abdomen weakly arcuate at sides, very sparsely punctured and haired as on thoraces, with basal ventrite half the length of the abdomen, ventrite 2 arcuately narrowed posteriad, widely deeply emarginate in arcuate line at a level just before basal margin on surface, ventrite 3 long, 3/10 the length of abdomen, widely distinctly emarginate on surface and closely punctured behind the emargination, ventrite 4 closely punctured, anal ventrite transversely semicircular, deeply emarginate at middle.

Legs short, clothed with erect pale yellow hairs; hind femur almost reaching elytral apex, distinctly clavate in apical half, which is strongly swollen at internal side and weakly so at external; hind tibia about 3/4 the length of femur, gently arcuate.

Female genital organ. Tergite 8 transverse quadrate, arcuate at sides, with apical margin truncate though slightly produced at sides which are provided with dense long setae. Sternite 8 transverse semicircular, clothed with dense short setae near apical margin. Ovipositor broad and very short, slightly wider than long even though in fully extended condition, largely lightly sclerotized; paraproct only weakly sclerotized at external margins, without setae; coxite widely separated, with each lobe strongly produced inwards at base, truncate at apical margin, provided with short setae near stylus; stylus very short, obliquely produced, slightly thickened apicad. Bursa copulatrix widely ovate in oblong-shaped, though very narrowed near basal fourth. Spermatheca large and moderately sclerotized, simply slightly arcuate in apical half though produced towards the basal end, and more or less bluntly angled both dorsal and ventral sides near base; duct long, strongly bent in two times and coiled more than 12 times, entering into just before the basal end of spermatheca; gland remarkably long, more than twice the length of spermatheca, simply narrow though constricted in apical seventh, and attaching the basal fourth of dorsal side.

Type specimen. Holotype: ♀, Puncak Pusuk, Lombok Is., Indonesia, 30–XI–2007, I WAYAN Guphu leg. The holotype is preserved in the National Museum of Nature and Science, Tokyo.

Distribution. Lombok, Indonesia.

Notes. *Kunbir lombokiana* sp. nov. is the first representative of the genus from the islands of Indonesia. The genus *Kunbir* LAMEERE is the sister group of *Merionoeda* PASCOE and *Euchlanis* PASCOE though closer to the latter, and have so far been recorded about twenty species from India, Indochina, China and Taiwan. It is a very interesting fact that the new member of the genus was found on the island of Lombok, close to the equator and far from their so far known habitats, from the zoological point of view. Furthermore, the new species may have a closer relationship to *K. teleporoides* LAMEERE, the type species of the genus from India, with regard to the almost common coloration and structure of body. The new species is barely distinguished from the Indian species, differing only by the broader black apical band on the elytra which occupies apical third instead of the apical fourth as the case in the latter, as well as by the reddish yellow abdomen instead of the almost infuscate one. Though *K. lombokiana* sp. nov. may be described as a subspecies of *K. teleporoides* for their similarities, we describe it as an independent species, mainly on account of the wide geographical gap between their original localities. The new species is also somewhat similar to *K. atriapicalis* GRESSITT et RONDON from Laos, but the body is distinctly robust with a fairly broader apical band on elytra.

Kunbir lombokiana sp. nov. was known only by the holotype female which was collected by WAYAN from Puncak Pusuk of Lombok in the end of November.

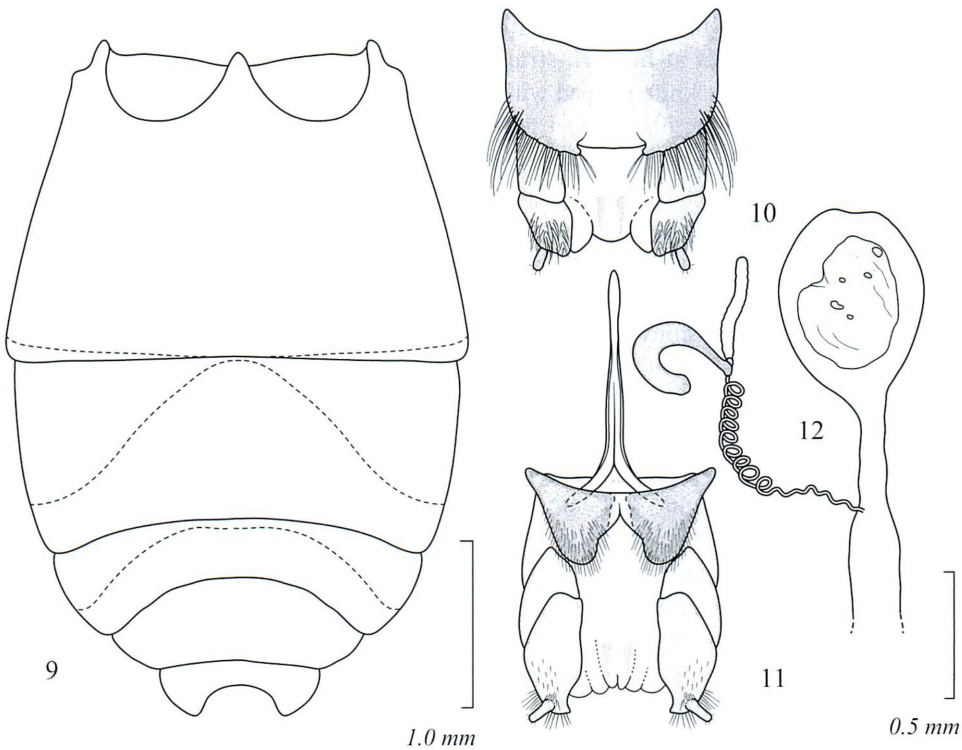
Merionoeda wayani sp. nov.

(Figs. 2 & 9–12)

Body length: (from apical margin of clypeus to abdominal apex) 8.7–8.8 mm in ♀.

F e m a l e. Colour pitchy black, strongly shiny in general even though yellowish brown in elytra, fore and mid legs, basal 5/9 of hind femur, maxilla and labium, slightly reddish in pleural process of prothorax, hind tarsus and appendicle of terminal segment of antenna, hind wings translucent black.

Head moderately projected forwards, moderately convex, as wide as or a little wider than the maximum width of pronotum, HW/PW 1.00–1.07 (M 1.03), moderately punctured except for center of occiput, obliquely furrowed at sides, sparsely clothed with pale hairs though almost glabrous on posterior part; frons nearly a half the length of the basal width, weakly declivous towards the distinct median groove, strongly punctured especially near middle, FA/FB 0.83–0.86 (M 0.85); clypeus large and long, 7/10 the length of basal width, weakly narrowed to apex, gently raised, sparsely with small punctures and hairs, with fronto-clypeal suture very deep; mandible stout and rather short, weakly arcuate; genae 2/5 the depth of lower eye-lobes; eyes large and moderately prominent, separated from one another by 4/9 the width of occiput. Antennae moderate in length, attaining the base of tergite 4, clothed with minute silvery pubescence and sparsely with pale short hairs except for only pale haired scape, additionally with sparse row of pale hairs on undersides of segments 2–5; scape long,



Figs. 9–12. Female abdomen and genital organ of *Merionoeda wayani* sp. nov. from Lombok Island, Indonesia. —— 9, Abdominal sternites; 10, ovipositor (dorsal view) and tergite 8; 11, ovipositor (ventral view) and sternite 8; 12, bursa copulatrix and spermatheca.

slender and moderately arcuate, segments 3 and 4 gently thickened apicad, equal in length to each other and 5/6 the length of scape, apical seven segments strongly depressed, of which segments 5–10 are strongly but roundly serrate externally, terminal segment provided with bluntly teethed appendicle.

Pronotum as long as the maximum width between the lateral swellings, slightly convergent to apex, PL/PW 1.00, PA/PW 0.78, PB/PW 0.92–0.93 (M 0.92), with moderately arcuate lateral swellings just before middle, strongly constricted just before the swellings, almost parallel-sided in basal third behind the swelling, with basal margin transverse near middle and weakly emarginate at sides, indistinctly bordered; disc strongly wholly convex, provided with three large prominent callosities, of which a median elongate oblong one attaining the prominent transverse area behind apex and basal sixth, a pair of large and more or less oblique ones at a level between apical and basal seventh, smooth in most parts though partly provided with a few large or irregular-sized punctures and erect pale hairs mostly on the intervening areas of callosities, matted and silvery pubescent on basal seventh behind the discal callosities. Scutellum fairly large, trapezoidal, shagreened and minutely pubescent.

Elytra relatively long and slender, EL/EW 2.08–2.18 (M 2.13), with sides moderately projected forwards at humeri, straightly narrowed to apical 3/5 then arcuate to apices which are narrow knife-shaped with small dents, rather widely dehiscent in gently arcuate line in apical 3/5; disc almost flattened and even, gently impressed near suture behind scutellum and near middle, provided with an indistinct median costa in apical fourth, provided with relatively large punctures arranged in eight irregular rows, the space between the rows being about three times the diameter of a single puncture, most of punctures are provided with pale short hairs, and supplementary pale yellow haired near bases.

Venter of thoraces shiny, densely clothed with silvery pubescence, though almost glabrous at apex and sides of prosternum, center of metasternum; prosternum strongly transversely prominent behind apical margin as on pronotum, with inter-coxal process strongly compressed between coxae; mesosternum shagreened near middle, with inter-coxal process broad and subparallel-sided; metasternum well convex, sparsely punctured. Abdomen moderately arcuate at sides, rather sparsely punctured and silvery pubescent, with basal ventrite a little more than a half the length of abdomen, ventrite 2 slightly dilated posteriad at sides, rather widely and deeply emarginate in triangular line at a level just before basal margin, ventrite 3 widely emarginate at apical margin, last two ventrites closely puncture, anal ventrite wide and widely and deeply emarginate at apex which has obtuse arcuate projection at sides.

Legs long and relatively stout; hind femur surpassing abdominal apex by about apical third, rather distinctly clavate in apical 4/9, which is strongly swollen at internal side and weakly so at external; hind tibia about 3/4 the length of femur, slightly sinuate in basal half, with small dents in two rows at external sides, terminal spur thin and rather long.

Female genital organ. Tergite 8 transverse semicircular, with apical margin gently arcuate, minutely projected inwards at sides, provided with dense long setae near sides. Sternite 8 transverse, bilobed in wide distance which are sinuate in inner margins, clothed with dense medium-sized setae near apical margin. Ovipositor moderately long though only slightly longer than wide in fully extended condition, moderately sclerotized; paraproct clearly separated from coxite by weak oblique line in dorsal side; coxite widely separated, with inner side weakly sinuate in basal 2/3 and strongly emarginate in apical third, external side oblique in apical half, narrowly truncate at apical margin, sparsely provided with short setae near stylus; stylus moderate in length, hardly thickened apicad, obliquely produced. Bursa copulatrix simply oval in apical 3/5, not so large, moderate in width near base. Spermatheca simply C-shaped more or less constricted before basal end which is thickened; duct moderate in length, coiled more than 9 times, entering into the base of spermatheca; gland moderate in length, nearly equal in the maximum width of spermatheca, simply elongate, attached with the base of spermatheca.

Type series. Holotype ♀, Margsit, Lombok Is., Indonesia, 25–XI–2007, I WAYAN Guphu leg. Paratype: 1♀, same data as the holotype. The holotype is preserved in the

National Museum of Nature and Science, Tokyo, and one female paratype is in the private collection of NIISATO.

Distribution. Lombok, Indonesia.

Notes. This new species has no direct relationship to any of the Asian members of the genus. It is very similar in coloration to *M. africana africana* DISTANT from Transvaal of South Africa. Such external similarities between two species may be caused by parallel evolution in two different zoogeographical areas. On the other hand, *M. wayani* sp. nov. has three isolate callosities on the pronotal disc like most members of the genus from Asia, while *M. africana africana* has simply a well convex one. True affinity of *M. wayani* sp. nov. is uncertain since no close relative could be found among all the so far described species of the genus.

It is most probable that *M. wayani* sp. nov. should be placed in the nominotypical subgenus by the method of elimination. The new species has a shiny elytra instead of the matted ones as species of *Ocytasia* PASCOE have; it has neither brushy hairs on the hind tibia nor elongate oviduct as in those of *Macromolorchus* PIC. However, we do not definitely assign a subgenus for the new species yet, since only female specimens are available for examination at present. Obviously, it is better to postpone the final determination until the male of the new species is found.

Two female specimens of *M. wayani* sp. nov. were collected by WAYAN in Margsit of Lombok after our survey in early November. The new name, *wayani*, is dedicated to I WAYAN Guphu for his contribution to the knowledge of the *Merionoeda* fauna in the Wallacia.

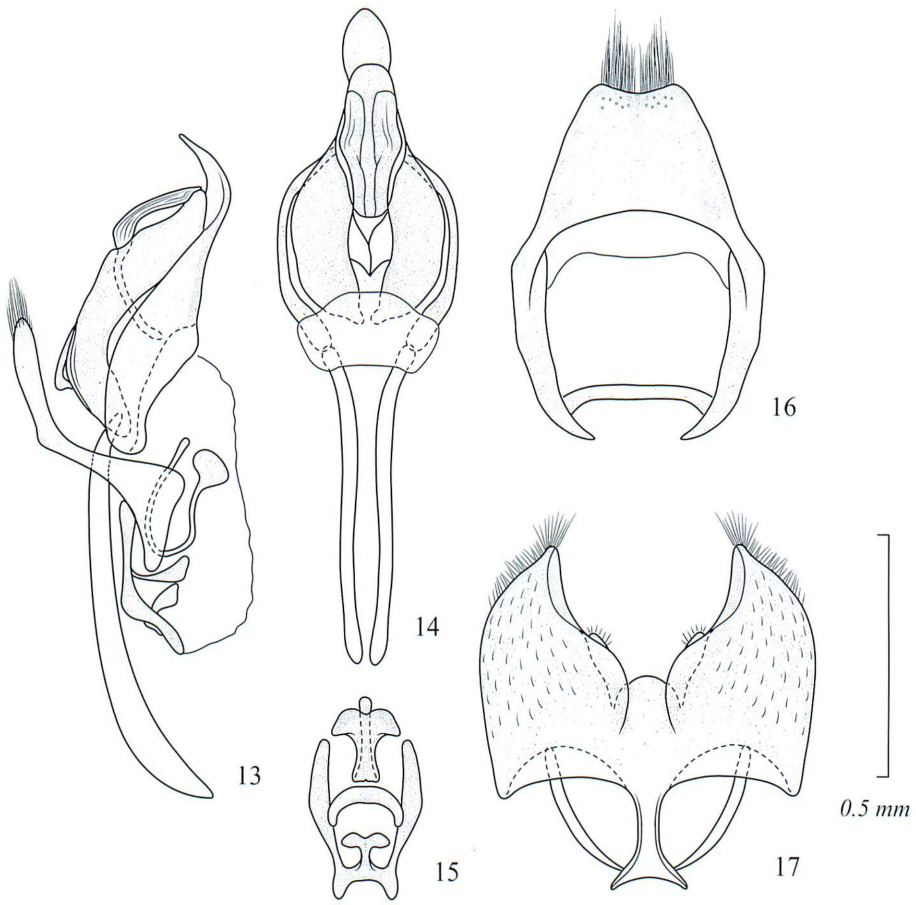
Merionoeda (*Ocytasia*) *lombokiana* sp. nov.

(Figs. 3, 4 & 13–21)

Body length: (from apical margin of clypeus to abdominal apex) 7.5–9.4 mm in ♂, 9.0–9.3 mm in ♀.

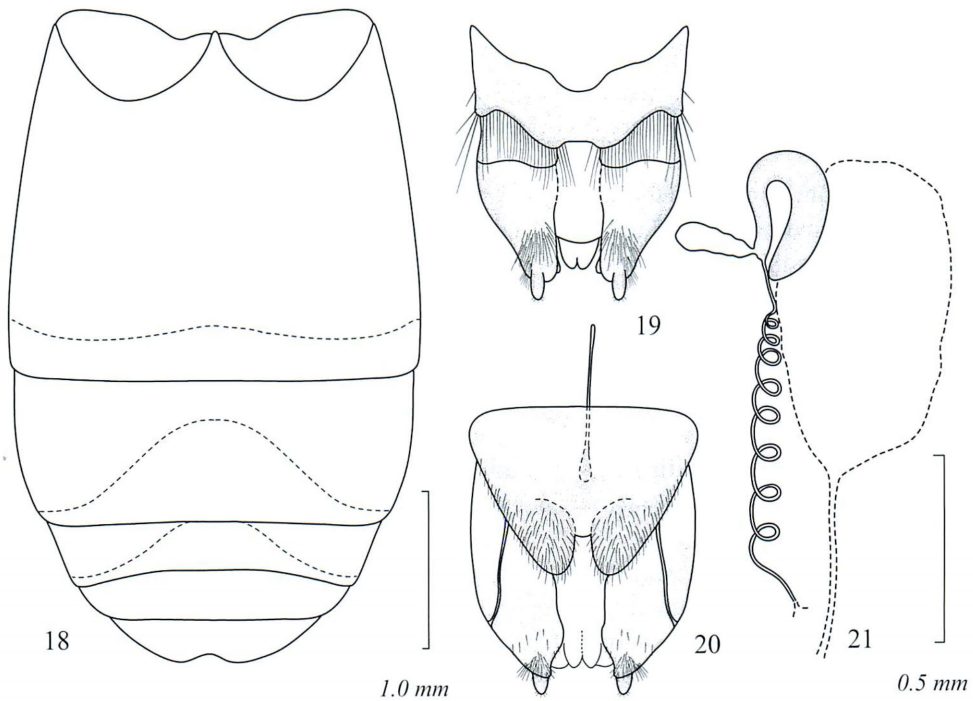
M a l e and f e m a l e. Colour reddish yellow, more or less matted except for head and pronotum, black in anterior part of head, eyes, mouthparts except for labium and maxilla, antenna except for terminal segment and apex of segment 10, and hind legs except for basal 5/9 of femur, slightly infuscate at apices of elytra, translucent black in hind wings, abdomen black in ♂ or reddish yellow in ♀.

Head relatively long for rather elongate neck, moderately projected forwards, moderately convex, slightly wider than in ♂ or nearly equal in width in ♀ to the maximum width of pronotum, HW/PW 1.04–1.19 (M 1.07) in ♂ or 0.95–1.00 (M 0.98) in ♀, coarsely punctured and silvery haired near upper eye-lobes except for a narrow midline which is slightly raised; frons nearly a half the length of the basal width, distinctly declivous towards the deep median groove, largely smooth and bare though provided with coarse punctures along the median groove and a few on the sides, FA/FB 0.83–0.85 (M 0.85) in ♂ or 0.84–0.85 (M 0.85) in ♀; clypeus nearly half the length of basal width, fairly transverse, moderately narrowed to apex, hardly raised, scattered



Figs. 13–17. Male genital organ of *Merionoeda* (*Ocytasia*) *lombokiana* sp. nov. from Lombok Island, Indonesia. —— 13, Median lobe and tegmen in lateral view; 14, median lobe in dorsal view; 15, copulatory piece in ventral view; 16, tegmen in dorsal view; 17, abdominal segment 8 in ventral view.

with small punctures with pale short hairs, with fronto-clypeal suture not so distinct; mandible moderate in length, weakly arcuate; genae 1/3 the depth of lower eye-lobes; eyes large and strongly prominent, very deeply and narrowly emarginate just before external sides under antennal scapes, separated from one another by 1/3 in ♂ or 2/3 in ♀ the width of occiput. Antennae long, attaining to the base of last tergite in ♂ or the middle of tergite 4 in ♀, clothed with silvery minute pubescence on segments 2–11, a few pale pubescence on segments 1–4, and supplemented with pale yellow hairs on undersides of segments 2–6; scape weakly clavate and slightly arcuate, smooth on dorsum, segments 3 and 4 gently thickened apicad, nearly equal in length to each other and 4/5 the length of scape, apical seven segments strongly depressed, with segments 5–10 distinctly serrate externally, especially so in segments 6–8, and terminal segment



Figs. 18–21. Female abdomen and genital organ of *Merionoeda* (*Ocytasia*) *lombokiana* sp. nov. from Lombok Island, Indonesia. —— 18, Abdominal sternites; 19, ovipositor (dorsal view) and tergite 8; 20, ovipositor (ventral view) and sternite 8; 21, bursa copulatrix and spermatheca.

provided with triangular appendicle.

Pronotum slightly shorter than the maximum width between the lateral swellings, moderately convergent to apex, PL/PW 0.96–0.97 (M 0.97) in ♂ or 0.95–0.98 (M 0.97) in ♀, PA/PW 0.77–0.80 (M 0.79) in ♂ or 0.76–0.80 (M 0.78) in ♀, PB/PW 0.94–0.98 (M 0.96) in ♂ or 0.93–0.97 (M 0.95) in ♀, with large oblique lateral swelling near middle, moderately constricted before or hardly so behind the swellings, with basal margin bisinuate and strongly produced near middle, thickly bordered throughout; disc strongly convex, provided with three distinctly prominent callosities, of which a reverse T-shaped one at a level between basal margin and basal 4/9, a pair of large oblong ones of 5/9 the length of pronotum at a level between apical third and basal 2/9, which are bounded on punctured lines from the median one in posterior halves, and also strongly raised in apical third, largely smooth though scattered with a few punctures, matted and silvery pubescent on basal third. Scutellum rounded triangular, flattened, almost smooth and hardly pubescent.

Elytra long and moderate in width, EL/EW, 2.18–2.25 (M 2.22) in ♂ or 2.05–2.13 (M 2.14) in ♀; sides with slightly prominent humeri, weakly arcuately emarginate throughout, arcuately and widely dehiscent in almost straight line in apical 4/7 to 5/8, apical part slightly pronounced as an arcuate knife-shape in ♂ though bluntly so in

straight line in ♀; disc quite flattened and even, hardly depressed even near sutural line behind scutellum, provided with a median costal line throughout though only raised in apical 3/5, shagreened on surface, provided with medium punctures arranged in nine irregular rows, most of punctures are provided with short hairs, silvery pubescent near bases.

Prosternum almost glabrous though thinly pubescent at sides, transverse part before coxal cavities and behind apical margin, with prosternal process strongly compressed between mid-level of coxae. Meso- and metathoraces finely weakly punctured, densely clothed with fine pale pubescence; mesosternal process subquadrate, rather weakly emarginate at sides and apex, weakly raised. Abdomen moderately dilated to apical third then strongly arcuately narrowed to apex, shagreened, densely clothed with silvery pubescence; in ♂, basal ventrite a little more than 2/5 the length of abdomen, anal ventrite emarginate at a level of apical third; in ♀, basal ventrite a half the length of abdomen, ventrite 2 with sides subparallel or gently dilated apicad, widely deeply emarginate at a level of basal fourth, anal ventrite transverse, shallowly concave at middle of apical margin.

Legs long and slender; mid tarsal segments in ♂ asymmetrically broadened towards external sides, with 1st segment forming rounded isosceles triangle, 2nd warped semicircular and distinctly wider than long (1.35: 1); hind femur surpassing abdominal apex by about apical third, moderately clavate in apical 4/9, which is slightly depressed at external side and marked with velvety black area as an elongate drop-shape in ♂, though only faintly depressed in ♀; hind tibia about 3/4 the length of femur, slightly arcuate or almost straight, with small dents in two rows at external sides, terminal spur rather stout and short.

Male genital organ. Basically similar to that of *M. baliana* but slender and weakly sclerotized. Sternite 8 of bilobed shape with each lobe arcuately projected inwards, clothed with short setae near apical margin. Median lobe a little less than half the length of abdomen, weakly convex and relatively broadened, with apical lobe swollen in basal 3/5, then constricted and produced to apex of dorsal plate which is rounded; dorsal plate provided with dorsal aperture which is branched arcuately convex in apical half and deeply inserted in basal half; ventral plate with apical part and strongly bent upwards in lateral view, and spoon-shaped in dorsal view; copulatory piece as shown in Fig. 14. Tegmen broad, with paramere trapezoidal uni-lobed, shallowly emarginate at apical margin which is densely provided with medium-sized setae, bluntly produced at sides of apical end of ring part.

Female genital organ. Tergite 8 arcuately transverse, with apical margin obliquely bisinuate, bluntly dented at sides, provided with dense long setae. Sternite 8 almost triangular, approximately bilobed in apical 2/5, with each lobe rounded at apex and clothed with dense short setae. Ovipositor moderately long though only slightly longer than wide in fully extended condition, rather weakly sclerotized; paraproct approximate at basal side of coxite in ventral view; coxite moderately separated, with inner margins arcuate and triangularly approximate before middle, apical part more or less produced

inwards and arcuate at external sides, provided with short setae near stylus; stylus moderate in length, hardly thickened apicad, straightly produced. Spermatheca simply strongly bent C-shaped, widened in apical half, hardly constricted near base; duct moderate in length, coiled more than 8 times, entering into the basal end of spermatheca; gland short and oblong, a little less than the maximum width of spermatheca, attaching near the base of spermatheca. (Bursa copulatrix was not examined because of the poor condition of the specimens.)

Type series. Holotype ♂, Puncak, Gn. (Mt.) Duduk, Pusuk, W. slope of Mt. Rinjani, W. Lombok, Indonesia, 10–XI–2007, T. NIISATO leg. Allotype ♀, and 1♂, 1♀ paratypes, Lokasi Margsit, Lombok Is., Indonesia, 25–XI–2007, I WAYAN Guphu leg. The holotype is preserved in the National Museum of Nature and Science, Tokyo, and the other type series are in the private collections of NIISATO and YOKOI.

Distribution. Lombok, Indonesia.

Notes. Though having an almost wholly reddish body, this new species has a closer relationship to *M. puella* PASCOE from Sulawesi Island and *M. baliana* YOKOI et NIISATO from Bali Island, both of the which have an entirely black body except for the reddish prothorax in the female of the former species. The three related species share the basic characters of head, pronotum and elytra in common. In addition, they all have the peculiar velvety depression on the male hind femur. The new species has an asymmetrically lobed mid tarsus as that of the *Ocytasia* species, sharing this character with *M. puella.* Meanwhile, *Merionoeda baliana* and *M. scitella* PASCOE also have the similar sexual dimorphism even though the mid tarsus is only slightly and almost symmetrically enlarged which is difficult to recognize by the naked eye. We provisionally describe *M. lombokiana* sp. nov. under the subgenus *Ocytasia* PASCOE on account of the sexual dimorphism of the male mid tarsus. The other related species, as mentioned above, belong most probably to the same subgenus, in spite of the weaker sexual dimorphism on the mid tarsus.

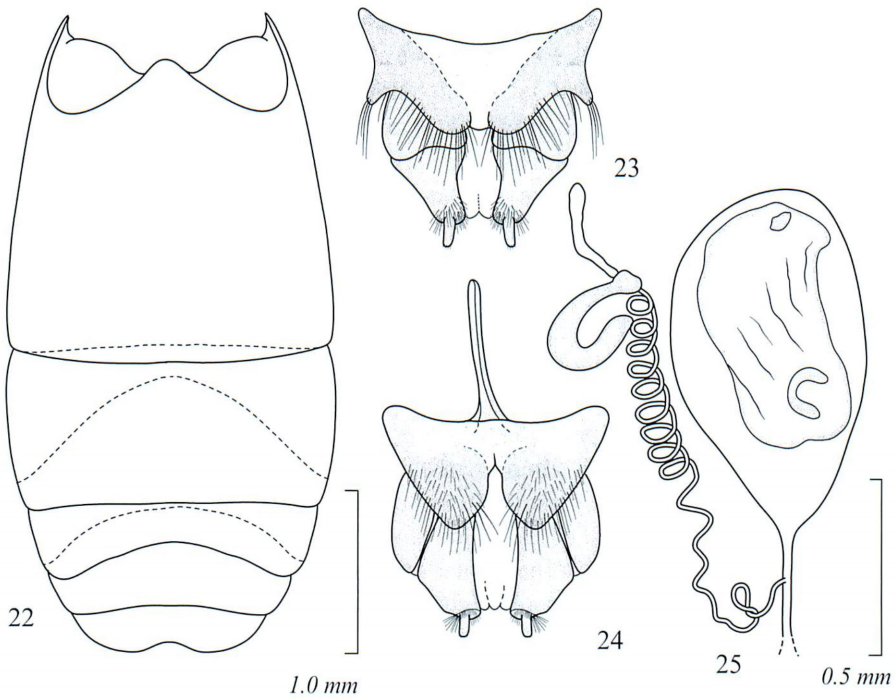
The holotype male was collected by NIISATO from the white blossoms of an oak tree in the early morning on the small peak of Mt. Duduk in northern Lombok. The other three specimens of the type series were collected by WAYAN in Margsit of Lombok in the late of November.

Merionoeda (*Ocytasia*) *baliana* YOKOI et NIISATO, 2007

(Figs. 22–25)

Merionoeda (*Merionoeda*) *baliana* YOKOI et NIISATO, 2007, Jpn. J. syst. Ent., **13**, p. 187, figs. 1–11; type locality: Gunung Prada, W. Bali, Indonesia.

Female genital organ. Tergite 8 arcuately transverse, with apical margin strongly bisinuate in oblique line, strongly projected at sides, provided with very long setae. Sternite 8 almost triangular, approximately bilobed in apical 3/5, with each lobe rounded triangular and clothed with dense long setae. Ovipositor rather short and wider



Figs. 22–25. Female abdomen and genital organ of *Merionoeda* (*Ocytasia*) *baliana* YOKOI et NIISATO from Bali Island, Indonesia. —— 22, Abdominal sternites; 23, ovipositor (dorsal view) and tergite 8; 24, ovipositor (ventral view) and sternite 8; 25, bursa copulatrix and spermatheca.

than long in fully extended condition, moderately sclerotized; paraproct approximate at basal sides of coxite in ventral view; coxite more or less approximate near apex, gently arcuate in inner margins, oblique at external, weakly rounded at apex which is clothed with short setae near stylus; stylus moderate in length, hardly thickened apicad, straightly produced. Bursa copulatrix very large in oblong shape, very narrow in basal part. Spermatheca simply U-shaped, slightly constricted near base which is distinctly thickened; duct very long, coiled more than 9 times, entering into the basal end of spermatheca; gland medium in length, a little less than the maximum width of spermatheca, attaching near the base of spermatheca.

Specimens examined. See the type series of the original description (YOKOI & NIISATO, 2007, p. 190).

Distribution. Bali, Indonesia.

Notes. Though originally treated as a member of the nominotypical subgenus, this species should be placed rather in the subgenus *Ocytasia* because of the close similarity of the external and genitalic characters to those of the preceding species. The male mid

Figs. 26–27. Collecting site in Lombok Island of Indonesia (November 2007). —— 26, Virgin forest in northern Lombok; 27, collection on the tree bloosums.



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tarsus of *M. baliana* is slightly but still obviously enlarged in almost symmetrical form. As was written in "Notes" to the description of the preceding species, this species has some relationship to *M. puella* PASCOE from Sulawesi with regard to the coloration and the fundamental structures. Nonetheless, the species in question is easily distinguished from the Sulawesi species by the arrangement of callosities on pronotum, the black female prothorax instead of the yellowish red one and the less enlarged male mid tarsus.

要　　約

新里達也・横井弥平太：インドネシア・ロンボック島から発見された *Kunbir* 属ならびにモモブトコバネカミキリ属の3新種．―― スラウェシ島からオーストラリア北部にかけての長大な地域はウァレシアと呼ばれ，それ以西の地域とは異なるオーストラリア区界要素を含む特異な生物相を有することが知られている．アジア熱帯地域で繁栄しているモモブトコバネカミキリ属も，ボルネオ島およびスマトラ島では未知の種を含めておそらく20種を超える種が分布し，非常に繁栄しているものの，この長大なウァレシアからはわずか8種の分布が知られているにすぎず（ミンダナオの *M. merocephala* HELLER を含む），それも記録がある島でも1〜2種程度で，ほとんどの島嶼からはまったくの未発見である．

私たちは，昨年秋に，ウァレス線のすぐ西に位置するバリ島から *Merionoeda baliana* YOKOI et NIISATO を命名記載したが，これはスマトラ島以東の赤道周辺の島嶼ではジャワ島を越えて本属の初めての発見であった．そこで，この *M. baliana* の発見を手がかりに，ウァレス線をはさんで東に隣接するロンボック島にもおそらく本属が分布するのではないかと考え，2007年秋に同島の調査を実施することにした．調査は短期間であったが，幸運にも，同島のドゥドゥック山において本属の未記載種の雄1点が採集され，その後，現地の協力者である I WAYAN Guphu 氏の手によって，同島北部の数地点からこの種の追加個体，さらにもうひとつの本属の未記載種がもたらされた．そして，まったく予想もしていなかったことであるが，モモブトコバネカミキリ属に近縁で，その分布が直近でもインドシナ北部まで遠く隔てられる *Kunbir* 属の1未記載種が，赤道地帯のロンボック島から見つかったのである．

本論文では，これらの2属3新種を命名記載し，雌雄交尾器を図示するとともに，先に記載した *M. baliana* の雌交尾器についても図示ならびに記載した．以下に，ここで命名記載した3新種の類縁関係などについて紹介する．

1) *Kunbir lombokiana* sp. nov.: 本属の基準種でインドから記載された *K. teleporoides* LAMEERE にきわめて近縁と考えられるが，上翅1/3を占める黒色帯と黄赤色の腹部から区別は可能である．本種は *K. teleporoides* の亜種とみなしてもよい存在であるが，両集団の遠く隔てられた分布と，その分布の空白地帯から中間的な形質を持つ種はおろか，本属のいかなる種の存在も知られていないことから，ここでは独立の種として扱うことにした．今後，雄個体が得られ，両集団の比較が十分に行われることで，両者の類縁関係も明らかにできるものと考えられる．本種は雌個体ただ1点のみが知られ，雄は未知である．

2) *Merionoeda wayani* sp. nov.: 体は頑強でやや細長く，黒色で上翅は全体が赤黄色．近縁な種はアジア産のなかには知られていないが，全体的な外観や色彩などは南アフリカのトランス

バールから記載された *M. africana africana* DISTANT に驚くほどよく似ている．動物地理学的にも遠く隔てられた両地域に血縁の近い種が現存することはとても考えにくく，この相似はおそらく異なる地域で別べつに生じた平行進化によるものであろう．本種は雌個体2点のみが知られ，その亜属の帰属はおそらく基亜属に所属するべきものと考えられるが，雄個体が発見され正確に同定されるまで，その決定は保留しておく．

3) *Merionoeda* (*Ocytasia*) *lombokiana* sp. nov.: 体は細長く華奢で，雌雄ともにほぼ全体が黄赤色だが触角と雄の腹部は黒色．スラウェシの *M. puella* PASCOE とバリの *M. baliana* YOKOI et NIISATO に類縁が近いことは明らかであるが，近縁2種は全体がほぼ黒色であることから，色彩だけでも区別は容易である．また，雄の後腿節の外側に，おそらく交尾行動と関係のあるビロード状の平圧部を持つ特徴は近縁2種とも共通である．さらに，雄の中付節は非対称に外側に向けて弱く拡がるが，この形質を重視した現在の亜属の分類にしたがえば，本種は *Ocytasia* 亜属に帰属すべきであろう．この特徴は *M. puella* でもほぼ同じ程度に認められ，*M. baliana* では肉眼による視認が難しいが，非常に弱いながら現れる．そこで，*M. baliana* の追加記載をした本論文で，この種の亜属の帰属を基亜属から *Ocytasia* 亜属に変更した．

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Additional New Records of the Staphylinid Beetles from the Island of Awaji-shima, West Japan

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Eighteen species of staphylinid beetles, with the exception of pselaphine beetles, have hitherto been reported from the Island of Awaji-shima in Hyôgo Prefecture, West Japan, by KINOSHITA (1973, 1974), TAKAHASHI (1984), NAOMI (1997), WATANABE (2001, 2004) and KAWAKAMI (2007). Through the courtesy of Dr. Masaru NISHIKAWA I had an opportunity to examine a short series of staphylinid beetles obtained on this island. Four of them are new to the fauna of the island. They are recorded below with the collecting data.

1. *Sepedophilus germanus* (SHARP)
   3 ♂♂, Mt. Yuzuruha-san (600 m alt.), 9–VI–2004, M. NISHIKAWA leg.
2. *Domene crassicornis* (SHARP)
   3 ♂♂, 2 ♀♀, same locality and collector as above, 5–VI–2004.
3. *Philonthus japonicus* SHARP
   1 ♂, same locality and collector as above, 9–VI–2004.
4. *Indoquedius juno* (SHARP)
   1 ♀, same data as above.

I thank Dr. M. NISHIKAWA, Tokushima-shi, for his kindness in giving me the specimens.

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A Remarkable New Species of the Genus *Necydalis* (Coleoptera, Cerambycidae) Discovered in Southern Vietnam

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Abstract A new species of the genus *Necydalis* is described from Mt. Brian of southern Vietnam under the name of *N.* (*Necydalis*) *meridionalis* sp. nov. The new species has close relationship to the members of the *N. esakii* group, and may be considered as a highly specialized species in the group. Mt. Brian of Lam Dong Province is the southernmost locality of the genus *Necydalis* in Indochina and about 300 km distant to the south from Mt. Tam Dao of Vinh Phu Province, an already-known locality of the genus.

Thirteen members of the genus *Necydalis* are known from Indochina and all of them were rather recently recorded in the past twenty years (HOLZSCHUH, 1989; TAKAKUWA & NIISATO, 1996; TAKAKUWA, 1997; NIISATO, 1998 a, b; NIISATO & N. OHBAYASHI, 2003, 2004). The known range of the genus in Indochina is restricted to northern areas, and none have so far been recorded from the south of about 20°N in latitude.

In the course of studying the necydaline fauna of Indochina, I found a remarkable new species recently collected from Mt. Brian of Lam Dong Province, southern Vietnam. Though it is quite peculiar in facies unlike any other members of the genus, it may have some relationship to the members of the *N. esakii* group. Mt. Brian of Lam Dong Province, the type locality of new species, is the southernmost known locality of the genus *Necydalis* in Indochina and about 300 km distant to the south from Mt. Tam Dao of Vinh Phu Province, which is the already-known locality of the genus in Vietnam. In the following lines, I will describe it under the name of *N. meridionalis* sp. nov. as the first representative of the genus from southern area of Indochina.

I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO for his continuous guidance, and also to Messrs. Shigeo TSUYUKI and Akira YAGISHITA for their kind arrangement to obtain the type series of the new *Necydalis* species.

Necydalis (*Necydalis*) *meridionalis* sp. nov.

(Figs. 1–7)

Body length 19.2 mm in ♂, 23.0 mm in ♀ (from apical margin of clypeus to abdominal apex). Slender and medium-sized species of infuscate body provided with

golden yellow pubescence at sides of thoraces.

M a l e. Colour black in head and thoraces, brown in abdomen, weakly shiny; elytra black, dark yellowish brown in basal fourth and along basal 2/5 near suture; hind wings translucent blackish brown; mouthparts light yellowish brown, blackish in clypeus except for yellowish apical part of apical lobe, mandibles blackish brown; antennae black, though slightly brownish in basal three segments; legs brown to yellowish brown, blackish in tarsi, most of hind tibia except for the base, upper sides of mid tibia and hind femur slightly infuscate.

Head relatively voluminous, moderately convex, 1.25 times as wide as apical or almost equal to the maximum width of pronotum, strongly and closely punctured, clothed with pale yellow hairs, partly with golden yellow pubescent maculation at the middle of frons and tempora behind eyes; frons quadrate, as long as wide, strongly convex in oblique line from basal corner to the middle of apical margin, markedly and triangularly declivous towards a deep median groove, the groove extending from apical margin of frons to the end of occiput, with apical margin triangularly concave by very deep suture; clypeus with basal lobe transverse triangular, moderately convex, smooth on surface, apical lobe trapezoidal, nearly a half of the basal width, slightly raised, scattered with a few large punctures; genae moderate in depth, 4/9 the depth of lower eye-lobes; vertex and occiput moderately convex, coarsely shagreened, rather distinctly raised near antennal cavities; tempora hardly produced, attaining external sixth of eye; eyes distinctly prominent though deeply emarginate, separated from one another by 4/9 the width of occiput or 4/5 the width of each lobe. Antennae slender though widened in middle segments, reaching the base of tergite 5, covered only with dense minute pale pubescence; scape rounded quadrate, slightly depressed, 4/5 the length of segment 3, segments 3 and 4 very weakly thickened apicad, segment 4 3/4 the length of the preceding, segments 5–7 broadened and distinctly depressed, segment 8 weakly so, apical three segments almost cylindrical.

Pronotum moderate in length, as long as the maximum width between lateral tubercles or 1+1/4 the width of apex, a little shorter than elytra, slightly broadened basad; sides moderately arcuate near middle, with conspicuous but small tubercles at basal 5/12, gently arcuate near apical and basal third, clothed with dense golden yellow pubescence throughout; disc largely convex in basal 3/4, on which large callosity before basal fourth is indistinctly divided in apical 2/5, transverse raised area before basal margin, shagreened and densely clothed with brown pubescence, though almost glabrous and with a few coarse punctures on the callosity. Scutellum rounded triangular, concave along the median line, coarsely punctured, thinly pubescent.

Elytra as long as wide, widely dehiscent in apical 3/4, thickly margined along suture; sides with distinctly prominent humeri, weakly narrowed in almost straight line to apices which are completely rounded at external angles but roundly angled at suture; disc moderately convex and strongly uneven, obliquely raised from humeri to apical 3/8, thickened in apical fourth, strongly depressed on the other parts, strongly and coarsely punctured in most areas, sparsely scattered with pale yellow hairs, short



Figs. 1–2. *Necydalis* (*Necydalis*) *meridionalis* sp. nov. from Mt. Brian of Lam Dong Province, southern Vietnam. —— 1, Holotype ♂; 2, allotype ♀.

brownish pubescence near apices and also dense golden yellow one near scutellum. Hind wings attaining to the apex of tergite 5.

Prosternum weakly concave in profile and coarsely rugosely punctured on surface before coxal cavities, scattered with golden yellow hairs, with strongly compressed intercoxal process. Meso- and metathoraces deeply closely punctured, densely clothed with golden yellow pubescence on mesepimeron, metasternum except for middle of

sides, apices of metepisternum and metepimeron. Abdomen long and very slender, 2/3 the length of body, almost smooth and sparsely brownish haired; ventrite 1 a little more than 1/4 the length of abdomen, quite cylindrical, ventrite 4 rather distinctly dilated apicad and as long as the preceding; anal ventrite with sides straightly dilated to middle then rather weakly arcuate to apex, with disc declivous towards mid-line just behind base, gradually deep towards apical margin which is widely triangularly concave; tergite 8 1+1/3 the length of the basal width, weakly narrowed to apex which is gently arcuate.

Legs long and markedly slender, thinly pale yellow haired on femora and tibiae; hind femur moderately swollen in apical 2/5 which is distinctly compressed; hind tarsus hardly thickened, with 1st segment 7/10 the length to the following two segments combined.

Male genital organ. Median lobe a little longer than anal ventrite, rather weakly arcuate in profile, weakly convex even at the base of apical lobe, bluntly pointed at apex, with dorsal plate a little shorter than ventral plate, narrowly truncate at apex. Tegmen slender, slightly longer than median lobe; paramere 5/8 the length of tegmen, dehiscent in apical 4/5, almost parallel at sides, though slightly narrowed from middle to apex, densely provided with short setae near apices.

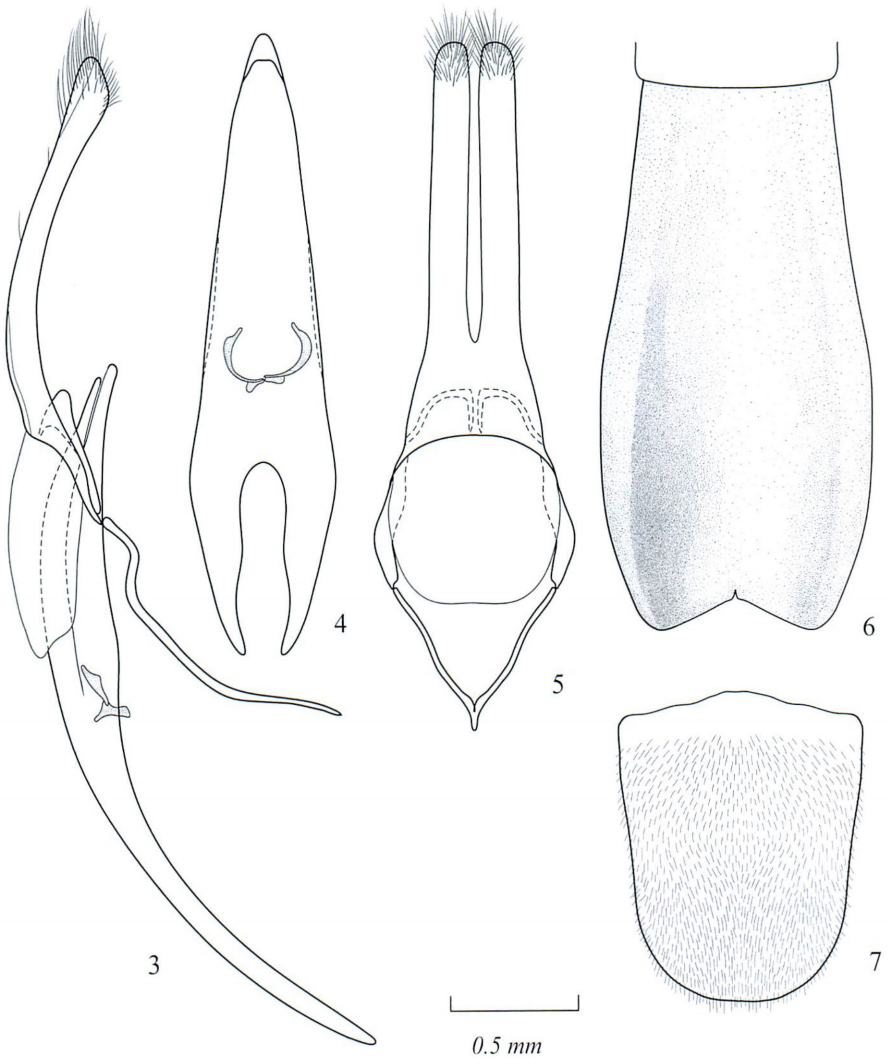
F e m a l e. Similar to male, though body fairly broad and not so slender. Colour almost as in ♂, though elytra except for the margins are largely dark yellowish brown, antenna brown in basal four segments, infuscate on upper sides of segments 5–7 and almost black in apical four segments, hind tarsus entirely light yellow. Antennae reaching the base of tergite 4, with segments 5–9 slightly broadened and weakly depressed. Elytra a little longer than wide. Abdomen with anal ventrite simply flattened. Hind tarsus moderately broadened, with segment 1 more than twice as long as the following two segments combined.

Type series. Holotype ♂, Mt. Brian, 1,600 m in alt., near Bao Loc, Lam Dong Prov., S. Vietnam, 1～10–V–2006. Allotype ♀, same locality as the holotype, 19–III–2004. The holotype is preserved in the collection of the National Museum of Nature and Science, Tokyo, and the allotype is in the private collection of NIISATO.

Distribution. Southern Vietnam.

Notes. *Necydalis meridionalis* sp. nov. is a remarkably peculiar species in having very slender infuscate body with long and slender legs, and largely golden pubescent sides of thoraces, and easily distinguished by the general appearance to the other members of the genus. True affinity of the new species seems uncertain for the reason of its external peculiarity. Consulting with the male abdomen and the genital organ, the new species has closer relationship to the members of the *N. esakii* group; the shape and concavity of anal ventrite, the simply arcuate median lobe with the narrowly truncate apex of dorsal plate, and the slender parallel-sided parameres, are almost identical with those of *N. esakii* MIWA et MITONO from Taiwan or *N. choui* NIISATO from Guangxi of the same species-group. *Necydalis meridionalis* sp. nov. may be a highly specialized species of the same lineage of the *N. esakii* group in southern area of Indochina.

Mt. Brian of Lam Dong Province is located just south of 12°N in latitude and is



Figs. 3–7. Genitalia and anal ventrite of male of *Necydalis* (*Necydalis*) *meridionalis* sp. nov. from Mt. Brian of Lam Dong Province, southern Vietnam. —— 3, Median lobe and tegmen, lateral view; 4, median lobe in dorsal view; 5, tegmen in dorsal view; 6, anal ventrite in ventral view, showing the concavity; 7, tergite 8 in dorsal view.

about 300 km distant to the south from Mt. Tam Dao, which is the most approximate locality of the genus *Necydalis* in Indochina. As was written in introduction, no member of the genus has so far been recorded from the south of 20° N in Indochina. Discovery of a *Necydalis* species from such lower latitude as southern Vietnam is very interesting in zoogeographical point of view, and some unknown members of the genus will be found from the wide blank area of distribution beyond 300 km in eastern Indochina by

further field survey.

Ecological data of *N. meridionalis* sp. nov. is quite unknown since I was unable to receive any information from the collectors. The pair of the type series have different data labels separated in March of 2004 and May of 2006, and may be collected on flight on certain peak of Mt. Brian.

要　約

新里達也：南ベトナムから発見されたホソコバネカミキリ属の1新種．―― インドシナでは，過去20年間の比較的新しい時代に，13種に及ぶホソコバネカミキリ類が次つぎと発見されてきたが，それらはいずれも北部山岳地に限られ，およそ北緯20度以南の地域からは本属のいかなる種も知られていなかった．最近になって，既知の分布地からはるか南に位置する，南ベトナムのラムドン県から本属の基亜属に含まれる顕著な1新種が発見されたので，本論文において *Necydalis* (*Necydalis*) *meridionalis* sp. nov. と命名し記載した．本種は，きわめて特異な外観をもち，基亜属の既知種とは容易に識別ができるが，基本的な体の構造や交尾器を含む雄の二次性徴から判断するかぎり，おそらくエサキホソコバネカミキリ種群の種に近いものではないかと考えられる．なお，基準産地のブライアン山は，ホソコバネカミキリ類の既知産地としてはもっと近いビンフー県のタムダオ山から直線距離でおよそ300 km南に位置し，本属の中心的な分布域からも遠く隔離されている．このような低緯度地域から本属が発見されたことは生物地理学的にみて非常に興味深いが，いっぽう，北緯12～20度にわたるこの広大な分布の空白地帯も，本属の未知の種が生息することは十分に予想され，今後の調査によるさらなる新発見が期待される．

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New Localities of Three Donaciine Species (Coleoptera, Chrysomelidae) from Chiba Prefecture, Honshu, Japan, with Special Reference to the Future Problems for Elucidating the Donaciine Fauna in Chiba Prefecture

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Abstract Several new localities of the following three donaciine species from Chiba Prefecture, Kantô District, Honshu, Japan, are reported: *Donacia* (*Cyphogaster*) *provostii* FAIRMAIRE, 1885, *D.* (*Donaciomima*) *bicoloricornis* CHEN, 1941, and *D.* (*Donaciomima*) *clavareaui* JACOBSON, 1906. Some comments on host plants observed in the habitats of each of them are given. A general survey of all the known collecting records of seven donaciine species belonging to three genera reported so far from Chiba Prefecture brings out zoogeographical problems of the donaciine fauna in this region to be elucidated. Of these seven species, *D.* (*Donaciomima*) *splendens hiurai* KIMOTO, 1963 should be omitted from the fauna of Chiba Prefecture.

Introduction

In the present paper we are going to report several new localities of the following three donaciine species from Chiba Prefecture, Kantô District, Honshu, Japan: *Donacia* (*Cyphogaster*) *provostii* FAIRMAIRE, 1885, *Donacia* (*Donaciomima*) *bicoloricornis* CHEN, 1941, and *Donacia* (*Donaciomima*) *clavareaui* JACOBSON, 1906. A few collecting records have been reported so far for these three species from Chiba Prefecture. They were mainly collected in central to southern regions of this prefecture. On this occasion we will compile all the known collecting records of seven donaciine species so far reported

from Chiba Prefecture with some opinions and will discuss future problems for elucidating the donaciine fauna of this prefecture.

New Localities of Three Donaciine Species from Chiba Prefecture

In a check-list of animals from Chiba Prefecture, FCPSHM (the Foundation of Chiba Prefecture for the Study of Historical Materials) (ed. 2003) divided the land of Chiba Prefecture into the following six areas: Tone-gawa Teichi (lowlands along the Tone-gawa River basin; LT), Shimôsa Daichi (Shimôsa Plateau; SP), Kujûkuri Heiya (Kujûkuri Plain; KP), Tokyo-wan Teichi (lowlands along Tokyo Bay; TB), Bôsô Kyûryô (Bôsô Hills; BH), Bôsô Engan-bu (coastal zone of the Bôsô Hills; BC). In recording the collecting data, we adopted these major zoogeographical divisions of Chiba Prefecture, though they are considerably arbitrary and vague especially in indicating the localities of the species concerned on a small scale map.

Abbreviations of collectors' names in recording the collecting data — IK: Itsuro KAWASHIMA, SN: Shogo NISHIHARA, KS: Kunio SUZUKI.

1. *Donacia* (*Cyphogaster*) *provostii* FAIRMAIRE, 1885

SP: 2♂♂, 2♀♀, Hanajima (Hanajima Park), Hanamigawa-ku, Chiba-shi, 14–VII–2003, M. AYATO leg.; BH: 1♂, Kiwadahata, Kimitsu-shi, 20–VIII–2003, IK (on *Trapa* sp., Trapaceae); 2♂♂, same locality, 29–VII–2006, IK (on *Trapa* sp.); 2♂♂, 2♀♀, Sasa, Kimitsu-shi, 15–VIII–1989, M. HAYASHI leg.; many, same locality, 6–VIII–2007, IK, KS & SN (on *Potamogeton* sp., Potamogetonaceae)

2. *Donacia* (*Donaciomima*) *bicoloricornis* CHEN, 1941

BH: 3♂♂, 1♀, Kiwadahata, Kimitsu-shi, 20–VIII–2003, IK (on *Scirpus triangulatus* ROXB.?, Cyperaceae); 1♂, same locality, 4–VI–2006, IK; 2♀♀, same locality, 29–VII–2006, IK; 3♂♂, 1♀, same locality, 20–V–2007, IK; 1♂, same locality, 26–V–2007, KS; 1♂, 1♀, Nishioi, Ôtaki-machi, Isumi-gun, 16–VI–2007, IK (on *Typha angustifolia* LINNAEUS, Typhaceae); 6♂♂, 2♀♀, same locality, 23–VI–2007, IK; 11♂♂, 11♀♀, same locality, 6–VIII–2007, IK, KS & SN; 1♂, Takataki-damu (dam), Ichihara-shi, 10–V–2003, collector unknown.

According to HAYASHI (2004), adults of this species feed on the leaves of Typhaceae and Sparganiaceae. We collected many individuals on the leaves of *Typha angustifolia* at Nishioi, but as regards almost all the individuals on those of *Scirpus* sp. (probably *S. triangulatus*) at Kiwadahata. Regrettably, we were unable to confirm if *Scirpus* is a true host plant of this species or not, though this is highly probable so far as the general floral and habital situation at Kiwadahata is concerned.

3. *Donacia* (*Donaciomima*) *clavareaui* JACOBSON, 1906

BH: 34♂♂, 24♀♀, Kiwadahata, Kimitsu-shi, 20–V–2007, IK; 34♂♂, 8♀♀, same locality, 26–V–2007, KS. All the individuals were collected on *Cyperus* sp. (Cyperaceae).

Of the specimens recorded here, four of *D.* (*C.*) *provostii* from Chiba-shi are preserved in the collection of Mr. H. MIYAUCHI, some of the same species from Kimitsu-shi in the collection of the Osaka Museum of Natural History, one specimen of *D.* (*Donaciomima*) *bicoloricornis* from Takataki-damu (dam) in the collection of M. MINAMI, and all the remainders in the collection of K. SUZUKI.

Since the 1980's, the second author KAWASHIMA has surveyed mainly odonate fauna at various localities in Chiba Prefecture, especially in the Bôsô Peninsula. Recently, odonate fauna has rapidly declined even in the central and southern areas of the peninsula where primary natural environment and secondary agricultural environment have been preserved in fairly good condition. In order to comprehend the actual circumstances and the changes in the species composition of odonate community from various aspects, we should pay attention to other aquatic insect groups. For this reason, he has also surveyed the donaciine fauna for last several years.

Kiwadahata is located to the southeast of Kimitsu-shi. The habitat of three donaciine species at Kiwadahata is a moor formed along the main stream of the Obitsu-gawa River which runs in a zigzag line. Several small surfaces of the water came to light. KAWASHIMA confirmed the co-existence of *Donacia* (*Cyphogaster*) *provostii* and *D.* (*Donaciomima*) *bicoloricornis* several years ago. On June 20, 2007, he also found *D.* (*Donaciomima*) *clavareaui* inhabiting the moor. One week after SUZUKI also confirmed the co-existence of this species with *D.* (*Donaciomima*) *bicoloricornis* there. At this habitat *D.* (*Cyphogaster*) *provostii* feeds on *Trapa* sp. (Trapaceae), *D.* (*Donaciomima*) *bicoloricornis* on *Scirpus triangulatus* (?), and *D.* (*Donaciomima*) *clavareaui* on *Cyperus* sp. (Cyperaceae). Sasa is also located to the southeast of Kimitsu-shi. *Donacia* (*C.*) *provostii* feeds on *Potamogeton* sp. (Potamogetonaceae) which densely grow on a small flat moor formed around the flow of cool spring water at the valley head. The moor was formerly an abandoned rice field. Nishioi is located at the western end of Ôtaki-machi and the habitat of *D.* (*Donaciomima*) *bicoloricornis* is a small moor formed along a branch of the Yôrô-gawa River. The Nishioi population of the species fed on the leaves of *Typha angustifolia* when KAWASHIMA found its existence for the first time and then KAWASHIMA and SUZUKI observed it in 2007. Though we were unable to confirm it, we infer that *D.* (*Donaciomima*) *clavareaui* also inhabits there because general circumstances at Nishioi resemble those of Kiwadahata. The Takataki-damu (dam) is located at the middle reaches of the main stream of the Yôrô-gawa River.

Compilation of Known Collecting Data of Six Donaciine Species from Chiba Prefecture

In the following pages we compile all the known collecting data of the six donaciine

species from Chiba Prefecture with some comments on their geographical distribution, host plants, and so on.

Figure 1 is a map showing all the known localities of the following six donaciine species (including those of the three species reported here) from Chiba Prefecture.

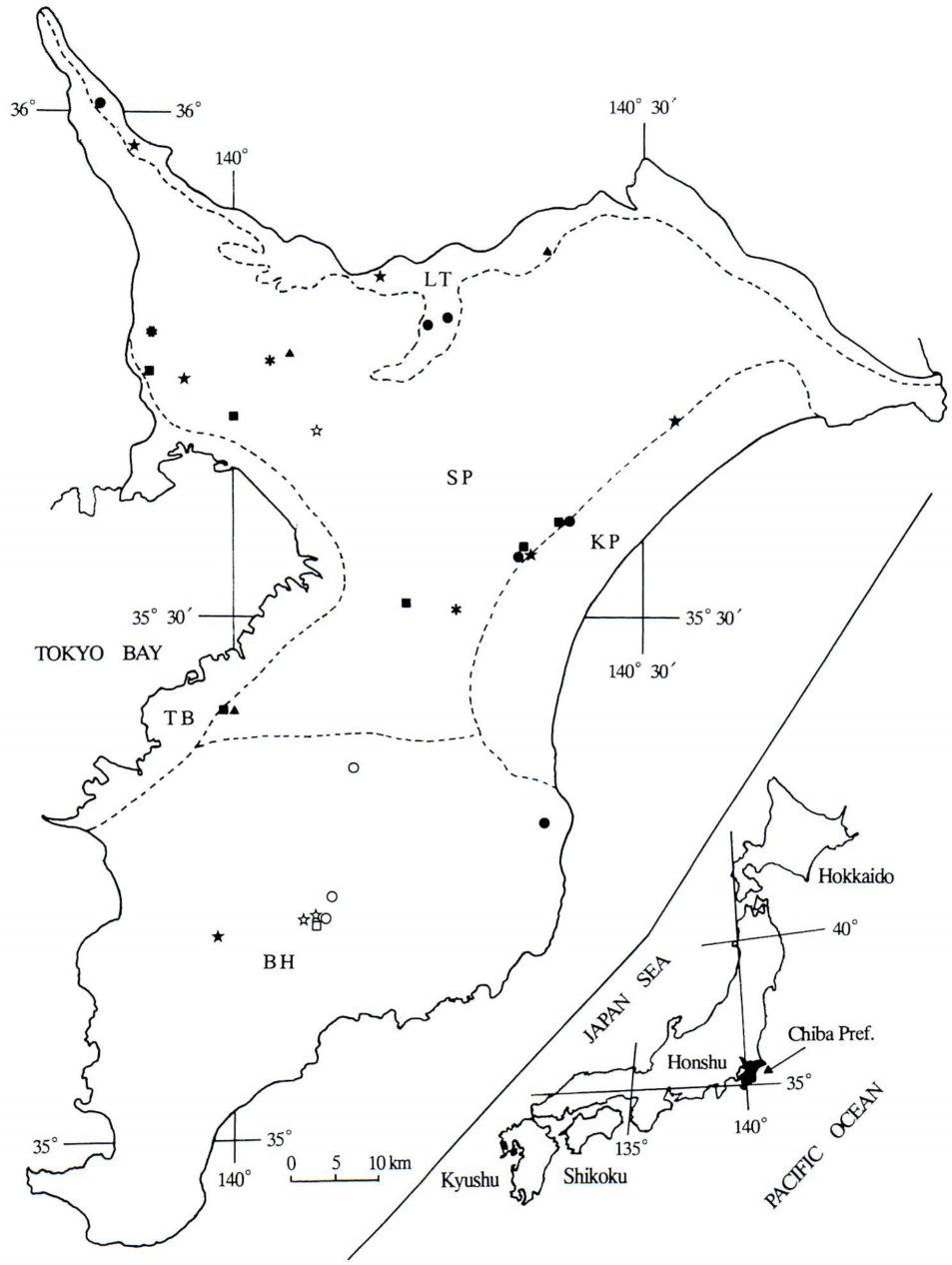
1. *Donacia* (*Cyphogaster*) *provostii* FAIRMAIRE, 1885 [Jpn. name: Ine-nekui-hamushi]

Known localities in Chiba Prefecture: LT (Noda-shi [KUBOTA, 1987], Sakae-machi, Inba-gun [YAMAZAKI, 1988, after KUBOTA & ITÔ, 1991]); SP (Ichikawa-shi, [YAMAZAKI & MIYAUCHI, 2004], Tôgane-shi [ITÔ, 1988, after KUBOTA & ITÔ, 1991], Yôka-ichiba (Sôsa-shi) [KUBOTA & ITÔ, 1991]); BH (Mt. Takago-yama, Futtsu-shi, [TAKAKUWA, 1987]).

Distribution. Hokkaido, Honshu, Shikoku, Kyushu, Sado-ga-shima Is., Oki Isls., Tsushima Isls., Gotô Isls., Tane-ga-shima Is., Yonaguni-jima Is.; Far East Russia, Korea, China, Taiwan, SE Asia.

This species is widely distributed in the Japanese Archipelago. However, there are a small number of collecting records from Chiba Prefecture. The only record by only one individual has been reported from the Bôsô Hills. We collected a number of individuals of this species on *Trapa* sp. (Trapaceae) at Kiwadahata in Kimitsu-shi and on *Potamogeton* sp. (Potamogetonaceae) at Sasa in Kimitsu-shi. The Sasa population consists of only very small-sized individuals; i.e., only about 4.5 mm in the smallest male and only about 6.5 mm even in the largest female in the body length. We observed that they did not fly actively at least in the evening though individuals of this species actively fly in general. OHNO (1967) already pointed out the possibility that this species, which had never been found from anywhere in Chiba Prefecture, fed on *Potamogeton* in a moor. TAKAKUWA and TAKAHASHI (1989) reported this species feeding on *Nymphaea tetragona* GEORGI (Nymphaeaceae) and *Potamogeton* sp. in Sawara-ike Pond in Nirasaki-shi, Yamanashi Prefecture, Chûbu District, and pointed out that the population showed a large scale of interindividual variation in body length; i.e., 5.1–6.8 mm in male and 6.8–8.0 mm in female. According to the observation by the senior author SUZUKI in Toyama Prefecture, Hokuriku District, this species generally feeds on *Nelumbo nucifera* GAERTN. (Nelumbonaceae) and rarely on *Nymphaea tetragona*, *Euryale ferox* SALISB. (Nymphaeaceae), *Nymphoides peltata* (GMEL.) O. KUNTZE, *N. indica* (L.) O. KUNTZE (Menyanthaceae), and *Trapa* sp. (Trapaceae). In order to find other habitats of this species in Chiba Prefecture further investigation should be made at various water systems where above mentioned aquatic plants grow.

Fig. 1. Known localities of six donaciine species from Chiba Prefecture, Kantô District, Honshu, Japan. ★: *Donacia* (*Cyphogaster*) *provostii*, known localities; ☆: do, new localities; ●: *D.* (*Donaciomima*) *bicoloricornis*, known localities; ○: do, new localities; ■: *D.* (*Donaciomima*) *clavareaui*, known localities; □: do, new localities; ✱: *Macroplea japana*, known locality; ✶: *Plateumaris constricticollis babai*, known localities; ▲: *Plateumaris sericea*, known localities. BH: Bôsô Hills; KP: Kujûkuri Plain; LT: lowlands along the Tone-gawa River basin; SP: Shimôsa Plateau; TB: lowlands along Tokyo Bay.


36°
36°
140°
140° 30′
LT
SP
KP
35° 30′
TOKYO BAY
TB
35° 30′
140° 30′
BH
35°
35°
140°
0 5 10 km
Hokkaido
40°
JAPAN SEA
Chiba Pref.
Honshu
35°
140°
135°
Kyushu
Shikoku
PACIFIC OCEAN

2. *Donacia* (*Donaciomima*) *bicoloricornis* CHEN, 1941 [Jpn. name: Kiashi-nekui-hamushi]

Known localities in Chiba Prefecture: LT (Sekiyado-machi, Higashi-katsushika-gun (Noda-shi) [KOMIYA, 1987], Inba-numa (Inba-mura, Inba-gun (Narita-shi) [MATSUBARA, 1988]); SP (Tôgane-shi [ITÔ, 1988; 1989, after KUBOTA & ITÔ, 1991], Narutô-machi (Sanbu-shi) [KUBOTA & ITÔ, 1991]); BH (Misaki-machi (Isumi-shi) [KOMIYA *et al.*, 1986]).

Distribution. Honshu (north of the Kantô District); Far East Russia, China, Taiwan.

This species is distributed in northern Honshu in the Japanese Islands. In Chiba Prefecture it has been known from only in the central and northern regions. We discovered the species in the southern region of the Bôsô Hills. This suggests the possibility that this species generally lives in various regions of the peninsula. It is noted that this species has a remarkably long term in adult activity; i.e., at Kiwadahata in 2007 adults already occurred on 20 May and co-existing situation with *Donacia* (*D.*) *clavareaui* continued for a while. A number of individuals were observed for a long time after the latter species disappeared. In 2003 the last individual was seen on 20 August. Donaciine species with such a long period of adult activity has never been known from Japan.

3. *Donacia* (*Donaciomima*) *clavareaui* JACOBSON, 1906 [Jpn. name: Futo-nekui-hamushi]

Known localities in Chiba Prefecture: SP (Ichikawa-shi [NARUSE, 2007], Funabashi-shi [FUKAGAWA, 2005b], Tôgane-shi [ITÔ, 1988; 1989, after KUBOTA & ITÔ, 1991], Narutô-machi, Sanbu-gun (Sanbu-shi) [KUBOTA & ITÔ, 1991]), Ichihara-shi [MIYAUCHI, 2005], Sodegaura-shi [Sodegaura-shi Kyôiku Iinkai (ed.), 1997]).

Distribution. Honshu (north of the Kantô District), Kyushu; Far East Russia, China, Mongolia.

This species has been reported from various places in the Shimôsa Plateau (ITÔ, 1988; 1989, after KUBOTA & ITÔ, 1991; Sodegaura-shi Kyôiku Iinkai (ed.), 1997; FUKAGAWA, 2005b; MIYAUCHI, 2005; NARUSE, 2007). We found this species at several places of the northern and central regions of the Bôsô Hills. This species will be discovered hereafter in various localities in Chiba Prefecture. The co-existing of this species with the former one has been known from several localities in the Shimôsa Plateau. We also confirmed such a co-existing situation of these two species in the moor at Kiwadahata. In general adults of this species occur from late April to late June in lowland areas of the Kantô District. The peak of adult activity is the period during early May to early June but adults have been observed until late July at some localities. At Kiwadahata this species nearly disappears till the end of June.

4. *Macroplea japana* (JACOBY, 1885) [New Jpn. name: Minami-kiiro-nekui-hamushi]

Known localities in Chiba Prefecture: SP (Matsudo-shi [YUASA, 1926]).

Distribution. Honshu, Kyushu; China.

This species has been recorded so far from a few localities in Chiba and Kanagawa

(type locality) Prefectures (Kantô District), Shiga and Hyôgo Prefectures (Kinki District), and Fukuoka Prefecture (Kyushu). The record from Chiba Prefecture was made by YUASA (1926) who found two individuals in the stomach contents of a frog *Rana porosa porosa* (COPE). Since a record from Fukuoka Prefecture in 1962 (KIMOTO, 1964), this species has never been found in the Japanese Archipelago for 56 years. Consequently, this species has been considered already to become extinct during recent several decades. Recently, HORI (2006) reported the discovery of *Macroplea mutica* (FABRICIUS, 1792) from the damp plains of Kushiro (Kushiro Shitsugen), Hokkaido, in 2004. This species was occasionally treated as the nominotypical subspecies of the species; i.e., according to this opinion *M. japana* should be regarded as a subspecies of *M. mutica*, *M. mutica japana*. HORI pointed out the possibility that the host plant is *Myriophyllum spicatum* L. (Haloragaceae). However, some workers (e.g., HAYASHI & SOTA, 2007) regarded these two subspecies as independent species, respectively. An exhaustive investigation should be conducted in the water system, where the *Myriophyllum* plants grow, in various districts of Japan.

5. *Plateumaris constricticollis babai* CHÛJÔ, 1959 [Jpn. name: Shinano-ô-nekui-hamushi]

Known localities in Chiba Prefecture: SP (Funabashi-shi [YAGI 1991; HAYASHI, 2005], Chiba-shi [NAOMI, 2004]).

Distribution. Honshu (Chûbu District).

This species was reported from Funabashi-shi and Chiba-shi in the Shimôsa Plateau. Based on the known geographical distribution of the species, the populations from Chiba Prefecture are obviously relicts as YAGI (1991) and KOMIYA (1991) pointed out. YAGI (1991) surmised that they are the relict populations which moved south in the Würm Period. The populations of this species living in Chiba Prefecture are zoogeographically very important and their preservation is strongly desired as KOMIYA (1991) emphasized. Recently, SOTA *et al.* (2007) reported on geographical variation of body and ovipositor sizes in this species. They discussed inter- and intrasubspecific differentiation of three subspecies (*constricticollis* JACOBY, 1885, *babai*, and *toyamensis* TOMINAGA et KATSURA, 1984) of this species in the Japanese Archipelago (Hokkaido and Honshu) based on different habitat conditions (especially climatic conditions as the depth of snow), host plants, genetic differentiation (haplotypes of the 28S rRNA), and so on. SOTA and HAYASHI (2007) also discussed historical biogeography of five *Plateumaris* species from Japan based on sequence data from a 750 bp portion of the COI gene. According to them the Chiba (Funabashi and Midori-ku) populations along with other nine populations of the subspecies *babai* form a closely united cluster, though the former population is geographically isolated from the latters.

6. *Plateumaris sericea* (LINNAEUS, 1758) [Jpn. name: Kinutsuya-nekui-hamushi]

Known localities in Chiba Prefecture: LT (Shimôsa-machi (Narita-shi) [Kubota, 1987]), SP (Funabashi-shi [FUKAGAWA, 2005b], Sodegaura-shi [Sodegaura-shi Kyôiku Iinkai (ed.), 1997]).

Distribution. Hokkaido, Honshu, Kyushu, Sado-ga-shima Is.; S. Kurile Isls.

(Kunashiri-tô Is. & Etorofu-tô Is.), Sakhalin, Far East Russia, Central Asia, Europe, Korea, China, Mongolia.

This species is widely distributed mainly in northern Japan and occurs in various environments from lowlands to high mountain areas. In the Kantô District this species has been reported from various localities. As the known habitats of this species in Chiba Prefecture are considerably restricted to the lowlands along the Tone-gawa River (LT) and Funabashi-shi and Sodegaura-shi in the Shimôsa Plateau (SP), intensive investigation should be conducted especially in central and southern areas of the Bôsô Peninsula.

Donacia (*Donaciomima*) *splendens hiurai* KIMOTO, 1963 was reported by FUKAGAWA (2005a) from Funabashi-shi [SP]. This species is distributed in Honshu (northeast of the Chûbu District). In the Chûbu District, this species occurs in a moor at high altitude, but it has been known from lowlands in the northern area of the Kantô District. Through the courtesy of Mr. FUKAGAWA we were able to examine the specimen from Funabashi-shi and clarified that the record of the species was based on misidentification of *Plateumaris sericea.* Consequently, this species should be omitted from the donaciine fauna of Chiba Prefecture (see also MIYAUCHI, 2007). However, according to HAYASHI (pers. comm.), a semi-fossilized dead body of this species was discovered from the remains in Chiba Prefecture. It is therefore possible that this species still survives somewhere in this prefecture.

Future Problems for Elucidating the Donaciine Fauna in Chiba Prefecture

The biogeographical significance of the insect fauna in Chiba Prefecture has been discussed by several workers. The following species are well-known representatives who have occasionally provided controversial topics: the so-called red-form of *Carabus* (*Ohompterus*) *insulicola* CHAUDOIR, 1869 (subsp. *nishikawai* ISHIKAWA, 1966; recently it was included in the nominotypical subspecies by UJIIE & ISHIKAWA (2005)) (Coleoptera, Carabidae), a white-winged form (f. *edai* ASAHINA, 1985) of *Mnais costalis* SELYS, 1869 (Odonata, Calopterygidae), *Tetrix wadai* UCHIDA et ICHIKAWA, 1999 (Orthoptera, Tetrigidae), and *Panchala ganesa loomisi* (PRYER, 1886) (Lepidoptera, Lycaenidae).

The chrysomelid fauna of Chiba Prefecture was intensively analyzed and discussed by OHNO (1967). He reported 139 species mainly based on the collecting data of preserved specimens, most of which were obtained by himself. Concerning the Donaciinae, only the known record of *Macroplea japana* (JACOBY, 1885) (YUASA, 1926) was cited in his report. In fact the donaciine fauna of Chiba Prefecture was not well surveyed before the end of the 1960's. Recently, FCPSHM (ed., 2003) published a check-list of all the animals which have been recorded theretofore from Chiba Prefecture. A total of 212 chrysomelid species (excluding 10 bruchid species which were treated here as a subfamily of the Chrysomelidae) were picked up in the check-list in which six donaciine species of three genera were included.

The donaciine fauna of Chiba Prefecture shows some peculiarities from the

zoogeographical viewpoint. Regrettably, reliable information has not been provided for discussing the processes of formation of the donaciine fauna in this prefecture. In addition to five species which were already known from Chiba Prefecture, two peculiar species, *Plateumaris constricticollis babai* and *Donacia* (*Donaciomima*) *splendens hiurai*, were recently reported from much localized areas in this prefecture, though the record of the latter was based on a misidentification of *P. sericea* as already mentioned. YAMAZAKI (2003) gave six species with the areas recorded. HAYASHI (2005, 2006) compiled most of the known collecting records of the Japanese donaciine species. He listed seven species (including *D.* (*Donaciomima*) *splendens hiurai*) of three genera recorded from Chiba Prefecture.

As aquatic or semiaquatic environment, where donaciine beetles generally inhabit, has been rapidly declined, comprehension of the present situation of the donaciine community should be considered to be an important problem of great urgency.

There are several donaciine species showing punctured or disjunctive geographical distribution pattern. In some species like *Plateumaris constricticollis babai* and *P. sericea* inhabiting lowland areas of the Kantô District, distinctly relict populations appear to live at intervals due to retreat of glaciers. Since the 1980's, a large scale of exploitation of land has brought a rapid pollution of water system and destruction of habitats of diverse organisms especially of aquatic and semiaquatic plants and animals including the Donaciinae especially at level ground to lowlands.

The geographical distribution of *Donacia* (*Donaciomima*) *clavareaui* is much limited in the Tôhoku and Kantô Districts, Honshu, and at the same time much separately in Fukuoka Prefecture, Kyushu. This species is also distributed in North China. Similarly *Donacia* (*Donaciomima*) *flemora* GOECKE, 1944 is distributed in northern Honshu and one habitat each is known from Yamanashi and Nagano Prefectures (Chûbu District). Moreover, this species also occurs separately in several localities of Tottori and Hiroshima Prefectures (Chûgoku District) in southwestern Honshu and the Korean Peninsula and North China. The geographical distribution pattern of these two species seems very unusual but such apparently similar disjunctive geographical distribution is also known in *Chrysolina virgata* (MOTSCHULSKY, 1860) (Chrysomelinae) (IWAI & YAGI, 2003). According to HAYASHI (pers. comm.), a semi-fossilized body of *Donacia* (*Donaciomima*) *flemora* was very recently found in Chiba Prefecture. This suggests the possibility that the species as well as *Donacia* (*Donaciomima*) *splendens hiurai* still exist somewhere in Chiba Prefecture. *Donacia* (*Donaciomima*) *nitidior* (NAKANE, 1963) is indigenous to Honshu and is known from the region from northern area of the Tôhoku to Kantô Districts in northern Honshu and separately from the region from the Kinki to Chûgoku Districts in southwestern Honshu. There is a very broad blank area from the Chûbu, Hokuriku and Tôkai Districts between the above two distributional regions of this species.

As mentioned above it can be said that all of six donaciine species from Chiba Prefecture show a unique distributional pattern even though the degree of investigation is not very high. *Donacia* (*Cyphogaster*) *provostii* is widely distributed from Southeast

Asia to Far East Asia including the Japanese Archipelago. However, there are various scales of blank areas in its geographical distribution even within the Japanese Archipelago. This suggests the possibility that every donaciine species occasionally shows such a punctured or disjunctive geographical distributional pattern reflecting the peculiarity in their adaptation to special habitats and the geological history of the latter. The isolating populations will also be found for many other donaciine species in various regions.

As compared with other districts, the present living situation in donaciine species in the Kantô District has been considerably revealed. A total of 12 donaciine species have been recorded from Ibaraki and Tochigi Prefectures where the number of donaciine species is most abundant in Japan and is nearly equivalent to that in Fukushima Prefecture in the Tôhoku District. In the Kantô District eight donaciine species are known from Gumma Prefecture and five species each from Saitama, Tokyo, and Kanagawa Prefectures. Considering the present situation mentioned above and species composition of the donaciine fauna in the Kantô District, the existence of the following two species in Chiba Prefecture deserves special mention: *Plateumaris constricticollis babai* and *P. sericea.* Taking everything into consideration, we came to the conclusion that *Donacia* (*Cyphogaster*) *lenzi* SCHÖNFELDT, 1888 is the most expected species to be newly found hereafter from Chiba Prefecture. One should pay attention to the pond, marsh, or moor where *Nymphaea* and/or *Brasenia* plants of its hosts grow. *Donacia* (*Donaciomima*) *nitidior* (NAKANE) (main hosts: *Carex* spp.) and *Donacia* (*Donaciomima*) *vulgaris* ZSCHACH, 1788 (main hosts: *Typha* spp., *Sparganium* spp.), which have been recorded from Tokyo (MINAMI, 1987; MINAMI & KOMIYA, 2005), may also be found in Chiba Prefecture. The latter species is distributed in North Japan, and recently its isolated populations were found in Tokyo (MINAMI & KOMIYA, 2005) and Fukui Prefecture (Hokuriku District) (unpublished; TAKEDA, pers. comm.).

Phytophagous insects largely and inevitably depend on the existence of host plants in their habitats. They must also have means to move to new habitats from the place where they already settled down. What habitat is stably kept for a long time is indispensable for their long term existence. It should be pointed out that the existence of a given donaciine species is also strongly disturbed and conditioned by various factors, e.g., dispersal by migratory aquatic birds, artificial transplantation of aquatic plants to a new habitat when artificial preparation or change of water system is made for the cause of preservation of 'natural' environment. The constructions of odonate and bird sanctuaries or biotopes are good examples of the latter. In fact such an artificial change of 'natural' environment has given serious influence to the fauna and flora in the place concerned. One should comprehend precisely the fauna and flora in a given locality and then make effort to reveal the factors determining the distributional pattern for each species. Donaciine fauna may show a good material for considering the biogeographical and conservation biological problems.

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Additional Note

After the completion of the manuscrispt, MIYAUCHI (2007) corrected and omitted the record of *Donacia* (*Donaciomima*) *splendens hiurai* from Chiba Prefecture as misidentification.

MIYAUCHI, H., 2007. Correction of the data of *Donacia* (*Donaciomima*) *splendens hiurai* from Chiba Prefecture. *Bôsô-no-Konchû*, *Yotsukaidô*, (39): 110. (In Japanese.)

要　　約

鈴木邦雄・川島逸郎・南　雅之：千葉県におけるイネネクイハムシ，キアシネクイハムシおよびフトネクイハムシの新産地―付：千葉県のネクイハムシ相解明にあたっての今後の課題―．―― 千葉県下では既知産地の少ない3種のネクイハムシの新産地（いずれも房総半島中南部）を報告した．千葉県から記録のあるネクイハムシ類7種すべての既知産地をまとめ，ヒウラヒラタネクイハムシの記録を誤同定に基づくものとして除外し，残りの6種についておもに動物地理学上の問題点を指摘し，千葉県のネクイハムシ相の解明にあたっての今後の課題について論じた．

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Elytra, Tokyo, **36**(1): 37–41, May 30, 2008

A New Species of *Passandra* (Coleoptera, Passandridae) from Japan, Formerly Classified as *P. trigemina* (NEWMAN)

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Abstract Japanese specimens of *Passandra trigemina* (NEWMAN, 1839) were found to belong to a different species and is described as *Passandra okinawana* sp. nov. It is distinguishable from true *P. trigemina* mainly by the structure of antennae, the shape of pronotum and parameres.

Passandra of the family Passandridae is a rather small genus consisting of thirty species in the world (ŚLIPIŃSKI, 1987). Two species of *Passandra* have been known from Japan and one of them was identified by SASAJI (1985) as *Hectarthrum sociale* WATERHOUSE, 1876, which was regarded later by ŚLIPIŃSKI (1987) and BRUCKHARDT & ŚLIPIŃSKI (2003) as a junior synonym of *Passandra trigemina* (NEWMAN, 1839). I had a chance to collect many specimens of *Passandra* on the Ryukyu Islands in Southwest Japan and studied their morphology in detail in comparison with the original description of *Hectarthrum trigeminum* by NEWMAN (1839) and its redescription by ŚLIPIŃSKI (1987). As the result, I found some differences between them and came to the conclusion that the specimens from the Ryukyu Islands belong to a species different from true *P. trigemina.* It is described below as a new species.

Passandra okinawana AOKI, sp. nov.

(Figs. 1–6)

Body length 7.2–15.1 mm (average 11.5, n=13). Color uniformly black, rarely dark brown; surface shiny.

Head 0.8× as long as wide; medial process truncate anteriorly, smoothly narrowed posteriad, surface of anterior 2/5 shallowly depressed; lateral grooves deep and connected with transverse groove; basal transverse area smooth and weakly arched medially; surface micropunctured. Antennomere I barrel-shaped, II the shortest; apical part of IV–X more or less projecting inwards; ventral side of III–V with narrow groove, VI –X widely grooved; XI large, rounded apically; VI–X with a few barbs, XI densely barbed; dorsal side of antennomeres IV–X (Fig. 2) each with a small groove; lateral side of antennomeres III–X each with a small groove minutely barbed (Fig. 3).

Pronotum nearly parallel-sided, but slightly narrowed anteriorly and posteriorly;

anterior angles strongly prominent; posterior angles acute; lateral lines slightly concave in the middle part; sublateral lines obsolete at basal 1/3.5, not connected anteriorly, but well extending inwards, with a small transverse concavity in median part between median ends of the lines; marginal groove at base with a pair of notches. Surface very finely punctured.

Elytra parallel-sided, together rounded apically; each elytron with three long lines (I, V and VI); their length I>VI>V.

Median lobe of male genitalia rounded apically (Fig. 6); lateral side of paramere with 16–20 long and thick setae, of which basal four are sharply pointed at tip, but the remaining long setae rather blunt at tip and strongly curled apically (Fig. 5); median side of paramere with about forty short spines; some more small spines in basal part of paramere; a number of small pores scattered on whole surface.

Type series. Holotype ♂ (NSMT-I-C-200121) and 3 paratypes (NSMT): Tropical Botanical Garden in Hirara City, Miyakojima Island, Southwest Japan, 13-IV-2005, J. AOKI leg; 6 paratypes (NSMT): the same place, 19-X-2007, J. AOKI leg.; 4 paratypes (NSMT): Kita-Kamiyama Utaki, Kuroshima Island, Southwest Japan, 21-V-2005. J. AOKI leg.; 1 paratype (KUM): Miyakojima Island, Southwest Japan, 29-VI-1965, Y. HAYASHI leg.; 2 paratypes (KUM): Haterumajima Island, 27-VII-1964, T. ITO leg.; 5 paratypes (SEHU): Taketomijima Island, Southwest Japan, 19-III-1983, T. & T. NAKANE leg. Holotype and 13 paratypes are deposited in the collection of the National Museum of Nature and Science, Tokyo (NSMT), 3 paratypes in the collection of Kyushu University Museum (KUM) and 5 paratypes in the collection of Hokkaido University Museum (SEHU).

Distribution in Japan. Ryukyu Islands (Miyakojima Island, Kuroshima Island, Taketomijima Island and Haterumajima Island).

Remarks. Among the thirty species of *Passandra* of the world, *P. trigemina* (NEWMAN, 1839) is most similar to *P. okinawana* sp. nov., but the new species differs from *P. trigemina* in 1) only antennomeres VI–X widely grooved on ventral side (III–X widely grooved in *trigemina*), 2) the wider pronotum, 1.1–1.2×as long as wide (1.4×as long as wide in *trigemina*), 3) anterior end of sublateral line on pronotum turning inwards considerably (only for a short distance in *trigemina*), 4) a small transverse concavity found medially near the anterior margin of pronotum (no such a concavity in *trigemina*), 5) parameres provided with 16–20 long thick setae blunt at tips (about 13 long setae sharply pointed at tips in *trigemina*). The last two features are peculiar to the new species distinguishing it from all the other species of *Passandra*. My investigation of specimens of *Passandra* preserved in Kyushu University Museum and Hokkaido University Museum revealed that they are all identical with the new species described herein.

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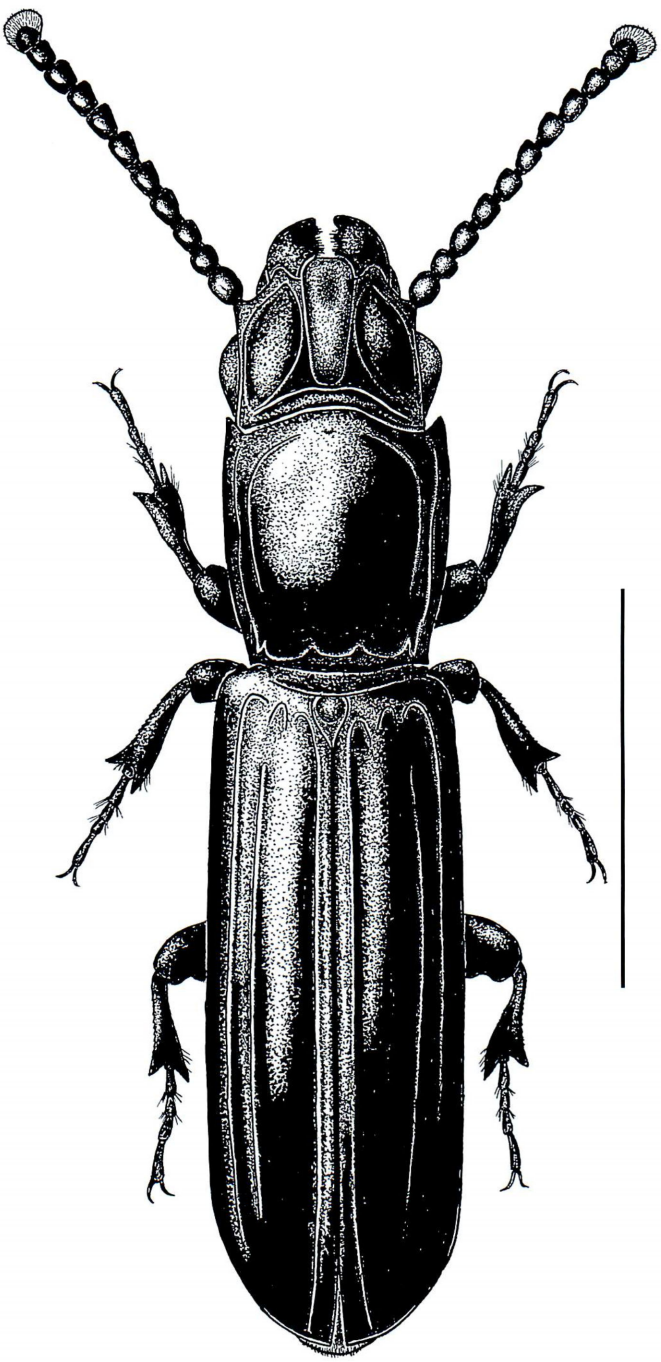
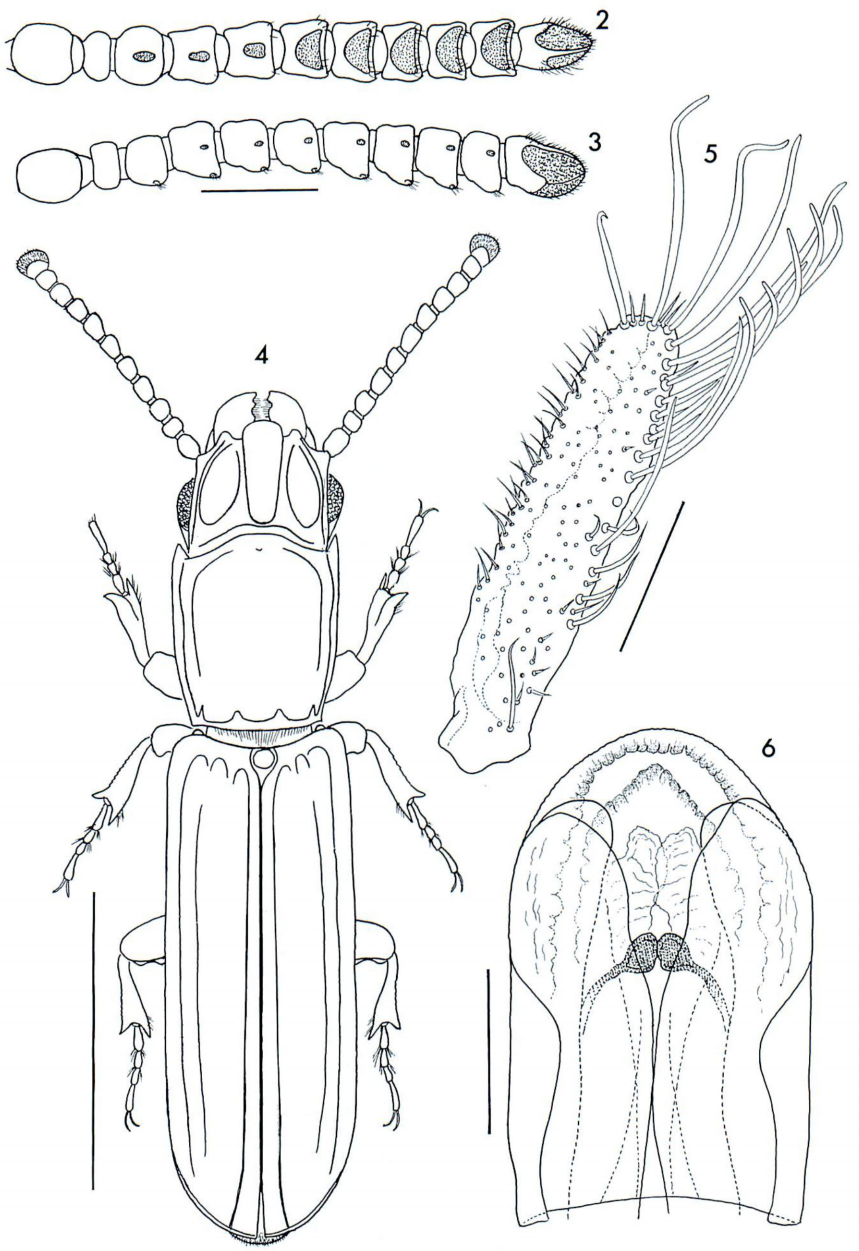


Fig. 1. *Passandra okinawana* sp. nov., ♂ (Scale: 5 mm).



Figs. 2–6. *Passandra okinawana* sp. nov., ♂. —— 2, Antenna in ventral aspect; 3, antenna in dorsal aspect; 4, dorsal side of whole body; 5, paramere, ventral; 6, median lobe, ventral (Scale: 1 mm for 2 and 3; 5 mm for 4; 0.2 mm for 5 and 6).

Dr. Masahiro ÔHARA (Hokkaido University) for their arrangement to examine *Passandra* specimens preserved in the University Museums, Mr. Yukihiko HIRANO (Odawara City) and Dr. Hideto HOSHINA (Fukui University) for their kindness to have given me instruction in observation of genitalia and to Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for his kind critical reading of the manuscript.

要　約

青木淳一：クロツヤツツヒラタムシ（甲虫目，ツツヒラタムシ科）の学名の変更と新種としての記載．—— 日本産のツツヒラタムシ属 *Passandra* には 2 種が知られているが，そのうちの 1 種クロツヤツツヒラタムシには *Passandra trigemina* (NEWMAN, 1839) の学名が当てられている．今回，宮古島および黒島（沖縄県）で採集された本属のものを上記の種の原記載および再記載と比較検討したところ，これは *P. trigemina* とは別種の新種であると判断されたので，*Passandra okinawana* sp. nov. と命名記載した．和名は従来のクロツヤツツヒラタムシをそのまま使用する．新種は触角の構造，前胸背板の形・溝・凹み，陰茎側片毛の形などの違いによって，*P. trigemina* と区別される．なお，九州大学や北海道大学に保管されており，*P. trigemina* と同定されている宮古島，竹富島，波照間島産の標本を検討したところ，すべて本新種と同一種であることが確認されたので，真の *P. trigemina* は日本には分布しないものと判断される．

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Elytra, *Tokyo*, **36**(1): 42, May 30, 2008

New Record of *Cercyon* (*Cercyon*) *verus* (Coleoptera, Hydrophilidae) from Japan

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Cerycyon (*Cercyon*) *verus* is a terrestrial hydrophilid beetle described by SHATROVSKIY (1989) on the basis of the specimens collected from Russia (Sakhalin and Kuril Islands). Recently I collected some individuals of the species on the Island of Dikokujima, off Akkeshi, Hokkaido, Japan. Herein I am going to record it for the first time from Japan (except southern Kuril Islands).

Cercyon (*Cercyon*) *verus* SHATROVSKIY, 1989

Cercyon (*Cercyon*) *verus* SHATROVSKIY, 1989, 282 [Sakhalin, southern Kurils (Kunashir)]; 1992, 364 [Sakhalin, Kurils (Kunashir, Shikotan)]; ÔHARA & JIA, 2006, 143 [Kurils (Kunashir, Iturup, Urup, Simushir)].

Specimens examined. Japan: Hokkaido. [Daikokujima, off Akkeshi] 1 male, 1 ex., 42°57.33′N144°52.17′E, 12-VII-2005, M. ÔHARA, carcasses of petrel, by hand with aspirator (DA-05-MO-002); 1 male, 42°57.05′N144°52.07′E, 12-VII-2005, M. ÔHARA, damp ground, with dip net (DA-05-MO-003).

Distribution. Japan (Hokkaido: Daikokujima). Kuril Islands (Shikotan, Kunashir, Iturup, Urup, Simushir). Russian Fed. (Sakhalin). New to Japan.

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Elytra, *Tokyo*, **36**(1): 43–44, May 30, 2008

Tenebrionid Beetles Feeding on Tissues of Witches' Broom

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Witches' broom is a disease symptom of woody plants, in which compact, dense clusters of numerous twigs and branches are formed. The shoot mass originates from one point, giving a broom- or bird-nest-like appearance (Fig. 1). Witches' brooms can be induced by various organisms, such as fungi, phytoplasmas, and mites, and are classified as a type of plant gall (MANI, 1964; YUKAWA & MASUDA, 1996). Plant galls are deformed plant tissues that are induced by physicochemical stimuli from diverse organisms (MANI, 1964; YUKAWA & MASUDA, 1996), and because galls are manipulated by gall-inducers to be more nutritious than normal plant tissues, various arthropods facultatively or obligately use them as food sources (HARTLEY & LAWTON, 1992; SUGIURA *et al.*, 2006). Although many gall-using species have been observed on diverse types of galls, those associated with witches' brooms have rarely been recorded. Here, we describe the feeding habit of a tenebrionid beetle species observed feeding on the tissues of witches' broom.

Field observations and samplings were conducted at the base of Mt. Takamado (34°40′N, 135°51′E, ca. 210 m above sea level), Nara City, Nara Prefecture, in central Japan on 17 April 2001. At this site, we found many (>30) shoot masses of witches' broom on a shrub of the thorny elaeagnus, *Elaeagnus pungens* THUNB. (Elaegnaceae) (Fig. 1), and we sampled 14 masses using pruning scissors. Masses were individually placed in zip-lock plastic bags, transported to the laboratory, and maintained under laboratory conditions. The sizes of shoot masses of witches' broom varied, but the average length and width were ca. 80 and 70 mm, respectively. Three days after sampling, three *Tarpela cordicollis* (MARSEUL) (Coleoptera, Tenebrionidae) adults appeared from two of the 14 shoot masses stored in plastic bags and fed on the tissues of the witches' broom. One-third of the volume of each shoot mass was consumed by the beetles within 1 week. In addition, an adult preying mantis, *Amantis nawai* (SHIRAKI) (Mantodea, Mantidae), a nymph of the issid planthopper, *Gergithus variabilis* (BUTLER) (Hemiptera, Issidae), three jumping spiders (Araenae, Salticidae), and an adult acarophagous ladybird beetle, *Stethorus japonicus* KAMIYA (Coleoptera, Coccinellidae) were found amongst the 14 shoot masses of witches' broom.

Witches' broom on *E. pungens* is reportedly caused by the gall mite (Acari, Eriophyidae, *Eriophyes* sp.; YAMASHITA *et al.*, 1980). This mite appears to induce witches' brooms in new shoots of the host plant in the spring, although its life cycle has not been examined. Because most of the tissues of witches' brooms were dead at the time of sampling, and appeared to have been formed during the preceding year, the observed *T. cordicollis* beetles can be classified as secondary users (*i.e.*, a successori) of the gall (sensu MANI, 1964). Similar to other galls, witches' brooms are likely to be more nutritious than normal plant tissues; thus, the tenebrionid beetles may be



Fig. 1. A shoot mass of witches' broom on the thorny elaeagnus, *Elaeagnus pungens*, Scale line: 10 mm.

using them as a food source. In addition, the structure of witches' broom may function as a shelter for the beetles. The life history of *T. cordicollis* remains to be examined, but because *T. cordicollis* and other congeneric species can be collected by beating shrub foliage, and are often observed walking on tree trunks at night in the spring, they are probably arboreal species. Therefore, witches' broom may provide a suitable microhabitat for this arboreal tenebrionid beetle.

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Strongylium pallidonotatum and its Relatives (Coleoptera, Tenebrionidae)

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Abstract *Strongylium pallidonotatum* PIC, 1917 and its relatives are dealt with. One known species and four new species are examined: *Strongylium pallidonotatum, S. kelantanense* sp. nov., *S. bessiense* sp. nov., *S. sukabumiense* sp. nov., and *S. wolfgangi* sp. nov.

This paper deals with *Strongylium pallidonotatum* PIC, 1917 and its relatives. The major characteristics of this species are the shortened body, several apical segments of antennae widened and flattened, the elytra with a pair of yellowish patches each with a gibbosity near the bases, and also with the apices dehiscent, male anal sternite semicircularly to subelliptically concave, and the male legs often modified.

On this occasion, *S. pallidonotatum* and four new species will be described; they form a species-group. More new relative species will be discovered in the future on the Sunda Land.

Strongylium pallidonotatum was originally described by PIC from Nias, but the collecting place handwritten on the type's label is Sumatra.

The specimens examined in the present taxonomic study are submitted to the authors mainly from the collections of the Staatliches Museum für Naturkunde, Stuttgart, the Muséum national d'Histoire naturelle, Paris, and the private collection of Stanislav BEČVÁR, České Budějovice, and also from the authors' collection, which are now deposited in the National Museum of Nature and Science, Tokyo.

The authors wish to express their cordial thanks to Dr. Wolfgang SCHAWALLER, Dr. Claude GIRARD, and Ing. Stanislav BEČVÁR. Deep appreciation is due to Dr. Makoto KIUCHI, Tsukuba City, for taking number of very clear photographs inserted in this paper. Finally, their deepest thanks should be expressed to Emeritus curator, Dr.

Shun-Ichi UÉNO, National Museum of Nature and Science, Tokyo, for his constant guidance on their taxonomic studies.

Depositories of the holotypes to be designated are given under each description. The abbreviations used herein are as follows: SMNS – Staatliches Museum für Naturkunde, Stuttgart; NSMT – National Museum of Nature and Science, Tokyo; NMPC – National Museum, Prague, Czech Republic; MNHNP – Muséum national d'Histoire naturelle, Paris.

Strongylium pallidonotatum PIC, 1917

(Figs. 1, 9, 20)

Strongylium pallidonotatum PIC, 1917, Mél. exot.-ent., Moulins, (23): 19.

Original description by PIC (p. 19): "Robustus et curtus, apice valde attenuatus, glaber, nitidus, rufus aut testaceus, capite postice pectoreque piceis, thorace elytrisque viridescentibus, illis antice pallido-testaceo notatis, antennis testaceis, apice nigris et dilatatis; pedibus testaceis, femoribus, tibiis tarsisque apice nigris. Thorace breve, transverso, inæquale, sulcato, densissime punctato; elytris ad basin minute gibbosis et depressis, fortiter striatis, antice foveolatis, intervallis fere carinatis. Long. 11 mill. Ile Nias. — Voisin des deux précédents [*Strongylium medanense* PIC and *S. violaceicolle* PIC, the present authors' insertion], mais gibbosités des élytres moins fortes et coloration toute autre."

Notes. As mentioned in the preface, the major characteristics of this species are the shortened body, several apical segments of antennae widened and flattened (more noticeably modified in female), the elytra with a pair of yellowish patches with gibbosities near the bases, and also with the apices dehiscent, male anal sternite semicircularly to subelliptically concave, and the male legs often modified. As the type specimen of this species is a female, the male characteristics are supplemented from those of its relatives.

The type of *Strongylium pallidonotatum* is preserved in the PIC collection in the Muséum national d'Histoire naturelle, Paris. The collecting place on the label attached to the type is not Nias but Sumatra. Presumably PIC recognized that the type specimen was collected in Nias, even though Sumatra was handwritten on the data label.

Among specimens of the genus *Strongylium* in various collections, the authors found several species which share the diagnostic characters with *S. pallidonotatum*.

Strongylium kelantanense sp. nov.

(Figs. 2–3, 10–11, 17, 21, 25, 28, 31, 35)

Brownish yellow, antennae with anterior half of seventh and four apical segments, pronotum with central parts and lateral margins, elytra with anterior 2/5 except for subellipitical patches at basal 1/8, somewhat T-shaped band in posterior 4/9, and also

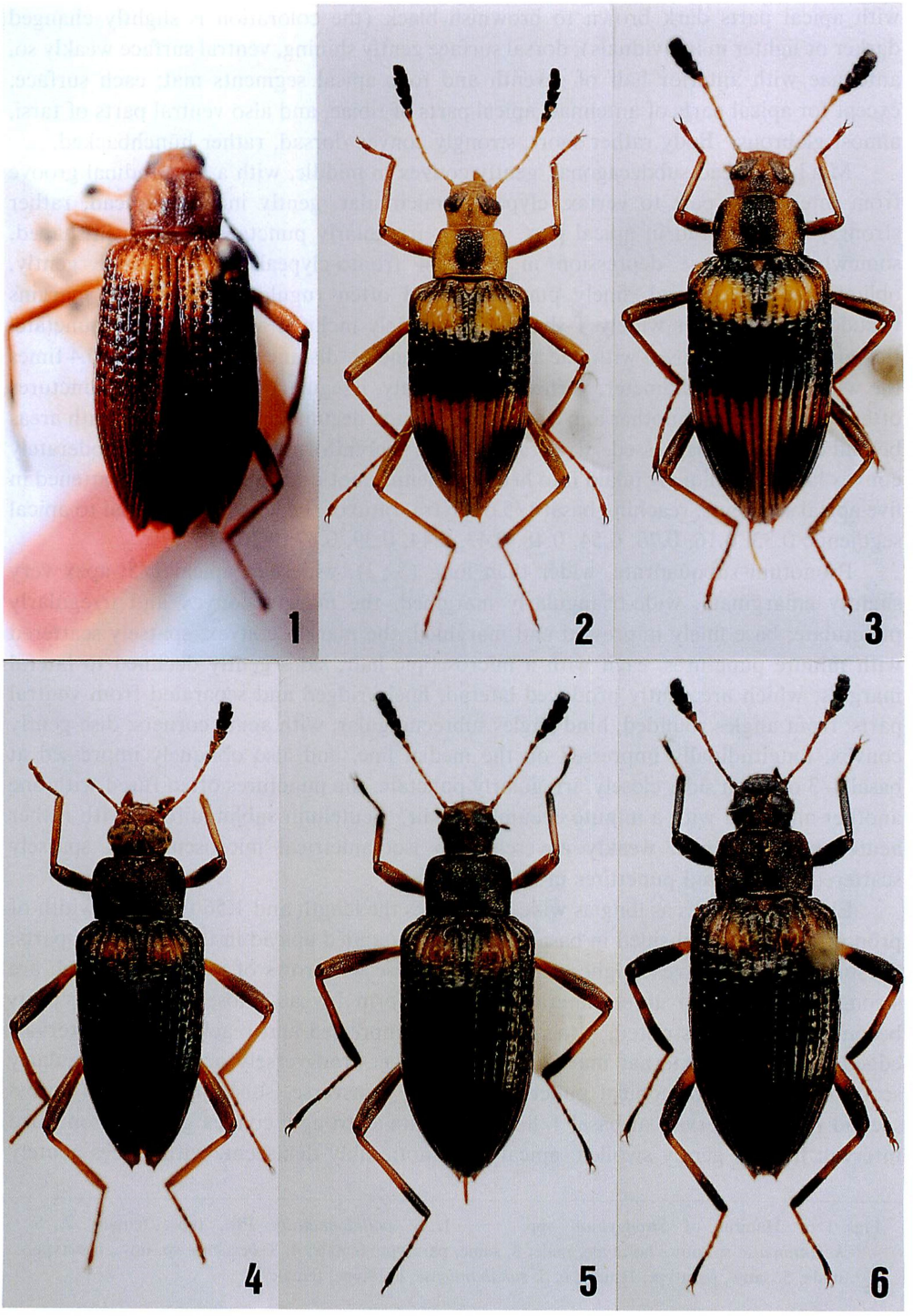
with apical parts dark brown to brownish black (the coloration is slightly changed darker or lighter in individuals); dorsal surface gently shining, ventral surface weakly so, antennae with anterior half of seventh and four apical segments mat; each surface, except for apical parts of antennae, apical parts of tibiae, and also ventral parts of tarsi, almost glabrous. Body rather short, strongly convex dorsad, rather hunchbacked.

M a l e. Head subdecagonal, gently convex in middle, with a longitudinal groove from interocular part to vertex; clypeus semicircular, gently inclined apicad, rather strongly bent ventrad in apical part, closely, irregularly punctate, with an ill-shaped, somewhat transverse depression in front of fronto-clypeal border; genae gently, obliquely raised laterad, finely punctulate and often rugulose, with outer margins rounded; frons rather widely T-shaped, moderately inclined anteriad, finely punctate, the punctures often fused with one another, diatone (=distance between eyes) 0.4 times the width of an eye diameter; vertex rather closely, irregularly punctate, the punctures often fused with one another and each with a minute decumbent hair; occiput with areas behind eye weakly depressed. Eyes rather large, subreniform in dorsal view, moderately convex laterad, obliquely inlaid into head. Antennae noticeably clubbed and flattened in five apical segments, reaching basal 1/5 of elytra, ratio of the length from basal to apical segments: 0.33, 0.16, 0.76, 0.54, 0.48, 0.43, 0.44, 0.39, 0.37, 0.36, 0.34.

Pronotum subquadrate, wider than long (3 : 2), widest at apical 2/5; apex very slightly emarginate, wide-triangularly margined, the margin convex and irregularly punctulate; base finely impressed and margined, the margin convex, sparsely scattered with minute punctures, each with a microscopic hair; sides gently declined to lateral margins, which are gently produced laterad, finely ridged and separated from ventral parts; front angles rounded, hind angles subrectangular, with acute corners; disc gently convex, longitudinally impressed on the medial line, and also obliquely impressed at basal 1/3 on each side, closely, irregularly punctate, the punctures often fused with one another and each with a minute decumbent hair. Scutellum sublinguiform with rather acute apex, flattened, weakly covered with isodiametrical microsculpture, sparsely scattered with haired punctures in lateral parts.

Elytra 1.91 times as long as wide, 4.19 times the length and 1.56 times the width of pronotum, subparallel-sided in basal 4/9, gently rounded apicad in the remaining parts; dorsum strongly convex, highest at basal 1/4; disc with rows of punctures, which are strong and coarse in antero-lateral parts and form foveae, those in posterior parts becoming finer and striated, fifth row strongly impressed and reaching base; intervals edged along each external margin, weakly, rather transversely aciculate, irregularly scattered with microscopical punctures, with a transverse, subelliptical hump across second to fifth intervals at basal 1/8, which bears a strongly convex gibbosity on third interval; humeri gently swollen; apical parts noticeably dehiscent, with apices acutely

Figs. 1–6. Habitus of *Strongylium* spp. —— 1, *S. pallidonotatum* Pic, type, female; 2, *S. kelantanense* sp. nov., holotype, male; 3, same, paratype, female; 4, *S. bessiense* sp. nov., holotype, male; 5, same, paratype, female; 6, *S. sukabumiense*, holotype, female.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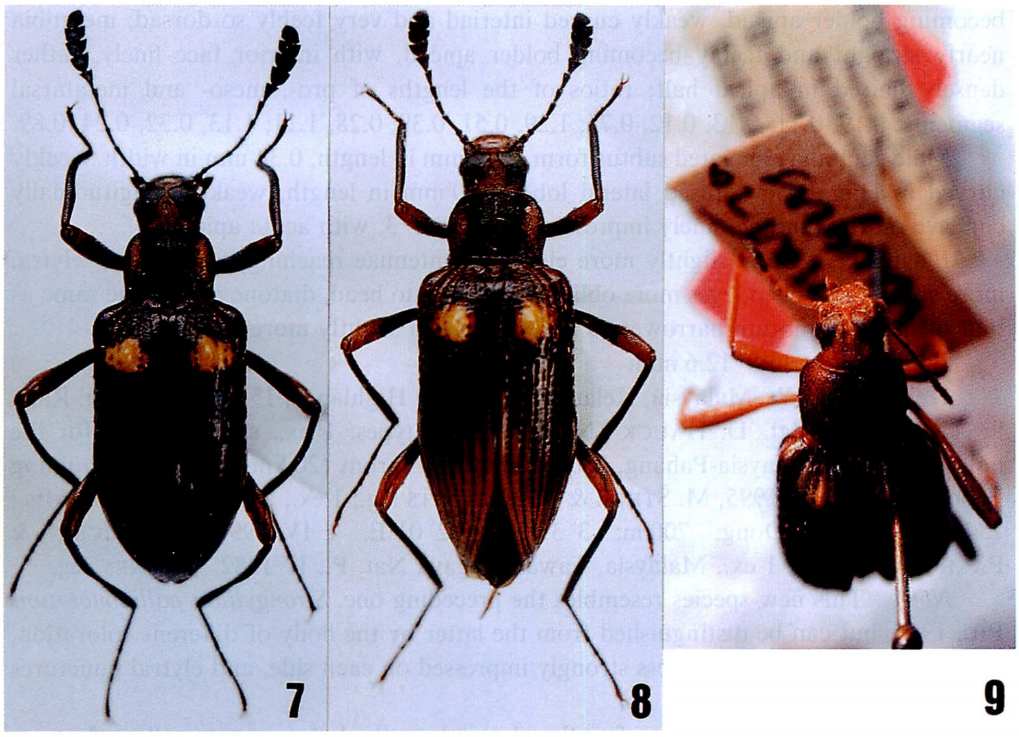


Figs. 7–9. Habitus and anterior body of *Strongylium* spp. —— 7, *S. wolfgangi* sp. nov., holotype, male; 8, same, paratype, female; 9, *S. pallidonotatum* PIC, type, female, front aspect.

projected.

Terminal segment of maxillary palpi securiform with curved outer side about 1.58 times the length of the inner, 0.76 times that of apical. Mentum widely obtrapezoidal with anterior part produced, convex in apico-medial part, rather coriaceous and sparsely pubescent in basal part; gula semicircular, almost smooth and sparsely, microscopically punctate, weakly impressed along lateral borders in anterior parts. Prosternum depressed in anterior part, very weakly covered with isodiametrical microsculpture, scattered with microscopical punctures, each with a minute bent hair, intercoxal space and prosternal process raised and rugulose, the latter widely subcordate, depressed on each side, and weakly reflexed along lateral margins. Mesosternum rather short, triangularly depressed and punctate in anterior and medial parts, raised and obliquely impressed in intero-anterior parts, sparsely punctate in areas near mesocoxae. Abdomen weakly covered with isodiametrical microsculpture, rather closely, finely punctate, each puncture very weakly, transversely impressed and with a rather long hair, anal (fifth) sternite with a subelliptical depression in apical 4/5, whose apices are pointed interiad.

Legs rather slender; protibia weakly curved ventrad, with interior face gently gouged at apical 1/3, and finely, rather densely haired in apical 1/4; mesotibiae gently

becoming bolder apicad, weakly curved interiad and very feebly so dorsad; metatibia nearly straight and feebly becoming bolder apicad, with interior face finely, rather densely haired in apical half; ratios of the lengths of pro-, meso- and metatarsal segments: 0.19, 0.11, 0.13, 0.12, 0.75; 1.29, 0.51, 0.39, 0.28, 1.11; 1.13, 0.32, 0.24, 0.89.

Male genitalia elongated subfusiform, 2.49 mm in length, 0.34 mm in width, weakly curved in lateral view; fused lateral lobes 1.10 mm in length, weakly, longitudinally concave on the midline, finely impressed in apical 1/3, with acute apices.

F e m a l e. Body slightly more elongate, antennae reaching basal 1/7 of elytra, more strongly clubbed, eyes more obliquely inlaid into head, diatone almost the same as that of male, pronotum narrower (9 : 8), and elytra slightly more elongate.

Body length: 11.3–12.6 mm.

Holotype: ♂, W. Malaysia, Kelantan, Cameron Highlands, 15 km NE of Kg. Raia, 9～11–IV. 1997, lgt. D. HAUCK (NHMP). Paratypes: 1 ex., same data as for the holotype; 1 ex., Malaysia-Pahang, 350–550 m, Lata Jarom (20 km NE Raub), Gunung Benom, 19～22–II–1995, M. ŠTRBA & R. HEROVITS leg.; 1 ex., Malaysia: Benom Mts.; 15 km Kampon Dong; 700 m; 3°35′N, 102°01′E, 1–IV–1998, DEMBICKÝ & PACHOLÁTKO leg.; 1 ex., Malaysia, Tawan Negava Nat. P., II–1982, WEVNEV leg.

Notes. This new species resembles the preceding one, *Strongylium pallidonotatum* PIC, 1917, but can be distinguished from the latter by the body of different coloration, the pronotum narrower and less strongly impressed on each side, and elytral punctures in rows stronger and round.

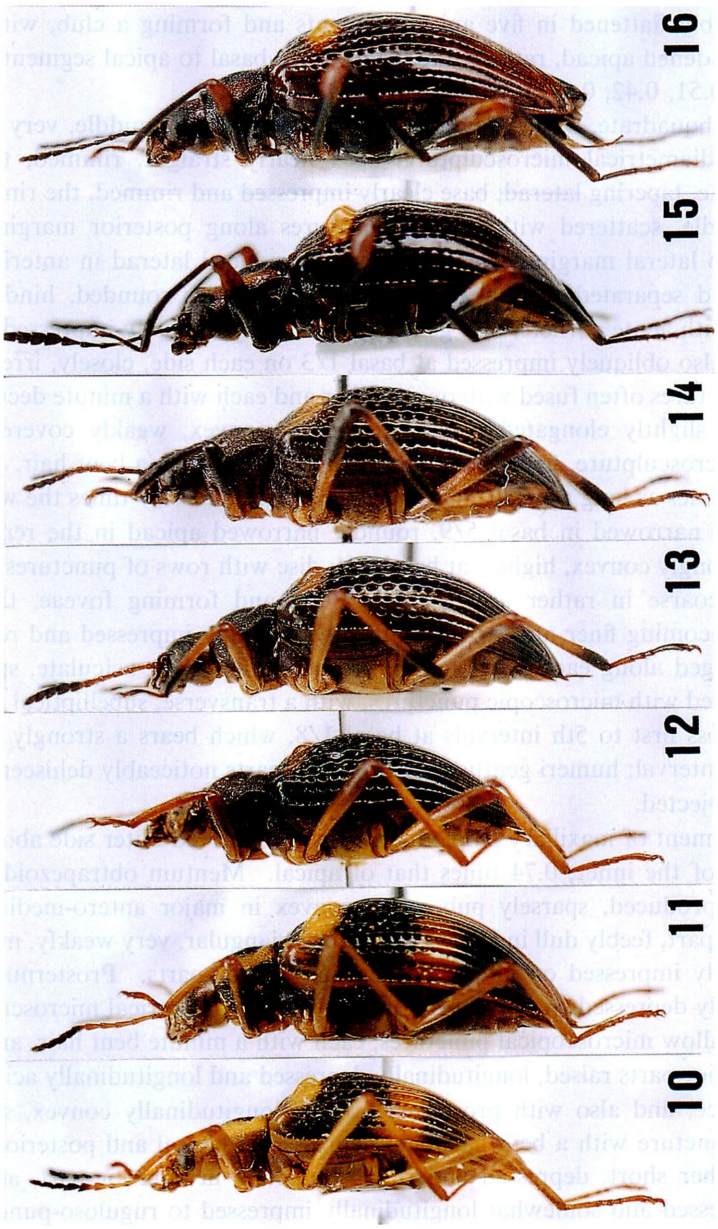
The specific name is given after the place where the holotype was collected.

Strongylium bessiense sp. nov.

(Figs. 4–5, 12–13, 18, 22, 26, 29, 32, 36)

Brownish yellow, three apical segments of antennae and posterior parts of apical fourth almost black, pronotum reddish brown with lateral parts darkened, scutellum also reddish brown, elytra almost black with feeble greenish tinge in anterior parts, dark brown in posterior parts, and reddish brown in subellipitical patches at basal 1/8, apical parts of femora darkened; head and pronotum weakly shining, scutellum and elytra gently shining, ventral surface weakly so and somewhat alutaceous; each surface almost glabrous, apical parts of antennae, apico-ventral parts of tibiae, and ventral parts of tarsi finely haired. Body rather short, strongly convex dorsad, somewhat hunchbacked.

M a l e. Head transversely subelliptical, deeply, longitudinally impressed from interocular part to vertex; clypeus transversely subelliptical, flattened in basal part, gently inclined in anterior part, closely, irregularly punctate, each puncture with a minute bent hair; fronto-clypeal border grooved, weakly, widely curved posteriad in middle, abruptly bent antero-laterad in lateral parts, and reaching lateral margins; genae rather rhombic and obliquely raised, closely punctulate and often rugulose; frons rather T-shaped, steeply inclined anteriad, finely punctate, ridged along anterior margins of eyes, diatone 1/6 the width of the diameter of an eye; vertex rather closely, irregularly



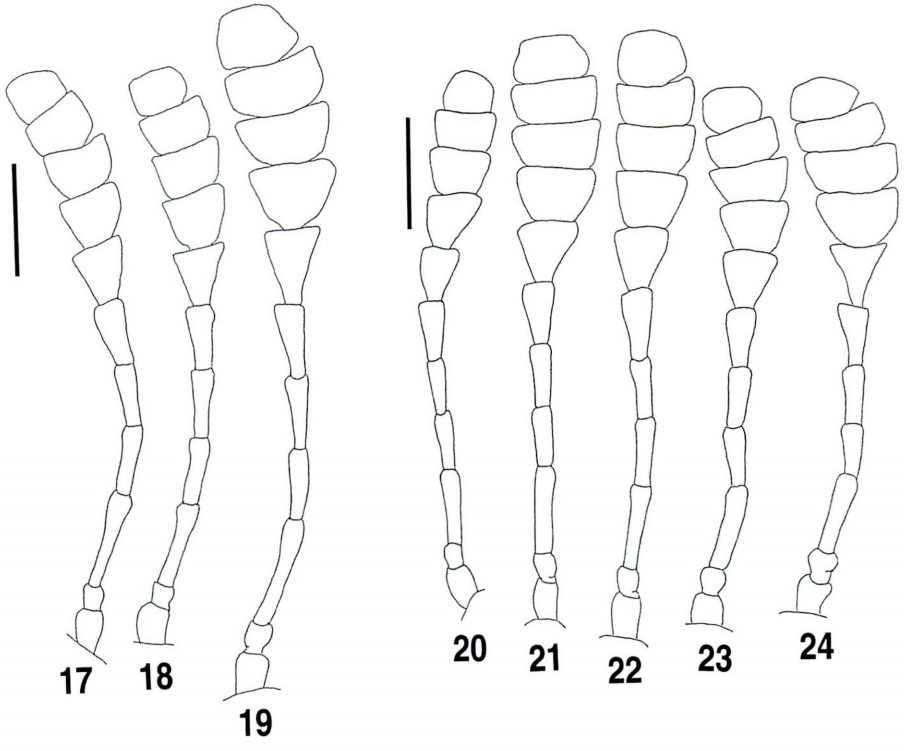
Figs. 10–16. *Strongylium* spp., in lateral aspects. —— 10, *S. kelantanense* sp. nov., holotype, male; 11, same, paratype, female; 12, *S. bessiense* sp. nov., holotype, male; 13, same, paratype, female; 14, *S. sukabumiense* sp. nov., holotype, female; 15, *S. wolfgangi* sp. nov., holotype, male; 16, same, paratype, female.

punctate, the punctures often fused with one another and each with a minute decumbent hair; occipt with areas behind eyes strongly depressed. Eyes large, subreniform in dorsal view, strongly convex laterad, obliquely inlaid into head. Antennae reaching basal 1/8 of elytra, noticeably flattened in five apical segments and forming a club, with sixth segment gently widened apicad, ratio of the length from basal to apical segments: 0.33, 0.13, 0.58, 0.49, 0.51, 0.42, 0.39, 0.41, 0.39, 0.38, 0.32.

Pronotum subquadrate, wider than long (3 : 2), widest at the middle, very weakly covered with isodiametrical microsculpture; apex nearly straight, rimmed, the rim sparsely punctulate, tapering laterad; base clearly impressed and rimmed, the rim feebly produced in middle, scattered with minute punctures along posterior margin; sides gently declined to lateral margins, which are gently produced laterad in anterior 3/4, finely rimmed and separated from ventral parts; front angles rounded, hind angles subrectangular, with acute corners; disc gently convex, longitudinally impressed on the medial line, and also obliquely impressed at basal 1/3 on each side, closely, irregularly punctate, the punctures often fused with one another and each with a minute decumbent hair. Scutellum slightly elongated triangular, gently convex, weakly covered with isodiametrical microsculpture, finely punctate, each puncture with a bent hair.

Elytra 1.95 times as long as wide, 3.96 times the length and 1.37 times the width of pronotum, gently narrowed in basal 5/9, roundly narrowed apicad in the remaining parts; dorsum strongly convex, highest at basal 1/4; disc with rows of punctures, which are strong and coarse in rather antero-lateral parts and forming foveae, those in posterior parts becoming finer and striated, 5th rows strongly impressed and reaching base; intervals edged along each outer margin, rather transversely aciculate, sparsely, irregularly scattered with microscopic punctures, with a transverse, subelliptical reddish brown patch across first to 5th intervals at basal 1/8, which bears a strongly convex gibbosity on 3rd interval; humeri gently swollen; apical parts noticeably dehiscent, with apices acutely projected.

Terminal segment of maxillary palpi securiform with curved outer side about 1.36 times the length of the inner, 0.74 times that of apical. Mentum obtrapezoidal with anterior margin produced, sparsely pubescent, convex in major antero-medial part, smooth in medial part, feebly dull in lateral parts; gula triangular, very weakly, minutely wrinkled, obliquely impressed on lateral borders in anterior parts. Prosternum with anterior part feebly depressed, very weakly covered with isodiametrical microsculpture, scattered with shallow microscopical punctures, each with a minute bent hair, and with medial and posterior parts raised, longitudinally depressed and longitudinally aciculated in intercoxal space, and also with prosternal process longitudinally convex, sparsely punctate, each puncture with a bent hair, and depressed in lateral and posterior parts. Mesosternum rather short, depressed and rugoso-punctate in anterior part, and also triangularly depressed and somewhat longitudinally impressed to ruguloso-punctate in intercoxal space, convex and wrinkled in areas before interior sides of mesocoxae. Metasternum rather short, shallowly punctate, each puncture with a fine decumbent hair, with a longitudinal groove on the median line. Abdomen weakly covered with



Figs. 17–24. Antennae. —— 17–19, male right antenna; 20–24, female right antenna. —— 17, 21, *Strongylium kelantanense* sp. nov.; 18, 22, *S. bessiense* sp. nov.; 19, 24, *S. wolfgangi* sp. nov.; 20, *S. pallidonotatum* PIC; 23, *S. sukabumiense* sp. nov. Scales = 1 mm.

isodiametrical microsculpture, rather closely, finely punctate, each puncture very weakly, transversely impressed and with a rather long hair, longitudinally wrinkled from first to third sternites, fifth with a semicircular depression in apical 3/4, whose apices are pointed interiad.

Legs rather slender; protibia very weakly curved ventrad, with interior face weakly gouged at apical 1/3, and finely, densely haired in apical 1/4; mesotibia gently becoming bolder apicad and weakly curved intero-ventrad, with interior face weakly gouged at apical 1/3, and finely, densely haired in apical 2/5; metatibia nearly straight and feebly becoming bolder apicad, with interior face finely, rather densely haired in apical half; ratios of the lengths of pro-, meso- and metatarsal segments: 0.16, 0.11, 0.13, 0.13, 0.74; 1.12, 0.44, 0.31, 0.26, 1.04; 0.91, 0.30, 0.23, 0.94.

Male genitalia elongated subfusiform, 2.06 mm in length, 0.58 mm in width, weakly curved in lateral view; fused lateral lobes 1.04 mm in length, depressed in an ovate-shape at basal 1/5, impressed in apical 3/5 on the medial line, with noticeably prolonged apices.

F e m a l e. Body more ovate, antennae similar to male in length, reaching basal

1/10 of elytra, with clubs more widened; eyes more obliquely inlaid into head, diatone slightly wider than that of male; pronotum narrower 1.38 times as wide as long, and elytra less strongly narrowed apicad.

Body length: 9.7–12.4 mm.

Holotype: ♂, Est Borneo, Batan bessi, M^e. M. E. WALSH, 1937, Muséum Paris, 1952, Coll. R. OBERTHÜR (NSMT). Paratypes: 4 exs., same data as for the holotype; 1 ex., Sarawak, 26–III–1990, Kuching Santubong, lgt. A. RIEDEL (NMPC); 1 ex., Borneo Occ., Pontianak, 1906, Coll. R. OBERTHÜR; 1 ex., nr. Kpg. Bunsit, N. Borneo, Sabah, Malaysia, 2–V–1984, M. NISHIKAWA leg.

Notes. This new species resembles the preceding one, *Strongylium kelantanense* sp. nov. In comparison of the males, the former species can be distinguished from the latter by the eyes closer to each other, the pronotum wider, the legs less modified, antennal clubs and anal sternite differently shaped, and the dorsal side differently colored. In females, on the other hand, the former can be distinguished from the latter by the eyes larger, the pronotum more quadrate, the elytra with punctures in rows slightly larger and elongate, and gibbosities in anterior part not elongate as in *S. kelantanense* sp. nov.

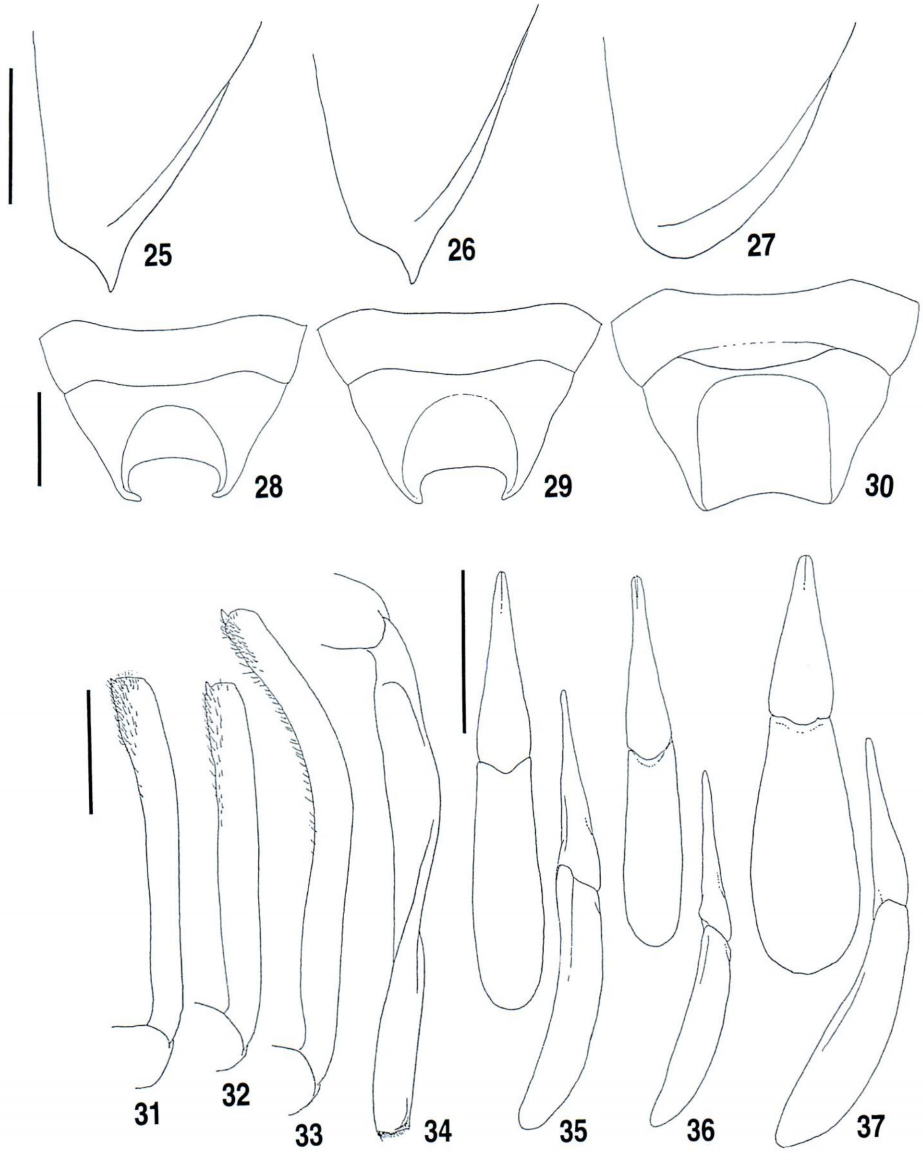
The specific name is given after the place where the holotype was collected.

Strongylium sukabumiense sp. nov.

(Figs. 6, 14, 23)

Head and pronotum blackish brown, seven apical segments of antennae and scutellum dark reddish brown, elytra brownish black with subelliptical patch yellowish brown, basal parts of femora, basal parts of meso- and metatibiae, tarsi except for apical segments, and claws also yellowish brown, ventral surface almost yellowish brown with lateral parts more or less darkened; head, pronotum and scutellum almost mat, elytra with anterior parts weakly, rather sericeously shining, and major posterior parts gently shining, ventral surface weakly so and rather alutaceous; dorsal surface almost glabrous, apical segments of antennae, tibiae with interior sides of apical parts, ventral sides of tarsi, metasternum and abdomen finely haired. Body rather short, strongly convex dorsad, somewhat hunchbacked.

F e m a l e. Head subdecagonal; clypeus transversely hexagonal, flattened in basal part, gently inclined in apical part, coarsely rugoso-punctate; fronto-clypeal border deeply grooved, weakly curved posteriad widely in middle; genae obliquely and rather rhombically raised, closely punctulate, often rugulose in interior parts; frons rather T-shaped, steeply inclined anteriad, coarsely rugoso-punctate, edged along anterior and interior margins of eyes, subrhombically impressed in area from interocular part to vertex, diatone 1/3 the width of the diameter of an eye; vertex hardly convex, coarsely rugose in medial part, rugoso-punctate in lateral part; occiput with areas behind eyes strongly depressed. Eyes large, subreniform in dorsal view, strongly convex laterad, obliquely inlaid into head. Antennae reaching basal 1/6 of elytra, noticeably flattened in five apical segments and forming a club, with sixth segment weakly widened apicad,



Figs. 25–37. Apical parts of elytra, male anal sternites, legs and male genitalia; 25–27, apical parts of elytra; 28–30, fourth and fifth abdominal sternites; 31–33, right protibia; 34, right metatibia; 35–37, male genitalia. —— 25, 28, 31, 35, *Strongylium kelantanense* sp. nov., male; 26, 29, 32, 36, *S. bessiense* sp. nov., male; 27, 30, 33–34, 37, *S. wolfgangi* sp. nov., male. Scales = 1 mm.

ratio of the length from basal to apical segments: 0.40, 0.17, 0.67 0.41, 0.44, 0.49, 0.44, 0.39, 0.30, 0.29, 0.33.

Pronotum subquadrate, wider than long (6 : 5), widest at apical 2/5, very weakly

covered with isodiametrical microsculpture; apex very weakly emarginate and rimmed, the rim punctulate, tapering laterad; base clearly impressed and rimmed, the rim feebly produced in middle, sparsely scattered with minute punctures in middle, closely, finely punctulate in lateral parts; sides moderately declined to lateral margins, which are gently produced laterad in anterior 2/3, subparallel-sided in the remaining parts, finely rimmed and separated from ventral parts; front angles rounded, hind angles rectangular; disc gently convex, deeply, longitudinally impressed on the medial line, and also gently, obliquely impressed at basal 1/3 on each side, closely, coarsely punctate, the punctures often fused with one another and each with a minute decumbent hair. Scutellum sublinguiform, feebly elevated, very slightly concave in posterior part, very weakly covered with isodiametrical microsculpture, irregularly punctate in lateral parts, each puncture with a rather long bent hair.

Elytra 1.70 times as long as wide, 3.80 times the length and 1.60 times the width of pronotum, widest at basal 4/9, weakly narrowed basad, roundly so apicad; dorsum strongly convex, highest at basal 1/3; disc with rows of strong punctures, which form foveae in antero-lateral parts, those in posterior parts becoming finer and striated, fifth rows strongly impressed and reaching base; intervals weakly covered with isodiametrical microsculpure, sparsely, irregularly scattered with microscopical punctures and often transversely aciculate, raised along each outer margin, with a transverse, subelliptical orange patch across first to fifth intervals at basal 1/8, which bears a strongly convex gibbosity on third interval; humeri gently swollen; apical parts noticeably dehiscent, with apices acutely projected.

Terminal segment of maxillary palpi securiform with curved outer side about 1.58 times the length of the inner, 0.76 times that of apical. Mentum rather obtrapezoidal, with anterior margin produced, convex in major antero-medial part, coriaceous; gula triangular, smooth, obliquely impressed on lateral borders in anterior parts. Prosternum rather alutaceous, rather closely punctate, each puncture with a bent hair, anterior part depressed, medial and posterior parts raised, and prosternal process longitudinally convex with lateral parts depressed and produced laterad. Mesosternum short, triangularly depressed and rugoso-punctate in antero-medial parts, convex and punctate in antero-interior areas of mesocoxae. Metasternum rather short, gently convex on each side, punctate in medial part, each puncture with a fine decumbent hair, granulo-punctate in lateral parts, with a longitudinal groove on the median line. Abdomen rather closely, finely punctate, each puncture with a rather long hair, very weakly, transversely impressed in second to fourth sternites, and longitudinally wrinkled from first to third sternites, fifth with a gently truncate apex.

Legs moderate in size; protibia very weakly curved ventrad, with interior face weakly gouged at apical 1/3, and finely, densely haired in apical 1/4; mesotibia gently becoming bolder apicad, and weakly curved ventro-interiad, with interior face weakly gouged at apical 1/3, and finely, densely haired in apical 2/5; metatibia nearly straight and feebly becoming bolder apicad, with interior face finely, rather densely haired in apical half; ratios of the lengths of pro-, meso- and metatarsal segments: 0.17, 0.12, 0.13,

0.13, 0.80; 0.99, 0.34, 0.29, 0.26, 1.06; 0.48, 0.33, 0.24, 1.06.

M a l e: Unknown.

Body length: 13.3 mm.

Holotype: ♀, Java occident, Sukabumi, 2000 1893, H. FRUHSTORFER (NSMT).

Notes. This new species resembles *Strongylium pallidonotatum* PIC, 1917. In comparison of the females, the former species can be distinguished from the latter by the eyes larger, the pronotum narrower, the scutellum sublinguiform, the elytra with rows of stronger punctures, and the legs bolder.

The specific name is given after the place where the holotype was collected.

Strongylium wolfgangi sp. nov.

(Figs. 7–8, 15–16, 19, 24, 27, 30, 33–34, 37)

Piceous, a pair of subelliptical patches in anterior parts of elytra yellow with feeble reddish tinge, major parts of head, lateral parts of pronotum (except for lateral margins), trochanters, apical parts of femora, lateral parts of fourth abdominal sternite and fifth reddish brown, basal and major posterior parts of elytra dark reddish brown, gula pale yellow; head, pronotum, posterior parts of elytra, a pair of elytral gibbosities, gula and femora gently shining, anterior parts of elytra, pro-, meso- and major anterior and lateral parts of metasterna weakly, somewhat sericeously shining, tibiae weakly shining; each surface almost glabrous except for apical parts of antennae, ventro-apical parts of tibiae, and ventral parts of tarsi. Body oblong-ovate, strongly convex dorsad, rather hunchbacked.

M a l e. Head subdecagonal, raised in medial part; clypeus semicircular, nearly flattened in basal part, rather strongly bent ventrad in apical part, closely punctate, each puncture with a decumbent microscopical hair, with a transverse impression in front of fronto-clypeal border, which is widely curved and extended to lateral margins; genae strongly raised laterad, finely punctulate, rugulose in inner parts, with outer margins rounded; frons T-shaped, steeply inclined anteriad, finely rugoso-punctate, diatone 1/7 times the width of an eye diameter; vertex closely punctate, each puncture with a minute bent hair, with a rhombic impression, which is continued with a longitudinal groove posteriad; occiput with areas behind eyes weakly depressed. Eyes large, subreniform in dorsal view, strongly convex laterad, rather obliquely, roundly inlaid into head. Antennae noticeably clubbed and flattened in five apical segments, reaching basal 2/5 of elytra, ratio of the length from basal to apical segments: 0.25, 0.17, 0.91, 0.54, 0.52, 0.50, 0.58, 0.40, 0.39, 0.37, 0.38.

Pronotum quadrate with rounded lateral sides, wider than long (4 : 3), widest at the middle; apex slightly produced, wide-triangularly margined, the margin covered with isodiametrical microsculpture and rather transverse small punctures; base finely impressed and margined, weakly covered with isodiametrical microsculpture and irregularly so with minute punctures; sides gently inclined, separated from ventral parts by ridges, which are easily visible from above; front angles obtusely angulate, hind angles

subrectangular; disc moderately convex, weakly covered with isodiametrical microsculpture, rather closely, irregularly punctate, the punctures often fused with one another in medial part, with a longitudinal impression on the medial line, and a pair of subcrescent impressions at the middle, also with a pair of vague impressions near hind angles. Scutellum sublinguiform, feebly elevated, very weakly depressed in medial part, covered with isodiametrical microsculpture, irregularly scattered with microscopical punctures in lateral parts.

Elytra 1.73 times as long as wide, 4.09 times the length and 1.82 times the width of pronotum, feebly constricted in basal 1/3, widest at apical 2/5; dorsum strongly convex, highest at basal 1/3; disc punctato-striate, the strial punctures ovate to oblong and rather closely set, those in antero-lateral parts rather foveolate, fifth striae strongly impressed and reaching base; intervals rather flat, weakly covered with isodiametrical microsculpture, feebly aciculate, scattered with microscopical punctures, each with a minute decumbent hair, third interval with a gibbosity at basal 1/6; humeri rather noticeably swollen antero-laterad; apical parts dehiscent, with apices gently produced.

Terminal segment of maxillary palpi securiform with curved outer side about 1.43 times the length of the inner, 0.74 times that of apical. Mentum somewhat obtrapezoidal, produced antriad, convex and smooth in apico-medial part, alutaceous and sparsely pubescent in lateral and basal parts; gula somewhat parabolic, very feebly aciculate and sparsely, microscopically punctate, weakly, obliquely bordered by impressions in anterior parts. Prosternum coarsely rugoso-punctate, transversely so in anterior part, longitudinally so in medial and posterior parts (intercoxal space and prosternal process), prosternal process widely triangular, depressed in lateral parts, and with lateral corners and apex rounded. Mesosternum rather short, depressed in intercoxal space, coarsely punctate. Metasternum weakly covered with isodiametrical microsculpture, depressed and rugoso-punctate in antero-medial part, convex, rather smooth and wrinkled in posterior parts, shallowly punctate in lateral parts. First to fourth abdominal sternites finely punctate (the punctures somewhat transverse) and covered with rather long bent hairs, fifth sternite finely punctate, with a rather subelliptical depression in apical 4/5, whose surface is covered with isodiametrical microsculpture, and lateral parts are longitudinally edged.

Mesofemora rather elongate, metafemora shortened; protibia curved ventrad at apical 2/5, with interior face moderately gouged at basal 3/7 and sparsely haired in apical 2/5; mesotibia rather elongate, weakly curved interiad and ventrad, with interior face haired in apical 2/5; male metatibia weakly curved interiad, gouged and twisted at basal 1/3; ratios of the lengths of pro-, meso- and metatarsal segments: 0.25, 0.14, 0.16, 0.15, 0.78; 1.38, 0.50, 0.33, 0.27, 0.89; 1.45, 0.40, 0.28, 1.06.

Male genitalia subfusiform, 2.35 mm in length, 0.48 mm in width, gently curved in lateral view; fused lateral lobes 0.92 mm in length, weakly, longitudinally concave on the midline, slightly prolonged and finely impressed in apical parts.

F e m a l e. Body more elongate, antennae shorter, reaching base of elytra, with five apical segments more strongly clubbed, eyes less approximate, 1/5 the width of an

eye diameter, and elytra more elongate, 1.87 times as long as wide.

Body length: 11.8–12.9 mm.

Holotype: ♂, Laos-CE, Boli Kham Xai Prov., Ban Nape (8 km NE), 600 m, 18° 21′N, 105° 80′E, 1～18–V–2001, Coll. L. DEMBICKÝ (SMNS). Paratypes: 4 exs., same data as for the holotype.

Notes. This new species resembles *Strongylium pallidonotatum* PIC, 1917 and three other new species, but can be distinguished from them by the elytra with the intervals more flattened and smooth, and the apices not acutely produced, and by the male legs distinctly modified.

The specific name is given after Dr. Wolfgang SCHAWALLER, who permitted the authors to loan materials for their studies concerning Asian Strongyliini.

要　　約

益本仁雄・秋田勝己: *Strongylium pallidonotatum* PIC とその近縁種について. —— *Strongylium pallidonotatum* PIC とその近縁種を取り上げて検討した. この種群の特徴は, ナガキマワリ属としては体格がやや短く, 触角の先端数節が平圧されて広がり, 翅鞘基部近くに 1 対の瘤があり, 翅端が多少なりとも 2 叉状である. また, 雄の肛門節が半円状～半楕円状に陥没し, さらに雄の肢が発達・変形している種もある. 本論文では, 既知種の *Strongylium pallidonotatum* PIC と 4 新種, *S. kelantanense* sp. nov., *S. bessiense* sp. nov., *S. sukabumiense* sp. nov. および *S. wolfgangi* sp. nov. を記載した. なお, 一部の種で雄が未発見のため, 検索表は次の機会にゆずることとした.

Postscript

In the authors' previous paper (Eltyra, Tokyo, **35**: 529–536), "Two new *Lycidioides* (Coleoptera, Tenebrionidae) from Borneo", there is an error that should be corrected as follows: In the key to the species of the genus *Lycidioides* in male, antennae with "third segment" (line second and seven in page 536) should be read antennae with "fourth segment".

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PIC, M., 1916. Coléoptères exotiques en partie nouveaux (suite.). *Échange, Lyon*, (32): 11–12.

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Elytra, *Tokyo*, **36**(1): 60, May 30, 2008

Records of the Carabid Beetles (Coleoptera) from the Koshiki-jima Islands, West Japan

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The carabid fauna of the Koshiki-jima Islands, Kagoshima Prefecture, West Japan is poorly known. Through the courtesy of Dr. Hitoo ÔHIRA, I had the opportunity to examine a short series of carabid beetles obtained by himself from the islands. Though they are fully winged and widespread species, I prefer to record them in this short report.

Scarites acutidens CHAUDOIR, 1855

Specimen examined. 1 ex., Teuchi, 22-VII-2002.

Clivina vulgivaga BOHEMAN, 1858

Specimen examined. 1 ex., Satomura-rindô, 21-VII-2002.

Metacolpodes buchannani (HOPE, 1831)

Specimen examined. 1 ex., Kamikoshiki-rindô, 20-VII-2002.

Agonum (*Atranodes*) *kyushuense* HABU, 1954

Specimens examined. 3 exs., Kamikoshiki-rindô, 20-VII-2002.

Chlaenius micans (FABRICIUS, 1792)

Specimen examined. 1 ex., Kamikoshiki-rindô, 20-VII-2002.

Chlaenius tetragonoderus CHAUDOIR, 1876

Specimen examined. 1 ex., Kamikoshiki-rindô, 20-VII-2002.

Aephnidius adelioides (MACLEAY, 1825)

Specimen examined. 1 ex., Satomura-rindô, 21-VII-2002.

Brachinus scotomedes REDTENBACHER, 1868

Specimen examined. 1 ex., Satomura-rindô, 21-VII-2002.

I thank Dr. Hitoo ÔHIRA for his kindness in supplying me with the materials.

Elytra, *Tokyo*, **36**(1): 61–70, May 30, 2008

Notes on the Lineage of *Asiopodabrus malthinoides* (Coleoptera, Cantharidae), with Description of a New Subspecies

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Abstract The lineage of *Asiopodabrus malthinoides* is reexamined. Two species and a subspecies are scrutinised. *Asiopodabrus hayato* NAKANE is not a subspecies of *A. malthinoides* but an independent species. *Asiopodabrus malthinoides takizawai* ssp. nov. is described as a new subspecies. A key to the species and subspecies of the *malthinoides* lineage is given.

Introduction

Asiopodabrus malthinoides KIESENWETTER, 1874, a small species almost brownish black in the colour of the body, is one of the commonest *Asiopodabrus* in Japan. It has been divided so far into two subspecies, one of which *A. malthinoides hayato* NAKANE, 1989 occurs in Kyushu. There is no more geographical variation to have been known up to the present, though some individual variations have been found through my examination of a series of specimens. On the other hand, I found coexistence of two different forms at a place in Ôita Prefecture, Kyushu. One of them is indubitably *A. malthinoides hayato* and the other is closely related to *A. malthinoides* but not perfectly coincide with true *A. malthinoides*. This suggests that *A. malthinoides hayato* is not a subspecies of *A. malthinoides*. Since then I have continuously tried to examine numerous specimens collected from various localities in Honshu, Shikoku and Kyushu of Japan. As the result, I found two forms of *A. malthinoides* collected from relatively close localities in Shikoku, one being the *malthinoiedes* of the Kyushu form as mentioned above, and the other almost coincides with true *A. malthinoides*.

After a careful examination, I have concluded that *A. hayato* is an independent species, whereas the *malthinoides* of the Kyushu form should be regarded as a new subspecies. I am therefore going to give a new status for *A. hayato* and to describe a new subspecies in the following lines.

Before going further, we wish to express my deep gratitude to the late Dr. Masataka SATÔ for his kind encouragement of my study and giving me opportunity to examine abundant specimens. My great appreciation is expressed to Mr. Malcolm D. KERLEY of the Natural History Museum, London and Dr. Masahiro ÔHARA of the Hokkaido University Museum for their giving opportunity to examine type specimens used in this study. Cordial thanks are also due to Mr. Katsumi AKITA of Tsu, Mr. Kaoru HAGA of

Saitama, Mr. Haruo TAKIZAWA of Hasuda, Dr. Nobuo OHBAYASHI of the Entomological Laboratory, Faculty of Agriculture, Ehime University, Dr. Yûichi OKUSHIMA of the Kurashiki Museum of Natural History and Mr. Atsuto YOSHIDA of Inagi, for their kind help in providing me with valuable materials.

Materials and Methods

Method of examining the male genitalia follows that explained in TAKAHASHI (1999).

The abbreviations used in the text are as follows. HW – width of head; PW – width of pronotum; PL – length of pronotum; PA – width of anterior margin of pronotum; PB – width of basal margin of pronotum; EW – width of elytra; EL – length of elytra.

Type depositories. The holotype to be designated in this paper is deposited in the collection of the Kanagawa Prefectural Museum of Natural History, Odawara. Paratypes are preserved in the collections of the Entomological Laboratory, Faculty of Agriculture, Ehime University, Matsuyama (ELE) and mine (KTC).

Descriptions

Asiopodabrus malthinoides (KIESENWETTER, 1874)

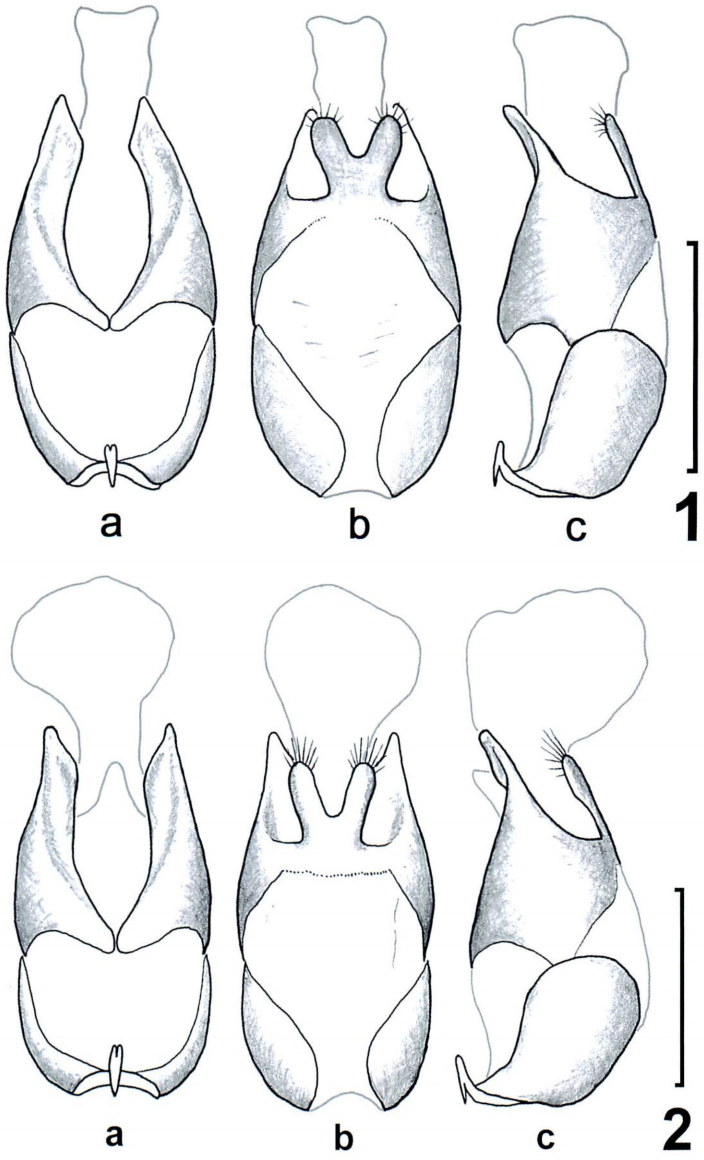
Podabrus malthinoides KIESENWETTER, 1874, 265.
Podabrus (*Dichelotarsus*) *malthinoides*: DELKESKAMP, 1939, 16.
Podabrus (*Asiopodabrus*) *malthinoides*: WITTMER, 1982, 123.
Asiopodabrus malthinoides: OTSUKA, 2003, 30.
Dichelotarsus sulcithorax PIC, 1904, 26. —— NAKANE & MAKINO, 1989, 4. [Synonym of *Podabrus malthinoides* Kiesenwetter, 1874.]
Podabrus (*Dichelotarsus*) *sulcithorax*: DELKESKAMP, 1939, 17.

Asiopodabrus malthinoides malthinoides s. str.

(Figs. 1, 2)

M a l e. Body almost brownish black; head before eyes, antennal segments 1–2 and basal portion of 3, lateral sides of pronotum (sometimes except for the middle), anterior half of prosternum, mouthparts except for last segments of maxillary and labial palpi and apical halves of mandibles, apical portion of coxae and trochanters yellowish brown; head beneath, antennal segments 3–11, apical portion of femora and tibiae dark yellowish brown.

Head closely covered with moderate punctures in front, rather closely and largely so behind eyes, and rugosely so on neck, surfaces of the other parts rather reticulated. Eyes prominent; inter-ocular distance 3.31–3.49 times as wide as eye. Terminal segments of maxillary palpi rather slender, 2.55 times as long as wide. Antennae short, reaching basal fifth of elytra; comparative lengths of each segment as follows:— 1.88 : 1.19 : 1.00 : 1.23 : 1.23 : 1.23 : 1.26 : 1.26 : 1.23 : 1.21 : 1.53.



Figs. 1–2. Male genitalia of *Asiopodabrus malthinoides malthinoides* (KIESENWETTER). —— 1, From Mt. Rokkô, Hyôgo Pref., Honshu; 2, From Takimoto, Kumanogawa-chô, Wakayama Pref., Kii Peninsula, Honshu. —— a, Ventral view; b, dorsal view; c, lateral view. (Scale: 0.5 mm.)

Pronotum almost the same in length and width, clearly narrower than head, widest at middle; PW/HW 0.84–0.88, PW/PL 1.03–1.08, PW/PA 1.36–1.44, PW/PB 1.1–1.11; surface closely covered with moderate punctures, though the punctures become larger on the basal half of elevated portion and in anterior marginal area; frontal and basal

margins nearly straight, lateral ones sinuate, anterior angles slightly angulate and posterior ones slightly prominent; disc well elevated except for lateral marginal parts, though circularly concave in basal half. Elytra rather short, distinctly wider than pronotum; EW/PW 1.36–1.38; EL/EW 2.85–3.19.

Male genitalia rather elongate; ventral process joining lateral sides of paramere, relatively wide with inner side slightly concave; dorsal process broad, rather sclerotized (Fig. 1). A form bearing not so broad dorsal process occurs in Shikoku and the Kii Peninsula, Honshu (Fig. 2).

Length: 4.9–5.7 mm; breadth: 1.0–1.3 mm.

F e m a l e. Similar to male, but body relatively broader, eyes smaller, antennae shorter; head and prosternum entirely brownish brown. Eyes not so prominent; inter-ocular distance 4.61–5.15 times as wide as eye. Terminal segments of maxillary palpi rather broad, 2.38 times as long as wide. PW/HW 0.88–0.93, PW/PL 1.06–1.08, PW/PA 1.43–1.55, PW/PB 1.09–1.11. Elytra wider and shorter; EW/PW 1.24–1.31; EL/EW 3.09–3.29.

Length: 5.3–6.2 mm; breadth: 1.1–1.4 mm.

Specimens examined. Lectotype, ♀, Kobe, Japan, G. LEWIS, 1910–320; 1 ♂, Bandaiatami, Kôriyama-shi, Fukushima Pref. 17–V–1987, K. HAGA leg.; 1 ♂, Numata, Gunma Pref., 10–V–1949, T. TAKEI leg.; 1 ♂, 1 ♀, Nanma, Kanuma-shi, Tochigi Pref., 28–V–1992, H. TAKIZAWA leg.; 1 ♂, Uchiurayama, Kamogawa-shi, Chiba Pref., 18–VI–2005, K. KUBO leg.; 1 ♂, Ishidoshuku, Kitamoto-shi, Saitama Pref., 30–IV–1990, A. YOSHIDA leg.; 1 ♂, Hatsuzawamachi, Hachiôji-shi, Tokyo Met., 8–V–1999, Y. OKUSHIMA leg.; 1 ♂, Mabushi, Izu-Ôshima, 4–V–1979, Y. NOTSU leg.; 1 ♂, Zushi, Kanagawa Pref., 15–IV–1983, T. NIISATO leg.; 1 ♂, Tsuchiya, Hiratsuka-shi, Kanagawa Pref., 14–IV–2002, K. TAKAHASHI leg.; 1 ♀, Inugoeji, Tanzawa Mts., Kanagawa Pref., 10–VII–1992, K. TAKAHASHI leg,; 1 ♂, Kôhôji, Oyabe-shi, Toyama Pref., 3–V–1992, K. TAKAHASHI leg.; 2 ♂♂, Nisshin, Aichi-gun, Aichi Pref., 5–V–1970, K. YAMAGISHI leg.; 1 ♂, Yotsuya, Inuyama, Aichi Pref., 19～20–V–1973, H. YAMADA & Y. HORI leg.; 1 ♂, Suhara, Gifu Pref., 30–IV–1967, N. OHBAYASHI leg.; 2 ♂♂, Mitsuka, Kasuga-mura, Gifu Pref. 20–VII–1986, I. KIRIYAMA leg.; 2 ♂♂, Takimoto, Kumanogawa-chô, Wakayama Pref., 2–V–1999, K. TAKAHASHI leg.; 2 ♂♂, Kiinagashima, Mie Pref., 22–IV–1971, H. ICHIHASHI leg.; 1 ♂, Yunoyama, Mie Pref., 17–V–1967, H. ICHIHASHI leg.; 1 ♂, 1 ♀, Nachi skyline, Nachikatsuura-chô, Wakayama Pref., 3–V–2002, K. AKITA leg.; 1 ♀, Hibanomori, Nachikatsuura-chô, Wakayama Pref., 4–V–2002, K. AKITA leg.; 1 ♀, Ikemine, Shimokitayama-mura, Nara Pref., 3–V–1995, K. TAKAHASHI leg.; 3 ♂♂, Kasugayama, Nara-shi, Nara Pref., 17–V–1996, K. TAKAHASHI leg.; 1 ♀, Kibune, Kyoto-shi, Kyoto Pref., 1～2–VI–1975, H. TAKIZAWA leg.; 1 ♂, Mt. Rokkô, Hyôgo Pref., 6–V–1967, N. UEDA leg.; 1 ♂, Mt. Tanematsuyama, Kurashiki-shi, Okayama Pref., 29–IV–1995, Y. OKUSHIMA; 1 ♂, Oh-iwa, Gayo-chô, Okayama Pref., 4–V–1991, K. WATANABE leg.; 1 ♂, Tamashimayashima, Kurashiki-shi, Okayama Pref., 1–V–2000, Y. YABE leg.; 1 ♂, Mukouyama, Kurashiki-shi, Okayama Pref., 25–IV–1999, Y. OKUSHIMA leg.; 1 ♂, Kageishidani, Nishiawakura-son,

Okayama Pref., 25–V–1996, Y. OKUSHIMA leg.; 3♂♂, 2♀♀, Okubara, Shûtô-chô, Yamaguchi Pref., 4–V–1991, K. TAKAHASHI leg.; 4♂♂, Akahonejima Is., Iwagi-son, Ehime Pref., 26～27–IV–2004, J. OGAWA leg.; 1♂, 1♀, Mt. Bizan, Tokushima Pref., 24–IV–1964, M. SAKAI leg.; 1♂, West Ravine of Mt. Shiratsue, Ehime Pref., 27–IV–1969, M. SAKAI leg.; 1♂, Omogo-kei, Ehime, 5–VI–1983, K. ISHIDA leg.

Distribution. Japan (Honshu except for northernmost area, Shikoku, mostly Camellietea-japonicae region).

Asiopodabrus malthinoides takizawai ssp. nov.

(Figs. 3, 4)

M a l e. Body almost brownish black; antennal segments 1–2, lateral sides of pronotum (sometimes except for the middle), head before eyes except in Kyushu specimens, lateral sides of prosternum, mouth-parts except for last segments of maxillary and labial palpi and apical halves of mandibles, apical portion of fore and mid coxae and



Fig. 3. Habitus of *Asiopodabrus malthinoides takizawai* ssp. nov., male (holotype).

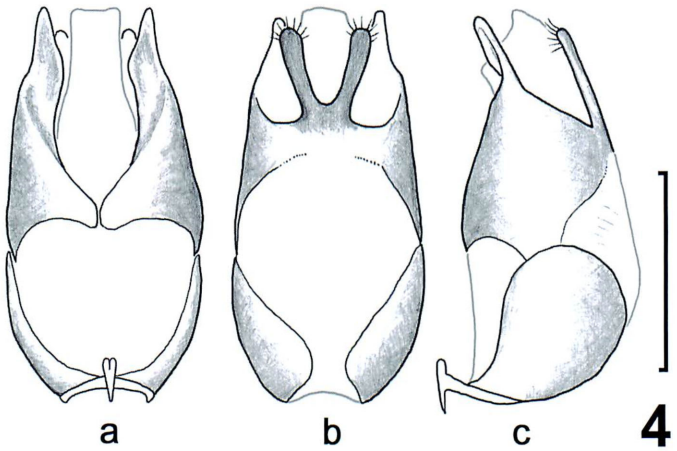


Fig. 4. Male genitalia of *Asiopodabrus malthinoides takizawai* ssp. nov.; a, ventral view; b, dorsal view; c, lateral view. (Scale: 0.5 mm.)

fore and mid trochanters yellowish brown; head beneath, antennal segment 3 and tibiae dark yellowish brown; antennal segments 4–11 dark brown.

Head closely covered with moderate punctures in front, rather closely and largely so behind eyes, and densely so on neck, surface of the other parts rather reticulated. Eyes prominent; inter-ocular distance 3.61–3.86 times as wide as eye. Terminal segments of maxillary palpi rather slender, 2.46 times as long as wide. Antennae short, reaching basal fifth of elytra; comparative lengths of each segment as follows:— 1.74 : 1.01 : 1.00 : 1.15 : 1.19 : 1.15 : 1.15 : 1.15 : 1.11 : 1.11 : 1.46.

Pronotum very slightly wider than length, clearly narrower than head, widest at basal two-thirds; PW/HW 0.85–0.92, PW/PL 1.03–1.07, PW/PA 1.49–1.5, PW/PB 1.11–1.17; surface closely covered with moderate punctures, though the punctures become larger on the basal half of elevated portion and in anterior marginal area; frontal and basal margins nearly straight, lateral ones sinuate, anterior angles slightly angulate and posterior ones slightly prominent; disc well elevated except in lateral marginal parts, though shallowly and circularly concaved in basal half. Elytra rather short, distinctly wider than pronotum; EW/PW 1.32–1.35; EL/EW 3.02–3.06.

Male genitalia rather elongate; ventral process joining lateral sides of paramere, relatively wide with inner side slightly concave; dorsal process rather slender, well sclerotized (Fig. 5).

Length: 5.6 (5.1–6.2) mm; breadth: 1.3 (1.1–1.3) mm.

F e m a l e. Similar to male, but body relatively broader, eyes smaller, antennae shorter. Eyes not so prominent; inter-ocular distance 4.13–4.35 times as wide as eye. PW/HW 0.97–0.98, PW/PL 1.03–1.04, PW/PA 1.38–1.38, PW/PB 1.08–1.12. Elytra wider and shorter; EW/PW 1.35–1.37; EL/EW 2.89–2.95.

Length: 5.8–7.1 mm; breadth: 1.3–1.6 mm.

Type series. Holotype: ♂, Obukuro, Sankô-mura, Ôita Pref., 24～25-IV-1992, H. TAKIZAWA leg. Paratypes: 1 ♂, Mt. Hiko, Fukuoka Pref., 17～19-V-1967, H. TAKIZAWA leg. (KTC); 2 ♂♂, Mt. Futagami, Takachiho-chô, Miyazaki Pref., 19-V-2005, K. TAKAHASHI leg. (KTC); 12 ♂♂, 8 ♀♀, Mominoki (alt. 1,300 m), Izumi-mura, Kumamoto Pref., 20-V-2005, K. TAKAHASHI leg. (KTC); 1 ♂, Sugitate, Matsuyama-shi, Ehime Pref., 3-IV-1974, Y. NOTSU leg. (ELE); 1 ♂, Oda-chô, Ehime Pref., 1-VI-1984, E. YAMAMOTO leg. (ELE).

Distribution. Japan (Kyushu and Shikoku (Ehime Pref.), upper Camellietea-japonicae region and lower Fagetea-crenatae region).

Asiopodabrus hayato (NAKANE, 1989)

(Fig. 5)

Podabrus malthinoides hayato NAKANE, 1989, 4.
Podabrus (Asiopodabrus) malthinoides hayato TAKAHASHI, 1998, 35.
Asiopodabrus malthinoides hayato: KAZANTSEV & BRANCUCCI, 2007, 235.

M a l e. Body almost brownish black; head before eyes, antennal segments 1–2, lateral sides of pronotum, prosternum, mouth-parts and apical portion of coxae and trochanters yellowish brown; head beneath, antennal segments 3, fore coxae except for apical portion, inner sides of fore and mid femora and fore and mid tibiae dark yellowish brown.

Head closely covered with moderate punctures in front, closely and somewhat largely so behind eyes, and densely so on neck, surface of the other parts reticulated.

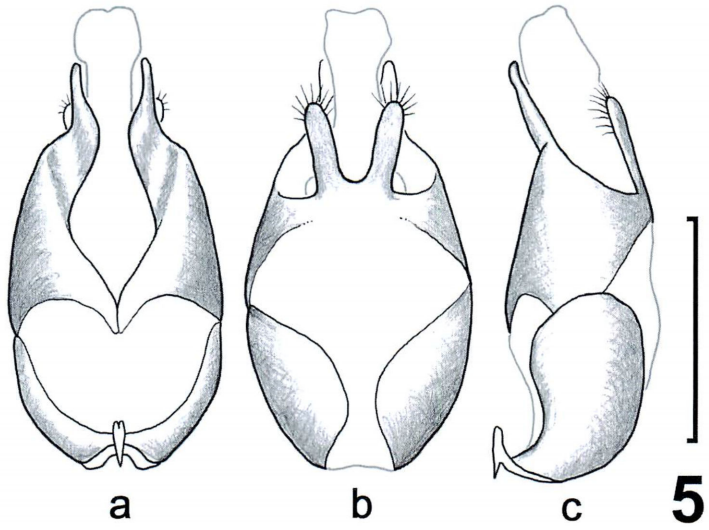


Fig. 5. Male genitalia of *Asiopodabrus hayato* (NAKANE); a, ventral view; b, dorsal view; c, lateral view. (Scale: 0.5 mm.)

Eyes prominent; inter-ocular distance 3.97–4.14 times as wide as eye. Terminal segments of maxillary palpi rather broad, 2.19 times as long as wide. Antennae short, reaching basal fifth of elytra; comparative lengths of each segment as follows:— 1.64 : 1.06 : 1.00 : 1.05 : 1.19 : 1.19 : 1.19 : 1.18 : 1.15 : 1.12 : 1.27.

Pronotum a little broader than length, distinctly narrower than head, widest at basal two-thirds; PW/HW 0.84–0.87, PW/PL 1.13–1.14, PW/PA 1.44–1.50, PW/PB 1.1–1.13; surface closely covered with relatively large punctures, then the punctures become larger on the basal half of elevated portion and in anterior marginal area; frontal and basal margins nearly straight, lateral ones sinuate, anterior angles slightly angulate and posterior ones slightly prominent; disc well elevated except for lateral marginal areas, though slightly concave in basal half. Elytra rather short, distinctly wider than pronotum; EW/PW 1.32–1.33; EL/EW 3.0–3.08.

Male genitalia rather elongate; ventral process joining lateral sides of paramere, relatively narrow, gradually narrowed toward apex; apices spread outwards; dorsal process rather slender, not so heavily sclerotized (Fig. 3).

Length: 5.0–5.7 mm; breadth: 1.1–1.3 mm.

F e m a l e. Similar to male, but body relatively broader, eyes smaller, antennae shorter; head entirely brownish black; prosternum partly darkened. Eyes not so prominent; inter-ocular distance 3.35–3.56 times as wide as eye. Terminal segments of maxillary palpi rather broad, 2.38 times as long as wide. PW/HW 0.9–0.94, PW/PL 1.12–1.15, PW/PA 1.46–1.52, PW/PB 1.04–1.06. Elytra wider and shorter; EW/PW 1.45–1.48; EL/EW 2.86–2.94.

Length: 5.4–6.8 mm; breadth: 1.2–1.6 mm.

Specimens examined. Holotype, ♂, Shiroyama, Kagoshima-shi, Kyushu, Japan, 17–IV–1981, T. NAKANE leg.; 2 ♂♂, 2 ♀♀, Neko Pass, Sasaguri-chô, Fukuoka Pref., 27–IV–2002, K. TAKAHASHI leg.; 2 ♂♂, 3 ♀♀, Kasagi-dam, Iizuka-shi, Fukuoka Pref., 26–IV–2002, K. TAKAHASHI leg.; 2 ♂♂, Obukuro, Sankô-mura, Ôita Pref., 24～25–IV–1992, H. TAKIZAWA leg.; 2 ♂♂, Tomioka, Amakusa, Kumamoto Pref., 6–IV–1973, Y. FURUKI leg.; 6 ♂♂, 4 ♀♀, Ibusuki, Kagoshima Pref., 29–III–1991, H. TAKIZAWA leg.; 1 ♂, estuary of Riv. Kawaguchi, Sata-chô, Kagoshima Pref., 7–V–1994, K. HAGA leg.

Distribution. Japan (Kyushu, mostly Camellietea-japonicae region).

Key to the Species of the Lineage of *Asiopodabrus malthinoides*

1. Inner bottom between two lobes of dorsal process of male genitalia distinctly higher than the base .....*A. malthinoides malthinoides* (KIESENWETTER).
— Inner bottom between two lobes of dorsal process of male genitalia slightly higher than the base .....2.
2. Ventral process joining lateral sides of paramere relatively narrow, rather sharply narrowed near base; apices spread outwards; dorsal process not so heavily sclerotized .....*A. hayato* (NAKANE).
— Ventral process joining lateral sides of paramere relatively wide, gradually

narrowed near apices; apices not spread outwards; dorsal process well sclerotized.....*A. malthinoides takizawai* ssp. nov.

Discussion

Close analysis of the distributional patterns of respective taxa clarifies two problems (Fig. 6). The first is the sympatric distribution recognized in Kyushu between *A. hayato* and *A. malthinoides takizawai.* Collecting data of the two species suggest that *A. hayato* occurs in relatively low places, in contrast to *A. malthinoides takizawai* which occurs in relatively high places. This means that the sympatry of the two species occurs in rather limited areas. The second problem is the existence of intermediate form of *A. malthinoides malthinoides* and *A. malthinoides takizawai.* Several localities in Shikoku and the Kii Peninsula, in central Honshu, harbour the intermediate form, whose peculiarity mostly appears in the shape of the dorsal process of the male genitalia. The fact suggests possibility of hybridization of the two forms occurring in those areas. This is why I do not regard *A. malthinoides takizawai* as an independent species.

The cause of differentiation of these taxa is not clear, though their distributional patterns suggest that they occur almost allopatrically. Judging from morphological gap,



Fig. 6. Map showing the distribution of the lineage of *A. malthinoides.* —— ○, *A. malthinoides malthinoides* (KIESENWETTER); ◎, *A. malthinoides malthinoides* (KIESENWETTER) (intermediate form of *A. m. malthinoides* and *A. m. takizawai*); ●, *A. malthinoides takizawai* sp. nov.; □, *A. hayato* (NAKANE).

A. hayato firstly diverged from the others. The place of divergence is surmised to have been somewhere in Kyushu. The specific independency of *A. hayato* can be concluded from its sympatric distribution with *A. malthinoides takizawai*. In my view, *A. malthinoides takizawai* may have diverged next from *A. malthinoides*, and the place of divergence may have been in Kyushu or Shikoku. In the course of this differentiation, hybridization between *A. malthinoides malthinoides* and *A. malthinoides takizawai* may have taken place somewhere in Shikoku or the Kii Peninsula. Occurrence of intermediate form between the subspecies *malthinoides* and *takizawai* may be elucidated in this way. Further detailed studies are needed for explaining raciation and speciation of the *malthinoides* lineage of *Asiopodabrus* on a sounder basis.

The *malthinoides* lineage is a relatively homogeneous group in external morphology, so that it is very interesting to know how the three taxa have diverged and occupied the present distributional areas. It is to be hoped that intensive surverys of their distribution will be made in near future.

要　約

高橋和弘：クロヒメクビボソジョウカイ種群に関する知見と1新亜種の記載. —— 日本産クロヒメクビボソジョウカイ種群について検討を行った結果，2種1亜種を認めた．従来クロヒメクビボソジョウカイ *Asiopodabrus malthinoides* KIESENWETTER の亜種として扱われていた ssp. *hayato* NAKANE は，クロヒメクビボソジョウカイと同所的に分布することが明らかとなり，独立種として扱うのが適当と考えられた．また，四国および九州に分布するクロヒメクビボソジョウカイに類似する個体群は，クロヒメクビボソジョウカイとは，一定の形態的差異が認められたので，クロヒメクビボソジョウカイの新亜種 *takizawai* ssp. nov. として記載した．

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A New Distributional Record of *Malthinellus bicolor* (Coleoptera, Cantharidae, Malthininae) from Yaku Island, Southwest Japan, with a List of Cantharids Recorded from the Island

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The genus *Malthinellus* comprises seven species known from East and Southeast Asia, three of which have been known to occur in Japan (TAKAHASHI & N. TAKAHASHI, 2007). As regards the Japanese species of the genus, *Malthinellus chujoi* and *M. masatakai* are found on the islands of the middle Ryukyus, and *M. bicolor* is distributed in Korea and the mainland of Japan except for Hokkaido. I was able to examine the material of the latter from Yaku Island lying in the northern Ryukyus; the collecting data are given below as a new distributional record from the island.

Malthinellus bicolor KIESENWETTER, 1874

[Japanese name: Futairo-chibi-jôkai]

Malthinellus bicolor KIESENWETTER, 1874, 281. —— NAKANE, 1963, 173. —— BABA & M. SATÔ, 1984, 25 (new to Sado Is.). —— M. SATÔ, 1985, 116. —— KIM & KANG, 2000, 116 (new to Korea). —— N. TAKAHASHI, 2003, 15 (new to Shikoku). —— TAKAHASHI & N. TAKAHASHI, 2007, 148 (in key).

Table 1. List of cantharids recorded from Yaku Island, Southwest Japan.

Subfamily	Species	Reference
Cantharinae	*Asiopodabrus nakaoi* (NAKANE, 1990)	IMASAKA & OHTSUKA (1996)*[1]
	Lycocerus matsunagai (IMASAKA et OKUSHIMA, 2000)	OKUSHIMA & IMASAKA (2000)[2]
	Lycocerus suturellus luteipennis (KIESENWETTER, 1874)	TAKEUCHI (1931)*[3]
	Lycocerus vitellinus (KIESENWETTER, 1874)	TAKEUCHI (1931)*[4]
	Macrohabronychus (*Habronychus*) *miyatakei* (ISHIDA, 1986)	ISHIDA (1986)[5]
	Stenothemus badius (KIESENWETTER, 1874)	M. SATÔ (1971)[6]
Malthininae	*Malthinellus bicolor* KIESENWETTER, 1874	Present study
	Malthodes yakushimanus yakushimanus N. TAKAHASHI, 2001	N. TAKAHASHI (2001)
Silinae	*Laemoglyptus pectinatus* (LEWIS, 1895)	M. SATÔ (1971)

* No collecting data. [1] Recorded as *Podabrus nakaoi*. [2] Recorded as *Athemus* (*Andrathemus*) *matsunagai*. [3] Recorded as *Telephorus suturellus*. [4] Recorded as *Telephorus vitellinus*. [5] Recorded as *Habronychus miyatakei*. [6] Recorded as *Cantharis badia*.

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Specimen examined. 1 ♀, Koyôji-rindô (110–130 m), Kurio, Yakushima Is., 28–V–2005, H. Inoue leg.

Distribution. Japan (Honshu, Sado Is., Awaji Is., Shikoku, Kyushu, Yaku Is. — New record); Korea.

Cantharid species, known from Yaku Island until now, were enumerated as presented in Table 1. Of the nine species listed herein, only two, *Macrohabronychus* (*Habronychus*) *miyatakei* and *Malthodes yakushimanus yakushimanus*, are endemic to the island, and the other seven are distributed in the Japanese mainland with their southernmost distributional end at Yaku Island.

I wish to express my gratitude to Dr. Hiromitsu Inoue (National Institute of Fruit Tree Science, Kuchinotsu) and Mr. Shôichi IMASAKA (Kurume) for their kindness in offering the invaluable material or useful information.

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New or Little-known Elateridae (Coleoptera) from Japan, LI

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Abstract A new species of the genus *Parathous* and two new subspecies of the genus *Homotechnes* belonging to the Dendrometrinae of the Elateridae are described from Japan and illustrated. They are named *P. tsushimensis* from the Islands of Tsushima in Nagasaki Prefecture, *H. motschulskyi fukuoi* from Akita Prefecture and *H. m. awaensis* from Tokushima Prefecture.

In the present study, I am going to describe a new species and two new subspecies of elaterid beetles from Japan. They belong to the subfamily Dendrometrinae. The holotype of each species and subspecies described in this paper are preserved in the collection of the National Museum of Nature and Science, Tokyo.

Before going further, I wish to express my scincere gratitute to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo, for his kindly reading the manuscript and giving me useful suggestions, and to Messrs. Takashi KURIHARA of Ehime, Yuji KUROTA of Tokushima, Toshihiro OZAKI and Fukuo SATOU of Akita, for their kindness in offering the specimens for this study.

Parathous tsushimensis sp. nov.

(Fig. 1 A–F)

M a l e. Length 10 mm, width about 2.5 mm. Body slender, nearly paralell-sided and gently convex above; surface rather shining, blackish brown except for frons including clypeal margin, around margins of pronotum including posterior angles, median portion of scutellum, elytra and most parts of ventral surface, which are more or less lighter and castaneous brown to dusky brown; antennae (basal two segments somewhat castaneous brown) and legs yellowish brown; vestiture short, semi-recumbent and pale yellowish-brown.

Head broadly, deeply and triangularly depressed between antennae, with surface rather densely, coarsely and circularly punctate. Clypeal margin well-developed, transversely defined and weakly emarginate at middle (Fig. 1F ↑). Eyes large and prominent, distance between eyes in upper view a little more than twice as large as each eye diameter in male (Fig. 1F). Antennae elongate and slender, extending beyond posterior angle of pronotum at least by 1.5 apical segments (Fig. 1A); basal segment robust and subcylindrical, 2nd small and subclavate, 3rd subtriangular, about twice as

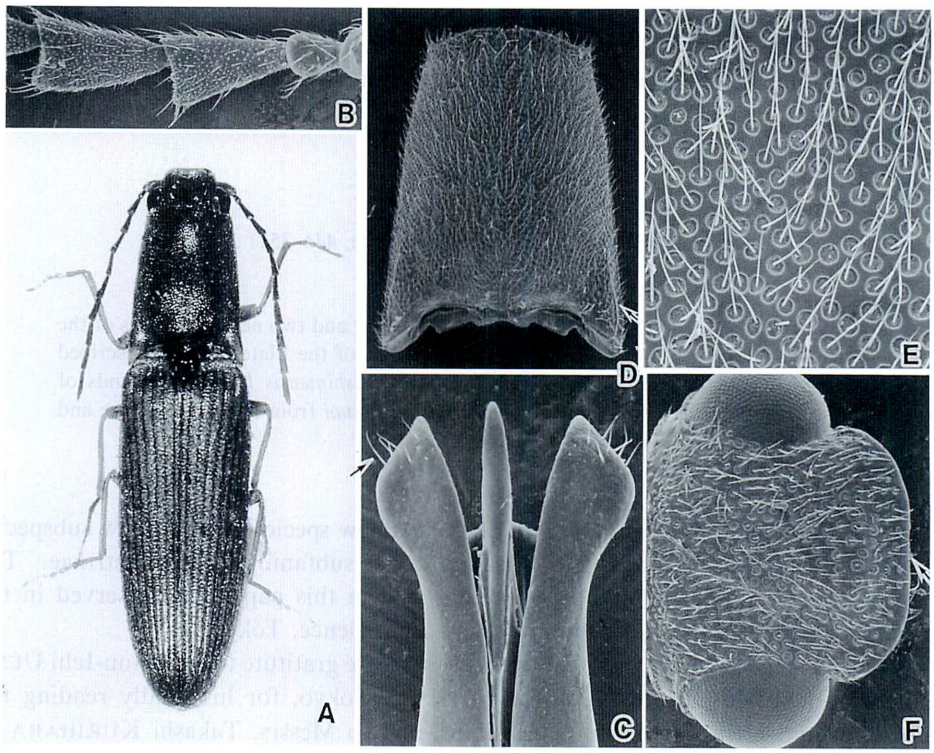

Fig. 1. *Parathous tsushimensis* sp. nov., male, Tsushima Isls. —— A, Holotype; B, 2nd to 4th segments of right antenna; C, apical portion of male ganitalia, dorsal aspect; D, pronotum, dorsal aspect; E, some punctures on the disc of pronotum; F, head, dorsal aspect.

long as 2nd and almost as long as 4th, 3rd to 10th rather plainly serrate (Fig. 1B).

Pronotum trapezoidal, longer than wide and widest at posterior angles, with sides nearly straight and gradually convergent from base towards anterior angles (Fig. 1D); disc dome-like, densely, deeply and circularly punctate, with intervals of punctures clearly narrower than each puncture diameter (Fig. 1E), but punctures becoming denser and coarser laterally, with neither median longitudinal smooth line nor canaliculation; posterior angles short, bluntly pointed posteriad, each with a narrow carina above along lateral margin (Fig. 1D↑). Scutellum pentagonal, gently convex at middle, punctate and pubescent. Prosternal process in lateral aspect narrrow, almost straightly projecting posteriad just behind procoxal cavities and obtusely pointed apicad.

Elytra about 2.7 times as long as its basal width, with sides almost parallel in basal two-thirds, thence gradulally covergent towards apices which are normally pointed; striae well defined, clearly furrowed, deeply punctate in striae; intervals elevated, punctate, irregularly and transversely rugose. Legs slender; tarsi and claws simple.

Apical portion of male genitalia in doral aspect as illustrated (Fig. 1C); median lobe narrow, slightly longer than lateral lobes and obtusely pointed apicad; each lateral margin of lateral lobes clearly expanded near apex and obtusely pointed apicad, usually bearing some short setae around outer margin (Fig. 1C↑).

Female unknown.

Holotype: ♂, Mt. Ôboshi-yama (大星山), Tsushima-shi, Tsushima Islands, Nagasaki Prefecture, 19–VI–2002, Takashi KURIHARA leg.

Distribution. Tsushima Isls., Kyushu, Japan.

This new species is closely allied to *Parathous porrecticollis* (LEWIS, 1894) from Hokkaido, but can be distinguished from the latter by the robuster and darker body; slender and more weakly serrate 3rd to 10th segments of antennae; and, more clearly expanded apical portion of each lateral lobe of male genitalia.

Homotechnes motschulskyi fukuoi subsp. nov.

(Fig. 2 A–D)

M a l e and f e m a l e. Length 9–11 mm, width about 3 mm. Body robust, oblong-ovate and convex above, with sides gently convergent towards bases of elytra; black and rather shining except for antennae, outer margins of pronotum including posterior angles and apical portions of elytra more or less dusky brown; legs yellowish-brown to dark yellowish-brown; vestiture fulvous, short and semi-recumbent on elytra, finer and longer on head and pronotum, recumbent on ventral surfaces.

This new subspecies is closely allied to subsp. *izumii* (KISHII, 1985) from the northern mountain areas of Akita Prefecture, but can be distinguished from the latter by the larger body, bearing a deep median longituidinal groove on frons of head (Fig. 2D↑), and very fine and sparse punctures on the disc of pronotum and absence of median longitudinal line, and large subtriangular expansion of apical portion of each lateral lobe of male genitalia.

Holotype: ♂, Marumai-sawa, Kawabe-chô, Akita-shi, 12–VI–2004, F. SATOU leg.; paratypes, 1 ♂, 1 ♀, same date as for the holotype.

Distribution. Honshu (Akita Prefcture), Japan.

Homotechnes motschulskyi awaensis subsp. nov.

(Fig. 3 A–D)

M a l e and f e m a l e. Length 9–12 mm, width about 3 mm. Body robust and oblong-ovate, with sides more or less convergent towards bases of elytra; black and shining except around margins of pronotum including anterior and posterior angles, apical portions of elytra and most parts of ventral surfaces which are more or less dusky brown; antennae dusky brown and legs yellowish-brown; vestiture short and semi-recumbent on elytra, finer and longer on head and pronotum, recumbent on ventral surfaces.

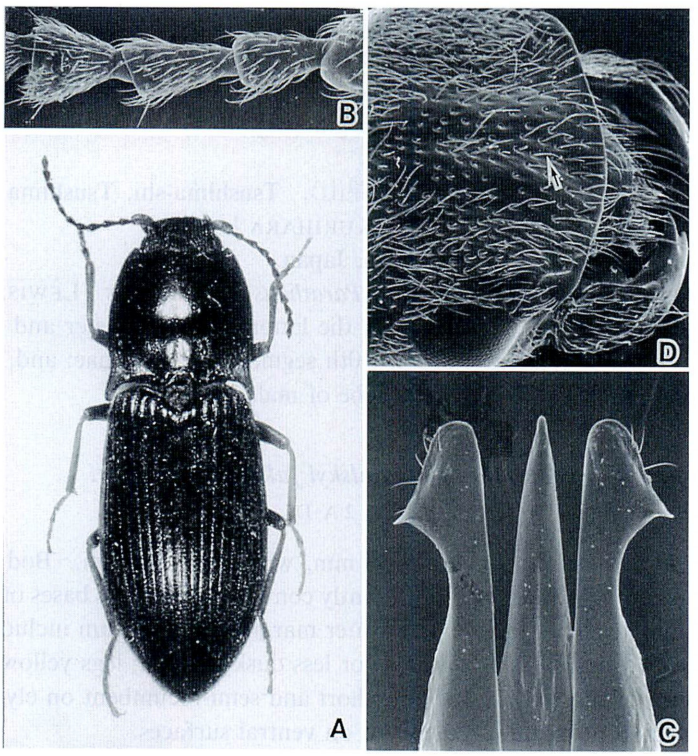

Fig. 2. *Homotechnes motschulskyi fukuoi* subsp. nov., male. —— A, Holotype (body length 9 mm); B, 2nd to 4th segments of right antenna; C, apical portion of male genitalia, dorsal aspect; D, head, dorso-lateral aspect.

This new subspecies resembles subsp. *tsurugi* (ÔHIRA, 1963) of Tokushima Prefecture, but can be distinguished from the latter by the robuster and more broadly depressed frons including clypeal margin (Fig. 3D↑); narrower and elongate 3rd segment of antennae (Fig. 3B), more gently convex disc of pronotum, which is more or less broadly depressed and sometimes bears a shallow median longitudinal line on posterior portion; apical portion of each lateral lobe of male genitalia narrow and elongate, with latero-posterior angles sharply pointed postero-laterad (Fig. 3 C↑).

Holotype; ♂, Mt. Nakatsumine (中津峰山) (alt. 700–900 m), Tokushima Prefecture, Shikoku, 7～10–VI–2005, Y. KUROTA leg.; paratypes, 25 ♂♂, 29 ♀♀, same date and collector as for the holotype.

Distribution. Mt. Nakatsumine, Tokushima Prefecture, Shikoku, Japan.

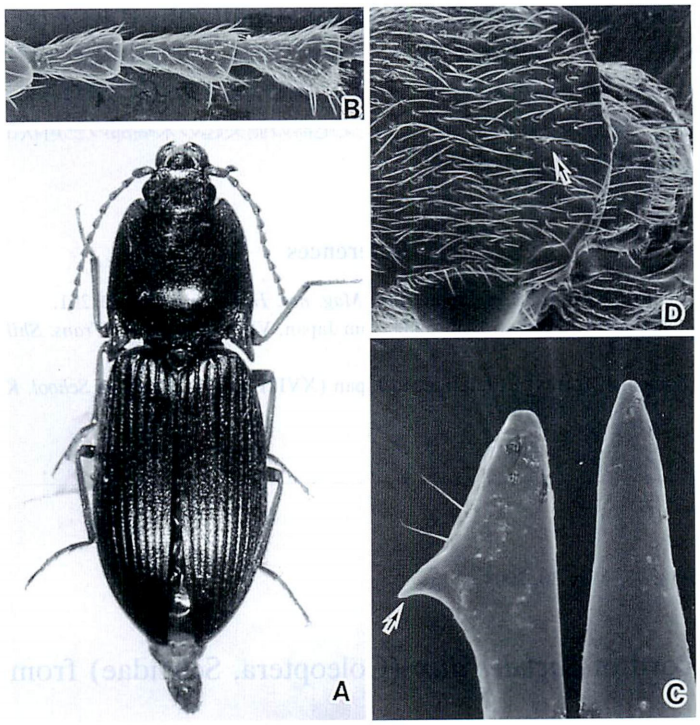

Fig. 3. *Homotechnes motschulskyi awaensis* subsp. nov., male. —— A, Holotype (body length 9.5 mm); B, 2nd to 4th segments of left antenna; C, apical portion of male genitalia, dorsal aspect; D, head, dorso-lateral aspect.

要　　約

大平仁夫: 日本産コメツキムシ科の新種, LI. —— 本報告ではカネコメツキムシ亜科に含まれる1新種と2新亜種を記載した.

1. *Parathous tsushimensis*（ツシマムナグロツヤハダコメツキ）

対馬の大星山（標高348 m）において，愛媛大学大学院の栗原　隆氏が採集した，体長10 mm内外の黒褐色をした種である．一般外形は北海道に分布するムナグロツヤコメツキ (*P. porrecticollis*) にきわめてよく類似しているが，触角や雄交尾器の形態が相違している.

2. *Homotechnes motsuchulskyi fukuoi*（フクオミヤマヒサゴコメツキ）

秋田県秋田市川辺町の丸舞沢から佐藤福男氏が採集した，体長10 mm内外の黒色をした亜種である．一般外形は秋田県北部の二ツ森から記録されたトウホクミヤマヒサゴコメツキ (*H. m. izumi*) に類似しているが，より大型で前胸背板は平滑であり，正中部には縦凹溝や平滑線を欠き，前頭部の正中部には深い縦凹溝を有する.

3. *Homotechnes motschulskyi awaensis*（アワミヤマヒサゴコメツキ）

徳島県の中津峰山（標高 773 m）において，徳島市の黒田祐次氏が見出した体長 10 mm 内外で黒褐色をした亜種である．一般外形は剣山から知られているシコクミヤマヒサゴコメツキ (*H. m. tsurugi*) に類似しているが，触角の第 3 節は細長く，前胸背板上の点刻はまばらに印し，正中部の後半にはときに浅い縦凹溝を有する．また，雄交尾器の側突起の末端部の三角状部は細長く，その外縁の後角は鋭く後外方にとがる．

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Elytra, *Tokyo*, **36**(1): 78, May 30, 2008

A New Record of *Sacodes dux* (Coleoptera, Scirtidae) from Hokkaido

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Sacodes dux (LEWIS) has been recorded from Honshu, Shikoku, Kyushu and Tsushima (YOSHITOMI, 1997, 2005). In this paper, we record it from Hokkaido for the first time.

1 ♂, Nopporo forest park (mesh code: 6441-44-60), Nishi-nopporo, Ebetsu-shi, Hokkaido, 1–VI–2006, S. HORI leg.

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Molecular Phylogenetic Analysis of the Genus *Actenicerus* (Coleoptera, Elateridae) in Japan

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Abstract The genus *Actenicerus* (Dendrometrinae, Elateridae) is widely distributed in the Holarctic Region and particularly diversified in Japan where approximately 20 species have been recognized. In this study, we examined the relationships of 11 Japanese *Actenicerus*-species based on partial sequences of mitochondrial 16S ribosomal DNA, cytochrome oxidase subunit I "barcode" region, and nuclear 28S ribosomal DNA genes. The result showed that the 11 Japanese *Actenicerus*-species are divided into three major clades.

Introduction

At present, approximately 30 species of the genus *Actenicerus* KIESENWETTER, 1858 (Coleoptera, Elateridae) have been recorded in the Nearctic Region, Europe, Russia, East and Southeast Asia; of these more or less 20 species are found in Japan (ÔHIRA, 1989 a; KISHII, 1996; TARNAWSKI, 2001). Thus, this genus seems to be particularly diversified in Japan. These Japanese *Actenicerus*-species are very similar in external morphology and indeed difficult to distinguish from one another (ÔHIRA, 1989 a). The taxonomic status of some species remains uncertain (ÔHIRA, 1989 a). On the other hand, some Japanese *Actenicerus*-species exhibit distinct niche preferences, such as wetlands or drier land habitats, and some species occur in a limited locality. Hence, Japanese *Actenicerus* is considered to be an interesting group for molecular phylogenetic approach.

Previously, we performed phylogenetic analysis of the Elateridae based on the partial sequences of 28S ribosomal DNA (rDNA) (SAGEGAMI-OBA *et al.*, 2007; OBA,

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2007). The results suggest that *Actenicerus* is placed in the subfamily Dendrometrinae (*sensu* ÔHIRA, 1999; or Prosterinae *sensu* JOHNSON, 2001) and is closely related to the genera *Actenicerомorphus* and *Corymbitodes*. In this study, we analysed phylogenetic interrelationships among 11 Japanese *Actenicerus* taxa based on the partial sequences of mitochondrial 16S rDNA, cytochrome oxidase subunit I (COI), and nuclear 28S rDNA. Additionally, we evaluated the informativeness of "COI barcodes" (HEBERT *et al.*, 2003) for biological identification of Japanese *Actenicerus*-species.

Materials and Methods

The taxa used in this study are listed in Table 1. The DNA extraction method was as described previously (SAGEGAMI-OBA *et al.*, 2007). A partial fragment of 16S rDNA (~600 bp) was amplified by PCR using the primer pair of 16Sar and 16Sbr (SIMON *et al.*, 1994). The PCR condition was 94°C for 1 min, followed by 40 cycles at 94°C for 0.5 min, 50°C for 0.5 min, and 72°C for 0.5 min, and a final extension step of 5 min at 72°C. The DNA barcode region of COI (~650 bp) was amplified using the primer pair of LCO1490 and HCO2198 (HEBERT *et al.*, 2003). The PCR amplification of partial fragment of 28S rDNA (~880 bp, expansion segments of D1–D3) was performed as previously described (SAGEGAMI-OBA *et al.*, 2007). The amplicons were directly sequenced using BigDye terminator kit 3.1 with ABI PRISM 3130 sequencer (Applied Biosystems, Foster City, CA). All sequences were deposited in GenBank (Table 1). Sequences of each gene were aligned using a L-INS-i strategy of MAFFT 5.734 (KATOH *et al.*, 2005), the regions of ambiguous alignment were manually eliminated, and concatenated together for phylogenetic analysis. Phylogenetic trees were inferred using the maximum likelihood (ML; FELSENSTEIN, 1981), most parsimonious (MP; FARRIS, 1983), neighbor-joining (NJ; SAITOU & NEI, 1987) methods with PAUP*4.0beta 10 (SWOFFORD, 2002), and Bayesian inference with MrBayes 3.1.2 (HUELSENBECK & RONQUIST, 2001). ML and Bayesian inference (1,000,000 generations, burnin=2,500) were performed under a model of GTR+I+Γ (selected by AIC using Modeltest 3.7 and MrModeltest 2.2; POSADA & CRANDALL, 1998). Bootstrap values were calculated as follows: ML, 100 replicates and 10 random taxon addition; MP, 1,000 replicates and 1,000 random taxon addition; NJ, 100,000 replicates under KIMURA's two-parameter (KIMURA, 1980). Based on our previous analysis of the Elateridae (SAGEGAMI-OBA *et al.*, 2007), three outgroup taxa of genera *Actenicerомorphus* and *Corymbitodes* were chosen for rooting the cladogram. The incongruence length difference (ILD) test was performed with PAUP* (FARRIS *et al.*, 1995).

Results

The aligned matrix consisted of 1783 positions (420 for 16S rDNA; 616 for COI; 747 for 28S rDNA), of which 227 positions (56 for 16S rDNA; 159 for COI; 12 for 28S rDNA) were parsimony-informative. Uncorrected pairwise nucleotide differences

Table 1. List of *Actenicerus* and their outgroup taxa used in the analysis.

Species	Collection location	GenBank accession no.			NUM voucher no.
		16S	COI	28S	
Actenicerus aerosus (LEWIS, 1879)	JAPAN: Honshu, Nara, Kasugano, Mt. Kasuga	**AB375485**	**AB375500**	**AB375476**	**NUM Ae02-000086**
Actenicerus athoides (KISHII, 1955)	JAPAN: Honshu, Aomori, Towada, Sarukura	**AB375486**	**AB375501**	**AB375477**	**NUM Ae02-000087**
Actenicerus giganteus KISHII, 1975	JAPAN: Honshu, Mie, Inabe, Fujiwara, Hongo	**AB375487**	**AB375502**	**AB375478**	**NUM Ae02-000088**
Actenicerus kiashianus (MIWA, 1928)	JAPAN: Honshu, Aichi, Seto, Jôkôji	**AB375488**	**AB375503**	**AB231215**	**NUM Ae02-000009**
Actenicerus kidonoi ÔHIRA, 2006	JAPAN: Honshu, Aichi, Okazaki, Kuwabara	**AB375489**	**AB375504**	**AB375479**	**NUM Ae02-000089**
Actenicerus naomii KISHII, 1996	JAPAN: Shikoku, Ehime, Niihama, Douzangoe	**AB375491**	**AB375505**	**AB375480**	**NUM Ae02-000090**
Actenicerus odaisanus (MIWA, 1928)	JAPAN: Honshu, Nara, Kamikitayama, Odaigahara	**AB375492**	**AB375506**	**AB375481**	**NUM Ae02-000091**
Actenicerus orientalis (CANDÈZE, 1889)	JAPAN: Honshu, Shiga, Ika, Yogo, Kushimi	**AB375493**	**AB375507**	**AB375482**	**NUM Ae02-000092**
Actenicerus pruinosus MOTSCHULSKY, 1861	JAPAN: Honshu, Kyoto, Sakyo, Hanase-Sugi	**AB375495**	**AB375509**	**AB375490**	**NUM Ae02-000093**
Actenicerus suzukii suzukii (MIWA, 1928)	JAPAN: Honshu, Aichi, Shinshiro, Naganoyama	**AB375494**	**AB375508**	**AB375483**	**NUM Ae02-000094**
Actenicerus yamashiro KISHII, 1998	JAPAN: Honshu, Kyoto, Sakyo, Hanase-Sugi	**AB375496**	**AB375510**	**AB375475**	**NUM Ae02-000095**
Acteniceromorphus kurofunei (MIWA, 1934)	JAPAN: Honshu, Nagano, Ina, Nishikomagatake	**AB375497**	**AB375511**	**AB231213**	**NUM Ae02-000010**
Corymbitodes gratus (LEWIS, 1894)	JAPAN: Shikoku, Ehime, Saijo, Kawagurusu	**AB375498**	**AB375512**	**AB231231**	**NUM Ae02-000011**
Corymbitodes rubripennis (LEWIS, 1894)	JAPAN: Honshu, Nara, Kamikitayama, Odaigahara	**AB375499**	**AB375513**	**AB375484**	**NUM Ae02-000096**

NUM voucher no., the collection number deposited in Nagoya University Museum.

among 11 *Actenicerus* taxa ranged as follows: 16S rDNA, 0.7–9.0%; COI, 3.2–16.9%; 28S rDNA, 0.0–1.2%. The ILD test for each pair of genes yielded non-significant *P*-values (16S rDNA-COI, $P=0.27$; 16S rDNA-28S rDNA, $P=0.77$; COI-28S rDNA, $P=1.00$), hence the partition homogeneity test supports the combination of the three gene partitions. The χ^2 test of homogeneity of base frequencies across taxa results in no significant *P*-values ($\chi^2=5.0393$, df=39, $P=1.0000$). The optimum ML tree was searched using a heuristic strategy with 100 random sequence addition and TBR branch swapping.

We herein analysed 11 species of Japanese *Actenicerus*, which cover about half of all Japanese taxa (and one-third of the world's taxa) of the genus (KISHII, 1996; TARNAWSKI, 2001). The concatenated sequences of partial 16S rDNA, COI, and 28S rDNA yielded a fully resolved phylogeny. The COI barcode segments were capable of distinguishing among the 11 *Actenicerus*-species: uncorrected pairwise distance between the most closely related species, *A. kidonoi* and *A. giganteus*, was 3.24%; between *A. orientalis* and *A. naomii* was 3.57%; between *A. kiashianus* and *A. yamashiro* was 4.71%.

Discussion

All *Actenicerus*-species analysed in this study form a clade with high statistical supports (100 %, Fig. 1), as previously suggested by morphological studies of larvae; the spiracle of 8th abdominal segment situated at different position (posterior portions of the segment) from the other elaterids (ÔHIRA, 1962, 1989 a). Our results resolved the 11 Japanese *Actenicerus*-species into three distinct clades (Clade A, B, and C; Fig. 1).

Clade A (*Actenicerus pruinosus*, *kiashianus*, *yamashiro*, *suzukii*, and *odaisanus*): Grouping of five *Actenicerus* species in Clade A was supported by ML, MP, NJ, and Bayesian analyses, but the statistical support was moderate (Fig. 1). Within Clade A, three species of *A. pruinosus*, *kiashianus*, and *yamashiro* (named "*pruinosus* group") resemble each other in adult morphology: body slender; antennae elongate and slender especially in male; pronotum narrow, subcylindrical, and the disc bears a median longitudinal groove

Clade B (*Actenicerus orientalis*, *kidonoi, giganteus*, *naomii,* and *athoides*): Grouping of five *Actenicerus* species in Clade B was supported by ML, MP, and Bayesian analyses, but not by MP (Fig. 1). Within Clade B, the monophyly of four species of *A. orientalis*, *kidonoi*, *giganteus*, and *naomii* (named "*orientalis* group") were strongly supported (100 %) by ML, MP, NJ and Bayesian analyses. The "*orientalis* group" share several common characteristics of the adult morphology: body robust; antennae short in both sexes; pronotum subtrapezoidal and the disc does not bear a median longitudinal groove. The phylogenetic tree shows that "*orientalis* group" has diversified relatively recently.

Clade C (*Actenicerus aerosus*): *A. aerosus* occupied the most basal branch in the phylogeny of the 11 *Actenicerus*-species (Fig. 1). The adult morphology is more similar to the species in Clade B than those in Clade A, but some characteristics are distinctly different from all the other members of *Actenicerus* (ÔHIRA, 1989 b); *e.g.*, the outer

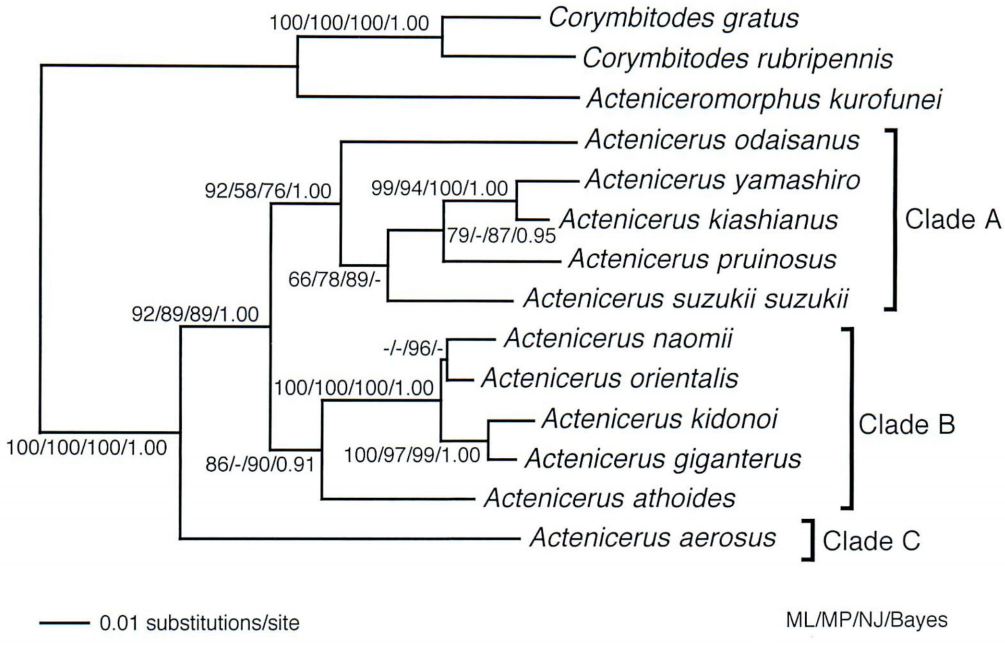

Fig. 1. Phylogenetic tree of 11 Japanese *Actenicerus*-species resulting from ML analysis based on the combination matrix of the partial 16S rDNA, COI, and 28S rDNA ($-\ln L = 4505.4776$). Values of ML/MP/NJ bootstraps/Bayesian posterior probabilities are indicated on the nodes.

prong of urogomphi on 9th abdominal segment is long horn-like upward in the larva of *A. aerosus*, while short horn-like in the other species (ÔHIRA, 1962).

Larvae of *Actenicerus* are generally found in moist soil, but the "*pruinosus* group", *A. pruinosus*, *kiashianus*, and *yamashiro*, are more dry soil inhabiting. Therefore, our molecular phylogenetic results suggest that the ancestral condition in *Actenicerus* was as a wetland inhabitant, and ecological adaptation to dry conditions was derived later in Clade A.

In conclusion, we showed here that the combination analysis of COI with 16S rDNA and 28S rDNA resolved basal relationships of the genus *Actenicerus*, and COI barcode fragment would be potentially useful as a tool for the delimitation of closely related species in this genus. Further analysis, such as comparing various local populations, may help to define the species status of world *Actenicerus*, and hopefully reveal the ecological reasons for explosive diversification of *Actenicerus* in Japan (ÔHIRA, 1989 a, c).

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要　　約

大場(提髪)玲子・大場裕一・大平仁夫：日本産シモフリコメツキ属 *Actenicerus* の分子系統解析．―― 日本から記録されているシモフリコメツキ属 *Actenicerus* は約 20 種にのぼり，きわめて多様なグループを形成している．また，これらの種は外形が類似しているために分類が難しく，系統関係も不明であった．今回，日本産シモフリコメツキ属 11 種について，3 つの遺伝子配列 (16S rDNA, COI, 28S rDNA) に基づく系統推定を行った．その結果，これらの種が大きく 3 つのクレード（クレード A：オオダイルリヒラタコメツキ，キアシシモフリコメツキ，シモフリコメツキ，スズキシモフリコメツキ，ヤマシロシモフリコメツキ／クレード B：オオシモフリコメツキ，クロツヤシモフリコメツキ，サトヤマシモフリコメツキ，シコクシモフリコメツキ，ヨコヅナシモフリコメツキ／クレード C：コガタシモフリコメツキ）に分類されることが初めて示唆された．さらに，解析に用いた COI 領域（DNA バーコード領域）が日本産シモフリコメツキ属の種判別に有効である可能性が示された．

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A Host Record of *Thranius variegatus variegatus* (Coleoptera, Cerambycidae)

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Late in 2007, I recorded *Thranius variegatus variegatus* BATES, 1873 emerged out from dead branches of *Zanthoxylum ailanthoides* SIEBOLD et ZUCC. (Rutaceae) as a distributional record from Kyoto Prefecture, Central Japan (YAMAMOTO, 2007, p. 11). Recentry, I have found out that *Z. ailanthoides* has not been known larval host plant of *T. variegatus variegatus*. In this short paper, I am going to record it as an additional larval host plant of the cerambycid species.

Before going further, I wish to express my hearty thanks to Mr. Satoshi FUJINUMA (Tokyo

Pref.) for giving me invaluable information.

Thranius variegatus variegatus BATES, 1873

[Japanese name: Torafu-hosobane-kamikiri]

Thranius variegatus BATES, 1873, Ann. Mag. nat. Hist., (4), **12**: 196; type locality: Nagasaki, Japan.
Thranius sapporensis KANO, 1933, Kontyû, Tokyo, **7**: 132; type locality: Maruyama, Sapporo City, Hokkaido.

Specimens examined. 1 ♂, 1 ♀, Tsune [常], Maizuru-shi, northern part of Kyoto Prefecture, Central Japan, 17–III–2006 coll., summer of 2006 emer., S. YAMAMOTO leg. in my coll.; 1 ♀, same collecting data as above, but 10–IV–2007 emer., S. FUJINUMA leg.

Larval host plants. *Mallotus japonicus* MÜLL. ARG. (Euphorbiaceae), *Castanopsis* spp. (Fagaceae), *Ulmus japonica* SIEBOLD, *Aphananthe aspera* PLANCH (Ulmaceae), *Robinia pseudo-acacia* LINN. (Leguminosae), *Zanthoxylum ailanthoides* SIEBOLD et ZUCC. (Rutaceae: new record.)

Notes. Specimens collected by the author are relatively smaller (body length: 11.3–12.4 mm) than generally known (BL: 13.0–25.5 mm; NIISATO, 2007, p. 464). On the other hand, an individual obtained by Mr. Satoshi FUJINUMA is much larger (BL: 20.0 mm). The hosts were newly dead branches about 6 cm in diameter, with tunnels made by the larvae. In addition to *T. variegatus variegatus*, ten individuals of *Agrilus yamawakii* Y. KUROSAWA, 1957 also emerged out from the same branches.

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Elytra, Tokyo, **36**(1):87–99, May 30, 2008

Five New Species of the Genus *Parastasia* (Coleoptera, Scarabaeidae, Rutelinae) from the Oriental Region

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Abstract Five new species of the scarabaeid genus *Parastasia* from the Oriental Region are described: *Parastasia dempuensis* sp. nov., *P. christmasensis* sp. nov., *P. peterzorni* sp. nov., *P. tenomensis* sp. nov., and *P. jamesonae* sp. nov.

Key words: Coleoptera, Scarabaeidae, Rutelini, *Parastasia*, new species.

In 2006 I had an opportunity to examine some unusual specimens of the genus *Parastasia* that have been preserved in the collection of the University of Nebraska State Museum, Lincoln, USA and the private collections of Mr. Masayuki FUJIOKA in Tokyo, Japan and Mr. Carsten ZORN in Gnoien, Germany. After a careful examination, I came to the conclusion that they were new to science. In this study, I will describe five new species: *Parastasia dempuensis* sp. nov., *P. christmasensis* sp. nov., *P. peterzorni* sp. nov., *P. tenomensis* sp. nov. and *P. jamesonae* sp. nov.

Parastasia dempuensis sp. nov. belongs to the "*Parastasia discolor* group". The "*Parastasia discolor* group" is one of the large species-groups of the genus *Parastasia* and is characterized by a medium-sized body and simple-formed male genitalia. Almost all species classified as "*Parastasia discolor* group" closely resemble each other. However, they are clearly divided by the shape of the galea and the form of the inner sac of the male genitalia. This group includes about ten species, with a distributional area from Burma through the Malay Peninsula to New Guinea. The group is speciated by locality (each mountain ridge or island has its own species allopatric distribution). *Parastasia dempuensis* sp. nov. is distributed exclusively in the highlands of Mt. Dempu (Sumatra).

In his study "A Revision of the Genus *Parastasia* in the Indo-Australian region (Coleoptera: Scarabaeidae, Rutelinae)", Dr. KUIJTEN (1992), reported an unnamed female has been inspected and is described herewith under the name: *Parastasia christmasensis*. This new species resembles *P. percheroni* (MONTROUZIER, 1860), but is clearly distinguished by the shape of the clypeus and vestigial teeth of the galea.

Parastasia peterzorni sp. nov. and *P. tenomensis* sp. nov. are members of the "*Parastasia quadrimaculata* group", characterized by a medium-sized body and convex pronotum. This group includes five species. *P. peterzorni* sp. nov. and *P. tenomensis* sp. nov. are distributed in the mountainous areas of Sumatra and Borneo, respectively.

Parastasia jamesonae sp. nov. is closely related to *P. dimidiata* (ERICHSON, 1845). However, it is clearly distinguished by the shape of the male genitalia. The former species is found in the Cuernos mountainous area of Negros Island, Philippines while the latter is found in the lowlands of Southeast Asia (southern India, Nicobars, Andamans, Malaysia, Natuna Is., Sumatra, Borneo, Java).

Before going further, I wish to express my cordial thanks to Dr. Shun-Ichi UÉNO, National Museum of Nature and Science, Tokyo, Japan for his critical reading of the manuscript. I am deeply indebted to Dr. Johannes FRISCH and Mr. Joachim WILLERS of the Museum für Naturkunde der Humboldt Universität zu Berlin, Germany, Mr. Malcolm D. KERLEY of the Natural History Museum, London, UK, Dr. Pol LIMBOURG of the Institut royal des Sciences naturelles, Belgium, Dr Thierry DEUVE and Ms. Azadeh TAGHAVIAN of the Muséum national d'Histoire naturelle, Paris, France, Ms. Ma Eulàlia Gassó MIRACLE of the Nationaal Natuurhistorisch Museum, Leiden, Netherland for giving me the opportunity to examine collections of the genus *Parastasia* and loaning the materials. My thanks are also due to Dr. Denis KEITH of the Muséum d'Histoire naturelle de Préhistoire, Paris, France for his helpful advice and kind cooperation. Finally, I wish to express my deepest gratitude to Dr. Mary Liz JAMESON of the University of Nebraska State Muséum, Lincolon, USA, Dr. Carsten ZORN, Gnoien, Germany and Mr. Masayuki FUJIOKA, Tokyo, Japan for their constant encouragement and helpful advice to my entomological studies, and their generous loaning of specimens housed in their collections.

The holotypes of the new species will be preserved in the collection of the Natural History Museum, London, UK, the Museum für Naturkunde der Humboldt Universität zu Berlin, Germany, and the Department of Zoology, National Museum of Nature and Science, Tokyo, Japan.

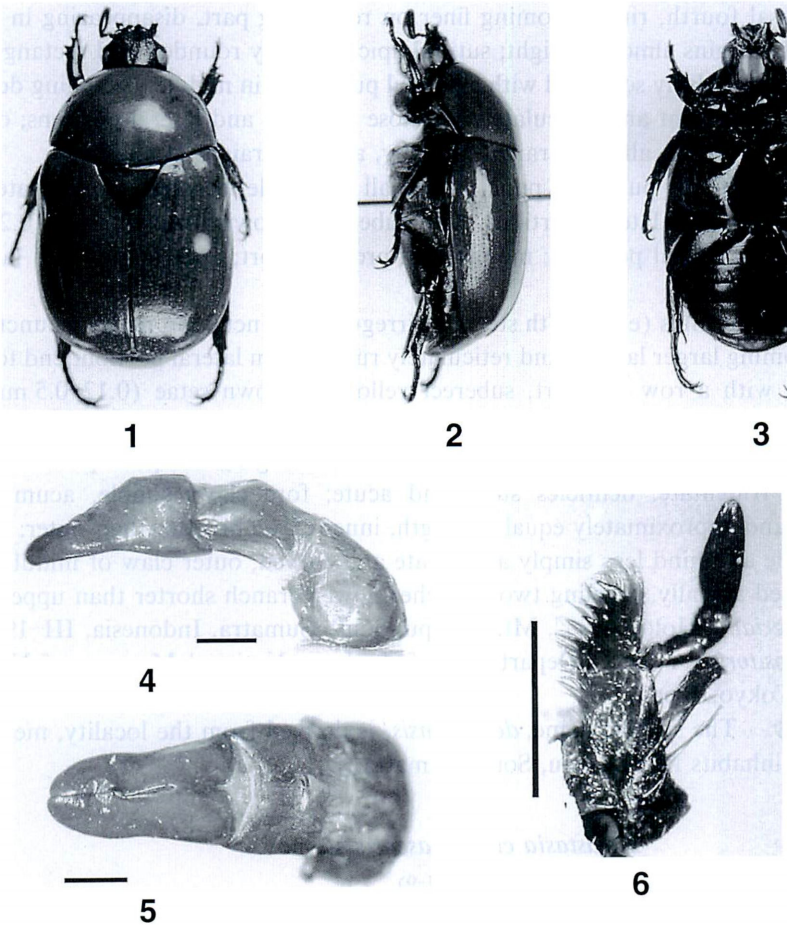
Parastasia dempuensis sp. nov.

(Figs. 1–6)

Description. Body length: 19.8 mm, width: 11.3 mm.

Head black, antennae, legs and ventral surface dark brown to black, dorsal surface (except pygidium) reddish brown, pygidium dark reddish brown; head, pronotum, elytra, and legs with vitreous lustre, pygidium and ventral surface with rather weak lustre.

Head micro-shagreened (visible under ×40); clypeus truncated with distinct angles, reticulately rugulose, apical margin reflexed, rounded at antero-lateral corners, with a pair of stout upright teeth; lateral margins before eye-canthi almost parallel, with a pair of transverse, low subparallel ridges at the bases of eye-canthi on lateral third of clypeus; frons and vertex irregularly punctate, punctures round in middle, becoming denser laterad, partly coalescent on lateral portions; eyes moderately convex; interocular distance 2.3 times as wide as eye diameter. Labrum transversely truncate, anterior margin almost straight and slightly pointed in middle. Galea with five teeth, apical two



Figs. 1–6. Habitus of *Parastasia dempuensis* sp. nov.; 1–3, holotype, ♂: 1, dorsal view, 2, lateral view, 3, ventral view; 4–5, male genitalia (scale: 1 mm), 4, lateral view (left), 5, dorsal view, 6, galea (scale: 1 mm).

large, stout and acute, middle two rather short, stout and acute, and basal one porrect and trifid. Length of antennal club shorter than interocular distance (0.7 : 1 in male).

Pronotum 1.34 times as wide as long, narrowed apicad in apical 3/5, weakly widened posteriad; front angles obtusely angulate, hind angles obtuse; lateral margins rimmed, rims becoming narrower apicad in apical half, wider in posterior half, disappearing to hind corners; disc with a pair of vague impressions in middle of lateral portions, irregularly punctate, punctures round and small in middle, elongate and crescent shaped on lateral portions, becoming smaller posteriad.

Elytra with 13 rows of round punctures, intervals scattered with minute punctures, 1st interval irregularly scattered with round punctures; lateral margins sinuous in basal 3/10, widened at basal 2/5, thence weakly rounded and narrowed posteriad, thickly

rimmed on basal fourth, rims becoming finer on remaining part, disappearing in hind corners; distal margins almost straight; sutural apices weakly rounded and rectangular.

Pygidium irregularly scattered with elliptical punctures in middle, becoming denser apicad, partly coalescent and reticulately rugulose on basal and lateral portions; outer margins thickly rimmed, almost straight laterally, almost straight at apex.

Metasternum finely punctate, punctures small in middle, becoming larger laterad, reticulately rugulose on lateral portions, with suberect yellowish brown setae (0.2–0.6 mm in length) on lateral portions; mesosternal process short; apex angulate in lateral view.

Abdominal sternites (except 7th sternite) irregularly punctate in middle, punctures elongate, becoming larger laterad and reticulately rugulose on lateral portion, 2nd to 5th sternites each with a row of short, suberect yellowish brown setae (0.12–0.5 mm in length) on apical 1/3 to half, 6th sternite glabrous, 7th reticulately rugulose with a row of short, erect yellowish brown setae (0.12–0.25 mm in length) on apical portion.

Protibiae tridentate, denticles stout and acute; fore claws simple, acuminate, sickle-shaped and approximately equal in length, inner claws broader than outer; inner claws of middle and hind legs simply acuminate and curved; outer claw of middle and hind legs incised apically, forming two branches, lower branch shorter than upper.

Type material. Holotype: ♂, Mt. Dempu, South Sumatra, Indonesia, III–1986.

Type depository. NSMT; Department of Zoology, National Museum of Nature and Science, Tokyo, Japan.

Etymology. The specific name, *dempuensis*, is derived from the locality, meaning a species that inhabits Mt. Dempu, South Sumatra.

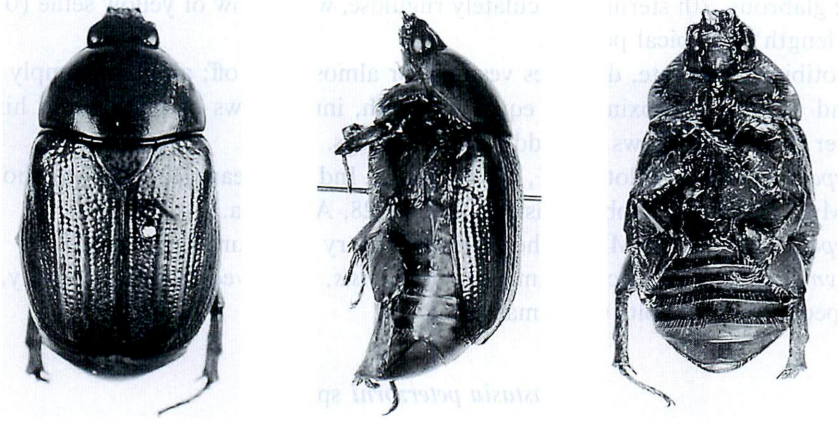
Parastasia christmasensis sp. nov.

(Figs. 7–9)

Description. Body length: 19.3 mm, width: 10.7 mm.

Antennae and head dark reddish brown, pronotum, scutellum, elytra, apical half of 1st and 2nd to 5th of abdominal sternites, legs reddish brown, propygidium, pygidium and ventral surface except for apical half of abdominal sternites yellowish brown; pronotum with yellowish brown band on marginal portions; propygidium with a pair of longitudinal reddish brown band on apical half, pygidium with a pair of elongate reddish brown areas at sides; pronotum, elytra and legs with vitreous lustre, head, propygidium, pygidium, legs and ventral surface with rather strong lustre.

Head micro-shagreened (visible under ×60); clypeus truncated with rounded angles, slightly rugulose; apical margin weakly reflexed, widely rounded at antero-lateral corners, with a pair of low and blunt teeth; lateral margins before eye-canthi weakly rounded, with a pair of transverse, low subparallel ridges at the bases of eye-canthi on lateral 2/5 of clypeus; frons and vertex irregularly punctate, punctures large on basal half, becoming denser, larger and partly coalescent and reticulately rugulose on anterior half and lateral portions; eyes moderately convex; interocular distance 1.6 times as wide



7 8 9

Figs. 7–9. Habitus of *Parastasia christmasensis* sp. nov., holotype, ♀; 7, dorsal view, 8, lateral view, 9, ventral view.

as eye diameter. Labrum transversely truncate, anterior margin broadly rounded and slightly sinuous. Galea with three vestigial teeth, middle two slender, short and acute, basal one slender and small, porrect and trifid at the base. (Antennal club missing.)

Pronotum 1.5 times as wide as long, narrowed apicad in apical half, weakly widened posteriad, sinuous before hind angles; front and hind angles obtusely angulate; lateral margins rimmed, rims extending to hind margin opposite to humeral swellings; disc with a pair of vague small impressions in middle of lateral portions, irregularly punctate, punctures round in middle, becoming denser laterad and sparser posteriad.

Elytra with 12 rows of round punctures, 1st and 5th intervals irregularly scattered with round punctures; lateral margins sinuous in basal 2/5, widened at middle, narrowed posteriad in apical half, thickly rimmed on basal half, rims becoming finer on remaining part, and disappearing before opposite to apical knob; distal margins slightly rounded; sutural apices weakly angulate.

Propygidium microsculptured, with a pair of transverse impressions at antero-lateral portions; disc irregularly punctate, punctures setigerous on anterior half, each with short, decumbent yellow seta (0.07–0.13 mm in length), becoming larger laterad, reticulately rugulose on basal half.

Pygidium distinctly reticulately rugulose; outer margins thickly rimmed, almost straight laterally, widely rounded at apex.

Metasternum irregularly punctate, punctures sparse in middle, reticulately rugulose on lateral portions, with suberect yellow setae (0.1–0.63 mm in length) on lateral portions; mesosternal process stout and acute; apex rounded in lateral view.

First to 5th abdominal sternites irregularly punctate, punctures elongate in middle, becoming denser laterad, reticulately rugulose on lateral portions, each with a row of suberect yellowish brown setae (0.4–0.75 mm in length) on apical half to third, 6th

sternite glabrous, 7th sternite reticulately rugulose, with a row of yellow setae (0.2–0.63 mm in length) on apical portion.

Protibiae tridentate, denticles vestigial or almost filed off; all claws simply acuminate and curved, approximately equal in length, inner claws of middle and hind legs slenderer than outer claws of middle and hind legs.

Type material. Holotype: ♀, Christmas Is., Indian Ocean, leg. Mrs Mlachove, VII 1935, Mus. Hincks & Dibb; Christmas I. 1942.28, Australia.

Type depository. BMNH; the Natural History Museum, London, UK.

Etymology. The specific name, *christmasensis*, is derived from the locality, meaning a species that inhabits Christmas Island.

Parastasia peterzorni sp. nov.

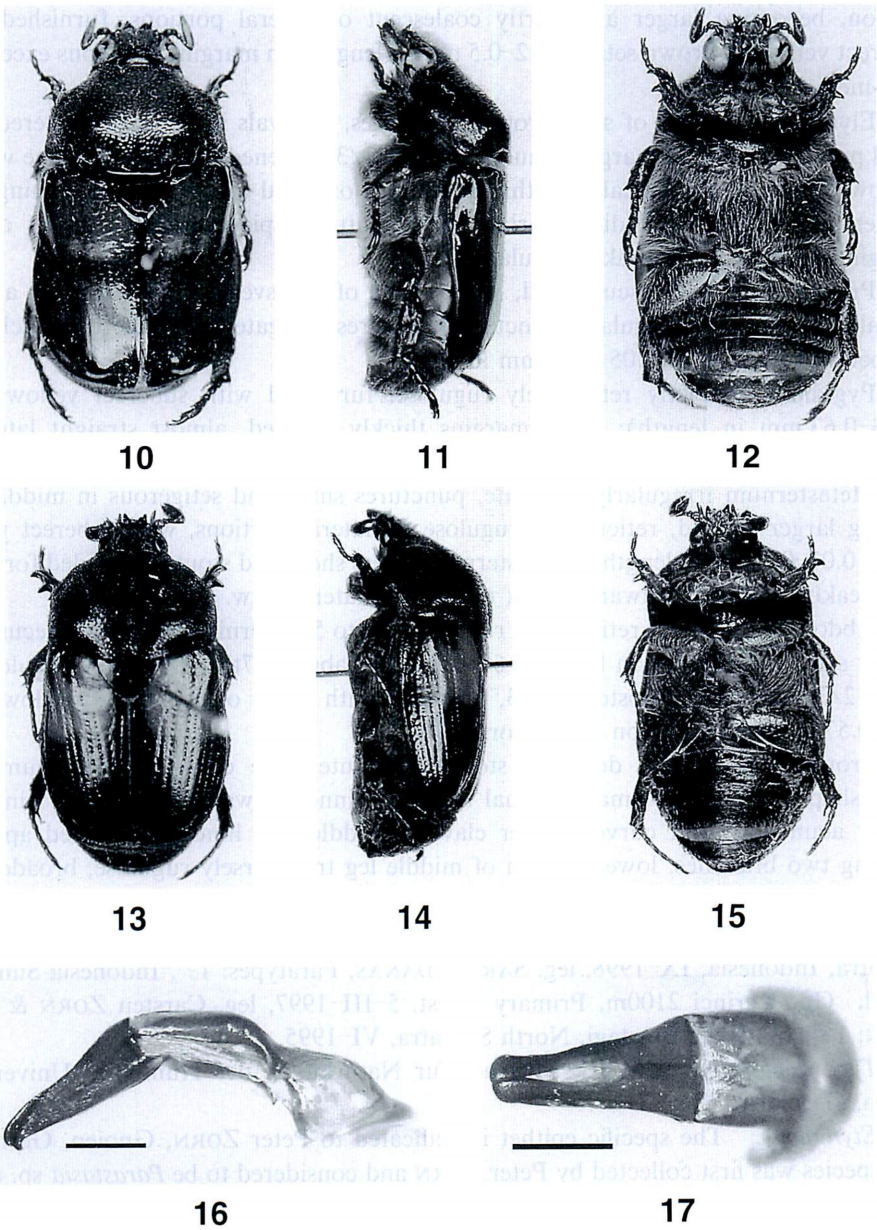
(Figs. 10–17)

Description. Body length: 12.8–16.1 mm, width: 7.1–8.6 mm.

Head and lateral margins of fore-tibiae dark brown to black, antennae, dorsal surface, legs except lateral margins of fore tibiae and ventral surface reddish brown to dark reddish brown, elytra with vague orange patches between scutellum and humeral swellings in male; in female, head (except clypeus), pronotum, pygidium dark reddish brown to dark brown, clypeus, elytra, propygidium, legs and ventral surface reddish brown to dark reddish brown, elytra with two pairs of patches, first large orange on basal third, except for humeral knob, second small and round dark brown at base of lateral half; dorsal surface except for propygidium and pygidium with vitreous lustre, propygidium, pygidium, legs and ventral surface with rather weak lustre.

Head micro-shagreened (visible under ×60); clypeus truncated with distinct angles, reticulately rugulose; apical margin reflexed, with a pair of sharp upright teeth; lateral margins before eye-canthi almost parallel, with a pair of transverse, low subparallel ridges at the bases of eye-canthi on lateral third of clypeus; frons irregularly punctate, punctures large and round in middle, partly coalescent and reticulately rugulose on anterior portion, furnished with erect yellowish brown setae (0.17–0.63 mm in length); vertex irregularly punctate; eyes moderately convex; interocular distance 1.1–1.2 times as wide as eye diameter. Labrum truncate and angles broadly lobed, with anterior margin deeply emarginate. Galea without tooth, lateral margins sinuous and furnished with a few spinous brown setae (0.1–0.12 mm in length). Length of antennal club shorter than interocular distance (0.93 : 1 in male).

Pronotum 1.42 times as wide as long, strongly narrowed apicad in apical half, slightly narrowed posteriad, slightly curved inwards before hind angles; front angles obtusely angulate, hind angles rounded; lateral margins rimmed, rims becoming narrower on posterior half, and extending to hind margin opposite to humeral swellings; disc with three pair of vague impressions, first and second in middle of lateral and postero-lateral portions, third at hind angles, and gibbous in baso-lateral portions, irregularly punctate, punctures horseshoe-shaped in middle, elongate on posterior



Figs. 10–17. Habitus of *Parastasia peterzorni* sp. nov.; 10–12, holotype, ♂, 10, dorsal view, 11, lateral view, 12, ventral view; 13–15, allotype, ♀, 13, dorsal view, 14, lateral view, 15, ventral view; 16–17, male genitalia (scale: 1 mm), 16, lateral view (left), 17, dorsal view.

portion, becoming larger and partly coalescent on lateral portions, furnished with suberect yellowish brown setae (0.12–0.5 mm in length) on marginal portions except for baso-medial portion.

Elytra with 9 rows of small, round punctures, intervals irregularly scattered with small punctures; lateral margins sinuous in basal 1/3, widened in middle, thence weakly narrowed posteriad in apical half, thickly rimmed on basal fourth, rims becoming finer on remaining part, and disappearing before sutural apices; distal margins almost straight; sutural apices weakly angulate.

Propygidium micro-sculptured, with a pair of transverse impressions at antero-lateral portions; disc irregularly punctate, punctures elongate and setigerous, each with a suberect yellow seta (0.05–0.45 mm in length).

Pygidium distinctly reticulately rugulose, furnished with suberect yellow setae (0.03–0.63 mm in length); outer margins thickly rimmed, almost straight laterally, truncate at apex.

Metasternum irregularly punctate, punctures small and setigerous in middle, becoming larger laterad, reticulately rugulose on lateral portions, with suberect yellow setae (0.07–0.8 mm in length); mesosternal process short and stout, protruded forwards and weakly curved downwards; apex rounded in lateral view.

Abdominal sternites reticulately rugulose, 1st to 5th sternites each with decumbent yellow seta (0.1–0.8 mm in length), 6th sternite glabrous, 7th reticulately rugulose on apical 2/3, glabrous on posterior 1/3, furnished with a row of decumbent yellow setae (0.3–0.57 mm in length) on apical portion.

Protibiae tridentate, denticles stout and acute; fore claws simple, acuminate, sickle-shaped and approximately equal in length; inner claws of middle and hind legs simply acuminate and curved; outer claw of middle and hind legs incised apically, forming two branches, lower branch of middle leg transversely rugulose, broader and shorter than upper; lower branch of hind leg shorter than upper.

Type material. Holotype: ♂, Harau Valley, Paya Kumbuh, Near Bukit Tinggig, Sumatra, Indonesia, IX–1998, leg. SARIMUDANAS. Paratypes: 1♂, Indonesia Sumatra, Jambl, Gn. Kerinci 2100m, Primary forest, 5–III–1997, leg. Carsten ZORN & Peter ZORN; 1♂, 1♀, Near Brastagi, North Sumatra, VI–1995.

Type depository. ZMHB; Museum fur Naturkunde der Humboldt Universitat, Berlin, Germany.

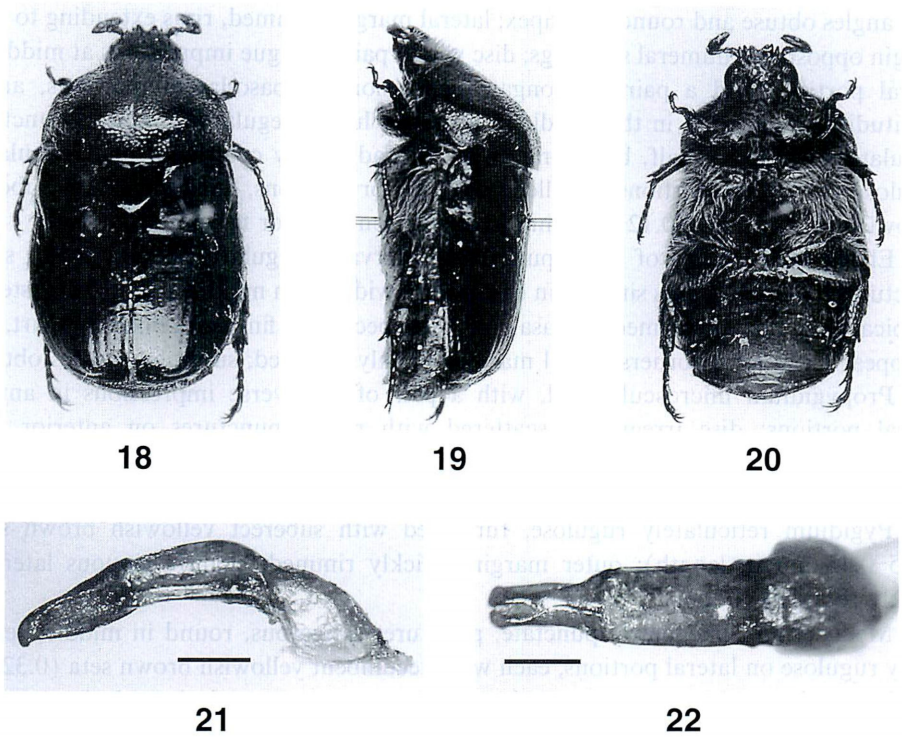
Etymology. The specific epithet is dedicated to Peter ZORN, Gnoien, Germany. The species was first collected by Peter ZORN and considered to be *Parastasia* sp. on an attached label inscribed by Carsten ZORN.

Parastasia tenomensis sp. nov.

(Figs. 18–22)

Description. Body length: 12.9 mm, width: 7.0 mm.

Antennae, elytra, posterior half of propygidium, pygidium and ventral surface



Figs. 18–22. Habitus of *Parastasia tenomensis* sp. nov.; holotype, ♂; 18, dorsal view, 19, lateral view, 20, ventral view; 21–22, male genitalia (scale: 1 mm), 21, lateral view (left), 22, dorsal view.

yellowish brown to reddish brown; head, pronotum, scutellum and legs reddish brown to dark reddish brown, anterior half of propygidium blackish brown; pronotum with a large red areas on apico-median portion to median 2/3, elytra with a pair of small black patches on humeral knob; dorsal surface (except propygidium and pygidium) with vitreous lustre, propygidium and pygidium, legs and ventral surface with rather weak lustre.

Head micro-shagreened (visible under ×60); clypeus truncate, reticulately rugulose; apical margin reflexed, weakly rounded at antero-lateral corners, with a pair of sharp upright teeth; lateral margins before eye-canthi almost straight, with a pair of transverse, low ridges at bases of eye-canthi on lateral fifth of clypeus; frons and vertex reticulately rugulose, furnished with erect brown setae (0.25–0.88 mm in length); eyes moderately convex; interocular distance 1.75 times as wide as eye diameter. Labrum transversely truncate, anterior margin deeply emarginate medially. Galea vestigial without tooth. Length of antennal club shorter than interocular distance (0.78 : 1 in male).

Pronotum 1.35–1.36 times as wide as long, strongly narrowed apicad in apical 1/3, widest at apical 1/3, thence almost straight posteriad; front angles obtusely angulate,

hind angles obtuse and rounded at apex; lateral margins rimmed, rims extending to hind margin opposite to humeral swellings; disc with a pair of vague impressions at middle of lateral portions and a pair of elongate depressions at baso-lateral portions, and a longitudinal depression in the middle of posterior half, irregularly punctate, punctures spatulate on anterior half, becoming larger laterad, partly coalescent and reticulately rugulose on lateral portions, smaller on posterior portions, furnished with suberect yellowish brown setae (0.12–0.45 mm in length) on anterior to lateral portions.

Elytra with 9 rows of small punctures, intervals irregularly scattered with small punctures; lateral margins sinuous in basal third, widened in middle, narrowed posteriad in apical half, thickly rimmed on basal 1/3, rims becoming finer on remaining part, and disappearing in hind corners; distal margins weakly rounded; sutural at apices obtuse.

Propygidium microsculptured, with a pair of transverse impressions in antero-lateral portions; disc irregularly scattered with round punctures on anterior half, reticulately rugulose on posterior half, furnished with suberect yellowish brown setae (0.02–0.05 mm in length).

Pygidium reticulately rugulose, furnished with suberect yellowish brown setae (0.05–0.45 mm in length); outer margins thickly rimmed, slightly sinuous laterally, weakly rounded at apex.

Metasternum irregularly punctate, punctures setigerous, round in middle, reticulately rugulose on lateral portions, each with decumbent yellowish brown seta (0.32–0.8 mm in length); mesosternal process short; rather acute at apex in lateral view.

Second to 5th abdominal sternites irregularly punctate in middle, reticulately rugulose on lateral portions, 7th sternite reticulately rugulose, 2nd to 4th sternites each with decumbent to suberect yellowish brown seta (0.07–0.55 mm in length), 5th sternite irregularly furnished with decumbent yellowish brown setae (0.15–0.55 mm in length), 6th sternite glabrous, 7th with a row of erect yellowish brown setae (0.05–0.15 mm in length) on apical portion.

Protibiae bidentate, denticles stout and acute; in male, fore-claws simple, acuminate, sickle-shaped and approximately equal in length and width; inner claws of middle and hind legs simply acuminate and curved; outer claw of middle and hind legs incised apically, forming two branches, lower branch of middle leg rather short and broader than upper, lower branch of hind leg almost of the same width and about half the length of upper.

Type material. Holotype: ♂, Tenom, Sabah, N. BORNEO, IV–2005. Paratype: 1 ♂, same data as for the holotype.

Type depository. NSMT; Department of Zoology, National Museum of Nature and Science, Tokyo, Japan.

Etymology. The specific name, *tenomensis*, is derived from the locality, meaning a species that inhabits Tenom, Sabah, North Borneo.

Parastasia jamesonae sp. nov.

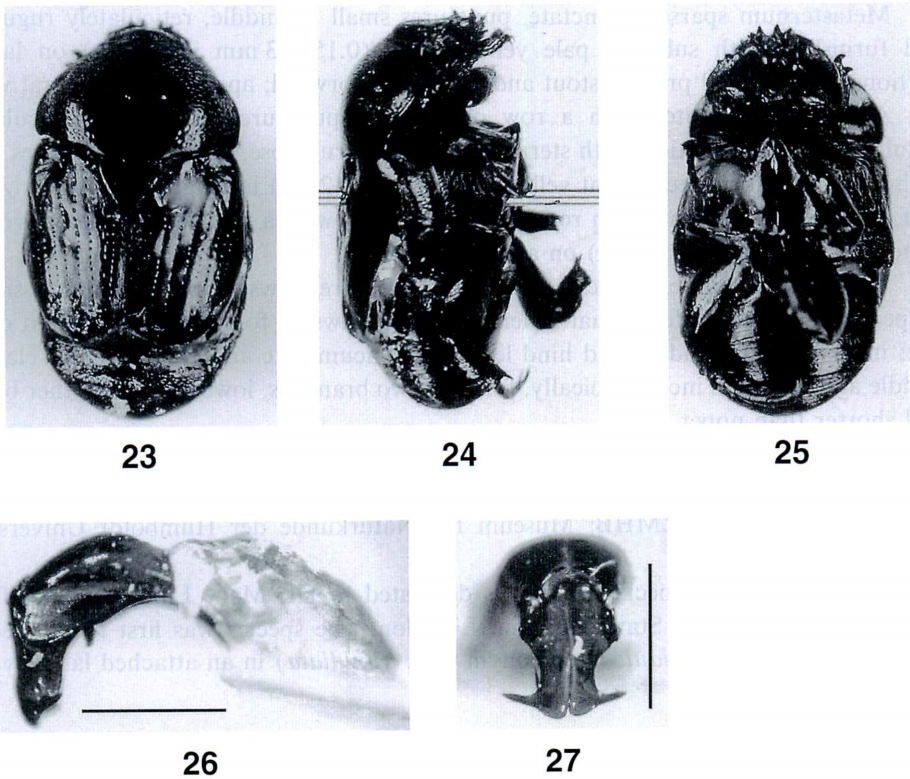
(Figs. 23–27)

Description. Body length: 9.4 mm, width: 5.4 mm.

Dorsal surface (except propygidium and pygidium) dark brown to black, propygidium, pygidium, legs and ventral surface dark reddish brown to black; dorsal surface, legs and ventral surface with vitreous lustre.

Head micro-shagreened (visible under ×60); clypeus emarginate and with a pair of sharp upright teeth at antero-lateral corners, teeth lobed, long and curved upwards, disc irregularly punctate, punctures partly coalescent; lateral margins before eye-canthi almost straight and weakly widened, with a pair of transverse, high subparallel ridges at bases of eye-canthi on lateral 1/4 of clypeus; frons reticulately rugulose, vertex irregularly punctate, punctures elongate; eyes moderately convex; interocular distance 2.14 times as wide as eye diameter.

Labrum deeply emarginate; anterior margin sinuous. Galea with three teeth, apical one large and acute, middle one stout and acute, and basal one small and vestigial.



Figs. 23–27. Habitus of *Parastasia jamesonae* sp. nov.; holotype, ♂, 23, dorsal view, 24, lateral view, 25, ventral view; 26–27, male genitalia (scale: 1 mm), 26, lateral view (left), 27, dorsal view.

Length of antennal club shorter than interocular distance (0.77 : 1 in male).

Pronotum 1.54 times wide as long, strongly narrowed apicad in apical 3/5, weakly widened posteriad, slightly curved inwards before hind angles; front angles obtusely angulate, hind angles obtuse and rounded at apex; lateral margins rimmed, rims extending to hind margin opposite to humeral swellings; disc with a pair of vague impressions at middle of lateral portions, irregularly punctate, punctures sparse and minute on middle and posterior portion, elongate and reticulately rugulose on anterior and lateral portions.

Elytra with 9 rows of small round punctures, intervals sparsely scattered with minute punctures; lateral margins sinuous in basal 1/3, widened at apical 1/3, thence narrowed posteriad, rimmed on apical 3/4, rims extending to sutural apices; distal margins deeply rounded.

Propygidium microsculptured, with a pair of transverse impressions at antero-lateral portions; disc irregularly rugoso-punctate in middle, reticulately rugulose on lateral portions.

Pygidium smooth in middle, deeply reticulately rugulose on marginal portions; outer margins rimmed, almost straight laterally, widely truncate at apex.

Metasternum sparsely punctate, punctures small in middle, reticulately rugulose, and furnished with suberect pale yellow setae (0.15–0.3 mm in length) on lateral portions; mesosternal process stout and protruded forward; apex acute in lateral view.

Abdominal sternites with a row of elongate punctures in middle, reticulately rugulose on lateral portions, 5th sternite reticulately rugulose, 2nd to 5th sternites each with a row of short, decumbent yellow setae (0.05–0.2 mm in length) on apical 1/3 to half, 6th sternite glabrous, 7th reticulately rugulose, with a row of short, erect yellow setae (0.05–0.12 mm in length) on apical portion.

Protibiae tridentate, denticles stout and acute; fore-claws simple, acuminate, sickle-shaped and approximately equal in length, inner claws of fore-leg broader than outer one; inner claws of middle and hind legs simply acuminate and curved; outer claw of middle and hind legs incised apically, forming two branches, lower branch rather broad and shorter than upper.

Type material. Holotype: ♂, Cuernos Mts., Negros, Philippines, Baker.; Ohaus determ *Parastasia* spec. near *nitidula* ER.

Type depository. ZMHB; Museum für Naturkunde der Humboldt Universität, Berlin, Germany.

Etymology. The specific epithet is dedicated to Dr. Mary Liz JAMESON of the University of Nebraska State Museum, Lincolon. The species was first mentioned as *Parastasia* sp. (nr. *P. nitidula* = synonym of *P. dimidiata*) in an attached label by Dr. Mary Liz JAMESON.

要　　約

和田　薫：東南アジアから発見された *Parastasia* 属コガネムシの 5 新種. —— *Parastasia dem-*

puensis sp. nov は *P. discolor* group に属し，特徴的な口器 (galea) の形状から近縁の他種との区別は容易である．*discolor* group に含まれる種は，島や山脈で種分化したものが多く，本種もスマトラ島中央部の山地（Dempu 山）から発見された．クリスマス島から発見された *Parastasia christmasensis* sp. nov. は *P. percheroni* (MONTROZIER, 1860) と近縁な種であるが，色彩と特徴的な口器 (galea) の形状から区別は容易である．*Parastasia peterzorni* sp. nov. と *P. tenomensis* sp. nov. は *quadrimaculata* group に属し，それぞれスマトラ島の山岳地帯とボルネオ島・サバ州から発見された．両種とも色彩と特徴的な前胸背板の形状から近縁な他種との区別は容易である．*Parastasia jamesonae* sp. nov. は *P. dimidiata* ERICHSON, 1845 に非常に近縁な種であるが，*P. dimidiata* が東南アジアの低地に広く分布するのに対し，本種は Negros 島の Cuern-os 山脈で特化した種である．外形は *P. dimidiata* に非常によく似ているが，♂の上歯が特大化しないことや，中胸背板の点刻や交尾器の形状から区別は容易である．

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Elytra, *Tokyo*, **36**(1): 100, May 30, 2008

A Host Plant Record of *Hoshihananomia auromaculata* (Coleoptera, Mordellidae)

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Hoshihananomia auromaculata (CHÛJÔ), a large beautiful mordellid beetle is found in Japan (Hokkaido to the Ryukyu Islands), Taiwan, and Thailand (TAKAKUWA, 2006). The adults of *H. auromaculata* can be collected from flowers of several tree species (TAKAKUWA, 2006), but the host plant of its larval stage has hitherto been unknown. We had a chance to find the host plant of *H. auromaculata* larvae in the Kinki District, Central Japan.

We found *H. auromaculata* adults resting on a rotten log of *Sapium sebiferum* (Euphorbiaceae) at the Wakakusa-yama hill, Nara City, Central Japan on a sunny day, on the 4th of July 1996. The rotten wood was located on the ground at a forest edge, and was 83 cm in length and 30 cm in diameter. Periphery of the wood was well rotten but the core part was still relatively hard. Six adults were collected by searching the surface of the wood. We then removed the bark from the log and collected 15 adults from under the bark. In addition, ca. 10–20 pupae and ca. 10 mature larvae of *H. auromaculata* were found. Cylindrical pupal cells were formed vertical to the bark, with pupal heads and heads of new adults facing the bark. Adults appeared to exit the rotten wood easily by breaking the bark. These observations indicate that *S. sebiferum* is the host plant for *H. auromaculata* larvae.

Sapium sebiferum is an exotic tree originally from China whose seeds are easily dispersed by birds and its saplings are avoided by the Japanese deer *Cervus nippon centralis* (MAESAKO, 2001). Therefore, the numbers of this tree species are increasing in Japan. It is very likely that *H. auromaculata* also uses other species of trees for its development. To clarify the host range of larval stages of this species, further studies are required.

We would like to express our sincere thanks to S. SHIYAKE and two anonymous referees for their valuable comments.

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Elytra, *Tokyo*, **36**(1): 101–108, May 30, 2008

Three New Species of the *Holotrichia constricta* Group (Scarabaeidae, Melolonthinae, Melolonthini) from the Philippines

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Abstract Three new species belonging to the *Holotrichia constricta* group of scarabaeid beetles are described from the Philippines under the names *H. canlaonensis* sp. nov., *H. succedanea* sp. nov. and *H. dannymohagani* sp. nov.

Up to date, about thirty species belonging to the *Holotrichia constricta* group of scarabaeid beetles have been known from the Sunda Archipelago and the Philippines. Of these, only one species occurs on Borneo Island, and some other species are known from Java, the Lesser Sunda and Sulawesi. In constrast, more than twenty species occur in the Philippines. I am now mainly investigating the Philippine species of this group based on rather a large number of materials provided by various colleagues and a native collector. At this time, I was able to find three undescribed species among the material and would like to describe them.

Before going further, I would like to express my cordial thanks to the Philippine native collector, Mr. Danny D. MOHAGAN for offering many invaluable materials in this study.

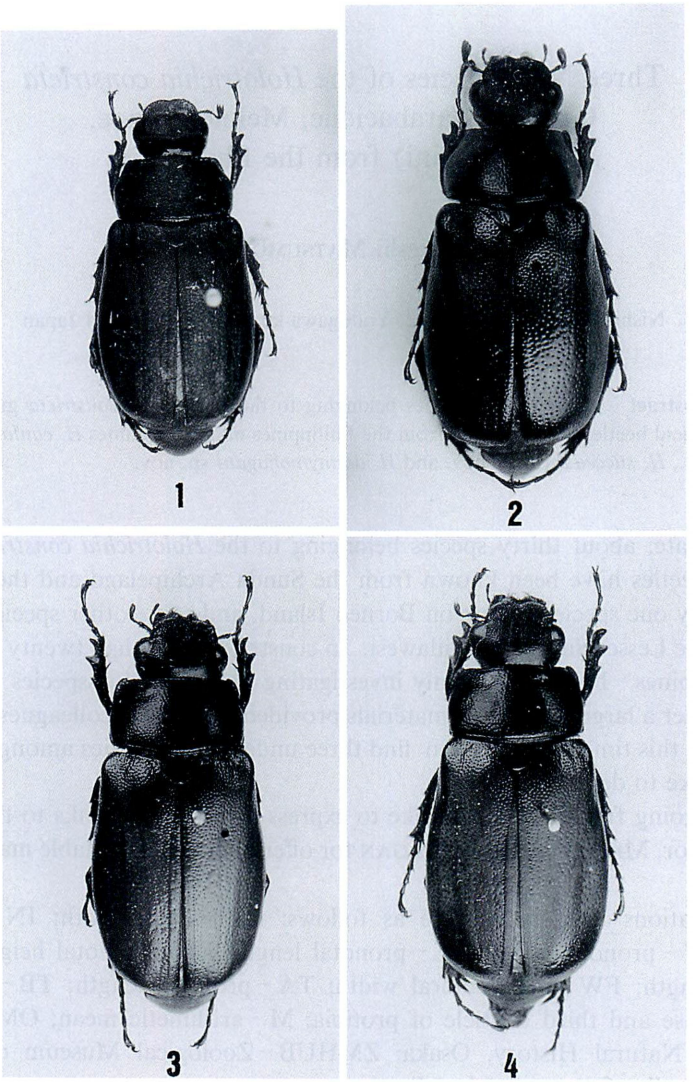
Abbreviations used herein are as follows: HW – head width; IN – interocular distance; PW – pronotal width; PL – pronotal length; PH – pronotal height; FL – metafemoral length; FW – metafemoral width; TA – protibial length; TB – distance between the base and third denticle of protibia; M – arithmetic mean; OMNH – Osaka Museum of Natural History, Osaka; ZMHUB – Zoological Museum of Humboldt University, Berlin; CA – author's collection.

Holotrichia canlaonensis MATSUMOTO, sp. nov.

(Figs. 1, 5, 8)

Description. Length: 14.2–19.2 mm.

Male. Body small-sized, generally blackish in color. Head, pronotum and scutellum almost blackish, mouth parts, elytra, pro- to metasterna, metacoxae and tibiae dark brown, femora brighter brown, abdomen and pygidium yellowish brown. Dorsal surface opaque, ventral surface generally opaque except in some portions.



Figs. 1–4. Habitus. —— 1, *Holotrichia canlaonensis*, ♂; 2, *H. succedanea*, ♂; 3, *H. dannymohagani*, ♂; 4, ditto, ♀.

Clypeus bilobed, slightly emarginate at the middle of anterior margin, feebly raised along fronto-clypeal suture; frons slightly rough, coarsely punctate; vertex obscurely ridged; occiput sparsely punctate just behind vertex, densely so from behind the portion beyond the level of posterior margin of eye; punctures distributed in a shape of arcuate belt; labrum with relatively distinct longitudinal ridge on each lobe; antennal club shorter than six preceding segments together.

Pronotum convex, smooth, moderately produced laterad and slightly compressed basad; anterior angle subrectangular, relatively sharp; posterior angle distinct, 135° in lateral view; lateral margin slightly sinuate in anterior half, gently curved past the middle and straight in posterior half; posterior margin rimmed throughout; disc smooth, coarsely and sparsely punctate, the surroundings of punctures hardly concave. Scutellum about 2.2 times as wide as long. Elytron smooth, with five costae, 4th and 5th costae often faint.

Prosternum with a narrow flattened postcoxal process. Metasternum shining in central lozenge-shaped portion, opaque in the remaining portion, covered with long hairs in almost all areas. Abdomen shining only in rather narrow central area, opaque in rather large area; 2nd sternite sparsely with short hairs in the lateral opaque portions, 3rd to 5th sternites hardly haired medially and with some long recumbent hairs mainly in both latero-basal portions, respectively.

Metacoxa rectangular and slightly bluntly angulate at the postero-lateral corner, gently curved along lateral margin; metafemur stout, coarsely and sparsely punctate, metafemoral hairs on surface at most 0.4 times as long as metafemoral width; meso- and metatibiae with some remarkable serrations on upper surfaces, average five on mesotibia and average seven on metatibia; metatibial apical spurs very sharp, longer one being longer than 1st metatarsal segment, which is about as long as the 2nd; metatarsus clearly shorter than metatibia; claws each strongly bent, with sharp vertical denticle near base; the denticle of outer claw of metatarsus feebly smaller than that of inner claw.

Male genitalia with parameres short, stout, swollen in the middle, greatly reduced in apico-ventral portions; each paramere sharply pointed downward at apex; temones each widely sclerotized in basal half, forming a feebly pointed sclerite between them at the middle; internal sac longer than paramere, furnished with very fine, short hairs near apex.

F e m a l e. Antennal club approximately as long as five preceding segmetns together. Scutellum about 2.2 times as wide as long. Metafemoral hairs on surface at most 0.43 times as long as metafemoral width; mesotibia with average five serrations, metatibia with average eight serrations, some of which are very sharp; metatibial apical spurs stouter, slender leaf-shaped; metatarsus clearly shorter than metatibia, at most 0.75 times as long as the latter. Coxite of female genitalia with thick frame, weakly and roundly produced toward both apices.

Arithmetic data. HW/PW ♂: 0.64–0.66 (M 0.65, n=5), ♀: 0.62–0.65 (M 0.63, n=5); IN/HW ♂: 0.66–0.69 (M 0.68, n=5), ♀: 0.68–0.71 (M 0.69, n=5); PH/PW ♂: 0.50–0.55 (M 0.53, n=5), ♀: 0.48–0.53 (M 0.51, n=5); PL/PW ♂: 0.56–0.58 (M 0.57, n=5), ♀: 0.54–0.57 (M 0.56, n=5); FW/FL ♂: 0.33–0.37 (M 0.35, n=5), ♀: 0.38–0.41 (M 0.40, n=5); TB/TA ♂: 0.47–0.51 (M 0.49, n=5), ♀: 0.45–0.47 (M 0.46, n=5).

Distribution. Negros Island (the Philippines).

Type series. Holotype: ♂, Mt. Canla-on, Negros Is., Philippines, XII–2005, D. MOHAGAN leg. (OMNH TI–222). Paratypes: 10 ♂♂, 7 ♀♀, the same data as for the holotype; 1 ♂, ditto, II–2006; 3 ♂♂, 2 ♀♀, ditto, I–2006; 1 ♂, ditto, IX–2005; 1 ♂, 1 ♀,

ditto, X–2006; 2 ♂♂, alt. 800 m, Mt. Canla-on, Negros Is., Philippines, X–1997, D. MOHAGAN leg.; 1 ♂, Mt. Canlandog, Negros Is., Philippines, 10～15–IX–1988. The holotype and one female paratype are deposited in OMNH. Two paratypes are preserved in ZMHUB and the other remaining paratypes are housed in CA.

Etymology. This species is named after the type locality, Mt. Canla-on, which is located in the northern region of Negros Island of the Philippines.

Holotrichia succedanea MATSUMOTO, sp. nov.

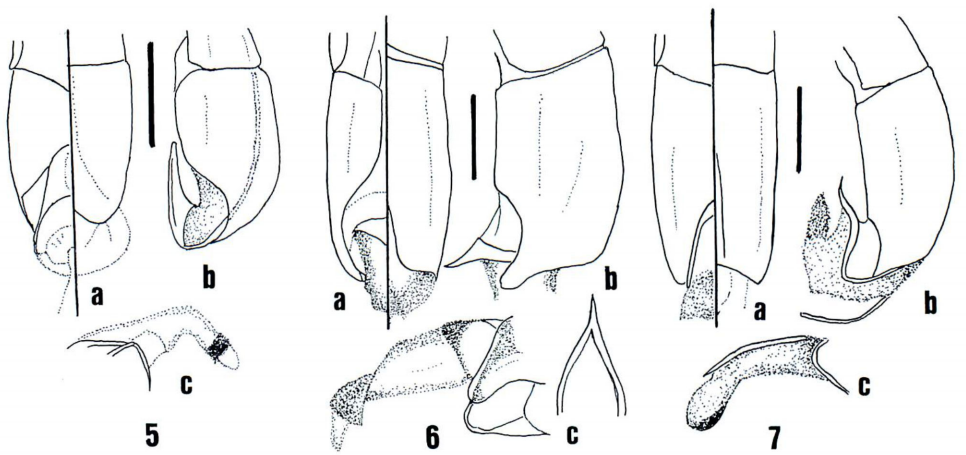
(Figs. 2, 7, 10)

Description. Length: 19.9–24.3 mm.

Male. Body elongate oval. Head blackish brown, antennae, mouth parts, pronotum, scutellum, pro- to mesosterna, tibiae and tarsi dark reddish brown, elytra, pygidium and femora lighter reddish brown, metasternum and metacoxae dark yellowish brown, and abdomen light yellowish brown. Dorsal surface generally shining, sometimes opaque in marginal and apico-marginal areas of elytra.

Clypeus quadrate, flattened, gently rounded at each antero-lateral corner, and feebly emarginate at the middle of anterior margin; frons distinctly concave in central area, coarsely and densely punctate; vertex distinctly ridged, punctate as well as frons; occiput densely and finely punctate, the punctures extending toward foramen slightly beyond or not beyond the level of posterior margin of eye; antennae with 3-segmented club as long as or shorter than six preceding segments together.

Pronotum convex, trapezoidal and narrowed anteriorly; anterior angle sharp and rectangular, slightly produced anteriad; posterior angle very blunt, close to 150° in



Figs. 5–7. Male aedeagus [a, ventral (left half) and dorsal (right half) views; b, lateral view, scale for a and b: 1 mm; c, internal sac and temones]. —— 5, *H. canlaonensis*; 6, *H. dannymohagani*; 7, *H. succedanea*.

lateral view; lateral margin sinuate in anterior half and straight in posterior half, and remarkably reflexed in the portion between anterior angle and apical 1/4; disc smooth, coarsely and moderately densely punctate, the surroundings of punctures feebly concave, usually with a minute impression near each lateral angle and a pair of very faint transverse impressions in anterior portion. Scutellum 2.1 times as wide as long. Elytra smooth; sutural costa distinct, 2nd to 5th ones vanished or faint. Pygidium feebly convex, with some short hairs in apical area; the punctures coarse and sparse in almost all area, denser in apical portion.

Prosternum with almost flattened postcoxal process. Metasternum shining in central lozenge-shaped portion and opaque in the remaining portion, and covered with long hairs in almost all areas. Abdomen shining in large central portion, opaque in latero-basal transverse portions of 3rd to 5th sternites; central principal area hardly or very sparsely haired, 2nd sternite densely with short hairs laterad, 3rd to 5th sternites with recumbent long hairs in both latero-basal portions, respectively, 5th sternite also with a few long hairs medially.

Metacoxa bearing rectangular postero-lateral corner, which is feebly or not produced posteriad; metafemur sparsely and finely punctate, metafemoral hairs on surface being at most 0.33 times as long as metafemoral width; meso- and metatibiae with some serrations on upper surfaces, average five serrations on mesotibia and average seven on metatibia; metatibial apical spurs slender leaf-shaped, with the longer spur longer than 1st metatarsal segment, which is about as long as the 2nd; claws each strongly bent, with a sharp vertical denticle; the denticle of outer claw of metatarsus smaller than that of inner claw.

Male genitalia with parameres obliquely truncate in lateral view; temones becoming a blunt triangular sclerite apically, with an arcuate 3rd branch producing from the base; internal sac with a relatively large area composed of reticulate structure medially.

F e m a l e. Dorsal surface opaque in almost all area of elytra, or except in central, large obtriangular area. Clypeus with weak and transverse elevation near base; antennal club shorter than or as long as five preceding segments together. Pronotum with a pair of very faint or slightly faint transverse impressions in anterior portion. Scutellum about 2.1 times as wide as long. Legs more robust; metafemur rather strongly swollen; metafemoral hairs on surface being 0.3 times as long as the metafemoral width; mesotibia with average five serrations on upper surface, metatibia with average eight, respectively; metatibial apical spurs slightly stout and leaf-shaped. Coxite of female genitalia quadrate, gently rounded at each antero-lateral corner.

Arithmetic data. HW/PW ♂: 0.66–0.68 (M 0.67, n=7), ♀: 0.63–0.66 (M 0.64, n=5); IN/HW ♂: 0.61–0.66 (M 0.63, n=7), ♀: 0.65–0.67 (M 0.66, n=5); PH/PW ♂: 0.47–0.54 (M 0.50, n=7), ♀: 0.50–0.55 (M 0.53, n=5); PL/PW ♂: 0.56–0.60 (M 0.57, n=7), ♀: 0.55–0.58 (M 0.57, n=5); FW/FL ♂: 0.35–0.39 (M 0.37, n=7), ♀: 0.40–0.43 (M 0.41, n=5); TB/TA ♂: 0.52–0.57 (M 0.54, n=7), ♀: 0.52–0.55 (M 0.53, n=5).

Distribution. Samar, Leyte, Mindanao, Siarguo Islands (the Philippines).

Type series. Holotype: ♂, Mt. Balocawihay, C. Leyte, Philippines, IV–2005

(OMNH TI–223). Paratypes: [Leyte] 2 ♂♂, 2 ♀♀, the same data as for the holotype; 1 ♂, 3 ♀♀, ditto, III–2005; 1 ♀, ditto, V–2005; 1 ♀, ditto, X–2004; 4 ♂♂, 2 ♀♀, ditto, V–2006; 5 ♂♂, 1 ♀, ditto, VI–2006; 9 ♂♂, 7 ♀♀, ditto, III–2007; 3 ♂♂, 1 ♀, Mahaplag, C. Leyte, III–2007. [Samar] 1 ♂, 1 ♀, Western Visoyer, E. Samar, V–2002. [Mindanao] 2 ♂♂, 1 ♀, Tandag, Surigao, NE Mindanao, IV–1985; 1 ♀, Mt. Malindang, NW. Mindanao, IX–2003. [Siarguo] 2 ♂♂, 1 ♀, Dapa, Siarguo Is., 17～18–III–1983, N. NISHIKAWA leg. The holotype and one paratype are deposited in OMNH. Two paratypes are preserved in ZMHUB and the other remaining paratypes are housed in CA.

Remarks. This species is closely allied to *H. mindanaona* BRENSKE, but can be distinguished from the latter by the 3rd arcuate branch producing from the base of temones of male genitalia. After diverged from the common ancestor of this species and *H. mindanaona*, this species is considered to have extended its distribution northwards along the eastern coast of the Philippines.

Etymology. This species is named to show the presence of a close systematic relationship with *Holotrichia mindanaona* BRENSKE.

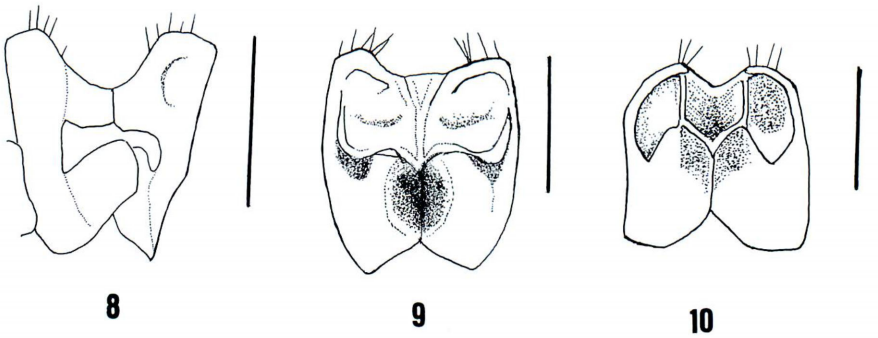
Holotrichia dannymohagani MATSUMOTO, sp. nov.

(Figs. 3, 4, 6, 9)

Description. Length: 20.4–25.7 mm.

M a l e. Head, pronotum and tibiae dark brown, the remaining portions brighter brown, base of elytra often thicker, femora with slightly reddish tinge. Dorsal surface shining; ventral surface opaque on metacoxa and almost all of meso- to metasterna, generally shining on prosternum and abdomen.

Clypeus clearly bilobed, rather deeply emarginate at the middle of anterior margin, weakly and transversely raised along fronto-clypeal suture; frons rough, distinctly concave in central area, coarsely punctate; vertex obscurely ridged; occiput densely and



Figs. 8–10. Coxite of female genitalia (scale: 1 mm). —— 8, *H. canlaonensis*; 9, *H. dannymohagani*; 10, *H. succedanea*.

finely punctate, with punctures extending toward foramen beyond the level of posterior margin of eye; labrum with remarkable longitudinal ridge on each lobe; antennal club short, as long as five preceding segments together.

Pronotum convex, quadrate and hardly produced laterad; anterior angle roundly and gently produced anteriad; posterior angle distinct, 135° in lateral view; lateral margin feebly sinuate in anterior half, straight in posterior half and laterally reflexed near anterior angle; posterior margin rimmed throughout; disc coarsely punctate, sometimes obscurely sulcate along median line, the surroundings of punctures hardly concave, with or without a minute impression near each lateral angle. Scutellum about 2.1 times as wide as long. Elytra smooth; sutural, 2nd and 3rd costae conspicuous, 4th and 5th vanished.

Prosternum with flattened postcoxal process. Metasternum shining and glabrous in central lozenge-shaped portion, opaque and densely with long hairs in the remaining portion. Abdomen shining in almost all area, opaque in each latero-basal transverse portion of 2nd to 5th sternites; central area almost glabrous, 2nd sternite sparsely with semi-long hairs in lateral portions, 3rd to 5th sternites bearing some longer hairs in above latero-basal transverse portions, respectively.

Metacoxa rectangular and sharp in postero-lateral corner, gently curved along lateral margin; metafemur stout, coarsely and sparsely punctate, metafemoral hairs on surface being at most 0.25 times as long as metafemoral width; meso- and metatibiae with some inconspicuous serrations on upper surfaces, average five serrations on both meso- and metatibiae; metatibial apical spurs slender and sharp, with longer one clearly longer than 1st metatarsal segment, which is as long as the 2nd; claws each strongly bent, with sharp vertical denticle near base; the denticle of outer claw of metatarsus feebly smaller than that of inner claw.

Male genitalia with parameres short and cylindrical, each paramere roundly and bluntly produced at apex in lateral view; temones each widely sclerotized in basal half, forming a feebly pointed sclerite between them at the middle, confluent at apex and forming an apically pointed apophysis; internal sac with a mass of sclerotized area near apex.

F e m a l e. Dorsal surface generally opaque except in small shining elliptical portions including elytral apical knobs. Antennal club approximately as long as five preceding segments together. Pronotum with or without a pair of very faint concavities near anterior margin. Scutellum about 2.0 times as wide as long. Legs more robust; metafemoral hairs on surface at most 0.25 times as long as metafemoral width; mesotibia with average five serrations on upper surface and metatibia with seven; metatibial apical spurs stouter, slender leaf-shaped; metatarsus clearly shorter than metatibia, about 0.75 times as long as the latter. Coxite of female genitalia quadrate, with upper frame moderately robust.

Arithmetic data. HW/PW ♂: 0.70–0.71 (M 0.71, n=4), ♀: 0.66–0.70 (M 0.68, n=4); IN/HW ♂: 0.63–0.65 (M 0.64, n=4), ♀: 0.64–0.66 (M 0.65, n=4); PH/PW ♂: 0.49–0.51 (M 0.50, n=4), ♀: 0.44–0.50 (M 0.48, n=4); PL/PW ♂: 0.55–0.56 (M 0.56,

n=4), ♀: 0.55–0.58 (M 0.57, n=4); FW/FL ♂: 0.36–0.39 (M 0.37, n=4), ♀: 0.42–0.45 (M 0.44, n=4); TB/TA ♂: 0.50–0.53 (M 0.52, n=4), ♀: 0.48–0.51 (M 0.49, n=3).

Distribution. Panay, Negros, Leyte, Mindanao Islands (the Philippines).

Type series. Holotype: ♂, Mt. Canla-on, Negros, alt. 800 m, X–1997, D. MOHAGAN leg. (OMNH TI–224). Paratypes: [Negros] 2 ♂♂, 2 ♀♀, the same data as for the holotype; 1 ♂, 1 ♀, ditto, 1–X–1990; 1 ♀, ditto, IX–1990; 1 ♂, ditto, 19–XI–1991; 1 ♀, ditto, 15–IX–2003; 2 ♂♂, Mambucal, alt. 300 m, Mt. Canla-on, 6–IX–1996; 1 ♂, 1 ♀, Mt. Mandalagan, N. Negros, IX–2005. [Leyte] 1 ♂, 1 ♀, S. Leyte, 13–IX–1989. [Mindanao] 1 ♂, Mt. Kitanglad, N. Mindanao, 12～30–IX–1991. [Panay] 1 ♂, Mt. Majaas, 24～30–VIII–1991. The holotype is deposited in OMNH. A paratype is given to ZMHUB and the other remaining paratypes are housed in CA.

Remarks. This new species is more closely allied to *H. stylifer* CHAPIN than to *H. mindanaona* BRENSKE and *H. succedanea* sp. nov. by having no 3rd branch of temones of male genitalia. This new species can also be distinguished from these three species by the clearly larger body.

Etymology. This species is named after Mr. Danny MOHAGAN, in honour of his sincere assistance in collecting these materials in the various areas of the Philippines.

要　　約

松本　武：フィリピンからの *Holotrichia constricta* 群の3新種. ——— 現在まで *Holotrichia constricta* 群の種は30種程度知られているが，そのうちフィリピン産のものは20種以上を占めている．筆者は，最近この群の中でもおもにフィリピンに産するものの解明を進めるため関連標本の集積を行ってきたが，今回，3種の新種を見い出した．ここに *Holotrichia canlaonensis* sp. nov., *H. succedanea* sp. nov., *H. dannymohagani* sp. nov. の名で報告することとした.

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Elytra, Tokyo, **36**(1): 109–128, May 28, 2008

Five New Taxa of the Genus *Platycerus* (Coleoptera, Lucanidae) from China

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Abstract Four new species and a new subspecies of the lucanid genus *Platycerus* are described from China, under the names *P. nagahatai* sp. nov., *P. yeren* sp. nov., *P. tangi* sp. nov., *P. cyanidraconis* sp. nov., and *P. hongwonpyoi shennongjianus* subsp. nov.

In this paper, I am going to describe four new species and a new subspecies of the genus *Platycerus* from Shaanxi, Hubei and Sichuan Provinces of China. All the materials were collected through my field researches routinely made in recent years in collaboration with the Academia Sinica.

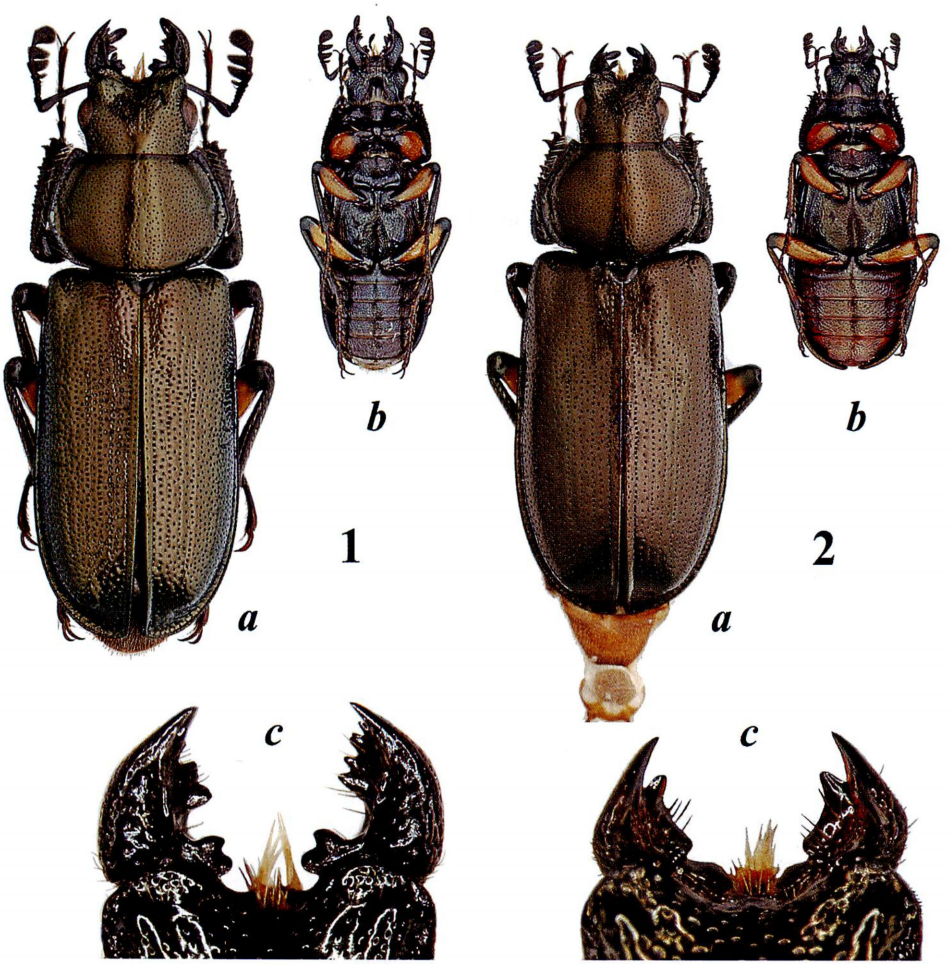
Before going into further details, I wish to express my sincere thanks to Messrs. Yoshiyuki NAGAHATA (Yamagata University), FAN Ting (International Academic Exchange Center of the Academia Sinica, Chengdu) and TANG Zhong-Ping (Maoxian Mountain Ecosystem Research Station, Chengdu Institute of Biology, CAS) from whom I received invaluable aid in the field work, and to Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for revising the manuscript of this paper.

1. *Platycerus nagahatai* IMURA, sp. nov.

(Figs. 1–3)

M a l e. Length (including mandibles): 8.7–10.8 (arithmetic mean 9.9) mm. Body above dark coppery brown, usually with a faint greenish tinge on head, pronotum and elytral margins; venter brownish black with a greenish metallic lustre; mandibles, palpi and antennae dark brown, femora brownish to reddish yellow except for blackish proximal and distal ends; tibiae dark brown to brownish black, tarsi and claws reddish brown. Colour variation is hardly recognizable as far as all the type specimens are concerned.

Head as in the other members of the genus; its dorsal surface rather coarsely scattered with small punctures which are not confluent with one another; mandibles (Fig. 1 c) small and short, widest at the base, rather acutely hooked inwards at about apical third, and acutely tapered towards apices which are sharply pointed; their dorsal



Figs. 1–2. *Platycerus nagahatai* sp. nov. from the Qinling Mts. of southern Shaanxi, Central China. —— 1, ♂ (a, holotype); 2, ♀ (paratype); a, habitus in dorsal view; b, ditto in ventral view; c, mandibles in dorsal view.

Fig. 3 (on p. 111). Genital organ of *Platycerus nagahatai* sp. nov. —— a, Male genital organ with fully inflated endophallus in ventral view; b, ditto in right subventral view; c, ditto in right lateral view; d, ditto in right subdorsal view; e, paramere in right lateral view; f, endophallus in posterior view; g, ditto in subdorsal view; h, female genital organ in ventral view.


a
b
c
d
e
f
g
h

wall weakly concave above in basal portions, and the outer margins rather weakly arcuate in basal halves, not remarkably angulate in median portions, and nearly straight in apical portions; retinacula not so large and irregularly multi-dentate, with 2–5 small inner teeth on each side.

Pronotum transverse, 1.41–1.57 (mean 1.50) times as wide as long, widest obviously behind the middle, and more acutely narrowed towards base than towards apex; apical margin nearly straight or slightly bisinuate, with the front angles triangularly protruding anteriad with blunt tips; lateral sides either subangulate or obtusely rounded at the widest part; hind angles obtusely rounded; disc moderately convex above and rather uniformly scattered with small punctures.

Elytra relatively short and robust, 1.70–1.76 (mean 1.72) times as long as wide, subparallel-sided, and rather acutely narrowed towards apices; shoulders distinct, with a very small humeral tooth on each side; surface rather uniformly scattered with small punctures which are often arranged in longitudinal rows; intervals weakly but obviously rugoso-striate near the sutural part in median portion.

Male genital organ as shown in Figs. 3 a–g; viewed ventrally, lateral side of each paramere rather remarkably inflated in basal portion, its inner-apical angle effaced though partly subangulate, inner margin weakly emarginate near the base, inner-basal corner not strongly protruding inwards, and apical margin of basal piece subtrapezoidally protruded apicad; viewed dorsally, inner margin of each paramere widely and roundly emarginate throughout, with the inner-basal corner obliquely protrudent, and basal piece triangularly protruding inwards; distal portion of aedeagus bifurcated into a pair of sclerotized plates; each plate suboval in shape, with a well sclerotized oblique keel near the middle; both the keels are subequal in size and shape, weakly protruded ventrally with the margins obtusely rounded throughout; endophallus not so large even in fully inflated condition; a single, large membraneous protrusion is recognized at the middle of basal portion between distal pair of aedeagal plates; median portion rather remarkably constricted before flagellum, distal portion with two pairs of accessory inflations on both sides; flagellum rather completely attached to membraneous wall of endophallus, indicated by longitudinally set linear sclerite which is widest at the base and gradually tapered towards the distal end.

F e m a l e. Length (including mandibles): 9.6–10.7 (arithmetic mean 10.2) mm. Coloration of dorsal surface similar to that of male, though usually more shiny and greenish tinge is hardly recognizable; venter more brownish, above all in abdominal sternites.

Head much smaller than in male; its dorsal surface rather irregularly scattered with small punctures which are not confluent with one another; mandibles (Fig. 2 c) small and short, with the basic structure almost as in the other members of the genus.

Pronotum transverse, 1.41–1.45 (mean 1.42) times as wide as long, widest behind the middle, much more strongly narrowed towards apex than towards base, with the widest parts either roundly arcuate or subangulate; front angles triangularly protruding anteriad as in male, hind angles almost rounded; disc moderately convex above, with the

surface scattered with small punctures as in male.

Elytra robuster than in male, 1.57–1.68 (mean 1.63) times as long as wide, widest behind the middle, with the lateral sides nearly straight before the widest part and roundly arcuate near apices; shoulders distinct and no humeral tooth is recognizable as far as all the four type specimens are concerned; surface rather uniformly scattered with small punctures which are usually arranged in longitudinal rows; intervals faintly rugoso-striate near the sutural part in median portion.

Female genital organ as shown in Fig. 3 h; gonocoxite robust, subquadrate in shape.

Type series. Holotype: ♂, pass between Banfangzi [板房子] and Longzaoping [尤草坪], 2,200–2,220 m in altitude, on the borders between Zhouzhi Xian [周至县] and Foping Xian [佛坪县], on the main ridge of the Qinling Mountains [秦岭山脉], in southern Shaanxi, Central China, larvae collected in the field on 3–XI–2005 by Y. IMURA & Y. NAGAHATA and emerged in the laboratory in VIII～IX–2006, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 5♂♂, 4♀♀, same data as for the holotype, in coll. Y. IMURA.

Notes. This new species is similar in appearance to *P. bashanicus* (IMURA & TANIKADO, 1998, p. 93; IMURA, 2006 a, p. 132, 2006 b, p. 27) of the Daba Shan Mountains in northern Chongqing, but distinguished from that species in the following points: 1) size a little smaller; 2) dorsal colour constantly dark coppery brown, while it is much more greenish (in male), golden to greenish coppery (in female), or dark bluish (in both sexes) in *P. bashanicus*; 3) pronotum more acutely narrowed towards the apex, with the front angles more prominently protruding anteriad, above all in male; 4) pronotal disc more strongly convex above in both sexes; 4) endophallus of male genital organ widely different in shape, with a large membraneous protrusion at the middle of basal portion between distal pair of aedeagal plates, while it is vestigial in *P. bashanicus*, and accessory inflations in median to apical portion much less strongly developed.

All the specimens of the new species were collected as larvae from the white-rotten part of dead *Prunus* sp. standing in the deciduous broadleaved forest, and emerged in the laboratory nine to ten months later.

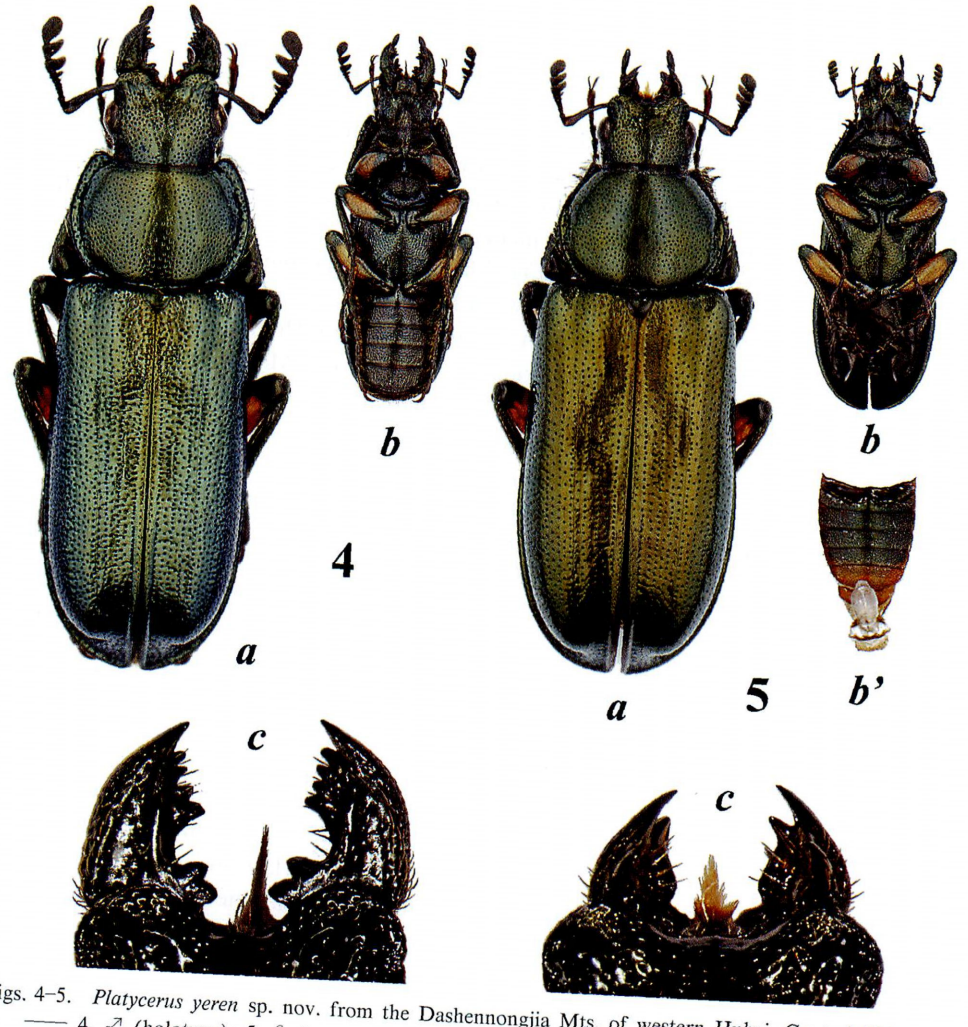
Etymology. This new species is named after Mr. Yoshiyuki NAGAHATA of Yamagata University, an eminent naturalist and nature photographer, who kindly helped my field work on the Qinling Mountains.

2. *Platycerus yeren* IMURA, sp. nov.

(Figs. 4–6)

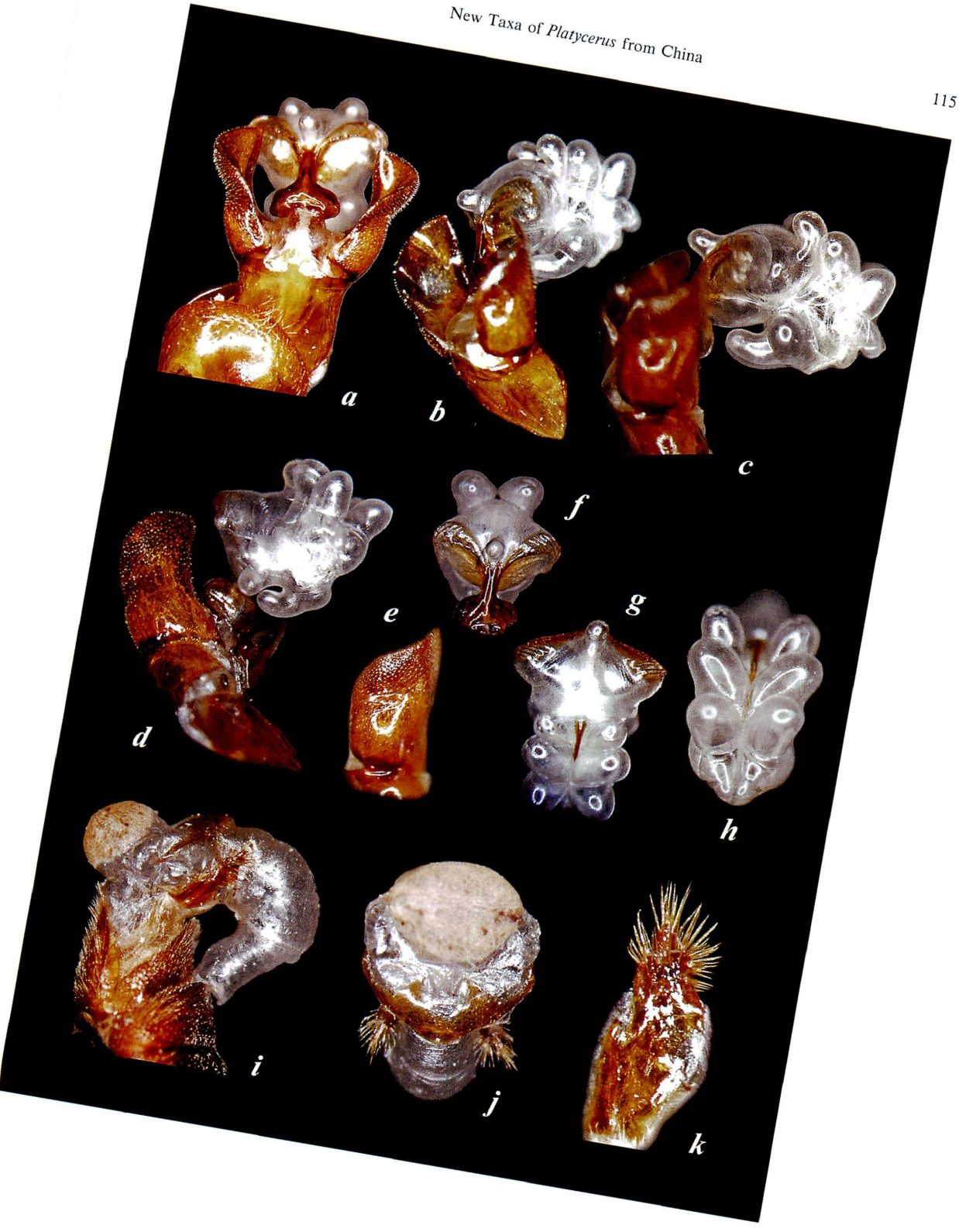
Platycerus businskyi: IMURA, 2002, Elytra, Tokyo, **30**, p. 38.
Platycerus bashanicus: IMURA, 2006 a, Elytra, Tokyo, **34**, p. 132. —— IMURA, 2006 b, Gekkan-Mushi, Tokyo, (426), p. 27.

M a l e. Length (including mandibles): 10.5–11.6 (arithmetic mean 11.0) mm. Body above bluish green or greenish blue often with rather remarkable bronzy or golden



Figs. 4–5. *Platycerus yeren* sp. nov. from the Dashennongjia Mts. of western Hubei, Central China. —— 4, ♂ (holotype); 5, ♀ (paratype); a, habitus in dorsal view; b, ditto in ventral view; b′, separated abdomen in ventral view; c, mandibles in dorsal view.

Fig. 6 (on p. 115). Genital organ of *Platycerus yeren* sp. nov. —— a, male genital organ with fully inflated endophallus in ventral view; b, ditto in right subventral view; c, ditto in right sublateral view; d, ditto in right subdorsal view; e, paramere in right lateral view; f, distal part of aedeagus & basal portion of endophallus in ventral view; g, basal portion of endophallus in posterior view; h, median portion of endophallus in subdorsal view; i, female genital organ with fully everted vagina in left lateral view; j, ditto in posterior view; k, left gonocoxite in ventral view.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tinge; mandibles, tibiae, and knees greenish black; palpi, antennae, tarsi, claws and basalmost part of each femur brownish black to brown; femora excepting proximal and distal ends yellowish brown; venter black, often with a remarkable blue-greenish metallic lustre.

Head as in the other members of the genus; its dorsal surface rather coarsely scattered with small punctures which are not confluent with one another; mandibles (Fig. 4 c) small and short, widest at the base, and rather acutely tapered towards apices which are sharply pointed; their dorsal wall more or less concave above in basal two-thirds, more strongly so in larger individuals, with the outer margins nearly straight or faintly arcuate in basal two-thirds, subangulate at about apical third, and nearly straight in apical portions; retinacula moderately sized and irregularly multi-dentate, with 3–5 small inner teeth on each side.

Pronotum transverse, 1.42–1.52 (arithmetic mean 1.46) times as wide as long, widest at or behind the middle, either roundly arcuate or subangulate at the widest part, and more gradually narrowed towards apex than towards base; front angles subtriangularly protruding anteriad with blunt tips; hind angles obtusely rounded though sometimes faintly angulate; disc not so strongly convex above, and almost uniformly punctate as on head.

Elytra oblong, 1.71–1.86 (arithmetic mean 1.77) times as long as wide, subparallel-sided and rather acutely and roundly narrowed towards the apices; shoulders distinct, sometimes with a very small humeral tooth on each side; surface rather uniformly scattered with small punctures which are usually arranged in longitudinal rows; intervals rather narrowly rugoso-striate near the sutural part in median portion.

Male genital organ as shown in Figs. 6 a–h; viewed ventrally, lateral side of each paramere rather remarkably inflated in basal portion, its inner-apical angle effaced, inner margin weakly emarginate near the base, inner-basal corner not strongly protrudent inwards, and apical margin of basal piece subtrapezoidally protruded apicad; viewed dorsally, inner margin of each paramere widely and roundly emarginate throughout, with the inner-basal angle obliquely protrudent, and basal piece triangularly protrudent inwards; distal portion of aedeagus bifurcated into a pair of sclerotized plates; each plate suboval in shape, with a sclerotized keel obliquely set near the middle; the right keel weakly protruded ventrad, with the ventral margin weakly arcuate throughout and rectangularly angulate at the distal end; the left one subequal in size and shape to the right; endophallus well developed; its basal portion with a single, moderately sized membraneous protrusion on extended side between distal pair of aedeagal plates; median portion constricted before flagellum, with four pairs of prominent inflations on both sides; flagellum rather short, indicated by longitudinally set linear sclerite completely attached to membraneous wall of endophallus; apical portion with a pair of hemispherical inflations on both sides and a pair of short finger-like protrusions at the apex.

F e m a l e. Length (including mandibles): 9.7–11.1 (arithmetic mean 10.4) mm. Body above dark green and shiny, often with a golden tinge on elytra; coloration of appendages and venter almost as in male, though lateral and apical portions of

abdominal sternites are usually brownish.

Head much smaller than in male; its dorsal surface rather uniformly scattered with small punctures which are not confluent with one another; mandibles (Fig. 5 c) small and short, with the basic structure almost as in the other members of the same genus.

Pronotum transverse, 1.29–1.50 (arithmetic mean 1.39) times as wide as long, widest a little behind the middle, more strongly narrowed towards apex than towards base, with the widest parts usually subangulate; front angles much shorter, smaller, and less strongly protruding anteriad than in male; hind angles as in male; disc a little less strongly convex above than in male.

Elytra robuster than in male, 1.59–1.74 (arithmetic mean 1.67) times as long as wide, widest obviously behind the middle, with the lateral sides nearly straight and weakly divergent posteriad before the widest part, and rather acutely and roundly narrowed towards apices; shoulders distinct, humeral tooth not recognizable; surface rather uniformly scattered with small punctures which are often arranged in longitudinal rows; intervals very weakly or hardly rugoso-striate near the sutural part in median portion.

Female genital organ as shown in Figs. 6 i–k; gonocoxite subquadrate and robust, widest at the base, with the inner margin obviously emarginate.

Type series. Holotype: ♂, Jinhouling [金猴岭], 2,350–2,460 m in altitude, on the northeastern slope of the peak Shennongding [神农顶] on the Dashennongjia [大神农架] Massif, in western Hubei, Central China, 3～5–IV–2007, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 13♂♂, 20♀♀, same data as for the holotype, Y. IMURA & Y. NAGAHATA leg.

Notes. The present new species was first recorded by myself as *Platycerus businskyi* (IMURA, 2002, p. 38), and later assigned also by myself to *P. bashanicus* (IMURA, 2006 a, p. 132; 2006 b, p. 27). As described in the above lines, however, the species can be worth regarded as an independent one judging from differently featured endophallus of the male genital organ. In many respects, the species seems to belong to the same group as that composed of such allied forms as *P. nagahatai* sp. nov, *P. bashanicus* and *P. consimilis* (TANIKADO & TABANA, 1998, p. 17).

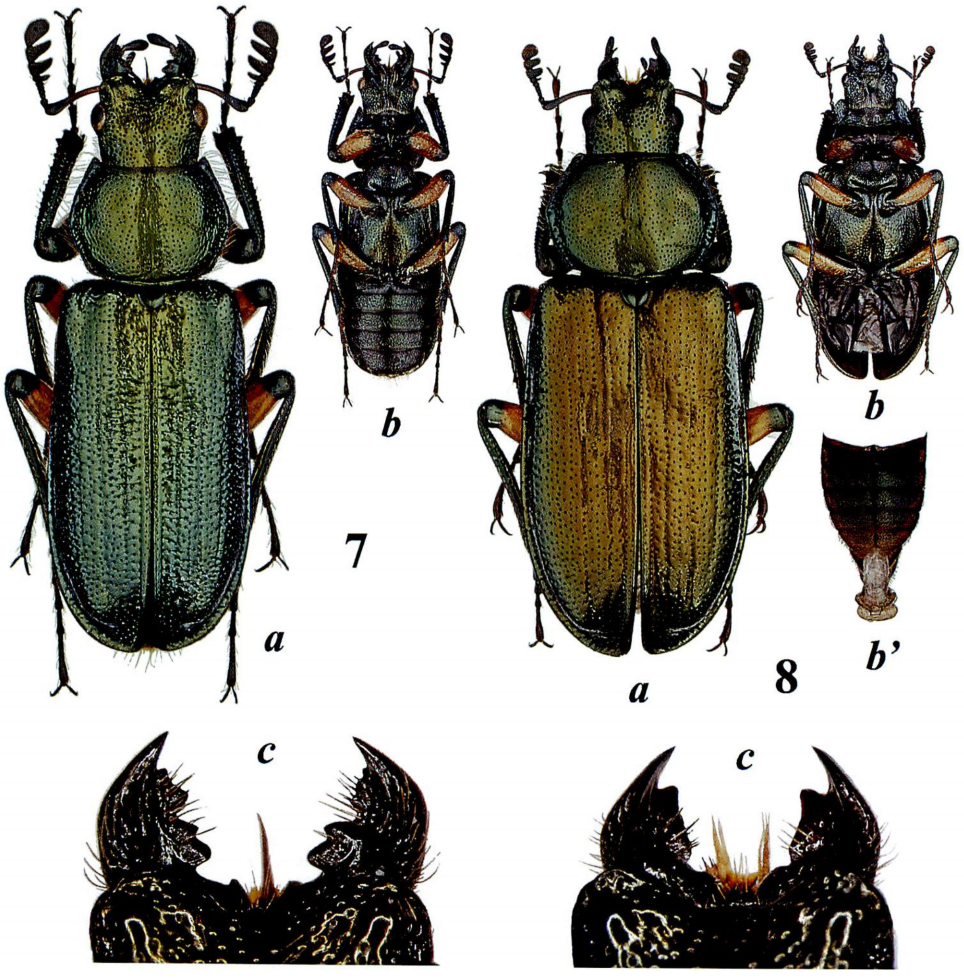
This new species inhabits, sympatrically with *P. turnai* (IMURA, 2001, p. 28), a primary forest composed of deciduous broadleaved trees and certain kind of coniferous trees now rather narrowly extant on the northeastern slope of the peak Shennongding. All the specimens collected in the field were hibernating in white- or gray-rotten part of withered wood either still standing or already fallen down.

The new specific name, *Yeren* [野人], means savage or wild man in Chinese, since its type locality, Shennongjia, is an area famous in having a legend of yeren.

3. *Platycerus tangi* IMURA, sp. nov.

(Figs. 7–9)

M a l e. Length (including mandibles): 10.8 mm. Body above dark green with a



Figs. 7–8. *Platycerus tangi* sp. nov. from east of Maoxian on Mt. Jiuding Shan of north-central Sichuan, Southwest China. —— 7, ♂ (holotype); 8, ♀ (paratype); a, habitus in dorsal view; b, ditto in ventral view; b′, separated abdomen in ventral view; c, mandibles in dorsal view.

Fig. 9 (on p. 119). Genital organ of *Platycerus tangi* sp. nov. —— a, Male genital organ with fully inflated endophallus in ventral view; b, ditto in right subventral view; c, ditto in right lateral view; d, ditto in right subdorsal view; e, paramere in right lateral view; f, basal portion of endophallus in subposterior view; g, median portion of endophallus in subdorsal view; h, female genital organ with fully everted vagina in left lateral view; i, ditto in posterior view; j, left gonocoxite in ventral view.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remarkable golden tinge on head, pronotum and basal part of elytra; mandibles, basalmost parts of femora, knees and tibiae greenish black; palpi, antennae, tarsi and claws brownish black; femora except for both proximal and distal ends yellow-reddish brown; venter black, with a remarkable blue-greenish metallic lustre.

Head as in the other members of the genus; its dorsal surface rather irregularly scattered with small punctures which are not confluent with one another but rather coarsely set near and between eyes; mandibles (Fig. 7 c) very small and short, rather acutely hooked at about the middle, with the dorsal wall not concave above but rather evidently carinate along the inner margin to form a longitudinal ridge; the outer margins of mandibles nearly straight in basal halves, obtusely angulate at about the middle, then almost straight again in apical halves; apical portion of mandibles rather acutely tapering towards the apices which are sharply pointed; retinacula very small and short, with the inner margin bi- or tridentate on each side.

Pronotum transverse, 1.41 times as wide as long, widest a little behind the middle, subangulate at the widest part, with front angles subtriangularly protruding anteriad and rather sharply pointed at the tips, hind angles rather remarkably subangulate; disc not so strongly convex above, and rather uniformly scattered with small punctures.

Elytra oblong, 1.79 times as long as wide, widest obviously behind the middle, subparallel-sided before the widest parts and roundly arcuate before apices; shoulders distinct, with a very small humeral tooth on each side; surface scattered with small punctures which are often arranged in longitudinal rows; intervals rather remarkably rugoso-striate near the sutural part in median portion.

Male genital organ as shown in Figs. 9 a–g; viewed ventrally, lateral side of each paramere moderately inflated in basal portion, its inner-apical angle effaced, inner margin nearly straight and rather remarkably emarginate near the base, inner-basal angle conspicuously protrudent inwards; apical margin of basal piece subtrapezoidally protruded apicad; viewed dorsally, inner margin of each paramere widely and roundly emarginate throughout, with the inner-basal angle obliquely protruded, basal piece triangularly protrudent inwards; distal portion of aedeagus indicated by sclerotized plate which is subquadrate in shape with the apical margin remarkably re-entrant at the middle; a pair of sclerotized oblique keels are recognized on both sides, each subtriangular in shape with the tips obtusely rounded; endophallus moderately developed and somewhat tube-like; its basal portion moderately inflated bilaterad; median portion with two pairs of horn-like protrusions on extended side; flagellum short, robust, weakly pigmented and completely attached to membraneous wall of endophallus; apical portion acutely inflexed towards the base of paramere, with a pair of short protrusions at the apex.

F e m a l e. Length (including mandibles): 10.2–11.5 (arithmetic mean 11.0) mm. Body above a little more strongly polished than in male, brassy with a greenish tinge on head, pronotum and along lateral margins of elytra, or wholly greenish in some individuals; coloration of appendages and venter almost as in male, though lateral and apical portions of abdominal sternites are reddish brown.

Head much smaller than in male; its dorsal surface irregularly scattered with small punctures, rather coarsely so near eyes; mandibles (Fig. 8 c) small and short, with the basic structure as in the other members of the same genus.

Pronotum transverse, 1.33–1.44 (arithmetic mean 1.38) times as wide as long, widest at or a little behind the middle, more acutely narrowed towards apex than towards base, with the widest part subangulate; front angles much less strongly protruding anteriad than in male; hind angles obviously subangulate; disc not so strongly convex above, scattered with a little smaller and more sparsely set punctures than on head.

Elytra much wider than in male, 1.55–1.64 (arithmetic mean 1.61) times as long as wide, widest obviously behind the middle, with the lateral sides nearly straight before the widest part and roundly arcuate near apices; shoulders distinct and subangulate, usually with a small humeral tooth on each side; surface rather uniformly scattered with small punctures which are often arranged in longitudinal rows; intervals faintly rugoso-striate near the sutural part in median portion.

Female genital organ as shown in Figs. 9 h–j; vagina in fully everted condition rather short, robust, and bifurcate at the apex in lateral view; gonocoxite oblong, widest at the base and gradually narrowed and slightly bent inwards towards the apex.

Type series. Holotype: ♂, ca. 6.5 km east of Maoxian [茂县] Town, 2,000–2,200 m in altitude, on the northeastern slope of Mt. Jiuding Shan [九頂山], on the Chaping Shan [茶坪山] Mts., in Mao Xian [茂县] of north-central Sichuan, Southwest China, 26–X–2007, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 6♀♀, same data as for the holotype, in coll. Y. IMURA.

Notes. This new species is considered to be most closely allied to *P. tieguanzi* described recently from Mt. Emei Shan (IMURA, 2007, p. 319), but readily discriminated from that species in the following points: 1) size much smaller; 2) coloration in male much lighter; 3) mandibles in male different in shape, with the outer margin more remarkably subangulate near the middle and retinacula much smaller; 4) pronotum in male different in shape, with the lateral sides more acutely and straightly narrowed towards front angles which are much more sharply pointed at the tips, disc more strongly convex above; 5) elytra in male robuster and more widely rugoso-striate in median portion; 6) paramere much wider and robuster, with the dorsal-apical corner more sharply pointed in lateral view.

The new species inhabits the deciduous broadleaved forest mainly composed of *Carpinus*, *Prunus*, *Acer*, etc., remaining along a narrow, steep stream running from east to west near the middle altitude of northeastern side of Mt. Jiuding Shan (2,000–2,200 m above sea level). All the specimens were hibernating in gray-rotten part of withered woods either still standing or already fallen down, or softly rotten branches on the forest floor.

Etymology. The new species is named after Mr. TANG Zhong-Ping [唐　中平] of the Maoxian Mountain Ecosystem Research Station, Chengdu Institute of Biology, CAS, from whom I have received invaluable aid in researching the platycerine fauna of

Mt. Jiuding Shan.

4. *Platycerus cyanidraconis* IMURA, sp. nov.

(Figs. 10–12)

M a l e. Length (including mandibles): 9.5 mm. Body above dull green with a faint coppery tinge and not strongly polished; mandibles, basalmost parts of femora, knees and tibiae brownish black; palpi, antennae, tarsi and claws dark brownish; femora except for proximal and distal ends yellow-reddish brown; venter black, with a weak blue-greenish metallic lustre.

Head as in the other members of the genus; its dorsal surface rather irregularly scattered with small punctures which are not confluent with one another; mandibles (Fig. 10 c) small and short, rather acutely hooked inwards at about the middle, with the dorsal wall not concave but somewhat convex above in basal portions; outer margin of each mandible nearly straight or faintly arcuate in basal halves, obtusely angulate at about the middle, then almost straight again in apical halves; apical portion of mandibles rather acutely tapering towards the apices which are sharply pointed; retinacula moderately sized, with 2–4 small inner teeth on each side.

Pronotum transverse, 1.33 times as wide as long, widest a little behind the middle, subangulate at the widest part, with the front angles rather weakly protruding anteriad with the tips obtusely rounded, hind angles obtusely rounded; disc not so strongly convex above, and rather uniformly scattered with small punctures.

Elytra oblong, 1.76 times as long as wide, widest obviously behind the middle, with the lateral sides subparallel-sided in apical halves and roundly arcuate near apices; shoulders distinct, humeral tooth vestigial; surface scattered with small punctures which are often arranged in longitudinal rows; intervals rather prominently rugoso-striate near the sutural part in median portion.

Male genital organ as shown in Figs. 12 a–g; viewed ventrally, lateral side of each paramere rather strongly inflated in basal portion, its inner-apical angle effaced, inner margin nearly straight and slightly emarginate near the base, inner-basal angle protrudent inwards; apical margin of basal piece roundly protruded apicad; viewed dorsally, inner margin of each paramere widely and roundly emarginate throughout, with the inner-basal angle obliquely protrudent, basal piece triangularly protruded inwards; distal portion of aedeagus indicated by subquadrate sclerotized plates with the apical margin remarkably re-entrant at the middle; a pair of subtriangularly shaped keels are recognized on both sides, the right keel a little more strongly protuberant than the left; endophallus robust and not so large; its basal portion rather strongly inflated and not constricted before flagellum; median portion with a pair of finger-like narrow projections and much shorter hemispherical inflations on dorsal side; flagellum not so long, widest at the base, weakly pigmented and completely attached to membraneous wall of endophallus; apical portion acutely inflexed, with a pair of short and robust protrusions at the apex.

F e m a l e. Length (including mandibles): 9.4 mm. Body above brassy with a weak greenish tinge on head, pronotum and lateral margins of elytra; coloration of appendages and venter almost as in male, though meso- and metatibiae are yellow-reddish brown and the abdominal sternites are much more strongly brownish.

Head a little smaller than in male; its dorsal surface irregularly and rather sparsely scattered with small punctures which are not confluent with one another; mandibles (Fig. 11 c) small and short, with the basic structure almost as in the other members of the same genus.

Pronotum transverse, 1.41 times as wide as long, widest a little behind the middle, much more acutely narrowed towards apex than towards base, with the lateral sides remarkably angulate at the widest part and nearly straight before and behind there; front angles only slightly produced anteriad; hind angles subangulate; disc not so strongly convex above, rather sparsely scattered with small punctures.

Elytra much wider than in male, 1.55 times as long as wide, widest near apical third, with the lateral sides nearly straight before the widest part and roundly arcuate near apices; shoulders distinct, with a very small humeral tooth on each side; surface rather uniformly scattered with small punctures which are often arranged in longitudinal rows; intervals more weakly and narrowly rugoso-striate than in male near the sutural part in median portion.

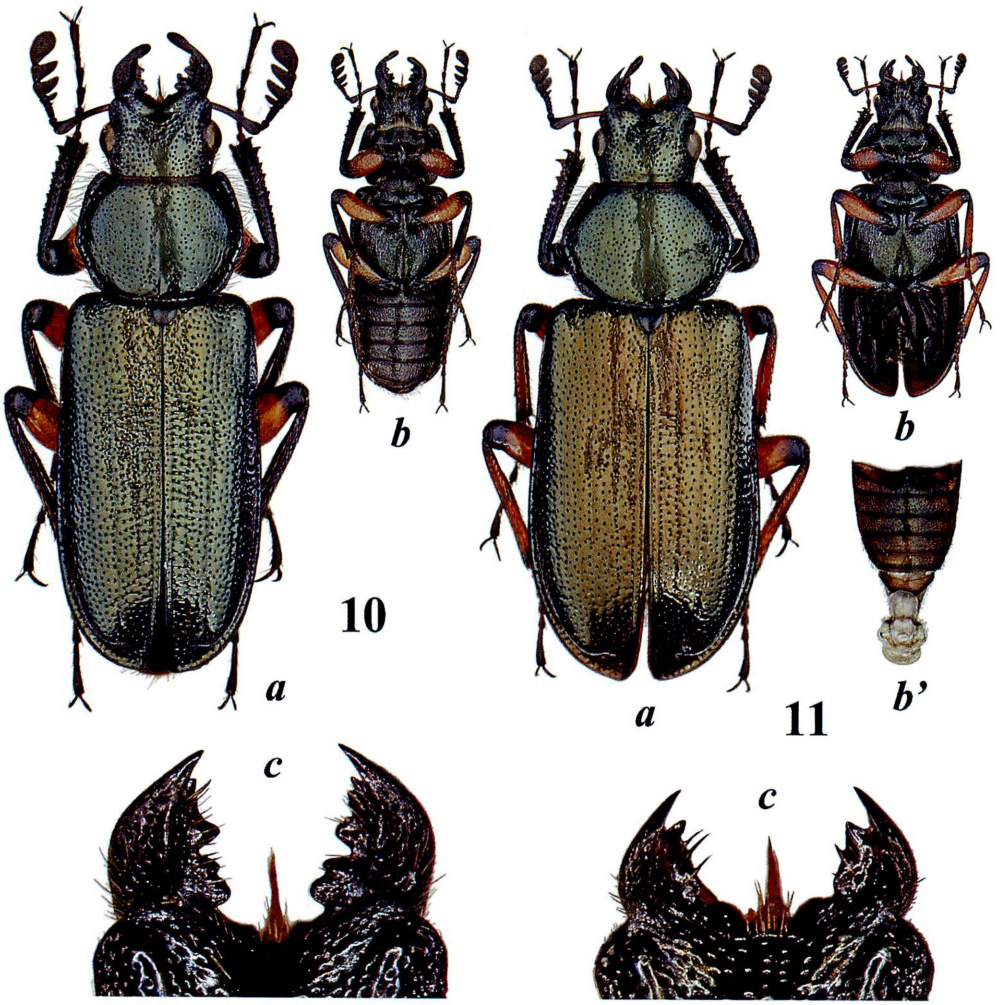
Female genital organ as shown in Figs. 12 h–j; vagina very short and robust in fully everted condition; gonocoxite oblong, subparallel-sided and hardly bent inwards towards the apex.

Type series. Holotype: ♂, Qinlongping [青龙坪], 2,700–2,800 m in altitude, ca. 5.2 km south of Nanxin [南新], on the western slope of Mt. Jiuding Shan [九顶山], on the Chaping Shan [茶坪山] Mts., in Mao Xian [茂县] of north-central Sichuan, Southwest China, 27–X–2007, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratype: 1♀, same data as for the holotype, in coll. Y. IMURA.

Notes. This new species is allied to *P. tangi* nov. described from the same mountain range, but the former is readily discriminated from the latter as follows: 1) mandibles a little larger, with more strongly developed retinacula in male; 2) pronotum different in shape in both sexes; 3) elytra more widely and remarkably rugoso-striate in both sexes; 4) genital organ different in shape, above all in characteristically featured endophallus. It is most probable that the new species belongs to the same group as that composed of such species as *P. tangi* sp. nov., *P. tieguanzi* and *P. hiurai* (TANIKADO & TABANA, 1997, p. 7), all distributed in Sichuan Province.

The two type specimens were obtained from the broadleaved forest surrounding an alpine meadow called Qinlongping on the western side of Mt. Jiuding Shan (2,700–2,800 m above sea level). They were hibernating in gray-rotten part of a dead branch protruded from living trunk of *Carpinus* sp. at about 1 m above the ground.

Etymology. The new specific name comes from the type locality of the new species, Qinlongping [青龙坪], which means "the Plateau of Blue Dragon" in Chinese.



Figs. 10–11. *Platycerus cyanidraconis* sp. nov., from Qinlongping on Mt. Jiuding Shan of north-central Sichuan, Southwest China. —— 10, ♂ (holotype); 11, ♀ (paratype); a, habitus in dorsal view; b, ditto in ventral view; b′, separated abdomen in ventral view; c, mandibles in dorsal view.

Fig. 12 (on p. 125). Genital organ of *Platycerus cyanidraconis* sp. nov. —— a, Male genital organ with fully inflated endophallus in ventral view; b, ditto in right subventral view; c, ditto in right sublateral view; d, ditto in right subdorsal view; e, paramere in right lateral view; f, basal portion of endophallus in subposterior view; g, median portion of endophallus in subdorsal view; h, female genital organ with fully everted vagina in left lateral view; i, ditto in posterior view; j, left gonocoxite in ventral view.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5. *Platycerus hongwonpyoi shennongjianus* IMURA, subsp. nov.

(Fig. 13)

Length (including mandibles): ♂, 8.6–12.0 (arithmetic mean 11.0) mm; ♀, 10.1–11.1 (arithmetic mean 10.5) mm.

Most closely allied to subsp. *dabashanensis* (OKUDA, 1997, p. 12) of the Daba Shan Mountains, but distinguishable from that race in the following points: 1) body above usually less strongly golden yellowish but a little more remarkably bluish in male; 2) elytra more gradually narrowed towards apices in both sexes; 3) elytral punctures a little smaller and a little more sparsely set in both sexes; 4) elytral wrinkles in male more narrowly and shallowly carved.

From the nominotypical subspecies (IMURA & CHOE, 1989, p. 20) and subsp. *merkli* (ibid., p. 21), the new subspecies is readily discriminated by differently shaped male mandibles, more sparsely set punctures on the head, more strongly convex pronotum, and more widely and minutely carved elytral wrinkles.

From subsp. *tianmushanus* (IMURA et WAN, 2006, p. 294), the new race is

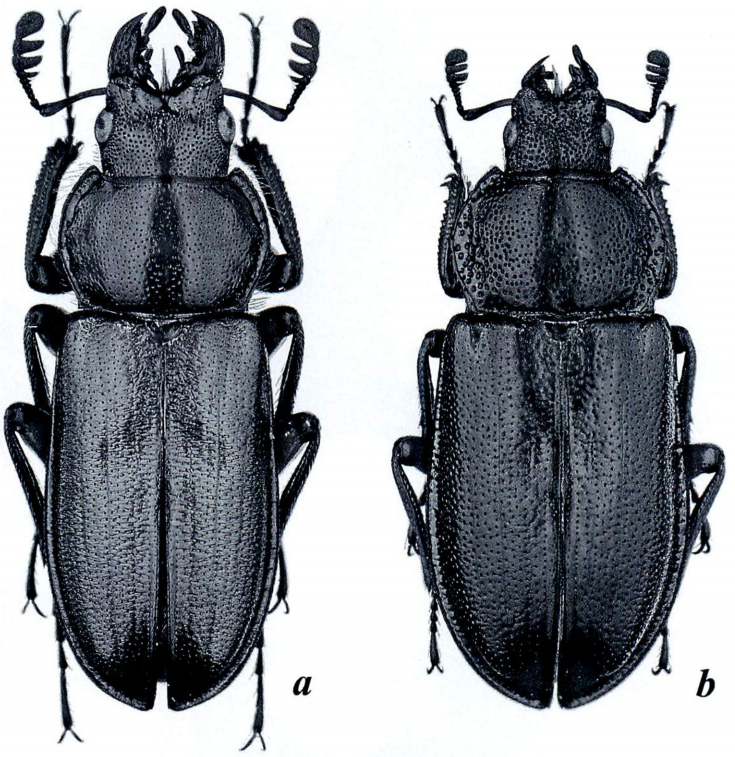

Fig. 13. *Platycerus hongwonpyoi shennongjianus* subsp. nov., from Shennnongjia of western Hubei, Central China. —— a, ♂ (holotype); b, ♀ (paratype).

discriminated as follows: 1) pronotum different in shape, with the front angles less widely protruding anteriad; 2) elytra more gradually narrowed towards apices; 3) elytral wrinkles much more widely and minutely recognizable.

From subsp. *qinlingensis* (IMURA, 1993, p. 12) and subsp. *funiuensis* (IMURA, 2005, p. 498), the new subspecies is readily distinguishable by the following characteristics: 1) male mandibles different in shape, much less strongly arcuate inwards; 2) punctures on head and pronotal disc more sparsely set; 3) elytra more gradually narrowed towards apices; 4) elytral disc much more smoothly sculptured.

The new subspecies differs from subsp. *mongolicus* (IMURA et BARTOLOZZI, 2006, p. 136) in the following points: 1) dorsal colour in male much less strongly bluish; 2) male mandibles a little different in shape; 3) dorsal surface of head more sparsely punctate; 4) pronotum less transverse, with the disc more narrowly depressed along the lateral margins; 5) elytral disc much more smoothly sculptured.

Type series. Holotype: ♂, between Muyu [木鱼] and Yezikou [鸭子口], 1,800–1,850 m in altitude, in Shennongjia [神农架] of western Hubei, Central China, 4–IV–2007, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 4♂♂, 4♀♀, same data as for the holotype; 16 ♂♂, 2♀♀, same locality, larvae collected in the field on 4 & 6–IV–2007 and emerged in the laboratory in VIII～IX–2007, in coll. Y. IMURA.

要　約

中国産ルリクワガタ属の5新分類単位. —— 中国陝西省，湖北省，四川省の各地から，以下に述べるようなルリクワガタ属の4新種，1新亜種を記載した.

1) ナガハタルリクワガタ *Platycerus nagahatai*: バサンルリクワガタに近いが，背面の色彩は雌雄ともに安定した銅褐色で，♂交尾器内袋の形態が大きく異なる．陝西省南部の秦岭山脈高所に生息し，新種名は永幡嘉之氏にちなむ.

2) ヤジンルリクワガタ *P. yeren*: 前種と同じくバサンルリクワガタに近いが，♂交尾器内袋の形態には顕著な差がみられる．湖北省西部の神农架に産し，新種名は同地が野人伝説で有名なことにちなむ．ミトコンドリアDNAを分析して得られた分子系統樹（未発表）や♂交尾器形態からみて，前種と本種，それにバサンルリクワガタ，ミヤマルリクワガタの4種は，たがいに類縁が近いものと思われる.

3) タンルリクワガタ *P. tangi*: 比較的特異な外観をもつが，♂交尾器内袋の形態は，既知種のなかではテツカンシルリクワガタのそれにもっとも近い．四川省中北部の茶坪山脈から発見された新種で，種名は調査に随行していただいた中国科学院成都生物研究所茂县山地生态系统定位研究站の唐 中平氏にちなむ.

4) セイリュウルリクワガタ *P. cyanidraconis*: 前種に近いが，外部形態，交尾器形態とも大きく異なるため，識別は容易である．茶坪山脈の，より高所から記載された新種で，種名は基準産地である青龙坪にちなむ．分子系統と♂交尾器内袋の形態からみて，前種と本種，ならびに四川省中～南部のテツカンシルリクワガタ，ウラクロルリクワガタの4種は，たがいに類縁が

近いものと思われる.

5) チョウセンコルリクワガタ神农架亜種 *P. hongwonpyoi shennongjianus*: 大巴山から記載された susp. *dabashanensis* にもっとも近いが, ♂では体表の色調がやや異なり, 上翅は先端に向けてより緩やかに狭まるため, 先端が尖ってみえ, 両性において上翅の点刻がやや小さく疎で, ♂の上翅中央にある横皺がより浅く狭い.

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Elytra, *Tokyo*, **36**(1): 129–131, May 30, 2008

A New Subspecies of *Leptaulax matsumotoi* (Coleoptera, Passalidae) from Kachin, Myanmar

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Abstract A new subspecies of *Leptaulax matsumotoi* is described from Myanmar under the name of *L. matsumotoi kachinensis* ssp. nov.

Leptaulax matsumotoi was described from Phu Pan, Laos by KON *et al.* (2003). Recently, the second author collected this species from Kangfang, Kachin, Myanmar. After a comparison of the present specimens from Myanmar with the type series of *L. matsumotoi* from Laos, it was revealed that the specimens from Myanmar are slightly different from the type series in external morphology and the male genitalia. Thus, we describe a new subspecies of *L. matsumotoi* from Myanmar.

Leptaulax matsumotoi kachinensis ssp. nov.

(Figs. 1, 3, 5)

Body length is 18.1 mm±0.91, 16.3–19.0 mm (mean±SD, range; n=7). No sexual dimorphism is evident.

The present new subspecies is different from the nominotypical one in the following points: 1) the side of pronotum is densely punctured almost as a whole, whereas in the nominotypical one, it is impunctate except near the anterior corner and in the scar (Fig. 2); 2) the humerus is hairless, whereas in the nominotypical one, it is hairy; 3) in the male genitalia, the distal margin of basal piece is strongly incised at the middle on the ventral side, whereas in the nominotypical one, it is moderately incised (Fig. 4).

Type series. Holotype: ♂, Kangfang, Kachin, Myanmar, 5–VI–2007, A. ABE leg. Paratypes: 6 ♀♀, the same data as for the holotype. The holotype is deposited in the collection of the Department of Zoology, National Museum of Nature and Science,



Fig. 1. Habitus of *Leptaulax matsumotoi kachinensis* ssp. nov., holotype, male, scale 5 mm.

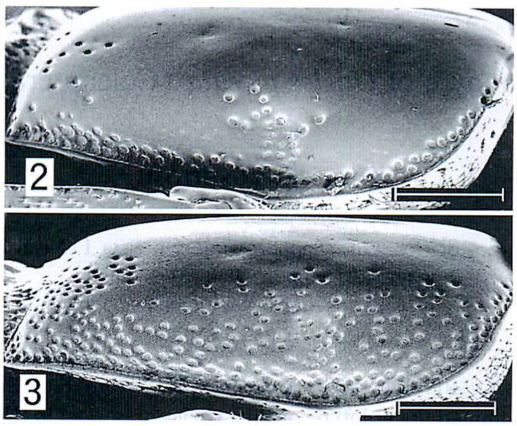
Tokyo.

Distribution. Myanmar (Kachin).

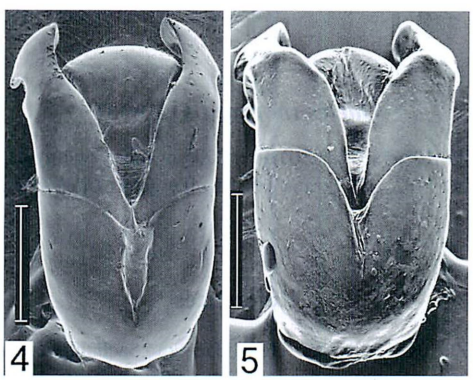
Specimens compared. *Leptaulax matsumotoi matsumotoi* KON, JOHKI et ARAYA: holotype, ♂, Phu Pan, 1,800 m, Houapan, Laos, 4–III–2003; paratypes, 16 ♂♂, 19 ♀♀, ditto, 4～7–III–2003.

Acknowledgments

The last author wishes to express his cordial thanks to Mr. H. SHIZUYA for giving him the opportunity to collect the present specimens. This study was supported in part by a Grant-in-Aid from the Japan Society for the Promotion of Science (No. 18510203).



Figs. 2–3. Pronotum, left lateral view, scale 1 mm. 2, *L. matsumotoi matsumotoi*, male; 3, *L. matsumotoi kachinensis* ssp. nov., holotype, male.



Figs. 4–5. Male genitalia, ventral view, scale 0.5 mm. 4, *L. matsumotoi matsumotoi*, male; 5, *L. matsumotoi kachinensis* ssp. nov., holotype, male.

要　　約

近　雅博・阿部　東：クロツヤムシの1種の *Leptaulax matsumotoi* のミャンマーからの1新亜種. —— ミャンマーから *Leptaulax matsumotoi* の1新亜種を記載し，*L. matsumotoi kachinensis* ssp. nov. と名付けた.

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Elytra, *Tokyo*, **36**(1): 132, May 30, 2008

A New Synonym of *Odeles piceata* (Coleoptera, Scirtidae)

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Odeles piceata (KLAUSNITZER, 1982) was described from Kunashir based on one male specimen. Recently I examined the holotype of this species preserved in ZIL (Zoological Institute, Academy of Science, Leningrad). After close examination including that of male genitalia, it becomes clear that this species is a junior synonym of *Odeles inornata* (LEWIS). The latter species has already been recorded from Kunashir Island by YOSHITOMI & NIKITSKY (2004).

I wish to express my gratitude to Dr. N. NIKITSKY of the Zoological Museum, Moscow Lomonosov State University for the permission to examine the type specimen of *Helodes piceata* KLAUSNITZER.

Odeles inornata (LEWIS)

Helodes inornatus LEWIS, 1895, 107. (see YOSHITOMI, 2005 in other synonyms.)
Helodes piceata KLAUSNITZER, 1982, 277 [transferred to the genus *Odeles* by KLAUSNITZER (2004)]. *Syn. nov.*

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Elytra, *Tokyo*, **36**(1): 133–148, May 30, 2008

A New Genus *Dendrolasiophilus* and a New Synonym in the Subtribe Batrisina, Tribe Batrisini (Coleoptera, Staphylinidae, Pselaphinae) from Japan

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Abstract The batrisine genus *Batristilbus* RAFFRAY is regarded as a junior synonym of the genus *Batrisus* AUBÉ. A new genus *Dendrolasiophilus* is established for the well known myrmecophilous species, *Batrisus concolor* SHARP. A new species of this genus, *D. nishikawai* is described from Hokkaido and Honshu.

The genus *Batristilbus* was defined by RAFFRAY (1909) with the type species *Batrisus politus* SHARP known from Japan. Up to the present, the other three species of this genus have been known, namely, *B. trichothorax* TANOKUCHI and *B. concolor* (SHARP) described from Japan, and *B. monstrotibialis* HLAVÁČ, SUGAYA et ZHOU from China. These four species are all myrmecophilous whose hosts are *Lasius* ants in many cases.

These species are similar in appearance to one another in the dorsal surface of the body almost lacking any pubescence and punctures. They are divided into two species-groups, the *politus* group containing *B. politus* and *B. trichothorax*, and the *concolor* group consisting of *B. concolor* and *B. monstrotibialis*. After examination of all species in detail, the *concolor* group is concluded to belong to the genus-group of *Tribasodes* distant from the *politus* group in the *Batrisus* group; both the genus-groups were defined by NOMURA & IDRIS (2003). On the other hand, the type species *B. politus* is closely allied to *B. formicarius* AUBÉ which is the type species of the genus *Batrisus* AUBÉ, and is not separable at the genus level.

As the conclusion, the genus *Batristilbus* is synonymized with *Batrisus* in this study, and the two species *B. politus* and *B. trichothorax* are transferred to *Batrisus*. The *concolor* group is separated from *Batristilbus* and is given a new generic name, *Dendrolasiophilus*. Description of a new species collected from Hokkaido and Honshu is also given.

Material and Methods

For the SEM observation, specimens of *Batrisus politus* and *B. concolor* was dried,

coated with gold, and observed under the accelerating voltage (AV) 15 kV by JEOL JSM-6380LV, and were digital-micrographed from various angles. The other specimens for the SEM observations were not metal-coated, and were examined with low AV 0.9 - 1.2 kV. Measurements of the body and the parts were made with a stereo microscope (Leica MZ Apo). Type series of *Dendrolasiophilus nishikawai* sp. nov. is deposited at the National Museum of Nature and Science, Tokyo (NSMT).

Genus *Batrisus* AUBÉ

[Japanese name: Chiiro-arizukamushi Zoku]

Batrisus AUBÉ, 1833, 45.
Batristilbus RAFFRAY, 1909, Annls. Soc. ent. Fr., **18**: 22. *Syn. nov.*

Type species: *Batrisus formicarius* AUBÉ (see remarks).

Remarks. The type designation of this genus was argued by NEWTON & CHANDLER (1989), but it was retained as a problem to be solved. LÖBL & BESUCHET (2004) desiganated *Batrisus formicarius* AUBÉ as the type species of this genus.

This genus is characterized by the large and stout body, the eleventh antennal segment with hook-like spine in the male, the mid femur and tibia each with spine or denticle(s) in the male, and almost symmetrical male genitalia with slender and well sclerotised endophallus. It contains six species, two of which are known from Japan, *Batrisus politus* SHARP and *B. trichothorax* (TANOKUCHI).

Batrisus politus SHARP

[Japanese name: Eguri-chiiro-arizukamushi]

(Figs. 1A, C, E, G, 2A, C, E, G)

Batrisus politus SHARP, 1883, 310.
Batristilbus politus: RAFFRAY, 1909, Annls. Soc. ent. Fr., **18**: 22; 1911, Psel., Coleopt. Cat., (27): 72.

Specimens examined. 1 male, Mt. Hakkenzan, Sapporo-shi, Hokkaido, 31–V–2002, M. MARUYAMA leg.; 1 female, Ohnuma, Shiobara-machi, Tochigi Pref., 20–V–1989, S. OHMOMO leg.; 1 male, Hatchônoyu, Tochigi Pref., 10～12–VII–1984, H. MAKIHARA leg.; 1 male, Mugiyamazawa, Okutama-machi, Tokyo Pref., 7–VI–2005, S. NOMURA leg.; 1 female, Aokigahara, Mt. Fuji, Yamanashi Pref., 23–VIII–1984, S. NOMURA leg.; 1 male, Ohyakuzure, Shizuoka-shi, Shizuoka Pref., 13–V–1985, N. HARAKI leg.; 1 female, Iriyamabe, Tobira, Matsumoto-shi, Nagano Pref., 29–VI–1997, T. FURIHATA leg.; 1 female, Asahi Super Rindô, Niigata Pref., 24–V–1990, H. KOIKE keg.; 1 female, Tainai, Kurokawa-mura, Niigata Pref., S. NOMURA leg.; 1 male, Mt. Hatobukiyama, Minokamo-shi, Gifu Pref., K. SUZUKI leg.; 1 male, Nabi, Hachiman-chô, Gifu Pref., 18–IV–1986, K. SUZUKI leg.; 2 males, 4 females, Hakusan Super Rindô, Shirakawa-mura, Gifu Pref., 9–V–1999, Y. TAKAI leg.; 1 male, Hirakura, Misugi-mura, Mie Pref., 4–VII–1983, K. AKITA leg.; 1 male, Mt. Ohtô, Wakayama Pref., 28～29–VI–1981, S.

NAOMI leg.; 1 female, Urahikimi, Hikimi-chô, Shimane Pref., 5–VI–1988, S. NOMURA leg.; 1 male, same data as above but 6–VI–1988; 1 male, Mt. Tsurugisan, N-slope 1,400–1,800 m alt., 1–VIII–1997, K. AKITA leg.; 1 female, Dosu-tôge, Tokushima Pref., 5–VI–2004, M. YOSHIDA leg.; 1 male, Omogo Vall., Mikawa-mura, Ehime Pref., 9–X–1990, S. NOMURA leg.; 1 female, Omogo Vall., Ehime Pref., 15–VI–1981, S. NAOMI leg.; 1 female, Koyayama, 1,300 m alt., Mt. Odamiyama, Ehime Pref., E. YAMAMOTO leg.; 2 males, 7 females, same locality as above but from *Lasius* nest, 23–IV–1996; 2 males, 1 female, Keikoku, 800 m alt., Mt. Odamiyama, Ehime Pref., 15–VII–1993, E. YAMAMOTO leg.; 1 female, Mt. Ôtakiyama, Shionoe-chô, Kagawa Pref., 2–VI–2001, M. MARUYAMA leg.; 1 male, Fujio Jinja, Kagawa Pref., 1–VI–2001, M. MARUYAMA leg.; 1 female, same data as above, but 2–VI–2001; 2 males, Buzenbô, Mt. Hikosan, Fukuoka Pref., 2–V–1983, S. NOMURA leg.: 1 female, Mt. Hikosan, Fukuoka Pref., 7–VIII–1940, T. ESAKI & K. YASUMATSU leg.; 1 female, Mt. Hikosan, Soeda-machi, Fukuoka Pref., 16–V–1978, K. MORIMOTO leg.; 1 female, Mt. Tôsenzan, from litter, Shiota-chô, Saga Pref., 21–VI–1997, M. NISHIDA leg.; 1 female, Unzen, Nagasaki Pref., 22–IX–1981, K. OGATA leg.; 1 female, Mt. Iwayasan, Nagasaki-shi, Nagasaki Pref., 31–V–1987, T. YASUNAGA leg.; 1 male, 2 females, Tomikawa Vall., 350 m alt., Isahaya-shi, Nagasaki Pref., 6–VI–2001, S. NOMURA leg.; 1 male, Mt. Takenotsuji, 200 m alt., Gônoura-chô, Iki Is., Nagasaki Pref., 2–VII–1996, S. NOMURA leg.; 2 females, Saruiwa, 100 m alt., Gônoura-chô, Iki Is., Nagasaki Pref., 20–IV–1999, S. NOMURA leg.; 1 male, 1 female, Mt. Kurodake, Kujû Mts., Ôita Pref., 29–VI–1995, H. HOSHINA leg.; 1 female, Mt. Shiragadake, Kumamoto Pref., 4–VII–1982, M. ÔHARA leg.; 1 female, Yuzuzono, Suki-son, Miyazaki Pref., 18–VI–1978, A. NAGAI leg.; 1 male, 1 female, Mt. Morotsu-kayama, Morotsuka-son, Miyazaki Pref., 10–IX–1994, S. NOMURA leg.

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu, Iki Is.).

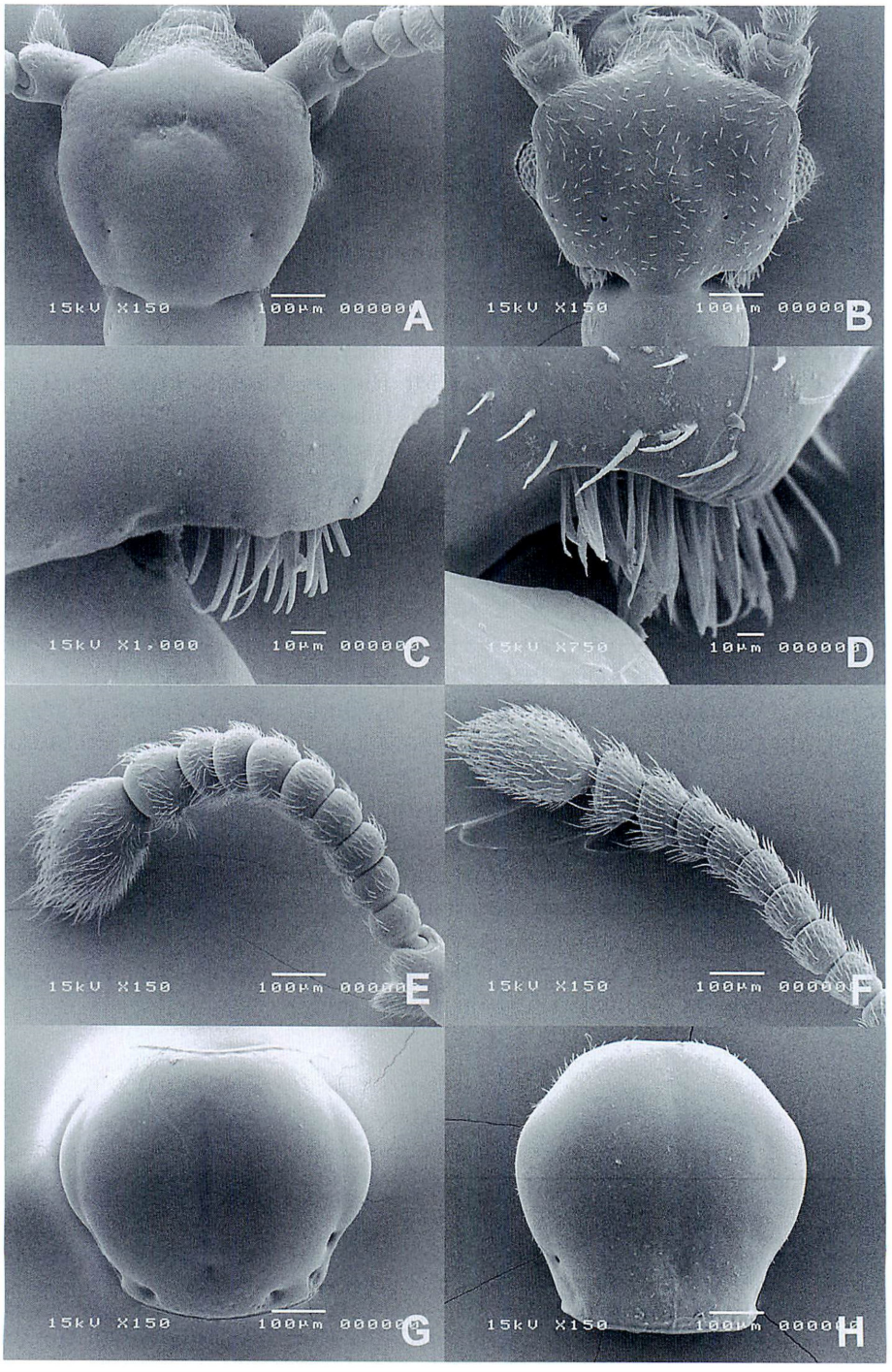
Remarks. This well-known species is closely allied to the European species, *B. formicarius* AUBÉ in having the male sexual characters, the denticulate antennal segment XI, the denticulate mid femur, and the strongly excavated mid tibia near the apex.

Host ant:

Lasius (*Lasius*) *hayashi* YAMAUCHI et HAYASHIDA: Kimitsu-shi, Sapporo-shi, Hokkaido (det. by M. MARUYAMA in the present study)

Fig. 1 (on p. 136). *Batrisus politus* SHARP, male (A, C, E, G) and *Dendrolasiophilus concolor* (SHARP), male (B, D, F, H). —— A, B, Head in dorsal view; C, D, right postgena in dorsal view; E, F, left antenna in dorsal view; G, H, pronotum in dorsal view.

Fig. 2 (on p. 137). *Batrisus politus* SHARP, male (A, C, E, G) and *Dendrolasiophilus concolor* (SHARP), male (B, D, F, H). —— A, B, Right elytral base; C, D, meso-metanota in ventral view; E, F, left hind trochanter in ventral view; G, H, abdominal tergite IV.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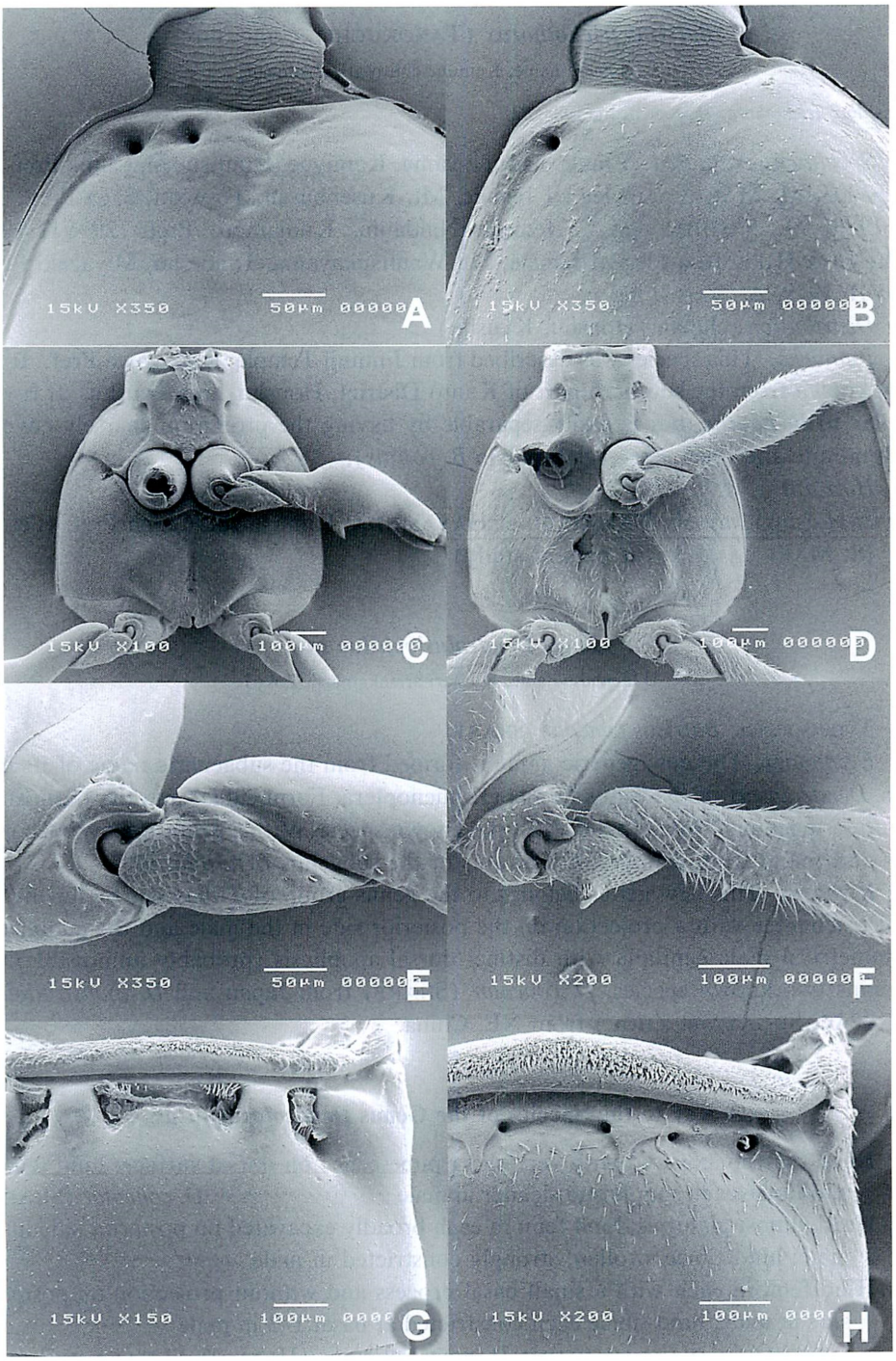
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50µm 00000
E
15kV X200
100µm 00000
F
15kV X150
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G
15kV X200
100µm 000
H

Batrisus trichothorax (TANOKUCHI), comb. nov.

[Japanese name: Kemune-chiiro-arizukamushi]

Batristilbus trichothorax TANOKUCHI, 1988, 72.

Specimens examined. 1 male, Mifune-yama, Kamiyue, Kimitsu-shi, Chiba Pref., 5–VII–2005, M. MARUYAMA leg.; 1 female, Mt. Kusenbusan, Tosu-shi, Saga Pref., 20–IV–1989, M. NISHIDA leg.; 1 female, Naidaijin, Kumamoto Pref., 29–VII–1952, TAKEYA & HIRASHIMA leg.; 1 female, Mt. Wanitsukayama, Tano-chô, Miyazaki Pref., 15–VII–1979, A. NAGAI leg.

Distribution. Japan (Honshu, Kyushu).

Remarks. This species was described from Jinmuji Temple, Kanagawa Pref. It has been known from the southern part of Kantô District, Honshu, and Kyushu. It is very similar to *B. politus*, but is easily separable by having the pronotum sparsely covered with minute and erect setae (glabrous in *B. politus*).

Host ant:

Lasius (*Lasius*) *hayashi* YAMAUCHI et HAYASHIDA: Kimitsu-shi, Chiba Pref. (det. by M. MARUYAMA in the present study)

Genus *Dendrolasiophilus* nov.

[Japanese name: Kusaari-arizukamushi Zoku]

Type species: *Batrisus concolor* SHARP.

Etymology. The new generic name is formed from the subgeneric name of its host ants, *Dendrolasius* of the genus *Lasius* (Hymenoptera, Formicidae) and the Latin suffix "*-philus*" meaning "-lover". Since, all the known species of this genus are myrmecophilous and found from colonies of host ants of the subgenus *Dendrolasius*.

Remarks. This new genus belongs to the genus-group of *Tribasodes* by having the hind trochanter with a projection on the posterior side in the male and the completely asymmetrical male genitalia with distinct dorsal apophysis (probably immovable). It contains two known species, *D. concolor* (SHARP) from Japan and *D. monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU) from NE. China.

A Key to the Species of the Genus *Dendrolasiophilus*

1. Head sparsely covered with very short pubescence on dorsal surface; hind femora and tibiae each simple and slender in male ·····*D. concolor* (SHARP).
— Head almost glabrous; hind femora each broadly excavated on posterior side in the male; hind tibiae swollen, strongly constricted in male ·····2.
2. Hind femora each with a small basal process and without projection on posterior side in male; hind tibiae each constricted at basal 1/3 in male·····
·····*D. monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU).

— Hind femora each with a large angular projection near apical 1/4 on posterior side and without basal process in male; hind tibiae each constricted near the middle in male ·····*D. nishikawai* sp. nov.

Dendrolasiophilus concolor (SHARP), comb. nov.

[Japanese name: Tsuya-kusaari-arizukamushi]

(Figs. 1B, D, F, H, 2B, D, F, H)

Batrisus concolor SHARP, 1883, 310.

Specimens examined. [Hokkaido] 1 female, Kamimuri, Maruseppu-chô, 21–V–2000, M. MARUYAMA leg.; 1 female, Taihei, Maruseppu-chô, 2～3–VI–2000, Y. KIDA leg.; 2 females, Tomambetsu, Nopporo Shinrin-kôen, Ebetsu-shi, 11–V–2000, M. MARUYAMA leg.; 1 male, 2 females, same data as above but 29–V–2002; 1 male, Nopporo Forest Park, Ebetsu-shi, from *Lasius* nest, 6441–44–60 HMH, 20–VI–2002, S. HORI leg.; 2 males, 1 female, same locality as above, from *Lasius* nest, 6441–44–50, 4–VI–2003, S. HORI leg.; 1 male, 1 female, Kannon-zawa, Sapporo-shi, 1–VI–2002, M. MARUYAMA leg.; 1 female, Mt. Maruyama, Sapporo-shi, 6–VI–1998, M. MARUYAMA leg.; 2 males, 5 females, Daiichi-usakumai-bashi, Rankoshi, Chitose-shi, 30–VI–2002, M. MARUYAMA leg.; 2 males, 1 female, Utasai, Kuromatsunai-chô, 26–V–1996, M. ÔHARA leg; 1 male, 3 females, Upper Menagawa River, Esan-chô, 14–VIII–1998, M. NISHIKAWA leg.; 1 female, same locality as above, 12–VIII–1999, M. NISHIKAWA leg. [Honshu] 2 females, Izumi-ku, Sendai-shi, Miyagi Pref., 7–VI–2005, Kôichi MATSUMOTO leg.; 2 males, Kashi Spa (800 m alt.), Nishigô-mura, Fukushima Pref., 16～17–VI–1998, M. MARUYAMA leg.; 1 male, Sayado, Môka-shi, Tochigi Pref., 15–VI–2000, T. KOBAYASHI & H. OBATA leg.; 1 male, Nakano, Showa-machi, Saitama Pref., 11–V–2002, H. KAMEZAWA leg.; 1 female, Ikuta Ryokuchi, Tama-ku, Kawasaki-shi, Kanagawa Pref., 18–V–1998, K. KAWADA leg.; 3 females, Daiyûzan, Kanagawa Pref., 15–V–1983, M. NISHIKAWA leg; 1 male, Shibusawa Kyûryô, Hadano, Kanagawa Pref., 22–VI–2000, T. WATANABE leg.; 1 male, 1 female, Odawara, Kanagawa Pref., 12–V–1984, M. KUBOTA leg.; 2 males, 2 females, Kamiimai, Hosaka-chô, Nirasaki-shi, Yamanashi Pref., 6–VI–2004, M. MARUYAMA leg.; 1 male, Ôkubo, Komoro-shi, Nagano Pref., 29～30–IV–2001, H. KAMEZAWA leg.; 1 female, Mt. Yahikosan, Niigata Pref., 27–V–1990, M. MARUYAMA leg.; 2 males, 3 females, Mt. Kentôsan, Shôgawa-mura, Gifu Pref., 27–VI–2004, M. MARUYAMA leg. [Shikoku] 2 females, Fujio-jinja, Nishiueta-machi, Takamatsu-shi, Kagawa Pref., 1–VI–2001, M. MARUYAMA leg.

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu).

Remarks. This species differs from *D. monstrotibialis* and *D. nishikawai* by having the head sparsely covered with minute pubescence on dorsal surface. The male is separable from the female by having a short and strong mucro at the apex of mid tibia.

Host ants:

Lasius (*Dendrolasius*) *fuji* RADCHENKO=*L.* (*D.*) *fuliginosus* (LATREILLE)?: Nopporo,

Hokkaido (det. by M. MARUYAMA in the present study); Sapporo-shi, Hokkaido (det. by M. MARUYAMA in the present study); Nishigô-mura, Fukushima Pref. (det. by M. MARUYAMA in the present study); Daiyû-zan, Kanagawa Pref. (det. by M. NISHIKAWA in the present study).

L. (*D.*) *nipponensis* (FOREL): Maruseppu-chô, Hokkaido (det. by M. MARUYAMA in the present study); Sapporo-shi, Hokkaido (det. by M. MARUYAMA in the present study); Môka-shi, Tochigi Pref. (det. by M. MARUYAMA in the present study); Nirasaki-shi, Yamanashi Pref. (det. by M. MARUYAMA in the present study); Takamatsu-shi, Kagawa Pref. (det. by M. MARUYAMA in the present study).

L. (*D.*) *capitatus* (KUPIANSKAYA)=*L. nipponensis* (FOREL)?: Shôgawa-mura, Gifu Pref. (det. by M. MARUYAMA in the present study).

L. (*D.*) *teranishii* (WHEELER)=*L. orientalis* (KARAVAIEV): Maruseppu-chô, Hokkaido (det. by M. MARUYAMA in the present study).

Dendrolasiophilus monstrotibialis (HLAVÁČ, SUGAYA et ZHOU), comb. nov.

(Figs. 5, 6)

Batristilbus monstrotibialis HLAVÁČ, SUGAYA et ZHOU, 2002, 129.

Specimens examined. 2 male paratypes, Dongling Mts., 1,400 m alt., Yan Shan, Beijing, China, 15～16-VI-2001, HLAVÁČ & COOTER leg.

Distribution. China (Beijing).

Remarks. This species is very similar to the new species, *D. nishikawai*, but the male is separated by having the hind femur with basal process and without apical projection on the posterior side, and the hind tibia strongly constricted near basal 1/3. The female is difficult to be separated from that of *D. nishikawai*.

Host ants:

Lasius (*Dendrolasius*) *fuliginosus* (LATREILLE)? (HLAVÁČ, SUGAYA & ZHOU, 2002).

Dendrolasiophilus nishikawai sp. nov.

[Japanese name: Nishikawa-kusaari-arizukamushi]

(Fig. 7)

Etymology. This new species is dedicated to the collector of some type specimens, Mr. Masaaki NISHIKAWA, who is a coleopterologist studying Silphidae, Agyrtidae and Cholevinae (Leiodidae).

Holotype male, Mt. Hakodateyama, Hakodate-shi, Hokkaido, 1-VIII-1981, M. NISHIKAWA leg. Paratypes: 1 male, same data as holotype, but 16-VIII-1995; 1 male, 2 female, Minehama, Shari-chô, Hokkaido, 6544-76-12 HMH, 9-VI-2002, S. HORI leg.; 2 females, Nopporo Forest Park, Ebetsu-shi, Hokkaido, 6441-44-60 HMH, 20-VI-2002, S. HORI leg.; 1 male, Mt. Hakkenzan, Sapporo-shi, Hokkaido, 1-VI-2002, M. MARUYAMA leg.; 1 male, Naruko-onsen, Naruko-machi, Miyagi Pref., 14～17-VI-

1999, M. SANO leg.; 5 females, Mt. Aobayama, Sendai-shi, Miyagi Pref., 22–IX–2001, M. MARUYAMA leg.; 2 males, 2 females, Shimokomatsu, Kawanishi-machi, Yamagata Pref., 15–VIII–2006, M. MARUYAMA leg.; 1 male, Sagashio Spa, Enzan-shi, Yamanashi Pref., 4–V–2006, H. KAMEZAWA leg.; 1 male, Mt. Yahiko, Niigata Pref., 28–IV–1990, M. NISHIKAWA leg.; 1 male, same data as above, but 27–V–1990.

M a l e. Body length 2.52–2.59 mm, width 0.94–0.96 mm, large-sized, elongate and stout, almost smooth and glabrous on dorsal surface, color reddish brown, shiny.

Head slightly wider than long, quadrangular, weakly broadened anteriad; clypeus very short, arcuately expanded anteriad, sparsely covered with short pubescence; frons very broad, shallowly concave in median part, gently convex at antennal bases, smooth and glabrous; vertex weakly convex, with a pair of small dorsal tentorial pits; postgenae angulately projected posteriad, each excavated and densely setose just inside the projection. Eyes well developed and semispherical, each composed of 40 facets. Mouthparts normal in structure; labrum short, transverse and trapezoidal, almost horizontal on anterior margin; mandibles large, arcuate on outer margin; maxillary palpi large and elongate; segment I short, indistinct; II elongate, thickened distally; III short, nearly triangular; IV the largest, longer than I+II+III, fusiform, four times as long as wide, widest at apical 3/7; palpal sine very short, indistinct. Antennae long and slender, reaching middle of elytra, densely covered with short setae; segment I short, cylindrical, with onter and inner projections at apex; II to VIII, narrower than I, each short and ovoid; IX to X thick, subequal, each slightly longer than wide, ovoid; XI the largest, ovoid, 1.7 times as long as wide; relative length (width) of each segment to width of segment I : 1.3 (1.0) : 0.9 (0.8) : 1.0 (0.8) : 0.9 (0.7) : 0.9 (0.7) : 0.9 (0.8) : 1.0 (0.8) : 0.8 (0.8) : 1.1 (1.0) : 1.1 (1.0) : 2.4 (1.4).

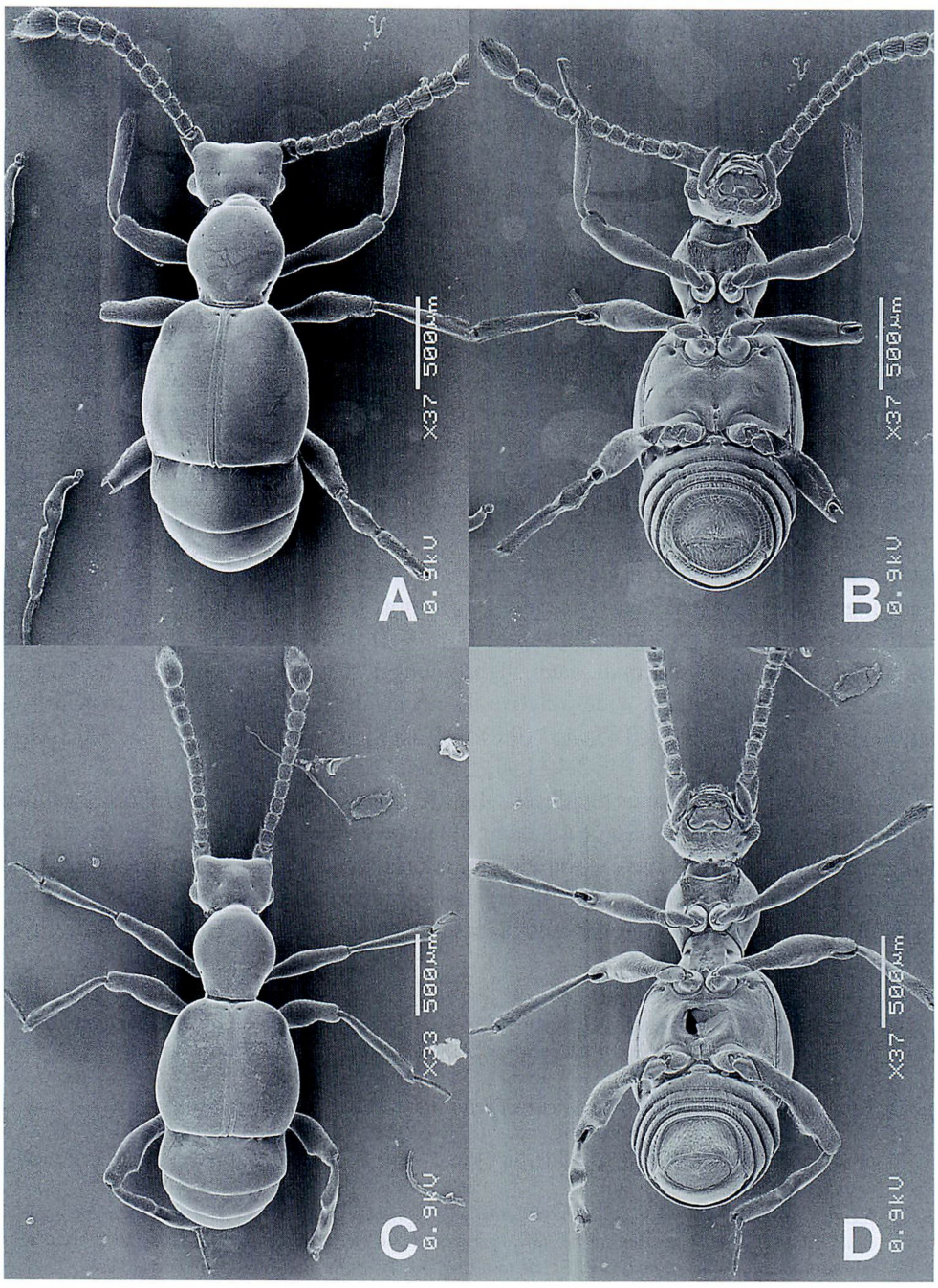
Pronotum slightly longer than head, slightly longer than wide, subglobose, rounded on lateral sides, limbate at base, with a pair of lateral foveae at basal 1/4. Elytra slightly wider than long, gently convex, rounded on lateral sides, widest at posterior 1/3, then weakly narrowed anteriad with gently expanded humeri, almost smooth and glabrous; each elytron with a basal fovea and adsutural sulcus running from basal fovea to

Fig. 3 (on p. 142). *Dendrolasiophilus monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU), paratype male (A, B) and *D. nishikawai* sp. nov., paratype male (C, D). —— A, C, Habitus in dorsal view; B, D, ditto, in ventral view.

Fig. 4 (on p. 143). *Dendrolasiophilus monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU), paratype male (A, C, E, G) and *D. nishikawai* sp. nov., paratype male (B, D, F, H). —— A, B, Head and pronotum in dorsal view; C, D, ditto, in ventral view; E, F, head in frontal view; G, H, left antenna.

Fig. 5 (on p. 144). *Dendrolasiophilus monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU), paratype male (A, C, E, G) and *D. nishikawai* sp. nov., paratype male (B, D, F, H). —— A, B, Pronotum in lateral view; C, D, left elytron; E, F, left mid tibia; G, H, right hind femur in ventral view.

Fig. 6 (on p. 145). *Dendrolasiophilus monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU), paratype male (A, C, E, G) and *D. nishikawai* sp. nov., paratype male (B, D, F, H). —— A, B, Hind tibia in dorsal view; C, D, ditto, in lateral view; E, F, abdomen in dorsal view; G, H, ditto, in ventral view.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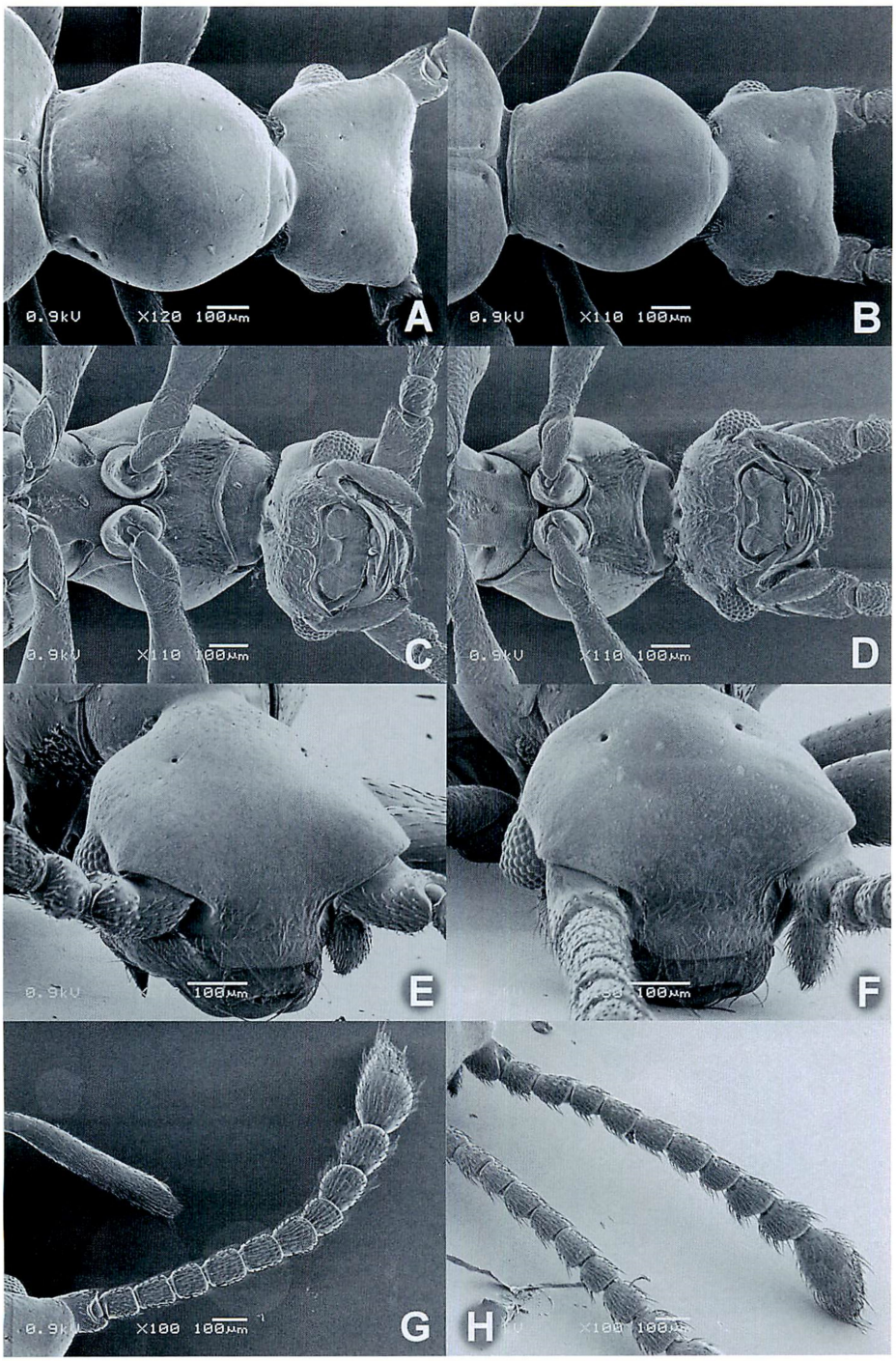
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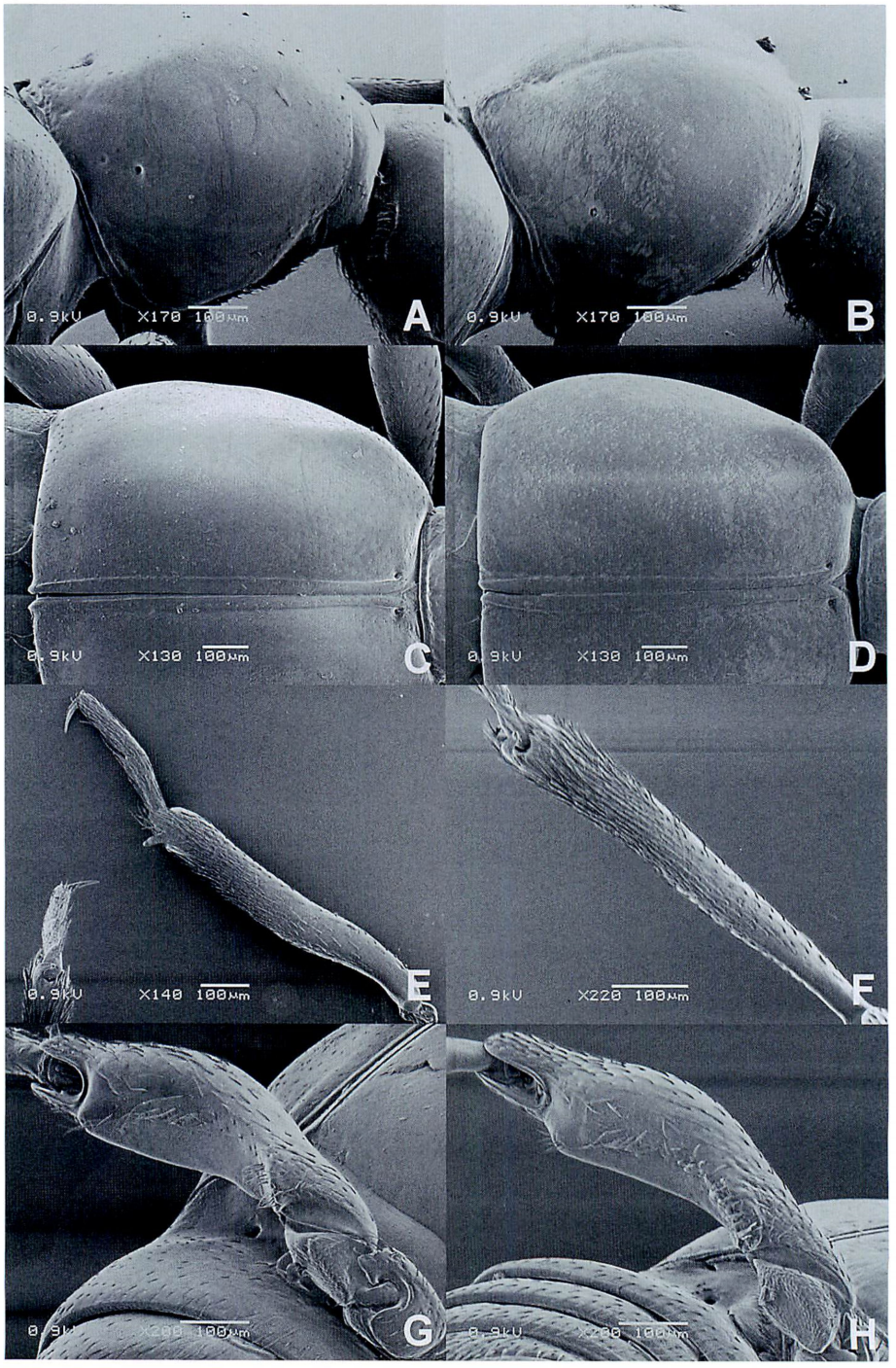
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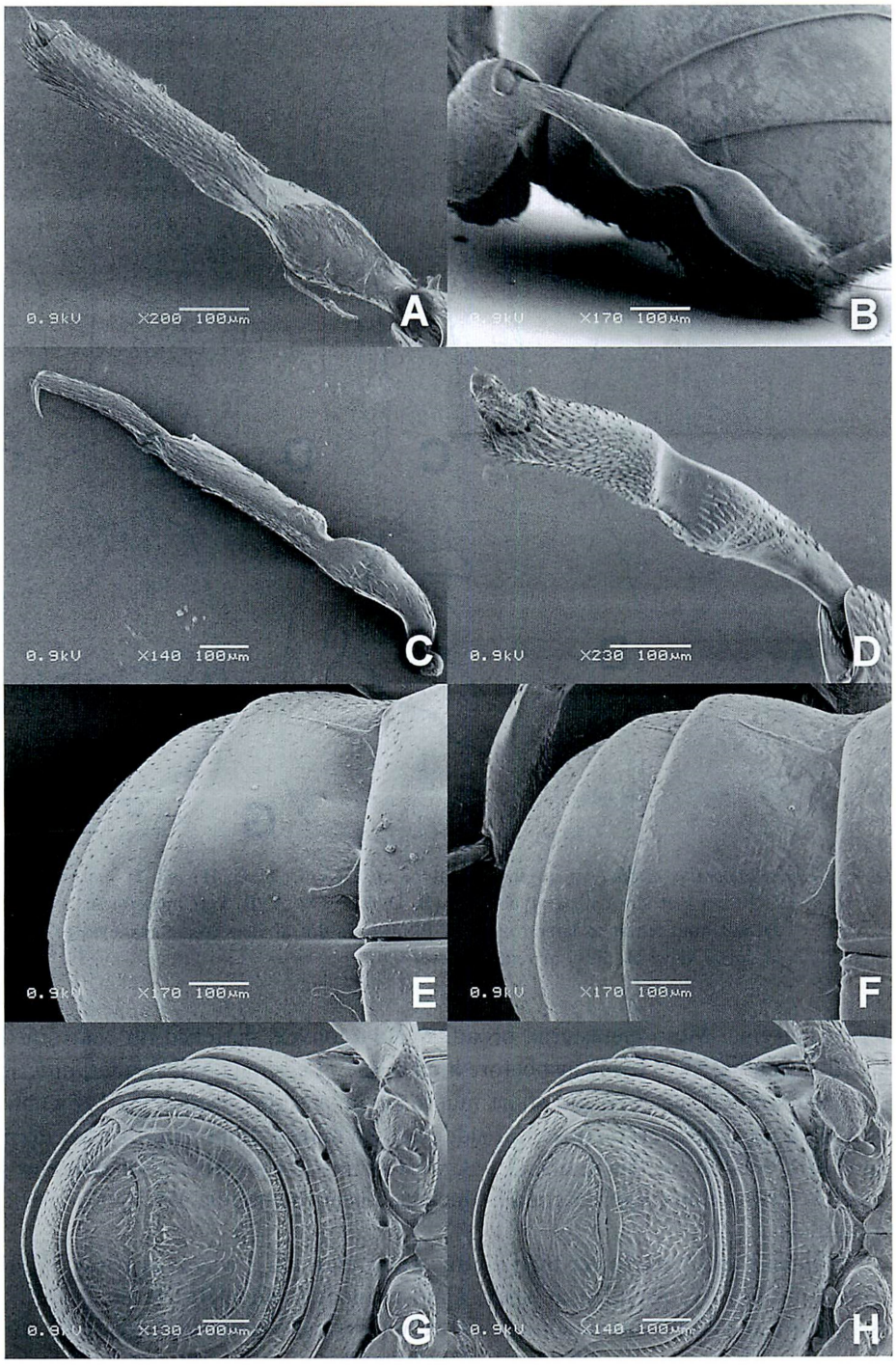
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H

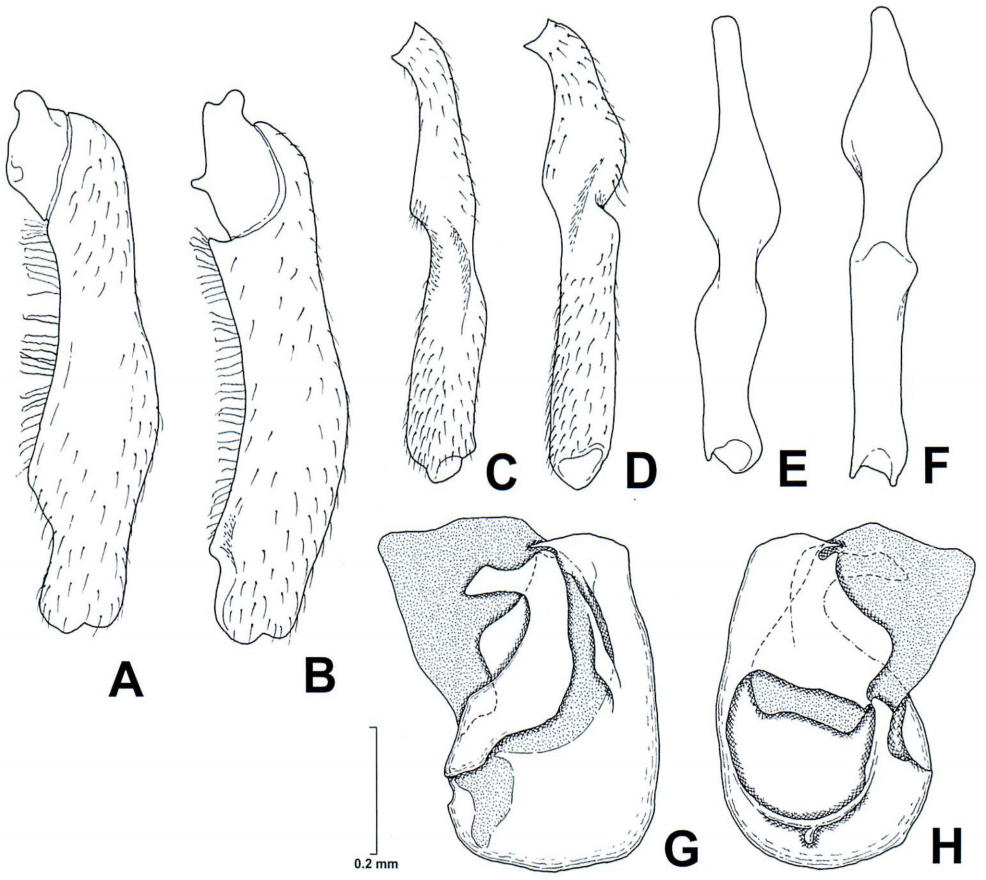

Fig. 7. *Dendrolasiophilus nishikawai* sp. nov., paratype male (A, C, E, G, H) and *D. monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU), paratype male (B, D, F). —— A, B, Left hind femur in ventral view; C, D, left hind femur in lateral view; E, F, ditto, in dorsal view (setae excluded); G, male genitalia in dorsal view; H, ditto, in ventral view.

posterior margin. Meso-metasterna broad, weakly convex, flattened on ventromedian side, with a small median fovea just before hind coxae. Legs long and slender; mid tibiae slender and straight, each with a short mucro on inner side of apex; hind trochanters short, with a small denticle on posterior side near the middle; hind femora stout, narrow in basal part, weakly swollen at apical 1/3, with an angular projection on posterior side at apical 1/4; hind tibiae asymmetrically thickened near the middle, strongly constricted at the middle.

Abdomen slightly narrower than elytra, wider than long, widest at basal 1/3, then narrowed posteriorly, rounded at apex, almost smooth and glabrous on dorsal side, sparsely covered with minute punctures and very short pubescence on lateral and ventral sides; segment IV the largest, transverse, convex on dorsal side, with a pair of short and

triangular basimedian carinae and a pair of lateral carinae (tergo-paratergal suture) in basal 2/3; V to VII sucsessively shortened and narrowed posteriorly in dorsal view, each short and transverse; tergite VIII short and transverse, semicircular; sternite VIII large and transverse, nearly trapezoidal, flattened on ventromedian side.

Male genitalia weakly sclerotized; median lobe broad, flattened dorso-ventrally, broadened in basal part, with large and nearly round basal foramen, a small projection at basal end of basal foramen and a large dorsal apophysis on right side; dorsal apophysis elongate, weakly narrowed basad, and narrowed apically, bent rightwards in apical part, externally projected near apex.

F e m a l e. Body length 2.50–2.67 mm, width 0.92–0.98 mm. Antennae 1.02–1.15 mm in length. Similar to male, but antennae shorter than in male; mid tibiae truncate at apex, each without mucro; hind legs simple, each without denticle, projection nor constriction.

Distribution. Japan (Hokkaido, Honshu).

Remarks. This new species is closely allied to *D. monstrotibialis* (HLAVÁČ, SUGAYA et ZHOU) known from NE. China, but is separable by having the hind femur with an angular projection at apical fourth on posterior side and without basal process in the male, and the hind tibia strongly constricted near the middle.

Host ants:

L. (*D.*) *teranishii* (WHEELER)=*L. orientalis* (KARAVAIEV): Shari-chô, Hokkaido (present study); Sapporo-shi, Hokkaido (det. by M. MARUYAMA in the present study); Naruko-machi, Miyagi Pref. (det. by M. MARUYAMA in the present study).

L. (*D.*) *capitatus* (KUPIANSKAYA)=*L. nipponensis* (FOREL)?: Sendai-shi, Miyagi Pref. (det. by M. MARUYAMA in the present study).

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I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO for his critical reading of the manuscript. I am also indebted to the following persons for their kind offer of the invaluable material: Mr. Peter HLAVÁČ (Slovakia), Mr. Shigehisa HORI (Hokkaido), Mr. Masaaki NISHIKAWA (Kanagawa Pref.), Dr. Munetoshi MARUYAMA (Kyushu Univ. Mus.), and Dr. Hiroshi SUGAYA.

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要　　約

野村周平：日本から記録されるムネトゲアリヅカムシ亜族の1新属と1新シノニム（コウチュウ目ハネカクシ科アリヅカムシ亜科）．—— 好蟻性ムネトゲアリヅカムシとしてよく知られる *Batristilbus* チイロアリヅカムシ属の分類学的再検討を行った．本属のタイプ種である *B. politus* (SHARP) とその近似種 *B. trichothorax* TANOKUCHI は，ヨーロッパ産で *Batrisus* 属のタイプ種であ

る *B. formicarius* AUBÉ と非常に近いため，*Batristilbus* 属を *Batrisus* 属の下位シノニムとし，2種を *Batrisus* 属に移すのが妥当であると考えられた．従来，*Batristilbus* の構成員とされていた *B. concolor* (SHARP) および *B. monstrotibialis* HLAVÁČ, SUGAYA et ZHOU の2種は，*Batrisus* とはまったく異なる *Tribasodes* 属群に所属すると考えられたため，これに新属名 *Dendrolasiophilus*（クサアリアリヅカムシ属）を与えるとともに，北海道，本州から新種 *D. nishikawai* ニシカワクサアリアリヅカムシを記載した．

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Elytra, *Tokyo*, **36**(1): 149–151, May 30, 2008

A Synonym and Some New Combinations of Pselaphine Species and Subspecies (Coleoptera, Staphylinidae, Pselaphinae) Known from Japan

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Abstract A synonym and some new combinations of pselaphine species and subspecies known from Japan are presented. *Batrisodes vulgaris* described by RAFFRAY, 1909 from Kyoto is synonymised with *Batrisodellus nipponensis* (RAFFRAY, 1909). *Batrisocenus dilatatus* RAFFRAY, 1909 is not conspecific with *Arthromelodes dilatatus daibosatsuanus* NOMURA, 1991 and its two allied subspecies. The four taxa, therefore, should be recombined as follows: *Arthromelodes dilatatus* (RAFFRAY); *A. daibosatsuanus daibosatsuanus* NOMURA; *A. d. shiranemontanus* NOMURA; *A. d. fujimontanus* NOMURA.

From 25th February to 1st March 2007, the author visited the Muséum National d'Histoire Naturelle, Paris (MNHN), and checked the collection of Asian species of Pselaphinae described by A. RAFFRAY, L. W. SCHAUFUSS and E. REITTER. As the result, a synonym and some new combinations of Japanese species and subspecies were found as shown below.

Before going further, I wish to express my hearty thanks to Dr. Thierry DEUVE and Ms. Taghavian AZADEH of MNHN for their kindness in giving me an opportunity to examine the invaluable collection.

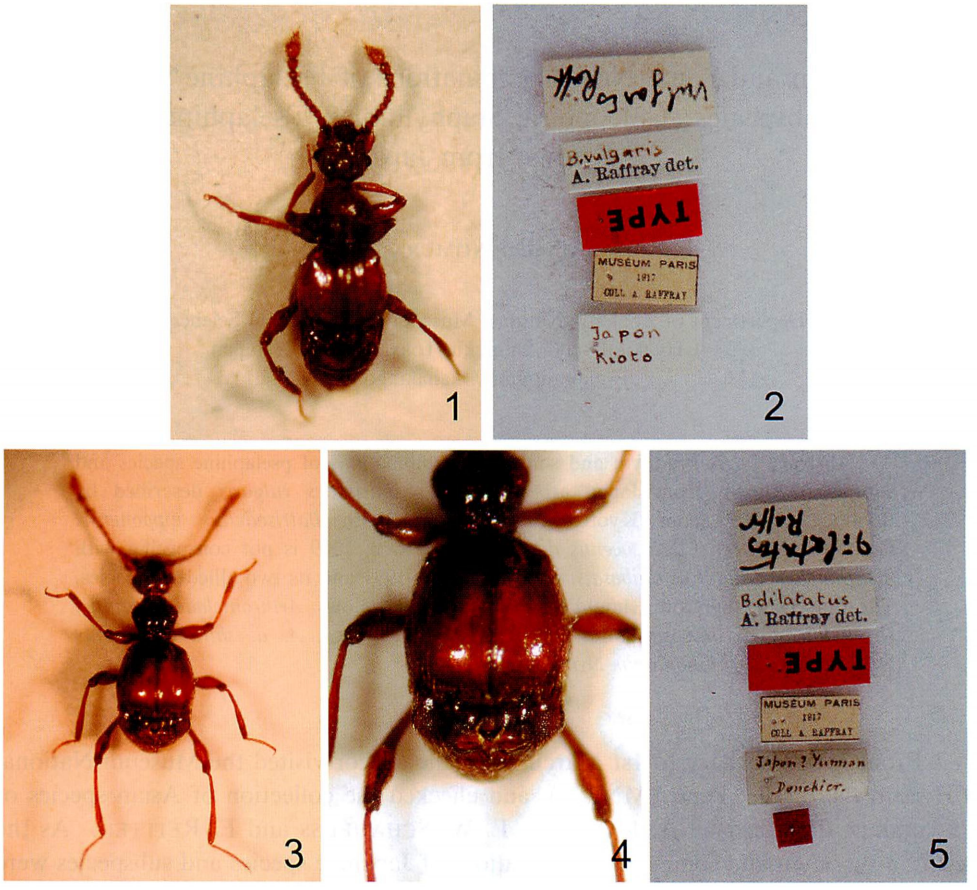
Batrisodellus nipponensis (RAFFRAY)

[Japanese name: Nippon-munetoge-arizukamushi]

Batrisodes nipponensis RAFFRAY, 1909, Annls. Soc. ent. Fr., **78**: 23.
Batrisodes vulgaris RAFFRAY, 1909, Annls. Soc. ent. Fr., **78**: 24. *Syn. nov.*
Batrisodellus nipponensis: JEANNEL, 1958, Mém. Mus. Hist. nat., Paris, (A), **18**: 38. —— NOMURA, 1989, Check List Jpn. Ins., Fukuoka, [1]: 289.
Batrisodellus risor TANABE et NAKANE, 1990, Kontyû, Tokyo, **57**: 735.

Type material examined. Syntype ♀, Japon, Kioto/ Museum Paris 1917, Coll. A. RAFFRAY/TYPE (red)/B. vulgaris, A. RAFFRAY det./vulgaris rafr.

Remarks. The syntype of *Batrisodes vulgaris* described by RAFFRAY, 1909 from



Figs. 1–5. Type specimens and their labels of two Japanese species of Pselaphinae preserved in MNHN, Paris. —— 1, A syntype of *Batrisodes vulgaris* RAFFRAY; 2, ditto, labels; 3, a syntype of *Batrisocenus dilatatus* RAFFRAY; 4, ditto, enlarged; 5, ditto, labels.

Kyoto is identical with the female of *Batrisodellus nipponensis* (RAFFRAY).

Arthromelodes dilatatus (RAFFRAY)

Batrisocenus dilatatus RAFFRAY, 1909, Annls. Soc. ent. Fr., **78**: 25.
Pseudobatriscenus dilatatus: JEANNEL, 1958, Mém. Mus. Hist. nat., Paris, (A), **18**: 66. —— NOMURA, 1989, Check List Jpn. Ins., Fukuoka, [1]: 290.
Arthromelodes dilatatus: NOMURA, 1991, Esakia, Fukuoka, (30): 352.

Type material examined. Syntype ♂, (red, square)/Japon? Yunnan Donckier/ Museum Paris 1917 Coll. A Raffray/TYPE (red)/B. dilatatus A. Raffray det./ dilatatus Raffr.

Remarks. NOMURA (1991) regarded this species as being conspecific with *Arthro-*

melodes dilatatus daibosatsuanus NOMURA, *A. d. shiranemontanus* NOMURA and *A. d. fujimontanus* NOMURA. However, it became apparent after an examination of the type of *Batrisodes dilatatus* that they should be separated at species lebel. Thus, the subspecies shown above are recombined as *A. daibosatsuanus daibosatsuanus* NOMURA, *A. d. shiranemontanus* NOMURA and *A. d. fujimontanus* NOMURA.

要　　約

野村周平：日本産アリヅカムシに見出された1シノニムと数個の新結合（コウチュウ目，ハネカクシ科，アリヅカムシ亜科）．—— 2007年2〜3月，パリの国立自然史博物館に所蔵される日本産アリヅカムシのタイプ標本をチェックした結果，以下の1シノニムおよび数個の新結合を見出した．RAFFRAY (1909) により京都から記載された *Batrisodes vulgaris* は，*Batrisodellus nipponensis* (RAFFRAY, 1909) のシノニムであった．また，NOMURA (1991) が *Batrisocenus dilatatus* RAFFRAY, 1909 と同種別亜種とみなして記載した3亜種は，別種とすべきであることがわかった．したがってこれら近似の4タクサは以下のように再結合すべきである：*Arthromelodes dilatatus* (RAFFRAY); *A. daibosatsuanus daibosatsuanus* NOMURA; *A. d. shiranemontanus* NOMURA; *A. d. fujimontanus* NOMURA.

Elytra, *Tokyo*, **36**(1): 151–152, May 30, 2008

Aleochara fucicola and *A. trisulcata* (Coleoptera, Staphylinidae) as Parasitoids of a Kelp Fly, *Fucellia apicalis* (Diptera, Anthomyiidae)

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Aleochara GRAVENHORST is a large genus of the Staphylinidae comprising ca. 400 described and many undescribed species throughout the world (KLIMASZEWSKI, 1984; MAUS *et al.*, 1998). Although most *Aleochara* species have been considered as solitary parasitoids of dipteran pupae, host records have been reported for only a part of *Aleochara* species (see MAUS *et al.*, 1998 for world host records). In particular, hosts of *Aleochara* are hardly known from Japan. Several *Aleochara* species inhabit littoral areas of Japan (SHIBATA, 1985). In spite of their common occurrence (KAWAKAMI *et al.*, 2004), their life histories have not been known. I found two littoral *Aleochara* species parasitizing puparia of a kelp fly along a sandy beach of Central Japan.

The host records are reported in this short paper.

I collected 32 puparia below seaweed of a brown alga, *Sargassum muticum* (YENDO) FENSHOLT, along the sandy beach in Maiko Fishing Port, Kobe City, Central Japan on May 27, 2004. The puparia were similar in their morphology and all were considered one and the same fly species. The puparia were reared on wet sand in a 200-mL plastic cup under laboratory conditions. Fourteen adults of *Fucellia apicalis* KERTÉSZ (Diptera, Anthomyiidae) eclosed on June 1. Eleven adults of *Aleochara fucicola* SHARP and two of *A. trisulcata* WEISE exited from the puparia between June 9 and June 16. One *Aleochara* individual exited from a puparium. Then, I dissected the remaining five puparia under a stereomicroscope and found dead *F. apicalis* flies in all the puparia. Therefore, the rates of parasitism by *A. fucicola* and *A. trisulcata* were 34.4% and 6.3%, respectively.

Fucellia apicalis often occurs abundantly from seaweed and fish carcasses deposited on the seashore and is known as a nuisance pest (KANO & SHINONAGA, 2003). Thus, these two *Aleochara* species may play an important role for the regulation of fly numbers. Host range of *Aleochara* species is generally wide, and one *Aleochara* species usually attacks puparia of several fly species with a similar size (MAUS *et al.*, 1998). Therefore, these two *Aleochara* species are likely to attack other fly species occurring on the seashore. I thank two anonymous reviewers for useful comments on this manuscript.

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Elytra, *Tokyo*, **36**(1): 153–157, May 30, 2008

A New *Cephennomicrus* REITTER (Coleoptera, Scydmaenidae) from the Malay Peninsula

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Abstract *Cephennomicrus simplex* sp. nov. from the Malay Peninsula is described. The type material has been collected on Fraser's Hill, Pahang, Malaysia. This is the first species of the genus reported from the Malay Peninsula. The habitus and aedeagus of the holotype are illustrated.

Key words: Coleoptera, Scydmaenidae, *Cephennomicrus* REITTER, new species, W Malaysia, taxonomy.

Introduction

Most species of Oriental *Cephennomicrus* REITTER have been described in *Neseuthia* SCOTT; only recently the latter name has been found to be a junior synonym of the former (JAŁOSZYŃSKI, 2008). This distinct genus includes the smallest Scydmaenidae, with the body length usually below 1 mm, and in some cases as small as nearly 0.6 mm. The most remarkable diagnostic character of *Cephennomicrus* is the pronotum bearing more than two ante-basal pits; typically there are four small pits forming two lateral pairs, in some cases the internal pair is connected by a transverse groove. Infrequently an additional median pit is present, or some pits are indistinct. The genus in its present shape may be heterogeneous, with several possible lineages sharing some unique characters, which in future may be defined as subgenera or even separate genera. Most species are known from the holotypes only, and the extremely small body size of these externally relatively uniform beetles makes detailed examination of important details (as mandibles) difficult. The Oriental members of the genus are sparse, and *Cephennomicrus* is rather infrequently collected. The Cephenniini of the hyperbiodiverse

Malay Peninsula and the Sunda Islands are very poorly studied and the only species of *Cephennomicrus* known from this region are *Cephennomicrus raffrayi* (SCHAUFUSS) from Singapore, and *C. sumatranus* (FRANZ) from Sumatra (a world checklist of species was provided by JAŁOSZYŃSKI, 2008). They both are extremely small and at least *C. sumatranus* shows a set of unique characters that may justify establishing a separate genus for this species (JAŁOSZYŃSKI, in preparation).

In this paper we describe the first species of *Cephennomicrus* from the Malay Peninsula. The type material (a single holotype male) has been collected on Fraser's Hill, Pahang, and is deposited in the National Museum of Nature and Science, Tokyo, Japan (NSMT). The measurements are as follows: length of head is from a hypothetical line connecting posterior margins of eyes to anterior margin of the frontoclypeal region; width of head is maximum including eyes; length of pronotum is along midline; width of pronotum is maximum; length of elytra is measured along suture from a hypothetical line connecting humeri to apex; width of elytra is maximum, combined; elytral index (EI) is length of elytra divided by width; body length is a sum of lengths of head, pronotum and elytra. The "tubercles" present near antero-interior margins of eyes were recognized as probably representing glands (JAŁOSZYŃSKI, in preparation), and therefore the name "frontal glands" is here adopted to describe these structures, to avoid confusion with minute and indistinct pair of tubercles visible in some species in the middle of vertex, suggested to be ocelli by LESCHEN & BEUTEL (2004).

Taxonomy

Cephennomicrus simplex sp. nov.

(Figs. 1–4)

Diagnosis. Body small (below 0.9 mm); head non-modified, with frontal glands; antennomere VIII distinctly broader than VII; antennal club distinctly 3-segmented; pronotum with two pairs of basal pits, without grooves; vestiture of dorsum extremely short and sparse, barely noticeable; lateral margin of each elytron bears two very long erect setae; aedeagus very broad and stout, with rapidly narrowed apex and symmetrical internal armature.

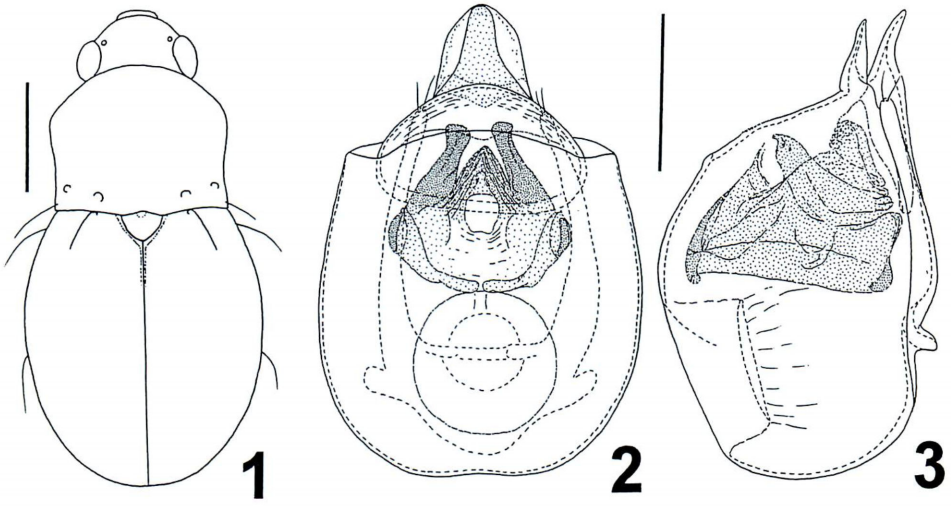
Description. Body moderately stout, with shallow but distinct constriction between pronotum and elytra, strongly convex, reddish-brown, covered with light brown vestiture.

M a l e (Figs. 1, 4). Body length 0.88 mm. Head large, length 0.12 mm, width 0.22 mm; vertex and frons regularly convex; ocelli well visible; frontal glands distinct, each located near antero-interior margin of eye and about as small as single ommatidium; supraantennal tubercles weakly marked; eyes very large, coarsely faceted, strongly convex. Punctures on vertex and frons extremely fine, barely noticeable under magnification 80×; setae extremely short and sparse. Antennae moderately long, with

slender flagellum and large, distinctly 3-segmented club, length 0.40 mm; antennomere I only 1.2× as long as broad; II slightly narrower and minimally longer than I, 1.4× as long as broad; III much narrower than II and about as long as broad; IV–V subequal in length and width, each minimally broader and longer than III, 1.1× as long as broad; VI as narrow as V but slightly longer, 1.2× as long as broad; VII distinctly broader than VI but slightly shorter, as long as broad; VIII slightly broader than VII but similar in length, minimally broader than long; IX as long as VIII but much broader, distinctly broader than long; X much broader and distinctly longer than IX, much broader than long; XI slightly narrower and longer than X, minimally longer than broad.

Pronotum subquadrate in shape, broadest near anterior third, length 0.25 mm, width 0.30 mm; anterior margin broadly rounded; sides strongly rounded in anterior third, near middle weakly but distinctly constricted, from middle up to nearly straight hind angles lateral margins are nearly straight, not microserrate; posterior margin with two very broad but very shallow lateral emarginations and short but deep median emargination; base of pronotum bears four small but deep pits forming two lateral pairs. Punctation extremely fine, barely noticeable under magnification 80×; setation slightly more distinct than that on head, composed of very short, sparse and recumbent setae; additionally each hind angle bears very long and strongly erect seta.

Elytra oval, broadest slightly anterior to middle, length 0.51 mm, width 0.40 mm, EI 1.27. Basal pit on each elytron small but distinct, connected with narrow but shallow impression running posteriorly and toward lateral margin that separates distinct humeral callus; apices of elytra separately rounded. Punctation as fine as that on pronotum; setation less distinct than that on pronotum, discernible under magnifications >100×, composed of extremely short, sparse and feebly suberect setae; additionally each elytron



Figs. 1–3. *Cephennomicrus simplex* sp. nov., holotype male; simplified body outline in dorsal view (1); aedeagus in dorsal (2) and lateral (3) views. Scale bars: 1: 0.2 mm, 2, 3: 0.05 mm.

bears two very long and strongly erect lateral setae, inserted near humerus and posterior to middle. Hind wings well developed.

Legs relatively long and slender; pro- and metatibiae straight, mesotibiae slightly recurved.

Metaventrite with very small but distinct median tubercle.

Aedeagus (Figs. 2, 3) 0.15 mm in length, very stout, in dorsal view with rapidly narrowing apical part, apex of dorsal wall much narrower than apex of ventral wall; internal armature symmetrical, composed of darkly sclerotized central complex; parameres short, slender, each bearing two apical setae.

F e m a l e. Unknown.



Figs. 4. *Cephennomicrus simplex* sp. nov., holotype male (0.88 mm).

Distribution. W Malaysia, Pahang: Fraser's Hill.

Holotype male, white printed label "FIT (M): Pinetree Trail, (Trail 8); Fraser's Hill, 〈Pahang, MALAYSIA〉, 26–29. vii. 2004, S. Nomura" (NSMT).

Etymology. The name refers to a simplified morphology of this species.

Remarks. This species is the first *Cephennomicrus* reported to occur in the Malay Peninsula. Since all species in this genus are relatively similar to one another, especially those with pits on the pronotum not connected by a groove, non-modified heads and a very short vestiture, the primary diagnostic characters are those associated with unique male copulatory organs. However, the combination of extremely short vestiture, two very long lateral setae on each elytron, concave sides of pronotum and the antennomere IX much broader than VIII is not known in any other Asiatic species of *Cephennomicrus.*

Acknowledgments

We express our sincere thanks to Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for his kind critical reading of the manuscript. The second author is indebted to Dr. IDRIS Abdul Ghani (Universiti Kebengsaan Malaysia, Bangi) for his kind assistance extended to his fieldwork in Malaysia.

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要　　約

Paweł JAŁOSZYŃSKI・野村周平：マレー半島産 *Cephennomicrus* 属（コウチュウ目コケムシ科）の1新種. —— マレー半島からコケムシ科の1新種，*Cephennomicrus simplex* を記載した．タイプ標本はパハン州フレーザーズ・ヒルから得られたものであり，本属の種としてはマレー半島から初めての記録となる．全形およびホロタイプの雄交尾器を図示した．

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Elytra, *Tokyo*, **36**(1): 158, May 30, 2008

New Records of *Merionoeda indica* (Coleoptera, Cerambycidae)

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Merionoeda indica was described by HOPE (1838, p. 28) based upon a female specimen collected from Nepal, and additionally described by GAHAN (1906). Since then, however, no contribution has been made to this species. It is characterized and easily distinguished from the other congeners of the genus by the wholly black body with the matted elytra and a pale ring just before the femoral club of the female hind leg. Recently, I was able to examine a rather long series of the same species collected from Laos and Sichuan as follows.

Specimens examined. [China] 1 ♂, 1 ♀, Mt. Daba Shan, Sichuan Prov., VI-2004. [Laos] 1 ♂, Phou Pan, 1,500-1,800 m in alt., Ban Saleui, Houaphan Prov., NE. Laos, 23～24-IV-2001; 2 ♂♂, 2 ♀♀, same locality, 9～13-IV-2004, T. NIISATO leg.; 1 ♂, same locality, 25-IV～5-V-2004; 1 ♀, 11-IV-2005; 1 ♀, 12-IV～11-V-2005; 1 ♀, same locality, 16-IV～15-V-2004; 2 ♂♂, 4 ♀♀, same locality, 22～24-V-2004, T. MIZUSAWA leg.; 2 ♂♂, 3 ♀♀, same locality, 22～23-V-2004; 2 ♂♂, 3 ♀♀, 27～31-III-2005, T. NIISATO leg.; 4 ♂♂, 8 ♀♀, 2～10-V-2005; 2 ♀♀, same locality, 12～21-V-2005; 1 ♀, Ban Niyod Rien, Houaphan Prov., 31-III-2004, Y. YOKOI leg.; 1 ♂, near Nong Het, 1,150 m in alt., Houaphan Prov., 29-IV-2004, Y. YOKOI leg.; 3 ♀♀, Ban Paksa, 1,650 m in alt., Xiengkhouang Prov., C. Laos, 17-IV-2008, H. WAKAHARA leg.; 12 ♂♂, 5 ♀♀, same locality, 30-IV-2008, T. NIISATO leg.; 2 ♂♂, 4 ♀♀, Ban Muang, 1,600 m in alt., Xiengkhouang Prov., 29-IV-2008, Y. ITO, T. NIISATO & H. WAKAHARA leg.; 2 ♂♂, Phuo Samsoun, 2,100m in alt., Xiengkhouang Prov., 2-V-2008, T. NIISATO leg.

In closing this short report, we wish to thank Messrs. Masayuki FUJIOKA, Yasuhiko ITO, Takashi MIZUSAWA and Hiroyuki WAKAHARA for offering the invaluable specimens.

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Elytra, *Tokyo*, **36**(1): 159–166, May 30, 2008

Two New Species of *Horaeomorphus* SCHAUFUSS (Coleoptera, Scydmaenidae) from Sabah, Malaysia

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Abstract *Horaeomorphus absconditus* sp. nov. and *H. aegrus* sp. nov. are described from East Malaysia. The type material has been collected in Borneo, Sabah: Crocker Range. The habitus of both species, their aedeagi and the spermatheca of *H. aegrus* are illustrated.

Key words: Coleoptera, Scydmaenidae, *Horaeomorphus* SCHAUFUSS, new species, Malaysia, Borneo, Sabah, taxonomy.

Introduction

Eighteen species of *Horaeomorphus* SCHAUFUSS have been known to occur in the Malay Peninsula and the Sunda Islands; nine of them have been recorded from Borneo (JAŁOSZYŃSKI, 2006; JAŁOSZYŃSKI *et al.*, 2007). Within Borneo, *H. eumicroides* SCHAUFUSS and *H. ishiianus* JAŁOSZYŃSKI are known from Kalimantan; *H. jaechi* JAŁOSZYŃSKI from Sarawak; *H. tibialis* JAŁOSZYŃSKI, *H. punctatissimus* FRANZ, *H. loeblianus* FRANZ, and *H. sabahensis* FRANZ from Sabah; *H. pseudosabahensis* JAŁOSZYŃSKI from Sarawak and Sabah, and *H. sarawakensis* FRANZ from Sarawak and Brunei (JAŁOSZYŃSKI, 2006). Some of these species have broader ranges, and they occur also in other parts of the archipelago, in peninsular Malaysia or on small islands near the Malay Peninsula. For instance, *H. sarawakensis* was found also in Kedah, Perak, peninsular part of Pahang, Tioman Is., and Penang Is., and *H. punctatissimus* in Sumatra and Siberut Is. The genus seems to be relatively common, although not particularly abundant in the region, and further fieldwork will very likely provide many new species, especially from the Malay Peninsula and the large islands like Borneo,

Sumatra, Java or Celebes. In this paper we describe two new species from the Crocker Range, Sabah. The type material is deposited in the National Museum of Nature and Science, Tokyo, Japan (NSMT) and in the private collection of the first author (PCPJ); the measurements follow the convention used in JAŁOSZYŃSKI, 2006.

Taxonomy

Horaeomorphus absconditus sp. nov.

(Figs. 1, 3, 4)

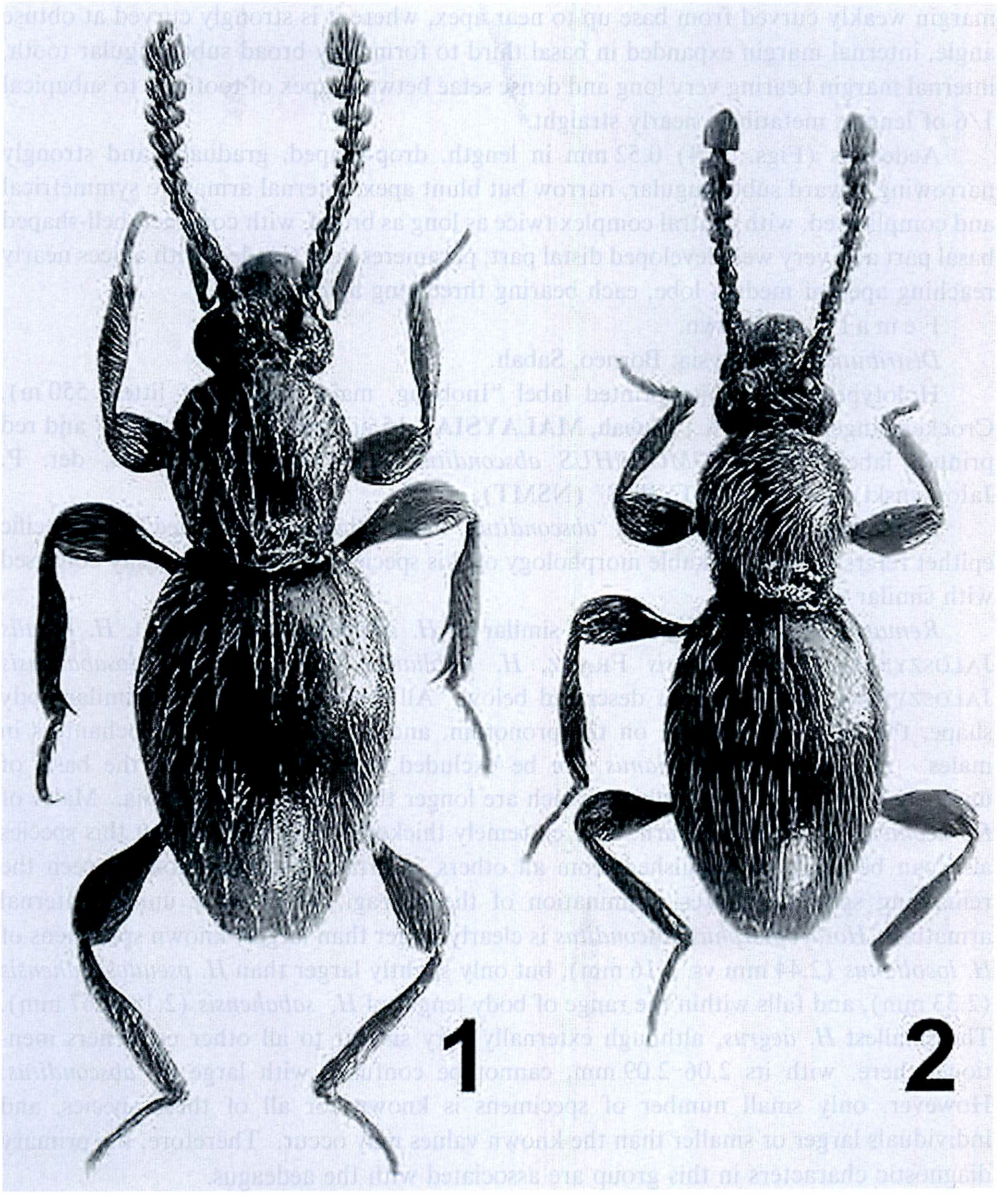
Diagnosis. The following combination of characters can be used to distinguish this species from all other congeners: body length below 2.5 mm; entire dorsum very finely punctate; base of pronotum with distinct transverse groove connecting five small pits; antennomeres I–IV elongate, V–VI as long as broad, VII–X strongly transverse; metatrochanters non-modified; aedeagus with narrow but blunt apex; central complex of aedeagus twice as long as broad, with very well developed distal part.

Description. Body moderately slender, strongly convex, dark brown, covered with vestiture slightly lighter than cuticle.

M a l e (Fig. 1). Body length 2.44 mm. Head widest at moderately convex, large eyes, length 0.37 mm, width 0.51 mm; vertex convex, with a pair of small and moderately deep but very distinct pits each adjacent to postero-interior margin of supraantennal tubercle; tempora short, strongly and nearly regularly rounded; frontoclypeal area strongly convex and relatively narrow; supraantennal tubercles moderately large, strongly raised and distinctly delimited from frons but indistinctly delimited from vertex. Punctation on vertex and frons distinct but composed of very small and sparse punctures; setation moderately long, sparse and suberect to erect. Antennae short and stout, gradually thickened toward apices, length 1.12 mm; antennomeres I–IV each elongate; V–VI each as long as broad; VII–X transverse and gradually broader; XI only 1.2× as long as broad.

Pronotum elongate but relatively stout, broadest near anterior third, length 0.72 mm, maximum width 0.64 mm. Anterior and lateral margins rounded together; very narrow basal collar is delimited from disc by narrow and sharply marked transverse groove with five small but distinct dorsal pits; posterior margin arcuate. Punctation distinct, composed of unevenly distributed small but sharply marked setiferous punctures, in central part of disc separated by spaces 1–4× as long as puncture diameters; setation dense, moderately long, erect and directed posteriorly.

Elytra oval, broadest distinctly anterior to middle, length 1.35 mm, width 0.95 mm, elytral index (EI; length/width) 1.42. Humeral calli moderately distinct; subhumeral impressions very shallow; small adsutural area on each elytron near anterior fourth is slightly but distinctly flattened; apices of elytra separately rounded. Punctation on flattened area similar to that on pronotum, remaining area on each elytron bears slightly



Figs. 1–2. Habitus of the holotypes (to the same scale). —— 1. *Horaeomorphus absconditus* sp. nov. (length 2.44 mm). —— 2. *Horaeomorphus aegrus* sp. nov. (length 2.09 mm).

smaller, shallower and sparser punctures; setation dense, slightly longer than that on pronotum and slightly more erect. Hind wings well developed.

Legs robust, moderately long; metatrochanters non-modified, with blunt apices; protibiae straight, broadest minimally posterior to middle; mesotibiae with external

margin weakly curved from base up to near apex, where it is strongly curved at obtuse angle, internal margin expanded in basal third to form very broad subtriangular tooth, internal margin bearing very long and dense setae between apex of tooth up to subapical 1/6 of length; metatibiae nearly straight.

Aedeagus (Figs. 3, 4) 0.52 mm in length, drop-shaped, gradually and strongly narrowing toward subtriangular, narrow but blunt apex; internal armature symmetrical and complicated, with central complex twice as long as broad, with compact, bell-shaped basal part and very well developed distal part; parameres very slender, with apices nearly reaching apex of median lobe, each bearing three long apical setae.

F e m a l e. Unknown.

Distribution. Malaysia: Borneo, Sabah.

Holotype male, white printed label "Inobong, main trail, (leaf litter: 550 m), Crocker range, near K. K., **[Sabah, MALAYSIA]**, 15.iii.2006, S. Nomura leg." and red printed label "*HORAEOMORPHUS absconditus* Jałoszyński & Nomura, det. P. Jałoszyński, 2008, HOLOTYPUS" (NSMT).

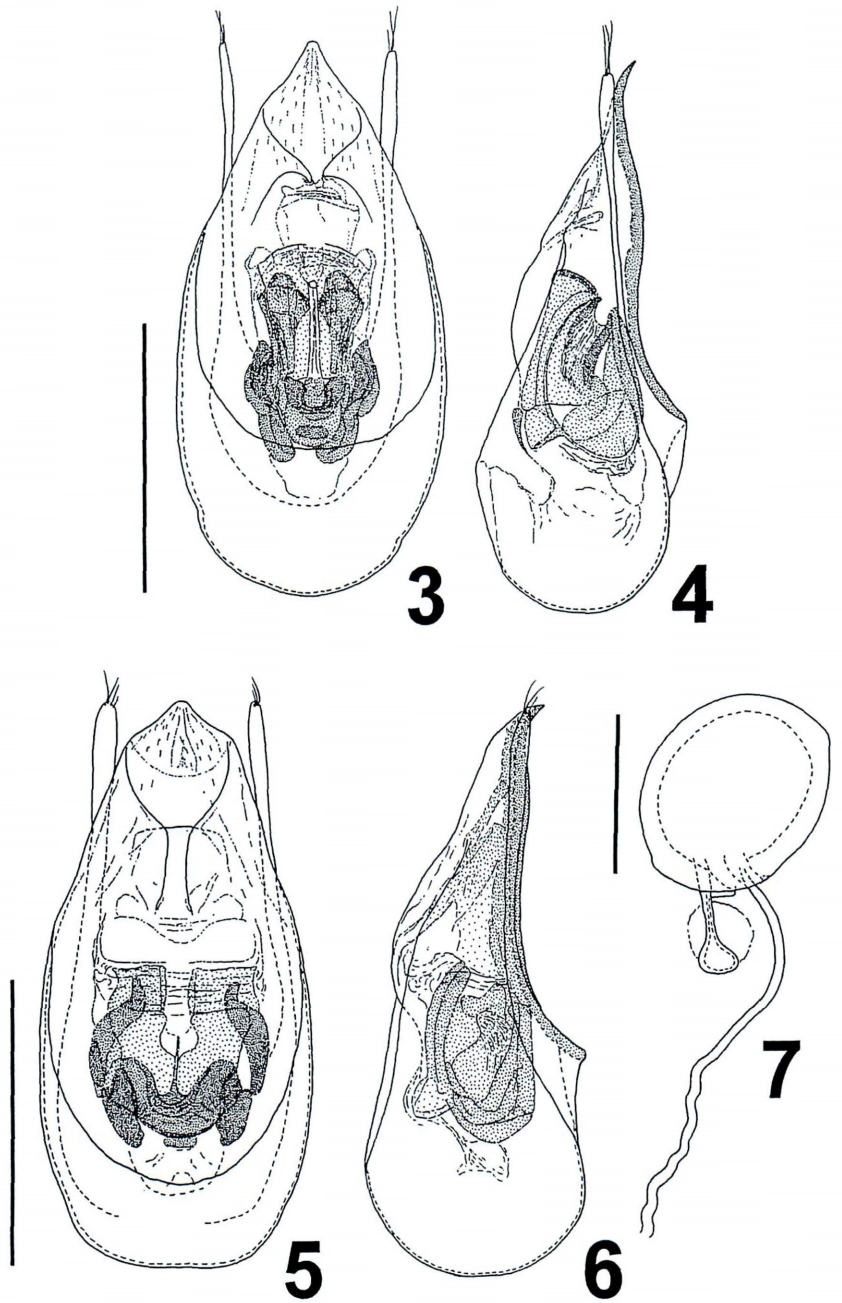
Etymology. The Latin word "*absconditus*" means "hidden, concealed"; the specific epithet refers to unremarkable morphology of this species, which can be easily confused with similar congeners.

Remarks. This species is most similar to *H. ishiianus* JAŁOSZYŃSKI, *H. tibialis* JAŁOSZYŃSKI, *H. sabahensis* FRANZ, *H. loeblianus* FRANZ, *H. pseudosabahensis* JAŁOSZYŃSKI, and *H. aegrus* described below. All these species share a similar body shape, the ante-basal groove on the pronotum, and non-modified metatrochanters in males. *Horaeomorphus ishiianus* can be excluded from this group on the basis of uniquely long setae on mesotibiae, which are longer than half length of tibia. Males of *Horaeomorphus tibialis*, in turn, have extremely thickened protibiae, so that this species also can be easily distinguished from all others. Certain discrimination between the remaining species requires examination of the aedeagi, which have unique internal armature. *Horaeomorphus absconditus* is clearly larger than largest known specimens of *H. loeblianus* (2.44 mm vs. 2.16 mm), but only slightly larger than *H. pseudosabahensis* (2.33 mm), and falls within the range of body length of *H. sabahensis* (2.18–2.67 mm). The smallest *H. aegrus*, although externally very similar to all other congeners mentioned here, with its 2.06–2.09 mm, cannot be confused with large *H. absconditus*. However, only small number of specimens is known for all of these species, and individuals larger or smaller than the known values may occur. Therefore, the primary diagnostic characters in this group are associated with the aedeagus.

Horaeomorphus aegrus sp. nov.

(Figs. 2, 5–7)

Diagnosis. The following combination of characters can be used to distinguish this species from all other congeners: body length about 2 mm; head with dense, deep and very distinct punctures, pronotum and elytra finely punctate; base of pronotum with



Figs. 3–7. Aedeagus in dorsal (3, 5) and lateral (4, 6) views and spermatheca (7). —— 3–4. *Horaeomorphus absconditus* sp. nov. —— 5–7. *Horaeomorphus aegrus* sp. nov. Scale bars: 3–6: 0.25 mm; 7: 0.05 mm.

distinct transverse groove connecting five small pits; antennomeres I–III distinctly elongate, IV–VI barely noticeably longer than broad, VII as long as broad, VIII–X strongly transverse; metatrochanters non-modified; aedeagus with broad and blunt apex; central complex of aedeagus about as long as broad, with darkly sclerotized and loosely assembled basal part and short, much lighter distal part.

Description. Body slender, strongly convex, dark brown, covered with vestiture only slightly lighter than cuticle.

M a l e (Fig. 2). Body length 2.09 mm. Head widest at moderately convex, large eyes, length 0.32 mm, width 0.40 mm; vertex convex, with a pair of small and moderately deep but very distinct pits each adjacent to postero-interior margin of supraantennal tubercle; tempora long, relatively weakly and nearly regularly rounded; frontoclypeal area strongly convex and relatively narrow; supraantennal tubercles large and strongly raised, distinctly delimited from frons but indistinctly delimited from vertex. Punctation on vertex very distinct, composed of unevenly distributed, moderately large but deep and sharply marked punctures separated by spaces 0.5–2× as long as puncture diameters; punctures on frontoclypeal area distinctly shallower, smaller and sparser; setation moderately long, sparse and strongly erect. Antennae short but moderately stout, gradually thickened toward apices, length 0.90 mm; antennomeres I–III distinctly elongate; IV–VI barely noticeably longer than broad; VII as long as broad; VIII–X strongly transverse; XI 1.2× as long as broad.

Pronotum elongate, moderately slender, broadest near anterior third, length 0.62 mm, maximum width 0.55 mm. Anterior and lateral margins rounded together; very narrow basal collar delimited from disc by narrow and sharply marked transverse groove with five small, moderately distinct dorsal pits; posterior margin arcuate. Punctation distinct, composed of unevenly distributed small and very shallow punctures with raised margins, in central part of disc punctures are separated by spaces 2–3× as long as puncture diameters; setation dense, moderately long, erect and directed posteriorly.

Elytra oval, broadest distinctly anterior to middle, length 1.15 mm, width 0.80 mm, EI 1.44. Humeral calli moderately distinct; subhumeral impressions shallow; small adsutural area on each elytron near anterior fourth is slightly but distinctly flattened; apices of elytra separately rounded. Punctation similar to that on pronotum, but composed of slightly smaller and regularly distributed punctures, those on flattened area are separated by spaces about twice as long as puncture diameters; setation dense, slightly longer than that on pronotum and slightly more erect. Hind wings well developed.

Legs robust, moderately long; metatrochanters non-modified, with blunt apices; protibiae nearly straight, broadest minimally anterior to middle; mesotibiae with external margin weakly curved from base up to near apex, where it is very strongly curved at obtuse angle, internal margin expanded in basal third to form very broad, rounded expansion, internal margin bearing moderately long and dense setae between broadest place up to subapical 1/4–1/5 of length; metatibiae nearly straight.

Aedeagus (Figs. 5, 6) 0.50 mm in length, drop-shaped, gradually and strongly narrowing toward subtriangular, broad and blunt apex; internal armature symmetrical and relatively simple, with central complex about as long as broad, with loosely assembled, bell-shaped basal part and lightly sclerotized, weakly developed distal part; parameres slender, with apices nearly reaching apex of median lobe, each bearing 3–4 moderately long apical setae.

F e m a l e. Very similar to male, but with slightly broader elytra; body length 2.06 mm, length of head 0.32 mm, width 0.40 mm, length of antennae 0.92 mm, length of pronotum 0.62 mm, maximum width 0.62 mm, length of elytra 1.12 mm, width of elytra 0.80 mm, EI 1.40.

Spermatheca (Fig. 7) 0.07 mm in length, globular, moderately thick-walled, with approximate insertions of accessory gland and ductus spermathecae.

Distribution. Malaysia: Borneo, Sabah.

Holotype male, white printed label "Inobong, main trail, (leaf litter: 550 m), Crocker range, near K. K., [**Sabah, MALAYSIA**], 15.iii.2006, S. Nomura leg." and red printed label "*HORAEOMORPHUS aegrus* Jałoszyński & Nomura, det. P. Jałoszyński, 2008, HOLOTYPUS" (NSMT). Paratype: female, same data as for the holotype, but with yellow "PARATYPUS" label (PCPJ).

Etymology. This species is very similar to *H. sabahensis* and allied congeners, but it has a distinctly smaller body, as if in a result of illness, which is reflected by the specific epithet "*aegrus*", in Latin meaning "ill, diseased, unwell".

Remarks. See remarks for *H. absconditus*.

Acknowledgments

We express our sincere thanks to Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for his kind critical reading of the manuscript. The second author is also indebted to Dr. Maryati MOHAMED (Institute for Tropical Biology and Conservation: ITBC, University Malaysia Sabah), Dr. Yoshiaki HASHIMOTO and Dr. Hiroaki ISHIDA (Museum of Nature and Human Activities, Hyogo) for their kind assistance extended to his fieldwork in Sabah.

要　　約

Paweł JAŁOSZYŃSKI・野村周平：マレーシア，サバ産トゲアシオオコケムシ属（コウチュウ目コケムシ科）の2新種．—— マレーシア東部からトゲアシオオコケムシ属の2新種，*Horaeomorphus absconditus* と *H. aegrus* を記載した．これらはサバ州クロッカー山脈から得られたものである．両種の全形，雄交尾器および後者の種の貯精嚢を図示した．

References

JAŁOSZYŃSKI P., 2006. Revision of *Horaeomorphus* SCHAUFUSS (Coleoptera, Scydmaenidae) of East Malaysia, Singapore and Sunda Islands. *Genus, Wrocław,* **17**: 19–66.

JAŁOSZYŃSKI P., S. NOMURA & IDRIS, A. G. 2007. A new *Horaeomorphus* from the Malay Peninsula. *Elytra, Tokyo,* **35**: 307–311.

Elytra, Tokyo, **36**(1): 166, May 30, 2008

A New Record of *Malthinus nakanishii* (Coleoptera, Cantharidae) from Minamidaitô Is., Southwest Japan

Kazuhiro TAKAHASHI

239–11 Nagamochi, Hiratsuka, 259–1217 Japan

Malthinus nakanishii TAKAHASHI, 2006 is a remarkable species first described from Kitadaitô Is., Southwest Japan. Up to the prestnt, this has been the sole known locality. Recently, I had an opportunity to examine a specimen collected on Minamidaitô Is., which almost coincides with the present species. After a careful examination I have concluded that this specimen from Minamidaitô Is. perfectly agrees with the specimens from Kitadaitô Is. The following locality is a second known place of occurrence of this rare species.

Material examined. 1 ♂, East coast of Minamidaitô Is., Okinawa Pref., 10–IV–2007, M. NAKANISHI leg.

Distribution. Japan. (Kitadaitô Is. and Minamidaitô Is.)

Finally, I wish to express my hearty thanks to Messrs. Motoo NAKANISHI of Matsusaka and Hiroshi OTOBE of Tsu for their kindness in providing me the opportunity to examine the above-mentioned specimen.

Reference

TAKAHASHI, K., 2006. A new species of the genus *Malthinus* (Coleoptera, Cantharidae) from Kitadaitô Island far off southwest Japan. *Elytra, Tokyo*, **34**: 353–356.

Elytra, *Tokyo*, **36**(1): 167–180, May 30, 2008

Contributions to the Knowledge of the "*Staphylinus*-complex" (Coleoptera, Staphylinidae, Staphylinini) of China.

Part 17. The Genus *Ocypus* LEACH, 1819, Subgenus *Pseudocypus* MULSANT & REY, 1876. Section 2

Aleš SMETANA

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Abstract The paper deals with the species of the subgenus *Pseudocypus* from the People's Republic of China. It contains corrections and additions to the section 1 published recently, additional records and/or comments for several species described in section 1, and presents descriptions of the following four new species: *Ocypus nabis* (Yunnan), *O. nigror* (Sichuan), *O. bicolor* (Sichuan), *O. caelestis* (Sichuan).

Introduction

This is the seventeenth of a series of papers dealing with the genera of the "*Staphylinus*-complex" (see SMETANA & DAVIES, 2000) of the People's Republic of China. It treats additional new species of the subgenus *Pseudocypus* that became available after the main section 1 was published, or that were subsequently assigned to the subgenus. It also presents additional records and/or comments for several species described in section 1 (SMETANA, 2007) and corrects some omissions (mostly additional paratypes that were labelled as such and partly already distributed) and additions that due to a computer glitch failed to appear in the final version of the paper.

The symbols used in the text, when referring to the depositions of specimens are as follows:

ASC Collection of Aleš SMETANA, Ottawa, Canada
MSC Collection of Michael SCHÜLKE, Berlin, Germany
VGC Collection of Volker GOLKOWSKI, Oelsnitz i.V., Germany

The number of paratypes is given for each locality behind the geographical data, followed by the symbol of the collection in which the paratype(s) are deposited in brackets. All data are presented in full for holotypes and allotypes.

Corrections to Section 1 of *Pseudocypus*

1. "Part XX" in the title should have been Part 15. I apologize for this difficult to explain blooper. The paper is correctly numbered as fifteenth in the Introduc-

tion.

2. *Ocypus* (*Pseudocypus*) *zetes* (list of paratypes on page 11):
Line 4 from above, change 6 ♀♀ to 7 ♀♀; add: same data as allotype, but 2300 m, 30°22.451′N 102°15.644′E, 15.VII.2004 M. Janata leg., 3 ♂♂, 2 ♀♀ (ASC).
Line 7 from above, change 4 ♂ ♂ to 12 ♂♂, 4 ♀♀.
3. *Ocypus* (*Pseudocypus*) *laelaps* (list of paratypes on pages 12 and 13):
page 12:
Last line from bottom, insert after semicolon: Lixian env., cca 1500 m, 31°26.920′ N 103°10. 381′E, 16.–17.V.2005, R. Sehnal & M. Trýzna, 3 ♂♂, 1 ♀ (MSC).
Last line from bottom, after coordinates, change 3251 m, 18.6.2005 into 3250 m or 3251 m, 18.–22.V.2005, or 18.6.2005.
Page 13:
Line 1 from above, change 58 ♂♂, 26 ♀♀ into 69 ♂♂, 28 ♀♀.
Line 3 from above, change 22 into 27.
4. *Ocypus* (*Pseudocypus*) *sarpedon* (list of paratypes on page 13):
Line 3 from bottom, insert after the end of paragraph: Str. v. Pingwu nach Nanping, Maoniu Shan, Nordseite, 2950–3000 m, 29.V.–5.VI.2006, I. A. Puchner, 7 ♂♂, 4 ♀♀ (ASC, NMW).
Page 14
Line 18 from above, change Erlang Shan into Erlang Shan and Maoniu Shan.
5. *Ocypus* (*Pseudocypus*) *scaevola* (list of paratypes on page 20):
Line 20 from above, add after first entry: Daxue Shan, N of San Ya, 4300 m, 28°47.711′N 101°58.875′E, 6.–12.VI.2005, leg. R. Sehnal & M. Trýzna, 11 ♂♂, 8 ♀♀ (ASC, MSC); same data, but 3040 m, 28°45.3N 101°579′E, 5 ♂♂ (ASC, MSC); same data, but 2720 m, 28°43.374′N 101°56.972′E, 2 ♀♀ (ASC, MSC);
Line 21 from above, change 3561 m Häckel & Sehnal, ♂ (ASC) into 3581 m Häckel & Sehnal, 4 ♂♂, 2 ♀♀ (ASC, MSC).
6. *Ocypus* (*Pseudocypus*) *hecato* (list of paratypes on page 21):
Line 2 from bottom, change 5 ♂♂ (ASC) into 13 ♂♂, 2 ♀♀ (ASC, MSC).
7. *Ocypus* (*Pseudocypus*) *itys* (list of paratypes on page 34):
Line 21 from bottom, add after first entry: Str. von Maoxian n. Beichuan, Berg östlich von Maoxian 1900–2350 m, 27.V.–3.VI.2006, I. A. Puchner, 2 ♂♂ (ASC, NMW).
8. *Ocypus* (*Pseudocypus*) *pammenes* (list of paratypes on page 37):
Line 11 from bottom, add after the holotype entry: Allotype (female): **CHINA**: "CHINA: Sichuan Monggo-gou, 53 km NW Lixian 2800 m, 9.VIII.2002, Murzin & Shokhin" (MSC).
Paratype: **Sichuan**: same data as allotype, 1 ♂ (ASC).
Line 2 from above, change Female. Unknown into: Female. Tergite 10 of genital segment wide, markedly attenuated into narrow, acute apical portion, with numerous long setae on apical portion.
9. *Ocypus* (*Pseudocypus*) *gorgias*:

Line 16 from above, add new paragraph:
Paratype: **Sichuan**: same data as holotype, 1 ♂ (MSC).

10. *Ocypus* (*Pseudocypus*) *teuthras* (list of paratypes on page 43):
Line 7 from top, add after the holotype entry: Allotype (female): same data as holotype, but 3000 m, 28°13.026N 101°44.613E (ASC).
Line 8 from top, change 2 ♂♂ into 4 ♂♂, and add: same data as allotype, 6 ♂♂ (ASC, MSC); same data as holotype, but 3350 m, 1 ♂ (ASC);
Line 12 from bottom, change Female. Unknown into: Female. Tergite 10 of genital segment wide, markedly narrowed toward slightly differentiated, acute apical portion, with numerous long setae on apical portion.

Account of Species

Ocypus (*Pseudocypus*) *laelaps* SMETANA

Ocypus laelaps SMETANA, 2007, 12

New records. [Sichuan]: Li Xian Miyaluo N. R. Danzhamu valley, 3250 m [on some labels only], 31°23.902′N 103°14.827′E, 18.–22.V.2005, Sehnal & Trýzna [35] (ASC, MSC).

Comments. These are additional specimens from the Miyaluo Natural Reserve in Danzhamu valley. The species seems to be quite abundant in the Reserve.

Ocypus (*Pseudocypus*) *scaevola* SMETANA

Ocypus scaevola SMETANA, 2007, 20

New records. [Sichuan]: Daxue Shan mts., N of San Ya, 2720 m, 28°43.374′N 101°56.972′E, 2720 m, 6.–12.6.2006, R. Sehnal & M. Trýzna leg. [5] (ASC, MSC).

Comments. These are additional specimens from the type locality of the species.

Ocypus (*Pseudocypus*) *hecato* SMETANA

Ocypus hecato SMETANA, 2007, 21

New records. [Sichuan]: 20 km N Sabdê, 3200 m, 29°35′N 102°23′E, 11.VII.1998 [C77], 12.VII.1998 [C78], 13.VII.1998 [C80], 15.VII.1996 [C83], A. Smetana, [5] (ASC); Sabde, 3400 m, 29°04′N 101°25′E, 25.6.2001, M. Janata leg. [26] (ASC); Mts. ca. 20 km NNW Sabdê, 2000–3500 m, 18.–26.6.1994, forest, J. Kaláb leg. [10] (NMW); pass Zheduo Shankou W Kangding, W slope, 4000 m, 29°58′N 101°47′E, 17.VII.1998, A. Smetana [C84] [1] (ASC).

Comments. Most specimens of this species were collected in the wider vicinity of Sabdê. The occurrence at Zheduo Shankou extends the distributional range of this species northwards.

Ocypus (*Pseudocypus*) *teuthras* SMETANA

Ocypus teuthras SMETANA, 2007, 43

New records. [Sichuan]: Jinping Shan, W Mofanggou, 3350 m, 28°12.983′N 101°44.285′E, 28.V.–4.VI.2005, leg. R. Sehnal & R. Trýzna [5] (ASC, MSC); same, 3000 m, 28°13.026′N 101°44.613′E, [5] (ASC, MSC); same, 3850 m, 28°13.098′N 101°43.236′E, [4] (ASC, MSC).

Comments. These are additional specimens from the type locality. They are markedly larger than the specimens of the original series. They were originally set aside as possibly different, but except for larger size, there are no other external or aedoeagal differences to support the separation of these specimens. The largest specimen reaches 19.0 mm, the length for *O. teuthras* should therefore be corrected to 13.0–19.0 mm.

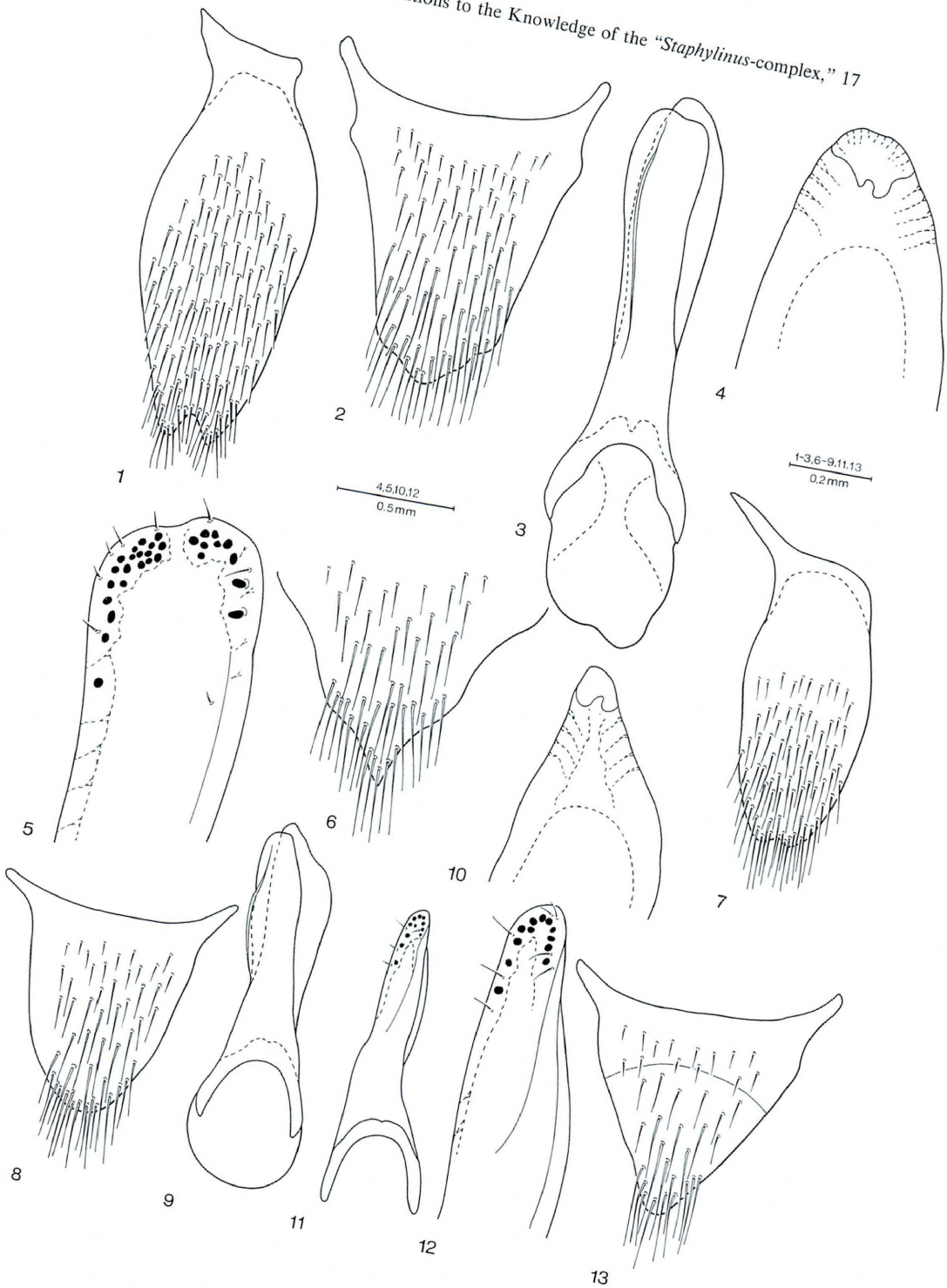
Ocypus (*Pseudocypus*) *nabis* sp. nov.

(Figs. 1–6)

Diagnosis. A medium-sized to large species with testaceo-rufous to rufous legs, uniformly dark pubescence of dorsal side of the body, with dense punctation of both the head and pronotum, lacking the impunctate medial line on the head, and with characteristic aedoeagus.

Description. Entirely black, rather dull; maxillary and labial palpi rufobrunneous, antennae brunneous, becoming variably darker toward apex; legs testaceo-rufous to rufous, pubescence of dorsal side of body uniformly piceous-black. Head of rounded quadrangular shape, with rounded posterior angles, wider than long (ratio 1.38); eyes small and rather flat, tempora considerably longer than eyes from above (ratio 2.68), dorsal surface of head densely, finely punctate and pubescent, interspaces between punctures on disc slightly larger than diameters of punctures, punctation gradually becoming denser toward posterior and lateral margins; impunctate midline absent; interspaces between punctures with fine submeshed microsculpture. Gular sutures rather widely separated; postgenae densely punctate, interspaces between punctures near gular sutures about as large as diameters of punctures. Dorsal side of neck with punctation similar to that on head. Antenna moderately long, segment 3 longer than segment 2 (ratio 1.40), segments 4 to 7 longer than wide, becoming gradually shorter, outer segments about as long as wide, last segment shorter than two preceding segments

Figs. 1–13. —— 1–6. *Ocypus nabis*: 1, sternite 9 of male genital segment; 2, tergite 10 of male genital segment; 3, aedoeagus, ventral view; 4, apical portion of median lobe, ventral view, paramere removed; 5, apical portion of underside of paramere; 6, apical portion of tergite 10 of female genital segment. —— 7–13. *Ocypus nigror*: 7, sternite 9 of male genital segment; 8, tergite 10 of male genital segment; 9, aedoeagus, ventral view; 10, apical portion of median lobe, ventral view, paramere removed; 11, underside of paramere; 12, apical portion of underside of paramere; 13, tergite 10 of female genital segment.


1
2
3
4
4,5,10,12
0.5mm
1-3,6-9,11,13
0.2mm
5
6
10
7
8
9
11
12
13

combined. Pronotum vaguely longer than wide (ratio 1.14), almost parallel-sided, narrow marginal groove disappearing downwards just in front of middle of pronotal length; disc with fine, entire impunctate midline; punctation on disc about same as that on head, pubescence and microsculpture on interspaces between punctures similar to that on head. Pronotal hypomeron lacking microsetae. Scutellum finely punctate and setose, surface with very fine, rudimentary microsculpture. Elytra short, moderately depressed at base, hardly dilated posteriad, at suture considerably (ratio 0.50), at sides distinctly (ratio 0.75) shorter than pronotum at midline; punctation fine and dense, difficult to observe among dense granulose microsculpture. Wings each reduced to minute, non-functional stump. Abdomen with fifth visible tergite lacking pale apical seam of palisade setae; tergite 2 (in front of first visible tergite) entirely, very densely and finely punctate and pubescent; all tergites evenly, very finely and densely punctate, punctation gradually becoming vaguely sparser toward apex of abdomen; interspaces with very fine, dense microsculpture of irregular, short striae.

M a l e. Sternite 8 with moderately wide and deep, obtusely triangular medioapical emargination. Genital segment with sternite 9 densely setose, with very short basal portion, apical portion with apex emarginate (Fig. 1). Tergite 10 markedly narrowed toward arcuate apex, with slightly differentiated apical portion, setose as in Fig. 2. Aedoeagus shaped as in Figs. 3–5; median lobe slightly asymmetrical, apex slightly irregularly obtuse; apical portion, when paramere removed, with characteristic formation (Fig. 4); paramere situated on median lobe asymmetrically, shaped as in Figs. 3, 5, with distinct, arcuate carina on face away from median lobe, apex of paramere irregularly obtuse, vaguely notched around middle, not quite reaching apex of median lobe; sensory peg setae on underside of paramere situated as in Fig. 5; apical setae minute, situated as in Fig. 5.

F e m a l e. Genital segment with tergite 10 large, of characteristic shape, markedly narrowed toward acute apex, setose as in Fig. 6.

Length 14.0–19.0 mm (see Comments).

Type material. Holotype (male): China: "CH. NW-Yunnan (LIJIANG) YULONGXUE SHAN, W-slope betw. BAIHANCHAN/TUGUANCUN 27 : 04N/100 : 11E/3900–4200 m alpine meadows/scree 4.VII.1998 B. Březina (No. 2)".

Allotype: China: "China, Yunnan, 1990 Yulongshan, 4000 m Lijiang, 7.–11.8., L.+R. Businský lgt.". Both holotype and allotype in the SMETANA collection, Ottawa, Canada.

Paratypes: [Yunnan]: same data as holotype, 2 ♂♂ (ASC); Yulongshan mts. GANHAIZI pass, 27°06′N 100°15′E 3000–3500 m 18.–23.VII.1990, Vít Kubáň leg., 2 ♀♀ (NMB); 27. May 1993 YULONG MTS., 4000 m, 27.02N 100.11E, Bolm lgt., 1 ♂, 2 ♀♀ (ASC, NMB); 16.–19. Jun. 1993 YULONG Mts. 27.10N 100.13E 3900 m, Bolm lgt., 1 ♂, 1 ♀ (NMB); 20–21 Jun 1993 YULONG Mts. 27.07N 100.13E 3400 m, Bolm lgt., 1 ♀ (NMB); 24–26 May 1993 YULONG MTS. 27.01N 100.12E, 3200 m, Bolm lgt., 1 ♂ (NMB); Yulongshan (Lijiang), 7–11.8.1990 L.+R. Businský lgt., 1 ♀ (ASC); N-Yunnan, Lijiang env., 2600 m, 26.VI.1996, leg. S. Murzin, 5 ♂♂ (ASC, MSC);

Yunnan Baishui 28.6.1996 Emil Kučera lg., 1 ♂ (ASC); HABASHAN mts. E-slope, 3000–3800 m, 127.20N 100.09E, 13–17/7. 92, Vít Kubáň leg., 1 ♀ (NMB).

Geographical distribution. *Ocypus nabis* is at present known from Yulongxueshan in northwestern Yunnan; it is very likely endemic to this mountain range.

Bionomics. The specimens of the original series were taken from pitfall traps, but nothing is known about the habitat the traps were set in.

Recognition and comments. The specimens of the original series vary considerably in size (see above). Large specimens of *O. nabis* are the largest specimens of the Chinese *Pseudocypus* species with red appendages and with the pronotal hypomeron lacking miscrosetae. The smaller specimens may resemble several species, but they can be separated from them by the different shape of the aedoeagus and by the geographical separation.

The locality "Habashan mts." refers apparently to the Haba Xueshan, which is the neighboring massive just west of Yulongshan. I was not able to locate the locality "Baishui".

Ocypus (*Pseudocypus*) *nigror* sp. nov.

(Figs. 7–13)

Diagnosis. A small to medium sized, entirely deep black species with black appendages, lacking microsetae on pronotal hypomeron, with characteristically shaped aedoeagus.

Description. Entirely deep black, moderately dull; maxillary and labial palpi piceous, apices of last segments of both paler, remaining appendages entirely black, pubescence of dorsal side of body uniformly deep black. Head of rounded quadrangular shape, with rounded posterior angles, distinctly wider than long (ratio 1.25); eyes small, flat, tempora considerably longer than eyes from above (ratio 2.72), dorsal surface of head finely, moderately densely punctate and pubescent, interspaces between punctures on disc markedly larger than diameters of punctures, punctation gradually becoming denser toward posterior and lateral margins; fine impunctate midline present on posterior two-thirds of head length; interspaces between punctures with fine and dense meshed microsculpture. Gular sutures rather widely separated; postgenae sparsely punctate, interspaces between punctures near gular sutures much larger than diameters of punctures. Dorsal side of neck with punctation somewhat denser than that on head. Antenna moderately long, segment 3 longer than segment 2 (ratio 1.30), segments 4 to 7 longer than wide, becoming gradually shorter, outer segments about as long as wide to slightly wider than long, last segment shorter than two preceding segments combined. Pronotum about as long as wide, almost parallel-sided, narrow marginal groove disappearing downwards at anterior third of pronotal length; disc with fine, entire impunctate midline; punctation on disc about same as that on head, pubescence and microsculpture on interspaces between punctures similar to that on head. Pronotal hypomeron lacking microsetae. Scutellum finely punctate and setose, surface with very fine, rudimentary

microsculpture. Elytra short, moderately depressed at base, hardly dilated posteriad, at suture considerably (ratio 0.58), at sides distinctly (ratio 0.77) shorter than pronotum at midline; punctation fine and dense, difficult to observe among dense granulose microsculpture. Wings each reduced to minute, non-functional stump. Abdomen with fifth visible tergite lacking pale apical seam of palisade setae; tergite 2 (in front of first visible tergite) entirely, densely and finely punctate and pubescent; all tergites evenly, finely and densely punctate, punctation gradually becoming sparser toward apex of abdomen; interspaces with very fine, dense microsculpture of irregular, short striae.

M a l e. Sternite 8 with rather shallow and narrow, obtusely triangular medioapical emargination. Genital segment with sternite 9 densely setose, with short basal portion, apical portion with apex minutely notched (Fig. 7). Tergite 10 markedly, evenly narrowed toward arcuate apex, setose as in Fig. 8. Aedoeagus shaped as in Figs. 9–12; median lobe markedly asymmetrical, with subacute apex (Fig. 8); paramere situated on median lobe asymmetrically, shaped as in Figs. 9, 11, with distinct, arcuate carina on face away from median lobe, apex of paramere obtuse, not quite reaching apex of median lobe; sensory peg setae on underside of paramere not numerous, situated along each lateral margin of apical portion and connected at apex of paramere (Figs. 11, 12); apical setae very fine to minute, situated as in Fig. 12.

F e m a l e. Genital segment with tergite 10 large, markedly narrowed toward narrowly arcuate apex, apical portion strongly sclerotized (Fig. 13).

Length 11.0–15.0 mm.

Type material. Holotype (male) and allotype (female): China: "CHINA: W-Sichuan W Zhier (Zi'er), 28°20.886′N 101°28.361′E, 5.VI.2006 R. Sehnal & M. Trýzna". Holotype in the SCHÜLKE collection, Berlin, Germany. Allotype in the SMETANA collection, Ottawa, Canada.

Paratypes: [Sichuan]: same data as holotype, 41 specimens of both sexes (ASC, MSC); same data as holotype, but 4118 m, 28°20.502′N 101°28.014′E, 15 specimens of both sexes (ASC, MSC, VGC); same data as holotype, but 4241 m, 28°20.886′N 101°28.361′E, 24 specimens of both sexes (ASC, MSC, VGC); same data as holotype, but 3500 m, between GPS pnts N28.22.293′E101.32.701′N28.21.113′E101.29.384′, 04–07.VI.2006, 9 specimens of both sexes (ASC, MSC, VGC).

Geographical distribution. *Ocypus nigror* is at present known only from the type locality in southwestern Sichan.

Bionomics. The specimens of the original series were taken from pitfall traps, but in most cases nothing is known about the habitat the traps were set in, except for some that were in an "alpine forest".

Recognition. *Ocypus nigror* may be easily recognized by the deep black body color, in combination with the black appendages, the small to medium body size, the asetose pronotal hypomeron, and the shape of the aedoeagus.

Etymology. The specific epithet is the Latin noun *nigror*, *-oris*, m. (black color) in apposition. It refers to the coloration of the species.

Ocypus (*Pseudocypus*) *bicolor* sp. nov.

(Figs. 14–19)

Diagnosis. Small to medium-sized, bicolored species with reddish-brown head and pronotum and piceous elytra and abdomen, with pronotal hypomeron lacking microsetae, and with quite characteristically shaped aedoeagus.

Description. Head and pronotum reddish-brown, elytra and abdomen piceous to piceous-black, surface moderately dull; maxillary and labial palpi brown, antennae brownish-piceous, with first three segments more or less paler, legs brownish-piceous to piceous with slightly paler tarsi; pubescence of dorsal side of body uniformly piceous. Head of rounded quadrangular shape, with rounded posterior angles, distinctly wider than long (ratio 1.33); eyes small, flat, tempora considerably longer than eyes from above (ratio 2.56), dorsal surface of head finely, densely punctate and pubescent, interspaces between punctures on disc about equally large as diameters of punctures, punctation gradually becoming denser toward posterior and lateral margins; impunctate midline indistinct, traceable only on posterior half of head length; interspaces between punctures with fine and dense meshed microsculpture. Gular sutures widely separated; postgenae moderately densely punctate, interspaces between punctures near gular sutures about as large as diameters of punctures. Dorsal side of neck with punctation denser than that on head. Antenna moderately long, segment 3 longer than segment 2 (ratio 1.20), segments 4 to 8 longer than wide, becoming gradually shorter, outer segments about as long as wide, last segment shorter than two preceding segments combined. Pronotum about as long as wide to vaguely longer than wide (ratio 1.10), almost parallel-sided, narrow marginal groove disappearing downwards just in front of middle of pronotal length; disc with fine impunctate midline disappearing toward anterior margin of pronotum; punctation on disc about same as that on head, pubescence and microsculpture on interspaces between punctures similar to that on head. Pronotal hypomeron lacking microsetae. Scutellum finely punctate and setose, surface with very fine, rudimentary microsculpture. Elytra short, moderately depressed at base, hardly dilated posteriad, at suture considerably (ratio 0.54), at sides distinctly (ratio 0.74) shorter than pronotum at midline; punctation very fine and dense, difficult to observe among dense granulose microsculpture. Wings each reduced to minute, non-functional stump. Abdomen with fifth visible tergite lacking pale apical seam of palisade setae; tergite 2 (in front of first visible tergite) entirely, densely and finely punctate and pubescent; all tergites finely and densely punctate, punctation gradually becoming sparser toward apex of abdomen; interspaces with very fine, dense microsculpture of irregular, short striae.

M a l e. Sternite 8 with rather wide, shallow, obtusely triangular medioapical emargination. Genital segment with sternite 9 elongate, parallel-sided, densely setose, with short basal portion, apical portion with apex markedly emarginate (Fig. 14). Tergite 10 rather short, evenly narrowed toward arcuate apex, setose as in Fig. 15. Aedoeagus large, elongate, shaped as in Figs. 16–18; median lobe largely parallel-sided,

narrowed into slender, acute apical portion (Fig. 16); paramere situated on median lobe asymmetrically, with slightly asymmetrical apical portion, with distinct, arcuate carina on face away from median lobe, apex of paramere narrowly obtuse, situated markedly below apex of median lobe; sensory peg setae on underside of paramere forming solid apical field, extended somewhat posteriad along each lateral margin of apical portion (Figs. 17, 18); apical setae very fine to minute, situated as in Fig. 18.

F e m a l e. Genital segment with tergite 10 large, markedly narrowed toward distinctly differentiated acute apical portion, apical portion of tergite strongly sclerotized (Fig. 19).

Length 13.0–17.0 mm.

Type material. Holotype (male) and allotype (female): China: "CHINA : W-Sichuan W Zhier (Zi'er), 2866 m, 2.–3.VI.2006, 28° 22.293′N 101° 32.701′E R. Sehnal & M. Trýzna". Both holotype and allotype in the SCHÜLKE collection, Berlin, Germany.

Paratype: [Sichuan]: same data as holotype, 1 ♂ (ASC).

Geographical distribution. *Ocypus bicolor* is known only from the type locality in western Sichuan.

Bionomics. The specimens of the original series were taken from pitfall traps, but nothing is known about the habitat the traps were set in.

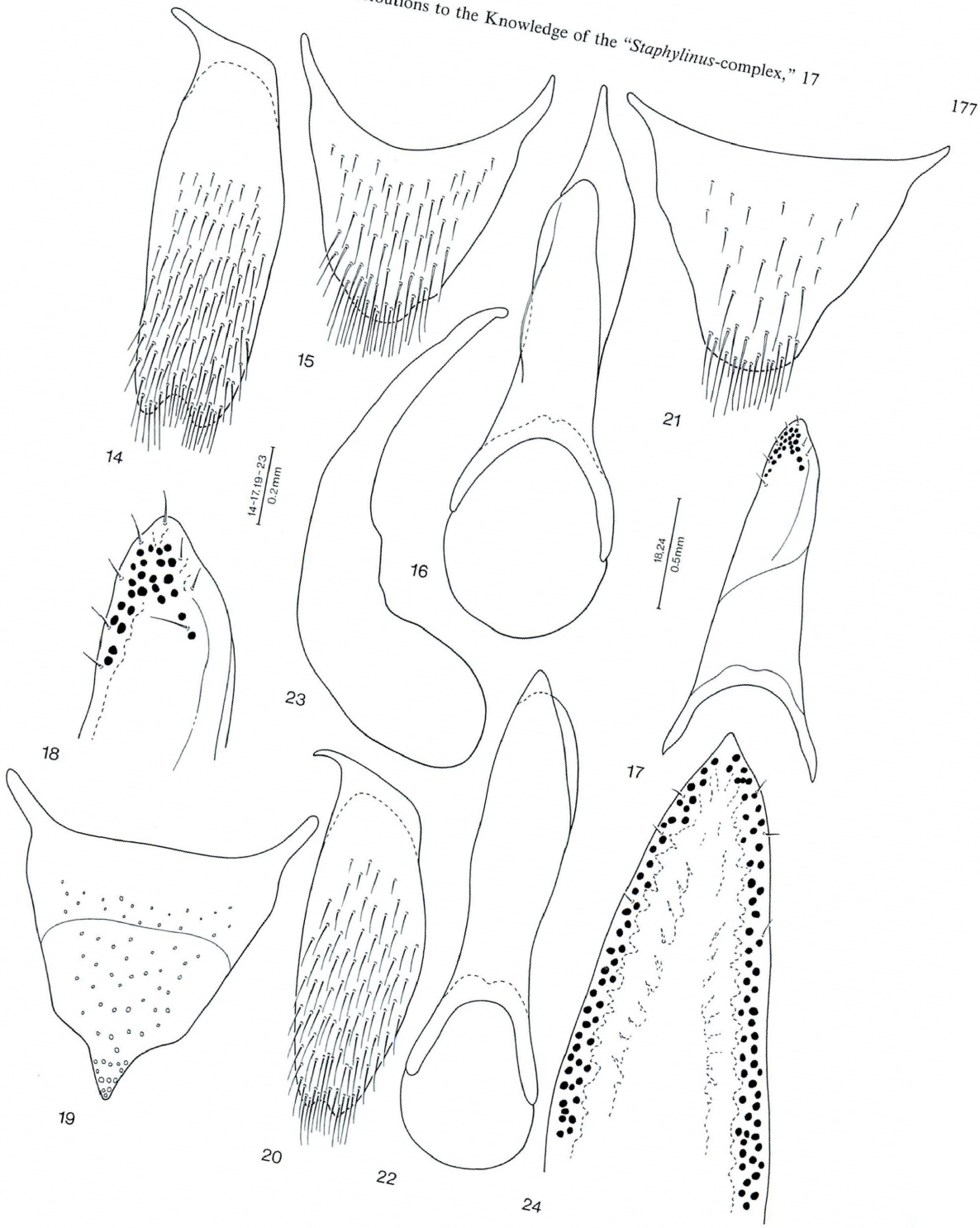
Recognition and comments. *Ocypus bicolor* may be easily recognized by the bicolored body (see the description), in combination with the quite characteristically shaped aedoeagus. It cannot be confused wih any other Chinese species of the subgenus *Pseudocypus*.

The specimens of the original series were obviously exposed to the fluids of the traps for extended period of time, which affected the pubescence of both the allotype and paratype (largely missing on abdomens). In addition, the allotype broke into several parts that were put together on a plate, left antenna is missing the last two, the right one the last four, outer segments. The paratype is missing segments 6–11 of both antennae.

The setation of tergite 10 of the female genital segment (allotype) is entirely absent, the position of the setae is therefore marked by their insertion points in Fig. 19.

Etymology. The specific epithet is the Latin adjective *bicolor, -oris* (bicolored). It refers to the coloration of the body of the species.

Figs. 14–24. —— 14–19. *Ocypus bicolor*: 14, sternite 9 of male genital segment; 15, tergite 10 of male genital segment; 16, aedoeagus, ventral view; 17, underside of paramere; 18, apical portion of underside of paramere; 19, tergite 10 of female genital segment with insertion points of setae. —— 20–24. *Ocypus caelestis*: 20, sternite 9 of male genital segment; 21, tergite 10 of male genital segment; 22, aedoeagus, ventral view; 23, aedoeagus, lateral view, paramere removed; 24, apical portion of underside of paramere.


14
15
16
17
18
19
20
21
22
23
24
14-17.19-23
0.2mm
18.24
0.5mm

Ocypus (*Pseudocypus*) *caelestis* sp. nov.

(Figs. 20–24)

Diagnosis. Small, deep black species with blue head and pronotum and black appendages, lacking microsetae on pronotal hypomeron, with characteristically shaped aedoeagus.

Description. Deep black with blue head and pronotum, moderately dull; maxillary and labial palpi piceous, apices of last segments of both paler, remaining appendages entirely black, pubescence of dorsal side of body uniformly deep black. Head of rounded quadrangular shape, with rounded posterior angles, distinctly wider than long (ratio 1.32); eyes small, flat, tempora considerably longer than eyes from above (ratio 2.38), dorsal surface of head finely, densely punctate and pubescent, interspaces between punctures on disc slightly larger than diameters of punctures, punctation gradually becoming denser toward posterior and lateral margins; impunctate midline indistinct, traceable only on posterior half of head length; interspaces between punctures with fine and dense meshed microsculpture. Gular sutures quite narrowly separated; postgenae finely, moderately densely punctate, interspaces between punctures near gular sutures about slightly larger than diameters of punctures. Dorsal side of neck with punctation slightly denser than that on head. Antenna moderately long, segment 3 longer than segment 2 (ratio 1.18), segments 4 to 8 longer than wide, becoming gradually shorter, outer segments about as long as wide, last segment shorter than two preceding segments combined. Pronotum slightly longer than wide (ratio 1.13), almost parallel-sided, narrow marginal groove disappearing downwards just in front of middle of pronotal length; disc with fine, entire impunctate midline; punctation on disc about same as that on head, pubescence and microsculpture on interspaces between punctures similar to that on head. Pronotal hypomeron lacking microsetae. Scutellum finely punctate and setose, surface with very fine, rudimentary microsculpture. Elytra short, moderately depressed at base, hardly dilated posteriad, at suture considerably (ratio 0.61), at sides distinctly (ratio 0.76) shorter than pronotum at midline; punctation very fine and dense, difficult to observe among dense granulose microsculpture. Wings each reduced to minute, non-functional stump. Abdomen with fifth visible tergite lacking pale apical seam of palisade setae; tergite 2 (in front of first visible tergite) entirely, densely and finely punctate and pubescent; all tergites finely and densely punctate, punctation gradually becoming sparser toward apex of abdomen; interspaces with very fine, dense microsculpture of irregular, short striae.

M a l e. Sternite 8 with wide, rather shallow, obtusely triangular medioapical emargination. Genital segment with sternite 9 elongate, subparallel-sided, densely setose, with small, short basal portion, apical portion with almost semicircular, medioapical emargination (Fig. 20). Tergite 10 rather short, narrowed toward widely arcuate apex, setose as in Fig. 21. Aedoeagus large, elongate, shaped as in Figs. 22–24; median lobe largely parallel-sided in middle portion, narrowed into apical portion with widely arcuate apex (Fig. 22); paramere large, covering most of median lobe, situated

on median lobe almost symmetrically, narrowed into apical portion with acute apex exceeding apex of median lobe, without appreciable carina on face away from median lobe; sensory peg setae on underside of paramere quite numerous, forming a long row along each lateral margin of apical portion (Fig. 24); apical setae extremely minute, situated as in Fig. 24.

F e m a l e. Unknown.

Length 13.0–14.0 mm.

Type material. Holotype (male): China: "CHINA: Sichuan Daxue Shan Mts., N of San Ya, 3040 m, 28°45.3′N 101°57.9′E, 6.–12.VI. 2005, leg. R. Sehnal & M. Trýzna". In the SCHÜLKE collection, Berlin, Germany.

Paratype: [Sichuan]: CHINA SW-Sichuan V-2004 NNE Eryizuxiang, pr. forest, 28°48.6′N 101°58.3′E, 3561 m, [GPS] lgt. Häckel & Sehnal, 1 ♂ (ASC).

Geographical distribution. *Ocypus caelestis* is at present known from the Daxue Shan range, and obviously from the same area, as documented by the coordinates given on the locality labels.

Bionomics. The specimens of the original series were taken from pitfall traps, but nothing is known about the habitat the traps were set in, except that the paratype comes from a "primary forest".

Recognition and comments. *Ocypus caelestis* may be easily recognized by the body coloration (see the description), in combination with the quite characteristically shaped aedoeagus. It cannot be confused wih any other Chinese species of the subgenus *Pseudocypus*.

Etymology. The specific epithet is the Latin adjective *caelestis*, *-e* (pertaining to heaven, heavenly). It refers to the appearance of the species, particularly to the bluish dorsal body surface.

要　　約

A. SMETANA: 中国産ダイミョウハネカクシ属群に関する知見. 17. サビイロハネカクシ属 *Pseudocypus* 亜属, 2. —— *Pseudocypus* 亜属に属するサビイロハネカクシ類について, 先報での誤りを訂正し, 追加記録を報告した. また, 四川省と云南省から4新種を記載し, これらに *Ocypus nabis*, *O. nigror*, *O. bicolor* および *O. caelestis* の新名を与えた.

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Elytra, *Tokyo*, **36**(1): 181–198, May 30, 2008

Contributions to the Knowledge of the Quediina (Coleoptera, Staphylinidae, Staphylinini) of China

Part 29. Genus *Quedius* STEPHENS, 1829. Subgenus *Raphirus* STEPHENS 1829. Section 6

Aleš SMETANA

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Abstract Taxonomic data on the species of the genus *Quedius* subgenus *Raphirus*, from the People's Republic of China are provided. Eight species are described as new: *Q. ruoh* (Gansu), *Q. io* (Shaanxi), *Q. li* (Yunnan), *Q. erl* (Yunnan), *Q. bann* (Sichuan), *Q. pian* (Yunnan), *Q. doan* (Yunnan), *Q. microsauroides* (Xinjiang).

This is the twenty-ninth of a series of papers dealing with the Quediina of the People's Republic of China. It deals with the brachypterous species of the *Muscicola*-group (see SMETANA, 1988, 243) of the subgenus *Raphirus* STEPHENS, 1829. All species treated are described as new. The remaining species of the *Muscicola*-group will be treated in a subsequent paper that will present a key to all species of the *Muscicola*-group known to occur on the territory of the People's Republic of China.

The species treated in this paper may be divided into two lineages, based on two abdominal character states. The species of the first lineage have the second abdominal tergite (in front of the first visible tergite) densely, entirely punctate and pubescent, and the pubescence of the abdominal tergites is uniformly dark (most species treated belong to this group). The species of the second lineage have the second abdominal tergite either entirely lacking any punctation and pubescence, or there are at most a few fine scattered punctures present, and pubescence of the abdominal tergites is pale, often golden-yellowish with distinct tendency to form denser basolateral patch on each side of each tergite (*Q. pian* sp. nov. and *Q. doan* sp. nov. belong here). These two lineages appear also in the group of the winged species of the *Muscicola*-group; they are excellent character states to be used in the keys to species. The last new species described here, *Q. microsauroides*, seems to occupy a rather isolated position.

The symbols used in text, when referring to the deposition of specimens, are as follows:

APC Collection of Andreas PÜTZ, Eisenhüttenstadt, Germany
ASC Collection of Aleš SMETANA, Ottawa, Canada

GRC Collection of G. M. DEROUGEMONT, Londinières, France
MSC Collection of Michael SCHÜLKE, Berlin, Germany
NMW Naturhistorisches Museum, Wien, Austria

The number of paratypes, if applicable, is given for each locality behind the geographical data, followed by the acronym of the collection in which the paratype(s) are deposited in brackets. All data are presented in full for holotypes and allotypes.

Quedius (*Raphirus*) *ruoh* sp. nov.

(Figs. 1–8)

Description. Piceous-black with black head, pronotum often more or less paler; head, pronotum and elytra with slight metallic lustre, abdomen markedly iridescent. Palpi, antennae and legs rufotestaceous, medial faces of middle and hind tibiae darkened. Head rounded, wider than long (ratio 1.23); eyes very large and convex, tempora very short, considerably shorter than length of eyes seen from above (ratio 0.18); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture almost touching posteromedial margin of eye, one puncture between it and posterior margin of head; surface of head with fine, moderately dense microsculpture of irregular transverse waves becoming confused on clypeus. Antenna moderately long, segment 3 slightly narrower and shorter than segment 2, segments 4–6 longer than wide, gradually becoming shorter, outer segments about as long as wide, last segment about as long as two preceding segments combined. Pronotum about as long as wide, broadly arcuate basally, evenly transversely convex, hardly narrowed anteriad; dorsal rows each with three punctures, sublateral rows each with two fine punctures, posterior puncture situated before level of large lateral puncture; surface of pronotum with microsculpture similar to that on head but finer and denser. Scutellum with microsculpure of rudimentary waves, with several setiferous punctures on apical portion. Elytra short, at suture markedly (ratio 0.74), at sides vaguely (ratio 0.92) shorter than pronotum at midline; punctation fine, slightly asperate, moderately dense, transverse interspaces between punctures mostly somewhat larger than diameters of punctures; surface between punctures without microsculpture, piceous-black pubescence moderately long and dense. Wings non-functional, each reduced to a narrow rudiment slightly shorter than elytron. Abdomen with tergite 7 (fifth visible) lacking whitish apical seam of palisade setae; tergite 2 (in front of first visible tergite) entirely punctate and pubescent; punctation of tergites finer and denser than that of elytra, evenly covering first two visible tergites, on remaining tergites becoming gradually sparser toward apical margin of each tergite; first three tergites without shallow lateral impressions, piceous-black pubescence evenly covering each tergite; surface between punctures with excessively fine and dense microsculpture of striae.

M a l e. First four segments of front tarsus distinctly dilated, sub-bilobed, each densely covered with modified pale setae ventrally, segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Sternite 8 with four long setae on

each side, apical margin with moderately deep and wide, obtusely triangular medioapical emargination (Fig. 1), small triangular area before emargination flattened and smooth. Genital segment with tergite 10 narrowly triangular, narrowly arcuate apically, setose as in Fig. 2; sternite 9 as in Fig. 3, with slightly differentiated subapical seta at each side before apex. Aedoeagus (Figs. 4–7) narrow, elongate, median lobe narrowed anteriorly into acute apical portion, on face adjacent to paramere with distinct, moderately long median carina originating at apex of median lobe (lateral view, Fig. 6). Paramere elongate, covering most of apical portion of median lobe, elongate-fusiform, with narrowly arcuate apex not quite reaching apex of median lobe; apical setae minute, situated as in Fig. 7; sensory peg setae on underside of paramere forming longitudinal (often unequally long) row at each lateral margin of apical portion of paramere.

F e m a l e. First four segments of front tarsus not appreciably dilated. Tergite 10 of genital segment narrow, setose as in Fig. 8.

Length 4.0–4.8 mm.

Type material. Holotype (male) and allotype (female): China: "CHINA, Gansu, Dalijia Shan, 46 km W Linxia, 2980 m, 10.VII.1994 A. Smetana [C5]". In the SMETANA collection, Ottawa, Canada.

Paratypes: China: [Gansu]: same data as holotype, 34 ♂♂, 8 ♀♀ (ASC, MSC); Gansu, Dalijia Shan, 60 km W Linxia, 3475 m, 11.VII.1994, A. Smetana [C8], 1 ♀ (ASC).

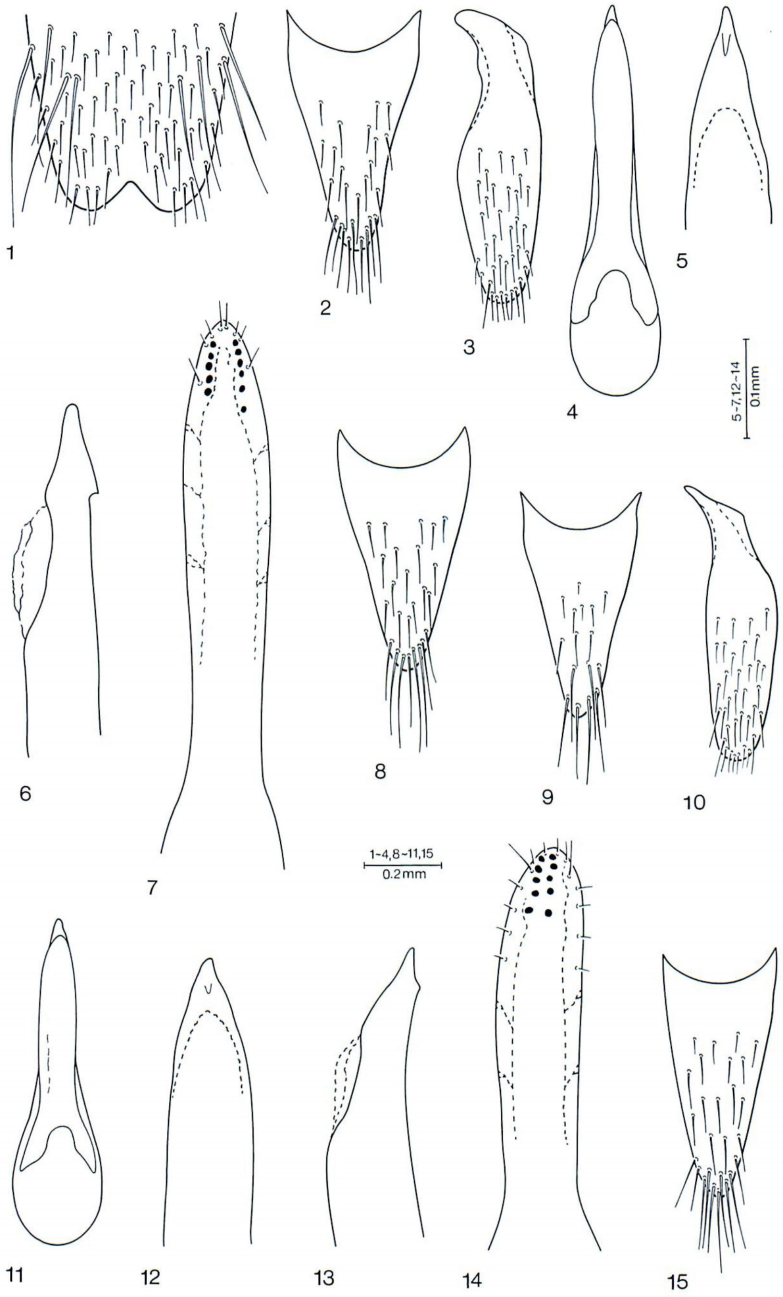
Additional material. Two females labelled: CHINA, Gansu, Hua Er Ge, 5 km SSW Luqu, 3400 m, 13.VII.1994, A. Smetana [C12] were associated with *Q. ruoh*, but were not labelled as paratypes.

Geographical distribution. *Quedius ruoh* is at present known only from the Dalijia Shan in Gansu.

Bionomics. The specimens of the original series were taken by sifting lush vegeta-

Figs. 1–15 (on p. 184). — 1–8. *Quedius ruoh*: 1, apical portion of male sternite 8; 2, tergite 10 of male genital segment; 3, sternite 9 of male genital segment; 4, aedoeagus, ventral view; 5, apical portion of median lobe, paramere removed; 6, apical portion of median lobe, paramere removed, lateral view; 7, underside of paramere with sensory peg setae; 8, tergite 10 of female genital segment. — 9–15. *Quedius io*: 9, tergite 10 of male genital segment; 10, sternite 9 of male genital segment; 11, aedoeagus, ventral view; 12, apical portion of median lobe, paramere removed; 13, apical portion of median lobe, paramere removed, lateral view; 14, underside of paramere with sensory peg setae; 15, tergite 10 of female genital segment.

Figs. 16–29 (on p. 185). — 16–21. *Quedius li*: 16, apical portion of male sternite 8; 17, tergite 10 of male genital segment; 18, sternite 9 of male genital segment; 19, aedoeagus, ventral view; 20, apical portion of median lobe, paramere removed; 21, underside of paramere with sensory peg setae. — 22–28. *Quedius erl*: 22, tergite 10 of male genital segment; 23, sternite 9 of male genital segment; 24, aedoeagus, ventral view; 25, apical portion of median lobe, paramere removed; 26, apical portion of median lobe, paramere removed, lateral view; 27, underside of paramere with sensory peg setae; 28, tergite 10 of female genital segment. — 29, *Quedius bann*: tergite 10 of male genital segment.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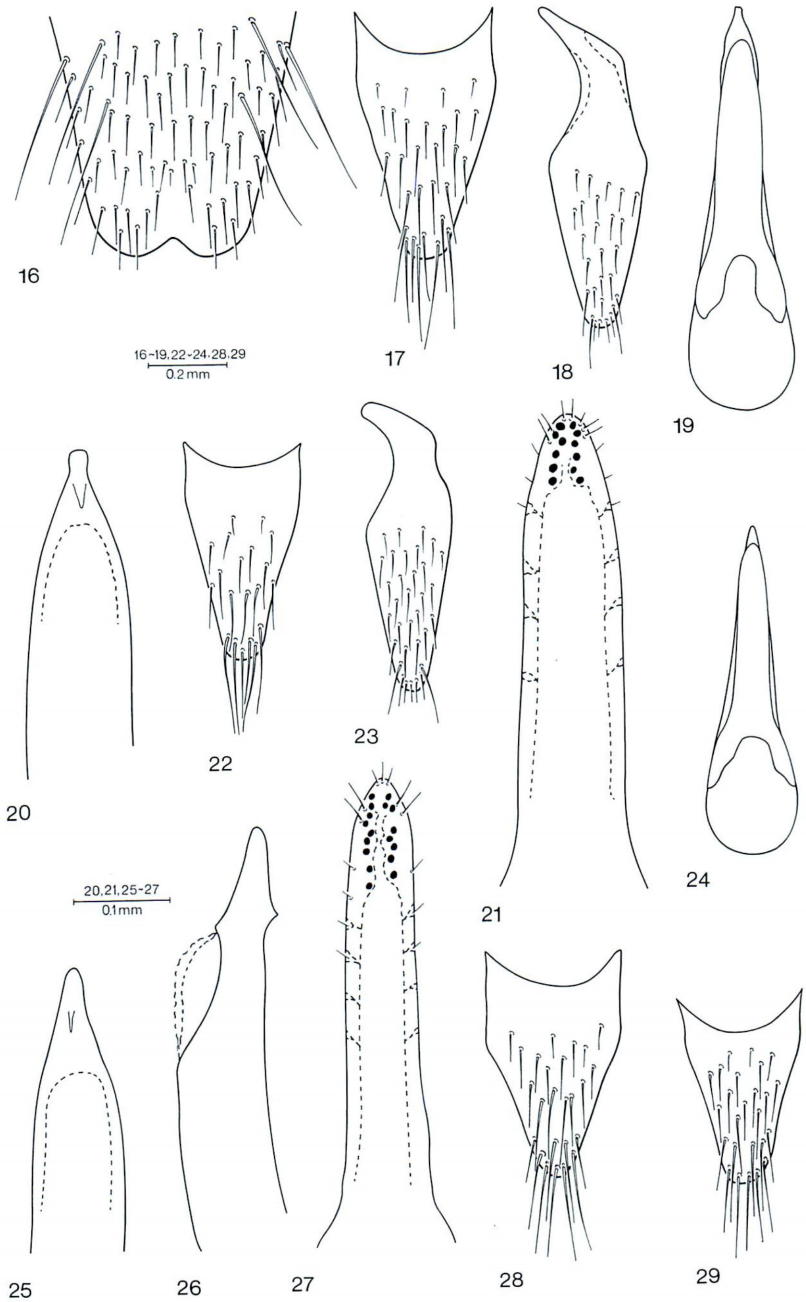
16
16-19,22-24,28,29
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21
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20,21,25-27
0.1 mm
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tion, moss and various debris under shrubs in shady places along a creek [C8], and by sifting of moss and some humus under dwarf *Salix* bushes.

Recognition and comments. *Quedius ruoh* may be best recognized among the species with the abdominal tergites bearing uniform, dark pubescence, in male sex by the following characters: markedly dilated first four segments of front tarsus; elongate aedoeagus with median lobe on face adjacent to paramere with moderately long median carina originating at apex of median lobe (lateral view); elongate-fusiform paramere with sensory peg setae forming longitudinal row at each lateral margin of apical portion of paramere. The coloration of the body is in general mostly dark. However, in one male specimen the pronotum is brightly rufotestaceous.

Etymology. The specific epithet is the Chinese word "ruoh" (weak, feeble). It refers to the inability of the species to fly.

Quedius (*Raphirus*) *io* sp. nov.

(Figs. 9–15)

Description. In all characters similar to *Q. ruoh*, but different in some external characters and in a slightly different aedoeagus. Size on average somewhat smaller and body form more slender, body coloration on average paler, rather piceous with pronotum and even elytra more often brunneous to rufobrunneous; punctation of elytra somewhat finer and denser, punctation and pubescence of abdominal tergites markedly finer and denser.

M a l e. First four segments of front tarsus similar to those of *Q. ruoh*, but markedly less dilated, segment 2 slightly narrower than apex of tibia (ratio 0.75). Sternite 8 with three long setae on each side, medioapical emargination not appreciably different from that of *Q. ruoh*. Genital segment with tergite 10 narrower and less setose (Fig. 9); sternite 9 with basal portion much narrower than that of *Q. ruoh* (Fig. 10). Aedoeagus (Figs. 11–14) smaller, median lobe on face adjacent to paramere with minute, short carina appearing far below apex of median lobe (lateral view, Fig. 13). Paramere similar to that of *Q. ruoh* but distinctly shorter; apical setae minute, situated as in Fig. 14; sensory peg setae on underside of paramere forming two irregular longitudinal rows along midline of apical portion of paramere.

F e m a l e. First four segments of front tarsus not appreciably dilated. Genital segment with tergite 10 narrow, setose as in Fig. 15.

Length 3.8–4.2 mm.

Type material. Holotype (male) and allotype (female): China: "CHINA: S Shaanxi Qinling Shan mt. range W pass on rd. X'ian-Shagouie " / " 45 km SSW X'ian 33°52′N 108°46′E 2600 m 25.VII.2001 A. Smetana [C118]". In the collection A. SMETANA, Ottawa, Canada.

Paratypes: China: [Shaanxi]: same data as holotype, 11 ♂♂, 13 ♀♀ (ASC); same but 2675 m, 26.VII.2001, A. Smetana [C119], 2 ♂♂, 7 ♀♀ (ASC); Qin Ling Shan, 108.47E 33.51N, Mountain W Pass at Autoroute km 70, 47 km S X'ian, 2300–2500 m,

sifted, 26.–30.08.1995, leg. A. Pütz, 15 ♂♂, 17 ♀♀ (ASC, MSC); same, but M. Schülke leg., 21 ♂♂, 15 ♀♀ (ASC, MSC).

Bionomics. The specimens collected by SMETANA [C118] were taken in an open deciduous forest (many *Betula*) with shrubs and lush vegetation by sifting various debris and vegetation around bases of larger standing trees.

Geographical distribution. *Quedius io* is at present known only from the eastern portion of Qinling Shan range south of X'ian in Shaanxi.

Recognition and comments. *Quedius io* may be best recognized by the shape of the aedoeagus, with median lobe on face adjacent to paramere with minute, short carina appearing far below apex of median lobe (lateral view), in combination with the first four segments of front tarsus being only slightly dilated, with very dense punctation and pubescence of the abdominal tergites, and with the tendency for paler body coloration (see above).

Etymology. The specific epithet is the name of the twelfth king of Argos, son of Lyncaeus and Hypermnestra, grandson of Danaus, father of Acrisius and grandfather of Perseus, in apposition.

Quedius (*Raphirus*) *li* sp. nov.

(Figs. 16–21)

Description. In all characters similar to *Q. ruoh* and different mainly by male sexual characters. Coloration similar to that of *Q. ruoh*, but pronotum piceous with lateral portions pale testaceous; pubescence of elytra and abdominal tergites brunneo-piceous; head more distinctly wider than long (ratio 1.31, corresponding ratio in *Q. ruoh* = 1.23).

M a l e. First four segments of front tarsus not appreciably different from those of *Q. ruoh.* Sternite 8 with three long setae on each side, medioapical emargination narrower and less deep (Fig. 16). Tergite 10 of genital segment similar to that of *Q. ruoh*, but somewhat wider (Fig. 17); sternite 9 with basal portion markedly narrower, apical portion with three slightly differentiated setae, distinctly less setose (Fig. 18). Aedoeagus (Figs. 19–21) similar to that of *Q. ruoh*, but median lobe with apex characteristically knob-like dilated. Paramere more parallel-sided, apex by far not reaching apex of median lobe; apical setae minute, situated as in Fig. 21; sensory peg setae on underside forming an irregular group below apex.

F e m a l e. Unknown.

Type material. Holotype (male): China: "CHINA: Yunnan [Ch 07–08] Dali Bai Auton. Pref., Diancang Shan 43 km NW Dali, 3078 m, 25°59′35″N 99°52′06″W pass, Rhodod., oaks, bamboo, sifted, 29.V.2007, M. Schülke". In the SMETANA collection, Ottawa, Canada.

Paratypes: China: [Yunnan]: same data as holotype but leg. A. PÜTZ, 3 ♂♂ (APC, ASC).

Bionomics. According to the data on the locality label, the holotype was taken at

the elevation 3,078 m by sifting debris under rhododendron–oaks–bamboo growths.

Geographical distribution. *Quedius li* is at present known only from the Diancang Shan in Yunnan.

Recognition and comments. *Quedius li* may be positively distiguished from *Q. ruoh* by the differently shaped aedoeagus, particularly by the characteristic, knob-like apex of the median lobe (Figs. 19, 20).

It is worth mentioning that at present three species of the genus *Quedius* occur in Diancang Shan: *Quedius vafer* SMETANA, 1997 of the subgenus *Microsaurus* DEJEAN, 1833, and two of the subgenus *Raphirus*: *Quedius li* sp. nov., and *Q. pian* sp. nov. The first species was until now known only from three females of the original series; however, the male became available quite recently and will be described in one of the next papers.

Quedius (*Raphirus*) *erl* sp. nov.

(Figs. 22–28)

Description. In all characters quite similar to *Q. ruoh* and different by male sexual characters.

M a l e. First four segments of front tarsus similar to those of *Q. ruoh*, but less dilated, segment 2 slightly narrower than apex of tibia. Sternite 8 with five long setae on each side, medioapical emargination less deep and more rounded. Genital segment with tergite 10 similar to that of *Q. ruoh* but narrower, with less numerous long setae at apex (Fig. 22); sternite 9 similar to that of *Q. ruoh* (Fig. 23). Aedoeagus (Figs. 24–27) similar to that of *Q. ruoh*, but distinctly shorter, median lobe shorter and wider, with shorter apical portion. Paramere shorter, rather parallel-sided, leaving lateral portions of median lobe exposed, with narrowly arcuate apex not reaching apex of median lobe; apical setae minute, situated as in Fig. 27; sensory peg setae on underside of paramere more numerous, arranged in two irregular rows situated more medially.

F e m a l e. First four segments of front tarsus not appreciably dilated. Tergite 10 of genital segment shorter and markedly wider (Fig. 28).

Length 3.8–5.0 mm.

Type material. Holotype (male) and allotype (female): China: "CHINA N Yunnan, Xue Shan nr. Zhongdian 3800 m 26.VI.1996 27°49′N 99°34′E C43 " / " collected by A. Smetana, J. Farkač and P. Kabátek". In the SMETANA collection, Ottawa, Canada

Paratypes: China: [Yunnan]: same data as holotype, 3 ♂♂, 2 ♀♀ (ASC); N-Yunnan Zhongdian Co. pass 28 km ESE Zhongdian 27°43.9′N 99°58.2′E 3700–3750 m 22.VIII.2003 A. Smetana [C131], 1 ♂, 5 ♀♀ (ASC); same, but devastated primary forest with young Abies, Larix, Betula, Rhodod., leg. M. Schülke, 6 ♀♀ (MSC); N-Yunnan Zhongdian Co. 36 km ESE Zhongdian 27°40.9′N 100°01.5′E 3500–3550 m 23.VIII.2003 A. Smetana [C133], 7 ♂♂, 7 ♀♀ (ASC); same, but overgrown rock hillside with old mixed forest, bamboo, dead wood, mushrooms, leg. M. Schülke, 13 ♂♂, 12 ♀♀ (ASC, MSC); N-Yunnan Diqing Tibet. Aut. Pr. Zhongdian Co. 35 km ESE

Zhongdian 27°41.00′N 100°01.47′E 3.VI.2005 A. Smetana [C150], 2 ♀♀ (ASC); same, but (devastated mixed forest near small creek, sifted from litter, moss, dead wood) D. W. Wrase [03], 12 ♂♂, 8 ♀♀ (ASC, MSC); same, but M. Schülke [C2005–03], 4 ♂♂, 1 ♀ (MSC).

Geographical distribution. *Quedius erl* is at present known from several localities in Xue Shan in northern Yunnan.

Bionomics. The specimens of the original series were collected in habitats in high montane, coniferous (mostly *Abies*) or mixed forests at elevations above 3,000 m (up to 3,800 m). Most specimens were taken by sifting various forest floor debris, including dead wood and bark, moss and leaf litter and other debris under *Rhododendron* bushes or bamboo growths. Some were also taken by sifting debris under old mushrooms on forest floor.

Recognition and comments. In addition to distinct geographical isolation, *Q. erl* differs from *Q. ruoh* by the male sexual characters, as they were outlined in the description above. The same goes for comparison of *Q. erl* with *Q. io*, the latter occurring in Qinling Shan in Shaanxi, although the body coloration of specimens of *Q. io* tends to be paler.

Etymology. The specific epithet is the Chinese word "erl" (son, child). It refers to the similarity of the species to *Q. ruoh*.

Quedius (*Raphirus*) *bann* sp. nov.

(Figs. 29–34)

Description. In all characters similar to *Q. ruoh*, but different as follows: average size smaller, body form narrower; maxillary and labial palpi darker, brunneopiceous to piceous; antennae darker, dark brownish with first three segments more or less piceous; legs darker, medial faces of both middle and hind tibiae more distinctly and more extensively darkened. Head narrower, only vaguely wider than long (ratio 1.08) to equally long as wide, eyes relatively larger, tempora still shorter than those of *Q. ruoh* (corresponding ratio 0.14), surface of head lacking microsculpture, except for rudiments on clypeus. Pronotum narrower, disc lacking microsculpture, lateral portions with rudimentary microsculpture of longitudinal waves. Elytra shorter than those of *Q. ruoh*, at suture considerably (ratio 0.70), at sides feebly (ratio 0.92) shorter than pronotum at midline. Wings more reduced, each in form of a flap much shorter than elytron.

M a l e. First four segments of front tarsus only slightly dilated, second segment distinctly narrower than apex of tibia (ratio 0.65). Sternite 8 similar to that of *Q. ruoh*, but medioapical emargination slightly less deep and narrower. Genital segment with tergite 10 shorter (Fig. 29); sternite 9 with basal portion markedly narrower, apical portion with two slightly differentiated setae on each side (Fig. 30). Aedoeagus (Figs. 31–34) similar to that of *Q. ruoh*, but markedly shorter; median lobe shorter and somewhat wider, on face adjacent to paramere with short carina appearing far below

apex of median lobe (lateral view, Fig. 33); paramere markedly shorter; apical setae minute, situated as in Fig. 34; sensory peg setae on underside of paramere forming two longitudinal rows below apex, similar to those of *Q. ruoh*.

F e m a l e. First four segments of front tarsus not at all dilated, simple. Tergite 10 not appreciably different from that of *Q. ruoh*.

Length 3.5–4.5 mm.

Type material. Holotype (male): China: "CHINA: W Sichuan, Pass Zheduo Shankou W Kangding, W slope, 4000 m, 29°58′N 101°47′E, 17.VII. 1998, A. Smetana [C84] " / " 1998 China Expedition J. Farkač, D. Král, J. Schneider & A. Smetana".

Allotype (female): China: "CHINA (W Sichuan) (11) Daxue Shan, 5 km W Tsheto-La Pass (W Kangding) 3900–4000 m 30.04N/101.47E 26.V.1997 Wrase". In the SCHÜLKE collection, Berlin.

Paratypes: China: [Sichuan]: same data as holotype, 3 ♂♂ (ASC); same data as allotype, but 30.04.20′N 101.46.39′E, M. Schülke, 1 ♂ (MSC); Ganzi Pref. Daxue Shan 101.47E, 30.04N, ca. 21 kmW Kangding, km 2884, 3970 m, 26.V.1997, 1 ♀, leg. A. Pütz (APC).

Geographical disribution. *Quedius bann* is known at present from the Zheduo Shankou Pass (Tsheto-La Pass) west of Kanding in Sichuan.

Bionomics. The specimens collected by SMETANA [C84] were taken in the alpine zone by sifting moss and various debris under the *Juniper* and low *Azalea* growths.

Recognition and comments. *Quedius bann* may be rather easily recognized, in addition to the shape of aedoeagus, by a combination of the following characters: small size, lack of microsculpture on the disc of both head and pronotum, quite short elytra, and by the only slightly dilated first four segments of the male front tarsus.

Etymology. The specific epithet is the Chinese word "bann" (half, to halve). It refers to the markedly short elytra.

Quedius (*Raphirus*) *pian* sp. nov.

(Fig. 35)

Description. Dark brownish with black head; head, pronotum and elytra with inconspicuous, vague metallic lustre, abdomen markedly iridescent. Palpi, antennae and legs entirely rufotestaceous. Head rounded, wider than long (ratio 1.20); eyes very large and convex, tempora very short, considerably shorter than length of eyes seen from above (ratio 0.18); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture almost touching posteromedial margin of eye, one puncture between it and posterior margin of head; surface of head with very fine, moderately dense microsculpture of irregular transverse waves becoming submeshed on clypeus. Antenna moderately long, segment 3 slightly narrower and shorter than segment 2, following segments longer than wide, gradually becoming shorter, outer segments about as long as wide, last segment slightly shorter than two preceding segments combined. Pronotum about as long as wide, broadly arcuate basally, evenly

transversely convex, markedly narrowed anteriad; dorsal rows each with three punctures, sublateral rows each with one puncture, situated before level of large lateral puncture; surface of pronotum with microsculpture similar to that on head but denser. Scutellum with very fine microsculpure of rudimentary waves, with several punctures on apical portion bearing pale setae. Elytra short, at suture markedly (ratio 0.80), at sides vaguely (ratio 0.92) shorter than pronotum at midline; punctation fine, dense, slightly asperate, transverse interspaces between punctures mostly smaller than diameters of punctures; surface between punctures without microsculpture, yellowish-golden pubescence moderately long and dense. Wings non-functional, each reduced to a rudiment slightly shorter than elytron. Abdomen with tergite 7 (fifth visible) lacking whitish apical seam of palisade setae; tergite 2 (in front of first visible tergite) with only a few, scattered, very fine punctures; punctation of tergites finer than that of elytra, in general sparse, becoming sparser toward apical margin of each tergite; first three tergites each with traces of shallow lateral impression; pale brownish pubescence evenly covering each tergite but each tergite on each side with basolateral patch of denser yellowish-golden pubescence and denser punctation; surface between punctures with excessively fine and dense microsculpture of striae.

F e m a l e. First four segments of front tarsus not appreciably dilated. Tergite 10 of female genital segment as in Fig. 35.

M a l e. Unknown.

Length 6.3 mm.

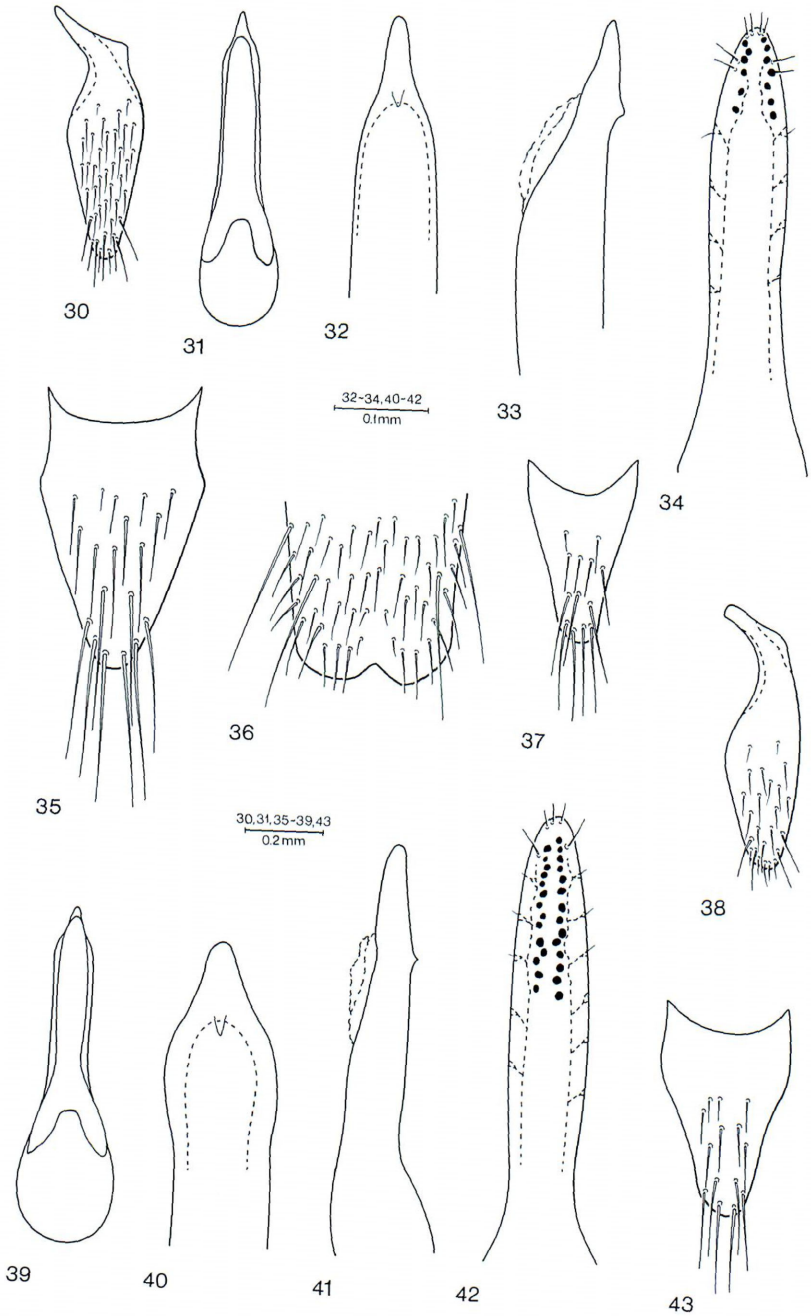
Type material. Holotype (female): China: "CHINA (N-Yunnan) Dali Bai Nat. Aut. Pref., Diancang Shan, 3 km W Dali old town, creek valley at "Cloud Road", right upper chairlift station 25°41.1′N/100°06.3′E, 2650–2750 m (bamboo, moss, leaf litter) 29.VIII.–1.X.2003 Wrase [19]". In the SMETANA collection, Ottawa, Canada.

Geographical distribution. *Quedius pian* is at present known only from Diancang Shan in northern Yunnan.

Bionomics. No details are known about the collection circumstances of the holotype.

Recognition and comments. I decided to describe this species, although only one female is available. The species stands out among the brachypterous species dealt with in this paper by its relatively large size, the body coloration and the pattern of the pubescence of elytra and abdomen, as well as by the antennae with outer segments slightly longer than wide. It cannot be confused with any other species.

Figs. 30–43 (on p. 192). —— 30–34. *Quedius bann*: 30, sternite 9 of male genital segment; 31, aedoeagus, ventral view; 32, apical portion of medin lobe, paramere removed; 33, apical portion of median lobe, paramere removed, lateral view; 34, underside of paramere with sensory peg setae. —— 35. *Quedius pian*: tergite 10 of female genital segment. —— 36–43. *Quedius doan*: 36, apical portion of male sternite 8; 37, tergite 10 of male genital segment; 38, sternite 9 of male genital segment; 39, aedoeagus, ventral view; 40, apical portion of median lobe, paramere removed; 41, apical portion of median lobe, paramere removed, lateral view; 42, underside of paramere with sensory peg setae; 43, tergite 10 of female genital segment.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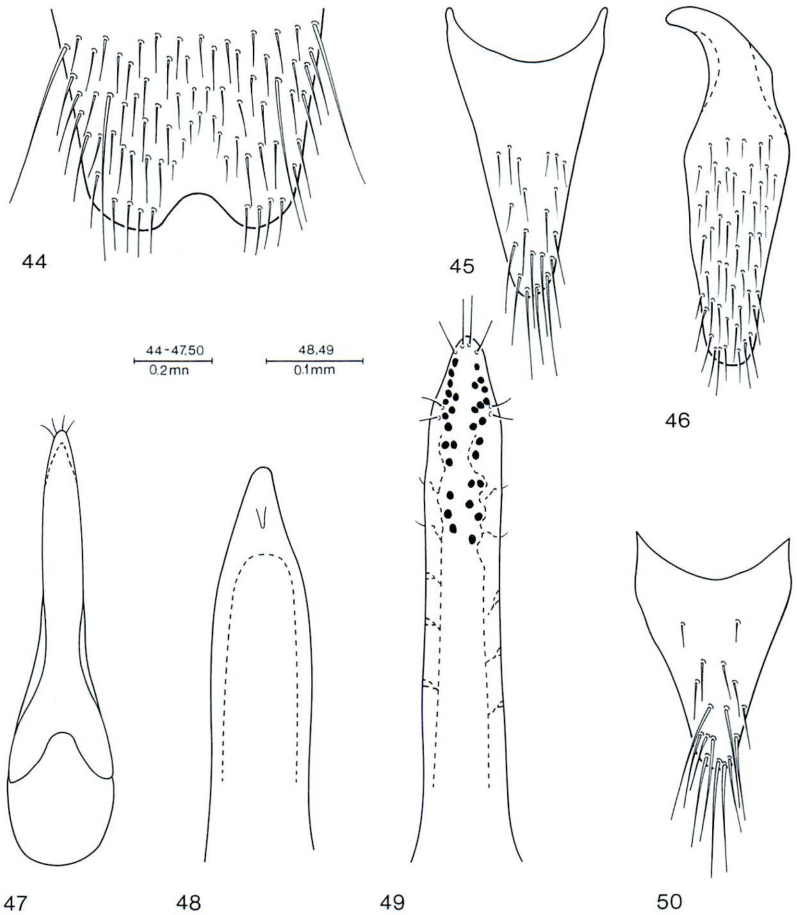

Figs. 44–50. *Quedius microsauroides*: 44, apical portion of male sternite 8; 45, tergite 10 of male genital segment; 46, sternite 9 of male genital segment; 47, aedoeagus, ventral view; 48, apical portion of median lobe, paramere removed; 49, underside of paramere with sensory peg setae; 50, tergite 10 of female genital segment.

Etymology. The specific epithet is the Chinese word "pian" (partial). It refers to the fact that only one sex is known.

Quedius (*Raphirus*) *doan* sp. nov.

(Figs. 36–43)

Description. Piceous-black to black, elytra and abdomen often somewhat paler, abdominal tergites with apical margins usually narrowly paler; head, pronotum and elytra with slight metallic lustre, abdomen markedly iridescent. Palpi and antennae rufotestaceous, labial palpi often darker, antennae usually slightly darkened toward apex; legs rufotestaceous, medial faces of middle tibiae slightly, those of hind tibiae more distinctly darkened. Head rounded, wider than long (ratio 1.23); eyes very large and convex, tempora very short, considerably shorter than length of eyes seen from above (ratio 0.11); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture touching posteromedial margin of eye, one puncture between it and posterior margin of head; surface of head with very fine, moderately dense microsculpture of irregular transverse waves becoming submeshed on clypeus. Antenna moderately long, segment 3 slightly narrower and shorter than segment 2, segments 4 and 5 longer than wide, segments 6 and 7 as long as wide, outer segments slightly wider than long, last segment about as long as two preceding segments combined. Pronotum about as long as wide to vaguely wider than long (ratio 1.09), broadly arcuate basally, evenly transversely convex, no more than slightly narrowed anteriad; dorsal rows each with three punctures, sublateral rows each with two punctures, posterior puncture situated before level of large lateral puncture; surface of pronotum with microsculpture similar to that on head but mostly somewhat denser. Scutellum with microsculpure of rudimentary waves, with several setiferous punctures on apical portion. Elytra short, at suture moderately shorter (ratio 0.82), at sides about as long as pronotum at midline; punctation fine, slightly asperate, moderately dense, transverse interspaces between punctures mostly somewhat larger than diameters of punctures; surface between punctures without microsculpture, golden-yellowish pubescence moderately long and dense. Wings non-functional, each reduced to rudiment slightly shorter than elytron. Abdomen with tergite 7 (fifth visible) lacking whitish apical seam of palisade setae; tergite 2 (in front of first visible tergite) with no more than a few scattered, very fine punctures; punctation of tergites finer and denser than that of elytra, becoming sparser toward apical margin of each tergite; first three tergites without shallow lateral impressions, golden-yellowish pubescence with tendency to become denser basolaterally on each tergite; surface between punctures with excessively fine and dense microsculpture of striae.

M a l e. First four segments of front tarsus slightly dilated, sub-bilobed, each densely covered with modified pale setae ventrally, segment 2 narrower than apex of tibia (ratio 0. 80); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side, apical margin with moderately deep and wide, obtusely

triangular medioapical emargination (Fig. 36), small triangular area before emargination flattened and smooth. Genital segment with tergite 10 narrow, setose as in Fig. 37; sternite 9 as in Fig. 38, sparingly setose and with two slightly differentiated setae on each side. Aedoeagus (Figs. 39–42) narrow, elongate, median lobe anteriorly markedly, arcuately dilated before narrowed into subacute apical portion, on face adjacent to paramere with minute, short carina appearing far below apex of median lobe (lateral view, Fig. 41). Paramere elongate, subparallel-sided to elongate-fusiform, with narrowly arcuate apex not reaching apex of median lobe; apical setae situated as in Fig. 42; sensory peg setae on underside of paramere numerous, forming two dense longitudinal rows along midline of apical portion of paramere.

F e m a l e. First four segments of front tarsus not appreciably dilated. Tergite 10 of female genital segment relatively wide and short, arcuate apically, setose as in Fig. 43.

Length 3.8–4.5 mm.

Type material. Holotype (male) and allotype (female): China: "CHINA: N-Yunnan Nujiang Lisu Aut. Pr. Gongshan Co. Gaoligong Shan, valley at 3000–3050 m 27°47.90′N 98°30.19′E 21.VI.2005 A. SMETANA [C169]". In the SMETANA collection, Ottawa, Canada.

Paratypes: China: [Yunnan]: same data as holotype, 5 ♂♂, 2 ♀♀ (ASC); same data as holotype, but M. Schülke [C2005–16]/conif.forest with *Rhododendron*, broad leaved bushes, litter, moss, dead wood sifted along creek and snowfields, 9 ♂♂, 4 ♀♀ (ASC, MSC); [CH 07–24] Nuijang Lisu Aut. Pref., Gaoligong Shan, valley 18 km W Gongshan, 3020 m, 27°47.54′N 98°30.13′E, mixed forest, litter, moss, wood sifted, 7.VI. 2007, M. Schülke, 1 ♂, 6 ♀♀ (ASC, MSC); same as previous, but D. W. Wrase [24], 3 ♀♀ (ASC, MSC).

Geographical distribution. *Quedius doan* is known only from the type locality in the Gaoligong Shan, a mountain range west of the Salween river near the Myanmar border, Yunnan.

Bionomics. The specimens of the original series were taken at the elevation about 3,000 m in a large clearing in a coniferous forest by sifting leaflitter, various debris, moss and dead wood under rhododendron and broadleaved bushes along creeks and snowfields. Specimens of *Q. goong*, *Q. jaang*, *Q. kwang*, *Q. pyn* and *Q. lanugo* (see SMETANA, 2006) were collected in the same habitat.

Recognition and comments. *Quedius doan* may be easily recognized among the brachypterous species of the *Muscicola*-group, in addition to the characters of the aedoeagus, by the golden-yellowish pubescence of the elytra and abdomen, and by the almost impunctate second tergite of the abdomen.

In some specimens the sublateral rows of punctures each may have three punctures, and the last puncture may be at the level, or even behind the level of the large lateral puncture.

Etymology. The specific epithet is the Chinese word "doan" (short). It refers to the short elytra of the species.

Quedius (*Raphirus*) *microsauroides* sp. nov.

(Figs. 44–50)

Description. Piceous to piceous-black with black head, pronotum and elytra usually variably paler, pronotum rufotestaceous in some specimens, apical margin of each elytron narrowly pale testaceous, apical margins of abdominal tergites usually variably paler; abdomen markedly iridescent. Palpi brunneous, antennae and legs rufotestaceous to brunneous, medial faces of middle and hind tibiae slightly darkened. Head rounded, wider than long (ratio 1.15); eyes very large and convex, tempora markedly shorter than length of eyes seen from above (ratio 0.35); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture separated from posteromedial margin of eye by distance about equal to diameter of puncture, one puncture between it and posterior margin of head; surface of head with very fine, moderately dense microsculpture of irregular transverse waves becoming confused on clypeus. Antenna moderately long, segments 2 and 3 subequal in length, segments 4–6 longer than wide, gradually becoming shorter, outer segments as long as wide to slightly wider than long, last segment as long as two preceding segments combined. Pronotum about as long as wide, broadly arcuate basally, evenly transversely convex, slightly narrowed anteriad; dorsal rows each with three punctures, sublateral rows each with one to two punctures, posterior puncture situated before level of large lateral puncture; surface of lateral portions of pronotum with microsculpture similar to that on head, becoming to great extent rudimentary or entirely missing on middle portions of pronotal disc. Scutellum with microsculpure of rudimentary transverse waves, impunctate. Elytra short, at suture moderately shorter (ratio 0.82), at sides about as long as pronotum at midline; punctation fine, slightly asperate, moderately dense, transverse interspaces between punctures mostly somewhat larger than diameters of punctures; surface between punctures without microsculpture, piceous pubescence moderately long and dense. Wings non-functional, each markedly reduced, but folded once under elytron. Abdomen with tergite 7 (fifth visible) lacking whitish apical seam of palisade setae; tergite 2 (in front of first visible tergite) with a few scattered, very fine punctures; punctation of tergites much finer than that of elytra, becoming markedly sparser toward apical margin of each tergite and in general toward apex of abdomen; first three tergites without shallow lateral impressions, piceous pubescence moderately dense; surface between punctures with excessively fine and dense microsculpture of striae.

M a l e. First four segments of front tarsus moderately dilated, sub-bilobed, each densely covered with modified pale setae ventrally, segment 2 narrower than apex of tibia (ratio 0. 80); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side, apical margin with moderately deep, rather wide, almost arcuate medioapical emargination (Fig. 44), small triangular area before emargination flattened and smooth. Genital segment with tergite 10 markedly narrowly triangular, narrowly arcuate apically, setose as in Fig. 45; sternite 9 narrow, extensively setose, without any differentiated subapical or apical setae (Fig.46). Aedoeagus (Figs. 47–49) quite narrow

and elongate, median lobe anteriorly narrowed into subacute apical portion, on face adjacent to paramere with minute, short carina appearing far below apex of median lobe. Paramere elongate, subparallel-sided, covering most of median lobe, with narrowly arcuate apex slightly exceeding apex of median lobe; apical setae minute, situated as in Fig. 49; sensory peg setae on underside of paramere numerous, forming two dense, irregular longitudinal rows along midline of apical portion of paramere.

F e m a l e. First four segments of front tarsus not appreciably dilated. Tergite 10 of genital segment as in Fig. 50, except for apical portion quite sparingly setose.

Length 4.0–5.1 mm

Type material. Holotype (male) and allotype (female): China: "China, Xinjiang, 2000–2500 m NE slope of Tian Shan mt. Road Urumqui–Houxia, ca. 60 km SW Urumqui, 1993 15–17.V. Jaroslav Turna leg." In the collection of the Naturhistorisches Museum Wien, Austria.

Paratypes: China: [Xinjiang]: same data as holotype, 2 ♀♀ (ASC, NMW); same, but J. Kaláb leg., 1 ♀ (NMW); China–Xinjiang, road Narat–Kuytun, pass 40 km NE Narat, 3500 m, alpine region, 16.–18. 7. 1993, J. Kaláb leg., 1 ♂, 3 ♀♀ (ASC, NMW); same, but Jaroslav Turna leg., 2 ♂♂ (ASC, NMW); road Bayanbulak–Narat, Tian Shan, pass 30 km ESE Narat 2800 m, 13–14. VII. 1993, Jar. Turna or J. Kaláb leg., 2 ♂♂, 2 ♀♀ (ASC, NMW); Tian Shan, road Kuqa–Bayanbulak, pass 80 km SW Bayanbulak, 3500 m 10–12/VII. 1993, J. Turna or J. Kaláb leg., 5 ♂♂, 2 ♀♀ (ASC, NMW); N slope of Tian Shan mts., road Kuqa–Bayanbulak, 50 km SW Bayanbulak, ca. 2800 m, 10.VII.1993, Jaroslav Turna leg., 2 ♂♂, 1 ♀ (ASC, NMW); S slope of Tian Shan mts., road Kuqa–Bayanbulak ca. 100 km NNE Kuqa, 2,000–3,000 m, 8–11.V. 1993, Jaroslav Turna leg., 4 ♂♂, 3 ♀♀ (ASC, NMW); road Narat–Kuytun, pass ca 40 km NE Narat 3500 m, 16–18/VII 1993, Jaroslav Turna leg., 2 ♂♂ (ASC, NMW); SW slope of Borohoro 40 km ENE Qingshuihezi, 2000–3000 m, 24–26/VII. 1993, Jaroslav Turna leg., 1 ♂, 1 ♀; CHINA, 70 km W Urumqui, VIII. 1982, Rougemont, 2 ♀♀ (ASC, GRC); Xinjiang: Nanshan, VIII. 86, Rougemont, 1 ♂, 1 ♀ (ASC, GRC); Xinjiang: Tienshi VIII. 86, Rougemont, 1 ♂ (GRC).

Geographical distribution. *Quedius microsauroides* is at present known from numerous localities in the Tian Shan range in Xinjiang.

Bionomics. No details are known about the habitat requirements of this species. It occurs from habitats in moderate mountain elevations (2,000 m) all the way up to the alpine zone (3,500 m).

Recognition and comments. *Quedius microsauroides* resembles in its habitus some small species of the subgenus *Microsaurus* DEJEAN, 1833. However, the chaetotaxy of the head (the presence of only one puncture between the posterior frontal puncture and the posterior margin of the head), and the shape of the aedoeagus confirm that it is a member of the subgenus *Raphirus*. It cannot be confused with any other member of the subgenus *Raphirus,* occurring in the mainland China.

Etymology. The specific epithet is a combination of the stem of the existing name *Microsaurus*, and the suffix *-oides*. It refers to the *Microsaurus*-like habitus of the species.

Acknowledgments

I thank Mr. Go SATO, Agriculture and Agri-Food Canada, Biodiversity, Ottawa, Canada, who carefully finished the line drawings. I also thank my friend Michael SCHÜLKE, Berlin, who graciously allowed me to keep the holotypes of *Q. li* and *Q. pian* in my collection.

要　　約

A. SMETANA: 中国産ツヤムネハネカクシ亜族に関する知見. 29. ツヤムネハネカクシ属 *Raphirus* 亜属の 6. —— *Raphirus* 亜属のツヤムネハネカクシの 8 新種を，陝西，甘粛，四川，云南および新彊の各省から命名記載した．いずれも短翅型の *Q. muscicola* 種群に属し，高山帯に生息している．

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A New Apterous *Ochthephilum* (Coleoptera, Staphylinidae) from the Island of Okinawa-hontô of the Ryukyus, Japan

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Abstract A new species of the staphylinid genus *Ochthephilum* is described under the name of *O. okinawaense*. It was obtained on the Island of Okinawa-hontô of the Ryukyus, Japan.

The staphylinid genus *Ochthephilum* is one of the characteristic group in the subfamily Paederinae, since its congeners have strongly geniculate antennae. The species of the genus have been known to be widely distributed throughout the world and five species have hitherto been reported from Japan. One of them, *O. shibatai*, has been reported from the two islands Ishigaki-jima (ITO, 1996) and Iriomote-jima (WATANABE & SATO, 2004) of the Ryukyus, Japan.

Through the courtesy of Prof. Yoshiaki NISHIKAWA, I had an opportunity to examine an interesting species of *Ochthephilum* obtained by himself on the Island of Okinawa-hontô of the Ryukyus, Japan. It seems to be placed near *O. yunnanense* from Xishuangbanna of Southwest China in the characteristics of degenerated hind wings. After a close examination, it has become clear that it is new to science on account of disagreement with the previously known species including *O. yunnanense* in external features as well as structure of male genital organ. It will be described in this paper.

Before going further, I would like to express my sincere gratitude to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. My thanks are also due to Professor Yoshiaki NISHIKAWA, Otemon Gakuin University, for his kindness in providing me with the specimens used in this study, and to Mr. Junnosuke KANTOH, Tokyo University of Agriculture, for taking the photograph inserted in this paper.

Ochthephilum okinawaense Y. WATANABE, sp. nov.

[Japanese name: Okinawa-nagae-hanekakushi]

(Figs. 1–6)

Body length: 7.0–7.3 mm (from front margin of head to anal end); 3.8–3.9 mm (from front margin of head to elytral apices).

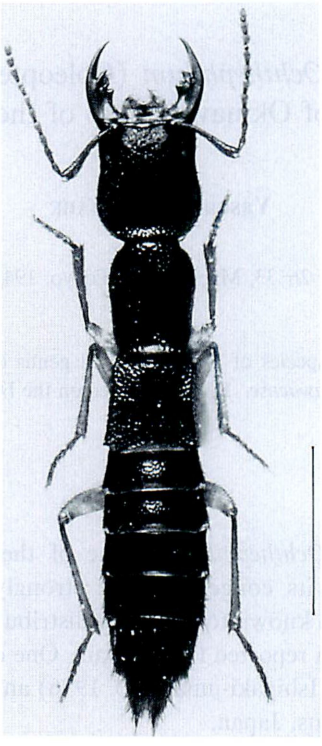
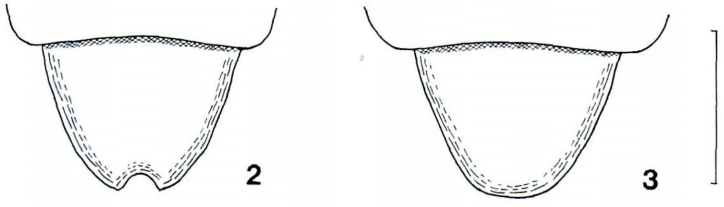


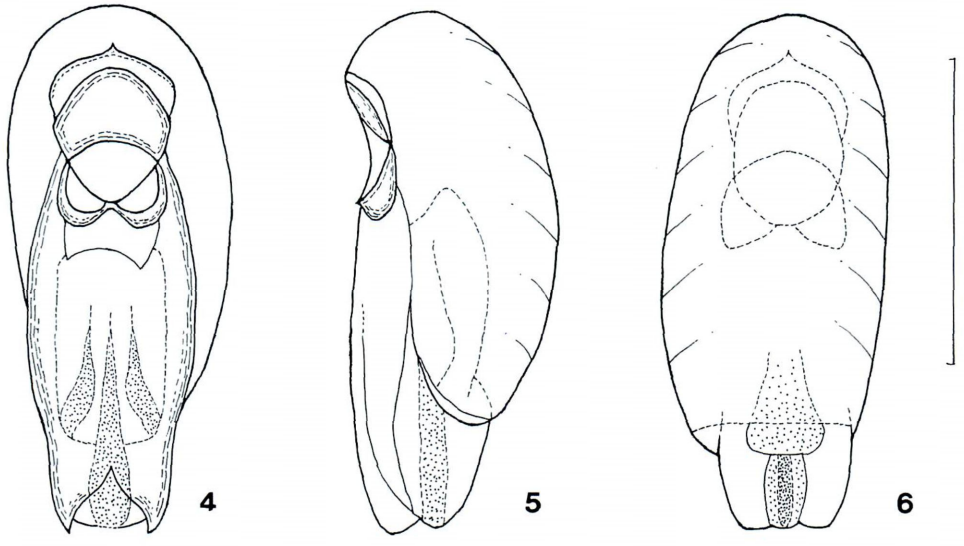
Fig. 1. *Ochthephilum okinawaense* sp. nov., allotype, from the Hiji-gawa, Kunigami, Okinawa-hontô, Ryukyus. Scale: 2.0 mm.

Body elongate, parallel-sided and subdepressed above, apterous. Colour brownish black and moderately shining, with mouth parts and antennae reddish brown, legs, yellow.

M a l e. Head subquadrate and weakly elevated medially, slightly longer than wide (length/width = 1.02); lateral sides gently arcuate towards the rounded posterior angles, postocular part long, four times as long as the longitudinal diameter of each eye, frons subtriangularly depressed between antennal tubercles which are well elevated and glabrous, surface of the depression roughly and finely strigose, disc covered with rugose umbilicate punctures which become somewhat finer and closer in latero-posterior parts. Antennae geniculate, somewhat slender and not thickened apicad, two proximal segments polished, the remainings subopaque, 1st segment the longest and dilated towards the apex, six times as long as wide, 2nd to 8th equal in both length and width to one another, each twice as long as wide and remarkably shorter (each of 2nd to 8th/1st = 0.22) and a little narrower (each of 2nd to 8th/1st = 0.67) than 1st, 9th distinctly longer than wide (length/width = 1.74), as long as though slightly wider (9th/8th = 1.15) than 8th, 10th a little longer than wide (length/width = 1.40), somewhat shorter (10th/9th = 0.88) but slightly wider (10th/9th = 1.09) than 9th, 11th oval, a little longer than wide



Figs. 2–3. Eighth abdominal sternites of *Ochthephilum okinawaense* sp. nov.; male (2), female (3). Scale: 0.5 mm.



Figs. 4–6. Male genital organ of *Ochthephilum okinawaense* sp. nov.; dorsal view (4), lateral view (5), and ventral view (6). Scale: 0.5 mm.

(length/width=1.30), somewhat shorter (11th/10th=0.86) and slightly narrower (11th/10th=0.92) than 10th.

Pronotum subcylindrical and distinctly longer than wide (length/width=1.30), slightly longer (pronotum/head=1.04) but somewhat narrower (pronotum/head=0.81) than head, widest behind anterior angles and slightly narrowed posteriad; lateral sides somewhat emarginate behind the middle; anterior margin slightly emarginate at the middle, posterior margin subtruncate, anterior angles bluntly angulate, posterior ones narrowly rounded; surface more coarsely and less closely punctured than on head, bearing a longitudinal smooth area at the middle in posterior two-thirds. Scutellum subtriangular, surface uneven and provided with a few coarse punctures. Elytra depressed above and subtrapezoidal, somewhat dilated posteriad, almost as long as wide, distinctly shorter (elytra/pronotum=0.82) but a little wider (elytra/pronotum=1.07) than pronotum; lateral sides straight, posterior margin emarginate at the middle, posterior angles excised at the corner; surface densely covered with very coarse umbili-

cate punctures; each epipleuron without longitudinal keel. Legs relatively elongate, anterior tarsi thin.

Abdomen elongate, widest at the 5th segment, and then narrowed both anteriad and posteriad; basal three visible tergites each transversely and shallowly depressed along respective basal margins and densely covered with coarse setiferous punctures, 7th and 8th tergites each more sparingly and more finely punctured than on the preceding tergites; 8th sternite provided with a small semicircular excision at the middle of posterior margin, 7th sternite not modified.

Genital organ elliptical and almost symmetrical. Median lobe slightly shorter than fused paramere. Fused paramere relatively broad, somewhat dilated at the middle and narrowed both basad and apicad, apex divided into two triangular parts by a deep notch as seen from dorsal side.

F e m a l e. Similar to male in facies and body size, though the 8th abdominal sternite is almost straight at the middle of posterior margin.

Type series. Holotype: ♂, allotype: ♀, Hiji-gawa Riv., Kunigami, Okinawa-hontô Is., Ryukyus, 22–X–1987, Y. NISHIKAWA leg. Paratypes: 6 ♀♀, same data as for the holotype.

Type depository. All the type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Remarks. The present new species is somewhat similar in general appearance to *O. yunnanense* Y. WATANABE et XIAO, 1994 from Yunnan Province of Southwest China, but differs from it in the following points: body smaller, head almost as long as wide and less densely punctured on the surface; elytra as long as wide, posterior margin more deeply emarginate at the middle, posterior angles excised at the corner, surface more coarsely punctured; abdominal tergites more densely and more coarsely punctured, 8th sternite shallowly and semicircularly excised at the middle of posterior margin and male genital organ not trilobed; fused paramere broad, provided with a deep notch at the middle of the apex.

Bionomics. Unknown.

Etymology. The specific epithet of this new species is derived from Okinawa-hontô Island, the type locality.

要　　約

渡辺泰明：沖縄本島で採集されたナガエハネカクシ属（甲虫目ハネカクシ科）の1新種. ——ナガエハネカクシ属はアリガタハネカクシ亜科に含まれ，触覚が膝状を呈する顕著な属で，世界中に分布している．日本からは5種が知られ，そのうちの1種が沖縄の石垣島および西表島から報告されている．私は西川喜朗追手門大学教授が沖縄本島で採集された，この属に含まれる1種を検討する機会を得た．その結果，この種は後翅が退化し，中国雲南省から報告された *O. yunnanense* に近縁の種と判断されたが，形態的特徴ならびに雄交尾器の形状が異なり，未記載種と認められたので，*O. okinawaense* と命名・記載した．

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WATANABE, Y., & N. XIAO, 1994. A new apterous *Ochthephilum* (Coleoptera, Staphylinidae) from Yunnan Province, Southwest China. *Elytra, Tokyo*, **22**: 109–113.

——— & H. SATO, 2004. Occurrence of *Ochthephilum shibatai* ITO (Coleoptera, Staphylinidae) on the Island of Iriomote-jima of the Ryukyu Islands, Japan. *Ibid.*, **32**: 314.

Elytra, Tokyo, **36**(1): 203–204, May 30, 2008

Notes on *Morphodactyla ishikawai* (Coleoptera, Carabidae): Recent Records and Preliminary Data on the Breeding Type

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Morphodactyla ishikawai (NEMOTO, 1990) was described based on the specimens from Mt. Jirisan, South Korea (NEMOTO, 1990), but there has been no additional record since the original description. This short communication reports: 1) recent records from two mountains, one of which is a new distribution record; and 2) the result of the dissection of the female reproductive organs, which provide useful information for inferring its breeding type (*i.e.*, spring or autumn breeder).

The specimens examined are deposited in the following public collections: Department of Forest Resources Protection, College of Forest Science, Kangwon National University, Korea; Laboratory of Forest Zoology, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan; and Division of Health, Uiduk University, Korea.

Specimens examined. 1 ♂, Mt. Deogyusan, around summit, Muju-gun, Jeollabuk-do [new record], 6～7–VII–2003; 3 ♂♂, 9 ♀♀, Jungsan-ri, Mt. Jirisan, Sancheong-gun, Gyeongsangnam-do, 2～3–VII–2003; 1 ♂, 4 ♀♀, Jongseokdae – Nogodan (alt. 1,100～1,500 m), Mt. Jirisan,

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Gurye-gun, Jeollanam-do, 4～5-VII-2003, all from Korea, K. SASAKAWA, J.-L. KIM, Y. TAKAMI, T. SOTA & K. KUBOTA leg.

Results of the dissection. Four females from Jungsan-ri were dissected, and the all individuals had mature eggs. Some carabid species known to be a spring breeder (*e.g.*, *Tomocarabus fraterculus*: see KIM & LEE, 1992) were collected at the same time, and had also mature eggs. These results suggest that *M. ishikawai* is a spring breeder.

We thank Dr. T. SOTA, Dr. Y. TAKAMI, and Mr. S.-J. CHANG for fieldwork in Korea. This study was supported by grants-in-aid from the Japan Society for the Promotion of Science (Japan-Korea Basic Scientific Cooperation Program) (to K. K.) and Korea-Japan Basic Scientific Promotion Program (to J. K. K.).

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KIM, J.-L., & C.-E. LEE, 1992. Breeding patterns in South Korean Carabina (Coleoptera, Carabidae). *Proc. ent. Soc. Wash.*, **94**: 136-150.

Elytra, *Tokyo*, **36**(1): 205–208, May 30, 2008

Notes on the Pterostichine Subgenus *Eosteropus* (Coleoptera, Carabidae) from Japan

Part 2. A New Species from the Tôhoku District, with a Note on the Cotype of *Pterostichus fuligineus*

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Abstract A new pterostichine carabid beetle is described from the Tôhoku District, North Japan, under the name of *Pterostichus* (*Eosteropus*) *noborui*. It is related to *P.* (*E.*) *tokui* MORITA, but differs from it in the shape of the hind angles of pronotum. A problem about the cotype of *Pterostichus* (*Eosteropus*) *fuligineus* MORAWITZ is noted.

The main purpose of this short paper is to describe a new species and to accommodate it in my earlier key given in the last year.

The abbreviations used herein are the same as those explained in my previous papers.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo, for critically reading the original manuscript of this paper. My thanks are also due to Mr. Noboru ITO for supplying me with important material.

Dr. Shun-Ichi YOSHIMATSU gave me an opportunity of examining the specimen of this new species. I thank him for his kind help. Dr. German Sh. LAFER offered me invaluable information about the cotype of *P.* (*E.*) *fuligineus*. I thank him for his kind advice.

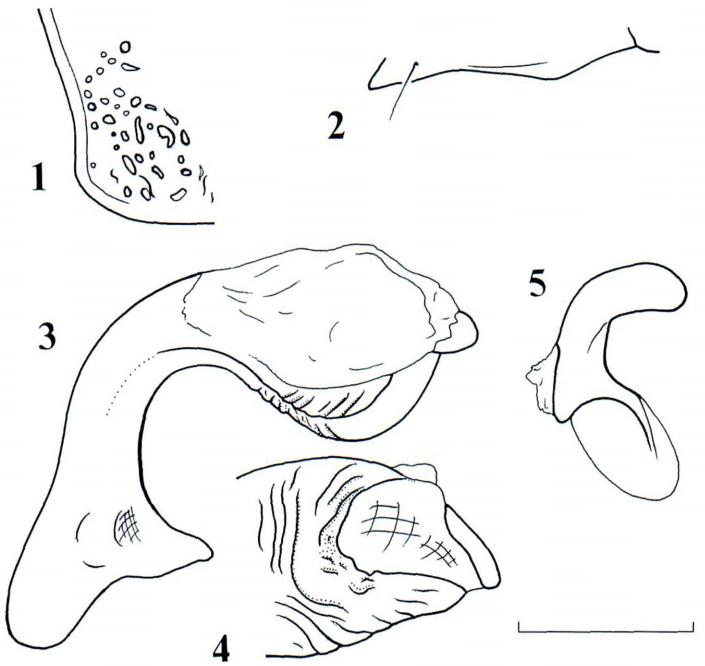
Pterostichus (*Eosteropus*) *noborui* MORITA, sp. nov.

[Japanese name: Iide-kuro-naga-gomimushi]

(Figs. 1–5)

Diagnosis. Sides of pronotum slightly sinuate before hind angles; hind angles of pronotum angulate or obtuse; in ♂, anal sternite with a carina; basal half of aedeagus weakly arcuate; right wall of aedeagus very high; ventral edge of right wall strongly incurved towards the narrow fovea; right paramere of male genitalia small and C-shaped.

Description. L: 14.0–14.6 mm. Body rather large; colour as in *P.* (*E.*) *tokui*



Figs. 1–5. Body parts in *Pterostichus* (*Eosteropus*) *noborui* MORITA, sp. nov. —— 1, Left hind angle of pronotum; 2, anal sternite, right lateral view; 3, aedeagus, left lateral view; 4, apical part of aedeagus, ventral view; 5, right paramere, left lateral view. (Scale: 1.0 mm.)

MORITA. Head as in *P.* (*E.*) *tokui* MORITA, but the eyes are more convex; relative lengths of antennal segments as follows:— I : II : III : IV : V : VI : XI ≒ 1 : 0.50 : 0.85 : 0.93 : 0.90 : 0.92 : 0.85.

Pronotum less convex; sides moderately arcuate, strongly convergent, and then sinuate before hind angles which are angulate or obtuse; PW/HW 1.33–1.34 (M 1.34), PW/PL 1.20–1.27 (M 1.22), PW/PA 1.34–1.37 (M 1.36), PW/PB 1.39–1.53 (M 1.45), PA/PB 1.02–1.15 (M 1.08) in 3 ♂♂; basal foveae very shallow and with many coarse punctures and irregular wrinkles; microsculpture consisting of fine transverse lines.

Elytra rather narrow at basal parts; EW/PW 1.28–1.38 (M 1.33), EL/EW 1.50–1.55 (M 1.52) in 3 ♂♂; striae smooth; basal part of interval VIII usually with several transverse sulci; microsculpture composed of wide meshes; marginal series composed of 17–18 pores; epipleuron gradually narrowed apicad; interval III with three pores; the first pore adjoining stria 3 and situated at about basal 1/5 of elytra, the second one adjoining stria 2 and situated at a little before the middle, and the third one adjoining stria 2 and situated at about basal 4/5 of elytra; WL/EL 0.33 in 1 ♂; TL/HW 1.35, 1.42 in 2 ♂♂; in ♂, anal sternite narrowly arcuate, and with a blunt apex and a longitudinal carina at middle.

Aedeagus of moderate size, and with elongate and arcuate basal part; fovea rather

narrow and deep; left wall with several wrinkles; right wall very high and ventral edge curved inwards; median part of ventral surface widely depressed and strongly and densely wrinkled; right paramere small and C-shaped.

Type series. Holotype: ♂ "VII. 23, 1959" / "Mts. Iide" / "Yamagata P" / "Y. ASANO". Paratypes: 1 ♂, 11–VIII–1984, Nukumidaira, N. ITO leg.; 1 ♂, 13–VIII–1984, same locality, N. ITO leg. The holotype is deposited in the National Institute of Agro-environmental Sciences, Tsukuba.

Locality. Mt. Iide-san, Yamagata Prefecture, Tôhoku District, North Japan.

Notes. My earlier key (2007, p. 409) is modified in order to accommodate *P.* (*E.*) *noborui* MORITA, sp. nov.

8 (3) Right paramere of male genital organ C-shaped, and with rather wide and rounded apex in lateral view.

9 (10) Sides of pronotum arcuate, and not sinuate; hind angles of pronotum rounded or obtuse; anal sternite in ♂ with a carina; right wall of aedeagus very high; [Miyagi, Yamagata, Fukushima and Ibaraki Prefectures]……*P.* (*E.*) *tokui* MORITA.

10 (9) Sides of pronotum sinuate just before hind angles; hind angles of pronotum obtuse or angulate; anal projection and right wall of aedeagus variable.

11 (12) Anal projection triangular; right wall of aedeagus of moderate size; right paramere large; [Fukushima Prefecture]……*P.* (*E.*) *mizunoyai* MORITA.

12 (11) Anal sternite in ♂ with a carina; right wall of aedeagus high; right paramere small; [Yamagata Prefecture]……*P.* (*E.*) *noborui* MORITA, sp. nov.

Postscript

Just after the first part of this study was published, Dr. LAFER informed me of the taxonomic problem about the cotypes of *Pterostichus* (*Eosteropus*) *fuligineus* MORAWITZ. He pointed out that the male shown by myself is not a cotype.

According to the original description, MORAWITZ described this species based on a female. However, there are two males and one female from the type locality, Hakodate, in the Zoological Institute of the Academy of Sciences, Sankt-Peterburg. Therefore, further investigation is needed.

要　　約

森田誠司: 日本産クロナガゴミムシの研究. 2. 東北地方で採集された1新種. —— 山形県飯豊山から採集された標本を基にイイデクロナガゴミムシ *Pterostichus noborui* を記載し, 前報で示した種の検索表を, 改訂した. さらに *Pterostichus fuligineus* の基準標本の問題点について簡単に述べた.

Reference

MORITA, S., 2007. Notes on the pterostichine subgenus *Eosteropus* (Coleoptera, Carabidae) from Japan. Part 1. Complex of *Pterostichus japonicus*. *Elytra, Tokyo*, **35**: 407–432.

Elytra, Tokyo, **36**(1): 208, May 30, 2008

A New Record of *Stenocladius azumai keramensis* KAWASHIMA et F. SATOU, 2004 (Coleoptera, Lampyridae) in the Kerama Group of the Middle Ryukyus

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The luminescent beetle of the lampyrid genus *Stenocladius*, *S. azumai keramensis* was originally described from Tokashiki-jima Is. of the Kerama Group, the middle Ryukyus (KAWASHIMA, & SATOU, 2004, pp. 394–398, figs. 2, 4, 6, 9–10 & 12). In 2006, the junior author was able to collect this subspecies from Aka-jima Island of the same group. We will record it below in this short report.

Specimens examined. [Aka-jima Is., Kerama Group] 5 ♂♂, 2 ♀♀, 5 larvae (2 full-grown & 3 younger to mid-instar individuals), 6–XII–2006, F. SATOU leg.

Distribution. Kerama Group, Okinawa Isls., M. Ryukyus: Tokashiki-jima Is. and Aka-jima Is. (new record).

Notes. It is concluded from comparison of adult males from the two islands recorded above that they cannot be discriminated from each other in any of the following external characteristics: 1) body size; 2) coloration of body including appendages; 3) relative lengths of antennal pectinae and 4) shape of male genitalia. Besides, the color-marking patterns in thoracic and abdominal tergites of larvae are the same as those of individuals from Tokashiki-jima Island.

The adult male has a pair of spot-like luminous organs at the sides of the 7th abdominal segment, which are luminescent weakly but continuously in yellowish green light.

Reference

KAWASHIMA, I., & F. SATOU, 2004. The lampyrid genus *Stenocladius* (Coleoptera, Lampyridae) from the Okinawa Islands, middle Ryukyus, Southwest Japan, with descriptions of two new local populations. *Elytra, Tokyo*, **32**: 389–403.

Elytra, *Tokyo*, **36**(1): 209–211, May 30, 2008

Notes on the Bembidiinae (Carabidae) of Japan
XVI. A New Species of the Group of *Tachyura notaphoides*

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Abstract A new bembidiine species belonging to the group of *Tachyura notaphoides* is described from Shikoku, Southwest Japan.

In this paper, I describe a new species belonging to the group of *Tachyura notaphoides* (ANDREWES, 1925, p. 394) from Odamiyama, Shikoku, Southwest Japan.

I am deeply indebted to Mr. Takashi KURIHARA for supplying me with the specimens used in this study and to Mr. Minoru TAO for his kind help.

The abbreviations used herein are as follows: L – body length, measured from apical margin of clypeus to apices of elytra; HW – greatest width of head; PW – greatest width of pronotum; GL – length of gena, measured parallel to the mid-line; eL – length of eye, measured parallel to the mid-line; PL – length of pronotum, measured along the mid-line; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra.

Tachyura kuriharai MORITA, sp. nov.

[Japanese name: Odamiyama-komizugiwa-gomimushi]

(Fig. 1)

Diagnosis. Body relatively small; body brown without elytral spots; eyes convex; elytral striae almost entire; stria 8 entire.

Description. L: 1.97–2.00 mm. Body relatively small and convex. Body brown; elytral interval I and ventral side slightly lighter than dorsum; appendages reddish brown.

Head weakly convex; eyes convex; PW/HW 1.31, 1.35; frontal furrows deep, a little divergent posteriad and reaching the level of the anterior supraorbital pores; anterior supraorbital pore foveolate, situated at the mid-eye level; posterior ones situated at the post-eye level; surface polished; genae rather short and arcuate; GL/eL 0.19; neck very wide; clypeal suture deep; apex of labrum almost straight; relative lengths of antennal segments as follows: —— I : II : III : IV : V : VI : XI ≒ 1 : 0.70 : 0.86 : 0.80 : 0.90 : 0.80 : 1.24.

Pronotum transverse, convex and polished; PW/PL 1.48, 1.46; apex weakly and

widely emarginate; anterior transverse impression vestigial; posterior transverse impression linear, weakly crenulate, interrupted at middle by a pore; PW/PA 1.37, 1.40; sides widely and moderately arcuate in front and weakly sinuate at about 1/4 from base, and very weakly convergent towards hind angles; PW/PB 1.22, 1.25; PA/PB 0.90, 0.89; median line clearly impressed between anterior and posterior transverse impressions; base moderately arcuate, weakly sinuate at the sides; apical angles weakly produced; hind ones sharp, with a long carina; basal foveae deep and smooth.

Elytra ovate and convex; EW/PW 1.46, 1.51; EL/EW 1.38, 1.34; shoulders widely rounded; sides smooth and moderately arcuate throughout; apex conjointly rounded; striae weakly crenulate; stria 1 clearly impressed throughout; striae 2–4 clearly impressed, but disappearing at basal 5/6 of elytra; striae 5–7 clearly impressed but disappearing at basal 3/10 of elytra; stria 8 deep and entire; apical striole deep; intervals weakly convex; two dorsal pores situated on interval III, and adjoining stria 3 or on stria



Fig. 1. Habitus of *Tachyura kuriharai* MORITA, sp. nov.

3; anterior dorsal pore situated at basal 1/3 of elytra and posterior one at 13/20, respectively; surface polished.

Prosternum medially sulcate; metasternal process bordered.

Type series. Holotype: ♀, paratype: 1 ♀, 26–VII–2006, T. KURIHARA leg.

Type locality. Odamiyama, 1,000 m alt., Uchiko-chô, Ehime Prefecture, Southwest Japan.

The holotype is deposited in the Entomological Laboratory, College of Agriculture, Ehime University, Matsuyama, Japan.

Notes. This new species can be separated from the other members of the group of *Tachyura notaphoides* by having a combination of the following characters: the elytral surface without spots, polished dorsal surface, convex eyes, and the state of elytral striae.

It has been known that the distributional range of the members of this group extends northeastwards to Taiwan (TANAKA, 1959, p. 218). It is therefore interesting to collect this new tachynine carabid beetle at rather a high altitude.

要　　約

森田誠司：日本産ミズギワゴミムシ類の知見．XVI. *Tachyura notaphoides* 種群に属する四国産コミズギワゴミムシの1新種．――愛媛県で採集されたコミズギワゴミムシを新種と認め，採集者の栗原　隆氏に献名し *Tachyura kuriharai* として記載した．本種は，体形，上翅の条線などで，わが国に産するコミズギワゴミムシ類と容易に識別できる．

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Elytra, *Tokyo*, **36**(1): 212, May 30, 2008

Records of Carabid Beetles (Coleoptera) from the Tsushima Islands, West Japan

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I had the opportunity to examine an ample series of carabid beetles collected by Mr. Takashi KURIHARA from the Tsushima Islands, Nagasaki Prefecture, West Japan. Of these, six species are new to the fauna of the islands, as recorded below.

Cosmodiscus platynotus (BATES, 1873)

Specimen examined. 1 ex., Mt. Ôhira-yama, Izuhara-machi, 9–VI–2002.

Anchomenus leucopus (BATES, 1873)

Specimen examined. 1 ex., Seta, Kamiagata-chô, 9–VI–2002.

Agonum (*Agonum*) *suavissimum* (BATES, 1883)

Specimen examined. 1 ex., Ôfunakoshi, Mitsushima-chô, 12–VI–2002.

Agonum (*Lorostemmoides*) *ogurae* (BATES, 1883)

Specimens examined. 5 exs., Kusu, Kamitsushima-machi, 21–VI–2002.

Perigona nigriceps (DEJEAN, 1831)

Specimen examined. 1 ex., Seta, Kamiagata-chô, 12–VI–2002.

Stenolophus difficilis (HOPE, 1845)

Specimens examined. 3 exs., Seta, Kamiagata-chô, 12–VI–2002.

In closing this short report, I thank Mr. Takashi KURIHARA for his kindness in supplying me with the materials.

Elytra, Tokyo, **36**(1): 213–225, May 30, 2008

Occurrence of Shikoku Representatives of Blind Trechines (Coleoptera, Trechinae) Originated in Eastern Kyushu, Southwest Japan

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Abstract Two new blind species of the trechine genus *Rakantrechus* are described from the western coastal areas of the Island of Shikoku, Southwest Japan, under the names *Rakantrechus* (*Paratrechiama*) *obscurus* S. UÉNO et NAITÔ and *R.* (*Pilosotrechiama*) *peninsularis* S. UÉNO et NAITÔ. The former belongs to the *nomurai* group of the subgenus *Paratrechiama*, and the latter bears a very close relationship to the type species of the subgenus *Pilosotrechiama*, both endemic to limestone caves and mine adits in the eastern coastal areas of the Island of Kyushu so far as known up to the present. These are the first indisputable evidences of the close faunal relationship between the two islands disclosed in blind trechines on the Shikoku side of the Bungo Channel.

It is well known that the fauna and flora of the Island of Shikoku bear a close relationship to those of central Kyushu. This is true not only for epigean animals and plants, but also for endogean and hypogean species including flightless blind trechine beetles. The best example of such a relationship in the Trechinae is found in the *Rakantrechus* complex, which is represented by three genera in the western part of Shikoku, i.e., *Rakantrechus*, *Yamautidius* and *Chaetotrechiama* (cf. UÉNO, 1982 a–c, etc.), and by two genera in central Kyushu, i.e., *Rakantrechus* and *Allotrechiama* (cf. UÉNO, 1958, 1960, 1970, etc.). The genus *Rakantrechus* in particular is represented by the subgenera *Rakantrechus* (s. str.) and *Izushites* in the former and by the subgenera *Paratrechiama* and *Pilosotrechiama* in the latter. However, no subgenus has been known up to now to have its representatives on both sides of the Bungo Channel that separates Shikoku from Kyushu. The other two subgenera *Uozumitrechus* and *Izushites* are somewhat different both taxonomically and zoogeographically, and do not show any

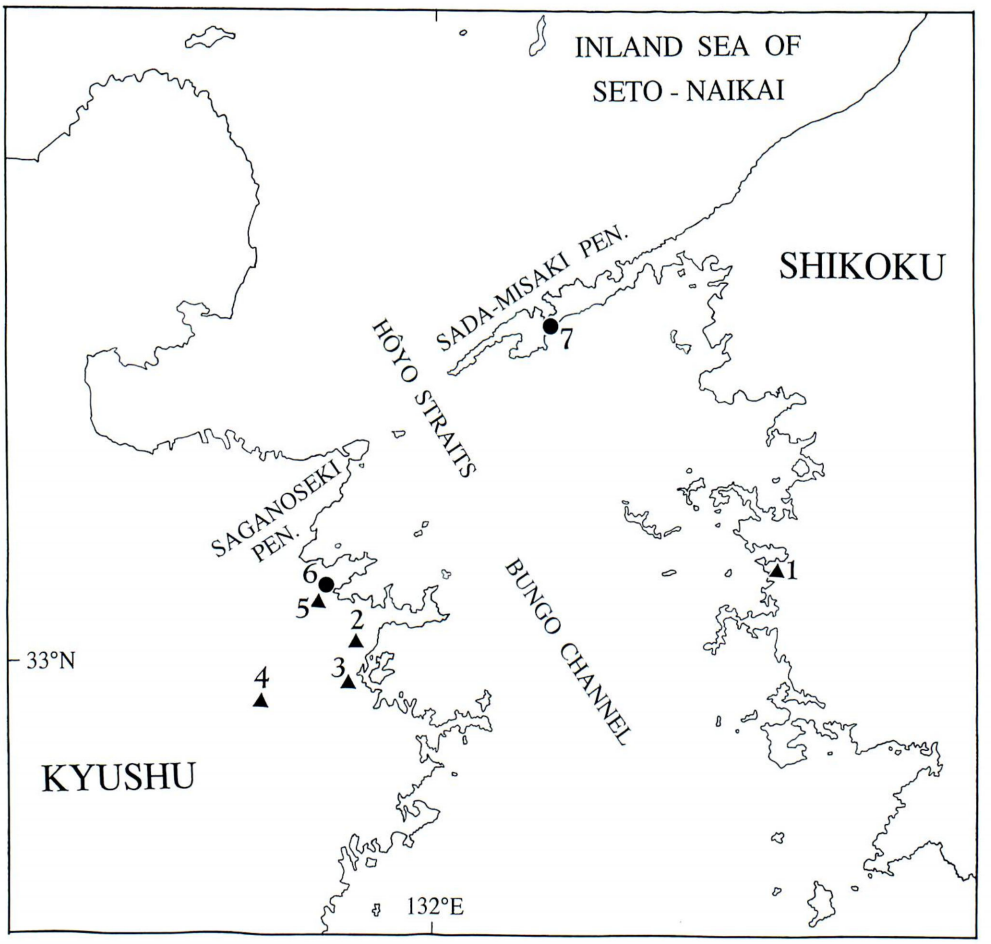


Fig. 1. Map showing the localities of blind trechine beetles on both sides of the Bungo Channel, Southwest Japan; black triangles: *Paratrechiama*; black circles: *Pilosotrechiama*. —— 1, Odorokami (*Rakantrechus obscurus* S. UÉNO et NAITÔ); 2, Karyû-dô Cave (*R. nomurai nomurai* S. UÉNO); 3, Tsuruoka-kô Adit (*R. nomurai fodinarum* S. UÉNO); 4, Onagara-dô Cave (*R. nomurai humerosus* S. UÉNO); 5, Kozono-no-ana Cave (*R. elegans* S. UÉNO); 6, Tokura-no-ana Cave (*R. mirabilis* S. UÉNO); 7, Kamagi (*R. peninsularis* S. UÉNO et NAITÔ).

direct relationship between Shikoku and Kyushu.

In the autumn of 2007, the second author of the present paper came across a blind trechine beetle on a low hill near the western coast of Shikoku. Most unexpectedly, it did not appear to belong to any genera or subgenera theretofore known from the island, but looked similar to certain species of the subgenus *Paratrechiama* of central Kyushu. Closer examination proved that his first impression was indisputably correct, and that the trechine beetle was closely related to *R. nomurai* S. UÉNO (1960, p. 37) of the

nomurai group of *Paratrechiama*, whose members were known only from caves and mines in the Saiki–Tsukumi area of eastern Kyushu.

Only six weeks after this astonishing discovery, he made more unexpected finding on the Sada-misaki, the longest and slenderest peninsula in Japan protruding west-southwestwards from the northwestern corner of Shikoku towards the Saganoseki Peninsula of eastern Kyushu. It was recognised on the spot that the trechine beetle discovered on the Sada-misaki was a second species of the subgenus *Pilosotrechiama*, whose type species, *R.* (*Pil.*) *mirabilis* S. UÉNO (1958, p. 201, figs. 1–2) has been known only from a pair of specimens of the type series, and since the small limestone hill embracing the type cave was excavated by a lime factory sometime in the 1960's, no more topotypical specimens of this interesting species have been obtainable since then. His discovery of a second species of the subgenus was therefore very important not only zoogeographically but also from the taxonomical viewpoint.

The discoveries of these two species are also significant because they are incredibly close to their counterparts occurring in eastern Kyushu, suggesting that their speciation must have taken place in rather a recent period, most probably sometime in the last Glacial Epoch after the separation of Shikoku from Kyushu was completed. In view of all these importance, we are going to describe the two new species in the present paper under the names *Rakantrechus* (*Paratrechiama*) *obscurus* and *R.* (*Pilosotrechiama*) *peninsularis*. The abbreviations employed herein are the same as those explained in previous papers of the first author's.

Rakantrechus (*Paratrechiama*) *obscurus* S. UÉNO et NAITÔ, sp. nov.

(Figs. 2–4)

Length: 4.80–5.60 mm (from apical margin of clypeus to apices of elytra).

Closely similar in external morphology to *R.* (*P.*) *nomurai nomurai* S. UÉNO (1960, p. 37, figs. 1–2; 1985, p. 77, pl. 14, fig. 28) from Karyû-dô Cave in Saiki-shi of eastern Kyushu, and agrees with it in many respects, but slightly larger on an average and recognised at first sight by the dark coloration of the body. Evidently different from it in the short broad aedeagus with large teeth-patches inside the inner sac and with short broad styles bearing only two short setae at each apex.

Colour dark brown, particularly darker in the fore body, basal halves of elytra, and femora, shiny, faintly iridescent in the basal fovea of elytra; palpi, apical halves of antennae, and abdominal ventrites more or less lighter than dorsum. Apterous and anophthalmic. Microsculpture fine though distinctly impressed on head, mostly consisting of transverse meshes; largely perceptible on pronotum and consisting of fine transverse lines; largely evanescent on elytra though partially observable as fine transverse lines.

Head subquadrate, about as long as wide, widest at about basal third, and nearly parallel-sided; genae either straight or very slightly arcuate, completely glabrous; neck broad, neck constriction distinct though usually very shallow; frontal furrows deeply

impressed except for posterior parts, moderately arcuate, and not angulate at middle; frons and supraorbital areas moderately convex, the latter bearing two pair of supraorbital setae on lines convergent posteriad; apical margin of labrum nearly straight at middle; mandibles fairly long, gently incurved at the acute apices; mental tooth porrect, truncated at the tip; palpi slender; antennae long and slender, reaching apical two-fifths of elytra, pedicel the shortest and antennomere 3 the longest, terminal antennomere about as long as antennomere 8.

Pronotum subcordate, evidently wider than head, about as long as or a little longer than wide, widest at about three-fourths from base, and contracted posteriorly; PW/HW 1.34–1.43 (M 1.39), PW/PL 0.93–0.98 (M 0.95), PW/PA 1.35–1.48 (M 1.42), PW/PB 1.49–1.64 (M 1.56); sides rather widely reflexed in front, the borders becoming narrower posteriad towards ante-basal sinuation located between basal sixth and fifth, moderately arcuate in front, nearly straight at middle, and either subparallel or very slightly convergent towards hind angles, with shallow ante-basal sinuation; apex about as wide as or a little wider than base, nearly straight or very slightly arcuate, PA/PB 1.01–1.15 (M 1.10), with front angles obtuse, narrowly rounded, and hardly produced forwards; base slightly but widely emarginate; hind angles usually sharp and often denticulate at the tips, protrudent posteriad or postero-laterad, with postangular setae widely removed forwards; dorsum convex, especially in anterior half, with fine median line narrowly deepened in basal area; apical transverse impression shallow, basal one narrow but distinct, arcuate, interrupted at middle, and laterally reaching the bottom of basal foveae, which are fairly large, deep, and shallowly extending anteriad; postangular carinae vestigial; basal area narrow and more or less uneven. Lateral expansion of propleura narrowly visible from above behind middle.

Elytra oblong-ovate, much wider than pronotum, evidently longer than wide, widest at about middle, and almost equally narrowed towards apices and bases, though apical parts are ampler than the basal; EW/PW 1.72–1.83 (M 1.75), EL/PL 2.61–2.74 (M 2.67), EL/EW 1.56–1.65 (M 1.60); shoulders feebly arcuate, with prehumeral borders oblique and nearly straight; sides feebly arcuate from behind shoulders to before apices, which are conjointly and rather widely rounded, moderately bordered except for prehumeral parts which are finely bordered; dorsum convex, steeply declivous in marginal areas, transversely depressed in basal areas, forming a fovea delimited on each side by obtuse basal carina formed by proximal portion of interval 5; striae superficial, indistinctly crenulate, clearly impressed near suture but obliterated at the side, stria 8 distinctly impressed in apical half; scutellar striole short but distinct; apical striole distinct, moderately curved, free at the anterior end though directed to the site of stria 5; intervals flat except for two parasutural ones; apical carina not prominent; stria 3 with two setiferous dorsal pores at 1/7–1/6 and 2/5–4/9 from base, respectively; stria 5 also with two setiferous dorsal pores at about 1/4 and 3/5–2/3 from base, respectively; preapical pore located at the apical anastomosis of striae 2 and 3, and more distant from apex than from suture; marginal umbilicate series typical of *Paratrechiama*.

Ventral surface smooth; anal ventrite provided with a pair of marginal setae in ♂,

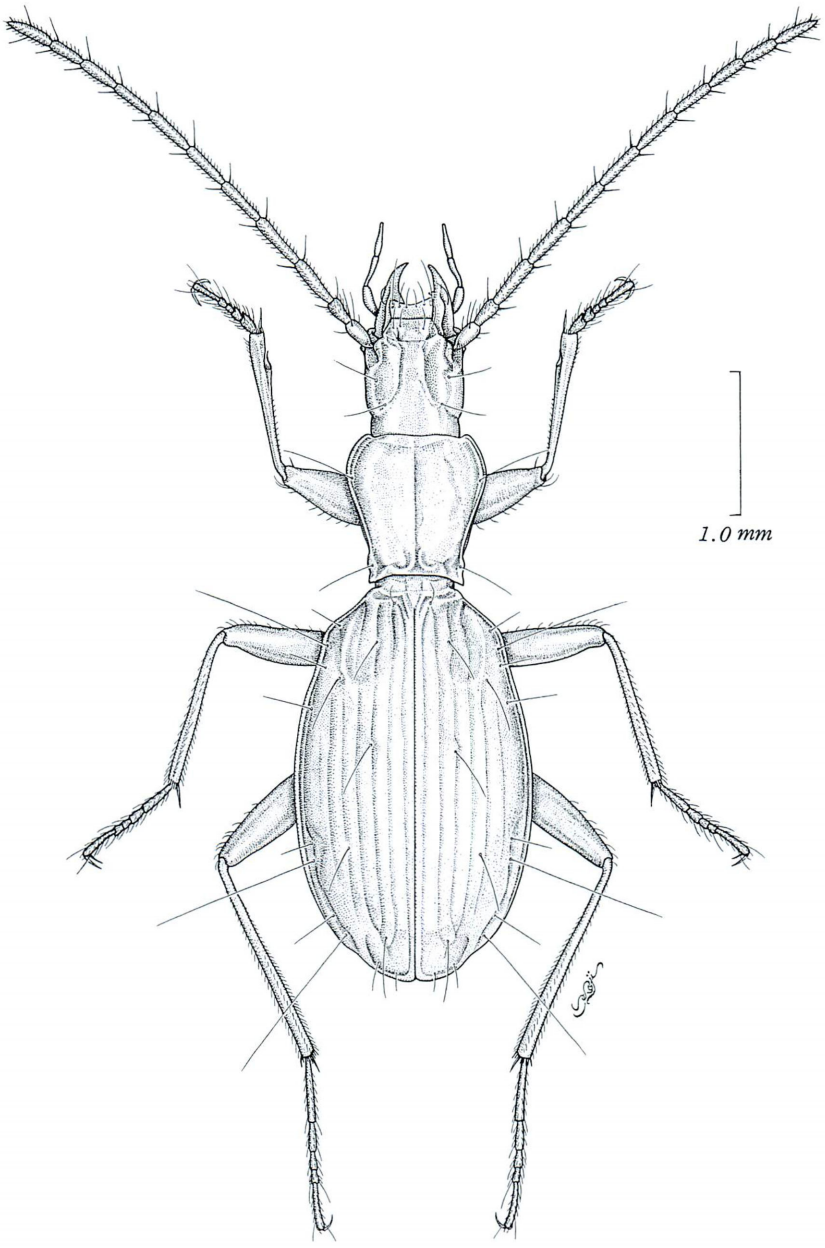
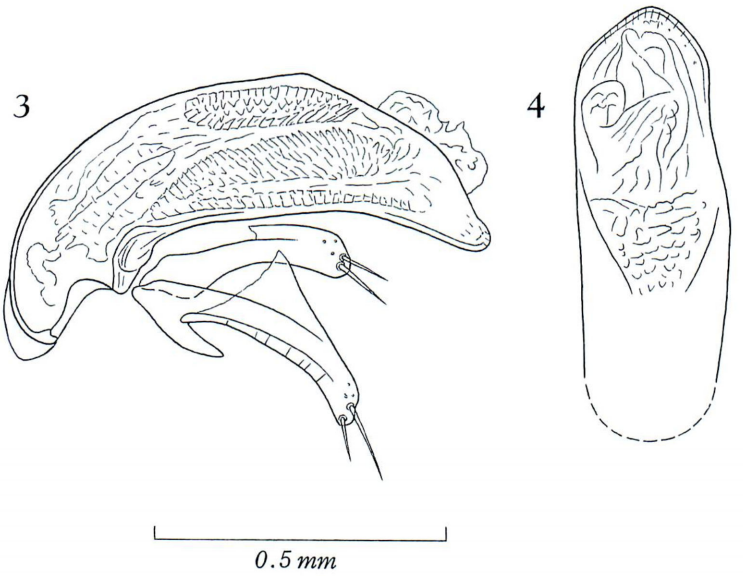


Fig. 2. *Rakantrechus* (*Paratrechiama*) *obscurus* S. UÉNO et NAITÔ, sp. nov., ♂, from Odorokami in Tsushima-chô.



Figs. 3–4. Male genitalia of *Rakantrechus* (*Paratrechiama*) *obscurus* S. UÉNO et NAITÔ, sp. nov., from Odorokami in Tsushima-chô; left lateral view (3), and apical part of aedeagus, dorso-apical view (4).

with two pair of them in ♀. Legs fairly long and slender; protibiae gently dilated towards apices, longitudinally grooved on the external face, and glabrous on the anterior face; mesotibia about two-fifths as long as elytra, metatibia about a half as long as elytra, and very slightly outcurved at the apical part; tarsi thin, mesotarsus about two-thirds as long as mesotibia, metatarsus about three-fourths as long as metatibia; tarsomere 1 a little shorter than tarsomeres 2–4 combined in mesotarsus, a little longer than tarsomeres 2–4 combined in metatarsus.

Male genital organ small and rather lightly sclerotised, similar to that of *R. nomurai* in basic conformation, but markedly different in the shape of aedeagal apical lobe, development of teeth-patches inside the inner sac, and apical setae of styles. Aedeagus nearly one-fourth as long as elytra, short and broad, about as high as wide, with dorsal margin almost semicircularly rounded in profile; viewed dorsally, aedeagus broad to the base of apical lobe, emarginate on the left side at the level of apical orifice, and then abruptly narrowed to obtuse extremity; viewed laterally, apical part tapered and decurved from behind middle, abruptly narrowed from the base of apical lobe, and narrowly rounded at the terminal portion; basal part small, not sharply bent at the level of parameral articulation, and deeply emarginate at the sides of basal orifice; sagittal aileron hyaline, of moderate size; ventral margin nearly straight at middle in profile. Inner sac devoid of differentiated copulatory piece, but largely covered with scales of various degree of sclerotisation, which form elongate teeth-patches on the left side, smaller dorsal one above larger ventral one. Styles relatively broad, left style much

longer than the right, each bearing two short setae at the apex.

Type series. Holotype: ♂, allotype: ♀, paratypes: 6 ♀♀, 21–X–2007, T. NAITÔ leg. Deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

Type locality. Odorokami, 40 m in altitude, of Tsushima-chô [now included in Uwajima-shi] at the western part of Ehimé Prefecture, western Shikoku, Southwest Japan.

Notes. Though almost identical with *R. nomurai* in external characteristics, this new species is fully described since the original description of *R. nomurai* was made half a century ago, when our knowledge of the Japanese Trechinae was still insufficient. The dark coloration of its body is quite exceptional among the blind trechines of Japan, in spite of the fact that similarly dark-coloured blind species are often found in the caves of Southwest China and Indo-china.

The present new species was found near the source of a narrow branch stream of the Howara-gawa River at the southeastern foot of Amamori-yama (303 m in height), about 5 km north by east from the base of the Yura Peninsula. This locality is about 56 km distant to the east by north in a beeline beyond the Bungo Channel from Karyû-dô Cave, the type locality of *Rakantrechus* (*Paratrechiama*) *nomurai nomurai*, and about 60.5 km distant to the east in a beeline beyond the Bungo Channel from the site of Kozono-no-ana Cave, the lost type locality of *R.* (*P.*) *elegans* S. UÉNO (1960, p. 43, fig. 5; 2006, p. 30). All the specimens of the type series were found out from a heap of weathered shale accumulated on a shale bed. Most of them occurred in rather a shallow part of the heap, in particular from among tangled grass roots.

It is difficult to determine by what means the ancestor of *R. obscurus* reached the western coast of the Island of Shikoku and successfully colonized there. It must have originated somewhere in central Kyushu, since its con-subgeners flourish now in only that area and nowhere else. To disperse eastwards from eastern Kyushu, however, the ancestral beetle must have crossed the Bungo Channel, or a strong tidal current, even though the width of the channel is 30 km or so in a beeline. Therefore, immigration by means of sweepstakes dispersal does not seem plausible for flightless blind beetles like trechines. On the other hand, direct dispersal through land bridges may not be possible, since we have to go back to the middle Pleistocene, four hundred or five hundred thousand years ago, for finding an appropriate land connection between the Saiki–Tsukumi area of eastern Kyushu and the Tsushima area of western Shikoku. This lapse of time is too large to keep the trechine beetle unchanged, which was already adapted to the life under the ground and was closely similar in facies and other external peculiarities to highly adapted cavernicolous congeners endemic to eastern Kyushu. Their speciation must have taken place rather recently, most probably in the late Pleistocene. Otherwise, they have become differentiated into species more widely different from each other.

Another possibility of the eastward dispersal of the ancestor of *R. obscurus* is taking the same route as that of *R.* (*Pilosotrechiama*) *peninsularis*, that is, from the Saganoseki Peninsula of eastern Kyushu to Sada-misaki Peninsula of western Shikoku, then spread

southwards along the western coast of Shikoku, and through the base of the Komobuchi Peninsula to the Amamori-yama Hills. This is, however, a long way, and further painstaking investigations are needed for obtaining evidences of its track.

Rakantrechus (*Pilosotrechiama*) *peninsularis* S. UÉNO et NAITÔ, sp. nov.

(Figs. 5–7)

Length: 4.50–5.20 mm (from apical margin of clypeus to apices of elytra).

Closely similar to *R.* (*Pilosotrechiama*) *mirabilis* S. UÉNO, but much larger, with a little smaller head and a little more elongate elytra. Evidently different from the type species in configuration of aedeagus, which is compressed, higher at middle, with larger basal part, much larger teeth-patch inside inner sac, and differently shaped copulatory piece.

Colour somewhat darker than in *R. mirabilis*, reddish brown, shiny; palpi, antennae, venter of hind body, and legs yellowish brown, obviously lighter than dorsum. Body elongate, sparsely covered with fairly long hairs on pronotum, pubescent on elytra; apterous and anophthalmic. Microsculpture clearly impressed and mostly consisting of wide meshes on head, formed by fine transverse lines on pronotum and elytra, though partially degenerated on the former and mostly evanescent on the latter.

Head relatively small though similar in shape to that of *R. mirabilis*, about as wide as long, and widest at about basal third; dorsum depressed and glabrous; frontal furrows distinctly impressed, gently arcuate, and not angulate at middle; frons and supraorbital areas gently convex, the former seemingly ridged, the latter bearing two pair of supraorbital setae on lines convergent posteriad; genae feebly and evenly convex, sparsely covered with fairly long hairs; labrum transverse, shallowly emarginate at the apex; mandibles fairly stout, briefly incurved at the acute apices; mentum with a porrect tooth in apical emargination, which is simple at the tip; palpi slender; antennae long and slender, reaching apical fourth of elytra in ♂, apical three-eighths of elytra in ♀, pedicel the shortest, a little more than a half as long as each of antennomeres 3–7, which is nearly four times as long as wide, antennomeres 8–10 gradually decreasing in length towards apex, terminal antennomere about as long as antennomere 8.

Pronotum cordate, obviously wider than head, slightly wider than long, widest at about three-fourths from base, and contracted at base; PW/HW 1.36–1.47 (M 1.42), PW/PL 1.05–1.13 (M 1.09), PW/PA ca. 1.46–1.56 (M ca. 1.51), PW/PB 1.45–1.64 (M 1.56); sides moderately reflexed in front, narrowly so behind middle, rather strongly arcuate in apical three-sevenths, almost straight behind middle, briefly and deeply sinuate between basal eighth and sixth, and then more or less divergent towards hind angles, which are sharp and protrudent postero-laterad; postangular setae a little removed forwards; apex nearly straight, usually somewhat wider than base, sometimes as wide as the latter, PA/PB ca. 0.97–1.08 (M ca. 1.03), with front angles nearly rounded off; base either straight or very slightly emarginate at middle, briefly but deeply emarginate on each side just inside hind angle; dorsum moderately convex and sparsely

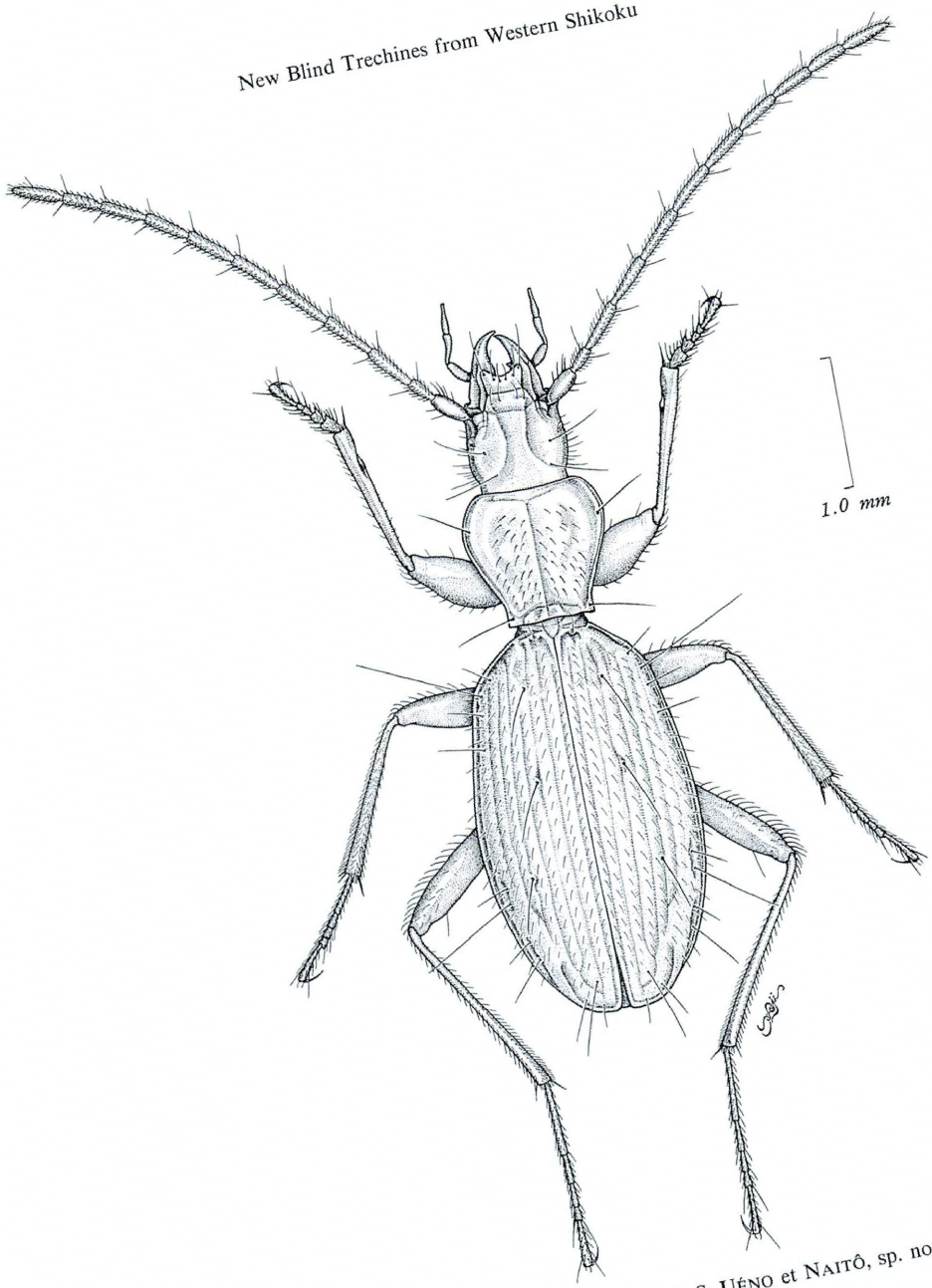
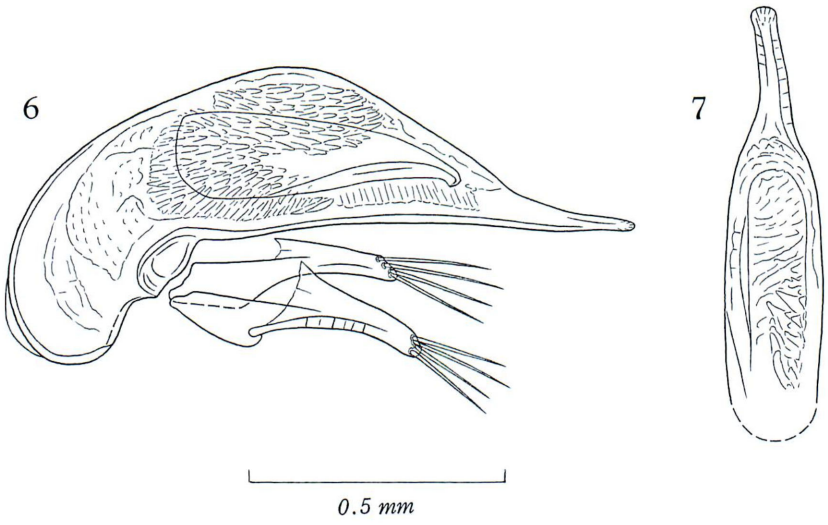


Fig. 5. *Rakantrechus* (*Pilosotrechiama*) *peninsularis* S. UÉNO et NAITÔ, sp. nov., ♂, from Kamagi on the Sada-misaki Peninsula.

covered with fairly long hairs, particularly in basal half, with sharply impressed median line, which is a little widened in basal area; apical transverse impression mal-defined, basal one arcuate, uneven, and laterally reaching the bottom of basal foveae which



Figs. 6–7. Male genitalia of *Rakantrechus* (*Pilosotrechiama*) *peninsularis* S. UÉNO et NAITÔ, sp. nov., from Kamagi on the Sada-misaki Peninsula; left lateral view (6), and apical part of aedeagus, dorso-apical view (7).

extend anteriorly parallel to lateral borders; postangular carinae obtuse; basal area narrow and more or less uneven. Lateral expansion of propleura hardly visible from above.

Elytra oblong-oval, evidently wider than pronotum, much longer than wide, widest at about middle, and equally narrowed towards bases and towards apices; EW/PW 1.55–1.67 (M 1.59), EL/PL 2.89–3.05 (M 2.97), EL/EW 1.67–1.77 (M 1.71); shoulders widely rounded, prehumeral borders oblique and straight; sides narrowly bordered throughout, nearly straight behind shoulders, then feebly arcuate to before apices, which are widely and conjointly rounded; dorsum rather flat though steeply declivous in narrow lateral parts, shallowly depressed in basal areas and forming a small transverse fovea; striae distinct and almost entire though more or less shallower at the side than on the disc, irregularly crenulate, stria 8 not particularly deepened in apical part; scutellar striole short and shallow; apical striole deeply impressed, moderately curved, and almost joining stria 5 or at least directed to the terminus of stria 5; intervals slightly convex near suture, each bearing irregular rows of pubescence; apical carina distinct though obtuse; stria 3 with two setiferous dorsal pores at about 2/15 and 1/3–2/5 from base, respectively; stria 5 with a single setiferous dorsal pore at about 5/8 from base; preapical pore located at the apical anastomosis of striae 2 and 3, and more distant from apex than from suture; marginal umbilicate series as in the type species.

Ventral surface glabrous and smooth; each ventrite usually with two pair of paramedian setae; anal ventrite provided with a pair of marginal setae in ♂, with two pair of them in ♀. Legs long and slender; protibiae gently dilated towards apices, longitudinally grooved on the external face, and glabrous on the anterior face; mesotibia

about two-fifths as long as elytra, metatibia about five-ninths as long as elytra and nearly straight; tarsi slender, mesotarsus about three-fourths as long as mesotibia, metatarsus about five-sixths as long as metatibia; tarsomere 1 about as long as tarsomeres 2–4 combined in both meso- and metatarsi.

Male genital organ similar in basic conformation to that of *R. mirabilis*, fairly large and moderately sclerotised. Aedeagus four-ninths as long as elytra, compressed, and hardly arcuate except for basal part, with the dorsal margin rather strongly arcuate at middle in profile; basal part large, moderately curved ventrad, with small basal orifice, whose sides are deeply emarginate; sagittal aileron small, narrow and hyaline; apical part tapered from behind middle in lateral view, abruptly narrowed behind apical orifice in dorsal view, and produced into a narrow apical lobe, which is nearly parallel-sided, slightly curved to the right, and narrowly rounded at the extremity in dorsal view, gradually narrowed apicad, almost invisibly reflexed, and blunt at the extremity in lateral view; ventral margin very slightly arcuate in profile. Inner sac armed with a large copulatory piece about four-ninths as long as aedeagus and a large teeth-patch consisting of fairly large teeth at the left side; copulatory piece spatulate, widely lamellar at the proximal part and rounded at the apex, attenuated towards the blunt apex in lateral view, which is briefly bent ventrad; teeth-patch deeply curved in a C-shape, with the dorsal branch narrowly rounded at the apex. Styles rather short with narrow apical parts, left style evidently longer than the right, each bearing four setae at the apex.

Type series. Holotype: ♂, allotype: ♀, paratypes: 1 ♂, 5 ♀♀, 2–XII–2007, T. NAITÔ leg. Deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

Type locality. Kamagi, 100 m in altitude, of Misaki-chô on the Sada-misaki Peninsula, at the western part of Ehimé Prefecture, western Shikoku, Southwest Japan.

Notes. This interesting new species can be recognised at first sight by its large size, though almost identical in external morphology with *R. mirabilis*. It was found from a thick scree of argillaceous schist lying at about three-sevenths from the tip of the Sada-misaki Peninsula or 4.3 km east-northeast of the town of Misaki. The scree was tight at the deep part, but loose and rather dry near the surface. The micro-habitat of the trechine beetle lay beneath the loose layer, at a depth of only about 15 cm, though the environmental condition seemed fairly stable at that level.

Extending for about 37 km to the west-southwest from the northwestern corner of Shikoku, this peninsula is the longest and slenderest in the Japanese Islands, and is only 1,150 m wide at a point near the habitat of the trechine beetle. This locality is about 46.5 km distant to the northeast in a beeline beyond the Bungo Channel from the site of Tokura-no-ana Cave in Tsukumi-shi, the lost type locality of *Rakantrechus mirabilis*, which is the type species of the subgenus *Pilosotrechiama*. Up to the late Pleistocene, about twenty thousand years ago, this long peninsula was connected by land with the northeastern tip of the Saganoseki Peninsula of eastern Kyushu, but was separated from it by the subsidence of the Hôyo Straits which are deeper than −400 m. At present, the tips of the two peninsulae are 13.5 km distant from each other.

It is doubtless that the ancestor of *R. peninsularis* dispersed northeastwards on the Hôyo land bridge from the Saganoseki Peninsula, and immigrated into the Sada-misaki Peninsula in the late Pleistocene. It is to be hoped that further investigations will bring forth other evidences and clarify the distributional history of *Pilosotrechiama* on a sounder basis.

要　　約

上野俊一・内藤隆夫：四国西端部で発見された九州起源のメクラチビゴミムシ類の2新種. —— 四国の動植物相と九州中央部のものとが密接な関連性をもっていることは，古くからよく知られている．この事情は複眼の退化した甲虫類でも同様だが，分化のとくにいちじるしい盲目のチビゴミムシ類では，豊後水道を挟んで四国側と九州側とにまたがる分布域をもつ亜属は，これまでまったく知られていなかった．ところが，2007年の10月に四国西岸の津島町で，本論文の第二著者，内藤が採集した盲目のチビゴミムシは，それまで九州中央部の固有だと考えられていたサイカイメクラチビゴミムシ亜属 *Paratrechiama* に属するもので，しかも大分県佐伯地方の石灰洞に固有のノムラメクラチビゴミムシ *Rakantrechus nomurai nomurai* と外部形態では区別できないほど近縁のものであった．さらに同年の12月になって，佐田岬半島の先端部近くで別の盲目種が発見されたが，この種は大分県津久見地方のみから知られていたウスケメクラチビゴミムシ亜属 *Pilosotrechiama* の第二の種で，亜属基準種のウスケメクラチビゴミムシ *Rakantrechus mirabilis* にきわめて類縁が近く，やはり外部形態では区別できないほど酷似している．

外部形態では識別困難というものの，津島町の種は，異常に暗い体色だけでほかの種から一目で区別できるし，佐田岬のものは基準種より明らかに大型であることで，一見して別種だとわかる．さらにどちらの種も交尾器の形態が既知種のものとは明らかに異なっているので顕著な別新種だと判定される．それで，サイカイメクラチビゴミムシ亜属のものにはウスグロメクラチビゴミムシ *Rakantrechus* (*Paratrechiama*) *obscurus* S. UÉNO et NAITÔ, ウスケメクラチビゴミムシ亜属のものにはサダメクラチビゴミムシ *Rakantrechus* (*Pilosotrechiama*) *peninsularis* S. UÉNO et NAITÔ という新名を与えて，この論文に記載した．

これらのメクラチビゴミムシ類は，九州東部産の種に類縁関係がきわめて近いので，九州起源の祖先種から分化したものであることに疑いの余地はない．しかもその種分化は，ごく新しい時代に起こったものだろう．しかし，拡散の時期や経路の追究はかならずしもやさしくない．2新種のうちで比較的わかりやすいのは，サダメクラチビゴミムシのほうで，その祖先種が，大分県の佐賀関半島から豊予陸橋を通って佐田岬半島に到達したことはほぼ確実である．豊予陸橋は，更新世最終氷期の末期，今から2万年くらい前に，中央部の西寄りが沈降して豊予海峡になり，東西ふたつの半島に分かれた．したがって，拡散の時期は豊予海峡の成立より前，いずれにしても更新世末期だといえるだろう．ウスグロメクラチビゴミムシのほうも，同じ経路で四国へ到達したのち，西海岸沿いに南下して，津島に行き着いたのかも知れないが，複眼がなくなり生息場所も限定されるようになったメクラチビゴミムシ類にとって，この経路はいかにも長い．いっぽう，九州東部と四国南西部とに挟まれる区域は，豊後水道部分の南方からの沈降によって深い入り込みになったが，更新世中期以降には，それを横切る陸橋の存在が記録されていない．また，豊後

水道は潮流が速いので，いわゆる賭けによる拡散で渡ったとも考えにくい．いずれにしても，ウスグロメクラチビゴミムシの分化拡散の経緯を解明するためには，より多くの証拠が必要で，近い将来にその断片でも発見されて，推論の根拠により高い信頼性の付加されることが望まれる．

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Elytra, *Tokyo*, **36**(1): 225–226, May 30, 2008

New Records of the Species of the Genus *Platysoma* (Coleoptera, Histeridae) from the Ryukyus, Japan

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Through the courtesy of Dr. Kiyoshi ANDO, I had the opportunity to examine the histerid collection of Mr. Taichi SHIBATA housed in the Kashihara City Museum, Nara Prefecture, Japan. Under close examination of the collection, I found three unrecorded histerid species of the genus *Platysoma* from the Islands of Amami-Ôshima and Hateruma-jima, the Ryukyus, Japan. The collecting data are as given below:

Platysoma (*Platysoma*) *unicum* BICKHARDT, 1912

Platysoma (*Platysoma*) *unicum*: ÔHARA, 1986, 96 [Tokara-nakano-shima, Ishigaki-jima, Taketomi-jima; Taiwan]; 1999, 88 [Ishigaki-jima].

Specimens examined. Japan: Ryukyu. [Tokara-nakano-shima] 14–VII–1961, Y. HAMA. [Ishigaki-jima] 1 ex., Yonehara, 8–VIII–1956, M. YASUI. [Hateruma-jima] 1 ex., 27–VII–1964, T. ITO.

Distribution. Japan (Ryukyu: Tokara-nakano-shima, Taketomi-jima; Ishigaki-jima; Hateruma-jima); Taiwan. New to Hateruma-jima.

Platysoma (*Platylister*) *atratum* ERICHSON, 1834

Platysoma (*Platylister*) *atratum*: SAWADA, 1988, 40 [Izu Isls.: Miyake-jima]; ÔHARA, 1994, 96 [Kyushu, Yaku-shima, Ryukyu: Tokara-nakano-shima, Amami-Ôshima, Tokuno-shima, Okinawa-Hontô, Taketomi-jima]; 1999, 91 [Tokara-nakano-shima, Amami-Ôshima].

Specimens examined. Japan: Ryukyu. [Amami-Ôshima] 1 ex., Ikari, 4–VI–1960, T. SHIBATA; 1 ex., Shimmura, 27–V–1960, T. SHIBATA. [Hateruma-jima] 27–VII–1964, M. YASUI.

Distribution. Japan (Kyushu, Izu Isls., Yaku-shima, Ryukyu: Tokara-nakano-shima, Amami-Ôshima, Tokuno-shima, Okinawa-Hontô, Taketomi-jima, Hateruma-jima); Taiwan; Vietnam; Burma; Laos; southeastern China; India; Nepal. New to Hateruma-jima.

Platysoma (*Platylister*) *horni* BICKHDARDT, 1913

Platysoma (*Platylister*) *horni*: ÔHARA, 1994, 103 [Ishigaki-jima]; 1999, 91 [Ishigaki-jima, Iriomote-jima].

Specimens examined. Japan: Ryukyu. [Amami-Ôshima] 1 ex., Ikari, 29–V–1960, T. SHIBATA.

Distribution. Japan (Ryukyu: Amami-Ôshima, Ishigaki-jima, Iriomote-jima) and Taiwan. New to Amami-Ôshima.

I am thankful to Dr. Kiyoshi ANDO for his kindness in giving me the opportunity to record the specimens.

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Elytra, *Tokyo*, **36**(1): 227–228, May 30, 2008

Symbiotic Host of *Triartiger reductus* NOMURA (Coleoptera, Staphylinidae, Pselaphinae, Clavigeritae) in the Island of Tsushima, Japan

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The clavigerine beetle *Triartiger reductus* NOMURA, 1997 (Fig. 1) was recorded from the Islands of Tsushima, western Japan, and only a few specimens have hitherto been collected (NOMURA, 1997). Though it was presumed to be a myrmecophile as most species of the supertribe Clavigeritae, no information on ant association of this species was available. Recently, T. K. visited Tsushima for investigation of myrmecophilous insects and found numerous specimens of this rare species. The beetles were collected from the nests of *Crematogaster osakensis* FOREL, 1900 (Myrmicinae). Sixteen colonies of *C. osakensis* were investigated, seven of them being parasitized by *T. reductus*. During his four days of investigation in Tsushima, T. K. investigated a total of 17 species of ants (totally 91 colonies), but beetles were found only in the nests of *C. osakensis*. Therefore, *C. osakensis* is most probably the host ant of *T. reductus*. Normally three or



Fig. 1. A living *Triartiger reductus*, dorsal view.



Fig. 2. *Triartiger reductus* in a nest *Crematogaster osakensis*.

four beetles were found per colony, though sometimes more than ten beetles were found in a single ant colony (Fig. 2). When T. K. inspected an understone colony, the beetles walked slowly in the trail of ants and escaped into the hole continuing under ground. The ants showed clear interest in the beetles and tapped their backs with their antennae for a short time. Behaviour that ant carries the beetle with its mandibles has not been observed in the symbiotic association of *C. osakensis* and *T. reductus*, though this behaviour is commonly observed in associations between beetles of the genus *Diartiger* SHARP, 1883, a close relative of *Triartiger*, and ants of the genus *Lasius* FABRICIUS, 1804 (Formicinae) (MARUYAMA, pers. obs.)

Triartiger reductus NOMURA, 1997

Specimens examined. 27 exs., Sasunaotsu, Kamiagata-machi, Tsushima-shi, Nagasaki, Japan, 27–IV–2008, T. KOMATSU leg.; 5 exs., same data but, 29–IV–2008. In the collections of the Kyushu University Museum and the National Museum of Nature and Science, Tokyo.

Symbiotic host. Crematogaster osakensis.

Reference

NOMURA, S., 1997. A revision of the clavigerine genus *Triartiger* KUBOTA (Coleoptera, Staphylinidae, Pselaphinae) from Taiwan and Japan. *Elytra, Tokyo*, **25**: 435–444.

Elytra, *Tokyo*, **36**(1): 229–230, May 30, 2008

A New Record of *Prionocyphon laosensis* (Coleoptera, Scirtidae) from Thailand

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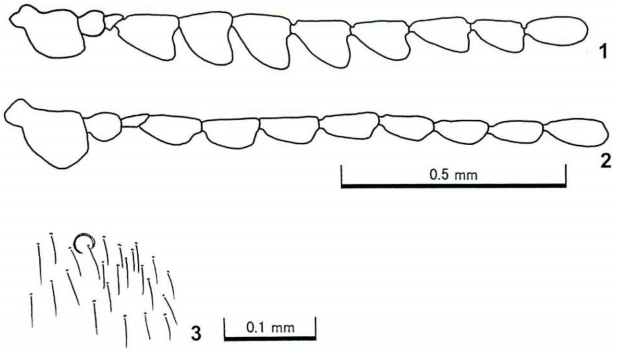
Prionocyphon laosensis was described from Laos based on a single male specimen (YOSHITOMI & SATÔ, 2003). Recently I had the opportunity to examine eight specimens of this species collected in Thailand and preserved in the collection of the Naturhistorisches Museum Wien (NMW). In this paper, I will record this species for the first time from Thailand, with additional descriptions and remarks.

I wish to express my gratitude to Dr. M. A. JÄCH (NMW) for his kindness allowing me to examine the specimens.

Specimens examined. 2 ♂♂, "N-THAILAND, 19.–26.6. 18°32′N 98°32′E Doi Inthanon, 1200 m Bang Khun Klang, Malicky & Chantaramongkol 1989"; 2 ♀♀, "N-THAILAND, 10.–17.4. 18°49′ N 98°57′ E Chiang Mai, Zoo (Licht) leg. Chantaramonkol & Malicky 1989"; 2 ♂♂, "NW-THAIL.: Chiang Mai 98°57′E 18°49′N, Zoo 1.–8.5.1989 Malicky & Chantaramongkol LF"; 1 ♂, "THAILAND 1989 Chiang Mai Malicky 10.–17.IV.", genitalia on slide no. HY 839; 1 ♂, "THAILAND, Mae Ping 24.–25.6.1991 leg. Malicky (Licht)".

Additional description. Coloration of elytra infuscated in some specimens. Male antennae (Fig. 1) serrate on IV–X; approximate ratio of each antennal segment as 4.0 : 1.5 : 1.0 : 3.5 : 3.0 : 3.3 : 3.3 : 3.3 : 3.3 : 3.0 : 3.5. Female antennae (Fig. 2) filiform; approximate ratio of each antennal segment as 3.0 : 1.3 : 1.0 : 2.3 : 2.2 : 2.2 : 2.2 : 2.0 : 2.0 : 2.0 : 2.3. Female sternite VI with small concavity near apical margin of mesal part; caudal margin of sternite VII gently arcuate.



Figs. 1–3. *Prionocyphon laosensis*: 1, male antenna; 2, female antenna; 3, mesal part of sternite VI of female.

Remarks. The presence of "extra setae" on female sternite VI is considered to be an autapomorphy of the genus *Prionocyphon* (YOSHITOMI, 2005). In *P. laosensis*, the extra setae are absent, but the small concavity is present (Fig. 3).

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YOSHITOMI, H., 2005. Systematic revision of the family Scirtidae of Japan, with phylogeny, morphology and bionomics (Insecta: Coleoptera, Scirtoidea). *Jpn. J. syst. Ent., Mon. ser.*, (3), 212 pp. Matsuyama.

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WATANABE, Y., 1995. A new micropeplid species (Coleoptera) from Yunnan, Southwest China. *Elytra, Tokyo*, **23**: 245–249.

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