

## Three New Taxa of the Carabina (Coleoptera, Carabidae) from Zhejiang and Fujian, Southeast China

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**Abstract** Two new species and a new subspecies of the subtribe Carabina are described from Zhejiang and Fujian Provinces of Southeast China under the names *Apotomopterus* (s. str.) *candidiequus*, *A.* (s. str.) *flavihervosus* and *Isiocarabus daiyunshan caementibos*.

In this paper, I am going to describe two new species of the genus *Apotomopterus* and a new subspecies of *Isiocarabus daiyunshan* from southeastern part of China. For the higher classification of the subtribe Carabina, I follow the system proposed by myself (IMURA, 2002).

I wish to express my cordial thanks to Mr. Jaroslav TURNA (Czech Republic) for his kind help in various ways. Hearty thanks are also due to Dr. Frank KLEINFELD (Fürth, Germany) for kindly allowing me to examine the type specimen of *I. daiyunshan* in his collection and Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for revising the manuscript of this paper.

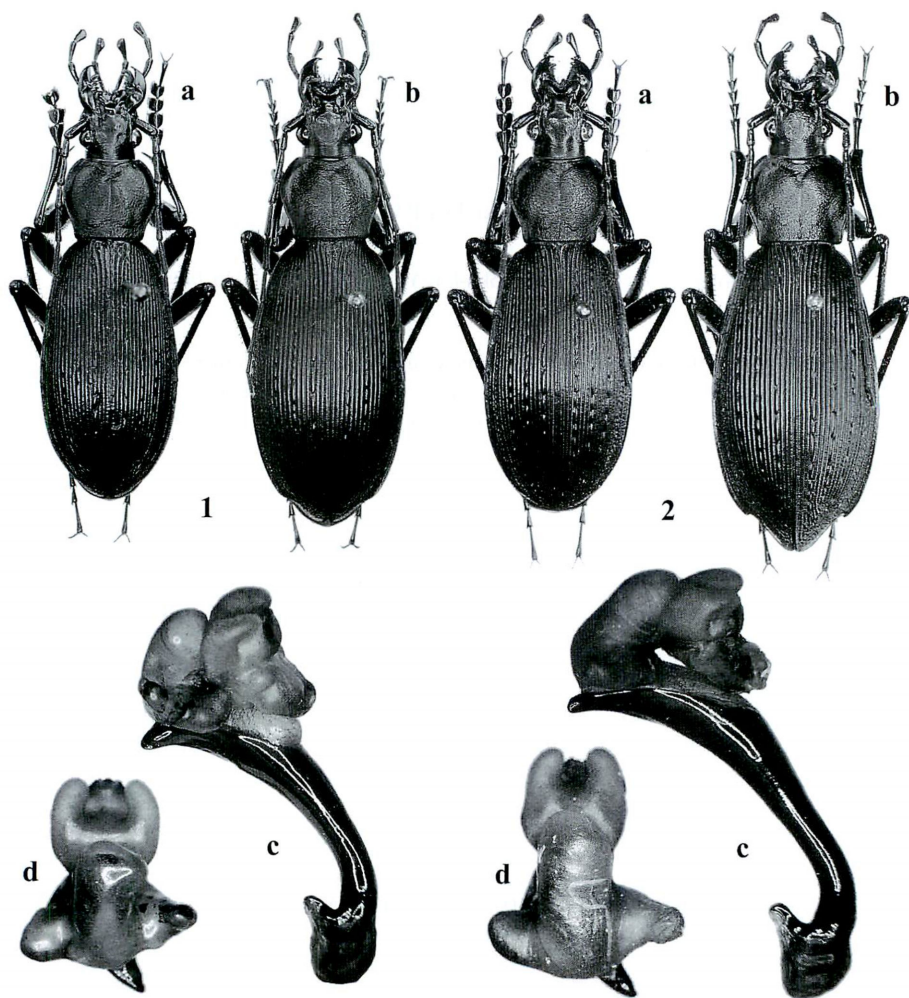
### 1. *Apotomopterus* (s. str.) *candidiequus* IMURA, sp. nov.

(Figs. 1, 4)

Length (including mandibles): 28.0–33.5 mm. Allied to *A. luschanensis* (HAUSER, 1919, p. 25) of northern Jiangxi, but definitely discriminated from that species in differently featured male genitalia and preapical emargination of female elytra as shown in Figs. 3 and 4. The new species differs from HAUSER's species mainly in the following respects: 1) preapical emargination of female elytra much shallower and not remarkably angulate near the outer margin as in *A. luschanensis* (Figs. 3 a & 4 a); apical lobe of aedeagus shorter, robuster and a little more acutely bent ventrad in lateral view, with the right lateral wall along apical margin rather remarkably compressed; 3) spinula different in shape as shown in Figs. 3 (d, e) and 4 (d, e), more strongly narrowed towards apex in dorsal view, robuster from basal to median portion and more remarkably bent ventrad towards apex in lateral view; 4) endophallus almost as in *A. luschanensis*, though the right basal lateral lobe is smaller and more sharply pointed towards the distal end.

*Type series.* Holotype: ♂, Mt. Baima Shan [白马山], 1,270–1,520 m in altitude,



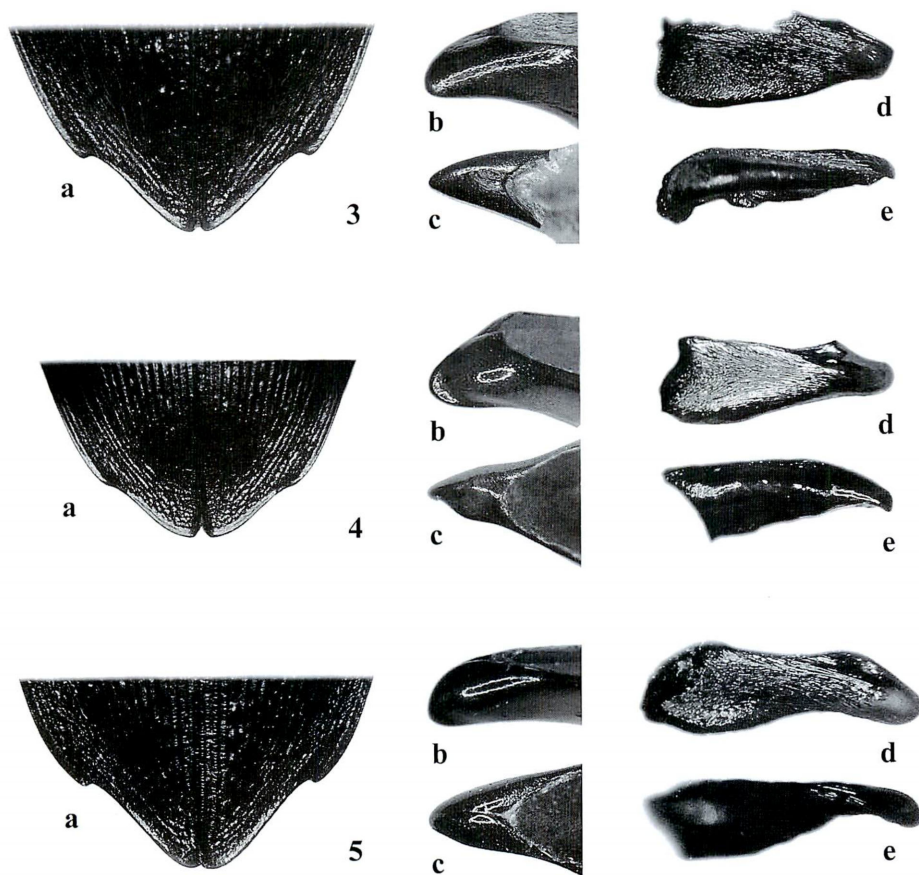


Figs. 1-2. *Apotomopterus* spp. from southwestern Zhejiang, Southeast China. — 1, *A. candidiequus* from Mt. Baima Shan in Suichang Xian of Lishui Shi; 2, *A. flavihervosus* from Fengyang Shan on the Huangmaojian Massif in Longquan Shi. — a, ♂, holotype; b, ♀, paratype; c, aedeagus with fully everted endophallus in right lateral view; d, ditto in view from aedeagal apex.

28°37'N / 119°09'E, in Suichang Xian [遂昌县], of Lishui Shi [丽水市], southwestern Zhejiang, Southeast China, 7~17-VI-2008, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 2♀, same data as for the holotype, preserved in the collection of Y. IMURA and J. TURNA.

*Notes.* The present new species was found together with such races as *Isiocarabus kiukiangensis orphniopertus* and *Coptolabrus lafossei lungtschuanensis*.

*Etymology.* The new specific name comes from its locality, Baima Shan, which



Figs. 3-5. Apical part of female elytra and male genitalia of *Apotomopterus* spp. — 3, *A. luschanensis* from Mt. Lu Shan of northern Jiangxi; 4, *A. candidiequus* (a, paratype; b-e, holotype); 5, *A. flavihervosus* (a, paratype; b-e, holotype). — a, apical part of female elytra showing preapical emargination; b, apical lobe of aedeagus in right lateral view; c, ditto in dorsal view; d, spinula in dorsal view; e, ditto in lateral view.

means “mountain of white horse” in Chinese.

## 2. *Apotomopterus* (s. str.) *flavihervosus* IMURA, sp. nov.

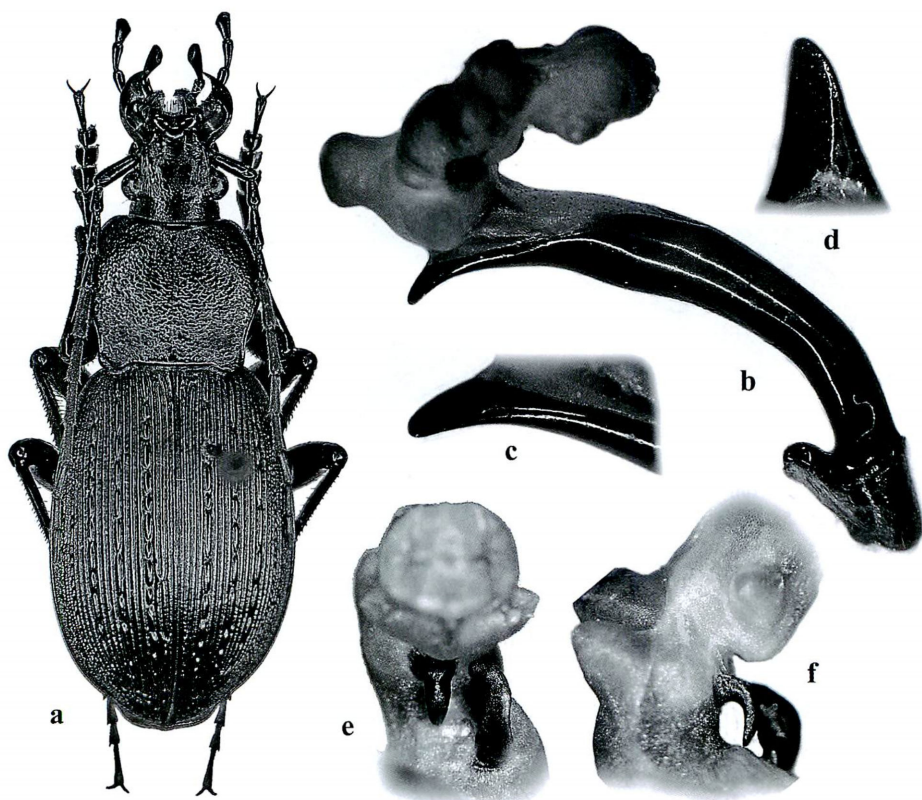
(Fig. 2, 5)

Length (including mandibles): 32.5–36.0 mm. Allied to *P. luschanensis* and *P. candidiequus*, but decisively different from them in the male genitalic features. Preapical emargination of female elytra similar to that of *A. luschanensis*, but much more deeply emarginate than in *A. candidiequus*. Aedeagus much longer and slenderer than in the two allied species, above all in basal and median portions, with the ventral margin



neither tuberculate nor protruded at apical third, apical portion more gently bent ventrad. Apical lobe of aedeagus slenderer, much less acutely narrowed towards apices whose apical end is not remarkably compressed as in *A. candidiequus*. Spinula much larger, longer and slenderer, different in shape from those of two allied species as shown in Figs. 5 d and 5 e, with the apex not sharply pointed but obtusely rounded in lateral view. Endophallus similar in general appearance to that of *A. candidiequus*, but the right basal lateral lobe is smaller, less remarkably protruded towards the distal end.

*Type series.* Holotype: ♂, Fengyang Shan [凤阳山] Nature Reserve, 1,500–1,850 m in altitude, 27°53'N / 119°11'E, on the Huangmaojian [黄茅尖] Massif, in Longquan Shi [龙泉市], southwestern Zhejiang, Southeast China, 12-V~5-VI-2008, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 1♂, 18♀♀, same data as for the holotype, preserved in the collection of Y.



Figs. 6. *Isiocarabus daiyunshan caementibos* from Mt. Shiniu Shan in east-central Fujian, Southeast China. — a, male (holotype); b, aedeagus with fully everted endophallus in right lateral view; c, apical part of aedeagus in the same view; d, ditto in dorsal view; e, digitulus (copulatory piece) in dorsal view; f, ditto in right lateral view.



IMURA and J. TURNA.

*Notes.* At the type locality, the new species occurs sympatrically with *Apotomopterus sauteri* and *Isiocarabus kiukiangensis orphniopterus*.

*Etymology.* The name of this new species comes from its locality, Huangmaojian, which means “mountain peak covered with yellow grass” in Chinese.

### 3. *Isiocarabus daiyunshan caementibos* IMURA, subsp. nov.

(Fig. 6)

*Description.* Length (including mandibles): 26.0–30.0 mm. Allied to the nominotypical subspecies described from “China, Fujian, Daiyun-Shan, (25.41 / 118.12), 1,500 m, Dehua” (KLEINFELD, 1998, p. 30), but distinguished from it by the following points: 1) body much shorter and robuster, above all in elytra (1.5 times as long as wide in the new subspecies, while the ratio is 1.7 in the nominotypical subspecies); 2) pronotum narrower and less prominently arcuate around the widest part, with the disc less strongly rugoso-punctate; 3) elevated parts of elytral intervals wider, and striae between intervals more vaguely punctate; 4) aedeagus as in the nominotypical subspecies, though the apical lobe is a little slenderer in both lateral and dorsal views; 5) digitulus (copulatory piece) different in shape, shorter, robuster and apparently dilated towards the base in dorsal view, thicker and more roundly arcuate at the basal third in lateral view.

*Type series.* Holotype: ♂, Mt. Shiniu Shan [石牛山], 1,600–1,700 m in altitude, 25°38' N / 118°28' E, in Dehua Xian [德化县], of east-central Fujian, Southeast China, 24–VI~15–VII–2007, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 3♀♀, same data as for the holotype; 3♀♀, same locality, 1~28–V–2008; 5♂♂, 14♀♀, same area, 1,350 m in altitude, 25°38' N / 118°30' E, 2~28–V–2008, preserved in the collections of Y. IMURA & J. TURNA.

*Notes.* On Mt. Shiniu Shan, the new subspecies inhabits sympatrically with *Apotomopterus sauteri* (allied to subsp. *fujianensis*), *Isiocarabus gressittianus* and *Coptolabrus ignimitella*.

*Etymology.* The new subspecific name comes from the type locality, Shiniu Shan, which means “mountain of stone cow” in Chinese.

## 要 約

井村有希: 中国浙江省と福建省から発見されたオサムシ亜族の3新分類単位。—— 中国浙江省南西部の白马山と黄茅尖からトゲオサムシ属の2新種を, また福建省中東部の石牛山からタイリクオオオサムシ属の1新亜種を記載し, それぞれに *Apotomopterus* (s. str.) *candidiequus*, *A.* (s. str.) *flavihervosus*, *Isiocarabus daiyunshan caementibos* という新名を与えた。

## Reference

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*Elytra, Tokyo*, **37**(1): 6, May 29, 2009

New Record of *Coelostoma stultum* (Coleoptera, Hydrophilidae)  
from the Daitô Islands, far off Southwest Japan

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A hydrophilid beetle *Coelostoma stultum* (WALKER, 1858) has been known from throughout Japan excluding Hokkaido (HAYASHI, 2008), however, has not been record from the Daitô Islands. I collected two individuals of this species from the Kita-daitô Islands of the Island group. In this short paper, I record it for the first time from the Daitô Islands.

*Specimens examined.* 2 males, Minami, Kita-daitô Is., 25° 56.315' N, 131° 18.352' E, 15–XII–2005, Y. MINOSHIMA leg. Deposited in the Systematic Entomology, Hokkaido University.

I would like to express my cordial thanks to Kazuaki HIGASHI (visitors' center “Minami-daitô Shima-marugoto-kan”) for his kind support during my field work.

## Reference

- HAYASHI, M., 2008. Identification and distributional records of the genus *Coelostoma* BRULLÉ in Japan (Coleoptera: Hydrophilidae). *Bull. Hoshizaki Green Found.*, **11**: 93–102. (In Japanese, with English title and abstract.)

New Upper Hypogean *Trechiana* (Coleoptera, Trechinae)  
from the Northeastern Corner of the Island of  
Shikoku, Southwest Japan

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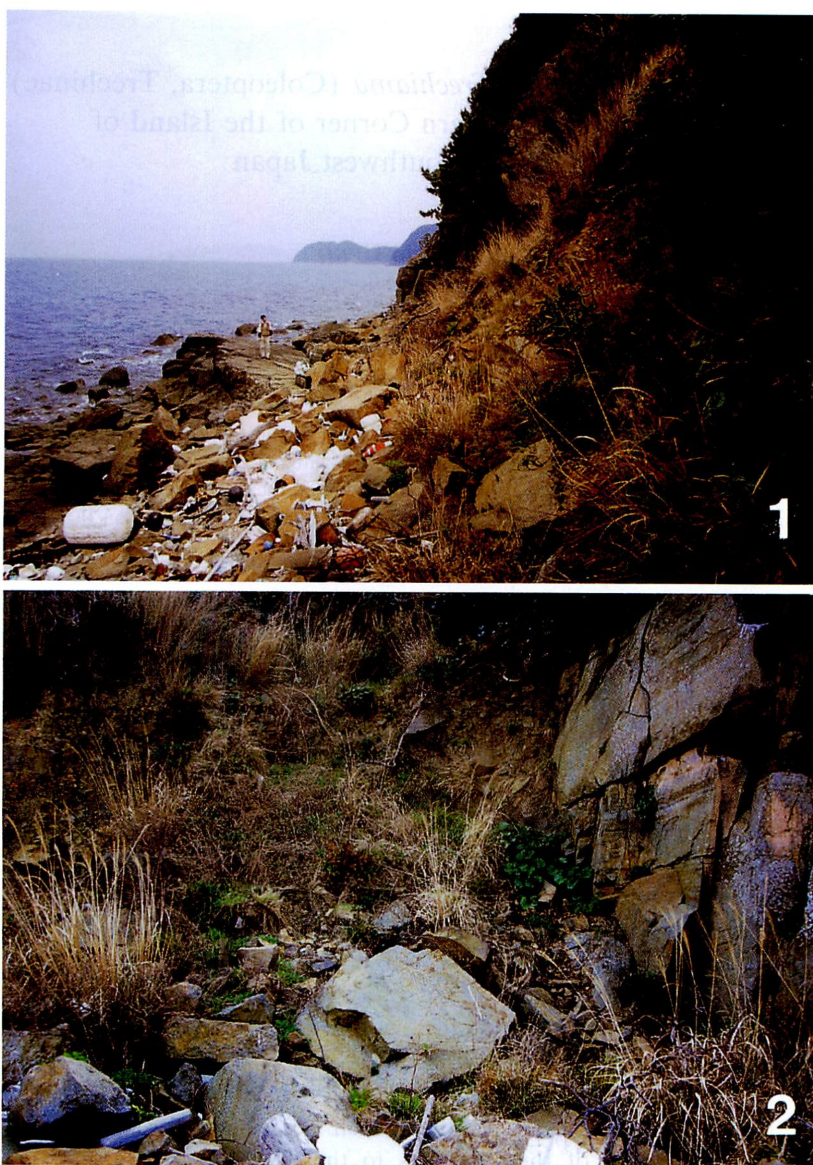
**Abstract** Two new upper hypogean species of the trechine genus *Trechiana* are described from the sandstone hill Ôasa-yama isolated at the northeastern corner of the Island of Shikoku, Southwest Japan. One of them belongs to the *reductoculatus* group and is mainly characterised by the multiplication of dorsal setae on the elytra. The other resembles the members of the *imadatei* complex of the *habei* group in general appearance, but is unique in the presence of short hairs on the pronotal disc and of only three dorsal setae of the external series on the elytra. A new species-group of its own is recognised for this species. The new names given are *Trechiana* (s. str.) *sakuragii* S. UÉNO and *T.* (s. str.) *uzushio* S. UÉNO.

At the northeastern corner of the Island of Shikoku facing the Naruto Straits, there is an isolated sandstone hill called Ôasa-yama, from which no blind trechine beetles have previously been known, although most nearby hills are inhabited by certain blind trechines. It was therefore quite unexpected that a peculiar *Trechiana* was dug out by Daisuke SAKURAGI from the upper hypogean zone on the northeastern slope of the hill on February 11, 2008. Further investigations made by himself, Masataka YOSHIDA and Kôji TANAKA revealed that it was not easy to take additional specimens by naked eyes due to paucity of favourable sites for excavation. For this reason, they concentrated their energies on setting baited traps into the upper hypogean zone, and accomplished very satisfactory results.

First of all, they found out the coexistence of two different species of *Trechiana* belonging to two different lineages, both of which were theretofore unknown from the Island of Shikoku. One of them belongs to the *reductoculatus* group, which was represented so far by only a single isolated species known from the western part of the Kii Peninsula. The other species resembles the *imadatei* complex from the eastern part of the Kii Peninsula, but seems to form a new species-group of its own in view of certain peculiarities. This species is more widely distributed on the sandstone hill than the other one, and is unusually variable in size and other details. At the northeastern end of its range, its habitat almost reaches the rocky shore of the Naruto Straits (Figs. 1, 2).

In the present paper, I am going to describe these new species under the names





Figs. 1-2. — 1. Type habitat of *Trechiana* (s. str.) *uzushio* S. UÉNO, sp. nov., at Kitadomari of Seto-chô in Naruto-shi. White things scattered along the seashore are plastic rubbish washed up by the tide of the Naruto Straits. — 2. Close-up of the right lower part of Figure 1, taken from a different viewpoint; trechine beetles were taken from under the roots of the heartleaf lily at the right central part. (Photo Masataka YOSHIDA)

*Trechiana* (s. str.) *sakuragii* and *T.* (s. str.) *uzushio*. The abbreviations employed herein are the same as those explained in previous papers of mine.

Before going into further details, I wish to express my heartfelt thanks to Messrs. Masataka YOSHIDA, Kôji TANAKA and Daisuke SAKURAGI for their painstaking efforts to clarify the trechine fauna of Ôasa-yama Hill and its vicinities.

*Trechiana* (s. str.) *sakuragii* S. UÉNO, sp. nov.

(Figs. 3–5)

Length: 5.10–6.10 mm (from apical margin of clypeus to apices of elytra).

Closely similar in facies including standard ratios to *T. reductoculatus* S. UÉNO (1992, p. 24, figs. 1–3) from Ta in Misato-chô at the western part of the Kii Peninsula, but distinguished at first sight from it by the multiplication of dorsal setae on elytra, particularly those of the external series. Decisively different from *T. reductoculatus* also in the configuration of aedeagus, which is obviously narrower in profile, with the apical lobe subparallel-sided in apical half in dorsal view, and containing differently shaped inner armature.

Colour as in *T. reductoculatus*. Microsculpture identical with that of *T. reductoculatus*.

Head subquadrate, usually a little wider than long, HW/HL 0.95–1.45 (M 1.11); genae slightly convex just before neck constriction, which is shallow though distinct; eyes atrophied, more reduced than in *T. reductoculatus*, hardly faceted, and sometimes not recognisable even as a trace; mandibles fairly slender, feebly arcuate inwards near acute apices; antennae fairly slender, usually reaching apical three-sevenths of elytra.

Pronotum cordate, evidently wider than head, about as wide as or slightly wider than long, widest at about two-thirds from base, and a little more strongly contracted at apex than at base; PW/HW 1.39–1.54 (M 1.45), PW/PL 0.96–1.11 (M 1.04), PW/PA 1.41–1.54 (M 1.47), PW/PB 1.33–1.46 (M 1.39), PB/PA 1.01–1.12 (M 1.06); sides strongly arcuate in apical two-thirds, deeply sinuate at about basal fourth or fifth, and then either subparallel or slightly divergent towards hind angles, which are either rectangular or somewhat sharp; front angles fairly large, rounded, and slightly produced forwards; base almost straight at middle or slightly emarginate; sculptures as in *T. reductoculatus*.

Elytra oval, somewhat larger and slightly more elongate than in *T. reductoculatus*, widest at about or slightly before middle, and equally narrowed towards bases and towards apices; EW/PW 1.65–1.76 (M 1.70), EL/PL 2.69–3.09 (M 2.85), EL/EW 1.54–1.65 (M 1.60); shoulders distinct though rounded, with moderately arcuate prehumeral borders whose innermost portions are not conspicuously oblique; sides narrowly bordered near bases, moderately so posteriad; apices rather narrowly rounded; dorsum longitudinally depressed on the disc, steeply declivous at the sides and in apical area; striae nearly entire though becoming shallower at the side, finely punctate on the disc, and frequently disordered at the sites of setiferous dorsal pores, stria 3 usually forming



apical anastomosis with 4 and then with 2; scutellar striole short; apical striole deep, feebly arcuate, and either joining or almost joining stria 5; chaetotaxy variable on dorsum, stria 3 with two to five setae between 1/9 and 4/5 from base, stria 5 with three to five setae between 1/5 and 3/4 from base; preapical pore located at the apical anastomosis of striae 2 and 3, and closer to suture than to apex; marginal umbilicate pores aggregated.

Ventral surface and legs as in *T. reductoculatus*.

Male genital organ small though moderately sclerotised. Aedeagus two-sevenths as long as elytra, somewhat depressed, highest before the middle, and moderately arcuate from basal end to the tip of apical lobe; basal part fairly small, with large basal orifice whose sides are deeply emarginate; sagittal aileron small though distinct; viewed laterally, apical lobe long and narrow,<sup>1)</sup> gradually tapered towards the tip, which is very slightly upturned; viewed dorsally, apical lobe abruptly narrowed behind apical orifice, then subparallel-sided to narrowly rounded extremity; ventral margin regularly arcuate in profile. Inner sac armed with two patches of sclerotised teeth, left lateral and dorso-apical; left lateral teeth-patch composed of a row of large teeth bent at the apical end; dorso-apical one composed of short small teeth linearly ranged inside apical orifice; no differentiated copulatory piece. Styles short, left style much larger than the right, each usually bearing four apical setae, which are sometimes supplemented with extra seta(e).

*Type series.* Holotype: ♂, Awata 170 m, 2-III-2008, D. SAKURAGI leg. Allotype: ♀, Awata 190 m, 11-V-2008, K. TANAKA leg. (found in a baited trap set by K. TANAKA on 5-V-2008). Paratypes: 1 ♂, Awata 190 m, 22-III-2008, D. SAKURAGI leg.; 1 ♂, Awata 170 m, 11-V-2008, K. TANAKA leg. (found in a baited trap set by K. TANAKA on 5-V-2008); 1 ♂, 3 ♀♀, Awata 170 m, 26-XI-2008, K. TANAKA leg. (found in baited traps set by K. TANAKA on 8-XI-2008); 1 ♂, Awata 190 m, 26-XI-2008, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 8-XI-2008); 1 ♀, Nakatani, 11-II-2008, D. SAKURAGI leg.; 1 ♂, Nakatani, 16-III-2008, K. TANAKA leg.; 3 ♀♀, Nakatani, 11-V-2008, K. TANAKA & M. YOSHIDA leg. (found in baited traps set by K. TANAKA & M. YOSHIDA on 5-V-2008); 1 ♂, 4 ♀♀, Hidonodani, 29-IV-2008, K. TANAKA leg.

All deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

*Localities of the type series.* Awata (type locality!), 170 m & 190 m in altitude, of Kitanada-chô; Nakatani, 130 m in altitude, of Bandô-dani in Ôasa-chô; and Hidonodani, 130 m in altitude, in Ôasa-chô; all in Naruto-shi of Tokushima Prefecture, at the northeastern corner of the Island of Shikoku, Southwest Japan.

*Notes.* It was most unexpected that a second representative of the *reductoculatus* group should occur in the northeastern corner of the Island of Shikoku. Its habitats are

<sup>1)</sup> The curvature and thickness of the aedeagal apical lobe are subject to individual variation to some extent.



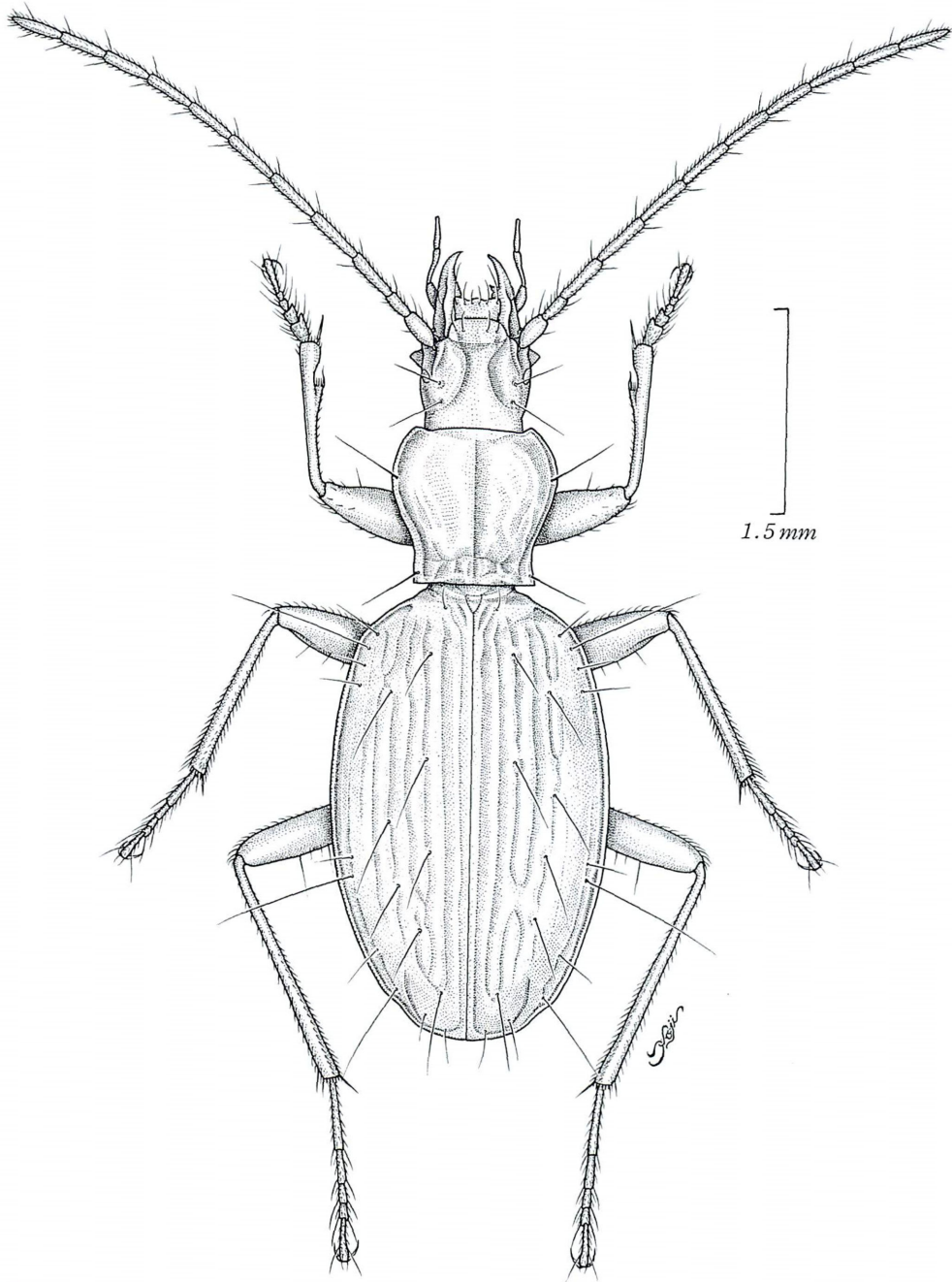
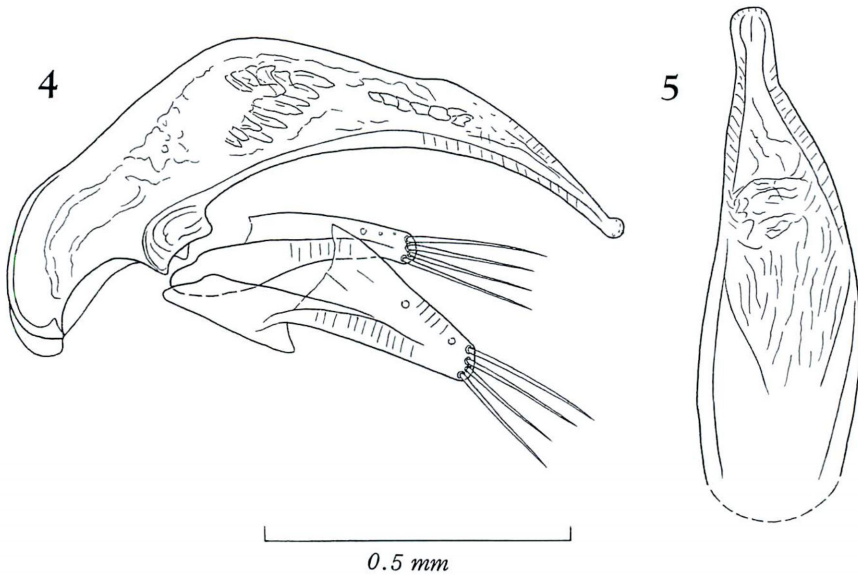


Fig. 3. *Trechiana* (s. str.) *sakuragii* S. UÉNO, sp. nov., ♂, from Awata on the northeastern slope of Ōasa-yama Hill.



Figs. 4-5. Male genitalia of *Trechiamma* (s. str.) *sakuragii* S. UENO, sp. nov., from Awata on the northeastern slope of Ōasa-yama Hill; left lateral view (4), and apical part of aedeagus, dorso-apical view (5).

not only distant for more than 60 km west by north in a beeline from the type locality of *T. reductoculatus*, but also separated from the latter by the Kitan and Naruto Straits at either side of the Island of Awaji-shima. It is true that the Naruto Straits separating Awaji-shima from Shikoku are only 1.5 km wide, but the only *Trechiamma* hitherto known from the former island (*T. onocoro* S. UENO, 1983, p. 355, figs. 3-4) belongs to a quite different group.

*Trechiamma sakuragii* has so far been known from three localities on the northeastern slope of Ōasa-yama Hill. The type locality Awata lies at the upper part of a small valley shaded by a mixture of deciduous and evergreen trees. Several individuals were dug out from the lower parts of screes at the roadside, but most specimens were caught by baited traps set in the upper hypogean zone at a depth of about 50 cm. Another blind species of the same genus, *Trechiamma uzushio* was usually found in coexistence with *T. sakuragii*.

The second locality of *T. sakuragii*, Nakatani is about 2.5 km distant to the south-southwest from the type locality, though at the other side of the watershed. It is similar to Awata in the environmental condition, and *T. uzushio* was also found in coexistence with *T. sakuragii*. Another locality, Hidonodani is only 700 m or so distant to the south-southeast from Nakatani. Though looking similar to the latter in every respect, *T. uzushio* has not been collected so far at this place.

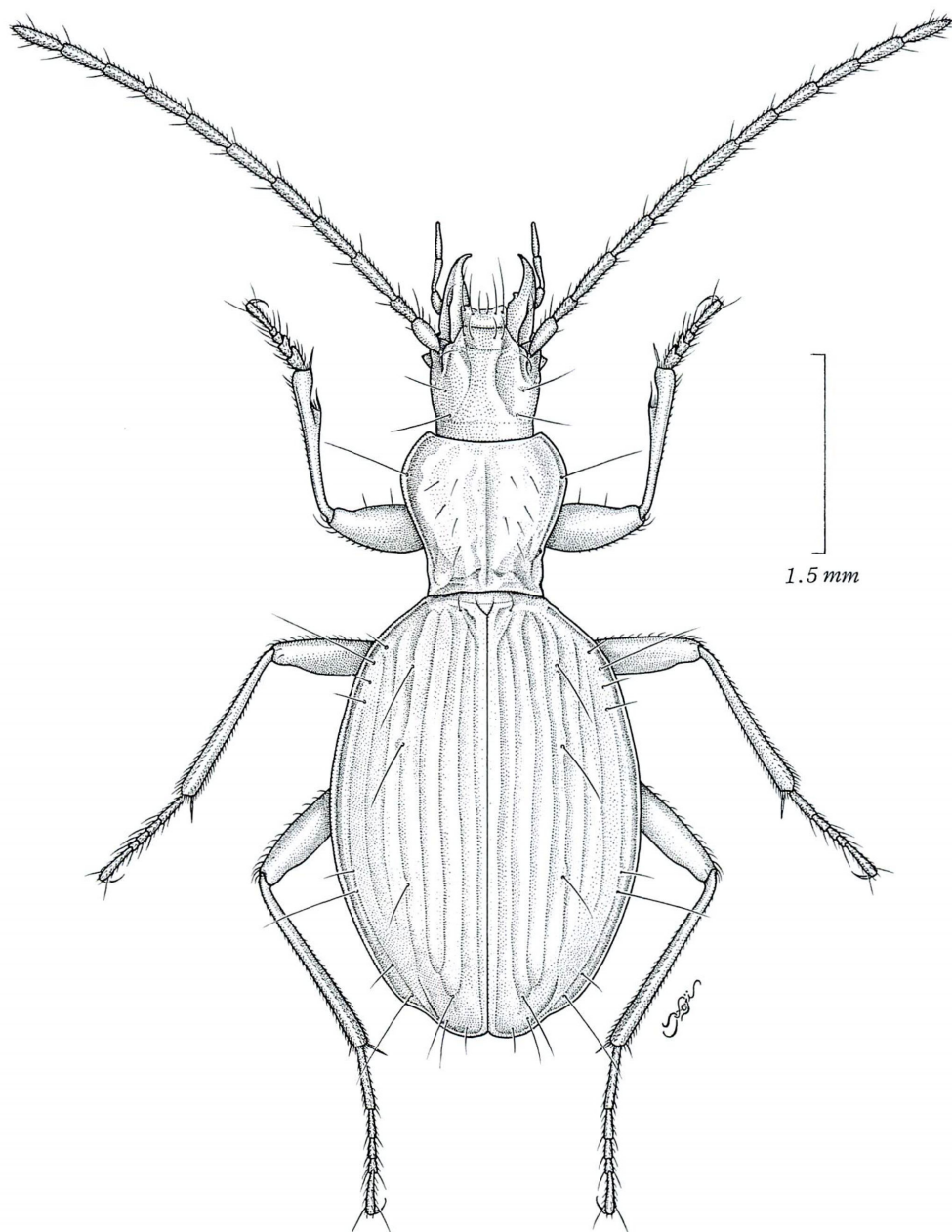


Fig. 6. *Trechiana* (s. str.) *uzushio* S. UÉNO, sp. nov., ♂, from Kitadomari of Seto-chô in Naruto-shi.



*Trechiamma* (s. str.) *uzushio* S. UÉNO, sp. nov.

(Figs. 6–8)

Length: 5.10–6.00 mm (from apical margin of clypeus to apices of elytra; mean 5.57 mm).

A variable species similar in general appearance to *T. apicedentatus* S. UÉNO (1979, p. 116, figs. 1–4) from Koya-no-kômorî-ana Cave at the eastern part of the Kii Peninsula, but definitely different in the presence of short hairs on the pronotal disc, the external dorsal series of elytra consisting of three pores instead of two, and unique conformation of male genitalia.

Facies relatively broad, with ample hind body whose sides are oblique at the prehumeral parts. Colour usually dark reddish brown, more or less infuscated in fore body, shiny, and faintly iridescent on elytra; palpi pale; apical halves of antennae, ventral surface of hind body, and legs dark yellowish brown to brown. Microsculpture mostly consisting of fine transverse lines, partially of fine transverse reticulation, clearly impressed on head, less clearly so on pronotum, and largely degenerated on elytra.

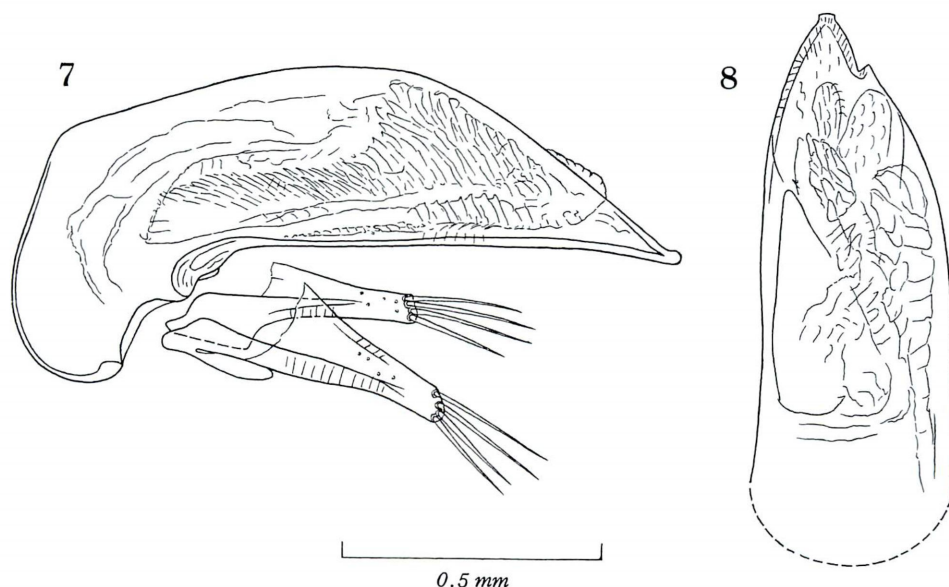
Head subquadrate, depressed above, about as long as or slightly wider than long, widest a little behind middle, HW/HL 0.88–1.13 (M 1.05); genae slightly convex and glabrous, slightly convergent posteriad towards shallow neck constriction; neck wide; frontal furrows feebly curved though deeply impressed in front, widely divergent posteriad; frons and supraorbital areas gently convex, the latter bearing two pair of supraorbital setae on lines convergent posteriorly; labrum transverse, with the apical margin slightly convex at middle, especially in large individuals; mandibles fairly stout, with incurved apical parts acute at apices; mental tooth slightly bifid at the tip; palpi slender; antennae slender, reaching apical three-sevenths of elytra in ♂, apical two-fifths of elytra or a little shorter than that in ♀, antennomere 2 the shortest, about a half as long as antennomere 3 or 4, antennomeres 5–10 gradually decreasing in length, each about four times as long as wide.

Pronotum cordate, much wider than head, usually a little wider than long, widest at about three-fourths from base, and almost equally contracted at apex and base; PW/HW 1.44–1.52 (M 1.49), PW/PL 1.01–1.10 (M 1.05), PW/PA 1.34–1.49 (M 1.45), PW/PB 1.28–1.49 (M 1.41); sides distinctly bordered throughout, rather strongly arcuate in apical third, nearly straight at middle, distinctly sinuate at about basal fourth or slightly before that level, and then usually subparallel to hind angles, which are either rectangular or somewhat sharp at the corners; apex either straight or slightly emarginate, about as wide as or slightly narrower than base, PB/PA 0.92–1.10 (M 1.03); front angles more or less produced forwards; base either straight or slightly oblique on each side just inside hind angle; dorsum gently convex, sparsely covered with short hairs, whose condition and density are to a considerable extent variable according to individuals, and frequently rubbed off; median line distinct, widened in basal area; apical transverse impression indistinct, basal one deep and arcuate, forming basal fovea on each side and extending anteriorly; postangular carina short; basal area uneven.

Elytra oval, widest at about or a little before the middle, and a little less pointed at bases than at apices; EW/PW 1.74–1.89 (M 1.81), EL/PL 2.62–3.06 (M 2.77), EL/EW 1.41–1.51 (M 1.46); shoulders effaced, with prehumeral borders oblique and nearly straight; sides moderately bordered except for narrowly bordered prehumeral parts; apices rather narrowly rounded; dorsum gently convex on the disc, steeply declivous at the sides and in apical area; striae entire, impunctate, deeply impressed on the disc though becoming shallower at the side; scutellar striole short; apical striole lightly arcuate, either joining or almost joining stria 5; stria 3 devoid of setiferous dorsal pores; stria 5 with three setiferous dorsal pores at  $1/10$ – $1/8$ ,  $1/4$ – $1/3$  and  $3/5$ – $2/3$  from base, respectively; preapical pore located at the apical anastomosis of striae 2 and 3, and unusually close to elytral apex, being equally distant from apex and suture.

Ventral surface glabrous and smooth, ventrites 3–5 each bearing a pair of paramedian setae; anal ventrite with ordinary marginal setae. Legs fairly slender; protibiae straight, gradually dilated towards apices, and longitudinally grooved on the external face; metatibiae also straight, about a half as long as elytra; tarsi thin, tarsomere 1 about as long as tarsomeres 2–4 combined in mesotarsus, slightly shorter than that in metatarsus; protarsomeres 1 and 2 more or less dilated and inwardly protrudent at each apex in ♂; dilatation of ♂ protarsomeres is subject to individual variation to some extent.

Male genital organ fairly large and moderately sclerotised. Aedeagus thick, about three-eighths as long as elytra, about as wide as high at middle, hardly arcuate, and



Figs. 7–8. Male genitalia of *Trechiana* (s. str.) *uzushio* S. UÉNO, sp. nov., from Kitadomari of Seto-chô in Naruto-shi; left lateral view (7), and apical part of aedeagus, dorso-apical view (8).



widely membranous on dorsum, with dorsal margin gently arcuate at middle in profile; basal part small, rather strongly curved ventrad, with small basal orifice whose sides are moderately emarginate; sagittal aileron absent; viewed dorsally, apical part subtriangular, rather rapidly narrowed towards the extremity, which is minutely tuberculate; viewed laterally, apical part rather rapidly attenuate towards the extremity, which is minutely tuberculate dorsad; ventral margin nearly straight at middle in profile. Inner sac armed with two large patches of sclerotised teeth one above the other, both becoming larger at the apical parts; dorsal teeth-patch much larger than the ventral, its large apical part about a half as long as the teeth-patch, consisting of compactly ranged narrow corrugated plates, proximal part much narrower than the apical, dorsally covered with minute aciculate teeth; ventral teeth-patch a little shorter and obviously narrower than the dorsal, with much smaller apical part and much narrower proximal part; no differentiated copulatory piece, though the proximal part of the dorsal teeth-patch looks like a mal-differentiated sclerite. Styles short, left style longer than the right, each bearing four thin setae at the apex.

*Type series.* Holotype: ♂, 29-IV-2008, D. SAKURAGI leg. Allotype: ♀, 29-IV-2008, D. SAKURAGI leg. Paratypes: 5 ♀♀, 29-IV-2008, M. YOSHIDA & K. TANAKA leg. (found in baited traps set by M. YOSHIDA & K. TANAKA on 14-IV-2008); 10 ♂♂, 3 ♀♀, 26-XI-2008, K. TANAKA leg. (found in baited traps set by K. TANAKA on 8-XI-2008).

*Type locality.* Kitadomari, 4 m above sea-level, of Seto-chô in Naruto-shi, Tokushima Prefecture, at the northeastern corner of the Island of Shikoku, Southwest Japan.

*Further specimens examined.* 1 ♀, Awata 190 m, 2-III-2008, D. SAKURAGI leg.; 1 ♂, 1 ♀, Awata 170 m & 190 m, 29-IV-2008, D. SAKURAGI leg.; 1 ♂, Awata 190 m, 11-V-2008, K. TANAKA leg. (found in a baited trap set by K. TANAKA on 5-V-2008); 1 ♀, Awata 190 m, 26-XI-2008, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 8-XI-2008); 1 ♀, Nakatani, 16-III-2008, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 11-II-2008); 1 ♂, Kuratani, 11-I-2009, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 23-XII-2008); 1 ♂, Munakeé-dani, 29-IV-2008, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 14-IV-2008); 3 ♀♀, Munakeé-dani, 11-V-2008, M. YOSHIDA leg. (found in baited traps set by M. YOSHIDA on 5-V-2008); 1 ♂, Udatsu-goé, 11-V-2008, M. YOSHIDA leg. (found in baited traps set by K. TANAKA on 5-V-2008); 2 ♂♂, Udatsu-goé, 21-XII-2008, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 26-XI-2008); 3 ♂♂, 1 ♀, Udatsu-goé, 21-XII-2008, K. TANAKA leg. (found in baited traps set by K. TANAKA on 26-XI-2008).

*Localities of the further specimens examined.* Awata 170 m & 190 m in altitude, in Kitanada-chô; Nakatani, 130 m in altitude, of Bandô-dani in Ôasa-chô; Kura-tani, 120 m in altitude, of Ohtani in Ôasa-chô; Munakeé-dani, 40 m in altitude, of Ohtani in Ôasa-chô; and Udatsu-goé, 210 m in altitude, of Orino in Kitanada-chô; all in Naruto-shi of Tokushima Prefecture, at the northeastern corner of the Island of Shikoku, Southwest Japan.



*Notes.* As was already pointed out, *Trechiana uzushio* is an unusually variable species, particularly in size and in the density of pronotal discal hairs. The description given above is based on the type series or 20 toptotypical specimens, which mainly consist of relatively large individuals. The type locality Kitadomari lies on the shore of the Naruto Straits or at the northeastern end of the distributional range of the new species. At that point, the skirt of the sandstone hill was semicircularly scooped out by a landslide and formed a theatre-like place scattered with eulalia (*Miscanthus sinensis*) and heartleaf lily (*Cardiocrinum cordatum*) (cf. Figs. 1 and 2). The trechine beetle was caught by baited traps set about 50 cm below the roots of those plants near the lower edge of the "theatre", which must be exposed to tidal splashes on windy days.

In contrast to the type population, the Awata population of *Trechiana uzushio* mainly consists of relatively small individuals (5.05–5.40 mm in size, mean 5.30 mm). Its location is 5.3 km southwest of the type locality and less than 200 m above sea-level. As was mentioned in the *Notes* following the description of *T. sakuragii*, *T. uzushio* was found at the upper part of a small valley shaded by a mixture of deciduous and evergreen trees. The standard ratios of the Awata specimens are as follows: HW/HL 1.00–1.15 (M 1.05), PW/HW 1.44–1.51 (M 1.47), PW/PL 0.98–1.08 (M 1.03), PW/PA 1.36–1.50 (M 1.44), PW/PB 1.32–1.40 (M 1.36), PB/PA 1.03–1.09 (M 1.06), EW/PW 1.78–1.88 (M 1.82), EL/PL 2.63–2.84 (M 2.73), EL/EW 1.43–1.49 (M 1.46).

Three of the other known localities of *T. uzushio*, Nakatani, Kuratani and Munakeé-dani are not far from Awata and from one another. Nakatani is 2.7 km distant to the south-southwest from Awata, Kuratani is 2.4 km southeast of Awata, and Munakeé-dani is only 1.8 km south by west of Kuratani. They are similar to one another in environmental condition. The single specimen known from Nakatani is one of the smallest individuals (4.85 mm in body length) and has the following standard ratios: HW/HL 1.10, PW/HW 1.46, PW/PL 1.10, PW/PA 1.44, PW/PB 1.37, PB/PA 1.05, EW/PW 1.80, EL/PL 2.98, EL/EW 1.51. The single specimen known from Kuratani (5.60 mm in body length) has the following standard ratios: HW/HL 1.00, PW/HW 1.47, PW/PL 1.05, EW/PA 1.44, PW/PB 1.32, PB/PA 1.09, EW/PW 1.82, EL/PL 2.89, EL/EW 1.51. And, the four specimens known from Munakeé-dani (4.95–5.65 mm in body length, mean 5.40 mm) have the following standard ratios: HW/HL 0.96–1.11 (M 1.04), PW/HW 1.40–1.46 (M 1.43), PW/PL 1.01–1.04 (M 1.03), PW/PA 1.39–1.46 (M 1.43), PW/PB 1.35–1.37 (M 1.36), PB/PA 1.03–1.08 (M 1.05), EW/PW 1.82–1.86 (M 1.83), EL/PL 2.76–2.79 (M 2.78), EL/EW 1.45–1.50 (M 1.48). In smaller specimens from these localities, the pronotal sides are sometimes convergent towards hind angles behind the ante-basal situation.

The last to be dealt with is the Udatsu-goé population of *Trechiana uzushio*, which is isolated to the western side of Ôasa-yama Hill and is different from the others in the peculiar situation of its habitat. It was found in a large quarry of sandstone 4 km distant to the west by south in a beeline from Nakatani. The working face of the quarry is bare, completely devoid of vegetation of any kind, though humid upper hypogean zone can be detected at a depth of 50 cm or more. In spite of such a seemingly deserted outlook, the

quarry harbours a blind trechine beetle, which can be identified with *T. uzushio* beyond all doubt. About half a dozen specimens caught by baited traps are relatively small (4.85–5.45 mm in body length, mean 5.20 mm), and have the following standard ratios: HW/HL 1.03–1.10 (M 1.07), PW/HW 1.42–1.61 (M 1.47), PW/PL 1.00–1.07 (M 1.03), PW/PA 1.43–1.50 (M 1.47), PW/PB 1.36–1.41 (M 1.39), PB/PA 1.03–1.09 (M 1.06), EW/PW 1.74–1.86 (M 1.79), EL/PL 2.62–2.76 (M 2.68), EL/EW 1.41–1.52 (M 1.46).

We can safely conclude now that *T. uzushio* is restricted to Ôasa-yama Hill (538 m in height) even though it seems to have tolerance for salt water, since it has never been caught by baited traps set in the areas outside the territory of the sandstone hill.

*Etymology.* The new specific name *uzushio* is derived from the Japanese word “uzushio” meaning a whirlpool, since the Naruto Straits are famous for the strong whirl currents.

## 要 約

上野俊一：四国鳴門地域に固有の地下浅層性メクラチビゴミムシ類。—— 四国の北東部，鳴門地域に位置する大麻山からは，これまで盲目のチビゴミムシ類が知られていなかった。しかし，2008年の2月に，ナガチビゴミムシ属の特異な1種が発見されたのを契機として，大麻山とその周辺地域の綿密な調査が，吉田正隆を中心とする数人の人たちによって行われ，四国産の既知種とは系統の異なる2種のメクラチビゴミムシ類の存在が明らかになった。しかし，これらの小甲虫類がすむ地下浅層へ直接に掘り込めるような場所が少なく，甲虫の個体数，とくに雄の数も多くはなかったので，トラップに誘引するのが最良の方策だろうと考えられ実施に移された。以後1ヵ年半にわたるトラップ調査が行われた結果，ようやく十分な検討に堪えうる資料を蓄積することができたので，その研究結果をこの論文にまとめた。

鳴門地域の地下浅層にすむ2種のメクラチビゴミムシ類は，いずれもナガチビゴミムシ属の新種で，異なった系統群に属する。そのひとつは，これまで紀伊半島の北西部のみから知られていたカワリメクラチビゴミムシ群に属し，種の類縁関係も近い。この興味深い新種には，発見者の功績を記念して，サクラギメクラチビゴミムシ *Trechiana* (s. str.) *sakuragii* S. UENO という新名を与えた。

もうひとつの新種は，紀伊半島の東側に生息するイマダテメクラチビゴミムシ亜群の種に外見が似ているが，ナガチビゴミムシ属の種としては例外的に，前胸背板に細毛があることや，上翅の剛毛式や雄生殖器官の形態が特異であることから，独自の種群を形成するものと考えられる。この種は，大麻山の地下浅層に広く分布し，個体変異がいちじるしいうえに，波飛沫の直接的な影響を受ける鳴門海峡の海岸まで広がっていることでも注目に値する。それで，ウズシオメクラチビゴミムシ *Trechiana* (s. str.) *uzushio* S. UENO という新名を与えて記載した。

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## Occurrence of *Trechoblemus postilenatus* (Coleoptera, Trechinae) in the Upper Hypogean Zone of Northeastern Shikoku, Southwest Japan

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It has been well known that the European species of *Trechoblemus*, *T. micros* (HERBST, 1784), frequently occurs in the subterranean domain. JEANNEL (1922, p. 298; 1926, p. 220; 1928, pp. 104–105) recorded the caves and catacombs in which *T. micros* had been known, and commented that “Ses mœurs sont nettement lucifuges, aussi pénètre-t-elle volontiers dans les cavités souterraines.” On the other hand, the East Asian species, *T. postilenatus* (H. W. BATES, 1873, p. 295), is seldom found under the ground. Until now, it has been recorded from caves only twice, both from lava caves lying in Daikon-jima on the Japan Sea coast of West Japan (UÉNO, 1970, p. 604; 1971, p. 182).

Early in the last winter, a *Trechoblemus* was unexpectedly obtained by Masataka YOSHIDA on Ôasa-yama Hill at the northeastern corner of the Island of Shikoku, Southwest Japan. It was found mingled with *Trechiamia uzushio* S. UÉNO in a baited trap set in the upper hypogean zone at a depth of about 50 cm. This is the first record of the species from the upper hypogean zone, and the collecting data are as given below.

*Specimen examined.* 1 ♂, Udatsu-goé, 210 m alt., Orino, Kitanada-chô, Naruto-shi, Tokushima Pref., Southwest Japan, 21–XII–2008, M. YOSHIDA leg. (found in a baited trap set by M. YOSHIDA on 26–XI–2008). (NSMT)



The specimen recorded above is a relatively small and unusually dark-coloured individual, measuring 4.45 mm in the length of body. Colour brown, more or less infuscated in head, pronotum, and lateral parts of elytra; supraorbital areas blackish; each elytron with a large blackish spot extending from basal three-fifths to apical eleventh and from interval 2 to 7; antennae and legs dark yellowish brown to dark brown, obviously darker than in ordinary epigeal individuals. Male genital organ perfectly identical with that of epigeal individuals.

As was already mentioned in the *Notes* following the description of *Trechiana uzushio* (UÉNO, 2009, pp. 17–18), Udatsu-goé is a large quarry of sandstone on a pass lying at the western side of Ōasa-yama Hill. Its working face is completely bare and dry, utterly differing from humid or wet places usually inhabited by *Trechoblemus*. It seems possible that the colonisation of *Trechoblemus* into the upper hypogean zone of this quarry, which was already inhabited by a completely blind species of *Trechiana*, may have been accomplished by night flight, since the hind wings are fully developed in the specimen examined as in epigeal ones.

In closing this brief report, I wish to thank Mr. Masataka YOSHIDA for his kindness in submitting the interesting specimen to me for taxonomic study.

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Notes on the Bembidiinae (Coleoptera, Carabidae) of Japan  
XVIII. Two New Species of the Genus *Bembidion* from Southwest Japan

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**Abstract** Two new species belonging to the genus *Bembidion* are described from Southwest Japan under the names, *B. nishidai* and *B. yoshidai*.

What will be dealt with in this part is the result of my study on two species of the genus *Bembidion* obtained in Southwest Japan.

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 for critically reading the original manuscript of this paper. My thanks are also due to Messrs. Mitsuyasu NISHIDA and Masataka YOSHIDA for supplying me with important material for this study.

*Bembidion* (*Peryphus*) *nishidai* MORITA, sp. nov.

[Japanese name: Kyushu-ruri-mizugiwa-gomimushi]

(Fig. 1)

**Diagnosis.** Body of moderate size; elytra oval; hind wings reduced; dorsal surface with bluish lustre; legs reddish brown; frons sparsely and finely punctate; apical gutters of pronotum long and deep; carina of pronotum long and prominent; viewed laterally, narrow membraneous part of aedeagal inner sac densely covered with spinules and overlapped with ostium flag.

**Description.** L: 4.07–4.79 mm. Body of moderate size and convex, with oval elytra. Dorsal side and epipleuron black with bluish lustre; ventral side blackish brown; antennal segments I–III, basal part of segment IV, palpi, mouth parts and mandibles reddish brown; rest of antennal segments and legs brown.

Head moderately convex; eyes moderately convex; PW/HW 1.19–1.25 (M 1.22); frontal furrows wide, deep, slightly divergent posteriad, and reaching the post-eye level; frons sparsely and finely punctate; anterior supraorbital pore foveolate and situated a little behind the mid-eye level; posterior ones situated a little behind the post-eye level or on that level; microsculpture not sharply impressed though consisting of polygonal meshes on frons and vertex, and of wide meshes on neck; genae invisible in dorsal view;

relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\cong$  1 : 0.83 : 1.37 : 1.16 : 1.05 : 1.04 : 1.35.

Pronotum cordate, moderately convex and widest at basal 3/4; PW/PL 1.25–1.32 (M 1.29); apex moderately emarginate or almost straight; apical gutters rather deep and long; anterior transverse impression shallow, with several fine punctures; PW/PA 1.37–1.41 (M 1.39); sides moderately arcuate in front, or rarely weakly arcuate from apical angles to the widest part, and then moderately sinuate at about basal 1/4, and parallel towards hind angles; reflexed sides rather wide, especially in apical halves; side gutters rather shallow and joining the apical gutters; PW/PB 1.31–1.36 (M 1.33); PA/PB 0.94–0.98 (M 0.96); median line deep and strongly impressed between anterior transverse impression and base; basal part with short and longitudinal wrinkles and coarse punctures; base weakly arcuate at median part, and oblique at the sides; apical angles weakly advanced, and blunt at the tips; hind ones right, with a long carina on each side; basal foveae deep, with moderate punctures; microsculpture consisting of fine transverse meshes on the disc, and of wide ones on the basal part.

Elytra oval and moderately convex; EW/PW 1.58–1.64 (M 1.61); EL/EW 1.44–1.52 (M 1.48); shoulders convex and widely rounded; sides weakly arcuate throughout with very shallow preapical emargination; apex of each elytron rounded, forming a small re-entrant angle at suture; intervals moderately convex and impunctate; stria 1 clearly impressed throughout, rather coarsely punctate at basal part, but the punctures become

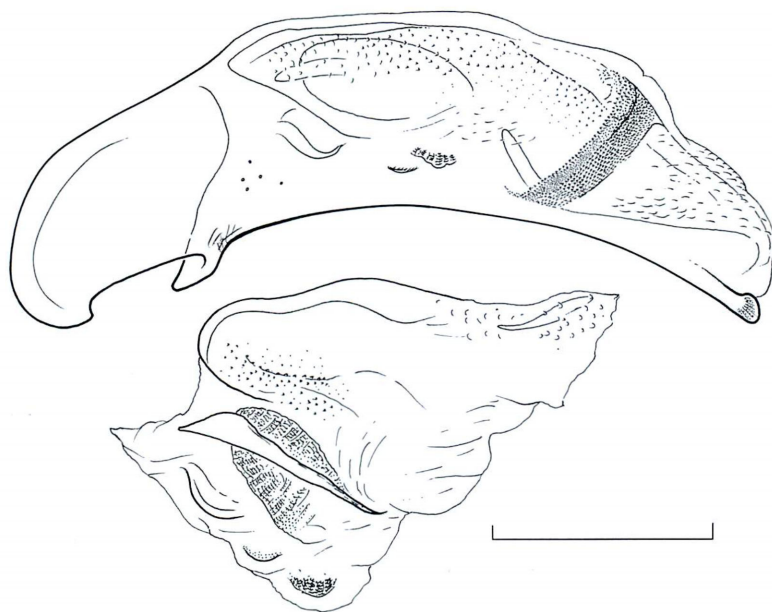


Fig. 1. Aedeagus of *Bembidion (Peryphus) nishidai* MORITA, sp. nov., from Mt. Yamaingiri. (Scale: 0.3 mm.)



indistinct at about middle; striae 2 and 3 similar to stria 1, but shallower at apical parts; striae 4–7 shallower towards apices and obliterated at about basal 3/5; scutellar striole long, deep, free at the apex, situated on interval I, and with several coarse punctures; apical striole deep, long, impunctate and approaching to the apex of stria 7; two dorsal pores situated on interval III, and adjoining stria 3; anterior dorsal pore situated at basal 1/3 of elytra and posterior one at basal 3/5, respectively; microsculpture not sharply impressed though consisting of fine transverse meshes. WL/EL 0.86 in 1 ♂.

Ventral side almost smooth; metasternal process rather narrowly and finely bordered at the median part.

Aedeagus elongate and weakly arcuate; apical lobe rather elongate, and widely rounded at the tip in lateral view.

Inner sac covered with poorly sclerotized scales and armed mainly with five components of sclerites; elongate sclerite moderately sclerotized; bundle of fibres large, and situated at the right side of elongate sclerite; ostium flag narrow and distinct; viewed laterally, narrow membranous part densely covered with spinules and overlapped with ostium flag.

Left style provided with a long setae and one or three short seta(e) at apex; right one provided with a long seta and a short seta at apex, and with two short setae at subapical part.

*Type series.* Holotype: ♂, Mt. Yamaingiri, 12–VI–1993, S. MORITA leg. (NSMT). Allotype: ♀, Mt. Yamaingiri, 12–13–IX–1992, S. MORITA leg. Paratypes: 1 ♂, Mt. Yamaingiri, 12–13–IX–1992, S. MORITA leg.; 2 ♂♂, Mt. Yamaingiri, 12–VI–1993, S. MORITA leg.; 3 ♂♂, Mt. Shiratori-yama, 8–X–1994, M. NISHIDA leg.

*Localities.* Mt. Yamaingiri and Mt. Shiratori-yama, Kumamoto Prefecture, South-west Japan.

*Dispersal potential.* Adults of this new species possess reduced hind wings and are probably incapable of flight.

*Notes.* This new species is unique in the reduced hind wings and structure of aedeagal inner sac.

The standard ratios of body parts shown in the descriptive part are those of 2 ♂♂ from Mt. Yamaingiri and 2 ♂♂ from Mt. Shiratori-yama.

***Bembidion yoshidai* MORITA, sp. nov.**

[Japanese name: Yoshida-mizugiwa-gomimushi]

(Figs. 2–3)

*Diagnosis.* Body of small size; head and pronotum with weak bluish lustre; elytra with weak brownish lustre; frons sparsely and finely punctate; hind angles of pronotum with a weak carina; elytra wide; basal part of elytral striae 1–7 not impressed and consisting of rows of punctures; sternites not pubescent; metasternal process widely and deeply bordered at the median part; aedeagus elongate and weakly arcuate; aedeagal

inner sac armed mainly with whip-shaped sclerite, hemispherical sclerite and bundle of fibres.

*Description.* L: 3.57–4.43 mm. Body of small size and convex. Dorsal side and epipleuron black; head and pronotum with weak bluish lustre; elytra with weak brownish lustre; ventral side blackish brown; antennal segments I–III, basal part of segment IV, palpi and legs light brown; mouth parts, rest of antennal segments, and mandibles brown to light brown.

Head moderately convex; eyes moderately convex; PW/HW 1.19–1.23 (M 1.21) in ♂, 1.15–1.21 (M 1.19) in ♀; frontal furrows wide, deep, slightly divergent posteriad, and reaching the level of basal 1/4–1/3 of eye; frons sparsely and finely punctate; anterior supraorbital pore foveolate and situated at the mid-eye level; posterior ones situated at the post-eye level; microsculpture not impressed though consisting of wide meshes on the neck; genae invisible in dorsal view; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\approx$  1 : 0.72 : 1.04 : 1.00 : 1.03 : 1.00 : 1.23.

Pronotum transverse and convex; sides weakly arcuate or nearly straight from the apical angles to the widest part, moderately arcuate, sinuate at about basal 1/5, and then parallel towards hind angles; PW/PL 1.30–1.37 (M 1.33) in ♂, 1.28–1.38 (M 1.33) in ♀; apex weakly emarginate; apical gutters deep and long; anterior transverse impression shallow, with several punctures; PW/PA 1.35–1.42 (M 1.39) in ♂, 1.35–1.38 (M 1.36) in ♀; reflexed sides very narrow throughout; side gutters deep and joining the apical gutters at the apical angles; PW/PB 1.25–1.26 (M 1.25) in ♂, 1.22–1.28 (M 1.26) in ♀; PA/PB 0.88–0.92 (M 0.90) in ♂, 0.90–0.94 (M 0.92) in ♀; median line deeply impressed between anterior and posterior transverse impressions; base weakly arcuate or almost straight at middle and oblique at the sides; basal part with a few coarse punctures and weak and irregular wrinkles; apical angles weakly advanced and blunt at the tips; hind ones right or obtuse, and with a seta and a weak carina; in 1 ♀, right hind angle with two setae; basal fovea deep, with linear bottom and several transverse wrinkles at outside; posterior transverse impression deep and joining linear bottom of basal fovea and with

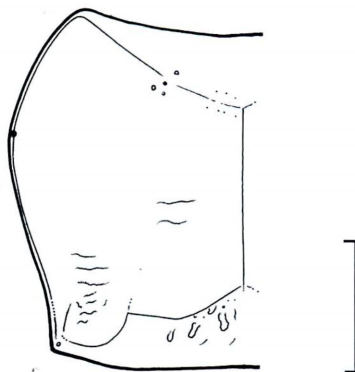


Fig. 2. Pronotum of *Bembidion yoshidai* MORITA, sp. nov. (Scale: 0.3 mm.)

some punctures; microsculpture vanished.

Elytra elongated ovate and moderately convex; EW/PW 1.61–1.69 (M 1.65); in ♂, 1.58–1.62 (M 1.60) in ♀; EL/EW 1.46–1.54 (M 1.50) in ♂, 1.49–1.54 (M 1.51) in ♀; shoulders convex and widely rounded; sides weakly arcuate throughout with very shallow preapical emargination; apex of each elytron rounded, forming a small re-entrant angle at suture; intervals impunctate, usually weakly convex, rarely almost flat; basal part of stria 1 marked with a row of coarse punctures and the remaining part clearly impressed throughout and rather coarsely punctate, but the punctures become indistinct at about middle; striae 2–4 similar to stria 1, but becoming indistinct at basal 4/5; striae 5 and 6 obliterated at about basal 7/10; stria 7 marked with a row of punctures, but disappearing at the middle; scutellar striole long, shallow, free at the apex and situated on interval I, and moderately punctate, or partially marked with a row of punctures; apical striole short and almost vestigial; two dorsal pores situated on interval III, and adjoining stria 3; anterior dorsal pore situated at basal 3/10–1/3 of elytra and posterior one at basal 3/5–7/10, respectively; microsculpture not sharply impressed and partially consisting of fine transverse meshes.

Ventral side almost smooth; sternites not pubescent; metasternal process widely and deeply bordered at the median part.

Aedeagus elongate and weakly arcuate; apical lobe rather elongate, and widely rounded at the tip in lateral view; basal orifice large; right wall of basal part strongly emarginate in right lateral view.

Inner sac covered with poorly sclerotized scales and armed mainly with five components of sclerites; whip-shaped sclerite moderately sclerotized and joining hemispherical sclerite at basal part; bundle of fibres large, and situated at the right side of whip-shaped sclerite; small fibres situated near the apical part of whip-shaped sclerite; a mat of spinules situated at the ventral side of aedeagus; ostium flag narrow and distinct. Each style with a long seta and two short setae at the apex.

*Type series.* Holotype: ♂ (NSMT), allotype: ♀, paratypes: 3 ♂♂, 9 ♀♀, 5-V-1973,

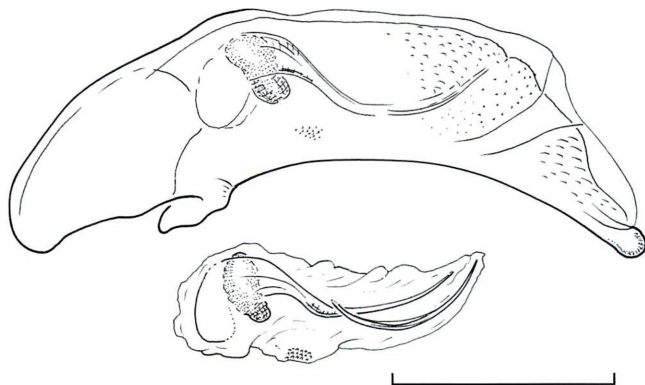


Fig. 3. Aedeagus of *Bembidion yoshidai* MORITA, sp. nov. (Scale: 0.3 mm.)



M. YOSHIDA leg.

*Locality.* Hatsuno, Sumiyô-mura, Amami-Ôshima Is., Kagoshima Prefecture, Southwest Japan.

*Dispersal potential.* This new species has fully functional hind wings.

*Notes.* This new species resembles *Bembidion trajectum* NETOLITZKY (1939, p.51) in general appearance, but can be distinguished from the latter by the following points: 1) different coloration on dorsal side, 2) sides of pronotum sinuate at about basal 1/5, 3) basal part of pronotum less punctate, 4) elytra wider and shorter, and 5) different structure of aedeagus (cf. HABU, 1959, p. 258).

The standard ratios of body parts shown in the descriptive part are those of 3 ♂♂ and 4 ♀♀.

## 要 約

森田誠司： 日本産ミズギワゴミムシ類の知見. XVIII. 西日本産ミズギワゴミムシの2新種。  
—— 西日本から2種のミズギワゴミムシを記載した。ひとつは、*Peryphus* 亜属に所属する種で、熊本県の山犬切および白鳥山から採集された。本種は体形、体色などのほか、後翅が縮小しているため、識別はやさしい。もうひとつは、吉田正隆氏により奄美大島から発見された種で、キアシルリミズギワゴミムシ *B. trajectum* NETOLITZKY に似ているが、体色、前胸背板の側縁の波曲、基部点刻の差異、幅広い上翅、陰茎の内部構造などに明瞭な差異がみとめられる。

## References

- HABU, A., 1959. One new species of *Bembidion* from Hokkaido. *Kontyû, Tokyo*, 27: 257-259.  
MORITA, S., 2001. On *Bembidion* (*Peryphus*) *umeyai* HABU. *Papers on Coleoptera in honor of Toshifumi HOZUMI, The Coleopteran Fauna of Tōkai District, Nagoya*, 293-296. (In Japanese with English summary.)  
NETOLITZKY, F., 1939. Beiträge zur Kenntnis der *Bembidion*-Arten des Fernen Ostens (Japan, Korea, Ost Sibirien) (Coleoptera) 3. Mitteilung. *Proc. r. ent. Soc. London*, (B), 8: 49-51.

pore foveolate; neck wide.

Pronotum cordate and convex; apex straight or weakly arcuate, and with clearly impressed gutters (apical gutters) at the sides; median line impressed, reaching neither apex nor base; basal part punctate; apical angles obtuse and not advanced; hind angles with a carina on each side.

Elytra rather strongly convex; stria 1 impressed throughout; striae 2–7 becoming shallower towards apices; apical striole vestigial or obliterated; interval III with two dorsal pores on each side. Ventral side smooth; metasternal process bordered at median part; each sternite with a pair of setae; anal sternite provided with a pair of setae in ♂, two pair of them in ♀.

Aedeagus robust and weakly arcuate in lateral view; apical lobe short, almost straight and simply rounded at the tip in lateral view. Inner sac covered with very poorly sclerotized scales and armed with five or six components of sclerites; lamellar sclerite poorly sclerotized, though bearing moderately sclerotized ventral margin; elongate sclerite robust and heavily sclerotized; poorly sclerotized sclerite situated at the middle of aedeagus; bundle of fibres situated at the right side of elongate sclerite; one or two small sclerite(s) poorly sclerotized and situated at the ventral portion of aedeagus; ostium flag usually indistinct. Styles each with several setae at apical and subapical parts, respectively.

*Bembidion misellum* HAROLD, 1877

[Japanese name: Nikkō-mizugiwa-gomimushi]

*Bembidium misellum* HAROLD, 1877, Dt. ent. Z., 21: 342; type area: Yedo.

Other references are omitted.

*Additional specimens examined.* 1 ♂, 3 ♀♀, Hakodate-yama, Hakodate-shi, Hokkaido, 2–XI–1973, Y. HIRANO leg.; 2 ♂♂, 1 ♀, Shirakoma-rindô, Yatsu Mts., Nagano Pref., 13–VI–1999, S. MORITA leg.; 4 ♂♂, 9 ♀♀, Inagoyu, Yatsu Mts., Nagano Pref., 15–16–VII–2006, S. MORITA leg.; 1 ♂, Mt. Sanbe-san, Shimane Pref., 6–VII–1985, S. MORITA leg.; 3 ♂♂, Shinryû-ko, Taishaku, Hiroshima Pref., 10–VII–1999, K. TERADA leg.; 1 ♂, 2 ♀♀, Hatajiki-machi, Miyoshi-shi, Hiroshima Pref., 23–IV–2006, K. TERADA leg.

*Range.* Southwestern part of Hokkaido; Honshu (from Aomori Prefecture to Shimane and Hiroshima Prefectures.)

*Notes.* This species is common in hilly and mountainous areas in Honshu, and also spreads over Hokkaido (MORITA, 1982, p. 12). I have examined more than 800 specimens. As space is limited, only several important records were given above.

## Notes on the Bembidiinae (Coleoptera, Carabidae) of Japan

### XIX. *Bembidion misellum* and its Relatives from Central Japan

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**Abstract** *Bembidion misellum* and its relatives are enumerated. Of these, five new species are described from Central Japan under the names *Bembidion toyodai*, *B. saitoi*, *B. yatsuense*, *B. horii* and *B. rengense*.

More than fifty years ago, UÉNO (1954, p. 58) mentioned that several new species related to *Bembidion misellum* HAROLD (1877, p. 342) occur in Japan and that a long series of their specimens were needed because of the difficulty of recognition. Since then, only two species have been described: *B. ehikoense* HABU (1984, p. 35) from Kyushu and *B. ohkurai* MORITA (1992, p. 103) from Central Japan.

In 2000, TOLEDANO showed the male genital organ of *B. misellum* and pointed out that this species, *B. ohkurai* and *B. kamikochii* (JEDLIČKA, 1965, p. 143) belong to the group of *B. cnemidotum* (KRYZHANOVSKIY *et al.*, 1995, p. 87).

The main purpose of this paper is to clarify *Bembidion misellum* and its relatives known from Central Japan.

The abbreviations used herein are the same as those explained in my previous papers. All the holotypes are preserved in the collection of the National Museum of Nature and Science, Tokyo.

I am deeply indebted to Dr. Shun-Ichi UÉNO for critical reading the manuscript of this paper. Thanks are also due to the following colleagues and friends, whose kind aid and support enabled me to complete this study: Dr. Toshio KISHIMOTO, Dr. Yoshiro KUROSA, Dr. Munetoshi MARUYAMA, Dr. Katsuyuki TERADA, Dr. Hiroyuki YOSHITOMI, Messrs. Katsumi AKITA, Kôji ARAI (=TOYODA), Yukihiro HIRANO, Katsuhiko HORI, Masaaki NISHIKAWA, Hideo OHKAWA, Masahiro SAITÔ and Takashi SHIMADA.

This study is based on an examination of approximately more than 1,000 specimens of *B. misellum* and relative new species. Most of them were collected by myself.

#### *Diagnostic characters of B. misellum and its relatives.*

Body rather small and convex, with oval or ovate elytra; colour black usually with greenish or brownish lustre.

Head moderately convex; frons with a small rounded fovea; anterior supraorbital



***Bembidion ohkurai* MORITA, 1992**

[Japanese name: Ohkura-mizugiwa-gomimushi]

*Bembidion* (*Peryphus*) *ohkurai* MORITA, 1992, Ent. Rev. Japan, Osaka, **47**: 103, figs. 1, 3; type locality: Mt. Amakazari-yama.

*Additional specimens examined.* 1 ♂, Kusakawa, Hakuba-mura, Nagano Pref., 22–IV–1990, S. WAKATSUKI leg.; 3 ♂♂, Hikarujō-yama, Toyoshina-machi, Nagano Pref., 5–VI–1995, K. HORI leg.; 1 ♀, same locality, 7–VII–1997, S. MORITA & K. HORI leg.; 2 ♀♀, Sasagamine, Mt. Myōkō-zan, Niigata Pref., 2–IX–2000, Y. KUROSA leg.

*Range.* Central Japan: Yamagata (MORITA, 1993, p. 322), Niigata and Nagano Prefectures.

***Bembidion toyodai* MORITA, sp. nov.**

[Japanese name: Ryōgami-mizugiwa-gomimushi]

(Figs. 1, 2, 4, 5)

*Diagnosis.* Body relatively large, with oval elytra; head and pronotum with dark greenish lustre; elytra with weak brownish lustre; frontal furrows with coarse punctures; eyes flat; anterior transverse impression of pronotum with many coarse punctures; elytral striae coarsely punctate; in ♀, elytral microsculpture largely vanished, but the basal parts weakly impressed by isodiametric meshes; EL/EW 1.39–1.43; aedeagus robust and weakly arcuate in lateral view; inner sac armed with six components of sclerites.

*Description.* L: 3.42–4.29 mm. Body relatively large. Body black; head and pronotum with dark greenish lustre; elytra with weak brownish lustre; ventral side dark brown to blackish brown; antennal segments I, II and basal part of III and legs reddish brown to brown; mandibles, palpi and the rest of antennal segments brown to dark brown.

Head moderately convex; eyes flat; PW/HW 1.28–1.32 (M 1.30) in ♂, 1.24–1.32 (M 1.27) in ♀; frontal furrows wide, parallel, plurisinuuous and with coarse punctures and wrinkles; anterior supraorbital pore situated at a little behind the mid-eye level, posterior ones at the post-eye level or a little behind that level; microsculpture vanished, but consisting of wide meshes on the neck; genae short and oblique; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\approx$  1 : 0.68 : 1.02 : 0.99 : 0.96 : 0.91 : 1.22.

Pronotum narrow and strongly convex; PW/PL 1.13–1.17 (M 1.15) in ♂, 1.12–1.21 (M 1.16) in ♀; anterior transverse impression shallow with many coarse punctures; PW/PA 1.27–1.40 (M 1.35) in ♂, 1.30–1.36 (M 1.32) in ♀; sides widely and moderately arcuate in front and moderately sinuate at basal 1/5 of pronotum, and then divergent or almost parallel towards hind angles; PW/PB 1.40–1.54 (M 1.46) in ♂, 1.36–1.52 (M 1.44) in ♀; PA/PB 1.01–1.15 (M 1.09) in ♂, 1.00–1.13 (M 1.09) in ♀; base weakly arcuate and oblique at the sides; basal part with coarse punctures; hind angles obtuse or

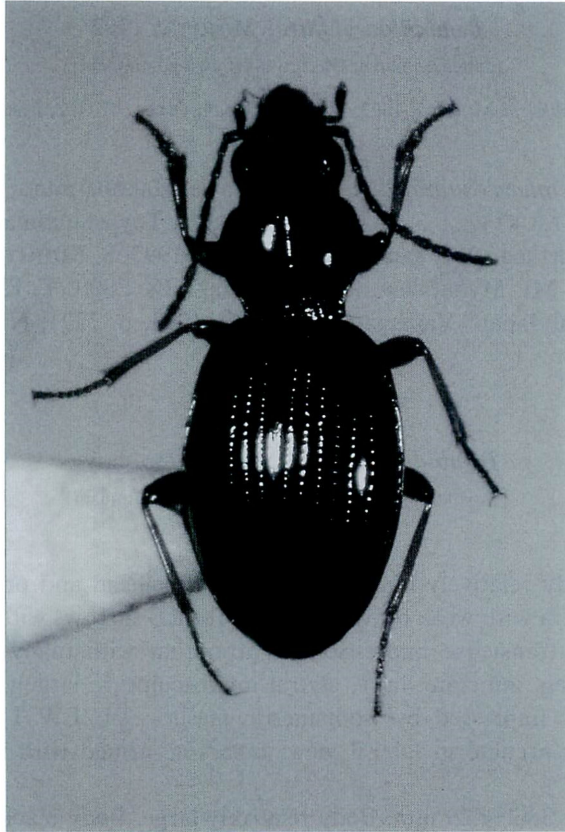
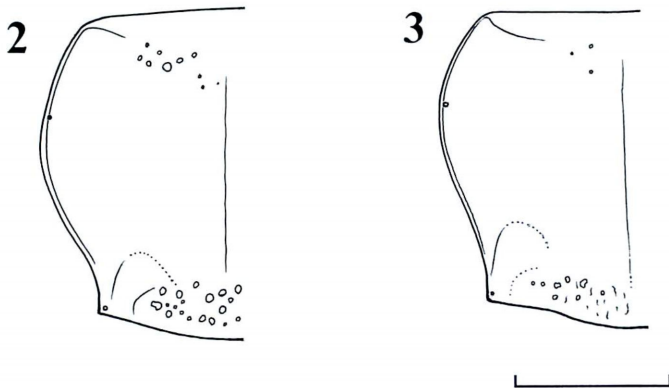
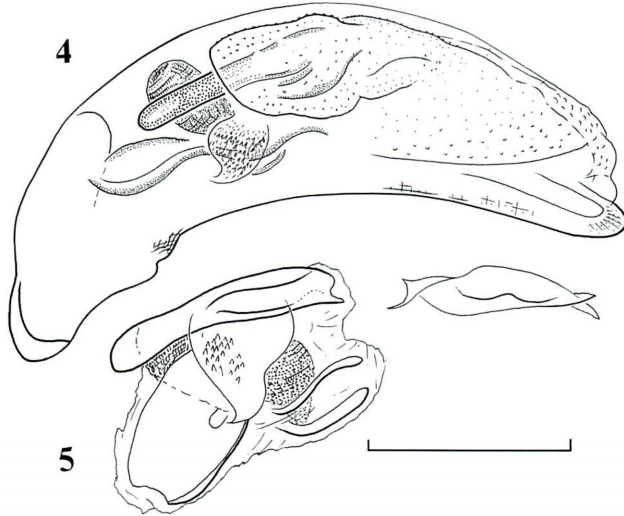


Fig. 1. *Bembidion toyodai* MORITA, sp. nov.



Figs. 2-3. Pronota of *Bembidion* spp. — 2, *Bembidion toyodai* MORITA, sp. nov.; 3, *B. saitoi* MORITA, sp. nov. (Scale: 0.5 mm.)



Figs. 4-5. Aedeagus and inner sac of *Bembidion toyodai* MORITA, sp. nov., left lateral view. — 4, Aedeagus; 5, cut open and extended inner sac. (Scale: 0.3 mm.)

right; basal foveae deep, oval and coarsely and densely punctate at the inner sides; microsculpture vanished.

Elytra oval; EW/PW 1.54–1.58 (M 1.56) in ♂, 1.50–1.56 (M 1.53) in ♀; EL/EW 1.39–1.43 (M 1.41) in ♂, 1.39–1.43 (M 1.40) in ♀; shoulders widely rounded; sides widely arcuate throughout; apex of each elytron rounded, forming a small re-entrant angle at suture; intervals weakly convex; stria 1 coarsely punctate at basal part, but the punctures become indistinct at about middle; stria 2 similar to stria 1, but the apical part is shallower; striae 3–6 strongly and coarsely punctate, but the punctures disappear at basal 5/7 of elytra; stria 7 marked with a row of fine to moderate punctures, but the punctures disappearing at basal 4/7 of elytra; scutellar striae very short, with several coarse punctures; two dorsal pores usually adjoining stria 3 or close to stria 3, rarely on the interval; anterior dorsal pore situated at basal 1/4–1/3 of elytra and posterior one at a little behind the middle to 13/20, respectively; microsculpture vanished in ♂, largely vanished but weakly impressed and consisting of isodiametric meshes on basal part in ♀. WL/EL 0.12 in 1 ♂.

Metasternal process rather narrowly bordered at the median part.

Aedeagus weakly arcuate in lateral view; apical lobe rather elongate and simply rounded at the tip in lateral view.

Inner sac covered with very poorly sclerotized scales and armed with six components of sclerites; rhombiform sclerite poorly sclerotized and situated at apical 1/3 of aedeagus; two small sclerites poorly sclerotized and situated at the ventral portion of aedeagus; ostium flag indistinct.

Left style provided with a long setae and two or three short setae at apex, and with



a short seta at subapical part; right one provided with a long seta and two short setae at apex, and with one or three short seta(e) at subapical part.

*Type series.* Holotype: ♂, allotype: ♀, 10-V-1997, S. MORITA leg. Paratypes: 4 ♂♂, 1 ♀, 19-XI-1996, K. TOYODA leg.; 7 ♂♂, 1 ♀, 23-XI-1996, K. TOYODA leg.; 31 ♂♂, 19 ♀♀, 10-V-1997, T. KISHIMOTO, M. MARUYAMA, S. MORITA & K. TOYODA leg.; 2 ♂♂, 2 ♀♀, 30-X-1999, K. TOYODA leg.; 1 ♂, 3 ♀♀, 31-X-1999, T. KISHIMOTO & T. SHIMADA leg.

*Type locality.* Kiyotaki, Mt. Ryôgami-san, Saitama Prefecture, Central Japan.

*Notes.* The standard ratios of body parts given in the descriptive part are those of 5 ♂♂ and 5 ♀♀. This new species is separable from *B. misellum* by having a combination of the following features: 1) body larger, 2) elytra oval and convex, 3) eyes flat and 4) robust aedeagus.

***Bembidion saitoi* MORITA, sp. nov.**

[Japanese name: Hô'ô-mizugiwa-gomimushi]

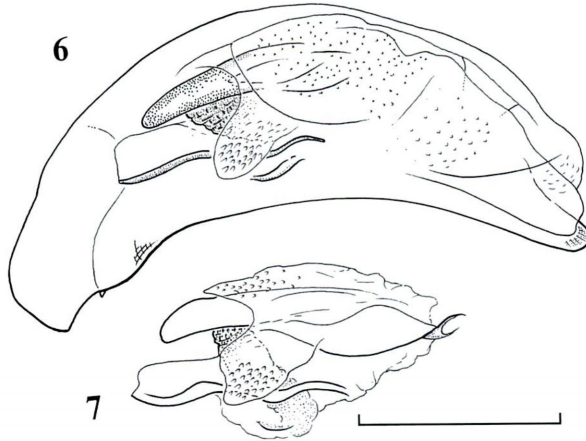
(Figs. 3, 6, 7)

*Diagnosis.* Body relatively small, with oval elytra; body black, with very weak brazen lustre; frontal furrows impunctate; eyes flat; anterior transverse impression of pronotum impunctate; elytral striae usually finely to moderately punctate; EL/EW 1.41–1.44; elytral microsculpture largely vanished, but consisting of isodiametric meshes on basal halves in ♀; aedeagus rather high at about middle in lateral view.

*Description.* L: 3.57–4.00 mm. Body relatively small with oval elytra. Body black, with very weak brazen lustre; ventral side black to blackish brown; mouth parts, antennal segments I, II, basal 1/2 of III, and basal 1/3 of IV and legs brown; mandibles, rest of antennal segments, palpi and labrum dark brown.

Head moderately convex; eyes flat; PW/HW 1.25–1.27 (M 1.26) in ♂, 1.23–1.32 (M 1.26) in ♀; frontal furrows wide, deep, plurisinuuous, impunctate and reaching the level of apical 4/5 of eye; eyes flat; anterior supraorbital pore situated at the mid-eye level, posterior ones at the post-eye level; microsculpture vanished, rarely consisting of wide meshes on the neck; genae short, oblique and very slightly convex; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\approx$  1 : 0.75 : 1.01 : 0.92 : 0.94 : 0.90 : 1.21 in ♂ and ♀.

Pronotum narrow and convex; PW/PL 1.14–1.18 (M 1.16) in ♂, 1.23–1.25 (M 1.24) in ♀; apex straight; anterior transverse impression shallow, rarely with two or three coarse punctures; PW/PA 1.30–1.34 (M 1.32) in ♂, 1.30–1.39 (M 1.35) in ♀; sides widely and moderately arcuate in front, and sinuate at basal 1/4, and then very weakly convergent or parallel to each other towards hind angles; PW/PB 1.38–1.44 (M 1.40) in ♂, 1.37–1.46 (M 1.42) in ♀; PA/PB 1.05–1.08 (M 1.06) in ♂, 1.01–1.09 (M 1.05) in ♀; median line finely impressed; base weakly arcuate throughout or weakly arcuate at middle and briefly oblique at the sides; basal part coarsely and sparsely



Figs. 6–7. Aedeagus and inner sac of *Bembidion saitoi* MORITA, sp. nov., left lateral view. — 6, Aedeagus; 7, cut open and extended inner sac. (Scale: 0.3 mm.)

punctate; hind angles with a weak carina on each side; basal foveae deep, oval and with rather coarse punctures; microsculpture vanished.

Elytra oval and relatively narrow; EW/PW 1.55–1.58 (M 1.57) in ♂, 1.52–1.58 (M 1.56) in ♀; EL/EW 1.41–1.43 (M 1.42) in ♂, 1.42–1.44 (M 1.43) in ♀; shoulders widely rounded; sides widely arcuate throughout; intervals very weakly convex and impunctate; striae moderately deep and finely to moderately punctate, but the punctures disappear towards apices; stria 1 finely to moderately punctate, though the punctures becoming indistinct at about middle; striae 2–4 disappear at basal 5/6 of elytra; stria 5 disappearing at basal 9/13; stria 6 disappearing at basal 7/13; stria 7 marked with a row of punctures, but disappearing at about middle; scutellar striole short, usually marked with a row of several punctures, rarely very shallowly impressed and impunctate; dorsal pores usually adjoining stria 3; in 1 ♀, the anterior dorsal pore situated on the interval of the left elytron; anterior dorsal pore situated at basal 1/4–3/10 of elytra and posterior one at a little behind the middle to 3/5, respectively; microsculpture vanished in ♂, largely vanished but consisting of isodiametric meshes on basal part in ♀. WL/EL 0.17 in 1 ♀.

Ventral side almost smooth; metasternal process rather widely bordered at the median part.

Aedeagus weakly arcuate and high at about middle in profile; viewed laterally, apical lobe rather short and simply rounded at the tip; inner sac armed mainly with five components of sclerites; ostium flag rather poorly sclerotized.

Left style provided with a long setae and two or three short setae at apex; right one provided with a long seta and one or two short seta(e) at apex and with one or two short seta(e) at subapical part.

*Type series.* Holotype: ♂, allotype: ♀, 7–VI–2007, M. SAITÔ leg. Paratypes: 1 ♂, 12–VII–1992, M. SAITÔ leg.; 1 ♀, 9–VII–1994, M. SAITÔ leg.; 1 ♂, 17–VII–1994, M.



SAITÔ leg.; 1 ♂, 11-X-1997, M. SAITÔ leg.; 1 ♂, 1 ♀, 7-VI-2007, M. SAITÔ leg.; 2 ♂♂, 1-VIII-2008, M. SAITÔ leg.

*Type locality.* Mt. Hô'ô-zan, Nirazaki-shi, Yamanashi Prefecture, Central Japan.

*Notes.* The standard ratios of body parts given in the descriptive part are those of 3 ♂♂ and 3 ♀♀. This new species may be easily recognized by the coloration of dorsal side, the reduced punctation of head, pronotum and elytral striae and the shape of aedeagus.

***Bembidion yatsuense* MORITA, sp. nov.**

[Japanese name: Yatsu-mizugiwa-gomimushi]

(Fig. 8)

*Diagnosis.* Body relatively small, with oval elytra; colour as in *B. misellum*; frontal furrows impunctate; eyes flat; anterior transverse impression of pronotum impunctate; elytral striae coarsely punctate; in ♀, elytral microsculpture consisting of wide meshes at basal halves, but evanescent at the apical halves; aedeagus rather elongate.

*Description.* L: 3.42–3.86 mm. Relatively small species with oval elytra. Body black; head and pronotum with dark greenish lustre; elytra with weak brownish lustre; ventral side brown; antennal segments I, II and basal part of III, and legs reddish brown to brown; mandibles, palpi and the rest of antennal segments brown to dark brown.

Head impunctate; eyes flat; frontal furrows wide; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\approx$  1 : 0.73 : 1.01 : 0.96 : 0.88 : 0.90 : 1.21 in ♂ and ♀.

Pronotum strongly convex; sides moderately arcuate in front, sinuate at basal 1/7 of pronotum and then parallel to each other towards hind angles; microsculpture vanished; anterior transverse impression usually without punctures; basal foveae usually with several coarse punctures, sometimes almost smooth; hind angles right or obtuse; PW/HW 1.25–1.33 (M 1.29) in ♂, 1.28–1.39 (M 1.30) in ♀; PW/PL 1.19–1.26 (M 1.24) in ♂, 1.17–1.26 (M 1.22) in ♀; PW/PA 1.34–1.48 (M 1.38) in ♂, 1.33–1.38 (M 1.36) in ♀; PW/PB 1.37–1.50 (M 1.40) in ♂, 1.36–1.50 (M 1.43) in ♀; PA/PB 0.96–1.08 (M 1.02) in ♂, 1.00–1.09 (M 1.05) in ♀.

Elytra oval and narrow; shoulders obliquely arcuate; stria 1 rather coarsely punctate from base to basal 1/3 of elytra, but the punctures become indistinct towards apex and obliterated at apical 1/4 of elytra; stria 2 similar to stria 1, but the apical part is shallower; striae 3–6 marked with a row of rather coarse punctures, but the punctures disappear at about basal 4/5 of elytra; stria 7 as in striae 6, but the punctures disappear at about middle; dorsal pores adjoining stria 3 or close to stria 3; anterior dorsal pore situated at basal 1/5–3/10 in ♂, 1/4–3/10 in ♀, posterior one at a little before the middle to 13/20 in ♂, a little behind the middle to 13/20 in ♀; microsculpture vanished in ♂, consisting of wide meshes at basal halves, but evanescent at the apical halves in ♀; EW/PW 1.53–1.62 (M 1.57) in ♂, 1.55–1.60 (M 1.55) in ♀; EL/EW 1.38–1.45 (M



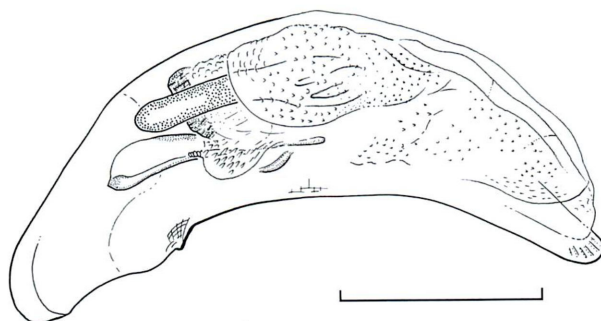


Fig. 8. Aedeagus of *Bembidion yatsuense* MORITA, sp. nov., from Shirakoma-rindô, left lateral view. (Scale: 0.3 mm.)

1.42) in ♂, 1.41–1.45 (M 1.43) in ♀. WL/EL 0.19 in 1 ♂. Ventral side as in *B. toyodai*.

Aedeagus rather elongate, weakly arcuate at about apical 1/3 in lateral view; apical lobe rather elongate and simply rounded at the tip. Each style with a long seta and two short setae at apex and a short seta at subapical part.

*Type series.* Holotype: ♂, allotype: ♀, Shirakoma-rindô, 13–VI–1999, S. MORITA leg. Paratypes: 3 ♀♀, Natsuzawa-kôsen, Chino-shi, 5–VII–1995, K. HORI leg.; 1 ♂, Shirakoma-ike, 30–VII–1995, H. YOSHITOMI leg.; 10 ♂♂, 10 ♀♀, Shirakoma-rindô, 13–VI–1999, S. MORITA leg.; 1 ♂, Oogawara-tôge, 2–VIII–2003, H. OHKAWA leg.; 1 ♂, Inagoyu, 15–16–VII–2006, S. MORITA leg.

*Localities.* Shirakoma-rindô, Shirakoma-ike, Inagoyu, Oogawara-tôge and Natsuzawa-kôsen, Yatsuga-take Mts., Nagano Pref., Central Japan.

*Notes.* The standard ratios of body parts given in the descriptive part are those of 5 ♂♂ and 5 ♀♀ from the Shirakoma-rindô.

This new species is closely allied to *Bembidion misellum*. It is, however, distinguished from the latter by the following points: 1) eyes flat; 2) sides of pronotum weakly sinuate; 3) elytra oval; and 4) EL/EW 1.38–1.45 in ♂ and ♀. [in *B. misellum* from Shirakoma-rindô, EL/EW 1.46, 1.48 in ♂, 1.47 in ♀].

This new species is also closely allied to small individuals of *B. toyodai*. However, it is distinguished from the latter by the following points: 1) frontal furrows, anterior transverse impression of pronotum and elytral striae with reduced punctation, 2) elytral shoulders more obliquely arcuate and 3) structure of aedeagus.

***Bembidion horii* MORITA, sp. nov.**

[Japanese name: Hida-mizugiwa-gomimushi]

(Figs. 9–11)

*Diagnosis.* Body relatively small; head impunctate; anterior transverse impression of pronotum usually without punctures; EL/EW 1.35–1.42; in ♀, elytral microsculpture

largely consisting of wide meshes, but vanished at the apical parts.

*Description.* L: 3.50–4.07 mm. Small species with oval elytra. Body black; head and pronotum with greenish lustre; elytra usually with brownish lustre; ventral side dark brown to blackish brown; antennal segments I, II and basal part of III and legs reddish brown to brown; mandibles, palpi and the rest of antennal segments brown to dark brown.

Head as in *B. yatsuense*; frontal furrows impunctate, variable in width and depth, usually deep, narrow and divergent posteriad, reaching the level a little before the post-eye, rarely rather shallow, wide or almost parallel to each other; microsculpture vanished, but the neck is impressed by isodiametric meshes; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\cong$  1 : 0.74 : 0.95 : 0.95 : 0.88 : 0.86 : 1.28 in ♂ and ♀.

Pronotum convex; sides widely and moderately arcuate in front, sinuate at basal 1/6–1/5 of pronotum and then parallel to each other towards hind angles; microsculpture vanished; anterior transverse impression usually without punctures, rarely with several fine punctures; basal foveae with coarse punctures; hind angles right; PW/HW 1.23–1.31 (M 1.27) in ♂, 1.24–1.31 (M 1.27) in ♀; PW/PL 1.19–1.28 (M 1.24) in ♂, 1.24–1.30 (M 1.25) in ♀; PW/PA 1.33–1.40 (M 1.35) in ♂, 1.30–1.36 (M 1.34) in ♀; PW/PB 1.38–1.41 (M 1.39) in ♂, 1.35–1.45 (M 1.39) in ♀; PA/PB 0.99–1.05 (M 1.03) in ♂, 1.00–1.11 (M 1.03) in ♀.

Elytra oval; shoulders moderately arcuate; stria 1 moderately punctate on the basal part, but the punctures become indistinct at about basal 3/4 of elytra; stria 2 similar to stria 1, but the apical part is shallower; stria 3 similar to stria 2, but the punctures disappear at basal 7/10; striae 4–6 usually marked with a row of rather coarse punctures, but the punctures disappear at basal 3/5; stria 7 marked with a row of rather fine punctures, but the punctures disappear at about middle; dorsal pores adjoining stria 3 or close to stria 3; anterior dorsal pore situated at basal 1/5–1/4, posterior one at about middle to 3/5, respectively; microsculpture vanished in ♂, largely consisting of wide meshes, but the apical parts are vanished in ♀; EW/PW 1.55–1.64 (M 1.59) in ♂, 1.53–1.60 (M 1.57) in ♀; EL/EW 1.37–1.42 (M 1.38) in ♂, 1.35–1.42 (M 1.38) in ♀; WL/EL 0.11, 0.12 in 2 ♂♂. Ventral side as in *B. toyodai*.

Aedeagus as in Fig. 9. Inner sac as in Figs. 10 and 11.

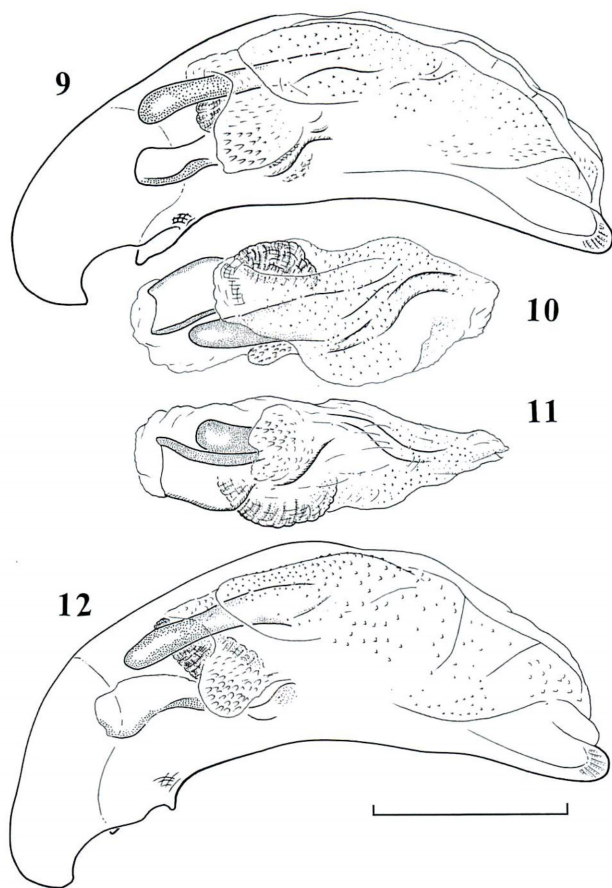
Left style with a long seta and two or three short setae at apex and rarely with a short seta at subapical part; right style with a long seta and two short setae at apex and with one or two short seta(e) at subapical part.

*Type series.* Holotype: ♂, allotype: ♀, 7–VII–1997, S. MORITA & K. HORI leg. Paratypes: 25 ♂♂, 22 ♀♀, 7–VII–1997, S. MORITA & K. HORI leg.; 3 ♀♀, 25–VII–1997, K. Hori leg.; 3 ♂♂, 24–VIII–1997, K. Hori leg.

*Type locality.* Mitsumata, Horigane-mura, Nagano Pref., Central Japan.

*Further specimens examined.* 2 ♀♀, Nakabusa-Spa, Nagano Pref., 6–VII–1997, S. MORITA leg.

*Notes.* The standard ratios of body parts given in the descriptive part are those of



Figs. 9-12. Aedeagus and inner sac of *Bembidion* spp. — 9-11, *Bembidion horii* MORITA, sp. nov., from Mitumata; 12, *B. rengense* MORITA, sp. nov., from Renge Spa. — 9 and 12, Aedeagus, left lateral view; 10, extracted inner sac, dorsal view; 11, extracted inner sac, ventral view. (Scale: 0.3 mm.)

5 ♂♂ and 5 ♀♀.

This new species is doubtless similar to the preceding species in both external and genitalic features, and might be regarded as a geographical race of it. In this paper, however, the differences between the two are regarded as being specific rather than subspecific.



*Bembidion rengense* MORITA, sp. nov.

[Japanese name: Renge-mizugiwa-gomimushi]

(Fig. 12)

**Diagnosis.** Body relatively large; head impunctate; frontal furrows long; anterior transverse impression of pronotum without punctures; basal part of elytra wide; EL/EW 1.35–1.39; in ♀, elytral microsculpture consisting of wide meshes.

**Description.** L: 3.71–3.86 mm. Body black with brownish lustre; ventral side brown; antennal segments I, II, basal parts of III and IV, and legs brown; mouth parts, the rest of antennal segments and legs brown to dark brown.

Head as in *B. horii*, but the frontal furrows are deeper and longer, and reach the post-eye level; microsculpture vanished, but the neck is impressed by isodiametric meshes; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI  $\approx$  1 : 0.68 : 0.98 : 0.87 : 0.85 : 0.84 : 1.11 in ♂ and ♀.

Pronotum strongly convex; sides strongly and widely arcuate in front, sinuate at basal 1/8–3/20 of pronotum and then parallel to each other towards hind angles; microsculpture vanished; anterior transverse impression without punctures; basal foveae with coarse punctures; hind angles right; PW/HW 1.30, 1.31 in ♂, 1.29, 1.30 in ♀; PW/PL 1.23, 1.25 in ♂, 1.25, 1.28 in ♀; PW/PA 1.34, 1.41 in ♂, 1.31, 1.35 in ♀; PW/PB 1.35, 1.48 in ♂, 1.38, 1.42 in ♀; PA/PB 0.96, 1.10 in ♂, 1.02, 1.08 in ♀.

Elytra oval with wide basal part; shoulders strongly and widely arcuate; striae rather shallow and moderately punctate in ♂, weakly so in ♀; punctures on striae 1, 3 and 4 becoming indistinct at about basal 5/7 of elytra; punctures on stria 2 becoming indistinct at about basal 9/10; stria 5–7 marked with a row of punctures, but the punctures disappear at about middle; dorsal pores usually adjoining stria 3 or close to stria 3; anterior dorsal pore situated at basal 1/4–1/3, posterior one at about middle to 3/5, respectively; microsculpture largely vanished in ♂, but the apical parts vaguely impressed by isodiametric meshes; in ♀, microsculpture clearly impressed by wide or polygonal meshes; EW/PW 1.54, 1.62 in ♂, 1.55, 1.58 in ♀; EL/EW 1.35, 1.39 in ♂, 1.37, 1.38 in ♀. Ventral side as in *B. horii*.

Aedeagus as in Fig. 12. Left style with a long seta and a short seta at apex and with a short seta at subapical part; right style with a long seta and two short setae at apex and with one short seta at subapical part.

**Type series.** Holotype: ♂, 12–VII–2008, S. MORITA leg.; allotype: ♀, 12–VII–1975, S. MORITA leg. Paratypes: 1 ♂, 1 ♀, 2–VIII–2008, S. MORITA leg.

**Locality.** Renge Spa, Itoigawa-shi, Niigata Pref., Central Japan.

**Additional specimens examined.** 3 ♂♂, 1 ♀, Mt. Kiso-koma-ga-take, Nagano Pref., 26–VII–1986, S. MORITA leg.; 1 ♀, Mt. Kiso-koma-ga-take, 22–VII–1992, K. AKITA leg.

**Notes.** This new species is closely allied to the preceding. However, it is distinguished from the latter by the following points: 1) frontal furrows longer, 2) sides of pronotum more strongly arcuate, 3) elytral shoulders more arcuate, 4) elytral base wider

and 5) sides of elytra more strongly arcuate.

## 要 約

森田誠司： 日本産ミズギワゴミムシ類の知見. XIX. ニッコウミズギワゴミムシ *Bembidion misellum* と中部地方産の近縁種. —— ニッコウミズギワゴミムシ *Bembidion misellum* とその近縁の 6 種を中部地方から記録, または新種として記載した.

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*Elytra, Tokyo*, **37**(1): 39–40, May 29, 2009

## New Records of *Creophilus maxillosus* (Coleoptera, Staphylinidae, Staphylininae) from Yaeyama archipelago, the Ryukyus

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A large-sized staphylinid beetle, *Creophilus maxillosus* (LINNAEUS) has wide range distribution in the Palaearctic Region including Japan (SMETANA, 2004). This species is also known to

be distributed widely in Japan including the Ryukyus (SHIBATA, 1985). However, there are only records from Amami-Ôshima Is., Iheya-jima Is. and Okinawa-jima Is, northern Ryukyus. Until now, no record has hitherto been made from the Yaeyama archipelago, southern Ryukyus (SHIBATA, pers. comm.).

Recently, I had an opportunity to visit and to collect insects on Ishigaki-jima Is. and Iriomote-jima Is., the Yaeyama archipelago, and I was able to find *C. maxillosus* in the islands.

In this brief report, I would like to record it as the first records of these two Islands.

### *Creophilus maxillosus* (LINNAEUS, 1758)

*Materials examined.* JAPAN: Yaeyama archipelago (in the Ryukyus). [Ishigaki-jima] 3 ♀, Ibaruma [伊原間], 8-IV-2009, S. YAMAMOTO leg; 1 ♂, Yarabu-dake [屋良部岳], 11-IV-2009, S. YAMAMOTO leg. [Iriomote-jima] 1 ♂, Kampirê-no-taki [カンピレーの滝], 4-IV-2009, S. YAMAMOTO leg. (deposited in the author's collection).

*Distribution.* Japan (Hokkaido, Honshu, Shikoku, Kyushu, Yaku-shima Is., Ryukyus: Amami-Ôshima Is., Iheya-jima Is., Okinawa-jima Is., Ishigaki-jima Is., Iriomote-jima Is.); Siberia, China, North Korea, South Korea, Taiwan, India, Europe, North Africa, Hawaii, North America, etc. New to Ishigaki-jima Is. and Iriomote-jima Is..

*Notes.* The individuals of *C. maxillosus* collected from Ibaruma, Ishigaki-jima Is. were found under a cattle carcass. It was already skeletonized, and a few fly puparia were scattered around them. I observed the staphylinid beetle not only in grassland but also in laurel forests.

The present paper reports the first record of *C. maxillosus* from the southern Ryukyus, and it suggests that this species is distributed widely throughout the Ryukyus. The species will be found from the other islands of the Ryukyus, such as Tokunoshima Is. and Yonaguni-jima Is.

In closing the paper, I wish to express my special thanks to Mr. Yasutoshi SHIBATA (Tokyo) for giving me some distributional information. I am also deeply indebted to Dr. Munetoshi MARUYAMA (Kyushu University Museum) for his critical reading and commenting on the manuscript.

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## A New *Pterostichus* (Coleoptera, Carabidae) from Central Japan

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**Abstract** A new macrocephalic pterostichine carabid beetle, *Pterostichus miyazawai* sp. nov., is described from Nagano Prefecture, Central Japan.

We first became interested in a pterostichine species in 1994 when Mr. Yutaka MIYAZAWA obtained a small macrocephalic pterostichine carabid beetle in Nagano Prefecture, Central Japan. His specimen was a female and less taxonomically important. Later, Mr. HAYAKAWA (1996) published a list of carabid beetles of Nagano Prefecture and made a comment that MIYAZAWA's specimen seemed possibly to belong to a new species based on the opinion given by the first author.

To obtain more specimens, especially males, of this species and to clarify its systematic status, the second author had made several investigations in various places near MIYAZAWA's collecting site. At last, he succeeded in obtaining many specimens. The purpose of this paper is to show the result of the examination of the additional specimens.

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; 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; M – arithmetic mean; NSMT – National Museum of Nature and Science, Tokyo.

Before going further, we wish to express our 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 Messrs. Yutaka MIYAZAWA and Yûji UCHIYAMA for their help.

*Pterostichus miyazawai* MORITA et OHKAWA, sp. nov.

[Japanese name: Shiwamune-ôzu-naga-gomimushi]

(Figs. 1-9)

*Diagnosis.* Body small and robust. Head very large; eyes vestigial or entirely flat; basal foveae and disc of pronotum with deep transverse wrinkles; aedeagus with elongate apical lobe.

*Description.* L: 12.5-14.2 mm. Body small and robust. Colour brown to dark brown; appendages dark brown.

Head very large and convex; eyes vestigial or entirely flat; frontal furrows shallow and divergent posteriad; lateral grooves deep, straight in front, curved inwards and wide at the posterior halves, and then reaching the posterior supraorbital pore on each side; additional groove situated a little outside lateral groove and joining posterior ends of

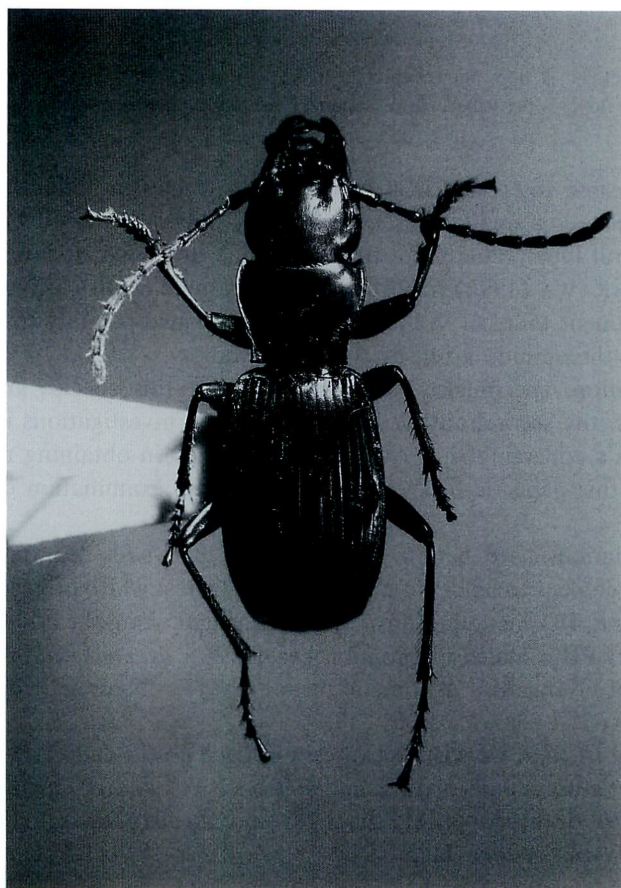
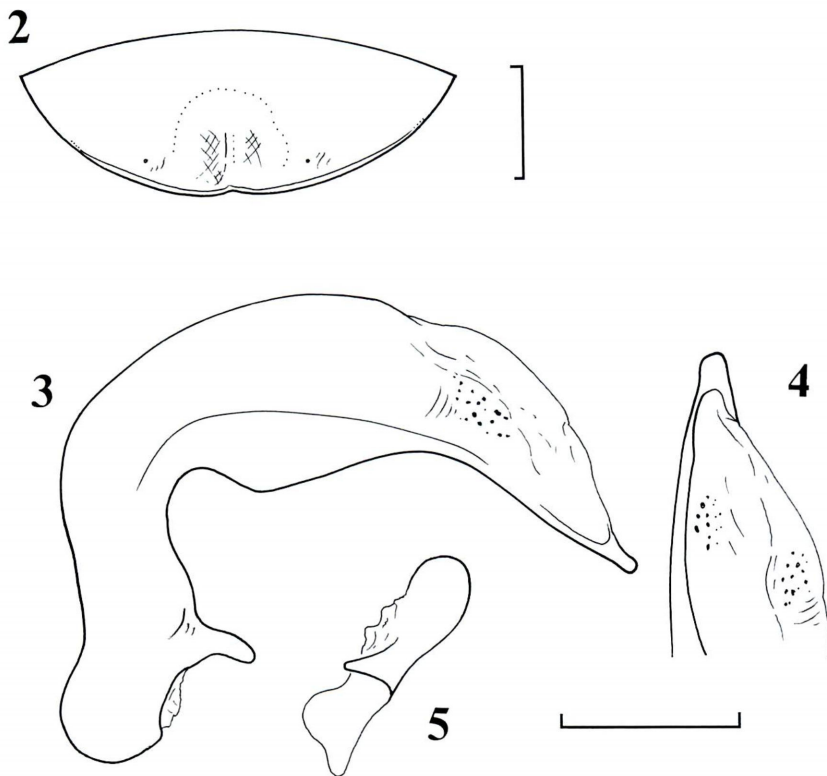


Fig. 1. *Pterostichus miyazawai* MORITA et OHKAWA, sp. nov., from Shirabiso Pass.

lateral grooves on each side; surface usually sparsely and finely punctate, rarely impunctate; PW/HW 1.10–1.14 (M 1.11) in 4 ♂♂, 1.01–1.04 (M 1.03) in 3 ♀♀; genae strongly convex; microsculpture almost obliterated, partially consisting of wide meshes; mentum tooth stout and bifid; relative lengths of antennal segments as follows:— I : II : III : IV : V : VI : XI  $\cong$  1 : 0.50 : 0.94 : 0.86 : 0.81 : 0.80 : 0.86.

Pronotum trapezoidal, weakly convex and widest at about apical 3/20–1/5 (measured along the median line); apex widely and moderately emarginate; PW/PL 1.56–1.63 (M 1.60) in 4 ♂♂, 1.40–1.51 (M 1.47) in 3 ♀♀; sides widely and weakly arcuate in front, and then shallowly sinuate at basal 1/5 (measured along mid-line) and weakly divergent towards hind angles; base moderately emarginate at median part, slightly oblique inside each hind angle; PW/PA 1.10–1.14 (M 1.13) in 4 ♂♂, 1.07–1.12 (M 1.10) in 3 ♀♀, PW/PB 1.34–1.38 (M 1.37) in 4 ♂♂, 1.35–1.44 (M 1.40) in 3 ♀♀, PA/PB 1.18–1.24 (M 1.21) in 4 ♂♂, 1.23–1.34 (M 1.28) in 3 ♀♀; apical angles strongly produced and simply rounded at the tips; hind angles sharp; anterior pair of setae inserted at a little behind the widest part or on that level, posterior ones a little before

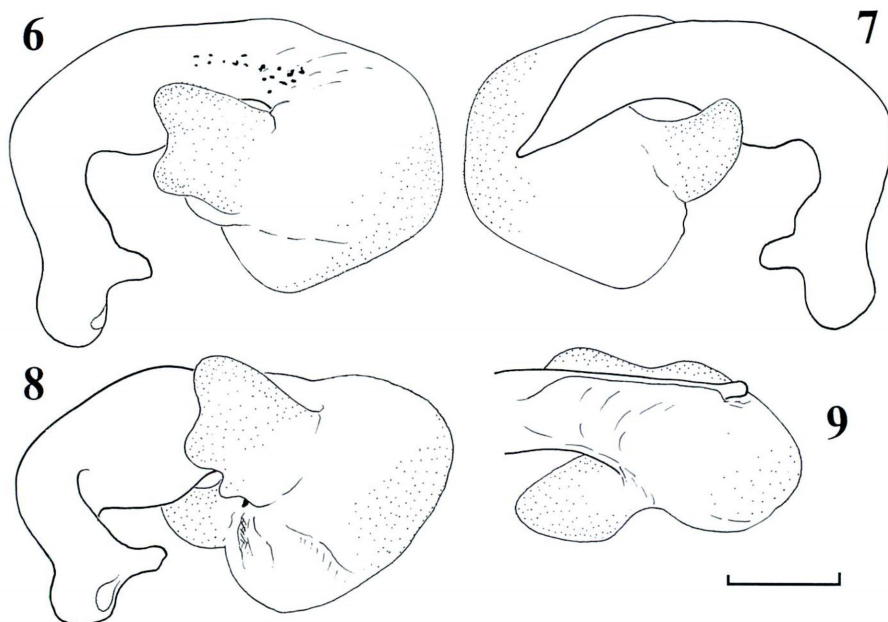


Figs. 2–5. *Pterostichus miyazawai* MORITA et OHKAWA, sp. nov. — 2, Anal sternite in ♂; 3, aedeagus, left lateral view; 4, apical part of aedeagus, dorsal view; 5, right paramere, left lateral view. (Scale: 1.00 mm.)



and inside hind angles; anterior transverse impression very shallow at the median part and obliterated at the sides; median line impressed between anterior and posterior impressions; basal foveae shallow, linear at the bottom, and with deep, wide and transverse wrinkles and fine punctures; disc with fine and transverse wrinkles; microsculpture composed of fine and wide or transverse meshes; surface rarely finely and sparsely punctate; basal part between bottoms of basal foveae not wrinkled.

Elytra elongated ovate, very weakly convex and widest at about middle or a little behind the middle; EW/PW 1.21–1.26 (M 1.24) in 4 ♂♂, 1.21–1.23 (M 1.22) in 3 ♀♀, EL/EW 1.48–1.55 (M 1.52) in 4 ♂♂, 1.52–1.56 (M 1.54) in 3 ♀♀; shoulders rounded; sides very weakly arcuate, and then moderately arcuate at the apical parts, with shallow preapical emargination on each side; apices separated from each other, and with obtuse sutural angle; scutellar striole very short, situated on interval I, and joining basal border which is weakly arcuate; striae rather shallow throughout and smooth; striae 1 and 2 anastomosed at basal part with a basal pore; two dorsal pores situated on interval III; anterior dorsal pore adjoining stria 2, and posterior one usually adjoining stria 2, rarely on interval III; anterior dorsal pore situated at basal 2/5 to the middle; posterior dorsal pore situated at basal 3/4–17/20; intervals weakly convex; microsculpture composed of wide meshes; inner plica visible; epipleuron gradually narrowed towards apex; marginal series composed of 13–16 pores.



Figs. 6–9. Aedeagus of *Pterostichus miyazawai* MORITA et OHKAWA, sp. nov., showing inflated inner sac. — 6, Left lateral view; 7, right lateral view; 8, left ventro-lateral view; 9, dorsal view. (Scale: 1.00 mm.)

Genae usually rugose on ventral side; prosternum rarely finely punctate; prepisternum usually finely punctate; mesosternum, mesepisternum, metasternum and sides of sternite 1 finely punctate; in ♂, anal sternite shallowly concave at apical part, the concavity being very weakly and longitudinally carinate at the middle, and very narrowly emarginate at apex.

Aedeagus elongate, strongly bent at basal third; basal part thin; apex rather elongate, simply rounded in lateral view and obliquely rounded in dorsal view; ventral edge of the right wall with a tumor which is large and longitudinally narrow; right paramere straight with rounded apex.

*Type series.* Holotype: ♂, Shirabiso Pass, 16~30-VII-2008, H. OHKAWA leg. (NSMT). Paratypes: 1 ♀, Hodonooike, 30-VII-1994, Y. MIYAZAWA leg.; 1 ♂, Shirabiso Pass, 4~18-X-2006, H. OHKAWA leg.; 3 ♀♀, Shirabiso Pass, 30-VII~27-VIII-2008, H. OHKAWA leg.; 2 ♂♂, 3 ♀♀, Shirabiso Pass, 17-IX~15-X-2008, H. Ohkawa leg.; 2 ♂♂, 1 ♀, Shirabiso Pass, 15-X~12-XI-2008, H. OHKAWA leg.; 1 ♂, Shirabiso Pass, 12-XI~2-XII-2008, H. OHKAWA leg.

*Localities.* Shirabiso Pass and Hodonooike, Iida-shi, Nagano Prefecture, Central Japan.

*Notes.* Judging from the shape of aedeagus, this new species is closely allied to *Pterostichus toyodai* MORITA et Y. KUROSA (1998, p. 69). It is, however, distinguished from it by the following points: 1) body larger, 2) smaller genae, 3) basal foveae and disc of pronotum with deep wrinkles, 4) more convex pronotum and 5) aedeagal apical lobe more elongate.

## 要 約

森田誠司・大川秀雄：中部地方産オオズナガゴミムシの1新種。—— 長野県飯田市から採集されたナガゴミムシを新種と認め、第一発見者の宮澤 豊氏に献名してシワムネオオズナガゴミムシ *Pterostichus miyazawai* sp. nov. と命名記載した。この種は、雄の交尾器から判断して静岡県安倍峠から知られているヒメオオズナガゴミムシ *Pterostichus toyodai* MORITA et Y. KUROSA に近い種であるが、やや大きく、前胸背板はやや隆まり、基部凹陷に深い横皺をもち、より長い陰茎先端部をもつこと、などで識別される。

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## New Records of *Atholus coelestis* (Coleoptera, Histeridae) from Okinawa-jima and Kuro-shima, The Ryukyus, Japan

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*Atholus coelestis* (MARSEUL, 1857) was described from China, and is rather widely distributed throughout the Oriental Region: continental China, Taiwan, Nepal, India, Sri Lanka, Indochina, Indonesia (Java and Celebes) and Tadzhikistan (MAZUR, 1997). In Japan the area of its distribution is restricted to the southern Ryukyus. Recently I collected several specimens of this species on the Islands of Okinawa-jima and Kuro-shima (Yaeyama Isls.), the Ryukyus. New to the fauna of these Islands.

### *Atholus coelestis* (MARSEUL, 1857)

*Hister coelestis* MARSEUL, 1857, 416 [China].

*Hister (Atholus) coelestis*: DESBORDES, 1921, 10 [India].

*Atholus coelestis*: HISAMATSU & KUSUI, 1984, 17 [Japan: Ryukyu: Iriomote-jima]; ÔHARA, 1992, 176 [Tarama-jima, Zamami-jima, Ishigaki-jima]; 1994, 137 [Yonaguni-jima]; MAZUR, 1997, 129.

*Specimens examined*. Japan: Ryukyu [Okinawa-jima] 9 exs., Ibe, Kunigami, 20–XII–2002, M. ÔHARA, from cow dung (OK-02-MO-003). [Kuro-shima, Yaeyama Isls.] 6 males and 2 females, Hori, 24° 14' 50" N 123° 59' 58" E, 8–XII–2008, M. ÔHARA, from cow dung (KU-08-MO-051); 6 males and 7 females, near Kuroshima light house, 24° 13' 13" N 124° 00' 27" E, 8–XII–2008, M. ÔHARA, from cow dung (KU-08-MO-052).

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## Collecting Records of Water Beetles in North Korea

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**Abstract** Collecting records of 15 species belonging to the families of Dytiscidae, Hydrophilidae and Scirtidae are listed from North Korea. Of these, eight species are recorded for the first time from the country.

### Introduction

In the course of field survey of the wildlife fauna of the DPR Korea (=North Korea) in 2008, the second author Changdo HAN collected a large number of insects mainly from Pyongyang City and Mt. Myohyang-san situated about 200 km north from the city. In this paper, we will report some collecting record of water beetles based on the collection.

The specimens reported herein are preserved in the Entomological Laboratory, Ehime University, Matsuyama (EUMJ) and the Wildlife Research Center in Korea University, Tokyo.

### List

#### Dytiscidae

##### 1. *Hyphydrus japonicus* SHARP, 1873

*Specimens examined.* 1 ex., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 20-VI-2008, Changdo HAN leg.; 7 exs., ditto, 8-VII-2008, Changdo HAN leg.; 11 exs., ditto, 15-VII-2008, Changdo HAN leg.; 1 ex., Pyong Yang City, Sun An Airport, Light of Entrance, 17-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from Russia (Far East), Japan and South Korea (NILSSON, 2003). This species is newly recorded from North Korea.

##### 2. *Hydroglyphus japonicus* (SHARP, 1873)

*Specimens examined.* 1 ex., Pyong Yang-City, Around Pyong Yang Hotel, near Daedong River, 20-VI-2008, Changdo HAN leg.; 2 exs., Hyang San Gun, around Chongchon Hotel, near Chongchon River, 1-VII-2008, Changdo HAN leg.; 2 exs., ditto, 4-VII-2008, Changdo HAN leg.; 3 exs., Pyong Yang City, Sun An Airport, Light of

Entrance, 17–VII–2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Russia (Far East), Japan, North Korea and South Korea (NILSSON, 2003).

### 3. *Nebrioporus hostilis* (SHARP, 1884)

*Specimens examined.* 2 exs., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 20–VI–2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Russia (Far East), Japan, North Korea, South Korea and Taiwan (NILSSON, 2003).

### 4. *Neonectes natrix* (SHARP, 1884)

*Specimens examined.* 3 exs., Hyang San Gun, around Hyangsan Hotel, near Chongchon River, 5–VII–2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Russia (Far East) and Japan. This species is newly recorded from North Korea (NILSSON, 2003).

### 5. *Laccophilus difficilis* SHARP, 1873

*Specimens examined.* 2 exs., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 8–VII–2008, Changdo HAN leg.; 2 exs., ditto, 15–VII–2008, Changdo HAN leg.; 18 exs., Pyong Yang City, Sun An Airport, Light of Entrance, 17–VII–2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Japan, North Korea and South Korea (NILSSON, 2003).

### 6. *Copelatus weymarni* BALFOUR-BROWNE, 1946

*Specimens examined.* 2 exs., Pyong Yang City, Sun An Airport, Light of Entrance, 17–VII–2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Russia (Far East), Japan and South Korea (NILSSON, 2003). This species is newly recorded from North Korea.

### 7. *Platambus fimbriatus* SHARP, 1884

*Specimens examined.* 13 exs., Hyang San Gun, around Chongchon Hotel, near Chongchon River, 1–VII–2008, Changdo HAN leg.; 4 exs., ditto, 4–VII–2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Russia (Far East) and South Korea (NILSSON, 2003). This species is newly recorded from North Korea.

### 8. *Rhantus suturalis* (MACLEAY, 1825)

*Specimens examined.* 1 ex., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 23-VI-2008, Changdo HAN leg.; 2 exs., ditto, 8-VII-2008, Changdo HAN leg.; 1 ex., Hyan San Gun, around Hyangsan Hotel, near Chongchon River, 6-VII-2008, Changdo HAN leg.; 1 ex., Kang Uon Do, Uon San City, An Byon Gun, Pisan Ri, 22-VII-2008, Changdo HAN leg.

*Notes.* This species is distributed worldwide from the Palaearctic, the Australian, to the Oriental Regions (Nilsson, 2003).

### 9. *Hydaticus bowringii* CLARK, 1864

*Specimen examined.* 1 ex., Kang Uon Do, Uon San City, An Byon Gun, Pisan-Ri, 22-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Japan, South Korea and Taiwan (NILSSON, 2003). This species is newly recorded from North Korea.

## Hydrophilidae

### 1. *Berosus (Enoplurus) lewisius* SHARP, 1873

*Specimens examined.* 10 exs., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 20-VI-2008, Changdo HAN leg.; 1 ex., ditto, 25-VI-2008, Changdo HAN leg.; 4 exs., ditto, 8-VII-2008, Changdo HAN leg.; 1 ex., ditto, 15-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Japan, Mongolia, North Korea, Russia (Far East), South Korea and Vietnam (HANSEN, 2004).

### 2. *Laccobius* (s. str.) *bedeli* SHARP, 1884

*Specimens examined.* 3 exs., Pyong Yang City, Sun An Airport, Light of Entrance, 17-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Japan, Russia (Far East) and South Korea (HANSEN, 2004). This species is newly recorded from North Korea.

### 3. *Laccobius (Microlaccobius) oscillans* SHARP, 1884

*Specimens examined.* 4 exs., Hyang San Gun, around Chongchon Hotel, near Chongchon River, 1-VII-2008, Changdo HAN leg.; 22 exs., ditto, 4-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Japan, North Korea, Russia (Far East) and South Korea (HANSEN, 2004).



#### 4. *Enochrus (Holcophilyedrus) simulans* (SHARP, 1873)

*Specimens examined.* 1 ex., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 20-VI-2008, Changdo HAN leg.; 6 exs., ditto, 8-VII-2008, Changdo HAN leg.; 6 exs., ditto, 15-VII-2008, Changdo HAN leg.; 45 exs., Pyong Yang City, Sun An Airport, Light of Entrance, 17-VII-1008, Changdo HAN leg.

*Notes.* This species has been recorded from China, Japan, Russia (Far East), South Korea and Taiwan (HANSEN, 2004). This species is newly recorded from North Korea.

#### 5. *Hydrophilus bilineatus caschmirensis* REDTENBACHER, 1844

*Specimens examined.* 3 exs., Pyong Yang City, around Pyong Yang Hotel, near Daedong River, 20-VI-2008, Changdo HAN leg.; 1 ex., ditto, 8-VII-2008, Changdo HAN leg.; 1 ex., ditto, 9-VII-2008, Changdo HAN leg.; 1 ex., ditto, 15-VII-2008, Changdo HAN leg.; 1 ex., Pyong Yang City, around Daedong River, near Pyong Yang Hotel, 17-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from Burma, Cambodia, China, India, Indonesia, Malaysia, Sri Lanka, Taiwan, Thailand, Vietnam, Japan and South Korea (HANSEN, 2004). This species is newly recorded from North Korea.

### Scirtidae

#### 1. *Scirtes japonicus* KIESENWETTER, 1874

*Specimens examined.* 1 ex., Pyong Yang City, around Daedong River, near Pyong Yang Hotel, 22-VI-2008, Changdo HAN leg.; 1 ex., Pyong Yang City, Mt. Daesong San, 26-VI-2008, Changdo HAN leg.; 1 ex., Hyang San Gun, around Chongchon Hotel, near Chongchon River, 1-VII-2008, Changdo HAN leg.

*Notes.* This species has been recorded from Japan, South Korea, Taiwan, China, East Russia and Hawaii (KLAUSNITZER *et al.*, 2006; YOSHITOMI, 2008). This species is newly recorded from North Korea.

### Acknowledgements

We wish to express our heartfelt thanks to the Biodiversity and Eco-engineering Center of the DPR Korea state academy of sciences, Prof. Dr. CHONG Jong-Ryol of the Wildlife Research Center in Korea University, Tokyo, and Dr. HAN Sang-Hoon of the National Institute of Biological Resources in Korea (NIBR) for their support and helpful comments for the survey.

### 要 約

新田涼平・韓 昌道・吉富博之：北朝鮮からの水生甲虫類の採集記録。—— 第2著者の採集し

た標本を基に、北朝鮮からゲンゴロウ科（9種）、ガムシ科（5種）、マルハナノミ科（1種）の合計15種の採集記録をリストアップした。そのうち、8種については北朝鮮から初記録であった。

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*Elytra, Tokyo*, 37(1): 51–52, May 29, 2009

### Records of the Genus *Baryrhynchus* (Brentidae, Arrhenodini) on Akuseki Island of the Tokara Islands, Japan

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*Baryrhynchus* LACORDAIRE, 1866 is widely distributed in Southeast Asia and its adjacent areas, from India to the Solomon Islands and to Japan, and consists of 25 species (MORIMOTO, 2008). Three species of this genus are recorded from Japan (MORIMOTO, 2008), i.e., *B. poweri* ROELOFS, 1879 (Japan [from Kunashiri Island in the Kuril Islands to Okinawa Island, but not recorded from Hokkaido], Taiwan, South China, Vietnam, Borneo and India), *B. tokarensis* OHBAYASHI et SATÔ, 1966 (Akuseki Island and Takara Island of the Tokara Islands) and *B. yaeyamensis* MORIMOTO, 1979 (Ishigaki Island and Iriomote Island). In the Tokara Islands, *B. poweri* has been recorded from Nakano-shima Island (MORIMOTO, 1984; SASAKI *et al.*, 2002). *Baryrhynchus tokarensis* is endemic to the Tokara Islands (Akuseki Island and Takara Island), and is designated as Data Deficient (DD) by Kagoshima Prefecture (2003), because there are only a few recent reports.

The body length of *B. tokarensis* was reported as 20.5–21.5 mm (MORIMOTO, 1984, 2008). The range of the body length of *B. tokarensis* is smaller than those of *B. poweri* (10.6–23.5 mm)

and *B. yaeyamensis* (13.4–24.0 mm) (MORIMOTO, 2008).

In this paper, we are going to report a new record of *B. poweri* and additional record of *B. tokarensis* in Akuseki Island, the Tokara Islands. We also record the body length of these species.

### *Baryrhynchus poweri* ROELOFS, 1879

*Specimen examined.* 1♀, Uebura, Akuseki Island, Tokara Islands, Kagoshima Pref., Kyushu, Japan, 8–VIII–2008, T. KIYOSHI & T. HOSOYA leg.

*Notes.* The specimen examined measures 20.2 mm in body length. This specimen was found from a rotten wood in a village.

### *Baryrhynchus tokarensis* OHBAYASHI et SATÔ, 1966

*Specimens examined.* 4♂♂, 6♀♀, Uebura, Akuseki Island, Tokara Islands, Kagoshima Pref., Kyushu, Japan, 8–VIII–2008, T. KIYOSHI & T. HOSOYA leg.

*Notes.* The male specimens examined measure 15.1 mm, 18.2 mm, 19.6 mm and 24.8 mm in body length. The female specimens examined measure 13.7 mm, 13.8 mm, 18.4 mm, 20.2 mm, 20.4 mm and 25.0 mm in body length. The range of body length in this report (13.7–25.0 mm) is larger than in the past reports (20.5–21.5 mm) (MORIMOTO, 1984, 2008). These specimens were found from rotten woods in a village.

This research was performed by permission of insect collection of Toshima Village. This study was supported by a Grant-in-Aid from the Ministry of Education, Science, Sports and Culture of Japan (No. 20770069) to T.H.

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Discovery of the Water Scavenger Beetle Genus *Megagraphydrus*  
HANSEN (Coleoptera, Hydrophilidae) from Japan,  
with Description of a New Species

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**Abstract** The genus *Megagraphydrus* HANSEN, 1999 is recorded from Japan for the first time. A single undescribed species is recognized: *Megagraphydrus luteilateralis* sp. nov. from Iriomote-jima Island, Ryukyu Archipelago. Digital photographs and SEM photographs of holotype are provided. Male genital segments, bursa copulatrix, and spermathecal organ are illustrated. Key to the Japanese genera of the tribe Hydrophilini is provided. The new species was found from hygropetric habitat. Biological information and photographs of habitats are given.

**Key words:** Coleoptera, Hydrophilidae, *Megagraphydrus*, new record, new species, Ryukyu, Japan, hygropetric, taxonomy.

**Introduction**

The aquatic hydrophilid fauna of Japan is relatively well known at the genus level than those of other Asian countries. Since the middle of the 20th Century, taxonomic study of the beetle from Japan have been actively progressed owing to the works of T. NAKANE, M. SATÔ, and E. MATSUI, by whom many taxa were described and recorded. During the last two decades, several species were described as new and newly recorded, but from the generic viewpoint, only one genus was additionally recorded from the country (SATÔ & YOSHITOMI, 2004).

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In 2007, we had an opportunity to examine ten individuals of an unfamiliar beetle collected by the second author from Iriomote-jima Island, at the southwestern part of the Ryukyu Archipelago, Southwest Japan. After a careful examination, these individuals were proved to belong to the genus *Megagraphydrus* HANSEN, 1999 (Hydrophilinae, Hydrophilini), of which ten species have been known from the Oriental Region (HANSEN, 1999 b; SHORT & HEBAUER, 2006). It is so far unknown from Japan and the beetle was recognised as an undescribed species. The type locality, Shirahama is a very famous collecting site for Japanese entomologists. The individuals were collected from hygropetric habitat; it is perhaps for this reason, that the genus has been overlooked until now.

### Material and Methods

Observation and dissection were mainly carried out using Olympus SZ40 stereoscopic microscope and Olympus BX41 compound light microscope; illustrations were made with the aid of a drawing tube. SEM photographs were taken using a Hitachi S-2250N scanning electron microscope.

The body parts were carefully removed and dissected with tweezers and placed into 10% KOH solution. They were subsequently warmed in the liquid for about 40–60 minutes at 60°C, rinsed with 80% ethanol, and dehydrated in 99% ethanol. If necessary, we used 10% KOH solution mixed with one or two drops of saturated solution of chlorazol black E dye (Wako Pure Chemical) in 70% ethanol, or stained the parts in lactic acid containing acid fuchsine and warmed in the liquid for 60–120 minutes at 60°C before rinsed. Spermathecal organ was generally rinsed and examined in distilled water; others were examined in glycerol or Euparal (Chroma-Gesellschaft). Their parts were mounted in Euparal on a slide glass card, which was pinned under the specimen (MARUYAMA, 2004), or were preserved in a small glass tubes with glycerol, which was pinned under the specimen.

Body measurements were taken using a micrometric eyepiece at 20× magnification with an accuracy of  $\pm 0.025$  mm. Measurements were given in text in the order of range, arithmetic mean  $\pm$  standard deviation; the latter two are in parentheses. The abbreviations of measurements used in the present paper are as follows: HW – width of head; ED – distance of between eyes; PL – length of pronotum; PW – width of pronotum; EL – length of elytra; EW – width of elytra; TL – total length (PL plus EL).

Label data of the holotype follow the original spellings between quotation marks. A forward slash (/) indicates a subsequent line of the label and a double forward slash (//) indicates separate labels. If label data were written in Japanese, they were transliterated into Roman characters between “<” and “>”.

The materials are deposited in the following collections: JFC – private collection of Jun'ichi FUJIWARA; NMW – Naturhistorische Museum Wien, Vienna (M. JÄCH, A. KOMAREK); SEHU – Systematic Entomology, Hokkaido University, Sapporo (M. ÔHARA); YKC – private collection of Yuuki KAMITE.

Regarding the morphological terminology, we generally follow HANSEN (1991) and KOMAREK (2004). For the female spermathecal organ, we also refer to LINDROTH & PALMÉN (1970) and BAMEUL (1992).

## Results

### Genus *Megagraphydrus* HANSEN

*Megagraphydrus* HANSEN, 1999 a, 137 (original description, genus, type species: *Megagraphydrus siamensis* HANSEN, 1999 by original designation).

**Diagnosis.** The genus is somewhat similar to other Japanese genera of the subtribe Acidocerina. However, it is distinguishable from them by the following character states: 1) head rounded apically; 2) second maxillary palpomere weakly swollen towards apex; 3) elytra widest at bases, weakly attenuated posteriad; 4) elytra with slightly irregular series of coarser punctures, without sutural stria; 5) mesoventrite with mesoventral process.

### *Megagraphydrus luteilateralis* MINOSHIMA et FUJIWARA, sp. nov.

(Figs. 1–3, 4A)

**Type locality.** Japan: Okinawa Prefecture, Iriomote-jima Island, Shirahama, N24°21'59", E123°45'22".

**Type material.** Holotype. male. "Iriomote-jima: Ryukyu: Japan"/"Shirahama" <"(Shirahama)">"(wet rock)"/"24°21'59"N123°45'22"E"/"4.XII.2008, M. Ôhara"/"[IR-08-MO-039a]"/"MiYu-D-00176"/"MINOSHIMA Yûsuke"/"SEHU, Japan"/"D-00176" [handwritten on slide glass card.]/"HOLOTYPE"/"Megagraphydrus"/"luteilateralis"/"Minoshima et Fujiwara"/"det. Minoshima & Fujiwara, 2009"/"0000010203"/"Sys.Ent."/"Hokkaido Univ."/"Japan [SEHU]" (SEHU). Paratypes: 3 males & 2 females, same data as the holotype (NMW, SEHU). 3 males, 4 females, & 3 exs., Ūshîkû-mori, Shirahama, Iriomote-jima Is., Okinawa Pref., 11-IX-2007, J. FUJIWARA leg. (NMW, SEHU, JFC, YKC). 1 female, West of Yuchin-bashi Br., Iriomote-jima Is., Okinawa Pref., 8-IX-2007, J. FUJIWARA leg. (SEHU).

**Description.** Male. Body oblong-oval, slightly attenuated posteriad, moderately convex (Figs. 1A, C, 4A). Colour: Dorsum shining. Dorsal surface of head dark reddish brown. Pronotum reddish brown, lighter than head; anterior, lateral, and posterolateral portions yellowish, lighter than median portion; two dark spots on posteromedial part undetectable. Elytra reddish brown, lateral margin distinctly yellowish. Ventral surface of head reddish brown; stipes slightly paler than mentum. Antenna, maxillary palpi, and labial palpi light yellowish brown; antennal club slightly infuscated. Thoracic ventrites reddish brown; prosternum, epipleura, pseudopipleura, and legs slightly paler than meso- and metaventrites. Abdominal ventrites reddish brown.



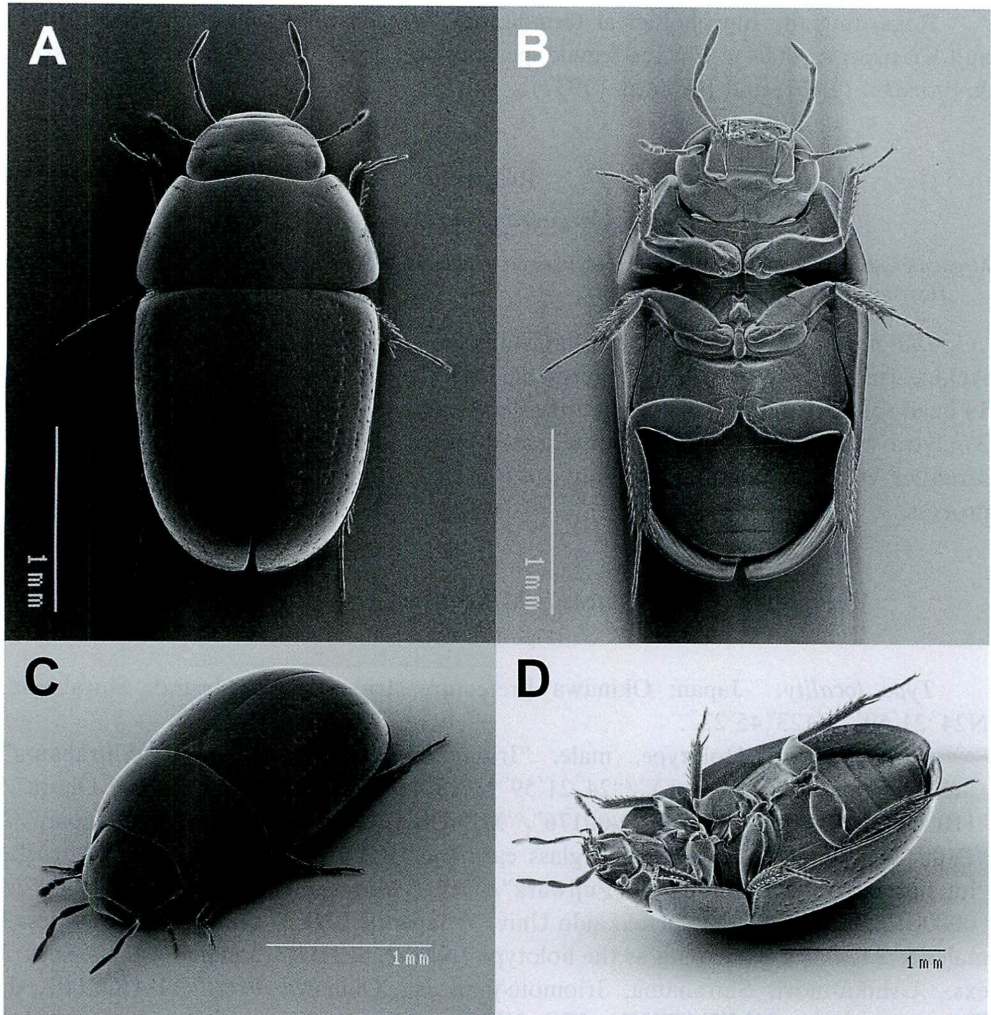


Fig. 1. SEM photographs of *Megagraphydrus luteilateralis*, holotype, male. — A, Habitus, dorsal view; B, ditto, ventral view; C, ditto, dorso-oblique view; D, ditto, ventro-oblique view.

Head (Figs. 2A, C): — Labrum about 2.8 times as wide as long; punctulation on labrum fine, moderately densely distributed; systematic puncture on labrum composed of a few setiferous punctures bearing fine erect setae mediolaterally. Punctulation on clypeus and frons moderately fine; interspaces between punctures about 1.0–3.0 times of the width of a puncture, sometimes more or less distant. Frontoclypeal sulcus fine but distinct. Systematic punctures of clypeus composed of a row of setiferous punctures bearing fine erect setae anterolaterally. Systematic punctures of frons composed of a row of setiferous punctures bearing fine, rather long, erect setae in anterolateral



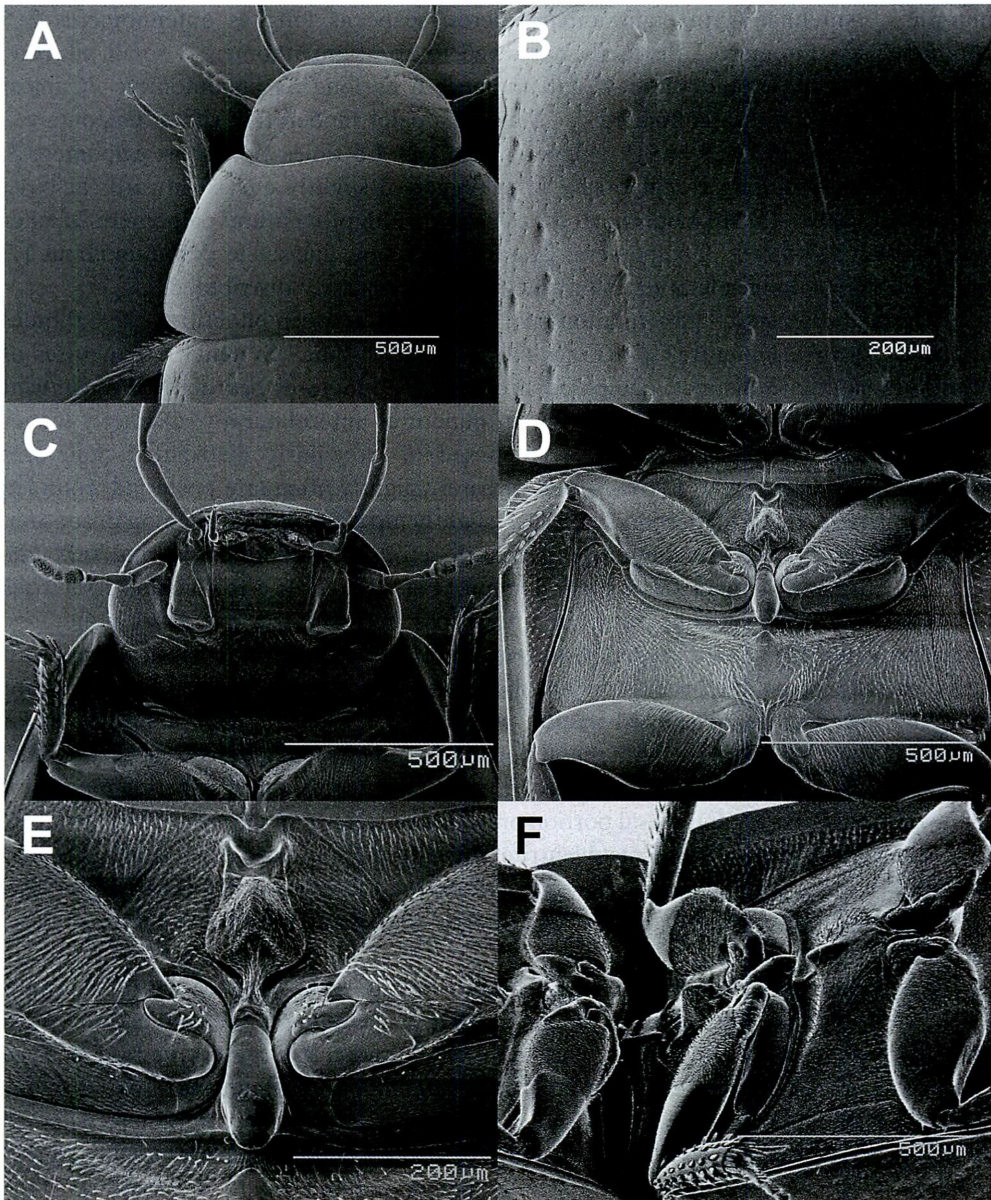


Fig. 2. SEM photographs of *Megagraphydrus luteilateralis*, holotype, male. — A, Head and pronotum, dorsal view; B, punctuation pattern of elytra, dorsal view; C, head and prosternum, ventral view; D, meso- and metaventrites, ventral view; E, meso-metaventral junction, ventral view; F, meso- and metaventrites, ventro-lateral view.



margins. Antennae with eight antennomeres; scape as long as antennomeres 2–5 combined; antennomere 2 distinctly narrowed to apex; antennomere 3 small, narrow, about as long as antennomere 4; antennomere 6 as long as antennomere 7; apical segment larger than antennomere 7. Maxillary palpi moderately short; palpomere 2 longer than palpomeres 3 and 4; palpomere 2 about 1.5 times as long as palpomere 3, about 1.3 times as long as palpomere 4; palpomere 3 slightly curved inwards at base, swollen into apex. Labial palpi short, shorter than width of mentum; palpomere 2 rather swollen than palpomere 3; palpomeres 2 and 3 with a few, fine setae. Mentum about 1.7 times as wide as long; punctulation of mentum fine, sparsely distributed.

Thorax: — Pronotal punctulation fine, interspaces between punctures 1.0–3.0 times of the width of a puncture, sometimes more or less distant. Systematic punctures of pronotum slightly indistinct, composed of setiferous punctures bearing fine recumbent setae; anterior series composed of a row of punctures anterolaterally, distinctly longer than posterior row; posterior series composed of irregularly distributed punctures mediolaterally (Fig. 2A). Elytra widest at bases, slightly attenuate posteriad, rounded apically; general punctulation on elytra fine, slightly more densely set than on pronotum; serial punctures of elytra composed of coarse, setiferous punctures bearing very fine setae, at least four distinct series from dorsum (Figs. 1A, 2B); a few coarse, setiferous punctures bearing very fine setae in interspaces between row of serial punctures. Prosternum weakly convex medially, without distinct median carina. Mesoventrite with mesoventral process, the process on posterior half strongly projected ventrally; anterior margin of mesoventral process M-shaped, with lateral margins swollen on posterior half (Figs. 2D, E). Metaventrite with mesal portion bearing a small glabrous area medially; anteromedian portion with distinct oblong transverse groove along anterior margin of metaventrite (Figs. 2E, F); mesal portion projected anteriorly in anteromedial part (Fig. 2F); anteromedial process of metaventrite strongly bulbous, projected anteriorly and posteriorly, joint with posterior margin of mesoventral process anteriorly (Fig. 2E). Pro- and mesofemora pubescent in basal halves; metafemur pubescent in about basal two-fifths.

Abdomen: — Abdominal ventrites densely covered with fine pubescence. Aedeagus (Fig. 3A): Median lobe slender, about as long as parameres, almost parallel-sided medially, attenuated towards apex; basal aphophysis short, stout; inner margin of basal aphophysis slightly projected inwards at apex; punctulation of median lobe very fine, sparsely distributed in apical two-fifths; corona in apical portion. Paramere wider in medial part, attenuated towards base and apex, weakly rounded apically, weakly curved inwards in apical third; inner margin of paramere almost straight in basal half, then curved outwards, curved inwards apically; outer margin of paramere curved inwards in apical one-third, abruptly curved inwards at basal third, then almost straight; punctulation of paramere fine, moderately densely distributed, denser in apical part. Phallobase wider than long, wider in base; anterior margin of ventral surface of phallobase deeply split in a V-shape medially; manubrium distinct, semi-oval.

F e m a l e. Bursa copulatrix with a small sclerotised patch near a junction of bursa



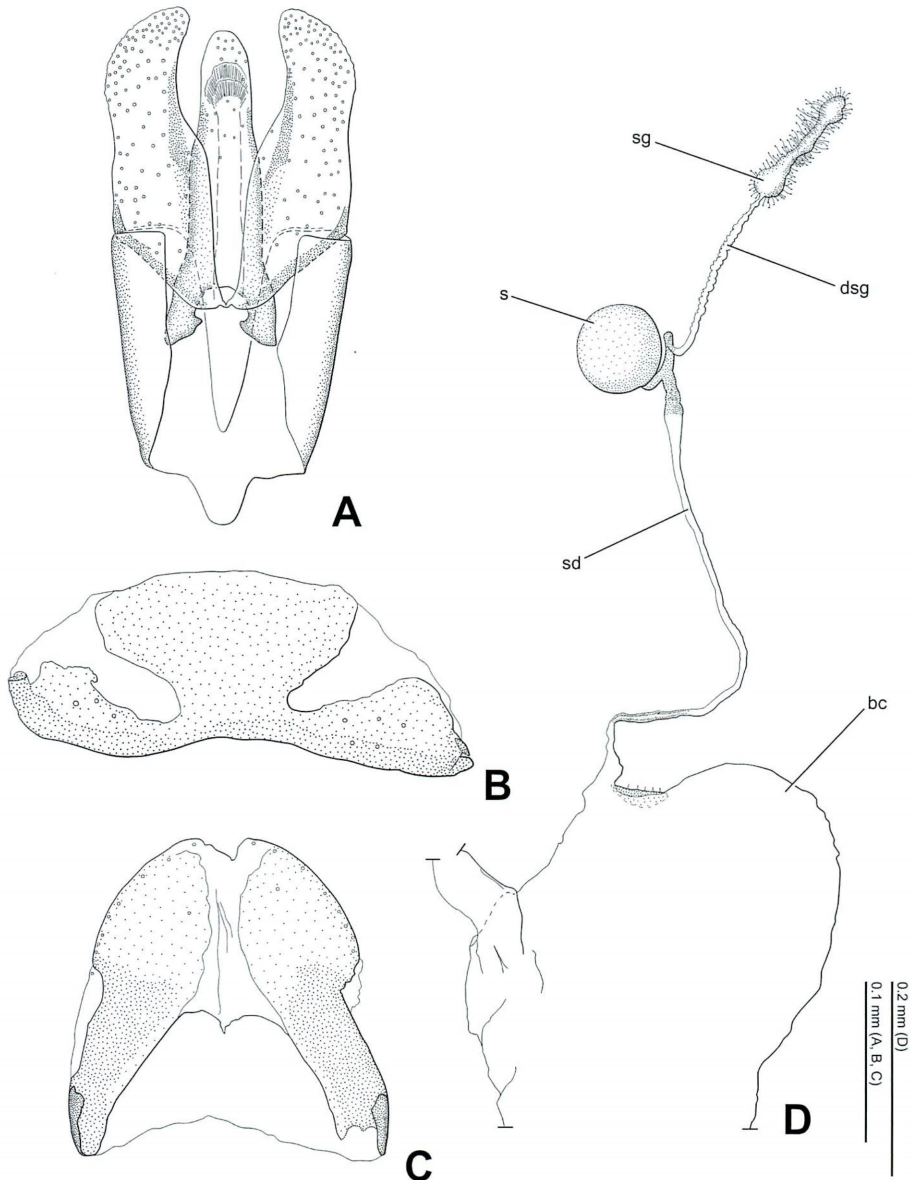


Fig. 3. Genitalia of *Megagraphydrus luteilateralis*. — A, Aedeagus, dorsal view; B, 9th tergite, ventral view; C, 9th sternite, dorsal view; D, bursa copulatrix and spermathecal organ. bc: bursa copulatrix; dsd: duct of the spermathecal gland; s: spermatheca; sd: spermathecal duct; sg: spermathecal gland. [A, paratype, male, MiYu-08-004; B, C, holotype, male; D, paratype, female, MiYu-08-007].

copulatrix and spermathecal duct (Fig. 3D). Spermathecal organ (Fig. 3D): Spermathecal duct narrow as a duct of the spermathecal gland, very long, about 2.5 times as long as duct of the spermathecal gland, swollen apically; infundibulum short, slightly swollen. Spermatheca composed of large bulbous division and oblong reniform division; bulbous division connected only to oblong reniform division; oblong reniform division connected to bulbous division, spermathecal duct, and duct of the spermathecal gland. Spermathecal gland elongate; spermatozoa densely distributed.

*Measurements* (n=10). TL: 1.75–1.94 ( $1.83 \pm 0.06$ ) mm; PW: 1.10–1.22 ( $1.14 \pm 0.04$ ) mm; PL: 0.49–0.57 ( $0.53 \pm 0.02$ ) mm; EL: 1.26–1.40 ( $1.31 \pm 0.05$ ) mm; EW: 1.06–1.20 ( $1.13 \pm 0.05$ ) mm; HW: 0.63–0.69 ( $0.66 \pm 0.02$ ) mm; ED: 0.45–0.49 ( $0.47 \pm 0.02$ ) mm; PW/PL: 2.09–2.26 ( $2.19 \pm 0.05$ ); EL/EW: 1.09–1.28 ( $1.16 \pm 0.06$ ); EL/PL: 2.33–2.63 ( $2.49 \pm 0.10$ ); EW/PW: 0.90–1.02 ( $0.98 \pm 0.04$ ); TL/EW: 1.54–1.77 ( $1.63 \pm 0.07$ ); HW/ED: 1.38–1.44 ( $1.41 \pm 0.02$ ).

*Distribution.* Japan (Iriomote-jima Island).

*Biology.* Collected at a hygropetric habitat.

*Etymology.* The specific epithet is a combination of the Latin “luteus” meaning “yellow” and Latin “lateralis” meaning “the side”, referring to yellowish lateral margins of elytra.

*Remarks.* This new species is most closely similar to *M. politus* HANSEN, 1999, which is distributed in Taiwan; however, it can be distinguished from the latter by the following characters: 1) elytra with five rows of coarse punctures; 2) metaventrite strongly bulbous between mesocoxae (Fig. 2E); 3) anteromedian portion of metaventrite with distinct groove along anterior margin of metaventrite (Figs. 2D, F).

### Biological Notes

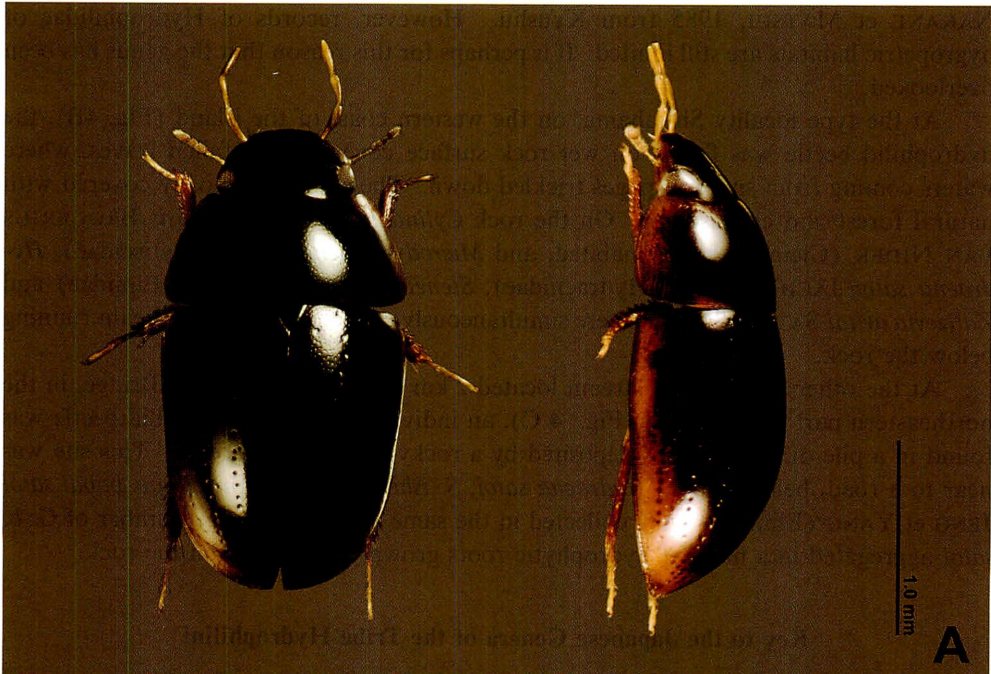
Iriomote-jima Island is a very famous collecting site for Japanese entomologists. The Ryukyu Archipelago, which contains Iriomote-jima Island, is well known as an area of high biological diversity and endemism in Japan, and hence many entomologists have surveyed the island chain and described many species of insects. In particular, many studies on the aquatic Coleopteran fauna of the Ryukyu Archipelago were published (SASAKI *et al.*, 2002; SATÔ, 2003).

The present specimens were collected from a hygropetric habitat, such as a wet rock surface. This habitat is unique but many aquatic and semi-aquatic insects depend on it (e.g., WARD, 1992). Several studies of Hydrophilidae that live in the habitat were published in recent years; in Japan, for example, KAMITE *et al.* (2007) described two *Laccobius* from eastern Honshu, MINOSHIMA *et al.* (2007) recorded *Crenitis neglecta*

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Fig. 4. A, *Megagraphydrus luteilateralis*, holotype, male, dorsal and lateral views; B, Shirahama, type locality and habitat of *M. luteilateralis*, Iriomote-jima Island, Ryukyu Archipelago, Japan; C, collecting locality of *M. luteilateralis*, 2 km west of Yuchin-bashi Bridge. Photographs of habitats by J. FUJIWARA.







NAKANE et MATSUI, 1985 from Kyushu. However, records of Hydrophilidae of hygropetric habitats are still limited. It is perhaps for this reason that the genus has been overlooked.

At the type locality Shirahama, on the western coast of the island (Fig. 4B), the hydrophilid beetle was found on wet rock surface covered with fallen leaves, where waters coming from small seepages trickled down. The slope was mostly covered with natural forest and crepuscular. On the rock *Cylindera psilica luchuensis* BROUERII VAN NIDEK (Cicindelidae) cohabited, and *Microdytes uenoi* SATÔ (Dytiscidae), *Hydraena satoi* JÄCH et DÍAZ (Hydraenidae), *Stenelmis ishiharai* SATÔ (Elmidae) and *Zaitzevia aritai* SATÔ (Elmidae) were simultaneously collected in a small stream running below the rock.

At the other site, a small stream located 2 km east of Yuchin-bashi Bridge, in the northeastern part of the island (Fig. 4 C), an individual of the hydrophilid beetle was found in a pile of fallen leaves deposited by a rocky edge of the stream. This site was near to a road, being sunny. *Hydraena satoi*, *S. ishiharai* and *Grouvellinus babai satoi* JENG et YANG (Elmidae) were collected in the same stream. A large number of *G. b. satoi* aggregated in a mass of hydrophytic roots grown in a crevice on the rock.

#### Key to the Japanese Genera of the Tribe Hydrophilini

1. Maxillary palpi longer than antennae .....2.
- Maxillary palpi about as long as antennae .....*Hydrobius* LEACH, 1815.
2. Large to medium-sized species (ca. 9–40 mm); coloration of body almost black; meso- and metaventrites strongly raised medially to form a common median keel, extending posteriorly into a spine .....3.
- Small to medium-sized species (ca. 2–8 mm); coloration of body various; meso- and metaventral elevations not forming a common median keel, thus not extending posteriorly into a spine .....5.
3. Body more than 20 mm in size; first segment of antennal club deeply split into two asymmetrical divisions, narrow one with long setae .....*Hydrophilus* GEOFFROY, 1762.
- Body less than 20 mm in size; first segment of antennal club not divided into two asymmetrical divisions, without long setae .....4.
4. Body more than 15 mm in size; apical segment of maxillary palpus not longer than the penultimate; first segment of antennal club comma-shaped .....*Hydrochara* BERTHOLD, 1827.
- Body less than 15 mm in size; apical segment of maxillary palpus longer than the penultimate; first segment of antennal club not comma-shaped .....*Sternolophus* SOLIER, 1834.
5. Second segment of maxillary palpus distinctly to slightly curved outwards, not swollen towards apex .....*Enochrus* THOMSON, 1859.
- Second segment of maxillary palpus distinctly to slightly curved inwards, sometimes

- only in apical half, swollen towards apex .....6.
- 6. Elytra with sutural stria .....*Chasmogenus* SHARP, 1882.
- Elytra without sutural stria .....7.
- 7. Elytra slightly attenuated posteriorly, widest at bases .....*Megagraphydrus* HANSEN, 1999.
- Elytra not attenuated posteriorly, not widest at bases .....8.
- 8. Apical segment of maxillary palpus slightly to distinctly longer than the penultimate; body almost parallel-sided, wider medially .....*Agraphydrus* RÉGIMBART, 1903.
- Apical segment of maxillary palpus slightly to distinctly shorter than the penultimate; body not or slightly parallel-sided, generally wider in apical one-third .....*Helochares* MULSANT, 1844.

### Acknowledgements

We would like to express our cordial thanks to Masahiro ÔHARA (SEHU) for his critical reading of the manuscript and supplying me with material used in this study; Kazuo HOSHIKAWA (Faculty of Life and Environmental Science, Shimane University), and Tadashi ISHIKAWA (Laboratory of Entomology, Tokyo University of Agriculture) for their critically reading the manuscript; Albrecht KOMAREK (NMW) for the opportunity to study type specimens of *Megagraphydrus*. Also we heartily thank Masakazu HAYASHI (Hoshizaki Green Foundation), Franz HEBAUER, Yuuki KAMITE (Nagoya City Public Health Research Institute), and Hiroyuki YOSHITOMI (Laboratory of Entomology, Ehime University) for their kind help in various ways.

### 要 約

蓑島悠介・藤原淳一：オオツヤヒラタガムシ属 *Megagraphydrus* の日本からの発見と1新種の記載。—— 日本未記録のオオツヤヒラタガムシ属（新称）*Megagraphydrus* を琉球列島西表島から記録した。キベリオオツヤヒラタガムシ（新称）*Megagraphydrus luteilateralis* を新種として記載し、生態的な知見を付した。さらに、日本産ガムシ族の属への検索表を加えた。

本属は、以下の形態的特徴で日本産の近似属と区別が可能である。1) 頭部は前方に向かい丸まる；2) 小顎肢第二節は先端に向かい太くなる；3) 上翅は基部で最大幅で、後方に向かいやや細くなる；4) 上翅にはわずかに乱れた粗い点刻列があり、亜会合線はみられない；5) 中胸腹板には中胸腹板突起がある。また、キベリオオツヤヒラタガムシは本属の近似種とは以下の形態的特徴で区別が可能である。1) 上翅に5列の粗い点刻列があり、最外列は不明瞭；2) 後胸腹板は中脚基節の間で強く膨らむ (Fig. 3E)；3) 後胸腹板中央前方には、後胸腹板前縁に沿った明瞭な溝がある (Figs. 3D, F)。

属レベルでは十分な研究がなされていたと考えられる日本の水生ガムシ類で未記録属が発見されたのは、本種の生息環境が hygropetric (湿った岩盤) という特異な環境によるものと考えられる。

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First Record of *Stenichnus* THOMSON (Coleoptera,  
Scydmaenidae) from Honshu, Japan, with Description  
of *S. sakurayamanus* sp. nov.

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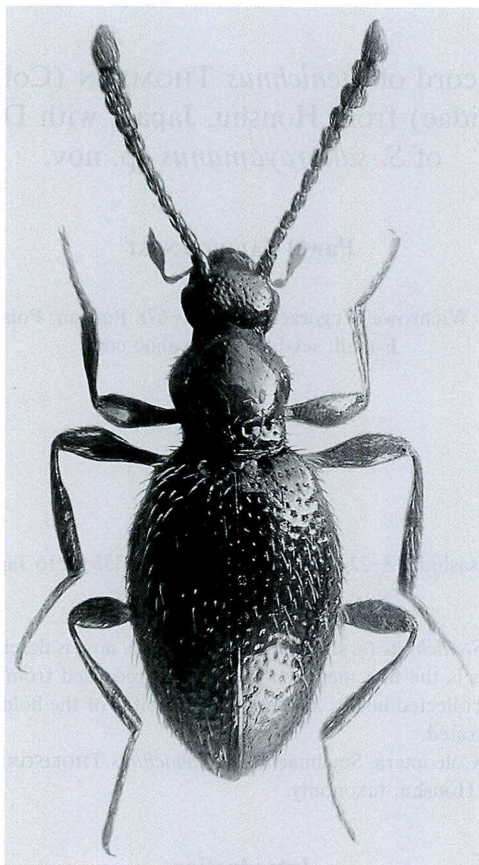
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**Abstract** *Stenichnus* (s. str.) *sakurayamanus* sp. nov. is described from Gunma Pref., Japan. This is the first member of the genus recorded from Honshu; the type material has been collected in Mt. Sakurayama. Habitus of the holotype male and the aedeagus are illustrated.

**Key words:** Coleoptera, Scydmaenidae, *Stenichnus* THOMSON, new species, East Palearctic, Japan, Honshu, taxonomy.

**Introduction**

Only five species belonging to the large genus *Stenichnus* THOMSON have been found in Japan so far. Interestingly, they inhabit Hokkaido, Kyushu, the Tokara Archipelago (Nakanoshima Is.), and the Sakishima Archipelago (Iriomotejima and Ishigakijima islands) (JAŁOSZYŃSKI, 2004; 2006), but none was known to occur on Honshu, the largest Japanese island. This remarkable gap in distribution of this genus seemed to be a result of inadequate exploration rather than a true lack of *Stenichnus* on such a large area. Here we report discovery of the first species of this genus on Honshu, in a mountainous region of the Gunma Prefecture. The type material is deposited in the National Museum of Nature and Science, Tokyo, Japan (NSMT); measurements follow the convention used by JAŁOSZYŃSKI (2004).



Figs. 1. *Stenichnus sakurayamanus* JAŁOSZYŃSKI et K. ARAI; habitus of the holotype male (length 1.68 mm).

### Taxonomy

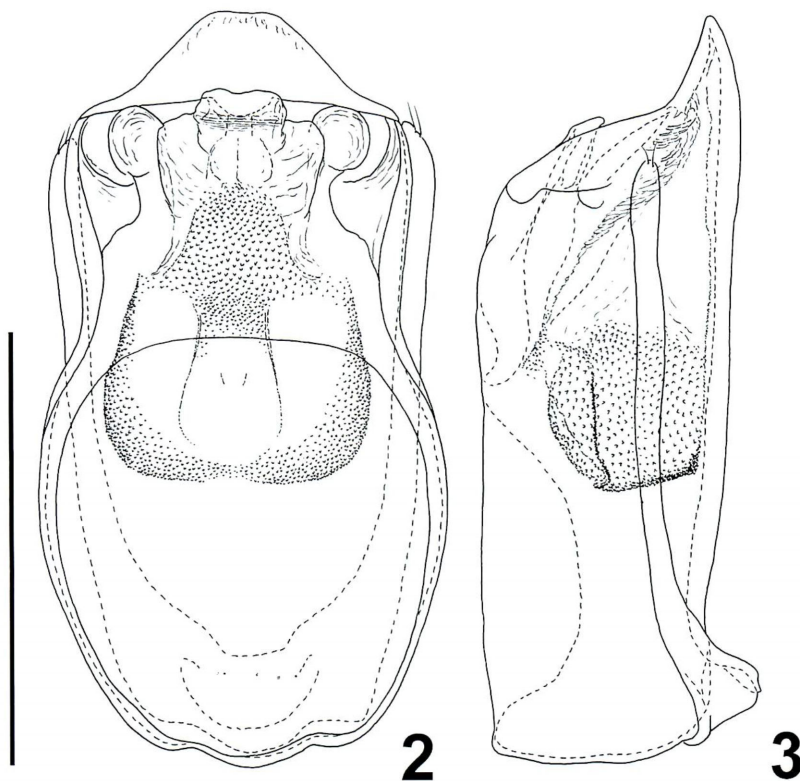
*Stenichnus* (s. str.) *sakurayamanus* sp. nov.

(Figs. 1–3)

*Diagnosis.* The following combination of characters is unique for this species: body length below 1.7 mm; vertex with very distinct, dense, large and deep punctures; frons and pronotum nearly impunctate; profemora of male very weakly modified; aedeagus with biemarginate base and simple internal sac without dark sclerites.

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

*Male* (Fig. 1). Body length 1.68 mm. Head widest at large, strongly convex eyes, length 0.28 mm, width 0.30 mm; vertex large, nearly subrectangular, convex on sides



Figs. 2-3. *Stenichnus sakurayamanus* JALOSZYŃSKI et K. ARAI; aedeagus in ventral (2) and lateral (3) views. Scale bar: 0.5 mm.

and slightly flattened in middle; tempora arcuate, in dorsal view as long as eye; frons small, triangular; supraantennal tubercles not marked. Punctuation on vertex composed of very distinct, large, deep and sharply marked punctures distributed densely but unevenly, distances between punctures are equal to 0.5–1.5 puncture diameters; setation short and sparse, suberect, tempora with several longer, more erect and curved lateral setae. Antennae long and slender, gradually broadening toward apices, length 0.28 mm; antennomere I  $2.7\times$  as long as broad; II  $2.5\times$  as long as broad; III  $2\times$  as long as broad; IV  $1.6\times$  as long as broad; V  $1.8\times$  as long as broad; VI  $1.2\times$  as long as broad; VII  $1.4\times$  as long as broad; VIII  $0.9\times$  as long as broad; IX and X each  $0.8\times$  as long as broad; XI  $1.5\times$  as long as broad.

Pronotum elongate but relatively stout, broadest in anterior third, length 0.38 mm, maximum width 0.40 mm, width at base 0.33 mm. Anterior margin strongly rounded; lateral margins rounded and strongly convex in anterior half, constricted in posterior third, nearly straight in posterior fourth; posterior margin arcuate; base of pronotum with slightly impressed transverse row of four small and moderately deep pits. Punc-



tures on disc very fine and sparse, pronotum appears impunctate under magnification  $40\times$ ; setae moderately long and dense, suberect to erect, directed upwards and posteriorly.

Elytra oval, broadest distinctly anterior to middle, from broadest place strongly narrowing anteriorly and posteriorly; length 1.03 mm, width 0.70 mm, elytral index (length/width) 1.46. Humeral calli very weakly marked; base of each elytron with large, circular and deep pit. Punctures on elytra very large, deep, sharply marked and dense, distances between punctures on median part of each elytron equal to or slightly shorter than puncture diameters, punctures are distinct up to apices; setation slightly longer and more erect than that on pronotum, moderately dense. Hind wings well developed.

Legs long and slender; profemora in lateral view with nearly straight dorsal margin in apical third of clavate part, then regularly rounded up to stalk-like basal part; all tibiae straight.

Aedeagus (Figs. 2, 3) 0.88 mm in length, moderately stout, with distinctly biemarginate base, apex subtrapezoidal, minimally emarginate, in lateral view not curved; internal sac simple, with densely granulate walls; basal orifice located very close to base of median lobe; parameres short, not reaching apex of median lobe, each with two setae.

*Female.* Unknown.

*Distribution.* Japan: Honshu (Gunma Prefecture).

Holotype male, white handwritten label "Mt. SAKURAYAMA, Onishi machi, Gunma Pref., JAPAN, 22.V.1999, Koji TOYODA leg.", and red printed label "*STENICHNUS* (s. str.) *sakurayamanus* Jałoszyński et K. Arai, det. P. JAŁOSZYŃSKI, '08, HOLOTYPUS" (NSMT).

*Etymology.* Locotypical, after the type locality, Mt. Sakurayama.

*Remarks.* This species differs from all other Japanese congeners in having very distinct, dense and deep punctures on the vertex, while the frons remains nearly impunctate. The aedeagus of *S. sakurayamanus* is most similar to that of *S. bellulus* JAŁOSZYŃSKI. However, the latter species is smaller, its head bears much finer punctures, the aedeagus shows clear differences, and *S. bellulus* is restricted to the southernmost Japanese islands (the Sakishima Archipelago) and Taiwan. Other species of *Stenichnus* from Taiwan, China or the Russian Far East have clearly different aedeagi. Amongst West Palearctic species the most similar copulatory organ can be seen in *S. pusillus* (MÜLLER et KUNZE), but external morphology of that species is strikingly different.

## 要 約

Paweł JAŁOSZYŃSKI・新井浩二: 本州初記録となる *Stenichnus* 属 (コウチュウ目コケムシ科) と *S. sakurayamanus* sp. nov. の記載。——群馬県南部の低山地で採集されたコケムシを *Stenichnus* 属に属する新種と認め、1雄に基づき *S. sakurayamanus* sp. nov. として記載した。これまで

*Stenichnus* 属の種は、日本からは北海道と九州、トカラ列島及び八重山諸島から 5 種類が確認されているのみで、本州からは未記録であったが、本種はこの分布の間を埋める種となる。

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*Elytra, Tokyo*, **37**(1): 69–70, May 29, 2009

## Rediscovery of *Stenhomalus japonicus* (Coleoptera, Cerambycidae) from Island of Sado of Type Locality

Tatsuya NIISATO<sup>1)</sup> and Tomio KINOSHITA<sup>2)</sup>

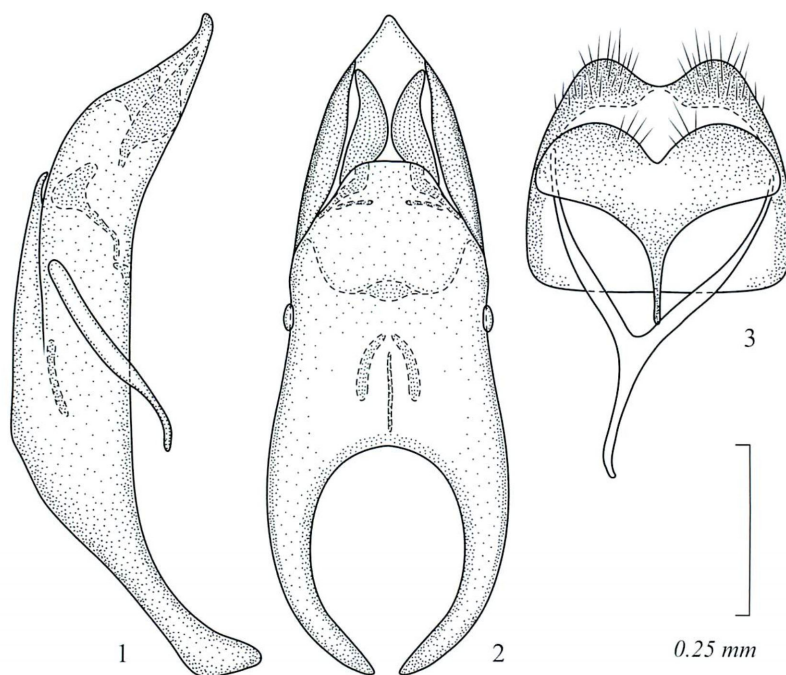
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*Stenhomalus japonicus* (PIC, 1904) is one of the most problematical species among the Japanese members of the Obriini. This species had been believed as a member of the genus *Obrium* followed the original combination, and was recently identified its true systematic position as the result of reexamination of holotype (NIISATO, 2006). Besides, the long used name *S. lighti* GRESSITT, 1935 was suggested as a junior synonym of this species (NIISATO, *op. cit.*). Though originally described from “Sado, Japan”, *S. japonicus* has never been rediscovered from the type locality after the original description. We are going to give an additional record of this species from Sado Island based on the specimens recently collected by the junior author.

*Specimens examined.* 2 ♂♂, 2 ♀♀, Mt. Donden-yama, Sado Is., off NW. Honshu, Ryôtsu City, Niigata Pref., Japan, emerged out in IV–1999, from the freshly dead trunk of *Cornus controversa* HEMSL., T. KINOSHITA leg.

*Notes.* Male genital organs of *S. japonicus* from Sado Island are as shown in Figs. 1–3. MIROSHIKOV (1989) described and illustrated the male genitalia of *S. japonicus* based on the specimen from Far East Russia under the name of *S. lighti*. According to the present examination, the median lobe and vestigial tegmen at least in proportion are quite identical with those of two localities.



Figs. 1–3. Male genital organs of *Stenhomalus japonicus* (PIC) from Sado Is., off NW. Honshu, Japan. — 1. Median lobe with vestigial tegmen, lateral view; 2, ditto, dorsal view; 3, 8th and 9th abdominal segments, ventral view.

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## A New Species of the Genus *Phloeostiba* (Coleoptera, Staphylinidae) from Hokkaido, Japan

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**Abstract** A new staphylinid species of the genus *Phloeostiba* is described under the name of *P. kamijoi*, and a key is given to the Japanese species. It is found in the cones of *Pinus koraiensis* growing at Urakawa-chô in southeastern Hokkaido, Japan.

Many years ago, I have received a short series of specimens of a staphylinid beetle found in the cones of *Pinus koraiensis* growing at Urakawa-chô in southeastern Hokkaido, Japan, through the courtesy of Dr. K. KAMIJO. They contained an interesting species belonging to the genus *Phloeostiba*, one of the relatively small genera in the subfamily Omaliinae. Four species have so far been known in the Northern Hemisphere (SMETANA, 2004). One of them has been reported by WATANABE (1964, 1990) from Japan. As the result of the latest examination, it has become clear that this species seems to be new to science though closely related to *P. lapponica* ZETTERSTEDT. It will be described in the present paper with a key to the Japanese species of *Phloeostiba*.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to Dr. Kazuaki KAMIJO, Bibai-shi, for his kindness in giving me the opportunity of studying the interesting specimens, and Mr. Itsuro KAWASHIMA, Yokosuka-shi, for his assistance in drawing the habitus sketch inserted in this paper.

*Phloeostiba kamijoi* Y. WATANABE sp. nov.

[Japanese name: Kamijo-hirata-yotsume-hanekakushi]

(Figs. 1–4)

Body length: 1.9–2.3 mm (from front margin of head to anal end); 1.2–1.3 mm (from front margin of head to elytral apices).

Body parallel-sided and somewhat depressed above. Colour brownish red and moderately shining, with mouth parts, five proximal segments of antennae and legs brownish yellow, elytra dark brownish yellow though sometimes infuscated in marginal and scutellar parts.

**Male.** Head subtrapezoidal, narrowed anteriorly and depressed above, distinctly

wider across compound eyes than long (width/length = 1.50); postocular part somewhat arcuate and short, about one-sixth as long as the longitudinal diameter of each eye which is somewhat prominent; surface shallowly depressed inside each antennal tubercle and provided with a short longitudinal furrow in front of each ocellus, sparingly, finely punctured and covered with distinct alutaceous ground sculpture all over; ocelli distinct, being situated on each side of the middle before posterior margin, the distance between them almost equal to that from the outside of each ocellus to the inner margin of each eye. Antennae somewhat stout and relatively short, not reaching posterior margin of pronotum, with five proximal segments polished and the remainings opaque, 1st segment somewhat robust and dilated apicad, 1.5 times as long as wide, 2nd constricted at the base, almost as long as wide and distinctly shorter ( $2\text{nd}/1\text{st}=0.67$ ) than though as wide as 1st, 3rd gently dilated apicad, a little longer ( $3\text{rd}/2\text{nd}=1.33$ ) but somewhat narrower ( $3\text{rd}/2\text{nd}=0.75$ ) than 2nd, 4th semioval and as long as wide, apparently shorter ( $4\text{th}/3\text{rd}=0.60$ ) and somewhat narrower ( $4\text{th}/3\text{rd}=0.80$ ) than 3rd, 5th a little transverse (width/length = 1.33), slightly longer ( $5\text{th}/4\text{th}=1.25$ ) and distinctly wider ( $5\text{th}/4\text{th}=1.67$ ) than 4th, 6th to 10th gradually increasing in width, each apparently

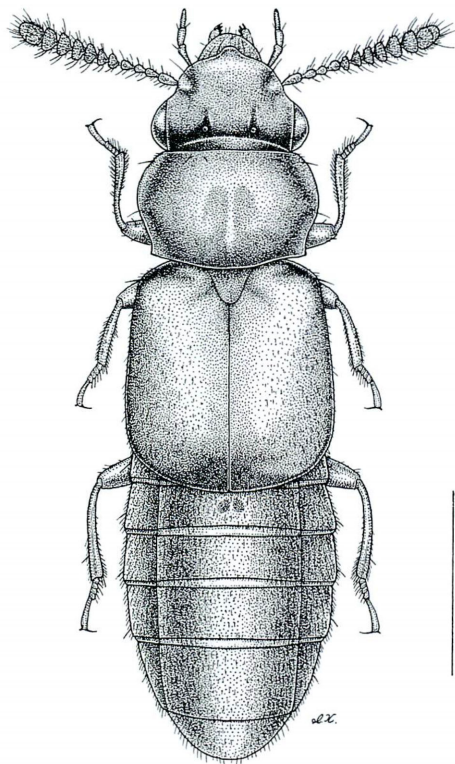
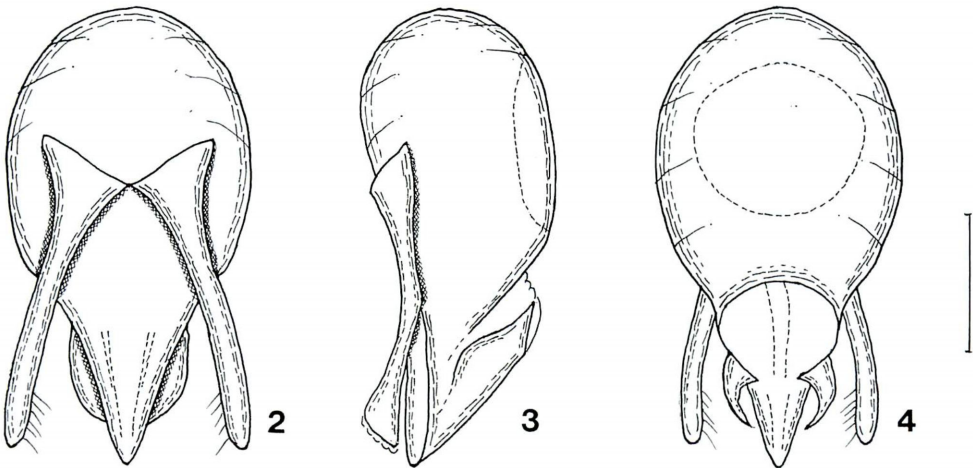


Fig. 1. *Phloeostiba kamijoi* sp. nov., ♂, from Urakawa, Hokkaido, Japan. Scale: 0.5 mm.

transverse, 11th semioval, almost as long as wide, narrowly rounded at the apex.

Pronotum subtrapezoidal and somewhat depressed above, clearly transverse (width/length=1.43), somewhat longer (pronotum/head=1.25) and distinctly wider (pronotum/head=1.19) than head, widest at anterior third and more strongly narrowed posteriad than anterior; each lateral side bordered, slightly arcuate in anterior half and more or less emarginate in posterior half, anterior angles rounded, posterior ones rectangular and acutely pointed at the corner; surface somewhat more numerous punctured than on head and covered with similar ground sculpture to that of head, provided with an indistinct depression on each side of the middle in posterior two-thirds, a shallow depression in posterior half just inside each lateral margin and an obscure trace of median longitudinal one which disappears before and behind. Scutellum subtriangular, surface impunctate though covered with extremely fine ground sculpture. Elytra subquadrate and slightly dilated posteriad, almost as long as wide, considerably longer (elytra/pronotum=1.87) and distinctly wider (elytra/pronotum=1.30) than pronotum; lateral sides straight, posterior margin truncate, posterior angles broadly rounded; surface covered with similar punctures and ground sculpture to those on pronotum. Legs relatively short, protibiae somewhat dilated apicad and gently curved internally, protarsus thin, last segment of metatarsus longer than the four preceding segments together.

Abdomen parallel-sided to 6th segment, and then abruptly narrowed towards the anal end; surface of each tergite impunctate though covered with microscopic ground sculpture, 4th tergite provided with a pair of small pruinose spots at the middle; 7th sternite shallowly and broadly emarginate at the middle of posterior margin; 8th sternite deeply and semicircularly emarginate at the middle of posterior margin; 9th sternite linguiform, broadly rounded at the apex.



Figs. 2-4. Male genital organ of *Phloeostiba kamijoi* sp. nov.; dorsal view (2), lateral view (3), and ventral view (4). Scale: 0.1 mm.



Genital organ trilobed and symmetrical, basal piece remarkably large and globular. Median lobe large, abruptly narrowed in posterior half towards nearly pointed apex, provided with a horn-like projection on each side at posterior half as seen from ventral side. Parameres elongate, though not extending to the apex of median lobe, dilated in apical part in profile; each paramere fringed with several fine setae in apical part.

*Female.* Similar in facies and colour to male, but different from it in the 8th abdominal sternite gradually narrowed towards the subtruncate apex, and the 7th sternite simple.

*Type series.* Holotype: ♂, allotype: ♀, Urakawa, Hokkaido, Japan, 20-X-1989, K. KAMIJO leg. Paratypes: 5♂♂, 2♀♀, 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.

*Distribution.* Japan (southeastern Hokkaido).

*Remarks.* The present new species is similar in general appearance to *P. lapponica* (ZETTERSTEDT), but differs from it in the following points: body somewhat smaller; pronotum more sparingly, more finely punctured and covered with finer ground sculpture on the surface; elytra square, as long as wide, surface covered with finer punctures and finer ground sculpture; male genital organ with median lobe abruptly narrowed towards the bluntly pointed apex in apical half. Also resembles *P. plana* in facies and colour, but distinguished from it by the key below.

*Bionomics.* According to Dr. KAMIJO, all the specimens of the type series were found in the cones of *Pinus koraiensis* growing at Urakawa in southeastern Hokkaido.

*Etymology.* The specific epithet of this new species is given after Dr. Kazuaki KAMIJO, who collected all the specimens of the type series.

### Key to the Japanese Species of *Phloeostiba*

1. Body relatively large (2.5–3.0 mm); pronotum with lateral sides seemingly double-margined as seen from lateral side; elytra covered with relatively coarse punctures and ground sculpture; median lobe of male genital organ as long as parameres and almost parallel-sided before the subtriangular apical part ..... *P. plana* (PAYKULL)
- Body relatively small (1.9–2.3 mm); pronotum with lateral sides simple; elytra covered with finer punctures and ground sculpture; median lobe of male genital organ somewhat shorter than parameres, and abruptly narrowed in apical fourth towards the bluntly pointed apex ..... *P. kamijoi* sp. nov.

### 要 約

渡辺泰明：北海道から採集されたヒラタヨツメハネカクシ属（コウチュウ目）の1新種。——ヒラタヨツメハネカクシ属は、ヨツメハネカクシ亜科に含まれる比較的小さい属で、日本にはヒラタヨツメハネカクシただ1種が分布している。1992年に私は松かさから採集されたハネカクシ

の同定依頼を上条一昭博士から受けた。最近このハネカクシを詳細に再検討した結果、北半球に広く分布している *P. lapponica* に近縁の未記載種と判定したので *P. kamijoi* と命名・記載した。

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## A Second Specimen of *Merohister uenoi* (Coleoptera, Histeridae)

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*Merohister uenoi* M. ÔHARA has been described from Amami-Ôshima Island, the Ryukyus, Japan, based on a single male specimen (ÔHARA, 1992). Recently we have had the opportunity to examine a second specimen collected by a bait trap using rotten fish. We thank Mr. Akeo INOUE for providing us with the valuable specimen.

*Specimen examined.* 1 female, Kôchi-yama, Setouchi-chô, Amami-Ôshima, the Ryukyus, Japan, 11–VIII–2004, A. INOUE leg.

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## Two Staphylinid Species (Coleoptera, Staphylinidae) Newly Recorded from the Island of Shôdo-shima in Kagawa Prefecture, West Japan

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Thirteen species of staphylinids, except for pselaphine beetles, have hitherto been reported by SAWADA (1955), HAYASHI (1956), WATANABE (1990), WATANABE and MATSUMOTO (2004), ITO (2007) and MIKI (2008) from the Island of Shôdo-shima in Kagawa Prefecture.

Examining the staphylinid specimens deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, I have found two unrecorded species from the island. They are recorded below with the collecting data:

1. *Domene crassicornis* (SHARP)  
2♂♂, Kankakei, Uchinomi-chô, Shôzu-gun, Shôdo-shima Is., Kagawa Pref., West Japan, 28~29-X-1977, Kei. MATSUMOTO leg.
2. *Cafius vestitus* (SHRAP)  
5♂♂, 6♀♀, Mouth of River Ootani, Shôdo-shima Is., Kagawa Pref., West Japan, 3-V-2005, A. KAMADA leg.

I thank Mr. Kei-ichi MATSUMOTO, Takamatsu-shi, for his kindness in giving me the specimens, and Messrs. Hirofumi FUJIMOTO, Udatsu-chô, Kagawa Pref., and Takeshi MIKI, Takamatsu-shi, for their kind help in consulting with literature.

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## Discovery of the Genus *Platycerus* (Coleoptera, Lucanidae) in Guizhou Province, South China

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**Abstract** A new species of the genus *Platycerus* is described from Mt. Fanjing Shan in northeastern Guizhou, South China, under the name *P. mandibularis*. This is the first record of the genus from Guizhou Province.

Up to the present, no *Platycerus* lucanid beetles have been recorded from Guizhou Province in South China. Very recently, I had an opportunity to make a faunal survey on Mt. Fanjing Shan in the northeastern part of the province, and succeeded in collecting a long series of the *Platycerus* specimens. Though considerably variable in dorsal coloration, above all in the male, the series is composed of a single species and is considered to be new to science. In the following lines, I am going to describe it as a new species under the name of *Platycerus mandibularis*. According to the present discovery, distributional range of the genus *Platycerus* in China now extends over the following ten administrative districts: Liaoning, Neimenggu, Zhejiang, Henan, Hubei, Shaanxi, Chongqing, Sichuan, Yunnan and Guizhou (IMURA, 2006 b; IMURA & WAN, 2006, etc.).

Before going into further details, I wish to express my heartfelt thanks to Messrs. FAN Ting (International Academic Exchange Center of the Academia Sinica, Chengdu) and YAO Guang-Lie (Academia Sinica, Guiyang) for their kind aid through my field works, to Mr. Yoshiyuki NAGAHATA (Yamagata University) for his help in various ways, and to Dr. Shun-Ichi UENO (National Museum of Nature and Science, Tokyo) for reviewing the manuscript of this paper.

### *Platycerus mandibularis* IMURA, sp. nov.

(Figs. 1–8)

**Male.** Length (including mandibles): 11.5–13.3 mm. Dorsal surface strongly polished, with the coloration yellow- to reddish coppery partly with a faint orange- or purplish tinge, or yellowish brassy with a greenish tinge; venter of head including mandibles brownish black with a strong yellow-greenish tinge, that of pronotum and mesosternum almost black partly with a faint greenish tinge, metasterna yellowish brown with a remarkable greenish tinge, abdominal sternites reddish brown; mandibles

dark brown to black, palpi reddish brown, antennae dark brown though basal and median portions of scapes are reddish brown; femora yellowish brown except for darker apical tips, tibiae a little more red-brownish with the proximal parts brownish black, tarsi and claws brown though usually a little darker in basal part of each segment.

Most closely allied to *P. feminatus* TANIKADO et TABANA (1997) described from Meigu Xian of south-central Sichuan, but readily discriminated from that species mainly by peculiarly shaped mandibles and genital organ. The new species differs from *P. feminatus* in the following respects: 1) coloration of legs different, areas around each knee joint brownish black in the new species, while they are much less dark in *P. feminatus*; 2) mandibles much more strongly developed, large, stout and remarkably elongated for a member of the genus, with the outer margins almost straight at basal three-fourths and faintly emarginate at the middle, acutely hooked inwards at apical fourth, then gradually tapered towards apices which are sharply pointed and obviously reflexed above in lateral view; 3) dorsal surface of mandibles widely depressed, with a large hump near the base; 4) retinacula large and longitudinally elongated, their inner margins multi-dentate, with four to eight small teeth on each side; 5) pronotum more strongly convex above, with the lateral sides roundly arcuate and not angulate at the basal third as in *P. feminatus*. Male genital organ basically similar to that of *P. feminatus*, but definitely different from that of the latter race in having the following characteristics: 1) paramere longer and slenderer, with the apico-ventral corner in lateral view less remarkably angulate than in *P. feminatus*; 2) terminal plates of aedeagus shorter and more transverse, with the distal end of each plate not so strongly protruded as in *P. feminatus*; 3) endophallus larger and robuster, above all in the apical portion, with a pair of finger-like protrusions at each side of flagellum more strongly developed.

**Female.** Length (including mandibles): 10.5–12.6 mm. Body above strongly polished, golden coppery to brassy usually with a remarkable greenish tinge; venter and appendages almost as in male, though femora are a little more strongly dark reddish and abdominal sternites are a little more brownish.

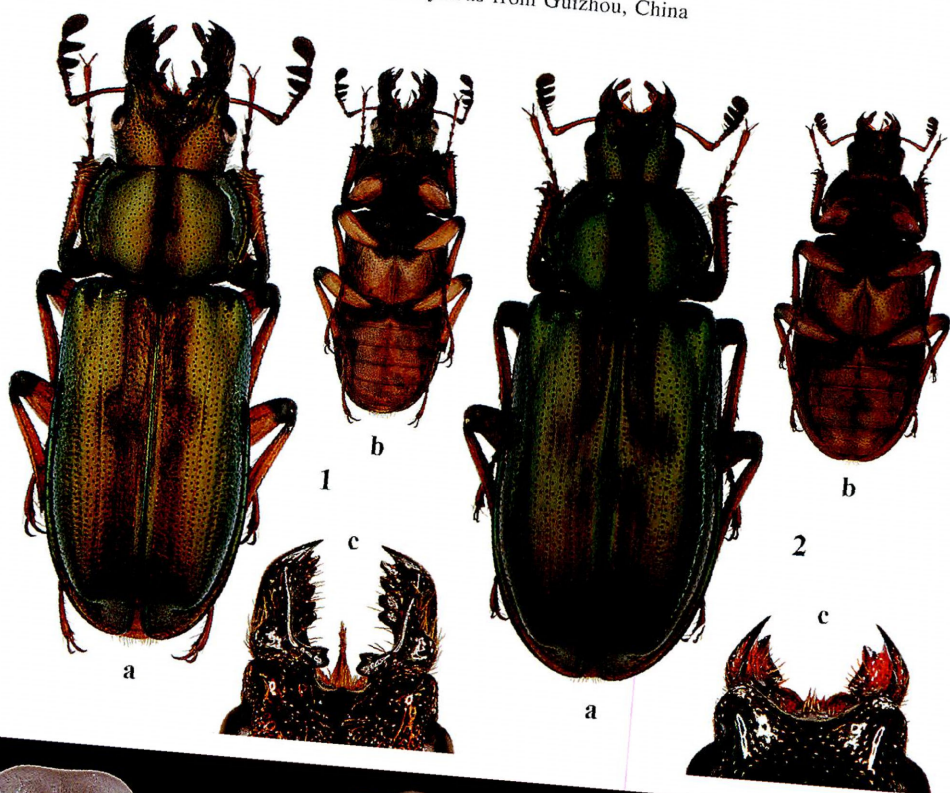
Also closely allied to *P. feminatus*, and barely distinguishable from that race in the following respects: 1) areas around each knee joint darker in coloration; 2) pronotum a little more strongly convex above, with the lateral margins roundly arcuate and hardly angulate at the basal third; 3) shoulders usually a little less prominent; 4) gonocoxite with the lateral sides not subparallel-sided as in *P. feminatus* but apparently narrowed towards apex, with the inner margin rather remarkably sinuate.

**Type series.** Holotype: ♂, western shoulder of Mt. Fanjing Shan [梵净山] (27° 54'

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Figs. 1–8. Habitus and genital organ of *Platycerus mandibularis* sp. nov. from Mt. Fanjing Shan in northeastern Guizhou, South China. —1–2, Habitus (1, ♂, holotype; 2, ♀, paratype); a, dorsal view; b, ventral view; c, mandibles in dorsal view. —3–8, Genital organ (3–6, male; 7–8, female); 3, basal piece, paramere, aedeagus and fully inflated endophallus in ventral view; 4, ditto (excluding basal piece) in ventral view; 5, ditto (including basal piece) in right lateral view; 6, ditto in right subdorsal view; 7, female genitalia with fully everted vagina in left lateral view; 8, left gonocoxite in ventral view.







49°N/108°39'20"E), ca. 2,000 m in altitude, in Yinjiang-Tujiazu-Miaozu-Zizhixian [印江土家族苗族自治县], of Tongren Diqu [铜仁地区], in northeastern Guizhou, South China, 22-III-2009, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes (10♂♂, 18♀♀): 6♂♂, 6♀♀, same data as for the holotype; 1♀, same area (27°55'03"N/108°40'18"E), ca. 2,100 m in altitude, 22-III-2009; 4♀♀, same area (27°55'00-05"N/108°40'10-25"E), 2,145 m in altitude, 23-III-2009; 1♂, 2♀♀, same area (27°54'43"N/108°39'06"E), 1,928 m in altitude, 23-III-2009; 3♂♂, 5♀♀ (of these, 1♂ is a broken specimen without elytra and abdomen, and 1♀ is also broken without head and pronotum), same area (27°55'10"N/108°41'28"E), 2,237 m in altitude, 24-III-2009; all collected by Y. IMURA and preserved in the collection of Y. IMURA.

*Notes.* Before the discovery of the present new species, no *Platycerus* has been known from Guizhou Province. Though distinguishable at a glance from *P. feminatus* by having much larger mandibles, this new species is a close relative of the latter beyond doubt. This is readily understood from a very close similarity of their aedeagi and endophalli. These two species should belong to the same lineage as that constructed by *P. cupreimicans* IMURA (2006 a), *P. dundai* IMURA et BARTOLOZZI (1994), *P. ladyae* IMURA (2005) and *P. tabanai* TANIKADO et OKUDA (1994), whose distribution is rather widely ranged from northwestern Yunnan to southern Shaanxi along the western margin of the Sichuan Basin, though the locality of the new species, Fanjing Shan, is completely isolated from all the known collecting sites of this group.

The new species was collected from the mixed forest of evergreen oak trees and deciduous broadleaved trees such as *Fagus*, *Acer*, *Carpinus*, *Prunus*, etc., now widely preserved in the upper part of Mt. Fanjing Shan. All the type specimens were hibernating in gray- to white-rotten part of withered wood either still standing or already fallen down on the ground. As in the other members belonging to the same genus in East Asia, this species leaves a peculiar oviposition mark on the surface of its hood plant.

*Etymology.* The new species is named after its uniquely developed male mandibles.

## 要 約

中国贵州省から発見されたルリクワガタ属。—— 中国南部に位置する贵州省からは、これまでルリクワガタ属の記録がなかったが、筆者は2009年3月下旬、同省北東部の梵浄山を調査し、同属の一種が生息していることを確認できた。本論文ではこれを新種と認め、コブキバルリクワガタ *Platycerus mandibularis* という名を与えて記載した。♂交尾器の基本形態からみて、本種は、四川省南部のアカアシツヤルリクワガタ *P. feminatus* にもっとも類縁に近いものと思われるが、♂の大顎に顕著な特徴を有しており、雌雄の交尾器や背面の色彩も異なるため、識別は容易である。新種名は、つよく発達し、基部に大きい瘤状隆起を有する♂大顎の形態にちなむ。

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## New Records of *Merionoeda* Species (Coleoptera, Cerambycidae) from the Malay Peninsula

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Recently, we have reexamined the specimens of the genus *Merionoeda* collected in the Malay Peninsula, and determined the following four species without previous record from the area.

We would like to thank Mr. Carolus HOLZSCHUH for generously providing us with the paratype of *Merionoeda marginalis*, and Dr. Martin BAEHR of Zoologische Staatssammlung München for providing us with the material from the Karl E. HÜDEPOHL collection for a closer observation. Further, we thank Mr. Theodore L. CHILDERS for his critical reading of the original draft of this short paper.

*Merionoeda calcarata* PASCOE, 1869

PASCOE, 1869, Trans. Ent. Soc. London, (3), 7, p. 573; type area: Sarawak.

*Specimens examined.* Cameron Highlands, Pahang, W. Malaysia: 2 ♂♂, 1 ♀, III~IV-1985, local collector leg.; 9 ♂♂, 2 ♀♀, V~VII-1985, local collector leg.; 1 ♂, VII-1985; 1 ♀, VIII-1985; 1 ♀, VI-1985 (last three records from HÜDEPOHL collection).

*Distribution.* Borneo and Malay Peninsula (new record).

*Merionoeda subulata* PASCOE, 1869

PASCOE, 1869, Trans. Ent. Soc. London, (3), 7, p. 574; type area: Sarawak.

*Specimens examined.* Cameron Highlands, Pahang, West Malaysia (4 ♂♂): 1 ♂, V-1985; 1 ♂, VII-1985; 1 ♂, IX-1985; 1 ♂, XI-1985 (all records from HÜDEPOHL collection); 10 ♂♂, 10 ♀♀, III~IV-1985, local collector leg.; 10 ♂♂, 10 ♀♀, V~VI-1985, local collector leg.; 10 ♂♂, 4 ♀♀, VI-1987, R. de KEIZER leg.; 1 ♀, Kelantan, Pahang, VI-1999, local collector leg.

*Notes.* The specimens examined from the Malay Peninsula have, like many examples of the species from Sumatra and South Kalimantan, black head instead of the reddish yellow one as described for the holotype from Sarawak.

*Distribution.* Borneo and Malay Peninsula (new record).

*Merionoeda (Merionoeda) marginalis* HOLZSCHUH, 1991

HOLZSCHUH, 1991, FBVA, Berichte, (60), p. 38, fig. 40; type locality: NE. Bangkok, S. Thailand.

*Specimens examined.* Cameron Highlands, Pahang, West Malaysia (6 ♂♂, 3 ♀♀): 6 ♂♂, 1 ♀, V~VII-1985, local collector leg.; 2 ♀♀, X-1985 (all records from HÜDEPOHL collection).

*Distribution.* Thailand and Malay Peninsula (new record from the territory of Malaysia).

*Notes.* This species was described on the basis of the specimens from Ne. Bangkok, Hat Yai and Trang of southern Thailand.

*Merionoeda (Ocytasia) pubicollis* HOLZSCHUH, 1991

HOLZSCHUH, 1991, FBVA, Berichte, (60), p. 35, fig. 37; type locality: Ranong, S. Thailand.

*Specimens examined.* 1 ♂, Cameron Highlands, Pahang, West Malaysia, VIII-1985; 3 ♀♀, Fraser's Hill, Pahang, West Malaysia, 10~12-III-1990 T. NIISATO leg.

*Distribution.* Borneo and Malay Peninsula (new record from the territory of Malaysia).



## A New Species of the Genus *Parastasia* (Coleoptera, Scarabaeidae, Rutelini) from Hainan Island

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**Abstract** A new species of the genus *Parastasia* belonging to the *discolor* group is described from Hainan Island: *Parastasia hainanensis* sp. nov.

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

In 2007, I had an opportunity of examining some specimens of the genus *Parastasia* that was preserved in the collection of Mr. Shinji NAGAI. After a careful examination, I have come to the conclusion that one of them is new to science.

This new species is a members of the *Parastasia discolor* group and resembles *Parastasia lobata* KUIJTEN, 1992 in the size and coloration. However, this new species is actually related to *Parastasia glottidion* KUIJTEN, 1992 in view of the shape of male genitalia. The paramere of the male genitalia is simple with the posterior margins extending posteriad. In this study, I am going to describe this new species as a result of my study, under the name *Parastasia hainanensis* sp. nov.

Before going further, I wish to express my cordial appreciation to Mr. Shinji NAGAI, Nagano, for his generously loaning specimens in his collection. My deep indebtedness is also due to Dr. Johannes FRISCH and Mr. Joachim WILLERS of the Museum für Naturkunde der Humboldt Universität zu Berlin, Mr. Malcolm D. KERLEY of the Natural History Museum, London, Dr. Pol LIMBOURG of the Institut royal des Sciences naturelles de Belgique, Dr. Thierry DEUVE and Ms. Azadeh TAGHAVIAN of the Muséum national d'Histoire naturelle, Paris, Ms. Eulàlia Gassó MIRACLE of the Nationaal Natuurhistorisch Museum, Leiden for giving me the opportunity to examine collections of the genus *Parastasia* and loaning me materials. Finally, I wish to express my deepest appreciation to Dr. Mary Liz JAMESON of the University of Nebraska State Museum, Lincoln and Dr. Carsten ZORN, Gnoien, for their constant encouragement and helpful advice to my entomological studies, and their generous loaning of specimens in their collections.

The holotypes of the new species will be preserved in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

*Parastasia hainanensis* sp. nov.

(Figs. 1-11)

*Description.* Body length: 13.7 mm, width: 8.0 mm. Antennae, head, legs and ventral surface except 5th to 7th abdominal sternites dark reddish brown to black, dorsal surface except head, 5th to 7th abdominal sternites dark orange; dorsal surface, legs and ventral surface except abdominal sternites with vitreous lustre, abdominal sternites with rather weak lustre.

Head micro-shagreened (visible under  $\times 60$ ); clypeus truncate, reticulately rugulose; apical margin reflexed, rounded at antero-lateral corners, with a pair of sharp upright teeth; lateral margins before eye-canths almost parallel, with a pair of transverse, low subparallel ridges at the bases of eye-canths in lateral 1/3 of clypeus; frons reticulately rugulose, becoming sparser posteriad, vertex irregularly punctate, the punctures becoming denser and partly coalescent in lateral portions; eyes moderately convex; interocular distance 1.7 times as wide as an eye diameter. Labrum truncate, with anterior margin slightly sinuous. Galea with three teeth, the apical two and the middle one almost equal, stout and acute, and the basal one rather short, porrect and trifid. Length of antennal club almost same as interocular distance (1.06 : 1 in male).

Pronotum 1.47 times as wide as long, strongly narrowed apicad in apical half, almost parallel-sided posteriad, and slightly sinuous before hind angles; front and hind angles obtusely angulate; lateral margins rimmed, the rims disappearing before hind corners; disc with a pair of vague impressions at the middle of lateral portions, irregularly punctate, the punctures round and small in middle, rather large and elongate in lateral portions, becoming smaller and sparser posteriad.

Elytra with 11 rows of round punctures, 1st and 3rd interval irregularly scattered with round punctures, each interval sparsely scattered with minute punctures; lateral margins sinuous in basal 2/5, widened at middle, weakly narrowed posteriad in apical half, thickly rimmed in basal 1/3, the rims becoming finer in the remaining part, and extending to sutural apices; distal margins slightly rounded; sutural apices obtuse.

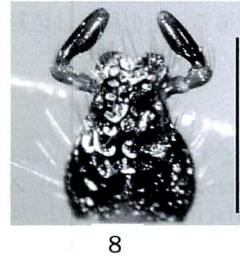
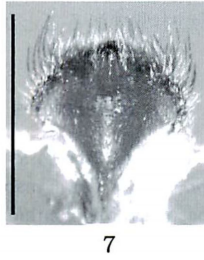
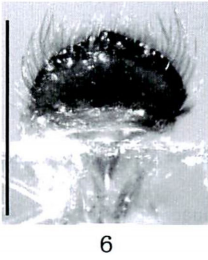
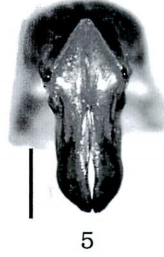
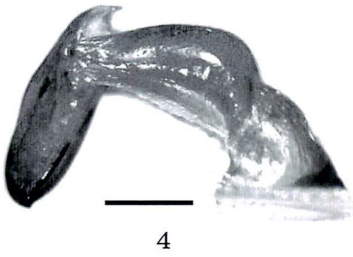
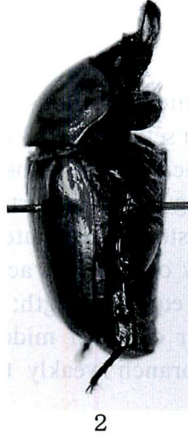
Propygidium microsculptured, with a pair of transverse impressions at antero-lateral portions; disc reticulately rugulose.

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

Metasternum sparsely punctate, the punctures small in middle, becoming larger laterad, and reticulately rugulose in lateral portions, with yellow suberect setae (0.12-

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Figs. 1-11. Habitus of *Parastasia hainanensis* 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; 6-11, mouth parts (scale 1 mm): 6, dorsal view of labrum; 7, ventral view of labrum showing epipharynx; 8, mentum; 9, dorsal view of maxilla showing galea; 10, dorsal view of left mandible showing apical teeth; 11, lateral view of left mandible showing mola.





0.62 mm in length) in lateral portions; mesosternal process short, with apex rather acute in lateral view.

Abdominal sternites rugoso-punctate in middle, the punctures becoming denser laterad, and reticulately rugulose in lateral portions, 2nd to 5th sternites each with a row of short, decumbent yellowish brown setae (0.1–0.3 mm in length) in apical half to 1/4, 6th sternite glabrous, 7th sternite reticulately rugulose, with a row of short, yellow erect setae (0.05–0.25 mm in length) along marginal portion.

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

*Type specimen.* Holotype: ♂, [CHINA] Atuocean, Hainan Tao, 23-V-1986, J. OKUMA leg.

*Etymology:* The new specific name, *hainanensis*, is derived from the locality, denoting that the new species inhabits Hainan Island.

## 要 約

和田 薫：海南島から発見された *Parastasia* 属コガネムシの 1 新種。——海南島から発見された *Parastasia hainanensis* sp. nov. は、*P. discolor* 群に属し、大きさと色彩は *Parastasia lobata* KUIJTEN, 1992 に似ているが、♂交尾器の形状からみて *Parastasia glottidion* KUIJTEN, 1992 に近縁な種である。近似種とは色彩と体形が小型であることから容易に区別できる。

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Scirtid Beetles (Coleoptera, Scirtidae) of the Oriental Region  
Part 10. New Species and New Record of *Cyphon variabilis* Species-Group

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**Abstract** Four new species of *Cyphon variabilis* species-group, *C. putzi* sp. nov., *C. kotanus* sp. nov., *C. apoanus* sp. nov., and *C. sagadanus* sp. nov., are described from China, Malaysia and the Philippines respectively. Additional specimens of *Cyphon thailandicus* RUTA, 2004 and *Cyphon weigeli* KLAUSNITZER, 2005 are recorded.

Introduction

*Cyphon variabilis* species-group (sensu NYHOLM, 1972 and YOSHITOMI, 2005) is characterised by the following characteristics: tergites VIII–IX rod-like with hemitergites, sternite VIII membranous, sternite IX covered with long setae in apical part, tegmen variously shaped, penis tending to reduction and smaller than tegmen.

In the Oriental Region, five species of this group have been recorded from the Philippines, Nepal, and Thailand so far (KLAUSNITZER, 2005 a, b, c; RUTA, 2004). In the present paper, I describe four new species from China, Malaysia, and the Philippines respectively.

For methodology and abbreviations see YOSHITOMI (2005). Type depositories are as follows: Naturhistorisches Museum Wien, Austria (NMW); Entomological Laboratory, Ehime University, Matsuyama, Japan (EUM); Collection of Dr. Andreas PÜTZ, Eisenhüttenstadt, Germany (CPE).

Taxonomy

*Cyphon putzi* sp. nov.

(Figs. 1A, 2)

*Type material.* Holotype (CPE): male, "CHINA: Yunnan [CH07–14], Baoshan Pref., Gaoligong Shan, 33 km SE Tengchong, 2100–2200 m, 24° 51' 22" N, 98° 45' 36" E, decid forest, litter, wood fungi sifted, 31.V.2007, leg. A. Pütz".

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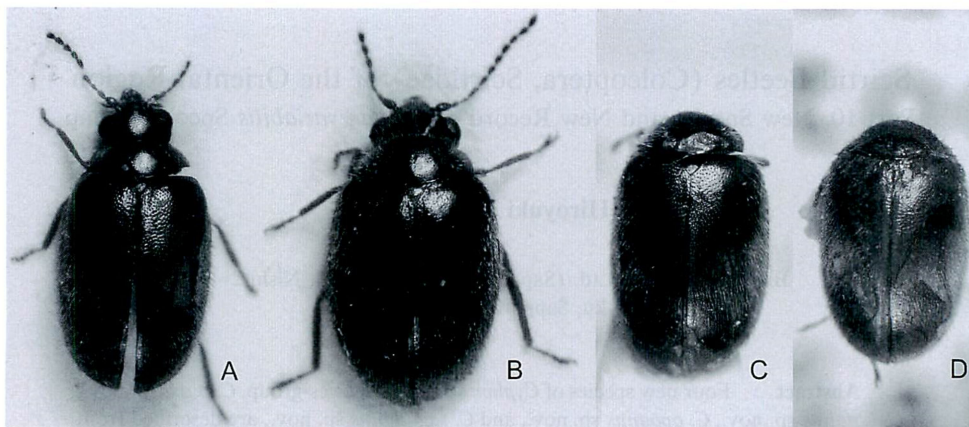


Fig. 1. Holotypes of *Cyphon* spp. — A, *Cyphon putzi* sp. nov.; B, *Cyphon kotanus* sp. nov.; C, *Cyphon apoanus* sp. nov.; D, *Cyphon sagadanus* sp. nov.

**Description.** Body oval, dorsally convex, shining, densely covered with yellowish-white setae. Coloration of body yellowish-brown; apical parts of antennae and basal part of elytra infusate.

Head moderate in size, dorsally finely granulate; anterior margin of clypeus almost straight; distance between eyes about 2.0 times as long as the maximal eye's diameter. Antennae slim, moderate in length. Pronotum transverse, strongly depressed dorso-laterally, finely punctate; anterior margin almost straight; antero-lateral angles obtuse, slightly projecting; lateral margins weakly arcuate; postero-lateral angles almost  $120^\circ$ ; posterior margin gently bisinuate; PW/PL 2.37. Scutellum subtriangular, finely punctate. Elytra oval, convex dorsally, widest in middle, strongly punctate, without costae; elytral humeri slightly elevated; EL/EW 1.39; EL/PL 4.92; EW/PW 1.50; TL/EW 1.67. Legs relatively long.

Caudal margin of sternite VII arcuate. Tergite VIII long, well sclerotized, rod-like hemitergites, apically expanded laterally, with membranous projections on inner margin of apical parts. Tergite IX long, well sclerotized, rod-like hemitergites, slightly longer than tergite VIII, densely covered with shallow and large oblong concavities on apical half, pointed at apices. Sternite IX moderately sclerotized, fan-shaped, apically with short setae, intermingled with fine punctures. Tegmen large, slightly sclerotized, trapezoidal in posterior part (=parameres), widest at posterior margin, densely covered with short setae. Penis as long as tegmen, well sclerotized; pala oblong, arcuate on basal margin; parameroids projecting antero-laterally, pointed at apices; trigonium shallowly excised in median part.

**Measurements** (n=1). TL 2.25 mm; PW 0.90 mm; PL 0.38 mm; EL 1.87 mm; EW 1.35 mm.

**Distribution.** China (Yunnan Prov.).



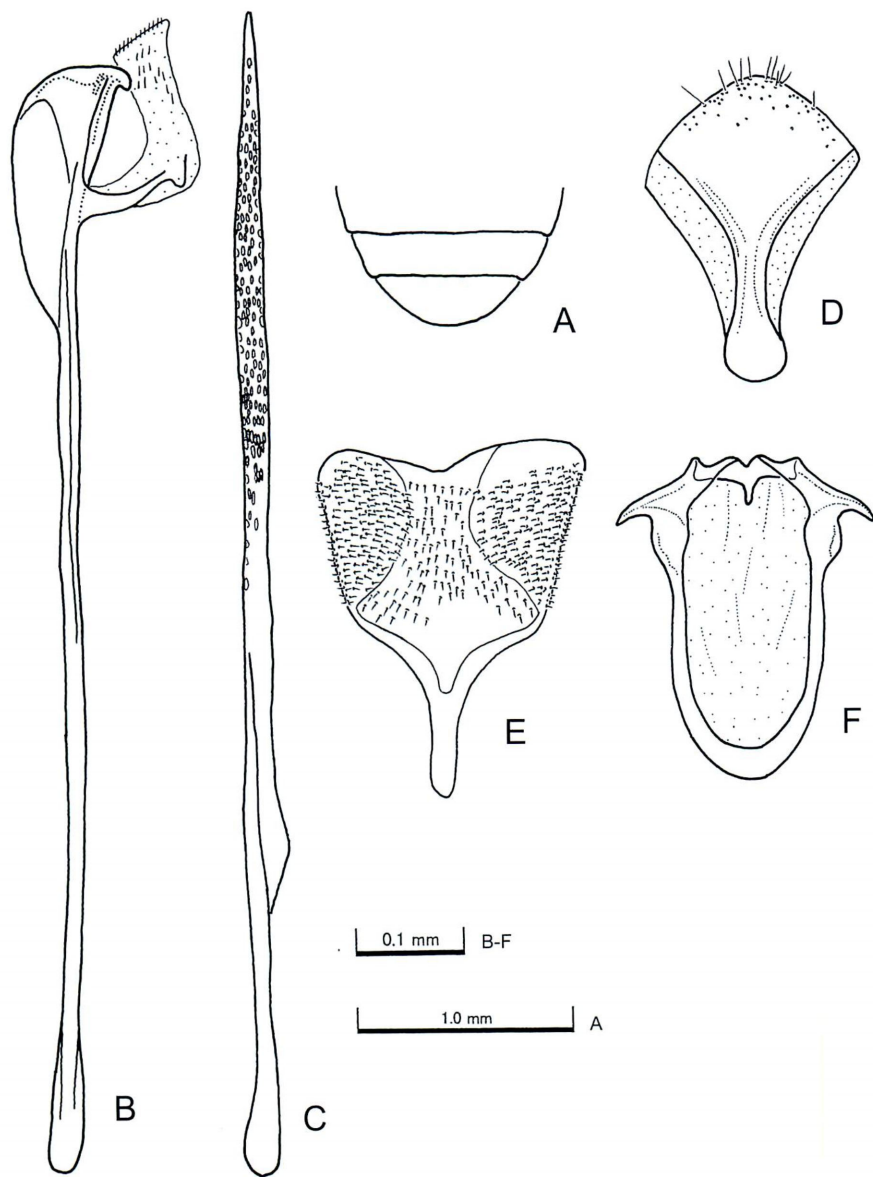


Fig. 2. *Cyphon putzi* sp. nov., holotype. — A, Sternites V–VII; B, right piece of tergite VIII; C, right piece of tergite IX; D, sternite IX; E, tegmen; F, penis.

*Remarks.* This species is similar to *Cyphon jaegeri* KLAUSNITZER, 2005 known from Nepal by the shapes of tergites VIII–IX and penis, but differs from it by the following characteristics: 1) sternite IX fan-shaped, bearing setae (*C. jaegeri* is project-

ing postero-mesally, and lacking setae); 2) tergite IX with concavities (without concavities in *jaegeri*); 3) parameroids of penis distinctly projecting laterally (slightly projecting in *jaegeri*).

*Etymology.* This species is named after Dr. Andreas PÜTZ, collector of the holotype.

*Cyphon kotanus* sp. nov.

(Figs. 1B, 3)

*Type material.* Holotype (NMW): male, "MALAYSIA, Sabah 1993 50 km E Kota Kinabalu Crocker Mts., Gg. Emas 16.-27.4. Strba & Jenis", genit. s. no. HY 964.

*Description.* Body oval, dorsally strongly convex, shining, densely covered with yellowish-white setae. Head, mouth parts, antennal segments I–V, pronotum, scutellum, legs and ventral surfaces of thoracies and abdomen reddish-brown; antennal segments VI–XI and elytra black; elytral humeri and apical fourth of elytra reddish-brown.

Head moderate in size, dorsally finely granulate; anterior margin gently arcuate; the distance between eyes about 2.1 times as long as the maximal eye's diameter. Antennae slender, reaching about proximal 1/4 of elytra. Pronotum transverse, strongly depressed dorso-laterally, finely punctate; anterior margin almost straight; antero-lateral angles almost right-angled, slightly projecting; lateral margins straight; postero-lateral angles obtuse; posterior margin arcuate; PW/PL 2.40. Scutellum subtriangular, finely punctate. Elytra oval, dorso-mesally convex, widest in middle, finely punctate, without costae; elytral humeri slightly elevated; EL/EW 1.32; EL/PL 4.40; EW/PW 1.39; TL/EW 1.62. Legs relatively long.

Caudal margin of sternite VII straight. Tergite VII pentagonal, with short apodemes. Tergites VIII–IX long, well sclerotized, rod-like hemitergites, pointed at apices. Sternite IX small, slightly sclerotized; anterior part lobed; posterior part expanded laterally, with a pair of small projections bearing short setae. Tegmen slightly sclerotized, circular in posterior part (parameres), widest at apical fourth, densely covered with short setae. Penis longer than tegmen, moderately sclerotized; pala oblong, arcuate on basal margin; parameroids projecting postero-laterally in basal parts, thence abruptly curved postero-laterally, obtuse at apices; trigonium gently projecting, shallowly concaved in median part.

*Measurements* (n=1). TL 2.43 mm; PW 1.08 mm; PL 0.45 mm; EL 1.98 mm; EW 1.50 mm.

*Distribution.* Malaysia (Sabah).

*Remarks.* Within the *Cyphon variavilis* species-group, this species differs in having: 1) posterior part of sternite IX expanded laterally, with a pair of small projections bearing short setae; 2) parameroids projecting postero-laterally in basal parts, thence abruptly curved postero-laterally. The character state of trigonium shallowly concaved in median part is similar to that of *Cyphon putzi* sp. nov.

*Etymology.* The species is named after the type locality.

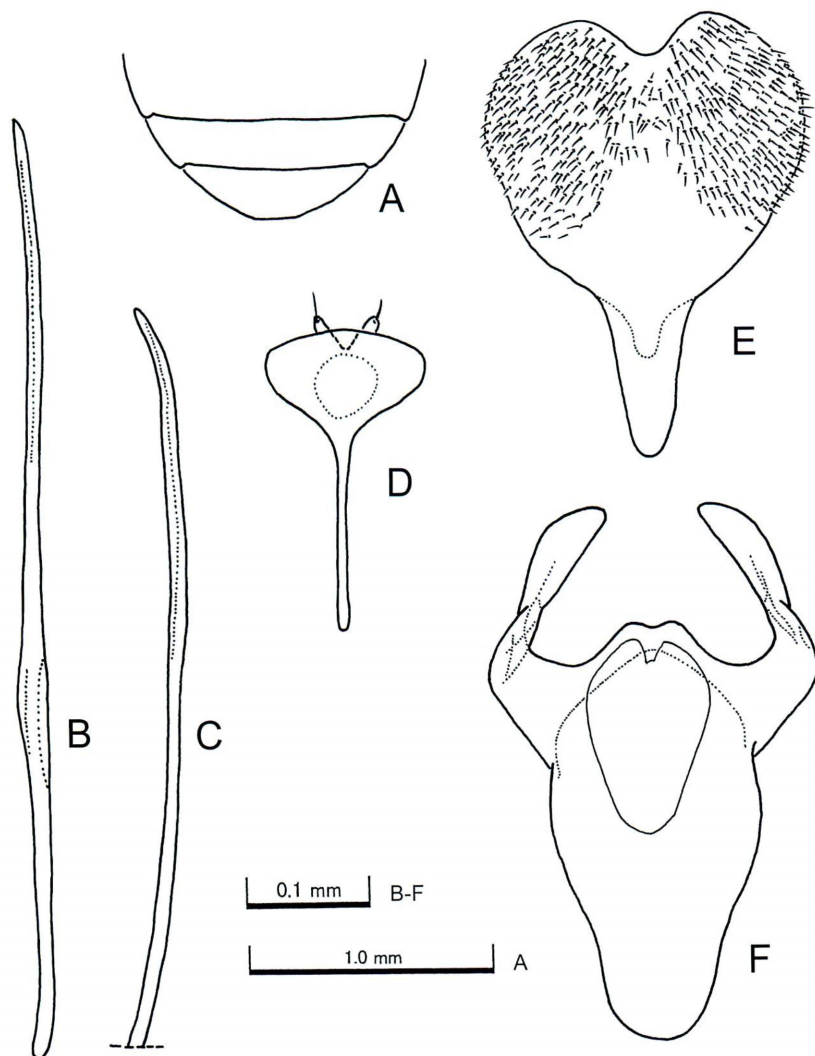


Fig. 3. *Cyphon kotanus* sp. nov., holotype. — A, Sternites V-VII; B, right piece of tergite VIII; C, right piece of tergite IX; D, sternite IX; E, tegmen; F, penis.

*Cyphon apoanus* sp. nov.

(Figs. 1C, 4)

*Type material.* Holotype (EUM): male, "[MINDANAO] Eagle Centre, 1100 m Baracatan north slope of Mt. Apo 4.VIII.1985 M. Sakai", genit. s. no. HY 960.

*Description.* Body oval, dorsally convex, shining, densely covered with yellowish-white setae. Coloration of body reddish-brown; legs paler.



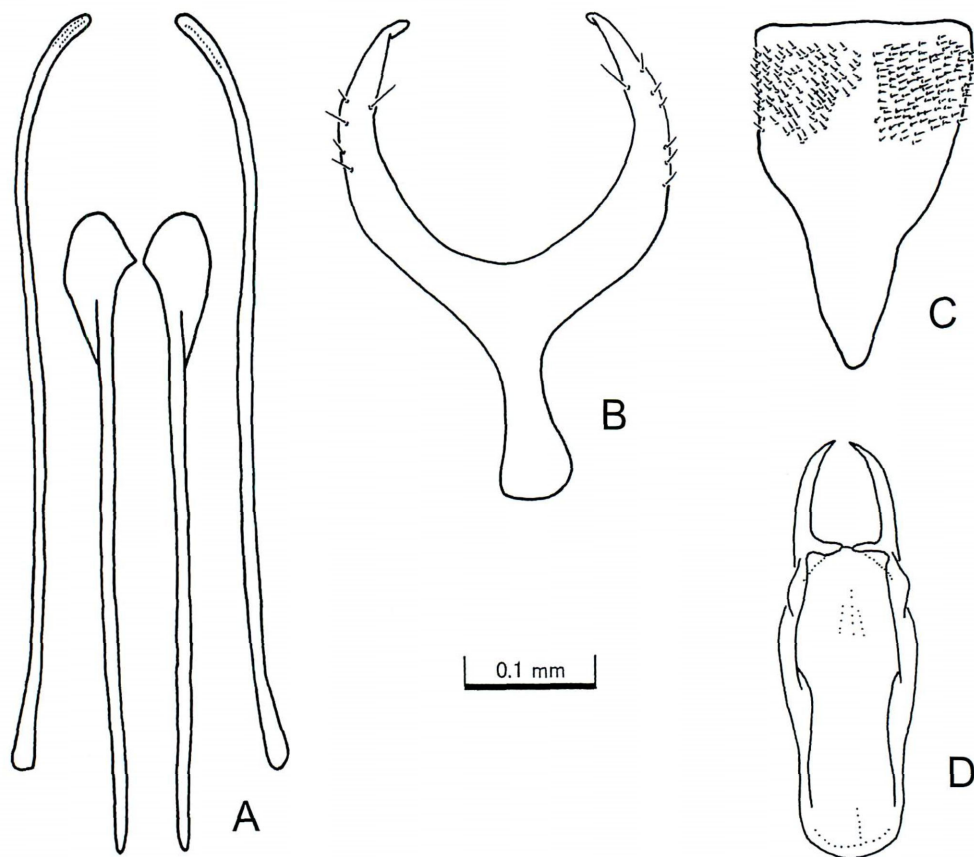


Fig. 4. *Cyphon apoanus* sp. nov., holotype. — A, Tergites VIII-IX; B, sternites IX; C, tegmen; D, penis.

Head moderate in size, finely punctate; anterior margin of clypeus almost straight; the distance between eyes about 2.1 times as long as the maximal eye's diameter. Pronotum transverse, depressed dorso-laterally, finely punctate; anterior margin almost straight; antero-lateral angles strongly projecting, about  $60^\circ$ ; lateral margins almost straight; postero-lateral angles obtuse; posterior margin gently arcuate; PW/PL 2.21. Scutellum subtriangular, finely punctate. Elytra oval, dorso-mesally convex, widest in middle, punctate as in pronotum, without costae; elytral humeri slightly elevated; EL/EW 1.06; EL/PL 3.33; EW/PW 1.42; TL/EW 1.38.

Caudal margin of sternite VII arcuate. Tergite VIII moderately sclerotized, rod-like hemitergites, obtuse at apices. Tergite IX moderately sclerotized, rod-like hemitergites, shorter than tergite VIII, expanded apically. Sternite IX well sclerotized, Y-shaped; basal part short, slightly expanded laterally and basally; apical part gently

curved inwardly, bearing short setae in apical half. Tegmen small, slightly sclerotized, subtriangular, posteriorly densely covered with short setae. Penis small, slightly sclerotized, longer than tegmen; pala oblong, subparallel, gently arcuate on basal margin; parameroids slightly convex; trigonium long, claw-like, apically curved inwardly, pointed at apices.

*Measurement* (n=1). TL 1.86 mm; PW 0.95 mm; PL 0.43 mm; EL 1.43 mm; EW 1.35 mm.

*Distribution*. Philippines (Mindanao Isl.).

*Remarks*. By Y-shaped sternite IX and long claw-like trigonium, this species resembles representatives of the "*ochraeus* subgroup" of *Cyphon coarctatus* species-group (sensu KLAUSNITZER, 2005 d), but its hemitergites VIII–IX are characteristic for the *variabilis* species-group.

*Etymology*. The species is named after the type locality.

*Cyphon sagadanus* sp. nov.

(Figs. 1D, 5)

*Type material*. Holotype (EUM): male, "Luzon: PHILIPPINES Sagada (1550 m) nr. Bontoc Mount. Prov. 23.VII.1985 M. Sakai leg.", genit. s. no. HY 967.

*Description*. Body oval, dorsally convex, shining, densely covered with yellowish-white setae. Coloration of body pale brown.

Head moderate in size, finely punctate, dorsally slightly convex; anterior margin of clypeus slightly arcuate; the distance between eyes about 2.1 times as long as the maximal eye's diameter. Pronotum transverse, depressed dorso-laterally, finely punctate; anterior margin almost straight; antero-lateral angles perpendicular, projecting; lateral margins gently arcuate; postero-lateral angles obtuse; posterior margin gently arcuate; PW/PL 2.38. Scutellum subtriangular, finely punctate. Elytra oval, dorso-mesally convex, subparallel from elytral base to apical third, punctate as in pronotum, without costae; elytral humeri elevated; EL/EW 1.41; EL/PL 4.58; EW/PW 1.37; TL/EW 1.72. Legs relatively long and slim.

Caudal margin of sternite VII arcuate. Tergite VIII slightly sclerotized, rod-like hemitergites, pointed at apices. Tergite IX slightly sclerotized, as long as tergite VIII, rod-like hemitergites, expanded laterally in apical parts. Sternite IX moderately sclerotized; basal half club-like, expanded basally; apical half oblong-oval, deeply excised in median part of apical margin, with a pair of claw-like projections on apical margin, bearing short setae apically. Tegmen small, slightly sclerotized, trapezoidal in posterior part (parameres), widest at apical half, densely covered with short setae. Penis small, slightly sclerotized, longer than tegmen; pala oblong, evenly tapered basally; parameroids indistinct; trigonium long, claw-like, curved interiorly, pointed at apices.

*Measurements* (n=1). TL 2.23 mm; PW 0.95 mm; PL 0.40 mm; EL 1.83 mm; EW 1.30 mm.

*Distribution*. Philippines (Luzon Isl.).

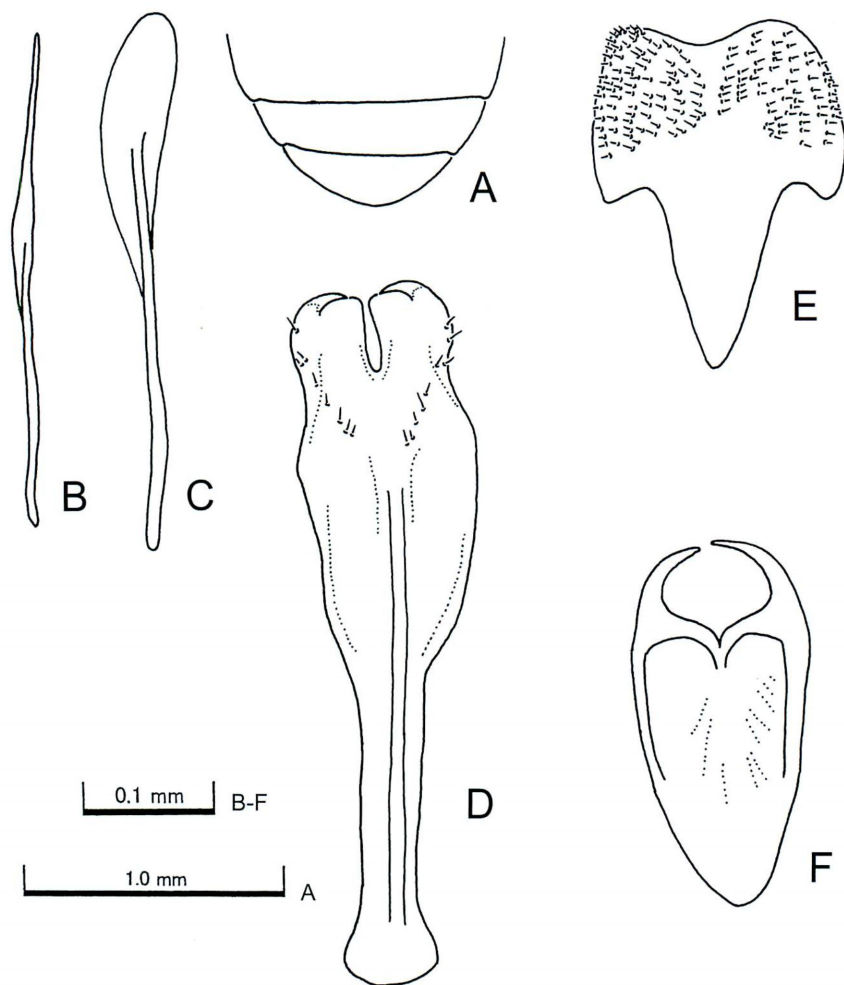


Fig. 5. *Cyphon sagadanus* sp. nov., holotype. — A, Sternites V-VII; B, tergite VIII; C, tergite IX; D, sternite IX; E, tegmen; F, penis.

**Remarks.** Within the *Cyphon variabilis* species-group, this species differs in having: 1) sternite IX long, deeply excised in median part of apical margin, with a pair of claw-like projections on apical margin; 2) parameroids of penis indistinct; 3) trigonium long, claw-like, curved interiorly, pointed at apices. The character state of trigonium claw-like projections is similar to that of *Cyphon apoanus* sp. nov.

**Etymology.** The species is named after the type locality.



***Cyphon thailandicus* RUTA, 2004***Cyphon thailandicus* RUTA, 2004, 372.

*Additional material.* 1 male (EUM), “[North THAI] Maeo Khun Klang 1350 m, Doi Inthanon 17.X.1983 M. Sakai”, genit. s. no. HY 958.

*Distribution.* Thailand.

***Cyphon weigeli* KLAUSNITZER, 2005***Cyphon weigeli* KLAUSNITZER, 2005 b, 300.

*Additional material.* 1 male (EUM), “[Central NEPAL] Ulleri (2000m) nr. Ghorapani 14.X.1981 M. Sakai”, genit. s. no. HY 747; 2 males (EUM), “[Central NEPAL] Kuldi (3000m)–Chumrung (2000m) nr. Ghandrung 21.X.1981 M. Sakai”.

*Distribution.* Nepal.

**Discussion**

Based on the male genital characteristics, the *variabilis* species-group is divided into six subgroups (KLAUSNITZER, 2005 b), and five species of *jaegeri* subgroup are known hitherto from the Oriental Region. Two new species, *Cyphon putzi* sp. nov. and *C. kotanus* sp. nov., are clearly the *jaegeri* subgroup (sensu KLAUSNITZER, 2005 a, b), but the remaining two new species, *C. apoanus* sp. nov. and *C. sagadanus* sp. nov., are uncertain in subgroup. In this paper, I propose a new subgroup (*apoanus* subgroup) for *C. apoanus* sp. nov. and *C. sagadanus* sp. nov. The *apoanus* subgroup is characterized in having claw-like long trigonium which is similar character state in *coarctatus* species-group.

**Key to Subgroup of the *Cyphon variabilis* Species-group**

(modified KLAUSNITZER, 2005 b)

1. Trigonium distinct, with a pair of projections (=“apical teeth” in YOSHITOMI, 2005); parameroids indistinct .....2
- Trigonium indistinct; parameroids distinct, projecting apico-laterally; distributed in the Oriental Region ..... *jaegeri* subgroup
2. Pala oval; trigonium short, with a pair of thumb-like/claw-like projections .....3
- Pala oblong; trigonium long, claw-like projections; distributed in the Oriental Region ..... *apoanus* subgroup
3. Basal part of tegmen short, distinctly and abruptly tapered .....4
- Basal part of tegmen long, gently and evenly tapered .....6
4. Sternite IX oblong; parameres widely plate-like, apical teeth large .....5
- Sternite IX trapezoidal; parameres composed a pair of projections; apical teeth

- small and thin; distributed in the Palaearctic Region ..... *ussuricus* subgroup
5. Tegmen not expanded near basal margin; parameres closely covered with short setae and punctures; distributed in Palaearctic and Nearctic Regions ..... *padi* subgroup
- Tegmen expanded near basal margin; parameres closely covered with long setae; distributed in the Palaearctic Region ..... *hilaris* subgroup
6. Tegmen trilobate in posterior part; parameres connected; distributed in Palaearctic and Nearctic Regions ..... *variabilis* subgroup
- Tegmen U-shaped; parameres separated; distributed in Palaearctic and Nearctic Regions ..... *pubescens* subgroup

#### List of the Oriental Species of *Cyphon variabilis* Species-group

|                                           |                             |
|-------------------------------------------|-----------------------------|
| <i>Cyphon apoanus</i> sp. nov.            | Philippines (Mindanao Isl.) |
| <i>Cyphon brancucci</i> KLAUSNITZER, 2005 | Philippines (Mindanao Isl.) |
| <i>Cyphon jaegeri</i> KLAUSNITZER, 2005   | Nepal                       |
| <i>Cyphon kotanus</i> sp. nov.            | Malaysia (Sabah)            |
| <i>Cyphon putzi</i> sp. nov.              | China (Yunnan Prov.)        |
| <i>Cyphon sagadanus</i> sp. nov.          | Philippines (Luzon Isl.)    |
| <i>Cyphon schmidtii</i> KLAUSNITZER, 2006 | Nepal                       |
| <i>Cyphon thailandicus</i> RUTA, 2004     | Thailand                    |
| <i>Cyphon weigeli</i> KLAUSNITZER, 2005   | Nepal                       |

#### Acknowledgements

I wish to express my sincere gratitude to Dr. M. JÄCH (NMW), Dr. Andreas PÜTZ, and Dr. Masahiro SAKAI (EUM) for their permission to loan the museum collections. I also thank the late Dr. Masataka SATÔ, Dr. Bernhard KLAUSNITZER, and Mr. Rafal RUTA for their kindness in various help.

#### 要 約

吉富博之: 東洋区のマルハナノミ科 パート 10. *Cyphon variabilis* 種群の新種と新記録種. — *Cyphon variabilis* 種群に属する 4 新種, *C. putzi* sp. nov. (中国), *C. kotanus* sp. nov. (マレーシア), *C. apoanus* sp. nov. (フィリピン), および *C. sagadanus* sp. nov. (フィリピン) を記載した. また, *C. thailandicus* RUTA, 2004 および *C. weigeli* KLAUSNITZER, 2005 の追加標本を記録した.

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*Elytra, Tokyo*, **37**(1): 97–98, May 29, 2009

## A New Distributional Record of *Platychora licheneopicta* (Coleoptera, Nitidulidae) from Lanyu Island, off Taiwan

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*Platychora licheneopicta* JELÍNEK, 1980 was described from Leyte and Luzon Islands of the Philippines, and there is no record from other areas. I found it in the coleopteran collections of Ehime University, and am going to report it from Lanyu Island, off Taiwan as the first representative of the genus.

The fauna of Lanyu Island is quite different from that of the main island of Taiwan. As was pointed out by KANO (1929 a, b, etc.), the fauna of the island is especially similar to that of the Philippines. This report gives an example of the specific fauna of the island.

*Platychora licheneopicta* JELÍNEK, 1980  
(Fig. 1)

*Platychora licheneopicta* JELÍNEK, 1980, 96 (type locality: Ins. Leyte, Philippines); 1982, 178.

*Diagnosis.* Body with black and whitish yellow scales composing rather complicated pattern. Tips of mandibles simple. Length 3.6–4.8 mm.

*Specimen examined.* [TAITUNG] 1 ♀, Is. Lanyu, 21–VI–1972, S. TAKEDA leg.

*Distribution.* Philippines (Luzon and Leyte), and Taiwan (Is. Lanyu) (new record).





Fig. 1. Habitus of *Platychora licheneopicta*, dorsal view (Lanyu Is., Taiwan).

I wish to express my sincere gratitude to Dr. Hiroyuki YOSHITOMI (Ehime University) for his valuable advice and critical reading of the manuscript.

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## Fossil of the Genus *Eubrianax* (Coleoptera, Psephenidae) from the Upper Miocene Ningyôtôge Formation in Tottori Prefecture, Japan

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**Abstract** A larval fossil specimen of water penny beetle *Eubrianax* sp. was found from the Upper Miocene Tatsumitôge Member (ca. 6.5–5.5 Ma) of the Ningyôtôge Formation in Saji-chô, Tottori-shi, Tottori Prefecture, Japan. The fossil specimen is identified with *Eubrianax* sp., aff. *E. pellucidus* LEWIS based on pronotal structures.

### Introduction

The genus *Eubrianax* KIESENWETTER includes 22 species worldwide (LEE *et al.*, 2001, 2003, 2005). The larvae are known as “water pennies” which dwell on stone surface in running water. In Japan, three species occur in the main islands and six species in the Ryukyu Islands (SATÔ, 1985; LEE *et al.*, 2001). However, fossil records of the Psephenidae in Japan are poorly known. FUJIYAMA (1983) reported the only record of a fossil water penny, *Mataeopsephus* sp., aff. *M. japonicus* MATSUMURA from the Early Pleistocene Kazusa Formation in Nagasaki Prefecture, Japan.

The Tatsumi-tôge (Pass) in Tottori Prefecture is one of the most famous sites of the Tertiary fossil insects in Japan (FIRGNE, 1988). For example, fossils of *Carabus* sp. (as *Apotomopterus* sp.: HIURA, 1971) and *Graptopsaltria inaba* FUJIYAMA, 1982 are described from the site. Recently, we noticed a fossil specimen from the Tatsumi-tôge, which is well-preserved water penny on siltstone. The larva is identified with the genus *Eubrianax*. In this paper, we are going to describe the fossil and to discuss its systematic position in the genus.

### Systematic Palaeontology

Famiy P s e p h e n i d a e LACORDAIRE

Subfamily E u b r i a n a c i n a e JAKOBSON

Genus *Eubrianax* KIESENWETTER, 1874

*Eubrianax* sp., aff. *E. pellucidus* LEWIS

(Figs. 1–2)

*Material.* A larval exuviae of the last instar (lacking abdominal segments VII to IX) in coll. of Tottori Prefectural Museum [TRPM-EF-0000008].

*Condition of fossil.* The fossil is well-preserved specimen but detail structure of marginal peg setae and surface of exuviae are not preserved.

*Description.* Length 5.0 mm, width 5.2 mm. Body flattend, but roundly convex, with lateral tergal extensions on thorax and abdomen; form entirely oval with dense marginal peg setae [MPS]. Pronotum strongly produced anteriorly, with broadly arcuate anterior margin; middle pronotal plate lacking (Fig. 1 A); mid-pronotal longitudinal sulci absent (Fig. 1 B); pericellular sulci absent (Fig. 1 C); dividing sulci at posterior plates on prothorax absent. Meso- and metathoraces shorter than but broader than prothorax. Spiracles [SP] on mesothorax. Median longitudinal suture and costal lines [CL] present on thorax. Posterior plates on abdominal terga absent.

*Fossil horizon and age.* Tatsumitôge Member of the Ningyôtôge Formation (YAMANA, 1992, 1997). The age is estimated ca. 6.5–5.5 Ma by pollen assemblages (SAITO & ICHITANI, 2007). The fossil is the oldest fossil record of the Psephenidae in Japan.

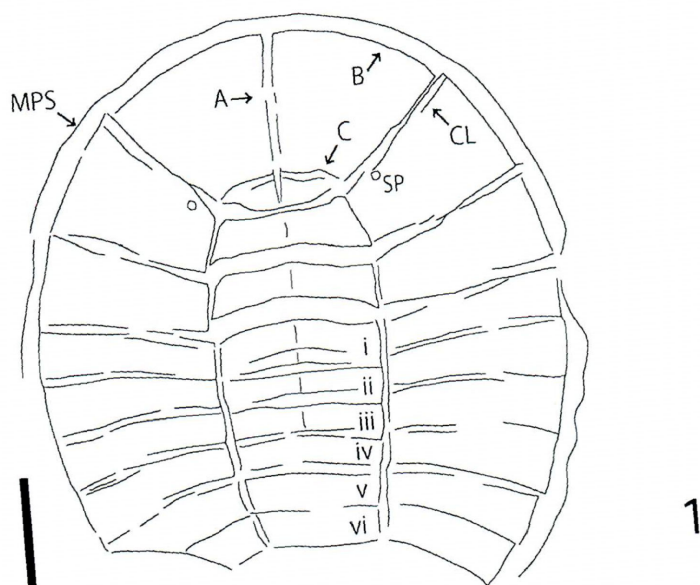
*Locality.* Tatsumi-tôge (Pass), Saji-chô, Tottori-shi, Tottori Prefecture, Honshu, Japan. The fossil site is the natural monument of Tottori Prefecture, so that it is protected by the ordinance.

### Discussion

LEE *et al.* (2001) recognized four species-groups, *ramicornis*, *granicollis*, *pellucidus*, *serratus* groups, from the genus *Eubrianax* based on cladistic analysis. The fossil belongs to the *E. pellucidus* species-group based on lacking middle pronotal plate in larva. The group includes four recent members: *E. pellucidus* in China and main islands of Japan (Honshu, Shikoku, Kyushu); *E. insularis* in Yaku-shima Is.; *E. amamiensis* in Amami-Ôshima and Okinawa Isls.; *E. manakikikuse* in Ishigaki, Iriomote Isls. and Taiwan (LEE *et al.*, 2001). The fossil age shows that the *E. pellucidus* species-group has existed for more than 5.5 million years.

All the members of the species-group live in mountain streams (HAYASHI, 2009). The fossil bed shows that the siltstone deposited in the area of still water (HIROTA, 1981). The fossil larval exuviae of the last instar was probably carried by running water from pupated place in the stream.





Figs. 1-2. Fossil *Eubrianax* sp., aff. *E. pellucidus*. CL, costal line; MPS, marginal peg setae; SP, spiracle. i-vi, 1st to 6th abdominal segments. A-C, see description of the fossil. Scale bar=1.0 mm.

### Acknowledgments

We thank Mr. Masakatsu ONODERA who discovered the fossil specimen. Thanks also go to Dr. Hiroyuki YOSHITOMI of Ehime University for obtaining literature and reading our manuscript; to Prof. Takao YANO of Tottori University for obtaining the literature on the geology of Tottori Prefecture; to Dr. Kei ICHISAWA, Mrs. Hayato YAMAGUCHI, Hiroto KITAURA, Yasuyuki ASADA and Tomikazu SHIMIZU for registration of the fossil specimen.

### 要 約

林 成多・川上 靖：鳥取県辰巳峠から産出した新第三紀のマルヒラタドロムシ属化石（コウチュウ目：ヒラタドロムシ科）。——鳥取県鳥取市佐治町（旧佐治村）の辰巳峠には、後期中新世の人形峠累層辰巳峠部層が分布し、泥岩層から昆虫化石が産出することが古くより知られている（現在は鳥取県の天然記念物となっており、化石採集等の行為は禁止されている）。この度、鳥取県立博物館の収蔵標本を検討した結果、ヒラタドロムシ科の幼虫（終齢幼虫の抜け殻）の化石が確認され、マルヒラタドロムシ属の一種と同定された。前胸中央部に菱形の小片を欠くことにより、ヒメマルヒラタドロムシ種群（*E. pellucidus* species-group）に属すると結論した。ヒラタドロムシ科の化石としては、国内で2例目となる発見で、国内ではもっとも古い化石記録となる。

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*Elytra*, Tokyo, **37**(1): 103–104, May 29, 2009

## *Xylopsocus intermedius* DAMOISEAU, 1993 (Coleoptera, Bostrichidae), a New Beetle in the Taiwanese and Palearctic Fauna

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The genus *Xylopsocus* LESNE belongs to the tribe Xyloperthini and subfamily Bostrichinae of the family Bostrichidae (BOROWSKI & WĘGRZYNOWICZ, 2007). Most of the 18 described species of the genus *Xylopsocus* is distributed in the Oriental, Australian and Ethiopian Regions. In the Palearctic four species were recorded, including three Taiwanese species, *X. bicuspis* LESNE, 1901, *X. capucinus* (FABRICIUS, 1781), and *X. castanoptera* (FAIRMAIRE, 1850) (BOROWSKI, 2007; LIU, 2006).

Working on the collection of the Taiwan Agricultural Research Institute Insect Collection in Wufeng, among the unidentified material we found *Xylopsocus intermedius* DAMOISEAU in DAMOISEAU & COULON, 1993, which has not been recorded from Taiwan so far. Single specimen of this species was collected in the Shaanxi Province (labeled: Sekizan, Formosa 18 V 1935, col. Y. MIWA) (Figs. 1 & 2). Till now the *X. intermedius* was recorded from Vietnam only (DAMOISEAU & COULON, 1993; BOROWSKI & WĘGRZYNOWICZ, 2007).

We would like to thank our colleagues Piotr ŚLIPIŃSKI and Magdalena KOWALEWSKA for taking photo of the specimen of *X. intermedius*. Special thanks we due to Professor Chiun-Cheng Ko (Department of Entomology, National Taiwan University) and Dr. Chi-Feng LEE (Applied Zoology Division, Taiwan Agricultural Research Institute, Wufeng) for their kind hospitality during JB's visit in Taiwan. This publication was supported by the grant N N 309 137135 given by the Ministry of Science and Higher Education, Poland.



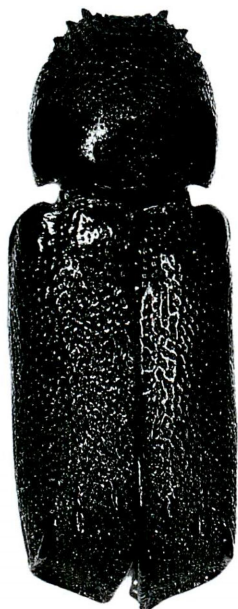


Fig. 1. *Xylopsocus intermedius* DAMOISEAU, habitus, dorsal view.

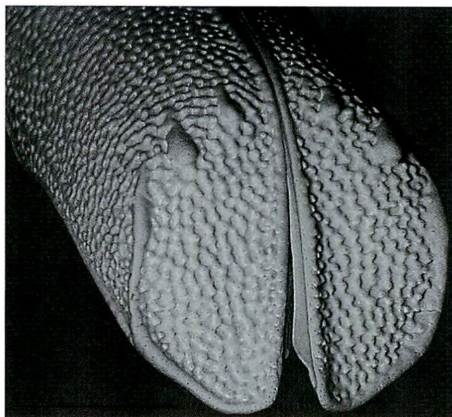


Fig. 2. *Xylopsocus intermedius* DAMOISEAU, elytral declivity, scale bar = 1 mm.

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## Additions to *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae, Amarygmini) from East Asia, Part 4

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**Abstract** Twelve new species belonging to *Plesiophthalmus* are described from East Asia under the following names: *Plesiophthalmus becvari* sp. nov.; *P. brancuccii* sp. nov.; *P. balkei* sp. nov.; *P. schawalleri* sp. nov.; *P. chifengi* sp. nov.; *P. namthaensis* sp. nov.; *P. gedensis* sp. nov.; *P. brantlovai* sp. nov.; *P. taibaishanensis* sp. nov.; *P. kucerai* sp. nov.; *P. sawaiae* sp. nov., and *P. fujianensis* sp. nov.

A key to the species of the relatives of *Plesiophthalmus perpulchrus* is also presented.

From 1999 to 2001, the first author of the present paper (K. M.) described thirty new species in three parts of the “Additions to *Plesiophthalmus* and its allied genera (Coleoptera, Tenebrionidae, Amarygmini) from East Asia”. These series were supplemented to his revisional study during 1988 to 1991. In 2005, one *Plesiophthalmus* species was described by the same author from Taiwan, and in 2008 three more new species were added from the same island by MASUMOTO, AKITA and LEE.

In these several years, many friends of the first author offered and loaned precious materials from various areas for continuous research. Therefore, he asked the second author to join for reviewing this group and again started the present study. In this paper they are going to describe twelve new species of this group.

Before going into further details, they would like to express their cordial acknowledgement to Ing. Stanislav BEČVÁŘ, České Budějovice, Dr. Michel BRANCCUCI, Naturhistorisches Museum Basel, Dr. Wolfgang SCHAWALLER, Staatliches Museum für Naturkunde, Stuttgart, Dr. Martin BAEHR, and Dr. Michael BALKE, Zoologische Staatssammlung, München, Dr. Kiyoshi ANDO, Osaka, Dr. Hans J. BREMER, Melle, Germany, Chi-Feng LEE, Taiwan Agricultural Research Institute, Wufeng, Dr. Ottó MERKL, Hungarian Natural History Museum, Budapest, and Dr. Takeshi YORO,

Kamakura City, for offering materials. They also thank Dr. Makoto KIUCHI, Tsukuba City, for taking clear photographs inserted in this paper. Finally, they wish to express their deepest appreciation to Dr. Shun-Ichi UÉNO, Emeritus Curator of the National Museum of Nature and Science, Tokyo, for his constant guidance on their taxonomic study.

The abbreviations used herein are as follows: NHMB = Naturhistorisches Museum Basel; ZSM = Zoologische Staatssammlung, München; SMNS = Staatliches Museum für Naturkunde, Stuttgart; NMNS = National Museum of Natural Science, Taichung; NMPC = National Museum, Praha, Czech Republic; NSMT = National Museum of Nature and Science, Tokyo.

### Descriptions of New Species

#### *Plesiophthalmus becvari* sp. nov.

(Figs. 1, 13–17)

Body subovate, strongly convex dorsad; dorsal surface brownish black with feeble coppery tinge, ventral surface dark reddish brown, antennae, mouth parts, ventral side of head and legs reddish brown, hairs on legs pale yellow; head feebly and somewhat sericeously shining, pronotum, scutellum and elytra rather strongly, metallicly shining, metasternum moderately, rather vitreously shining, abdomen with 1st sternite to major medial part of the 4th gently, somewhat alutaceously shining, lateral parts of 4th and 5th (anal sternite) moderately shining; body almost glabrous, antennae, apico-interior parts of tibiae and ventral sides of tarsi finely haired.

**Male.** Head transversely subelliptical, weakly covered with isodiametric microsculpture, slightly concave in middle; clypeus transversely semicircular, truncate at apex, weakly, rather transversely convex, closely, finely punctate, each puncture with a minute hair, fronto-clypeal border impressed and extending to outer margins; genae (ocular lobes) subparallelogrammatic, rather strongly raised outwards, punctulate, with outer margins obtusely produced antero-laterad; frons rather obpentagonal, more irregularly and coarsely punctate than on clypeus, with a shallow, longitudinally subovate concavity; diatone (distance between eyes) about 0.6 times the width of eye diameter. Eyes obliquely comma-shaped in dorsal view, strongly convex laterad, inlaid into head behind genae. Antennae subfiliform, ratio of the length of each segment from base to 10th (11th lost in the type specimen): 0.63, 0.20, 0.71, 0.42, 0.61, 0.52, 0.41, 0.53, 0.52, 0.52,–.

Pronotum subtrapezoidal, twice as wide as length; apex slightly sinuous on each side, bordered and rimmed; front angles obtusely angular, hind angles slightly acute; base feebly produced in middle, truncate opposite to scutellum, gently sinuous on each side, not bordered; sides with anterior parts steeply declined and posterior parts moderately so to lateral margins, which are weakly rounded, grooved and finely rimmed, the rims in basal halves visible from above; disc strongly convex, rather closely and



irregularly scattered with small, feebly ovate punctures, each with a microscopical hair, those in basal-lateral parts becoming smaller and denser. Scutellum equilateral triangular with feebly rounded sides, almost flat, sparsely scattered with microscopical punctures in lateral parts, with lateral margins feebly reflexed.

Elytra subovate, 1.33 times as long as wide, 3.33 times the length and 1.29 times the width of pronotum, widest at basal  $1/3$ ; dorsum strongly convex, highest at basal  $1/4$ ; disc with rows of small, slightly ovate and microscopically haired punctures, which become larger and connected one another with longitudinal grooves in lateral parts; intervals almost flat in interior parts, feebly convex in exterior parts, sparsely scattered with microscopical punctures, each with a minute bent hair; 5th and 6th rows of punctures depressed and forming impression close to base of elytra; humeri weakly swollen; apices not produced but simply rounded.

Terminal segment of maxillary palpi nearly securiform with straight outer side about 1.35 times the length of the inner, and 0.77 times that of the apical. Mentum rather obtrapezoidal, feebly alutaceous, weakly raised in intero-apical part, feebly concave in postero-lateral parts, with apical margin membranous and gently produced, posterior margin weakly reflexed; gula triangular, bordered by impressions. Prosternum short, with apex strongly rimmed, with prosternal process bluntly produced and gently depressed in apical part. Mesosternum short, major anterior part beneath prosternum, posterior part rather bold Y-shaped, flat and at the same level as metasternum, with two apices pointed. Metasternum rather wide, smooth in major parts, weakly convex in postero-lateral parts, sparsely scattered with punctures, with a longitudinal groove along the midline, and a pair of transverse grooves along posterior margins. Abdomen weakly covered with isodiametric microsculpture, rather longitudinally wrinkled, scattered with small punctures; anal sternite gently convex in apico-medial part, sparsely pubescent, finely bordered along outer margin, feebly truncate at apex.

Profemur with anterior face spined at apical  $1/3$ , the spine directed antero-exteriad; protibia strongly curved at apical  $3/7$ , with interior face noticeably gouged in basal  $5/9$  and finely haired in apical  $2/5$ ; mesotibia gently curved intero-ventrad; metatibia nearly straight; ratios of the lengths of pro-, meso- and metatarsal segments: 0.33, 0.23, 0.21, 0.24, 1.01; 0.63, 0.34, 0.28, 0.31, 0.99; 1.11, 0.39, 0.38, 1.06.

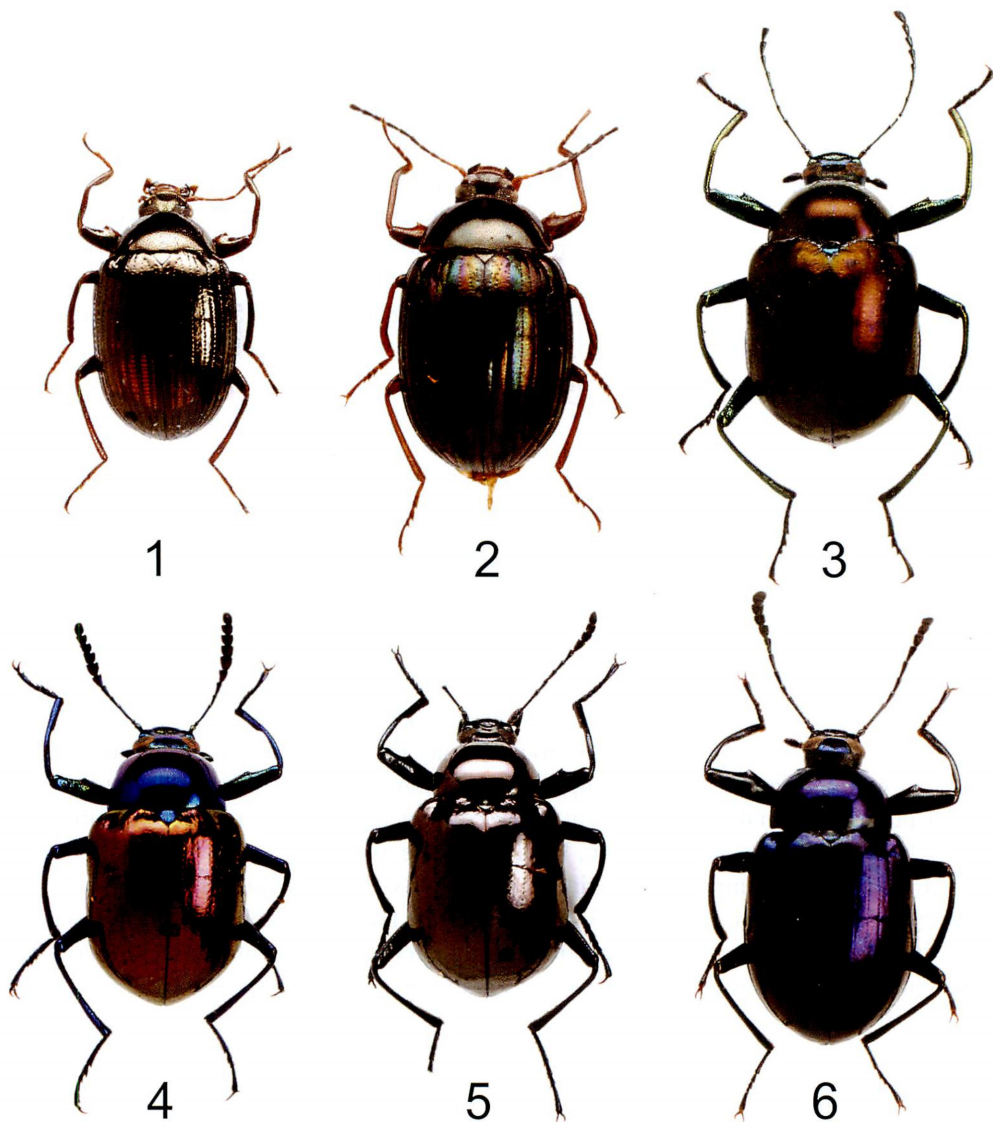
Male genitalia subfusiform, 2.16 mm in length, 0.45 mm in width, basal piece gently curved in lateral view; fused lateral lobes 0.62 mm in length, longitudinally impressed on midline, with apical halves flat and noticeably spatulate.

Body length: 5.5–7.3 mm.

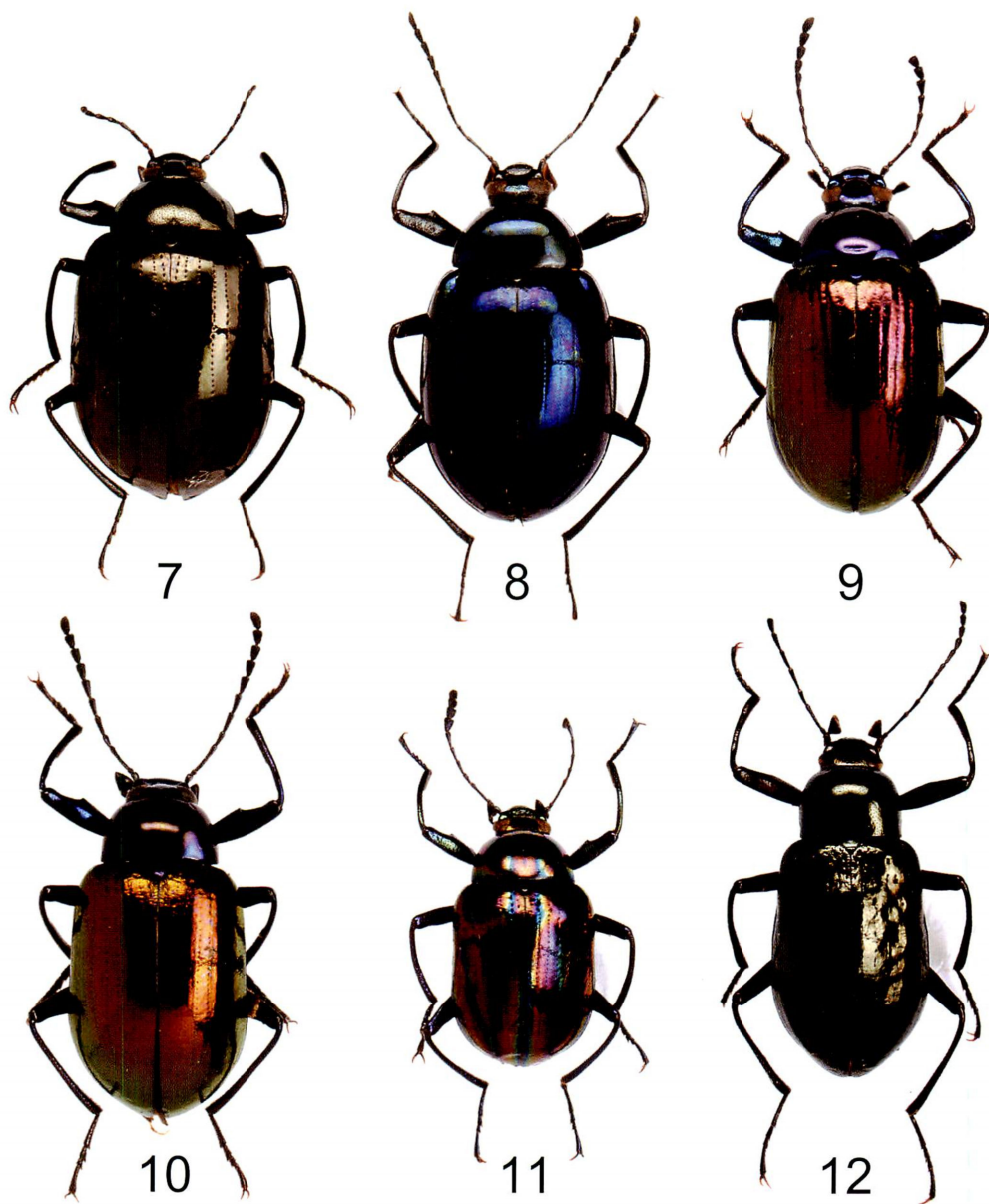
F e m a l e. Protibia simple in shape; eyes smaller and less strongly convex laterad.

Holotype: ♂, "S. INDIA, KERALA, Thekkady; / Periyar Lake; 9. 34 N, 77. 10 E; / 900–1000 m; 19.–27. iv. 1997; / DEMBICKÝ & PACHOLÁTKO leg." (NHMB). Paratypes: 3 exs., same data as for the holotype.

Notes. According to the key to the species of male *Spinamarygmus* by MASUMOTO (1988, p. 81), this new species resembles *S. obscurus* KULZER, 1950, originally described from Shembaganur, Madura, India, but can be easily distinguished from the latter by the

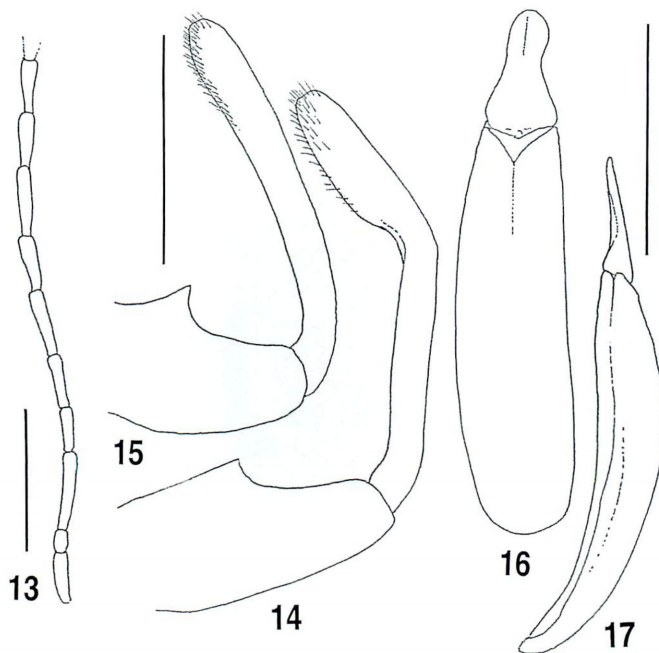


Figs. 1-6. Habitus of *Plesiophthalmus*. — 1, *P. becvari* sp. nov., male, holotype; 2, *P. brancuccii* sp. nov., male, holotype; 3, *P. balkei* sp. nov., male, holotype; 4, *P. schawalleri* sp. nov., male, holotype; 5, *P. chifengi* sp. nov., male, holotype; 6, *P. namthaensis* sp. nov., male, holotype.



Figs. 7-12. Habitus of *Plesiophthalmus*. — 7, *P. gedensis* sp. nov., male, holotype; 8, *P. brantlovai* sp. nov., male, holotype; 9, *P. taibaishanensis* sp. nov., male, holotype; 10, *P. kucerai* sp. nov., male, holotype; 11, *P. sawaiae* sp. nov., male, holotype; 12, *P. fujianensis* nov., male, holotype.





Figs. 13–17. *P. becvari* sp. nov. — 13, Male antenna, 14, male profemur & protibia, 15, female profemur & protibia, 16, male genitalia (dorsal view), 17, same (lateral view). Scales = 1 mm.

ovate body (rather subparallel-sided in *O. obscurus*), with the pronotum gently narrowed anteriad, and front angles not produced (almost parallel in basal halves and then strongly narrowed apicad, and the front angles produced anteriad in *O. obscurus*), the elytra obviously wider than the pronotum, three internal rows of punctures not deeply impressed, and intervals finely punctate (of the same width as the pronotum, three internal rows of punctures deeply impressed, and intervals impunctate in *O. obscurus*).

The specific name is given in honor of Ing. Stanislav BEČVÁŘ, who assisted the present authors for preparing of this paper.

PIC (1915, p. 7) erected the genus *Spinamarygmus* for *S. indicus*, and later KULZER revised the genus in 1950. His study concerning *Plesiophthalmus* and its allied genera (1988 to 1991) was followed by MASUMOTO in the historical treatment. Dr. H. J. BREMER considers that this genus is nothing but a junior synonym of *Plesiophthalmus*. The main characteristics of the members of this genus are their legs strongly bent in male. “Strongly or weakly” is a matter of degree. The present authors basically agreed with his opinion. Thus, the new species should be a member of the genus *Plesiophthalmus*.

*Plesiophthalmus brancuccii* sp. nov.

(Figs. 2, 18–21)

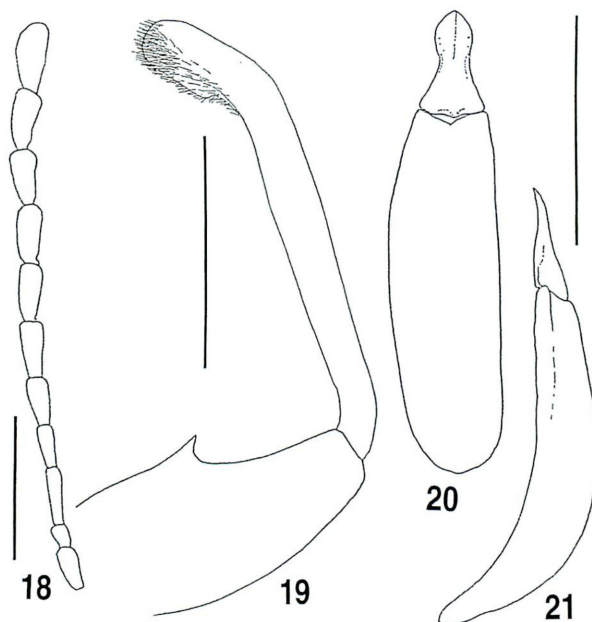
Body subovate, strongly convex dorsad; dorsal surface brownish black, head, pronotum and scutellum with feeble coppery tinge, elytra rather longitudinally iridescent, four basal segments of antennae, ventral side of head and legs dark reddish brown, the remaining antennal segments almost black, ventral surface rusty yellowish brown, hairs on legs pale yellow; head moderately shining, pronotum and scutellum rather strongly, metallicly shining, elytra rather weakly, feebly sericeously shining, ventral surface weakly, feebly alutaceously shining; body almost glabrous, antennae clothed with short fine hairs, apico-interior parts of tibiae clothed with fine hairs, which are longer than those on antennae, ventral sides of tarsi densely tufted.

**Male.** Head transversely subelliptical, partly covered with weak isodiametric microsculpture, slightly concave in anterior part; clypeus transversely semicircular, truncate at apex, weakly convex broadly in middle, irregularly punctate, each puncture with a minute hair, fronto-clypeal border finely impressed and extending to outer margins; genae raised antero-laterad and subcrescent-shaped, sparsely punctulate, with rounded outer margins; frons somewhat bold Y-shaped and rather flat, gently declined to fronto-clypeal border, irregularly punctate, punctures in posterior part (area of vertex) becoming smaller and closer; diatone about 0.67 times the width of eye transverse diameter. Eyes obliquely ovate, invaded by posterior part of genae, gently convex laterad, moderately inlaid into head in dorsal view. Antennae subfiliform, ratio of the length of each segment from base to apex: 0.53, 0.20, 0.55, 0.39, 0.48, 0.51, 0.41, 0.53, 0.64, 0.62, 0.61.

Pronotum subtrapezoidal, twice as width as length; apex weakly emarginate and slightly sinuous on each side, bordered and finely rimmed; front angles subrectangular and directed anteriorly, hind angles rounded; base slightly produced, truncate opposite to scutellum, gently sinuous on each side, not grooved but with a row of small punctures along margin in lateral parts; sides moderately declined to lateral margins, which are feebly and roundly produced, grooved and finely rimmed, the rims entirely visible from above; disc moderately and rather transversely convex, scattered with small punctures, each with a minute hair. Scutellum triangular with feebly rounded sides, slightly convex, sparsely scattered with smaller punctures than those on pronotum.

Elytra subovate, 1.24 times as long as wide, 3.11 times the length and 1.28 times the width of pronotum, widest at basal 1/3; dorsum strongly convex, highest at basal 2/7; disc punctato-striate, the punctures in striae small, slightly ovate, and rather closely set, basal parts of 5th and 6th striae fused each other and depressed close to base; intervals weakly convex, rather sparsely scattered with minute punctures (each with a microscopical bent hair), feebly aciculate, 1st intervals with sutural area feebly raised and forming a very low ridge, several lateral intervals more strongly convex than in interior ones; humeri weakly swollen; apices not produced but simply rounded.

Terminal segment of maxillary palpi subsecuriform with straight outer side about



Figs. 18–21. *P. brancuccii* sp. nov., male; 18, antenna, 19, profemur & protibia, 20, genitalia (dorsal view), 21, same (lateral view). Scales = 1 mm.

1.36 times the length of the inner, and 0.72 times that of apical. Mentum rather obtrapezoidal, somewhat coriaceous, weakly raised in intero-apical part, with apical margin membranous and produced anteriad, and posterior margin truncate; gula rather triangular, somewhat coriaceous. Prosternum short, with apex rimmed, intercoxal space longitudinally grooved in medial parts, prosternal process triangular and depressed. Mesosternum short, most of anterior parts beneath prosternum, posterior part raised and almost of the same level as metasternum, anterior margin of posterior part ridged with a pair of tubercles, area between these emarginate. Metasternum rather wide, covered with isodiametric microsculpture and scattered with rather coarse punctures in basal-lateral parts, with a longitudinal groove in apical 3/4 along the midline, a pair of transverse grooves along posterior margins. Abdomen rather sparsely scattered with small punctures (each with a microscopical bent hair), 1st sternite to basal-lateral parts of the 3rd longitudinally wrinkled, anal sternite with apex feebly emarginate.

Profemur with anterior face sharply spined at apical 1/3 and directed antero-exteriad; protibia strongly bent at apical 1/4, with interior face gouged in apical 1/4 and finely haired in apical 2/5; mesotibia bent at apical 1/3 and directed intero-ventrad, with ventral face gently gouged at apical 1/3; metatibia nearly straight; ratios of the lengths of pro-, meso- and metatarsal segments: 0.33, 0.23, 0.25, 0.24, 1.24; 0.76, 0.47, 0.32, 0.24, 1.31; 1.34, 0.52, 0.47, 1.21.

Male genitalia subfusiform, 1.78 mm in length, 0.47 mm in width, basal piece rather



strongly curved in lateral view; fused lateral lobes 0.45 mm in length, flat with apices noticeably spatulate.

Body length: 7.3 mm.

F e m a l e. Unknown.

Holotype: ♂, "S. INDIA, TAMIL, NADU; 1997 / 17.-22.v. 1997; 15 km SE. Kotagiri; / 11.22 N, 76.56 E; Kunchappanai; / DEMBICKÝ & PACHOLÁTKO" leg. (NHMB).

*Notes.* According to the key mentioned above, this new species is placed near "*Spinamarygmus confusus* KULZER, 1950", originally described from "Indien, Madura, Shembaganur", but can be easily distinguished from the latter by the protibia strongly bent at apical 1/4, with interior face gouged in apical 1/4 (the protibia strongly bent at apical 1/3 and becoming bolder in apical 1/3 in *S. confusus*), and the mesotibia bent at apical 1/3 with ventral face gently gouged at apical 1/3 (mesotibia slightly bent after the middle and then slightly bolder in *S. confusus*), the elytra obviously wider than pronotum (only slightly wider than pronotum in *S. confusus*), with the base simple (with three small tubercles in *S. confusus*).

The specific name is dedicated to Dr. Michel BRANCUCCI, Naturhistorisches Museum Basel, who permitted to loan the authors many invaluable specimens for a long period.

*Plesiophthalmus balkei* sp. nov.

(Figs. 3, 22-25)

Body short ovate, strongly convex dorsad, rather hunchbacked; anterior part of head, scutellum and major parts of legs green partly with golden tinge, posterior part of head and elytra reddish brown with weak golden tinge and partly darkened, pronotum purple with feeble greenish golden tinge in anterior and lateral parts, major parts of ventral surface dark blue, antennae, mouth parts and tarsi brownish black to black; anterior part of head, femora and tarsi metallically shining, posterior part of head, pronotum and elytra weakly, rather sericeously shining, scutellum strongly shining, metasternum and abdomen gently, rather metallically shining; body almost glabrous, seven apical segments of antennae with short fine hairs, apico-interior parts of tibiae with fine hairs, ventral sides of tarsi densely tufted.

M a l e. Head nearly rounded, slightly concave in areas of fronto-clypeal and clypeo-genal borders, weakly covered with isodiametric microsculpture in posterior parts; clypeus transversely hexagonal, gently, transversely convex, closely punctate, each puncture with a minute hair, fronto-clypeal border nearly straightly impressed, bent in lateral parts, and extending to outer margins; genae subparallelogrammatic, gently raised outwards, sparsely punctate, with outer margins obtusely, obliquely produced; frons somewhat bold X-shaped, gently inclined anteriad, irregularly scattered with round punctures; diatone almost of the same width as eye diameter. Eyes comma-shaped in dorsal view, strongly convex laterad, roundly inlaid into head behind genae. Antennae

subfiliform, feebly widened apicad, reaching apical 1/3 of elytra, ratio of the length of each segment from base to apex: 0.32, 0.20, 1.17, 0.51, 0.53, 0.55, 0.52, 0.50, 0.49, 0.46, 0.57.

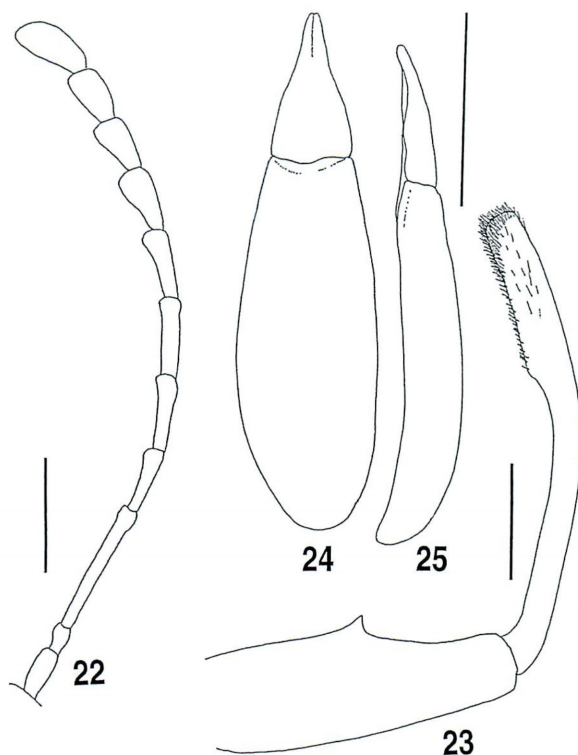
Pronotum subtrapezoidal in dorsal view, wider than long (5 : 3); apex nearly straight, finely rimmed; front angles rectangular, though they are not visible from above, hind angles obtusely angular; base widely triangular, emarginate opposite to scutellum, gently sinuous on each side, not bordered; sides with anterior parts convex and steeply declined, and posterior parts moderately so to lateral margins, which are gently rounded, grooved and very finely rimmed, the rims with basal halves visible from above; disc strongly convex, weakly covered with isodiametric microsculpture, scattered with small, round punctures, these in lateral parts becoming larger and closer. Scutellum subcordate, very weakly covered with isodiametric microsculpture, elevated in major anterior part, sparsely, irregularly scattered with small punctures, which are obviously larger than those on pronotum.

Elytra subovate, 1.27 times as long as wide, 2.67 times the length and 1.37 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal 1/3; disc covered with isodiametric microsculpture, very weakly aciculate, with rows of small, sparsely set punctures, which become larger and coarser in lateral parts; intervals wide and flat, sparsely scattered with microscopical punctures, 5th and 6th intervals weakly depressed close to base; base finely crenulate; humeri weakly swollen; lateral margins grooved with rows of punctures and finely rimmed; apices simply rounded.

Terminal segment of maxillary palpi nearly securiform, with straight outer side about 1.62 times the length of the inner, and 0.84 times that of apical. Mentum subcordate, rather asperate, raised in intero-apical part; gula triangular, weakly depressed, bordered by impressions, transversely wrinkled. Prosternum short, with apex coarsely rimmed, intercoxal area longitudinally rather deeply bi-grooved, with medial ridge, which extends to the narrow prosternal process. Mesosternum short, anterior part with a deep triangular declivity, posterior part almost of the same level as metasternum, coarsely wrinkled, ridged along edges of the declivity. Metasternum rather short and wide, gently raised in postero-lateral parts, feebly covered with microsculpture, sparsely scattered with minute punctures and shallowly and sparsely wrinkled in major central parts, strongly wrinkled along basal margin, with a longitudinal medial groove near anterior margin to posterior margin, also with a pair of transverse grooves along posterior margins. Abdomen finely, somewhat transversely punctate and weakly covered with isodiametric microsculpture from 1st to 4th sternites, rather longitudinally wrinkled in lateral parts of 2nd and 3rd sternites, anal sternites rather closely scattered with haired punctures, which are larger and stronger than those on other sternites, apical margin finely punctate grooved.

Profemur with anterior face spined at apical 2/5 and directed antero-exteriad; protibia gently curved, with interior face thinned in basal 3/5, weakly gouged in the middle, and thickened and finely haired in apical 2/5; mesotibia gently curved intero-ventrad, with interior face very weakly gouged at the middle; metatibia weakly curved





Figs. 22–25. *P. balkei* sp. nov., male; 22, antenna, 23, profemur & protibia, 24, genitalia (dorsal view), 25, same (lateral view). Scales = 1 mm.

interiad and feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.32, 0.23, 0.24, 0.24, 0.78; 0.72, 0.27, 0.28, 0.27, 1.02; 1.37, 0.32, 0.26, 1.03.

Male genitalia short fusiform, 2.62 mm in length, 0.60 mm in width, basal piece slightly curved in lateral view; fused lateral lobes nib-shaped, 0.63 mm in length, longitudinally impressed on the midline, with apical half rather noticeably narrowed.

Body length: 9.8–10.1 mm.

F e m a l e. Unknown.

Holotype: ♂, "LAOS centr.; / Khammouan Prov., / Nakai vic., 17°43'N, / 105°09'E, 500–600 m, / 22. V.–8. VI. 2001, / E. JENDEK & O. ŠAUSĀ leg." (ZSM). Paratype: 1 ex., "LAOS: Xamneua, / Ban Saleui, 1350 m / 21–24. V. 2004, / leg. C.-F. LEE."

*Notes.* This new species closely resembles "*Eumolpocyriogeton convexus* PIC, 1922", originally described from Tonkin, but can be distinguished from the latter by the eyes more approximate to each other (diatone 1.5 times the width of eye diameter in the latter), the pronotum more strongly narrowed anteriad, with the disc more finely punctate, the elytra with rows of punctures finer, male profemora more acutely spined, the male genitalia shorter and wider, and the body coloration different.



PIC (1922, p. 305) erected the genus *Eumolpocyriogeton* for *E. convexum*. MASUMOTO (1988 to 1991) followed this arrangement and described several new species. Dr. H. J. BREMER considered that this genus is also a junior synonym of *Plesiophthalmus* for the same reason.

The specific name is given in honor of Dr. Michael BALKE, Zoologische Staatssammlung, München, who permitted the authors to loan invaluable materials for the present study.

*Plesiophthalmus schawalleri* sp. nov.

(Figs. 4, 26–29)

Body short ovate, strongly convex dorsad, rather hunchbacked; major parts of head bluish green, area around fronto-clypeal border brownish golden, major central part of pronotum deep purple, partly with dark greenish tinge and lateral parts dark greenish blue, scutellum dark greenish blue, elytra purple, with basal parts reddish brown, antennae with apical halves dark violet and basal halves dark greenish blue, profemora dark green, mesofemora and metafemora, pro-, meso-, and metatibiae darker in color than profemora, ventral surface mostly bluish green, epipleura rather strongly bluish, anal segment dark brown; head weakly shining, pronotum and scutellum strongly, rather vitreously shining, elytra rather strongly, metallically shining, metasternum and abdomen weakly, somewhat alutaceously shining; body almost glabrous, seven apical segments of antennae with short fine hairs, apico-interior parts of tibiae with fine hairs, ventral sides of tarsi with dense tufts of hairs.

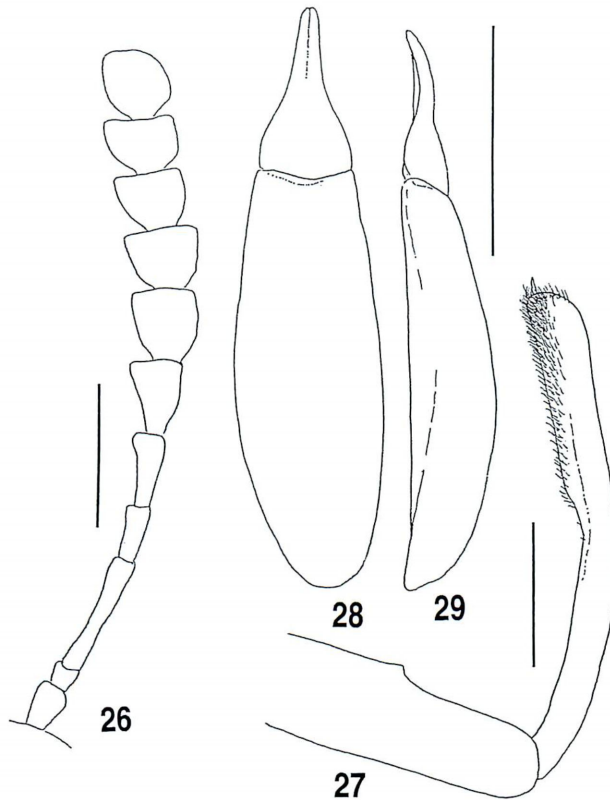
**Male.** Head transversely subelliptical, transversely depressed in area along fronto-clypeal border, irregularly scattered with small punctures, each with a microscopical hair; clypeus transversely hexagonal, gently, transversely convex, fronto-clypeal border nearly straightly impressed, bent in lateral parts, and extending to outer margins; genae obliquely subrhombic, gently raised outwards, sparsely punctate, with obtuse outer margins; frons somewhat wide X-shaped, gently inclined anteriad, weakly impressed in the middle of posterior part; diatone slightly narrower than eye diameter. Eyes subreniform in dorsal view, strongly convex laterad, roundly inlaid into head behind genae. Antennae with seven apical segments widened, forming a flattened club, reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.26, 0.14, 0.68, 0.31, 0.36, 0.37, 0.39, 0.37, 0.35, 0.34, 0.37.

Pronotum subtrapezoidal in dorsal view, 1.47 times wider than long; apex nearly straight, bordered and finely rimmed; front angles obtusely angular, visible from above, hind angles obtusely angular; base widely triangular, emarginate opposite to scutellum, gently sinuous on each side, not bordered; sides with anterior parts convex and steeply declined, and posterior parts comparatively moderately so to lateral margins, which are gently rounded, punctate-grooved and very finely rimmed, the rims with basal halves visible from above; disc strongly convex, smooth, rather sparsely scattered with microscopical punctures, these in lateral parts becoming larger and coarser. Scutellum

equilateral triangular with gently rounded sides, very weakly convex, sparsely, irregularly scattered with small punctures, which are larger than those on pronotum.

Elytra subovate, 1.43 times as long as wide, 3.04 times the length and 1.29 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal 1/4; disc with rows of small, sparsely set punctures, which become larger and coarser in lateral parts; intervals wide, flat in interior parts, feebly convex in lateral parts, sparsely scattered with microscopical punctures, 5th interval weakly depressed close to base; base finely crenulate; humeri weakly swollen; lateral margins with rows of irregularly set punctures and finely rimmed; apices simply rounded.

Terminal segment of maxillary palpi subsecuriform, with straight outer side about 1.75 times the length of inner, and 0.74 times that of apical. Mentum obtrapezoidal, ruguloso-punctate and pubescent, raised in intero-apical part, with apex weakly produced; gula triangular, weakly depressed, bordered by impressions. Prosternum short, with apex coarsely rimmed, intercoxal space shallowly depressed, with prosternal process rather large and produced, strongly depressed. Mesosternum very short, anterior



Figs. 26–29. *P. schawalleri* sp. nov., male; 26, antenna, 27, profemur & protibia, 28, genitalia (dorsal view), 29, same (lateral view). Scales = 1 mm.



part strongly depressed, posterior part almost of the same level as metasternum, anterior margin of posterior part steeply emarginate with both ends of the emargination sharply angular. Metasternum rather wide, longitudinally grooved on the midline in posterior 3/4, gently convex in postero-lateral parts, weakly covered with microsculpture, rather obliquely wrinkled, sparsely scattered with minute, haired punctures. Abdomen finely punctate and longitudinally wrinkled in 1st sternite to the 3rd and basal part of the 4th, ruguloso-punctate in medial part of 4th sternite, anal sternite rather closely punctate, with apical margin finely bordered, and truncate in the middle.

Profemur with anterior face bearing a blunt spine at apical 2/7 directed antero-exteriad; protibia gently curved, with interior face thinned in basal 4/7, weakly gouged in the middle, thickened and finely haired in apical 2/5; mesotibia gently curved intero-ventrad, with interior face very weakly gouged slightly behind the middle; metatibia nearly straight and feebly becoming bolder apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.32, 0.19, 0.20, 0.17, 0.80; 0.63, 0.26, 0.23, 0.22, 0.81; 1.29, 0.28, 0.24, 1.00.

Male genitalia short fusiform, 2.51 mm in length, 0.58 mm in width, basal piece weakly curved in lateral view; fused lateral lobes 0.63 mm in length, abruptly narrowed in apical 3/5, longitudinally impressed on the midline.

Body length: 9.8 mm.

F e m a l e. Unknown.

Holotype: ♂, "Chiang Mai / Thailand // 4. V. 1964, / leg. Sab. Steinke // Doi Pui // Sammulung / H. SCHINDLER." (SMNS).

Notes. This new species closely resembles *Plesiophthalmus semipurpureus* (PIC, 1917), originally described from Bengal, but can be distinguished from the latter by eyes more approximate to each other, the pronotum covered with microscopical punctures, the elytra with rows of smaller punctures, and the male genitalia differently shaped (fused lateral lobes abruptly narrowed in apical 3/5 in this new species, instead, simply narrowed apicad in *P. semipurpureus*).

The specific name is given in honor of Dr. Wolfgang SCHAWALLER, who permitted to examine the type specimen of the present new species.

*Plesiophthalmus chifengi* sp. nov.

(Figs. 5, 30–33)

Body short ovate, strongly convex dorsad, rather hunchbacked; central part of head, pronotum, and elytra piceous with feeble dark purplish tinge, scutellum with very weak dark greenish tinge, terminal segment of maxillary palpi with feeble dark bluish tinge; head weakly, partly sericeously shining, pronotum, scutellum and elytra strongly, vitreously shining, ventral side weakly, somewhat alutaceously shining; body almost glabrous, antennae, particularly five apical segments, with short fine hairs, apico-interior parts of tibiae with fine hairs, ventral sides of tarsi with dense tufts.

M a l e. Head subelliptical, rather semicircularly depressed in area around fronto-

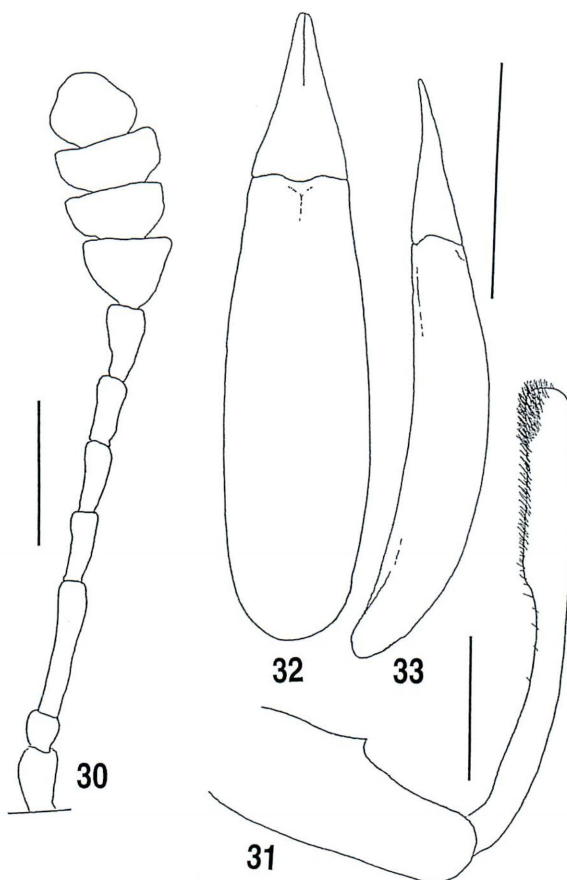


clypeal border, very weakly covered with isodiametric microsculpture; clypeus semicircular, irregularly punctate, depressed in basal part, gently, transversely convex in middle, gently bent in apical part, fronto-clypeal border roundly concave, with lateral parts finely impressed and extending to outer margins; genae obliquely subrhombic, gently raised outwards, sparsely punctate, with rounded outer margins; frons somewhat wide X-shaped, gently inclined anteriad, almost smooth and very sparsely scattered with microscopical punctures, with a pair of weak impressions in middle; diatone of the same width as eye diameter. Eyes invertedly comma-shaped in dorsal view, moderately convex laterad, roundly inlaid into head. Antennae with five apical segments widened, forming a flattened club (5th segment widest), reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.54, 0.20, 1.02, 0.48, 0.51, 0.49, 0.47, 0.43, 0.39, 0.37, 0.39.

Pronotum subquadrate in dorsal view, wider than long (4:3); apex slightly emarginate in the middle, very feebly produced on both sides, grooved and finely rimmed; front angles obtusely angular, visible from above, hind angles more obtusely angular; base widely triangular, emarginate opposite to scutellum, feebly sinuous on each side, not bordered; sides steeply declined to lateral margins, which are gently rounded, punctate grooved and very finely rimmed, the rims almost wholly visible from above; disc strongly convex, smooth, rather sparsely scattered with microscopical punctures, with a shallow medial line in anterior half. Scutellum hexagonal, feebly convex antero-medially, sparsely, irregularly scattered with microscopical punctures.

Elytra subovate, 1.34 times as long as wide, 2.73 times the length and 1.52 times the width of pronotum, widest at apical 3/8; dorsum strongly convex, highest at basal 1/4; disc with rows of small, sparsely and irregularly set punctures, which become larger and coarser in lateral parts; intervals wide, almost flat, almost impunctate (punctures not recognizable even under a high magnification), 5th row impressed and 5th interval depressed close to base; base finely crenulate in lateral parts; humeri weakly swollen; lateral margins with rows of irregularly set punctures and finely rimmed; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with gently curved outer side about 1.69 times the length of the inner, and 0.94 times that of the apical. Mentum obtrapezoidal, coriaceous and sparsely pubescent, raised in medio-apical part, with membranous apex weakly produced; gula triangular, weakly depressed and longitudinally wrinkled, bordered by impressions. Prosternum short, apex rugulosely ridged, intercoxal area gently steeply declined to prosternal process, which is triangularly produced and depressed. Mesosternum short, anterior parts steeply inclined, posterior part rather raised in a V-shape, coarsely wrinkled. Metasternum rather short and wide, rather smooth, shallowly wrinkled, entirely, longitudinally grooved along the midline, with a pair of coarse grooves along basal margins, also with a pair of finer transverse grooves along posterior borders. Abdomen finely punctate and longitudinally wrinkled in 1st sternite to the 3rd and lateral part of the 4th, finely, somewhat transversely punctate in medial part of 4th sternite, rather closely punctate broadly in middle in anal



Figs. 30–33. *P. chifengi* sp. nov., male; 30, antenna, 31, profemur & protibia, 32, genitalia (dorsal view), 33, same (lateral view). Scales=1 mm.

sternite, with apical margin truncate at the middle.

Profemur with anterior face sharply spined at apical 2/7 and directed antero-exteriad; protibia gently curved, with interior face thinned in basal 4/7, feebly gouged in the middle, thickened and finely haired in apical 3/7; mesotibia gently curved intero-ventrad, with interior face very weakly gouged slightly behind the middle; metatibia nearly straight and feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.36, 0.24, 0.21, 0.20, 0.79; 0.61, 0.32, 0.28, 0.23, 0.78; 1.24, 0.36, 0.26, 1.02.

Male genitalia subfusiform, 2.54 mm in length, 0.53 mm in width, basal piece weakly curved in lateral view; fused lateral lobes rather nib-shaped, 0.65 mm in length, longitudinally impressed on the midline in apical part.

Body length: 9.6 mm.

F e m a l e. Unknown.



Holotype: ♂, "LAOS: Xamneua, / Ban Saleui 1350 m / 21–24. V. 2004 / leg. C.-F. LEE." (NMNS).

*Notes.* The nearest species might be *Plesiophthalmus sparsepunctatus* (PIC, 1925), originally described from Tonkin, but the type is a female. The present new species can be distinguished from the type of *P. sparsepunctatus* by the head less closely punctate, the pronotum punctate with microscopical punctures, with the medial longitudinal impression obviously weaker, the elytra with rows of punctures more sparsely set, with the lateral margins clearly bordered and visible from above, and the femoral spines sharper.

The specific name is given in honor of Dr. C.-F. LEE, in Taiwan Agriculture Research Institute, who collected the type specimen.

*Plesiophthalmus namthaensis* sp. nov.

(Figs. 6, 34–37)

Body ovate, strongly convex dorsad; central part of head, lateral parts of pronotum, basal parts of elytra, prepisternum and metasternum dark blue, major parts of pronotum and also elytra dark purple, mouth parts and claws dark brown; head weakly shining, pronotum and elytra moderately shining, legs, prepisternum and metasternum rather weakly shining, abdomen feebly, alutaceously shining; body almost glabrous, antennae, particularly five apical segments, with short fine hairs, apico-interior parts of tibiae with fine hairs, and ventral sides of tarsi with dense tufts.

*Male.* Head rather round, depressed in areas around fronto-clypeal and fronto-genal borders, very weakly covered with isodiametric microsculpture; clypeus rather obtrapezoidal, slightly convex in basal part on each side, rather steeply inclined in apical part, irregularly punctate, each puncture with a minute bent hair, fronto-clypeal border shallowly impressed and gently curved posteriad, with each lateral end bent anteriad and extending to outer margins; genae obliquely subrhombic, strongly raised outwards, sparsely punctulate, with obtuse outer margins; frons somewhat wide T-shaped, rather steeply inclined anteriad, very sparsely scattered with microscopical punctures, which become closer in areas near fronto-clypeal border and interior parts along eyes, with a shallow groove in middle; diatone 0.77 times the width of eye diameter. Eyes subreniform in dorsal view, moderately convex laterad, rather obliquely, roundly inlaid into head. Antennae with five apical segments widened, forming a flattened club, 8th segment widest, reaching basal 3/10 of elytra, ratio of the length of each segment from base to apex: 0.35, 0.18, 1.11, 0.45, 0.52, 0.52, 0.53, 0.52, 0.38, 0.40, 0.59.

Pronotum wider than long (5 : 3); apex slightly emarginate in middle, very feebly produced on both sides, grooved and finely rimmed; front angles being actually subrectangular, but seemingly obtusely angular in dorsal view, hind angles subrectangular with corners weakly produced posteriad; base very widely triangular, feebly emarginate opposite to scutellum, weakly sinuous widely in lateral parts, not bordered; sides gently declined to lateral margins, which are subparallel in basal 2/5, roundly narrowed apicad in the remaining parts, rather noticeably grooved, and finely rimmed, the rims entirely



visible from above; disc moderately, somewhat transversely convex, smooth, rather sparsely scattered with microscopical punctures. Scutellum widely subcordate, feebly convex broadly in antero-medial part, feebly covered with isodiametric microsculpture, weakly, microscopically ruguloso-punctate.

Elytra subovate, 1.25 times as long as wide, 3.01 times the length and 1.44 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal 1/3; disc with rows of small and irregularly set punctures, which are often finely striated; intervals rather wide, slightly convex, scattered with small punctures, which are 1/3–1/4 times the diameter of those in rows; areas in 5th and 6th intervals gently depressed close to base; base finely crenulate in interior halves (except for parts around scutellum); humeri gently swollen; lateral margins grooved, feebly explanate, and finely rimmed, the rims entirely visible from above; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with feebly curved outer side about 1.60 times the length of inner, and 0.72 times that of apical. Mentum rather narrow and obtrapezoidal, finely pubescent, strongly raised in medio-apical part, grooved on each side; gula triangular, somewhat alutaceous, with impressions along lateral margins. Prosternum short, with apex slightly rugosely rimmed, intercoxal space gently grooved in medial part, with prosternal process rather wide in basal part, abruptly narrowed and pointed in apical part. Mesosternum very short, anterior part depressed, posterior part almost of the same level as metasternum, with steep triangular declivity opposite to prosternal process, upper margin of the declivity slightly ridged. Metasternum rather short and narrow, feebly convex in postero-lateral parts, obliquely wrinkled in antero-lateral parts, scattered with small punctures, with longitudinal groove along the midline, also with a pair of transverse grooves along posterior borders. Abdomen finely punctate and longitudinally wrinkled in 1st and 2nd sternites, basal half of 3rd and lateral parts of 4th, finely, somewhat transversely punctate in medial parts of 2nd to 4th sternites, anal sternite rather closely punctate broadly in middle, with apical margin emarginate in the middle.

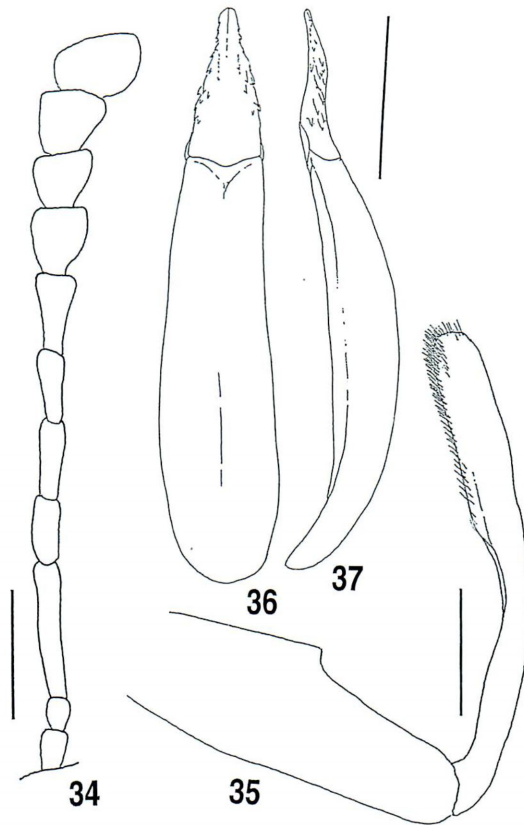
Profemur with anterior face sharply spined at apical 3/7 and directed antero-exteriad; protibia gently curved, with interior face thinned in basal 4/7, feebly gouged and twisted in the middle, thickened and finely haired in apical 3/7; mesotibia gently curved intero-ventrad, with interior face very weakly gouged slightly behind the middle; metatibia nearly straight and feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.38, 0.22, 0.20, 0.14, 0.76; 0.43, 0.27, 0.22, 0.19, 0.82; 0.97, 0.26, 0.21, 0.88.

Male genitalia elongated subfusiform, 3.47 mm in length, 0.63 mm in width, basal piece gently curved in lateral view; fused lateral lobes rather nib-shaped, 0.98 mm in length, raspish in antero-lateral parts, weakly prolonged in apical part.

Body length: 10.8 mm.

F e m a l e. Unknown.

Holotype: ♂, "LAOS, Louang Namtha pr., / 21°09'N 101°19'E. / Namtha→Muang Sing, / 5–31. V. 1997, 900–1200 m, / Vít KUBÁŇ leg." (NMPC from BEČVÁŘ



Figs. 34–37. *P. namthaensis* sp. nov., male; 34, antenna, 35, profemur & protibia, 36, genitalia (dorsal view), 37, same (lateral view). Scales=1 mm.

Collection).

*Notes.* This new species resembles in general features and coloration a male of *Plesiophthalmus yucae* MASUMOTO, 2000, originally described from N. Thailand, but can be distinguished from the latter by the smaller body, the antennae obviously widened in apical parts, the eyes obviously smaller with diatone 0.77 times the width of eye diameter (about 0.3 times that in *P. yucae*), the elytra minutely punctate, the profemur more acutely spined, the protibia slightly twisted, and male genitalia slenderer with lateral lobes noticeably raspish in lateral parts.

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



*Plesiophthalmus gedensis* sp. nov.

(Figs. 7, 38–41)

Body ovate, strongly convex dorsad; piceous in most part of body, posterior part of head, pronotum, scutellum and elytra with feeble blassy tinge, surrounding parts of elytral punctures with very feeble coppery tinge, each apical part of antennal segments, tarsi and claws brownish black to dark brown, mouth parts and trochanters yellowish brown to dark reddish brown, hairs on tibiae and tufts of hairs on tarsi brownish yellow; anterior parts of head weakly, feebly sericeously shining, posterior part of head, pronotum and femora moderately shining, scutellum and elytra strongly, rather metallicly shining, tibiae rather weakly shining, ventral surface weakly, rather alutaceously *shining*; body almost glabrous, antennae with short fine hairs, apico-interior parts of tibiae with fine hairs, and ventral sides of tarsi with dense tufts of hairs.

**Male.** Head rather transversely elliptical, feebly convex, weakly covered with isodiametric microsculpture in anterior parts; clypeus rather transversely hexagonal, slightly convex in middle, gently inclined in apical part, rather closely, irregularly punctate, each puncture with a minute bristle, fronto-clypeal border straight and deeply impressed with each lateral end bent anteriad and extending to outer margins; genae gently raised outwards, strongly depressed in areas before eyes, rugoso-punctate, with rounded outer margins; frons somewhat bold I-shaped, feebly convex, irregularly scattered with small punctures, which become closer in posterior part; diatone 0.77 times the width of eye diameter. Eyes somewhat comma-shaped in dorsal view, moderately convex laterad, rather obliquely, roundly inlaid into head. Antennae subfiliform, ratio of the length of each segment from base to apex: 0.32, 0.20, 0.61, 0.44, 0.45, 0.44, 0.43, 0.38, 0.34, 0.32, 0.47.

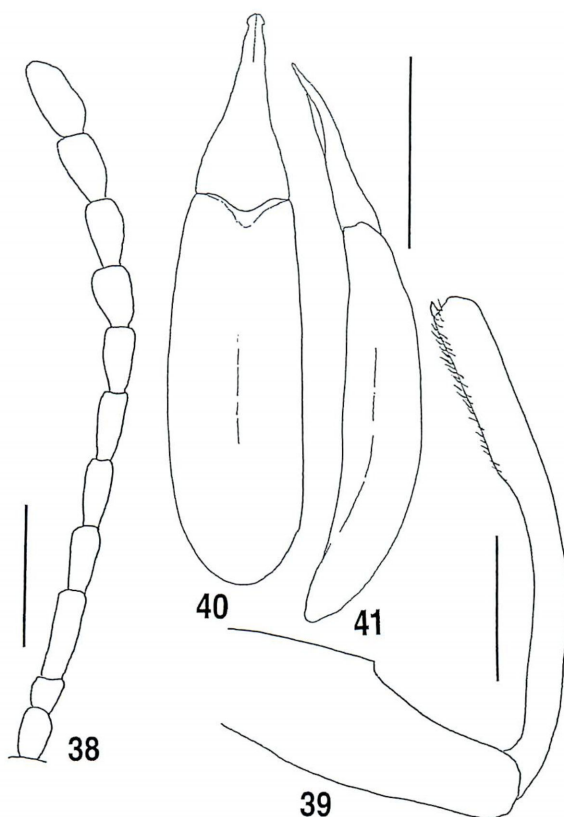
Pronotum 1.89 times as wide as long; apex gently emarginate, grooved and rather boldly rimmed, the groove interrupted at the middle; front angles acutely angular, hind angles slightly obtusely angular in dorsal view; base feebly produced, emarginate opposite to scutellum, weakly bisinuous on each side, not bordered; sides gently declined to lateral margins, which are subparallel-sided in basal 2/5, roundly narrowed apicad in the remaining parts, rather noticeably grooved, and finely rimmed, the rims entirely visible from above; disc moderately, somewhat transversely convex, very weakly impressed on the midline, rather closely, irregularly scattered with small punctures, which are of the same size as those on frons. Scutellum widely triangular with gently rounded sides, feebly depressed in postero-medial part, almost smooth, sparsely scattered with microscopical punctures, with outer margins very weakly serrate.

Elytra subovate, 1.35 times as long as wide, 3.84 times the length and 1.61 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal 1/4; disc with rows of small and irregular-sized punctures; intervals rather wide, flat and almost smooth; 6th intervals depressed close to base; humeri gently swollen; lateral margins bordered by irregularly shaped punctures and finely rimmed, the rims visible from above almost in all the area except near apices due to the sides lying over the rims



near apices; apices feebly produced.

Terminal segment of maxillary palpi subsecuriform, with feebly curved outer side about 1.58 times the length of inner, and 0.89 times that of apical. Mentum obtrapezoidal, feebly covered with microsculpture, raised in medio-apical part, obliquely grooved, punctulate and haired on each side, with apical part membranous and produced; gula triangular, somewhat alutaceous, with impressions along lateral margins. Prosternum short, rimmed along apex, gently, longitudinally depressed in intercoxal area, with prosternal process boldly triangularly produced, not depressed as in some other species. Mesosternum very short, anterior part strongly depressed, posterior part almost of the same level as metasternum, with steep triangular declivity opposite to prosternal process. Metasternum rather wide, longitudinally grooved on the midline, gently, somewhat transversely convex on each side, shallowly, obliquely wrinkled, sparsely scattered with minute punctures, with a pair of transverse grooves along posterior borders. Abdomen finely punctate, each with a fine bent hair; 1st and 2nd sternites, and lateral parts of the



Figs. 38-41. *P. gedensis* sp. nov., male; 38, antenna, 39, profemur & protibia, 40, genitalia (dorsal view), 41, same (lateral view). Scales=1 mm.

3rd and 4th longitudinally wrinkled; anal sternite with apical margin finely impressed, and very feebly emarginate in the middle.

Profemur with anterior face rather sharply spined at apical 1/3 and directed antero-exteriad; protibia gently curved, with interior face thinned in basal 4/7, feebly gouged in middle, thickened and rather sparsely and finely haired in apical 3/7; mesotibia gently curved intero-ventrad, with interior face very weakly gouged slightly behind the middle; metatibia nearly straight and feebly thickened apicad; ratios of the lengths of pro- (all segments of the protarsi are lacking in the type specimen), meso- and metatarsal segments: -, -, -, -, -; 0.37, 0.32, 0.28, 0.29, 0.88; 0.68, 0.32, 0.27, 0.98.

Male genitalia short subfusiform, 2.87 mm in length, 0.61 mm in width, basal piece weakly curved in lateral view; fused lateral lobes 0.96 mm in length, gently prolonged in anterior part, with apices with small semicircular modification.

Body length: 11.8 mm.

F e m a l e. Unknown.

Holotype: ♂, "W. Java prov., / Mt. Gede res. / VII 1996, 1200m / St. Jákl leg." (NMPC from BEČVÁŘ Collection). Paratype: 1 ex., "INDONESIA: E Java / Ijend pl. Nat P 1800 m / Sodong 26.-27. II. 1994 / BOLM leg." (SMNS).

*Notes.* This new species rather resembles *Plesiophthalmus javaensis* MASUMOTO, 1999, originally described from "Ost-Java, Idjen", but can be distinguished from the latter by the pronotum smaller compared with the elytra, scattered with larger punctures, the elytral intervals flat and almost impunctate, the protibiae with the interior face thickened and rather sparsely and finely haired in apical 3/7, and the male genitalia with lateral margins of parameres not rasp-like, and the apices semicircularly modified.

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

*Plesiophthalmus brantlovai* sp. nov.

(Figs. 8, 42-45)

Body ovate, strongly convex dorsad; posterior half of head greenish blue, pronotum dark blue, partly with yellowish green tinge in major central parts, scutellum piceous with feebly purplish tinge, elytra dark purple partly with dark greenish blue, and with dark golden tinge near humeral parts under certain light, basal parts of antennae, mouth parts, gula, trochanters, membranous parts of abdomen, anal sternite, tibiae and claws dark reddish brown, hairs on antennae and legs yellowish brown; anterior part of head and tibiae weakly shining, posterior part of head, pronotum, scutellum and elytra strongly, rather metallically shining, femora moderately shining, central part of prosternum (intercoxal space), posterior part of mesosternum, major central parts of metasternum rather strongly, vitreously shining, lateral parts of metasternum and abdomen somewhat alutaceously shining; body almost glabrous, apical parts of antennal segments with short fine hairs, apico-interior parts of tibiae with fine hairs, and ventral sides of tarsi with dense tufts.



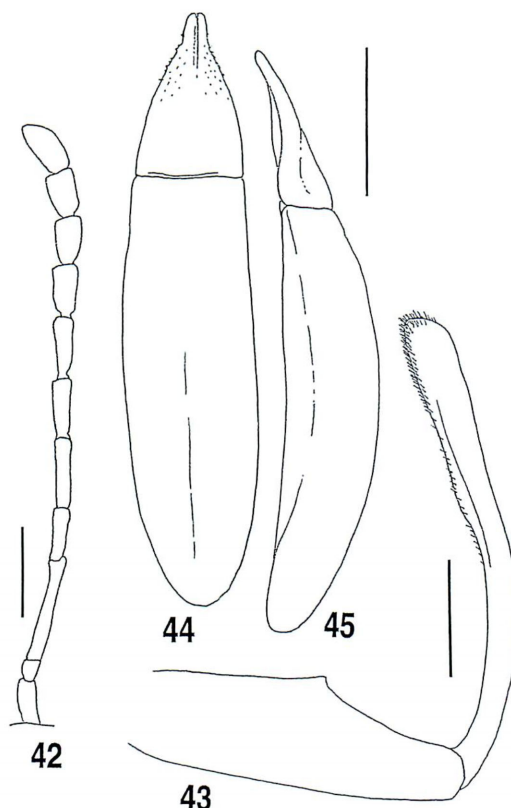
**Male.** Head rather transversely elliptical, depressed in areas around fronto-clypeal and fronto-genal borders; clypeus rather transversely hexagonal, very weakly covered with isodiametric microsculpture, transversely convex in middle, gently inclined apicad, rather closely, irregularly punctate, each puncture with a minute bent hair, fronto-clypeal border widely U-shaped and extending to outer margins; genae obliquely subrhombic, strongly raised outwards, sparsely scattered with minute punctures, with outer margins obtusely produced; frons somewhat wide T-shaped, slightly convex in middle, gently inclined antieriad, sparsely, irregularly scattered with punctures, very weakly, somewhat longitudinally impressed between eyes, with area behind fronto-clypeal border impunctate; diatone about 0.63 times the width of eye diameter. Eyes rather comma-shaped in dorsal view, rather strongly convex laterad, roundly inlaid into head. Antennae slender and subfiliform, ratio of the length of each segment from base to apex: 0.48, 0.20, 1.19, 0.46, 0.71, 0.52, 0.50, 0.50, 0.49, 0.42, 0.53.

Pronotum wider than long (5:3), widest at base; apex nearly straight, finely grooved and rimmed; front angles actually rectangular in lateral view, but seemingly acute in dorsal view, hind angles subrectangular, slightly produced posteriad; base weakly produced, feebly emarginate opposite to scutellum, weakly bisinuous on both sides, not bordered; sides rather steeply inclined in anterior parts, moderately so in posterior parts, with lateral margins rather noticeably grooved, and finely rimmed, the rims entirely visible from above; disc moderately, somewhat transversely convex, rather closely scattered with shallow microscopical punctures. Scutellum subequilateral triangular with slightly rounded sides, feebly convex, almost smooth, very sparsely scattered with minute punctures.

Elytra subovate, 1.23 times as long as wide, 3.10 times the length and 1.56 times the width of pronotum, widest at basal 4/9; dorsum strongly convex, highest at basal 3/10; disc with rows of small, rather closely set and irregular-sized punctures, which are often connected with one another by fine grooves; intervals rather wide, feebly convex, scattered with microscopical punctures and very weakly transversely aciculate sculpture visible under high magnification; 5th and 6th intervals depressed close to base; humeri rather noticeably swollen; lateral margins bordered by elongated punctures, slightly explanate and finely rimmed, the rims almost entirely visible from above except for apical parts, where the rims are feebly covered by produced sides; apices rounded.

Terminal segment of maxillary palpi subsecuriform, with nearly straight outer side about 1.67 times the length of the inner, and almost of the same length as the apical. Mentum rather obtrapezoidal and convex in antero-medial part, shagreened and pubescent in lateral parts, with apex membranous and produced; gula rather parabolic, depressed, somewhat alutaceous, and impressed along lateral margins. Prosternum short, with apex V-shaped, and coarsely rimmed, intercoxal space longitudinally, weakly depressed, with prosternal process triangular, gently depressed, bordered along outer margin. Mesosternum short, strongly depressed in anterior part, raised posterior part, with steep triangular concavity opposite to prosternal process. Metasternum wide, longitudinally grooved along the midline, gently raised posteriad on both sides, scattered





Figs. 42–45. *P. brantlovai* sp. nov., male; 42, antenna, 43, profemur & protibia, 44, genitalia (dorsal view), 45, same (lateral view). Scales = 1 mm.

with shallow, feebly transverse punctures, rugoso-punctate near lateral margins. Abdomen longitudinally wrinkled in 1st and 2nd sternites, basal half and lateral parts of the 3rd and lateral part of the 4th, finely punctate in medial parts of 1st sternite and whole parts of 2nd to anal sternites, and finely impressed along apical margin of anal sternite.

Profemur with anterior face rather sharply spined at apical 1/3 and directed antero-exteriad; protibia gently curved, with interior face thinned in basal half, very feebly gouged and twisted in the middle, thickened and finely haired in apical 2/5; mesotibia gently curved intero-ventrad, with interior face very weakly gouged slightly before the middle; metatibia nearly straight and very feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.57, 0.26, 0.22, 0.20, 1.02; 0.68, 0.40, 0.25, 0.20, 1.18; 1.29, 0.36, 0.24, 1.12.

Male genitalia subfusiform, 3.72 mm in length, 0.79 mm in width, basal piece feebly curved in lateral view; fused lateral lobes rather nib-shaped, 1.23 mm in length, feebly raspy in antero-lateral parts, weakly prolonged in apical part.

Body length: 12.3 mm.

F e m a l e. Unknown.

Holotype: ♂, "N. VIETNAM, SaPa / 11-19. VI. 1990 / BRANTLOVÁ lgt." (NHMB).

*Notes.* In general features and coloration, this new species resembles *Plesiophthalmus subovatus* MASUMOTO, 1990, originally described from N. Thailand, but can be distinguished from the latter by larger body with wider diatone (0.5 times the width of eye diameter in *P. subovatus*), the pronotum wider and less strongly narrowed apicad, with the disc smoother, the scutellum equilaterally triangular (subcordate in *P. subovatus*), the elytra with intervals smoother, and the male genitalia obviously slenderer.

The specific name is given in honor of the collector of the type specimen.

*Plesiophthalmus taibaishanensis* sp. nov.

(Figs. 9, 46-49)

Body ovate, strongly convex dorsad; apical parts of head dark blue, major posterior part of head, pronotum and major anterior part of scutellum deep purple, elytra reddish purple, posterior parts of 8th interval and whole of 9th violet, blue, green or yellow, prepisterna purple, pro- and mesofemora with apical halves of ventral sides, metasternum, abdomen with 1st and 2nd sternites, and major parts of 3rd and 4th (except for postero-medial parts) dark blue, postero-medial parts of 3rd and 4th and whole of the 5th black with feeble golden tinge, apical parts of antennae, ventral side of head, pro- and mesosterna, basal parts of profemora, whole tibiae black, basal parts of antennae and mouth parts brownish black, tarsi blackish brown, hairs on antennae almost black, tufts of hairs on ventral sides of tarsi brownish yellow; head, pronotum and scutellum strongly, metallicly shining, elytra rather strongly, metallicly shining, femora and basal halves of tibiae moderately shining, apical halves of tibiae and tarsi weakly shining, ventral side of head, pro- and mesosterna almost mat, metasternum and abdomen weakly, rather alutaceously shining; body almost glabrous, apical segments of antennae with short fine hairs, apico-interior parts of tibiae with fine hairs, and ventral sides of tarsi with dense tufts of hairs.

M a l e. Head subhexagonal; clypeus transversely hexagonal, transversely convex in middle, gently inclined apicad, closely, irregularly punctate, each puncture with a minute bent hair, fronto-clypeal border slightly bulged in middle and rather strongly impressed in lateral parts, with each end bent anteriad and extending to outer margins; genae obliquely subrhombic, strongly raised outwards, sparsely scattered with minute punctures, with outer margins obtusely produced; frons subquadrate, gently inclined anteriad, with a transverse impression in middle, sparsely, irregularly scattered with minute punctures, which are about a half width of those on clypeus; diatone about 1.20 times the width of eye diameter. Eyes somewhat reniform in dorsal view, moderately convex laterad, obliquely inlaid into head. Antennae subfiliform, feebly thickened apicad, reaching basal 1/3 of elytra, ratio of the length of each segment from base to apex: 0.55, 0.20, 0.91, 0.51, 0.68, 0.62, 0.56, 0.51, 0.47, 0.46, 0.60.



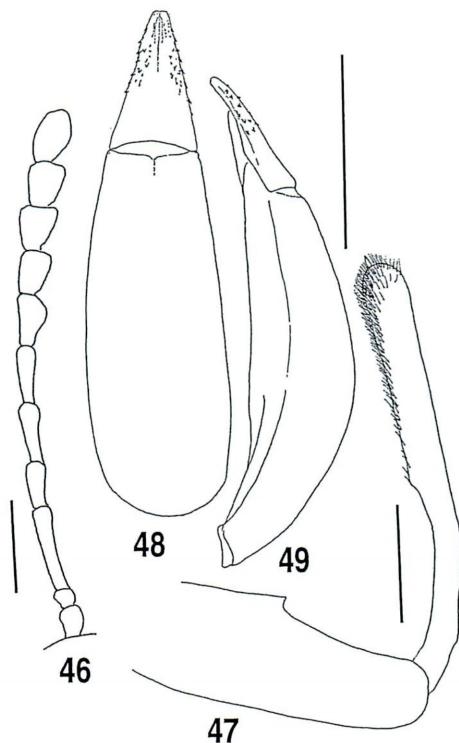
Pronotum 1.85 times as wide as long (5 : 3), widest at base; apex feebly produced in middle, very slightly sinuous on each side, finely grooved and rimmed; front angles actually rectangular in lateral view, but invisible from above, hind angles slightly obtuse; base feebly produced, slightly emarginate opposite to scutellum, weakly bisinuous on both sides, not bordered; sides steeply inclined, particularly in anterior parts, moderately so in posterior parts, with lateral margins finely grooved and rimmed, the rims barely visible from above; disc strongly convex, scattered with microscopical punctures, which are smaller ( $1/3$  to  $1/4$  times the width of diameter) than those on head. Scutellum subequilateral triangular with slightly rounded sides, feebly convex, weakly covered with isodiametric microsculpture, scattered with small (about twice the width of diameter of those on head) punctures.

Elytra subovate, 1.54 times as long as wide, 3.77 times the length and 1.64 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal  $1/5$ ; disc punctate grooved, the punctures small and somewhat irregularly set, the grooves shallow, 5th groove reaching base; intervals feebly convex, micro-aciculate, sparsely scattered with microscopical punctures; humeri rather longitudinally ridged; lateral margins bordered by elongated punctures and finely rimmed, the rims visible from above in basal  $4/5$ , the remaining parts invisible due to the convex sides feebly overlying the rims; apices simply rounded.

Terminal segment of maxillary palpi subsecuriform, with weakly curved outer side about 1.53 times the length of the inner, and slightly shorter than the apical. Mentum obtrapezoidal and longitudinally convex in antero-medial part, sparsely scattered with punctures, depressed in lateral parts, membranous and produced in apical parts, ridged along lateral margins; gula triangular, almost smooth in anterior part, rather alutaceous and longitudinally wrinkled in basal part, strongly impressed along lateral margins. Prosternum short, rather deeply, longitudinally grooved, with apex wide V-shaped and coarsely rimmed, prosternal process bluntly produced and rather strongly depressed. Mesosternum rather strongly depressed in anterior part, gently raised and rather closely punctate in posterior part, with moderate declivity in the middle opposite to prosternal process. Metasternum rather wide, longitudinally impressed along the midline in apical  $3/4$ , weakly convex in lateral parts, shallowly, obliquely wrinkled, sparsely scattered with shallow microscopical punctures, with a pair of deep transverse grooves along the posterior borders. Abdomen finely punctate, mostly longitudinally, partly obliquely wrinkled in 1st sternite, lateral parts of the 2nd, basal and lateral parts of the 3rd and also the 4th, and simply scattered with small punctures and finely impressed along apical margins in anal sternite.

Profemur with anterior face sharply spined at apical  $1/3$  and directed antero-exteriad; protibia gently curved, with interior face thinned in basal  $2/5$ , and thickened and finely haired in apical  $3/5$ ; mesotibia gently curved intero-ventrad, with interior face very weakly gouged in basal  $3/7$ ; metatibia nearly straight and very feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.60, 0.26, 0.24, 0.21, 0.89; 0.59, 0.27, 0.22, 0.19, 0.98; 0.87, 0.32, 0.22, 0.91.





Figs. 46-49. *P. taibaishanensis* sp. nov., male; 46, antenna, 47, profemur & protibia, 48, genitalia (dorsal view), 49, same (lateral view). Scales = 1 mm.

Male genitalia short fusiform, 2.52 mm in length, 0.60 mm in width, basal piece rather strongly curved in lateral view; fused lateral lobes rather isosceles triangular, 0.67 mm in length, feebly raspish in antero-lateral parts, longitudinally impressed in apical part.

Body length: 11.7 mm.

Female. Unknown.

Holotype: ♂, "CHINA, Shanxi 1200 m / Taibaishan, 20 km S / Wangzhuangbu, 1988, / BOLM lgt., 23.-26. Jul." (NMPC from BEČVÁŘ Collection).

Notes. This new species resembles *Plesiophthalmus crescentus* MASUMOTO, 1991, originally described from "Montes Mauson, Tonkin" in general features and coloration, but can be distinguished from the latter by the larger body with the wider diatone (0.5 times in *P. crescentus*), the pronotum shorter and more strongly narrowed apicad, the scutellum wider and obviously finely punctate, intervals of the elytra with noticeably aciculate sculpture, the legs slenderer with profemoral spines sharper, the male genitalia shorter and strongly curved, and the elytra lacking lateral bluish patches.

The specific name is given after the type locality.

*Plesiophthalmus kucerae* sp. nov.

(Figs. 10, 50–53)

Body slightly elongated ovate, strongly convex dorsad; antennae, ventral side of head, coxae and trochanters black to feebly brownish black, apical parts of head dark blue, major posterior part of head violet, pronotum and scutellum deep purple, elytra reddish purple with lateral margins finely golden brown to dark blue, pro- and mesepisterna, legs except for tarsi and claws dark blue to dark violet, metasternum dark greenish blue, abdomen with 1st to 4th sternites dark blue to dark violet, 5th sternite piceous, epipleura golden reddish green to dark blue, claws yellowish brown, hairs on antennae, femora and tibiae brownish black, tufts of hairs on tarsi dark brown; head with anterior parts weakly, rather sericeously shining, major posterior parts strongly shining, pronotum and scutellum strongly, metallicly shining, elytra gently, rather alutaceously shining, ventral side of head mat, propisterna weakly, rather alutaceously shining, metasternum rather weakly, feebly alutaceously shining, mesepisterna moderately shining, abdomen with 1st and 2nd sternites, and major basal part of the 3rd gently, rather alutaceously shining, apical part of 3rd, 4th and anal sternites moderately shining; body almost glabrous, apical parts of antennae with short fine hairs, apico-interior parts of tibiae with fine hairs, and ventral sides of tarsi with dense tufts of hairs.

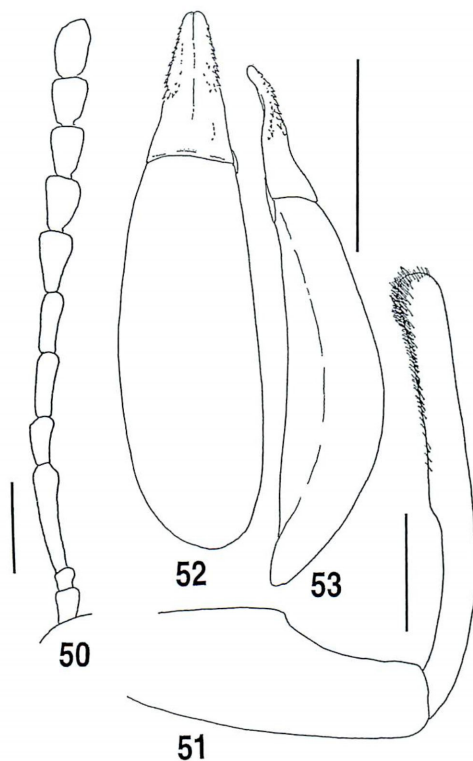
**Male.** Head transversely oval; clypeus transversely hexagonal, rather strongly convex in middle, rather steeply inclined apicad, very weakly covered with isodiametric microsculpture, closely, irregularly punctate, sparsely intermixed with microscopical punctures, fronto-clypeal border straight, deeply impressed, with each end bent anteriad and extending to outer margins; genae obliquely subelliptical, strongly raised outwards, weakly covered with isodiametric microsculpture, sparsely scattered with minute punctures, with outer margins roundly produced; frons somewhat bold T-shaped, rather steeply inclined anteriad, obliquely acuminate in corners near genae, sparsely, irregularly scattered with minute punctures, which are about 1/4 times the width of those on clypeus; diatone about 1.11 times the width of eye diameter. Eyes somewhat reniform in dorsal view, rather strongly convex laterad, roundly inlaid into head. Antennae subfiliform, feebly thickened apicad, reaching basal 2/5 of elytra, ratio of the length of each segment from base to apex: 0.48, 0.21, 1.18, 0.53, 0.69, 0.63, 0.61, 0.59, 0.48, 0.49, 0.63.

Pronotum 1.85 times as wide as long (5 : 3), widest at base; apex feebly produced in middle, very slightly sinuous on each side, finely grooved and rimmed; front angles actually rectangular in lateral view, but invisible from above, hind angles slightly obtuse; base feebly produced, slightly emarginate opposite to scutellum, weakly bisinuous on both sides, not bordered; sides steeply inclined particularly in anterior parts, moderately so in posterior parts, with lateral margins finely grooved and rimmed, the rims barely visible from above; disc strongly convex, scattered with round, microscopical punctures, which are smaller (1/3 to 1/4 times the width of diameter) than those on head. Scutellum subequilateral triangular with slightly rounded sides, feebly depressed against elytra, scattered with small punctures, which are slightly larger than those on pronotum

and rather ill-shaped.

Elytra subovate, 1.54 times as long as wide, 3.77 times the length and 1.64 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal 1/5; disc punctate grooved, the punctures small and somewhat irregularly set, the grooves shallow, 5th groove reaching base; intervals feebly convex, micro-aciculate, sparsely scattered with microscopical punctures; humeri rather longitudinally ridged; lateral margins bordered with elongated punctures and finely rimmed, the rims visible from above in basal 4/5 (the sides are slightly produced over the lateral margins, and the rims are invisible from above in apical 1/5); apices simply rounded.

Terminal segment of maxillary palpi subsecuriform, with weakly curved outer side about 1.73 times the length of the inner, and 0.79 times the length of apical. Mentum rather elongated obtrapezoidal and longitudinally convex in antero-medial part, somewhat sericeous and rugoso-punctate, depressed in postero-lateral parts, membranous and produced in the apical parts, rimmed along postero-lateral margins; gula with major parts under prosternum. Prosternum short, with apex widely emarginate and rimmed, interocular space gradually inclined posteriad, gently, longitudinally depressed, proster-



Figs. 50–53. *P. kucerai* sp. nov., male; 50, antenna, 51, profemur & protibia, 52, genitalia (dorsal view), 53, same (lateral view). Scales = 1 mm.



nal process triangularly produced. Mesosternum very short, rugulose, strongly depressed in anterior part, almost vertically, triangularly declivous in middle opposite to prosternal process, upper edges of the declivity pointed, raised in posterior part, with a moderate inclined triangular concavity at the middle. Metasternum rather narrow, longitudinally impressed along the midline in apical 3/4, weakly convex in posterior parts on each side, shallowly, obliquely wrinkled, scattered with microscopical punctures, with a pair of deep transverse grooves along the posterior borders. Abdomen finely punctate, longitudinally, partly obliquely wrinkled in 1st sternite to the 3rd and lateral parts of the 4th, smooth in major central part of the 4th and whole of anal sternite; anal sternite impressed along outer margin, with apex feebly truncate.

Profemur with anterior face rather sharply spined at apical 1/3 and directed antero-exteriad; protibia gently curved, with interior face thinned in basal 3/7, and thickened and finely haired in apical 4/7; mesotibia gently curved intero-ventrad, with interior face very weakly gouged in basal 3/7; metatibia slightly curved and very feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.42, 0.22, 0.17, 0.16, 0.78; 0.62, 0.34, 0.28, 0.22, 0.93; 1.22, 0.46, 0.23, 1.03.

Male genitalia short fusiform, 2.68 mm in length, 0.63 mm in width, basal piece moderately curved in lateral view; fused lateral lobes rather isosceles triangular, 0.67 mm in length, finely raspish in antero-lateral parts, longitudinally impressed in apical part.

Body length: 10.6–12.4 mm.

**F e m a l e.** Body relatively large, antennae shorter and reaching basal 1/4 of elytra, legs not modified.

**Holotype:** ♂, "CHINA, YUNNAN pr. / LIJIANG, 1,800 m / 23. VI.–21. VII. / 26,53N; 100,18E / lgt. S. BEČVÁŘ, 1992". (NMPC from BEČVÁŘ Collection). **Paratypes:** 4 exs., the same data as for the holotype; 4 exs., "China – Yunnan / Lijiang, 11. 6.–15. 6. 1995 / E. KUČERA leg."

**Notes.** This new species resembles the preceding new species *Plesiophthalmus taibaishanensis* sp. nov., but can be distinguished from the latter by the slightly slenderer body with the antennae slenderer, the pronotum narrower, particularly at the apex, the scutellum smaller and feebly depressed, the elytra with intervals not so convex, the protibia less sharply spined, the male genitalia slenderer, and the lateral margins of elytra without iridescent stribes.

The specific name is given in honor of Mr. E. KUČERA who collected the type specimens.

*Plesiophthalmus sawaiae* sp. nov.

(Figs. 11, 54–57)

Body short ovate, strongly convex dorsad, rather hunchbacked; anterior part of head golden green, major part of head dark purple, postero-central part of head dark green, pronotum with a pair of large ovate iridescent patches, elytron with a round

iridescent patch in humeral part, and also with a larger iridescent elongated patch lying from basal 1/3 to near apical part, ventral sides mostly dark greenish blue, posterior part of metepisternum and outer margin of epipleura deep violet, antennae, mouth parts and tarsi brownish black with feeble bluish tinge, hairs on antennae and legs almost black; posterior part of head and scutellum weakly shining, anterior part of head and pronotum strongly, metallicly shining, elytra gently, feebly sericeously shining, femora and basal halves of tibiae rather strongly and metallicly shining, apical halves of tibiae and tarsi gently shining, ventral side of head almost mat, pro- and mesosterna gently, somewhat metallicly shining, metasternum and abdomen rather weakly, metallicly shining; body almost glabrous, apical segments of antennae with short fine hairs, apico-interior parts of tibiae with fine hairs, ventral sides of tarsi with dense tufts.

**Male.** Head transversely subelliptical, feebly covered with isodiametric microsculpture, rather closely, irregularly punctate; clypeus semicircular, fronto-clypeal border gently curved and grooved, reaching outer margins; genae obliquely subrhombic, gently raised outwards, sparsely punctate, with obtuse outer margins; frons rather wide X-shaped, feebly convex in middle, gently inclined anteriorly, weakly depressed near neck; diatone about 1.2 times as wide as diameter of an eye. Eyes somewhat comma-shaped in dorsal view, strongly convex laterad, roundly, obliquely inlaid into head. Antennae with five apical segments noticeably widened and forming a flattened club, two segments behind the clubbed ones (6th and 7th segments) feebly widened apicad, reaching basal 2/5 of elytra, ratio of the length of each segment from base to apex: 0.41, 0.14, 0.91, 0.48, 0.53, 0.51, 0.48, 0.57 (widest), 0.39, 0.37, 0.56.

Pronotum subtrapezoidal in dorsal view, 1.60 times wider than long; apex nearly straight, bordered and finely rimmed; front angles obtuse angular, barely visible from above, hind angles obtusely angular; base slightly produced, feebly emarginate opposite to scutellum, gently sinuous on each side, bordered by finely punctate stria; sides steeply declined to lateral margins, which are gently rounded and widest at base, irregularly punctate grooved and finely rimmed, the rims barely visible from above; disc strongly convex, smooth, scattered with small punctures, these in lateral parts becoming larger, closer and coarser. Scutellum equilateral triangular with gently rounded sides, flat, irregularly scattered with small punctures, which are almost of the same size as those on pronotum.

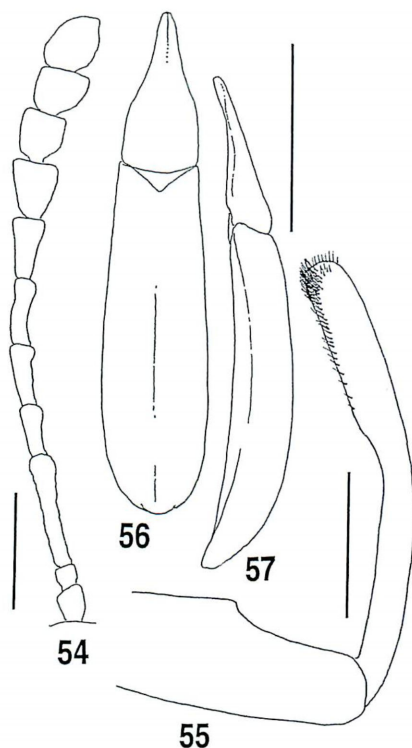
Elytra subovate, 1.23 times as long as wide, 3.04 times the length and 1.45 times the width of pronotum, widest at apical 2/5; dorsum strongly convex, highest at basal 1/4; disc with rows of punctures, which are often connected with one another by fine striae, and become finer and closer in lateral and posterior parts, with a pair of transverse concavities across outer part of the 4th to 7th intervals at basal 1/4; intervals nearly flat, micro-aciculate and scattered with minute puncture, sutural intervals gently ridged in medial and posterior parts, 5th interval depressed close to base; base crenulate; humeri weakly swollen; lateral margins coarsely punctate-grooved and finely rimmed; apices simply rounded.

Terminal segment of maxillary palpi subsecuriform, with gently curved outer side



about 1.82 times the length of the inner, and of the same length as that of the apical. Mentum semicircular in major basal part, raised in intero-apical part, covered with isodiametric microsculpture, ruguloso-punctate and pubescent in posterior part, with apex narrowly produced and membranous; gula triangular, covered with isodiametric microsculpture, wrinkled, bordered by impressions. Prosternum short, rugulose and sparsely pubescent, with apex widely emarginate and coarsely rimmed, interocular space longitudinally grooved and gently declined to prosternal process, which is subcordately produced and depressed. Mesosternum short, coarsely rugoso-punctate, strongly depressed in anterior part, strongly raised in posterior parts, steeply emarginate at the border of anterior part, both sides of emargination pointed. Metasternum rather narrow, longitudinally impressed on the midline in apical  $3/4$ , weakly raised in postero-lateral parts, obliquely wrinkled, sparsely scattered with small, rather transverse, haired punctures. Abdomen finely punctate, longitudinally wrinkled in 1st to 3rd sternites and basal part of the 4th, ruguloso-punctate in medial part of the 4th; anal sternite rather closely punctate, with apical margin very finely bordered and truncate in the middle.

Profemur with anterior face bluntly spined at apical  $1/3$  and directed antero-



Figs. 54–57. *P. sawaiae* sp. nov., male; 54, antenna, 55, profemur & protibia, 56, genitalia (dorsal view), 57, same (lateral view). Scales=1 mm.



exteriad; protibia gently curved, with interior face thinned in basal 4/7, weakly gouged slightly before the middle, thickened and finely haired in apical 2/5; mesotibia gently curved intero-ventrad, with interior face very weakly gouged slightly behind the middle; metatibia slightly curved and feebly thickened apicad; ratios of the lengths of pro-, meso- and metatarsal segments: 0.24, 0.21, 0.20, 0.19, 0.76; 0.62, 0.24, 0.22, 0.21, 0.81; 0.96, 0.33, 0.27, 0.90.

Male genitalia short fusiform, 2.54 mm in length, 0.52 mm in width, basal piece weakly curved in lateral view; fused lateral lobes 0.76 mm in length, rather abruptly narrowed in apical 3/5, longitudinally impressed on the midline in anterior 2/3.

Body length: 9.0–11.3 mm.

Female. Larger in size, antennae and legs shorter, protibiae not modified.

Holotype: ♂, "Phuping Palace / Chiang Mai City / Chiang Mai Prov. / N. Thailand / 20–21. V. 1985 / M. SAWAI leg." (NSMT). Paratype: 1 ex., "THAI, Mae Hong Son Pr. / 19°27'N, 98°20'E, 1500 m / Soppong, 7–12. 5. 1996 / lgt. Vit KUBÁŇ"; 1 ex., "Thai, 28–31/5 1995 / 19.27N 98.20E / Soppong 1500 m / Vit KUBÁŇ"; 1 ex., "NW – THAILAND, 7–12. 5. / Mae Hong Son distr. 1996 / Soppong - pai; 19°27', 98°20' / J. Horak lgt.; 1500 m; 1 ex., "Doi Pui, 1400- / 1500 m, Chiang Mai, / 18–VI–1983 / T. SHIMOMURA leg."

Notes. This new species closely resembles *Plesiophthalmus perpulchrus* (PIC, 1930), originally described from Yunnan, and also *P. pici* MASUMOTO, 1990. The present authors therefore prepared a key to the species of this group.

The specific name is given in honor of Ms. M. SAWAI, who collected the type specimen of the present new species.

#### Key to the Species of *Plesiophthalmus perpulchrus* and its Relatives

- 1(4) Elytra with posterior iridescent patch elongated triangular.
- 2(3) Body larger (ca.11 mm); diatone 1.6 times the width of eye diameter in male; protibia with interior face thinned in basal 3/5; Yunnan, W. Nepal.....  
..... *Plesiophthalmus perpulchrus* (PIC, 1930)
- 3(2) Body smaller (9.0–9.5 mm); diatone 1.2 times the width of eye diameter in male; protibia with interior face thinned in basal 4/7; N. Thailand.....  
..... *P. sawaiae* sp. nov.
- 4(1) Elytra with posterior iridescent patch ring-like ovate.
- 5(6) Body larger (12.5–13.5 mm); head with diatone 1.3 times the width of eye diameter; male genitalia bolder; male protibia with interior face thinned in basal half; N. Vietnam (Tam Dao) ..... *P. pici* MASUMOTO, 1990
- 6(5) Body smaller (less than 12 mm); male genitalia slenderer.
- 7(8) Head with diatone 1.25 times the width of eye diameter; pronotum mildly rounded in basal parts, then roundly narrowed apicad; male genitalia slenderer (4.25 mm); legs slender, male protibia with interior face thinned in basal 4/7; N. Vietnam (Cao Bang) ..... *P. caobangensis* MASUMOTO, 2000

- 8(7) Head with diatone 1.1 times the width of eye diameter; pronotum wholly roundly narrowed anteriad; male genitalia bolder (3.4 mm); legs less slender, male protibia with interior face thinned in basal 3/5; N. Thailand (Chiang Mai) ...  
 ..... *P. thaiperpulchrus* MASUMOTO, 2000

*Plesiophthalmus fujianensis* sp. nov.

(Figs. 12, 58–61)

Body oblong-ovate, gently widened posteriad, strongly convex dorsad; brownish black, femora except for apical parts and claws dark reddish brown, major posterior parts of head, pronotum, scutellum and elytra with coppery tinge, hairs on antennae and major parts of ventral surface black, those on postero-medial part of abdomen and tarsal tufts of hairs yellowish brown; head gently shining, pronotum and scutellum strongly, metallicly shining, elytra moderately, rather metallicly shining, legs and metasternum moderately shining, ventral side alutaceous; dorsal surface almost glabrous, apical parts of antennae with fine short hairs, ventral surface with rather long bent hairs, tarsi with thick tufts beneath.

**Male.** Head subdecagonal, weakly covered with isodiametric microsculpture, rather closely, irregularly scattered with small punctures, each with a short bent hair; clypeus rather transverse hexagonal, rather steeply inclined in apical half, fronto-clypeal border finely impressed, very weakly curved in middle, rather strongly curved in lateral parts, and extending to outer margins; genae somewhat elongated quadrate, weakly raised in outer parts, with outer margins weakly produced; frons rather wide, gently declined to fronto-clypeal border; diatone 1.30 times the width of eye diameter. Eyes rather comma-shaped in dorsal view, gently convex laterad, rather shallowly inlaid into head. Antennae filiform, reaching basal 1/3 of elytra, ratio of the length of each segment from base to apex: 0.42, 0.21, 1.02, 0.56, 0.77, 0.69, 0.65, 0.53, 0.47, 0.45, 0.62.

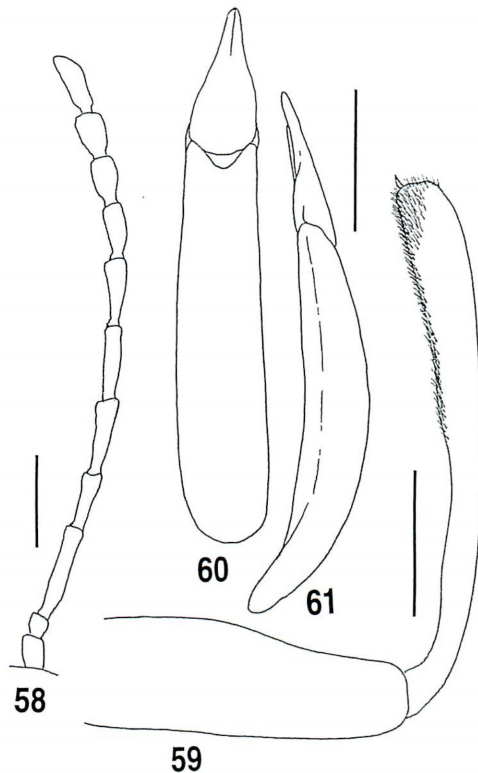
Pronotum rather trapezoidal, wider than long (4 : 3), widest at the middle; apex nearly straight and rimmed; base weakly produced, emarginate opposite to scutellum, gently sinuous on each side; sides steeply declined to lateral margins (particularly so in anterior parts), which are finely rimmed, the rims invisible from above; front angles rectangular, hind angles rather acute; disc strongly convex, very weakly, obliquely impressed at basal 1/3 on each side and also very faintly impressed on the midline in medial 1/3, rather irregularly scattered with small, round punctures, each with a microscopical short hair. Scutellum equilateral triangular with feebly rounded sides, slightly convex, sparsely scattered with small punctures, with a transverse impression near apex.

Elytra subovate, 1.58 times as long as wide, about 3 times the length and 1.62 times the width of pronotum, widest at apical 4/9; dorsum strongly convex, sutural parts rather ridged in anterior part and highest at basal 1/3; disc very weakly covered with isodiametric microsculpture, weakly wrinkled, and with rows of punctures, which are sparse, irregularly set and often fused with one another to longitudinal impressions and



shallow concavities; intervals very weakly convex, sparsely scattered with microscopical punctures, and weakly aciculate; humeri swollen; apices feebly, roundly produced.

Terminal segment of maxillary palpi subsecuriform, nearly straight outer side about 2.1 times the length of inner, and slightly longer than apical. Mentum sublinguiform, convex antero-mediad, scattered with small haired punctures except for apical part, impunctate in apical part, rugulose in baso-lateral parts; gula subelliptical, rather coriaceous, with impressions along lateral margins. Prosternum short, with apex widely emarginate and slightly coarsely rimmed, interocular space raised and, weakly concave in the middle, prosternal process triangular, coarsely granulate, and inclined apicad. Mesosternum punctate and haired, with anterior part strongly depressed and inserted into prosternum in repose, middle part triangularly raised posteriad opposite to prosternal process, and posterior part somewhat V-shaped and nearly impunctate, and the outer edges of V-shape rugose. Metasternum rather short, scattered with small, haired punctures, shallowly obliquely wrinkled in lateral parts, rather closely punctate and haired near lateral margins, longitudinally impressed on the midline in posterior 3/5, with a small wrinkled swelling at the middle close to base, a pair of strong grooves with



Figs. 58-61. *P. fujianensis* sp. nov., male; 58, antenna, 59, profemur & protibia, 60, genitalia (dorsal view), 61, same (lateral view). Scales=1 mm.



wrinkles along basal margins, and also with a pair of deep transverse grooves along the posterior borders. Abdomen alutaceous, rather closely punctate and bent haired; anal sternite impressed along outer margin, with apex feebly truncate; male anal sternite rounded, with very finely rimmed apex.

Profemur with anterior face angulate at apical 2/5; male protibia curved, with interior face gouged in basal halves; ratios of the lengths of pro-, meso- and metatarso-meres: 0.51, 0.27, 0.24, 0.25, 1.01; 0.58, 0.35, 0.30, 0.27, 1.03; 1.24, 0.36, 0.27, 1.08.

Male genitalia elongated fusiform, 3.52 mm in length, 0.63 mm in width, curved in lateral view; fused lateral lobes nib-shaped, 1.05 mm in length, with apices gently prolonged.

Body length: 12.3 mm.

F e m a l e. Unknown.

Holotype: ♂, "CHINA: Fujian Prov., / Wuyi Shan, ca. 800 m., / Sangan, 7. vi. 2001 / N27° 74' E117° 67' / Leg., J. Cooter." (NMNS).

Notes. This new species resembles *Plesiophthalmus anmashanus* MASUMOTO, AKITA et LEE, 2008, originally described from Anma-shan, Taichung Hsien, Taiwan, but can be distinguished from the latter by the body smaller, the head with interocular space wider, the pronotum more convex, smooth and more strongly punctate, the elytra gently ridged in anterior parts, legs shorter, and male genitalia slenderer and not serrate in antero-lateral parts of lateral lobes.

The specific name is given after the name of the type locality.

## 要 約

益本仁雄・秋田勝己: キマワリ属 (*Plesiophthalmus*) とその近縁属についての追加研究 (その 4). — キマワリ属 (*Plesiophthalmus*) とその近縁属についての追加研究の第 4 回として 12 新種を記載した. すなわち, *Plesiophthalmus becvari* sp. nov.; *P. brancuccii* sp. nov.; *P. balkei* sp. nov.; *P. schawalleri* sp. nov.; *P. chifengi* sp. nov.; *P. namthaensis* sp. nov.; *P. gedensis* sp. nov.; *P. brantlovai* sp. nov.; *P. taibaishanensis* sp. nov.; *P. kucerai* sp. nov.; *P. sawaiae* sp. nov., および *P. fujianensis* sp. nov. である. *Plesiophthalmus perpulchrus* とその近縁種についての検索表も用意した.

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*Elytra, Tokyo*, **37**(1): 141–142, May 29, 2009

## New Distributional Record of *Cercyon* (*Cercyon*) *numerosus* (Coleoptera, Hydrophilidae) from Oki Islands off Northwestern Honshu, Japan

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*Cercyon* (*Cercyon*) *numerosus* SHATROVSKIY, 1989 has been described from Primorsky Kray, Russia (type locality) and Misaki, Kyushu, Japan (SHATROVSKIY, 1992). The species was additionally recorded from Kuril Islands, Hokkaido and its peripheral Islands, Japan (SHATROVSKIY, 1989, ÔHARA & JIA, 2006, KILS, 1999 and ÔHARA, 2008), but not from Honshu, Japan. Under a series of faunal researches of the supralittoral insects of the Oki Islands off Honshu, we have had the opportunity to examine a single specimen collected under seaweeds on a shingle beach. This is the first record of this species from the Honshu region, Japan. We thank Mses. Y. KAWAKAMI and K. NUMATA who provided comments and helped with field work.

### *Cercyon* (*Cercyon*) *numerosus* SHATROVSKIY, 1989

*Cercyon* (*Cercyon*) *numerosus* SHATROVSKIY, 1989, 281 [Primorskiy; Kyushu]; ÔHARA & JIA, 2006, 134 [redescription, key].

*Cercyon* sp.: KAWAKAMI *et al.*, 2009, 154 [Dôgo, Oki Islands].

*Specimen examined.* [Dôgo (Island), Oki Islands off northwestern Honshu, Japan] 1 male, near Obomi-bashi, River mouth of Senji-gawa (river), Okino-shima-chô, 36° 11' 24" N 133° 14' 41" E, 12-X-2008, J. FUJIWARA and K. NUMATA leg., under seaweeds on a shingle beach.

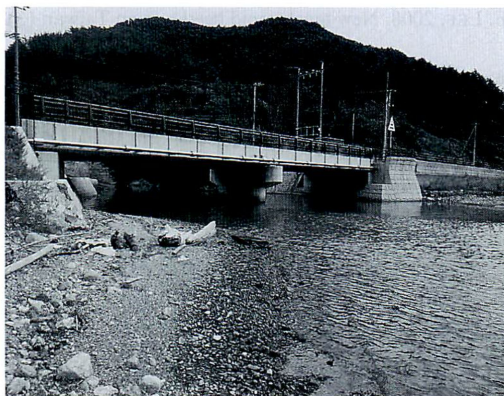


Fig. 1. Habitat of *Cercyon numerosus*, at Dôgo, Oki Islands, Japan.

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## A Third Species of *Neotrichus* (Coleoptera, Zopheridae) from Japan

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3–8–12 Nishiazabu, Minato-ku, Tokyo, 106–0031 Japan

**Abstract** *Neotrichus cavatus* sp. nov. is described from the Bonin Islands of Japan. It is distinguishable from the two known congeners from Japan by the rectangular pronotum with a deep central concavity and the round apophyses for elytral setae.

Two species of the genus *Neotrichus* have hitherto been known in Japan: *N. hispidus* SHARP, 1885, widely distributed in Japan and *N. serraticollis* SASAJI, 1986, known only from Ishigaki Island and Iriomote Island of Okinawa. Recently, a third species was found from Hahajima Island of the Bonin Islands and is described below as a new species in comparison with the two known Japanese species.

### *Neotrichus cavatus* sp. nov.

(Figs. 1–2)

Body length: 2.7–4.5 mm.

Color: — Body opaque black, antennae and legs reddish brown.

Head in middle part covered with round or polygonal granules, becoming smaller in anterior as well as posterior parts; anterior margin of clypeus almost straight; lateral margin stretching out in front of eyes as low trapezoidal eaves bearing several squamiform setae. Eyes well projecting,  $1/2.4$  as long as their interspace; several squamiform setae inserted on eyes. Antenna 10-segmented; antennomeres I and II large and rounded; III elongate and slender,  $2.3\times$  as long as broad; IV–IX gradually increasing in width; X distinctly enlarged, divided into two parts, transverse basal part and rounded apical part (Fig. 4A); antennomeres II–IX and basal part of X densely covered with small granules.

Pronotum with straight and parallel lateral margins, only slightly narrowing posteriorly, provided with 12–13 tubercles each bearing squamose seta; anterior margin strongly arcuate, weakly concave in middle; anterolateral corners distinctly angulate; posterior corners nearly right angled; disc uneven, having large round concavity in the middle, surrounded by several swellings bearing whitish squamiform setae.

Elytra parallel-sided, with a pair of weak swellings each in anterior and posterior part, broadly rounded apically, wholly covered with rows of round tubercles finely granulated and each with broad squamiform and serrated setae (Fig. 4C).

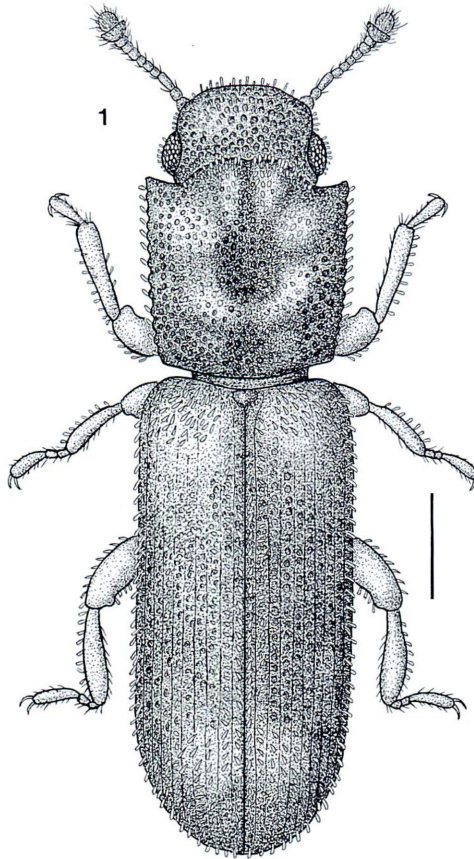
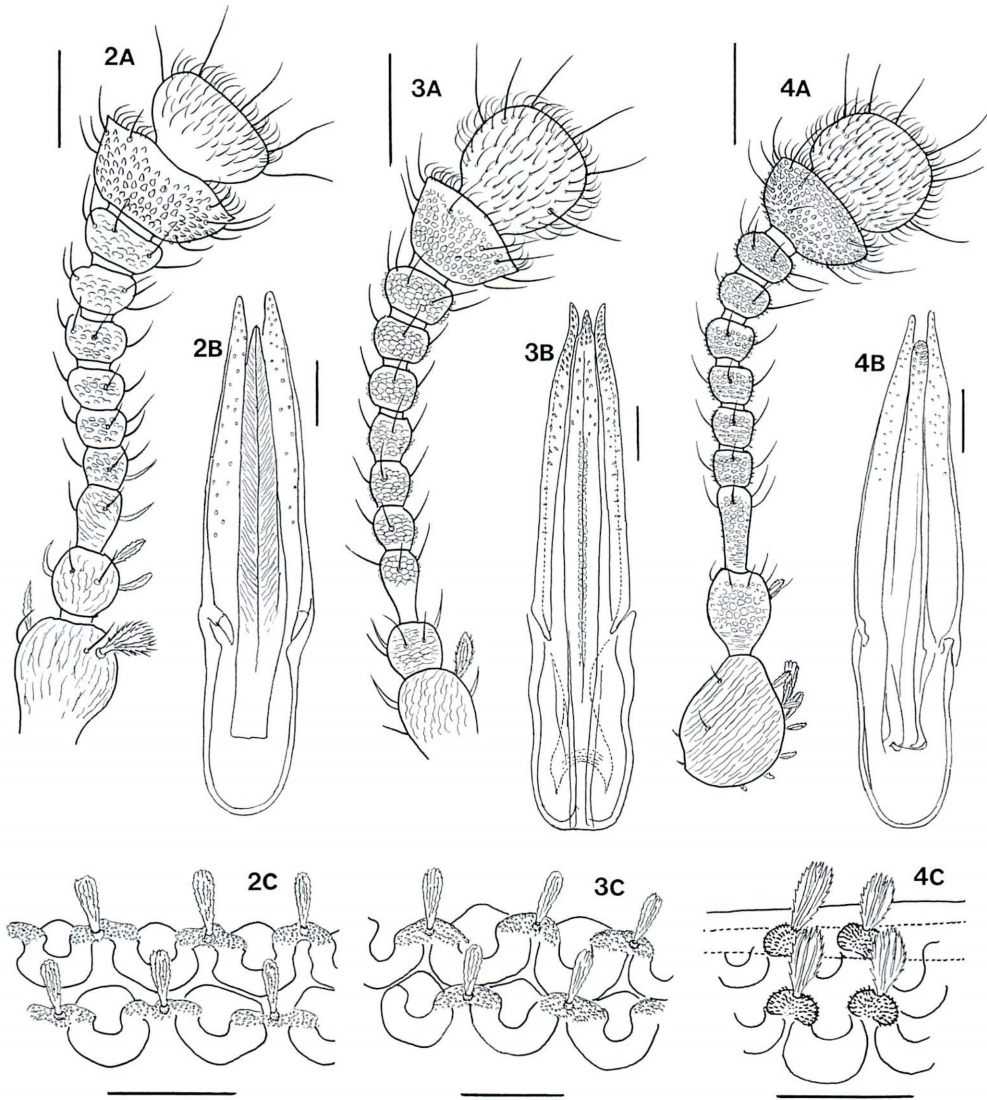


Fig. 1. *Neotrichus cavatus* sp. nov. Scale bar: 0.5 mm.

Prosternum, metasternum and ventral plate with elongate oval punctures. Femora of legs with marked appendage ventrodistally and squamose setae dorsally; tibia with thorn ventro-distally, squamose setae dorsally and normal setae ventrally.

*Type series.* Holotype ♂ and 15 paratypes: Mt. Kuwanoki, Hahajima Island, the Bonin Islands (the Ogasawara Islands) of Japan, 24-X-2008, J. AOKI leg. Holotype (NSMT-I-C200128) and five paratypes (NSMT-I-C200129~200133) are deposited in the collection of the National Museum of Nature and Science, Tokyo (NSMT).

*Notes.* Two species of the genus *Neotrichus*, *N. hispidus* SHARP, 1885, and *N. serraticollis* SASAJI, 1986, are known from Japan. *Neotrichus serraticollis* is readily separable from *N. hispidus* and *N. cavatus* by the pronotum with neither concavity nor swellings. The latter two are similar to each other in having uneven pronotum, but *N. hispidus* has its lateral sides strongly convergent posteriorly, and differs from *N. cavatus* with parallel-sided pronotum.



Figs. 2-4. Three Japanese species of *Neotrichus*. 2: *N. hispidus* SHARP; 3: *N. serraticollis* SASAJI; 4: *N. cavatus* sp. nov. — A: Antennae; B: male genitalia; C: setae on elytra. Scale bars: 0.1 mm.

#### Key to Three Japanese Species of *Neotrichus*

1. Dorsal surface of pronotum evenly rounded, with its lateral sides almost straight; terminal antennomere rounded. Body length 3.1-4.0 mm. The Ryukyus (Ishigaki-jima Island and Iriomote-jima Island). .....*N. serraticollis* SASAJI, 1986



- Dorsal surface of pronotum uneven, with several swellings and concavities. ...2
- 2. Pronotum distinctly wider anteriorly, narrowing posteriorly, with waving sides; central concavity of pronotum shallow; terminal segment of antenna transversely elliptical, with almost straight anterior margin; squamose setae on body rather slender; median lobe of male genitalia pointed at tip. Body length 3.5–5.0 mm. Honshu, Shikoku, Kyushu, Tsushima and Yakushima Islands. .... *N. hispidus* SHARP, 1885
- Pronotum mostly parallel-sided, only slightly narrowed posteriorly, with unwavering sides; central concavity of pronotum deep; terminal segment of antenna rounded, with arcuate anterior margin; squamose setae on body rather broad; median lobe of male genitalia rounded at tip. Body length 2.7–4.5 mm. The Bonin Islands. .... *N. cavatus* sp. nov.

Five species of *Neotrichus* are known in the Pacific area outside Japan. They are distinguishable from the new species by the following features: *Neotrichus afoveicollis* PAL, 2003 from India by short elytra ( $1.9 \times$  as long as broad) and short antennomere III; *N. acanthacollis* CARTER et ZECK, 1937 from Australia by broadly rounded apex of elytra and short antennomere III; *N. lanyuensis* SASAJI, 1986 from Taiwan by the last segment of antenna (antennomere X) compactly articulated and eyes without setae; *N. cylindricus* GROUVELLE, 1896 from Birma by much more elongate elytra and pronotum a little longer than broad; *N. serratus* SHARP, 1885 from Sri Lanka by the number of tubercles arranged on lateral margins of pronotum (7 in *N. serratus* and 13–14 in *N. cavatus*).

### Acknowledgement

I wish to express my hearty thanks to D. K. MIZUNO (Uji City) who permitted me to take out male genitalia of his specimen of *Neotrichus serraticollis* to enable me to compare genitalia of the three Japanese species of *Neotrichus*.

### 要 約

青木淳一：日本産サンゲホソカタムシ属の第3の種（コウチュウ目コブゴミムシダマシ科）。  
 — 日本産サンゲホソカタムシ属 *Neotrichus* にはサンゲホソカタムシ *N. hispidus* SHARP およびノコムネホソカタムシ *N. serraticollis* SASAJI の2種が知られているが、今回、小笠原諸島の母島において第3の種が見出されたので、ヘコムネホソカタムシ *Neotrichus cavatus* sp. nov. として命名記載した。本種の特徴は前胸背板中央の深い凹みとそれを取り巻く瘤状の隆起、ほぼ平行な前胸背板側縁、かなり目立って突出する前胸背板前角、きわめて細長い触角第3節、上翅（特に基部）に見られる緩やかな隆起などによって、日本および太平洋地域の他種と容易に区別される。

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*Elytra, Tokyo*, **37**(1): 147–148, May 29, 2009

## Additional Records of *Merionoeda scitella* PASCOE (Coleoptera, Cerambycidae), with a Brief Note on Geographical Variation

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*Merionoeda scitella* was first described by PASCOE (1858) and redescribed by the same author (PASCOE, 1869) on the basis of examples collected by A. R. WALLACE in Sarawak, Borneo. Thereafter, there have been few records of this species from other regions. The distribution of *M. scitella* is, however clearly larger than originally recorded, and the geographical variation larger. We have obtained specimens of this species from South Kalimantan, South and West Sumatra as well as the Malay Peninsula in addition to those from Sabah in northern Borneo, which is adjacent to Sarawak, from where the species was originally described. Thus, it is a typical species of western 'Malayana' of PASCOE.

The variation is considerable, especially regarding the coloration. The colour of pronotum can be darker than reddish yellow as originally described by PASCOE. In some cases it is totally blackish, though with a somewhat reddish tone. The colour of elytra is also variable with differing dimension of the 'triangular straw-coloured stripe' on elytral disc. Some specimens from South Kalimantan have almost totally black-coloured elytra, rather resembling those of *M. baliana* YOKOI et NIISATO or *M. puella* PASCOE with similar punctuation. Finally, the colour of the last antenna segments varies in accordance with location. While the last two segments of antennae are

yellow in the holotype from Sarawak, three segments are yellow in the specimens from West Sumatra whereas only one is so in those from South Kalimantan.

We would like to thank Mrs. Sharon SHUTE of the Natural History Museum of London for enabling us to study the holotype of *Merionoeda scitella* preserved there, to Dr. Martin BAEHR of Zoologische Staatssammlung München for providing us with material from the Karl E. HÜDEPOHL collection for a closer comparison, and to Messrs. Shigehisa HORI, Masao ITO, Yutaka JOHKI and Nobuyuki KOBAYASHI for kind offers of material. Finally, we would like to thank Mr. Theodore L. CHILDERS for his critical reading of the original draft of this short paper.

### *Merionoeda scitella* PASCOE, 1858

*Specimens examined.* [Borneo] 1 ♂, Sepilok, Sabah, E. Malaysia, 2–VIII–1981, Y. JOHKI leg.; 1 ♂, 2 ♀♀, Kimanis Road, Crocker Range, Sabah, 24–III–1988, M. ITO leg.; 1 ♂, 1 ♀, same locality as the preceding, 13, 15–IV–1988, N. KOBAYASHI leg.; 1 ♂, same locality as the preceding, 12–V–1988, N. KOBAYASHI leg.; 1 ♂, near Keningau, Crocker Range, Sabah, IV–1999, local collector leg.; 1 ♀, Gn. Trus Madi, Tambunan, Sabah, 29–V–1997, S. HORI leg.; 12 ♂♂, 6 ♀♀, Mamut, Ranau, Sabah, 8–10–IV–2005, Y. YOKOI leg.; 50 ♂♂, 50 ♀♀, Papagaran, S. Kalimantan, 23–30–X–2007, Y. YOKOI leg. [Sumatra] 4 ♂♂, 3 ♀♀, Gn. Pesagi, Kenali, Pr. Lampung. Liwa, S. Sumatra, 28–31–X–2006, Y. YOKOI leg.; 5 ♀♀, Annai Valley, Pr. West Sumatra, W. Sumatra, 9–14–IV–2007, Y. YOKOI leg.; 1 ♂, Padang, Pr. West Sumatra, W. Sumatra, V–1994, local collector leg. [Malay Peninsula] 1 ♂, “Malaysia, Cameron Highland, X. 85”; 1 ♂, “Malaysia, Cameron Highland, XI 85”. (HÜDEPOHL collection.); 1 ♀, Cameron Highland, Pahang, W. Malaysia, V–VI–1985, local collector leg.; same locality as the preceding, 4 ♂♂, 2 ♀♀, III–IV–1985, local collector leg.; 1 ♂, 1 ♀, same locality as the preceding, V–VI–1985, local collector leg.; 3 ♂♂, same locality as the preceding, local collector leg.; 10 ♂♂, 10 ♀♀, Kelantan, Pahang, VI–1999, local collector leg.

*Distribution.* Borneo, Sumatra (new record) and Malay Peninsula (new record).

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## Description of a New Alticine Genus (Coleoptera, Chrysomelidae) from Japan

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**Abstract** *Yoshiakia iwatensis*, gen. et sp. nov. (Chrysomelidae, Alticinae) is described from north Honshu, Japan, feeding on *Spiraea betulifolia* (Rosaceae) and *Magnolia ovata* (Magnoliaceae). This new genus is related to the genera *Zipangia* HEIKERTINGER and *Trachyaphthona* HEIKERTINGER.

In the course of routine survey of fauna and flora of river-systems and dams conducted by the Ministry of Land, Infrastructure, Transport and Tourism in 2004, a peculiar alticine species was found at Tase dam, Towa-machi, Iwate Prefecture. This species somewhat resembles those of the genus *Trachyaphthona* HEIKERTINGER or *Zipangia* HEIKERTINGER, but is clearly separable from the both. To accept this species, a new genus is established in this paper, which is dedicated to the late Dr. Yoshiaki KOMIYA, an eminent researcher in neuroscience and also a well-known taxonomist on Chrysomelidae.

The routine survey above-mentioned is called “Census of waterside fauna and flora”, which covers some 127 river-systems and 94 dams all over Japan. Several points for each river-system and dam are surveyed once every 5 years for mammals, birds, reptiles, amphibians, fishes, insects, spiders and plants. The results were published for 1991–2001, and afterwards on webs (<http://www3.river.go.jp>). While those on dams are shown on <http://www4.river.go.jp/seibutu.htm> for 1998–2004.

The holotype will be deposited in the collection of the Laboratory of the Systematic Entomology, Hokkaido University, Sapporo (SEHU). The paratypes will be distributed to SEHU, Kitakyushu City Museum for Natural History and Human History, Kitakyushu, U. S. National Museum for Natural History, Washington, and to author's private collection.

*Yoshiakia* gen. nov. (masculine)

**Diagnosis.** Body small and oblong-ovate; blackish brown with light brown legs. Head slightly narrower than pronotum at anterior margin; frontal tubercles narrow and obliquely situated, and delimited behind by a sharp furrow; fronto-clypeus almost regularly triangle, with a weak Y-shaped carina; antenna filiform and 11-segmented,

reaching middle of elytra; 2nd antennal segment shortest and robust; 3rd and 4th segments subequal in shape and length; 5th longer than 6th. Pronotum subquadrate, with the posterior margin gently produced posteriorly; anterior angle obliquely truncate; disc weakly convex, weakly depressed along posterior margin; not marginate at both anterior and posterior margins; prothoracic sternite distinctly separated procoxae, distinctly widened posteriorly and rounded at apex, but narrower than mesothoracic sternite. Elytra rather flat, distinctly wider than pronotum at base, slightly widened to apical 1/3, thence roundly narrowed to apex; elytral epipleuron continued to apical 1/6; mesothoracic sternite wide and weakly depressed medially; mesothoracic intercoxal process wide, but gradually narrowed to widely truncate apex. Male abdominal sternites with two rows of long, stiff and curved hairs medially; 5th visible abdominal sternite widely tri-lobed at apex, with a large, round depression. Hind legs with femora well expanded, with 1st tarsal segment longer than the following two combined.

*Female*: Abdominal sternites normal, without large fovea or rows of stiff hairs.

Type species: *Yoshiakia iwatensis* sp. nov.

*Remarks*. This new genus is uniquely characterized by the structure of male abdominal segments, with two rows of long, stiff and curved hairs and a large apical fovea. From the similarly shaped genus *Zipangia*, this new genus is distinguished by the narrow frontal tubercles which is obliquely situated and delimited behind by a sharp furrow with the anterior apex not extended into inter-antennal space. The key given below will help to distinguish related genera each other.

Key to the related Japanese alticine genera with 11-segmented antennae and opened anterior coxal cavities (after KIMOTO, 1994 modified).

- 1 Elytra with punctuation in more or less regular rows; pronotum with anti-basal transverse impression; mesothoracic sternite excavated in middle. .... *Ogloblinia* CSIKI
- Elytra with punctuation wholly confused; pronotum with/without anti-basal transverse impression; mesosternum flat or weakly depressed. ....2
- 2 Frontal tubercles with anterior angle extending toward inter-antennal space. ....5
- Frontal tubercles not as above. ....3
- 3 Mesothorax with intercoxal process much narrower, as wide as prothoracic one; pronotum without ante-basal transverse impression. ....*Parazipangia* OHNO (based on the original description)
- Mesothorax with intercoxal process wider than prothoracic one; pronotum with ante-basal transverse impression. ....4
- 4 Pronotum with ante-basal transverse impression not extending to sides; generally small in size. ....*Aphthonaltica* HEIKERTINGER
- Pronotum with ante-basal transverse impression extending to sides where it is curved upward to a short distance below middle of lateral margin; generally large in size. ....*Altica* GEOFFROY
- 5 Prothorax with intercoxal process subparallel-sided and truncate at apex, with/without ante-basal transverse impression. ....6

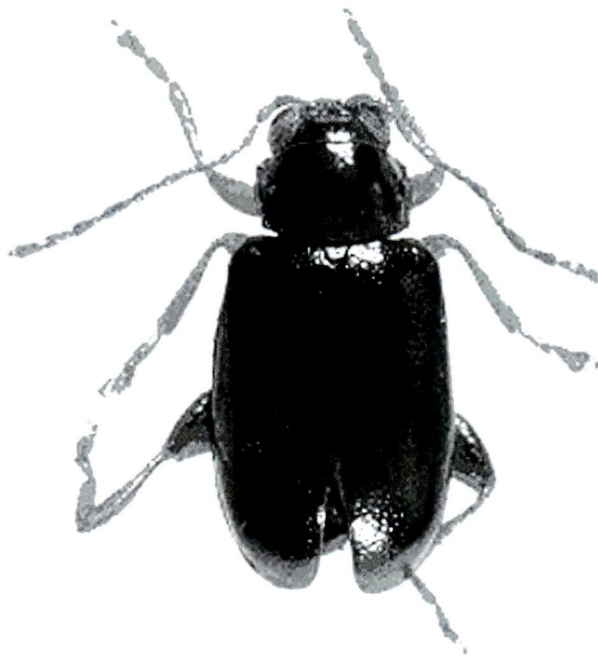


Fig. 1. *Yoshiakia iwatensis* gen. et sp. nov. (holotype).

- Prothorax with intercoxal process distinctly widened and round at apex, with ante-basal transverse impression. ....7
- 6 Prothorax with distinct ante-basal transverse impression. ....*Zipanginia* OHNO
- Prothorax without ante-basal transverse impression. ....*Trachyaphthona* HEIKERTINGER
- 7 Frontal tubercles oblique and narrow, with the anterior angle slightly extending toward inter-antennal space; male with two rows of long, stiff and curved hairs medially on abdominal sternites; last abdominal sternite with a deep and large fovea. ....*Yoshiakia* gen. nov.
- Frontal tubercles longitudinally triangle, with the anterior angle deeply extending toward inter-antennal space; male without such hairs or deep fovea on abdominal sternites. ....*Zipangia* HEIKERTINGER

*Yoshiakia iwatensis* sp. nov.

(Figs. 1 & 2)

**Male.** Body oblong-ovate and small, 2.2–2.5 mm in length; rather flat dorso-ventrally; dark chocolate brown with head and pronotum lighter; head below eyes, legs and antennae yellowish brown. Vertex impunctate and lustrous; frontal tubercles narrow and obliquely situated, widely separated from each other, distinctly delimited



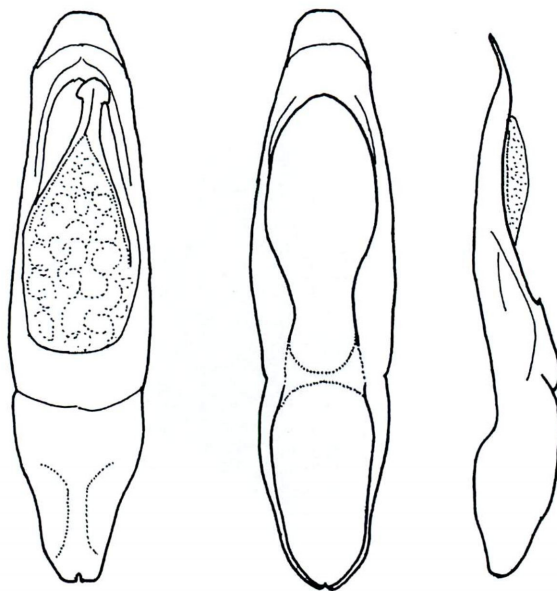


Fig. 2. Aedeagus of *Yoshiakia iwatensis* gen. et sp. nov. (left, dorsal view; middle, ventral view; right, lateral view).

behind by a sharp furrow; fronto-clypeus broadly triangular with a weak Y-shaped ridge, broadly emarginate at anterior margin; distance between eyes fully twice as wide as a transverse diameter of an eye; antenna filiform reaching the middle of elytron, beyond 4th segment thickly pubescent; 1st and 2nd segments robust; the 2nd shortest, almost half as long as 11th; relative length of each segment as:  $11\text{th} > 5\text{th} = 6\text{th} = 7\text{th} = 8\text{th} = 9\text{th} > 1\text{st} > 10\text{th} > 3\text{rd} = 4\text{th} > 2\text{nd}$ . Pronotum subquadrate, 1.6 times as wide as long; almost straight at anterior margin, weakly and archedly produced at posterior margin; slightly arched on lateral margins, slightly curved behind anterior angle and before posterior angle; anterior angle obliquely truncate, posterior angle obtuse; disc rather flat, finely punctuate and shining, very narrowly depressed along lateral margins, with obscure transverse impression before posterior margin; the impression curved forward on side, not reaching lateral margins. Scutellum ovate, as long as wide; surface impunctate and shining, narrowly shagreened along all margins. Elytron 3 times as long as wide; disc weakly depressed posteriorly to scutellum and interiorly to humerus, densely covered with distinct punctures; slightly curved anteriorly at sutural angle; epipleuron slightly concave and punctulate, rather wide on basal 1/3, thence narrowed and subparallel-sided till apical 1/3, narrowed to and disappeared at apical 1/6 of elytron. Procoxal cavities widely open; procoxal process wide, as wide as the length of 2nd antennal segment, roundly widened to apex on posterior half; mesothroacic sternites wide and inverted trapezoid, rough surfaced between coxae; before intercoxal area



Fig. 3. Leaves of *Spiraea betulifolia* damaged by *Yoshiakia iwatensis* sp. nov.

broadly depressed and smooth. Hind femora expanded, but not so strongly as in *Zipangia obscura*; 1st–4th abdominal sternites with a paired rows of long, stiff and inwardly curved hairs medially; 5th sternite broadly tri-lobed, median lobe deeply and roundly excavate, this fovea reaching near the anterior margin of the sternite; aedeagus rather broad and flat as in Fig. 2.

*Female*. Abdomen without rows of long and stiff hairs; last visible abdominal sternite simply produced at apex.

*Type series*. Holotype ♂, Tase dam, Towa-machi, Iwate Pref., Honshu, 19–VII–2006, H. TAKIZAWA leg. (SEHU in Sapporo). Paratypes. 79 ♂♂, 56 ♀♀, same data as the holotype (feeding on *Spiraea betulifolia* PALL., Rosaceae and *Magnolia ovata* (A. ST.-HIL.) SPRENG., Magnoliaceae); 8 ♂♂, 3 ♀♀, same locality, 21–VII–2004, H. TAKIZAWA leg.; 1 ♂, Mt. Myozin-dake, Hakone, Kanagawa Pref., Honshu, 20–VIII–2006, H. TAKIZAWA leg. (on *Magnolia* sp.).

*Remarks*. This new species is somewhat resembles to *Zipangia obscura* (JACOBY), but is clearly distinguished from the latter by the slender antennae, finely punctuate pronotum, structures of male abdomen, etc. It is distinguished from *Trachyaphthona sordida* (BALY), by the pronotum with ante-basal transverse impression. This species was collected by sweeping on sunny road-side along deciduous forests. A lot of adults

were found feeding on leaves of *Spiraea betulifolia* (Rosaceae) (Fig. 3), and at one place also feeding on young shoots of *Magnolia ovata* (Magnoliaceae). Family Magnoliaceae is seldom selected as food plants among Chrysomelidae. JOLIVET and HAWKESWOOD (1995) mentioned to an accidental case of the genus *Aspidomorpha* (Cassidinae) on *Michelia* sp. *Lanka magnoliae* (CHUJO et OHNO) feeds on *Magnolia ovata* on both adult and larval stages in Japan. Feeding on both *Spiraea* and *Magnolia* seems exceptional. While two individuals were collected on the leaves of *Magnolia* sp. at Hakone, Kanagawa Pref., which lies some 500 km south of Tase Dam. These facts suggest some biological relations at least, between this flea-beetle and *Magnolia*. Beetles collected in July, 2006, were somewhat immature, suggesting their recent emergence. The specific name was based on the locality collected.

### Acknowledgements

I wish to express my sincere gratitude to the authorities of offices of the Ministry of Land, Infrastructure, Transport and Tourism concerned for permitting to publish this interesting finding from their "Census of waterside fauna and flora".

### 要 約

滝沢春雄：トビハムシ亜科（鞘翅目ハムシ科）の日本産新属新種の記載。—— 本州からトビハムシ亜科の新属新種, *Yoshiakia iwatensis* を記載した。本属は *Zipangia* 属および *Trachyapthona* 属に近似するが、雄の腹部に2列の顕著な長毛を装い、第5腹節の中央部に大きな凹みを持つ点などで区別される。成虫は夏季に低山地のマルバシモツケやホオノキを食害している。なお、このトビハムシ亜科の顕著な新種は、国土交通省が2004年に実施した岩手県田瀬ダムの陸上昆虫類調査（河川水辺の国勢調査）の際に発見されたものである。

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A Redescription of *Euryarthrum hastigerum* HOLZSCHUH  
(Coleoptera, Cerambycidae), with Description of its  
New Relative from Kalimantan, Indonesia

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**Abstract** *Euryarthrum hastigerum* HOLZSCHUH is redescribed in detail including the male terminalia. *Euryarthrum kalimantanense* sp. nov. is described from West Kalimantan, Indonesia. The new species closely resembles *E. hastigerum*, but is distinguished from the latter mainly by the stouter body, more strongly convex pronotum, stronger apical projection of elytral epipleuron, deep median depression on mesosternal process and stouter median lobe of male terminalia.

**Introduction**

*Euryarthrum hastigerum*, a longhorned beetle belonging to the tribe Prothemini of the subfamily Cerambycinae, was recently described by HOLZSCHUH (2008) from Sabah, East Malaysia. Among *Euryarthrum* species having two elytral bands of light-colored hairs, this species is characterized by the long antennae, with segment VI strongly dilated externally from base to apex, less-flattened elytra, light-colored hairs on scutellum, simple tibiae of fore and mid legs in male, and very long apical spines of elytral suture and unique structure of abdominal sternites in female (HOLZSCHUH, 2008). However, some important taxonomic features such as the male terminalia were not described in the original paper. In the course of our study of *Euryarthrum*, we had an opportunity to obtain a pair of peculiar species of the genus collected from West Kalimantan, Indonesia. The species in question is very similar to *E. hastigerum* in general appearance. Based on detailed examination, however, we have concluded that it is an undescribed species. In order to promote further studies of the genus, we redescribe *E. hastigerum* in detail including the male terminalia as well as describe its allied new species from Kalimantan.

### Material and Methods

This study was based on specimens preserved in the National Institute for Agro-Environmental Sciences, Tsukuba (NIAES), and the private collection of T. NIISATO (PCTN). The holotype of the new species described herein is deposited at NIAES.

External structures were observed under a Nikon SMZ1500 stereoscopic microscope. Habitus photographs were taken with an Olympus E-500 digital camera. Measurements of various body parts are coded as follows: LB=length of body, from apical margin of clypeus to elytral apices; WH=maximum width of head across eyes; LG=length of gena, from upper to lower margins; LL=length of lower eye lobe, from upper to lower margins; WP=maximum width of pronotum; LP=length of pronotum, from base to apex along midline; WE=maximum width of elytra; LE=length of elytra, from basal margins to apices. All measurements are in mm.

To examine male terminalia, specimens were macerated in hot water and dissected under the stereoscopic microscope. The abdominal segment VIII was first removed from body, and then cleaned in hot 10% KOH solution for 5 to 10 minutes. Male terminalia extracted from abdominal segment VIII were mounted on slides with glycerol, studied with a Leitz Orthoplan optical microscope, and drawn in detail through an attached camera lucida. Scale bars were calibrated using a Nikon objective micrometer.

Verbatim label data indicated by quotation marks are provided for the holotype. Label breaks are indicated by a slash (“/”).

### Taxonomy

#### *Euryarthrum hastigerum* HOLZSCHUH, 2008

(Figs. 1, 3–9)

*Euryarthrum hastigerum* HOLZSCHUH, 2008, 237 (type locality: Malaysia, Sabah, Crocker Range, Keningau-Kinamis). — YOSHITAKE & NIISATO, 2009 (catalogued).

**Redescription.** Male. Dimensions: LB: 15.30–19.55 (holotype 15.30; mean 17.96). WH: 2.80–3.30 (2.80; 3.13). LG: 1.60–1.85 (1.60; 1.75). LL: 1.15–1.35 (1.15; 1.27). WP: 3.40–4.15 (3.40; 3.94). LP: 3.15–4.00 (3.15; 3.67). WE: 4.39–5.72 (4.39; 5.24). LE: 9.98–13.03 (9.98; 11.81). N=5 for all measurements. Habitus as in Fig. 1.

Black in general appearance; clypeus paler; antennal segments VII–XI testaceous except for base of VII tinged with black; coxae slightly tinged with red. Body surface opaque; head except for vertex and occiput more or less shiny. Body medium-sized and slender.

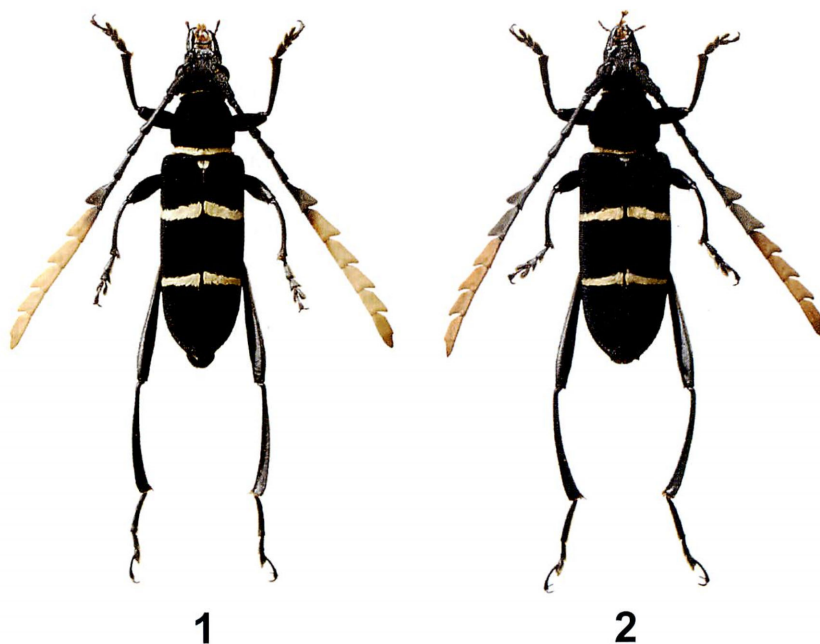
Head covered with shiny light-colored hairs; occiput nearly glabrous, bearing three very long hairs along posterior margin of each eye; vertex rather densely with long incurved hairs; frons with short hairs; clypeus glabrous; genae moderately with short hairs; neck sparsely with short hairs; gula moderately with long incurved hairs. Anten-



nal segments I and II moderately covered with fine short hairs; segments III–V moderately with minute hairs; segments VI–XI densely with light brown pubescence except for basal part of VI which is covered with minute hairs. Prothorax almost glabrous, provided with two pale yellow transverse bands of dense stout hairs along basal and apical margins; apical band much narrower than basal one, often obscure; apical margin fringed with a row of short golden hairs; sides with a few fine long shiny hairs on basal half; prosternum moderately with curved fine hairs, bearing three fine long shiny hairs on apical third at each side. Scutellum densely covered with shiny pale yellow stout hairs. Elytra almost glabrous, scattered with minute hairs along external margins, divided into three subequal parts by two relatively broad transverse bands of pale yellow stout hairs; ante-median band slightly arcuate posteriorly; post-median band nearly straight. Legs moderately covered with minute light-colored hairs; mid coxae rather densely with white hairs; mid femur almost glabrous on basal half of dorsal side, scattered with fine golden hairs; hind femur almost glabrous on basal half of dorsal side, fringed with suberect and subrecumbent setae on basal half along anterior margin; fore tibia internally with golden setae on dorsal side, the setae suberect, becoming longer and denser towards apex; mid and hind tibiae fringed with silver setae on apical half along internal margins; hind tibia sparsely mingled with longer suberect setae. Mesosternum moderately covered with light-colored hairs; mesepisternum moderately with fine dark hairs on basal half, mingled with white hairs, and densely with stout white hairs on apical half; mesepimeron scattered with minute dark and light-colored hairs. Metasternum moderately covered with fine dark and white hairs, rather densely with stout white hairs on disc, bearing a pair of white transverse bands of long stout hairs along apical margin; metepisternum sparsely with minute dark hairs, scattered with longer light-colored hairs, densely covered with stout white hairs on apical part. Sternite I covered with hairs as those on metasternum, with a transverse band of stout white hairs along apical margin; sternite II more sparsely with minute hairs, with a transverse band of stout white hairs along apical margin; sternites III and IV sparsely with minute hairs, almost glabrous on disc, with a pair of short transverse bands of stout white hairs along apical margins; sternite V rather densely with stout white hairs, except for basal part which are almost glabrous near middle, scattered with long golden hairs along apical margin; apical margin of sternite V fringed with stout white hairs which are replaced by short golden hairs at middle.

Head slightly narrower than pronotum, WH/WP 0.78–0.82 (mean 0.80), with a shallow median sulcus extending from occiput to base of frons; occiput densely coarsely punctured, widely prominent along median sulcus; vertex finely reticulately punctured, carinate along inner margins of antennal insertions; frons shallowly irregularly punctured; genae deeper than lower eye lobes, LG/LL 1.33–1.42 (mean 1.38); eyes large, rather strongly prominent. Antennae long, slightly extending beyond elytral apices; scape short and stout; segments III–VI moderately shiny, though apical part of VI is densely minutely punctured; segment III slender, much longer than scape; segment IV short, nearly half as long as III; segment V slightly slenderer than IV, simple, not





Figs. 1–2. *Euryarthrum* spp. — 1, *E. hastigerum* HOLZSCHUH, male; 2, *E. kalimantanense* sp. nov., holotype male.

projected externally near apex; segment VI rapidly externally widened from base to basal third, and then more weakly straightly widened to apex. Prothorax nearly as long as wide, WP/LP 1.04–1.09 (mean 1.07), reticulately punctured; punctures relatively large, more or less merged with each other; pronotum weakly rugged on interstices between punctures; sides gradually dilated from constricted base, widest at slightly produced middle, gently convergent apically, and then constricted at apex; prosternal process tuberculate at middle of apical part, the tubercle relatively large and transversely ellipsoidal from ventral view. Scutellum linguiform, finely shallowly wrinkled-punctured. Elytra long, LE/WE 2.18–2.30 (mean 2.25), moderately wider than or more than three times as long as pronotum, WE/WP 1.29–1.38 (mean 1.33), LE/LP 3.13–3.26 (mean 3.22), finely reticulately punctured; each puncture very deep, moderately shiny in bottom; disc weakly rugged on interstices between punctures, slightly flattened except weak postscutellar prominence, smoothly declivous, lacking submedian ridges; suture acutely projected at apex; apical projections moderate in length; sides widest just behind humeri, subparallel in basal half, gradually narrowed to apical fourth, then gently convergent apicad; each epipleuron becoming thin and armed with a triangular projection at apex. Mesosternal process weakly narrowly depressed along midline; apical margin moderately emarginate at middle. Metasternum finely rugosely punctured, weakly shiny; disc densely minutely punctured, strongly shiny. Sternites I–IV

with a thick glabrous part along apical margin, respectively; sternite I finely densely punctured, weakly shiny, nearly as long as II–IV combined; sternite II finely moderately punctured, slightly less than half as long as I, slightly shorter than III and IV combined; sternites III and IV sparsely minutely punctured, shiny, subequal in length to each other; sternite V sparsely minutely punctured on basal half, densely finely punctured on apical half, shiny, nearly as long as III and IV taken together. Legs slender; fore tibia weakly dilated externo-apically, gently incurved; mid tibia evenly strongly incurved, simple, not prolonged apically; external margin of fore and mid tibiae deeply emarginate near apex.

Tergite VIII (Fig. 3) elongate, nearly twice as long as wide, scattered with short setae on basal 2/3, moderately setiferous on apical third; sides subparallel in basal 2/3, thence moderately narrowed towards apex; apical margin rounded, moderately fringed with long setae. Tergite IX (Fig. 4) widely shallowly emarginate, fringed with a row of short setae at apex. Sternite VIII (Fig. 5) as long as wide, rounded, densely covered with short setae, entirely well-pigmented; basal apodemes short and wide, definitely divided from body by a black transverse ridge; apical margin broadly shallowly concave, densely setiferous. Sternite IX (Fig. 6) Y-shaped, slender, slightly longer than sternite VIII, simple, not appendiculate. Median lobe (Figs. 7, 8) slender though very thick in profile; ventral contour near apex dorsally raised in profile; median struts moderate in length, nearly as long as median lobe, weakly curved in profile; dorsal plate narrow, rounded apex; ventral plate with sides rather strongly narrowed in basal 2/3, subparallel in subapical part, thence apically strongly narrowed, bearing a small round projection at apex; median foramen located on apical third of median lobe. Tegmen (Fig. 9) slightly shorter than median lobe; lateral lobes densely covered with very long setae, widely separated from each other, broadly rounded at each apex, not attenuate, with external margins slightly laminate basally; laminae densely setiferous apically; ring part much longer than lateral lobes.

**Female.** Dimensions: LB: 16.63–20.88 (mean 18.81). HW: 2.85–3.30 (3.13). LG: 1.60–1.85 (1.75). LL: 1.20–1.40 (1.29). WP: 3.90–4.80 (4.30). LP: 3.55–4.25 (3.85). WE: 5.05–6.38 (5.69). LE: 11.17–14.10 (12.64). N=5 for all measurements.

Body stouter. Head narrower than pronotum, WH/WP 0.69–0.75 (mean 0.73); antennae shorter and stouter than in male, not extending to elytral apices. LG/LL 1.32–1.40. Prothorax slightly wider, WP/LP 1.09–1.13 (mean 1.12). Elytra slightly wider, widest at middle, LE/WE 2.21–2.25 (mean 2.22), LE/LP 3.15–3.35 (mean 3.28), WE/WP 1.29–1.35 (mean 1.32), with each elytron apically armed with a very slender projection, which is nearly twice as long as that in male. Prosternal process slightly narrower, with a smaller tubercle in middle of apical part. Mesosternal process slightly more strongly broadened towards apex. Sternite I slightly inflated, finely densely punctured, elongate, longer than II–V combined. Sternite II finely moderately punctured on disc, minutely sparsely punctured at sides, nearly 1/4 as long as I, slightly longer than III and IV combined, with a transverse band of white hairs near middle along basal margin of apical glabrous area. Sternites III and IV significantly reduced, subequal in length to each other, subglabrous, lacking white stout hairs, each with a pair



of distinct lateral flanges along apical margin. Sternite V minutely moderately punctured, widely depressed in apical half of disc, densely punctured, covered with fine white stout hairs in apical depression, nearly as long as II–IV combined; apical margin emarginate near middle, fringed with white stout hairs. Legs slightly shorter than in male; fore and mid tibiae more weakly incurved. Otherwise practically as in male.

*Material examined.* EAST MALAYSIA: SABAH. Crocker Range: 1 female, IV–1988, native collector (NIAES); 1 female, IV–1990, native collector (NIAES); 1 male, Keningau, IV–1993, native collector (NIAES); 1 male, near Keningau, 30–III~4–IV–1994, native collector (NIAES); 1 male, near Keningau, 30–III~4–IV–1995, native collector (NIAES); 1 male and 2 females, near Keningau, V–1997, native collector (NIAES); 8 males and 3 females, near Keningau, IV–1999, native collector (NIAES, PCTN); 1 female, near Keningau, V–1999, native collector (NIAES); 4 males and 2 females, near Keningau, VI–2002, native collector (NIAES); 5 males and 5 females, Kimanis Road, 16–IV–2000, native collector (NIAES); 1 female, Kimanis Road, IV–2002, native collector (NIAES); 1 male and 1 female, Kimanis Road, IX~X–2007, native collector (NIAES). Mt. Trus Madi: 5 males and 3 females, IV–1990, native collector; 1 female, III–1992, native collector (NIAES); 3 males and 1 female, V–2007, native collector (NIAES); 1 male and 4 females, IV–2008, native collector (NIAES); 53 males and 20 females, southwestern slope, ca 1,200 m, IV–1991, native collector (NIAES). Ranau: 1 male, IX–2000, native collector (NIAES). SARAWAK. Mt. Serapi: 1 male and 1 female, 10–V–1990, native collector (PCTN).

*Distribution.* Malaysia: Borneo.

*Notes.* *Euryarthrum hastigerum* slightly resembles *E. bifasciatum* PASCOE, 1856 (= *E. lambi* PASCOE, 1866) in having two white transverse bands which divide elytra into three equal parts. However, *E. hastigerum* is readily distinguished from *E. bifasciatum* mainly by the following points: antennae longer, slightly extending beyond elytral apices in male; elytra dorsally more convex, lacking definite submedian ridges; elytral white bands much broader; elytral suture acutely strongly projected at the apex in female; fore and mid tibiae gently incurved in male.

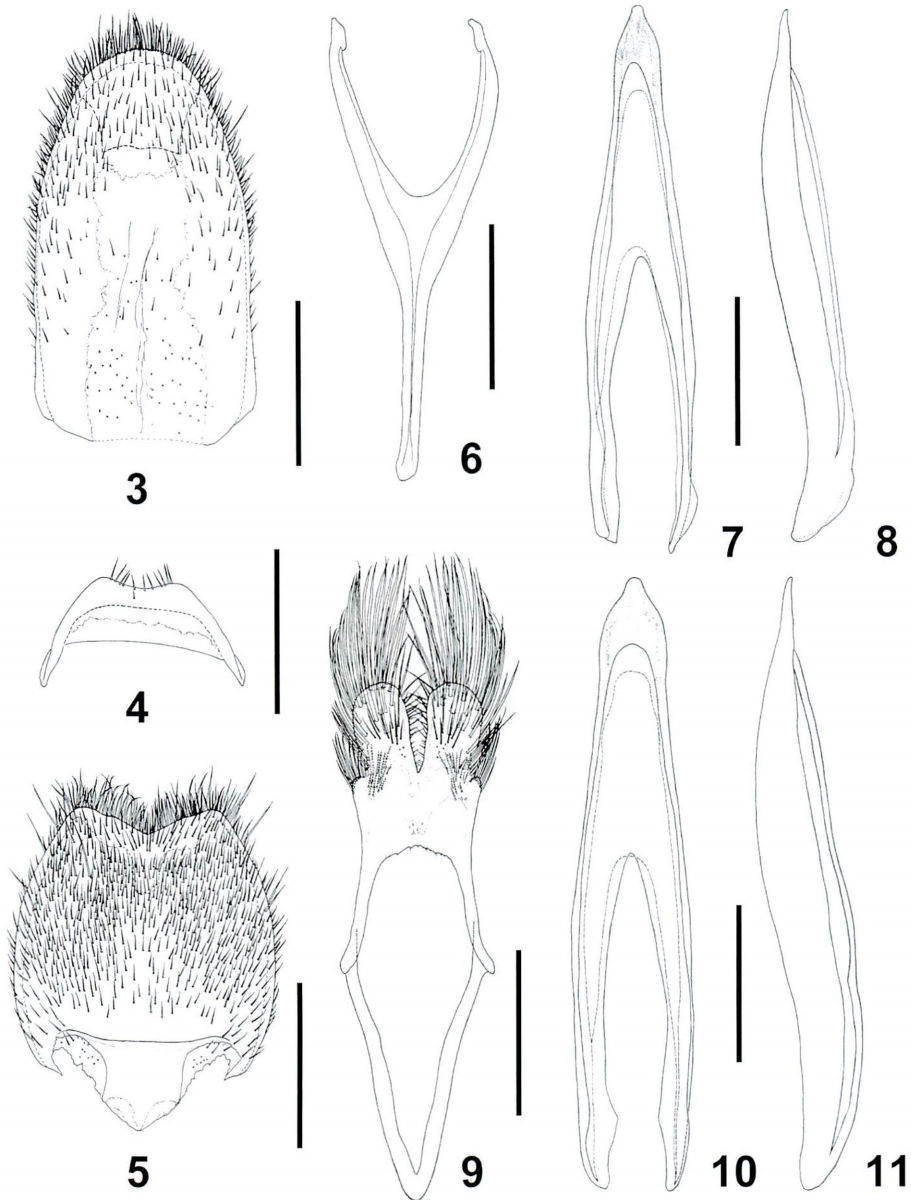
*Euryarthrum kalimantanense* sp. nov.

(Figs. 2, 10, 11)

*Description.* Male. Dimensions: LB: 18.89. WH: 3.25. LG: 1.75. LL: 1.25. WP: 4.50. LP: 3.85. WE: 5.70. LE: 12.30. N=1 for all measurements. Habitus as in Fig. 2.

Antennal segments VIII–XI testaceous. Body stouter. Vertex covered with shorter hairs; genae sparsely covered with hairs in lower half. Mid and hind femora scattered with shorter hairs in basal half of dorsal surface. Fore tibiae widely covered with golden setae on dorsal surface. Mesosternum sparsely covered with fine hairs. Mesepimeron and metasternum covered with dark hairs. Metepisternum covered only with dark minute hairs, lacking light-colored hairs. Sternites densely covered with minute hairs;





Figs. 3-11. Male terminalia of *Euryarthrum* spp. — 3-9, *E. hastigerum* HOLZSCHUH; 10-11, *E. kalimantanense* sp. nov. — 3, Tergite VIII in dorsal view; 4, tergite IX in dorsal view; 5, sternite VIII in ventral view; 6, sternite IX in ventral view; 7, median lobe in dorsal view; 8, ditto in lateral view; 9, tegmen in dorsal view; 10, median lobe in dorsal view; 11, ditto in lateral view. Scale bars=1.0 mm.

apical band of white stout hairs on sternite I becoming obscure near middle; sternite II with a pair of short transverse bands of white stout hairs along apical margin; sternite V with a pair of lateral patches of white stout hairs on apical half.

Ratio width of head to prothorax slightly narrower, WH/WP 0.72. Occiput wider, nearly flat, hardly prominent along median sulcus. LG/LL 1.40. Vertex wider. Antennae slightly stouter; segments III–VI except for apical part of VI more densely punctured, weakly shiny; segment VI more strongly dilated externally from basal third to apex. Prothorax wider, WP/LP 1.17; dorsum more strongly convex; sides rapidly dilated from constricted base, subparallel in basal third, widest at strongly produced middle, more strongly convergent towards apex; prosternal process with a larger tubercle which is spherical in ventral view. Scutellum wider. Elytra slightly wider, LE/WE 2.16, LE/LP 3.19, WE/WP 1.27; disc with a more developed postscutellar prominence; epipleura more strongly projected apicad. Mesosternal process strongly depressed along midline. Sternites I and II more densely punctured. Sternite V wider, flattened and more densely punctured near middle of apical part. Fore tibia simple, not dilated externo-apically.

Tergite VIII slightly wider; sides gradually narrowed in basal 2/3. Sternite VIII wider. Median lobe (Figs. 10, 11) stouter; dorsal plate widely rounded at apex; ventral plate slightly expanded in subapical part. Tegmen with wider lateral lobes, which are narrowly separated from each other. Otherwise practically as in *E. hastigerum*.

*Female*. Dimensions: LB: 19.02. HW: 3.15. LG: 1.75. LL: 1.15. WP: 4.50. LP: 3.85. WE: 5.90. LE: 12.60. N=1 for all measurements.

Body stouter. Ratio width of head to prothorax slightly narrower, WH/WP 0.70. Antennae shorter and stouter, not extending to elytral apices. Genae deeper, LG/LL 1.52. Elytra slightly wider, widest at middle, LE/WE 2.14, LE/LP 3.27, WE/WP 1.31, each armed with a very slender projection at apex. Prosternal process slightly wider, more densely covered with longer hairs, with a smaller apical tubercle. Mesosternal process slightly wider. Sternite I slightly inflated, nearly as long as II–V combined. Sternite II finely densely punctured on disc, minutely sparsely punctured at sides, nearly 1/3 as long as I, nearly as long as III and IV combined, with a transverse band of white hairs near middle along basal margin of apical glabrous area. Sternites III and IV significantly reduced, subequal in length to each other, sparsely covered with minute hairs, lacking white stout hairs, each with a pair of distinct lateral flanges along apical margin. Sternite V minutely moderately punctured, widely depressed in apical half of disc, densely punctured and covered with fine glossy hairs in apical depression, slightly shorter than II–IV combined; apical margin deeply emarginate at middle, fringed with long incurved glossy hairs. Legs slightly shorter; fore and mid tibiae more weakly incurved. Otherwise practically as in male.

*Type material*. Holotype male (NIAES), “[INDONESIA] / West Kalimantan / nr Benkayang / IV. 1998”; “[HOLOTYPE] male / *Euryarthrum kalimantanense* / YOSHITAKE & NIISATO, 2009” (typed on red card); “NIAES COLLECTION” (typed on yellow card). Paratype. INDONESIA. 1 female, same data as the holotype

(NIAES).

*Distribution.* Indonesia: Kalimantan (Borneo).

*Etymology.* The species epithet is derived from the type locality, Kalimantan.

*Notes.* *Euryarthrum kalimantanense* sp. nov. is very similar to *E. hastigerum* HOLZSCHUH in general appearance. However, the new species is readily distinguished from *E. hastigerum* by the stouter body, vertex covered with shorter hairs, more strongly convex pronotum, epipleuron with a stronger projection, mesosternal process strongly depressed along midline, and fore tibia lacking apical external expansion. Besides, *E. kalimantanense* possesses stouter median lobe and wider and narrowly separated lateral lobes in male terminalia.

### Acknowledgments

We thank Drs. M. TAKAKUWA (Kanagawa Prefectural Museum of Natural History, Odawara), M. HAJIKA (National Institute of Agrobiological Sciences, Tsukuba), and T. KURIHARA (Ehime University, Matsuyama) for the donation of specimens used in this study.

### 要 約

吉武 啓・新里達也: *Euryarthrum hastigerum* HOLZSCHUH の再記載とインドネシア・カリマンタン産近似 1 新種の記載. — *Euryarthrum hastigerum* HOLZSCHUH, 2008 を雄交尾器も含めて詳細に再記載した. また, 西カリマンタンから *E. kalimantanense* sp. nov. を記載した. 本新種は *E. hastigerum* に大変よく似ているが, 体はより幅広いうえに, 上翅の側片先端部の突起がより強く, 中胸腹板突起が正中線沿いに深く凹み, 雄交尾器中央片がより頑強であることなどによって容易に識別できる.

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A New Locality of *Euryclytosemia nomurai* HAYASHI  
(Coleoptera, Cerambycidae) from the Mainland of Taiwan

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*Euryclytosemia nomurai* HAYASHI, 1963 has been known to occur in two isolated islands, Yonaguni Island of the southern Ryukyus and Lan Hsu Island off southeastern Taiwan (HAYASHI, 1963, 1974; CHOU, 2008). In a recent field survey, CHUNG found this species from Pingtung County of the mainland of Taiwan as recorded below.

We would like to thank Dr. Chi-Feng LEE of Taiwan Agricultural Research Institute, Taiwan, and Dr. Tatsuya NIISATO of Bioindicator Co., Ltd., Tokyo, for their kind help in preparing this short report.

*Euryclytosemia nomurai* HAYASHI, 1963

*Euryclytosemia nomurai* HAYASHI, 1963, Ent. Rev. Japan, **16**, p. 15, pl. 2, fig. 10; type locality: Sonae [sic], Yonaguni Is., Southern Ryukyus, Japan. — HAYASHI, 1974, Ent. Rev. Japan, **27**, p. 52; locality record: Lan Hsu Island, off Southeastern Coast of Taiwan.

*Specimens examined.* 1 ♂, Sheding Nature Park, Pintung County, Taiwan, 12-III-2008, Y.-T. CHUNG leg.; 1 ♂, Siangjiaowan Coastal Forest, Pintung County, 12-III-2008, Y.-T. CHUNG leg.

*Note.* This species shows a weak geographical variation. In the structure of median lobe of male genitalia, the specimens from Yonaguni Island of the southern Ryukyu are slightly shorter in length than those of other localities and weakly swollen ventrad near middle in lateral view. The specimens from Lan Hsu Island have somewhat distinct dark elytral maculation, but its male genitalia show no difference from that of the mainland of Taiwan.

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## Occurrence of the Genus *Shiva* (Coleoptera, Nanophyidae) in Taiwan, with Description of a New Species

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**Abstract** A new species of the genus *Shiva* in the family Nanophyidae is described from Taiwan as the first and easternmost species of the genus other than India under the name *Shiva taiwanus* sp. nov. This new species is characterized by their maculation and coloration as well as the asymmetrical pedon of aedeagus at apex among the congeners. It may be confused with *Nanophyes formosensis* KÔNO by their superficial resemblance and coexistence on the flower buds of *Lagerstroemia subcostata* of the family Lythraceae.

A number of adult nanophyid weevils were collected on the flower buds of a crape myrtle, *Lagerstroemia subcostata* in Taiwan. They are easily recognized to be a mixture of several species by their different coloration from fulvous to fuscous, sizes and outlines. Among them, the fulvous coloured species were initially identified with a single species, *Nanophyes formosensis* KÔNO, 1930 (Figs. 5, 6) by their coloration and maculation. Later, it became clear that the mixtures of the two species belonging to different genera. The other species represents a new species belonging to the genus *Shiva* PAJANI et BHATEJA, 1982. The genus *Shiva* is defined by the following characters: antennae with funicle 6-segmented, club formed of three loose segments, eyes approximated, separated linearly, 8th elytral interval shortly crenulate distad of humeral callus, which is well developed, and intermesocoxal distance subequal to intermetacoxal one. Occurrence of the genus in Taiwan is interesting as the first record other than India and the easternmost one in the range.

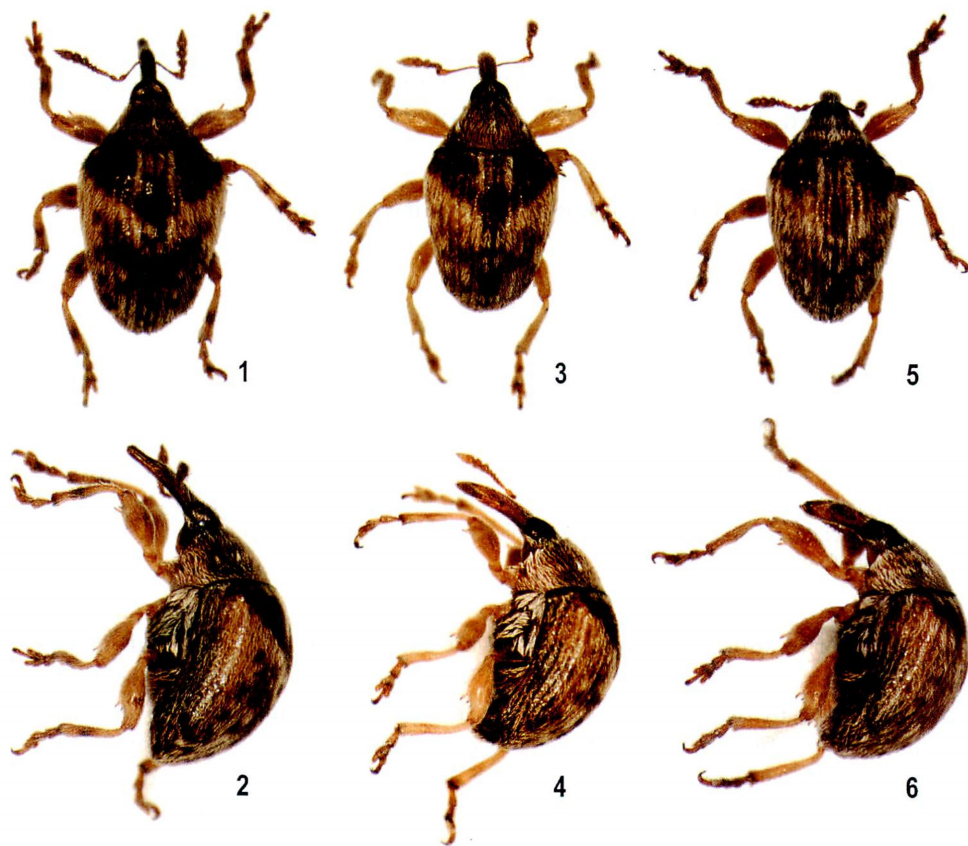
All the specimens examined are deposited at the Laboratory of Entomology, Tokyo University of Agriculture unless otherwise mentioned.

### *Shiva taiwanus* sp. nov.

(Figs. 1–4, 7–17)

**Male.** Length: 2.0–2.3 mm; pronotal width: 1.0–1.2 mm; elytral width: 1.2–1.4 mm.

Derm yellowish to reddish brown; head, rostrum at least behind antennal insertion, sides of pronotum, and basal keels of pronotum and elytra more or less fuscous; elytra

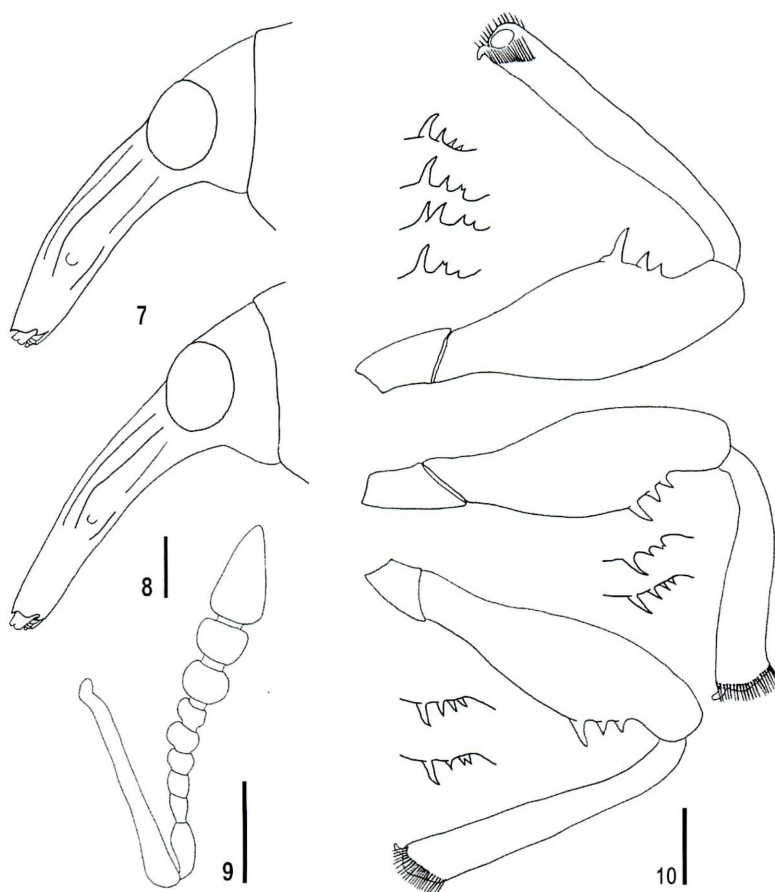


Figs. 1–6. Habitus photographs of *Shiva taiwanus* sp. nov. and *Nanophyes formosensis* KÔNO (1–4, *Shiva taiwanus*; 5, 6, *N. formosensis*). — 1, Female, dorsal view; 2, ditto, lateral view; 3, male (holotype), dorsal view; 4, ditto, lateral view; 5, male, dorsal view; 6, ditto, lateral view.

often fuscous along suture and lateral margin, with dark brown to fuscous basal triangular band and irregularly small patches behind middle; venter with meso- and metathoraces more or less darkened, ventrite sometimes darkened partly; legs pale brown except fuscous apices of tibiae, tarsi and denticles of femora, tibiae and femora each often with dark fascia. Vestiture of white to yellowish white elongate scales slightly condensed on base of 2nd elytral interval and sides of pro- to metathoraces and procoxae; elytra with fuscous hairs in dark areas. Specialized erect setae present on pronotum, odd intervals of elytra, femora and tibiae.

Head: — Forehead between eyes narrow, with row of scales on each side along inner margin of eye. Rostrum nearly as long as pronotum. Antennae (Fig. 9) inserted a little beyond middle of rostrum; scape nearly as long as funicle plus 1st segment of club; funicle with 1st segment twice as long as wide, 2nd  $3/5$  times as long as 1st, 3rd to



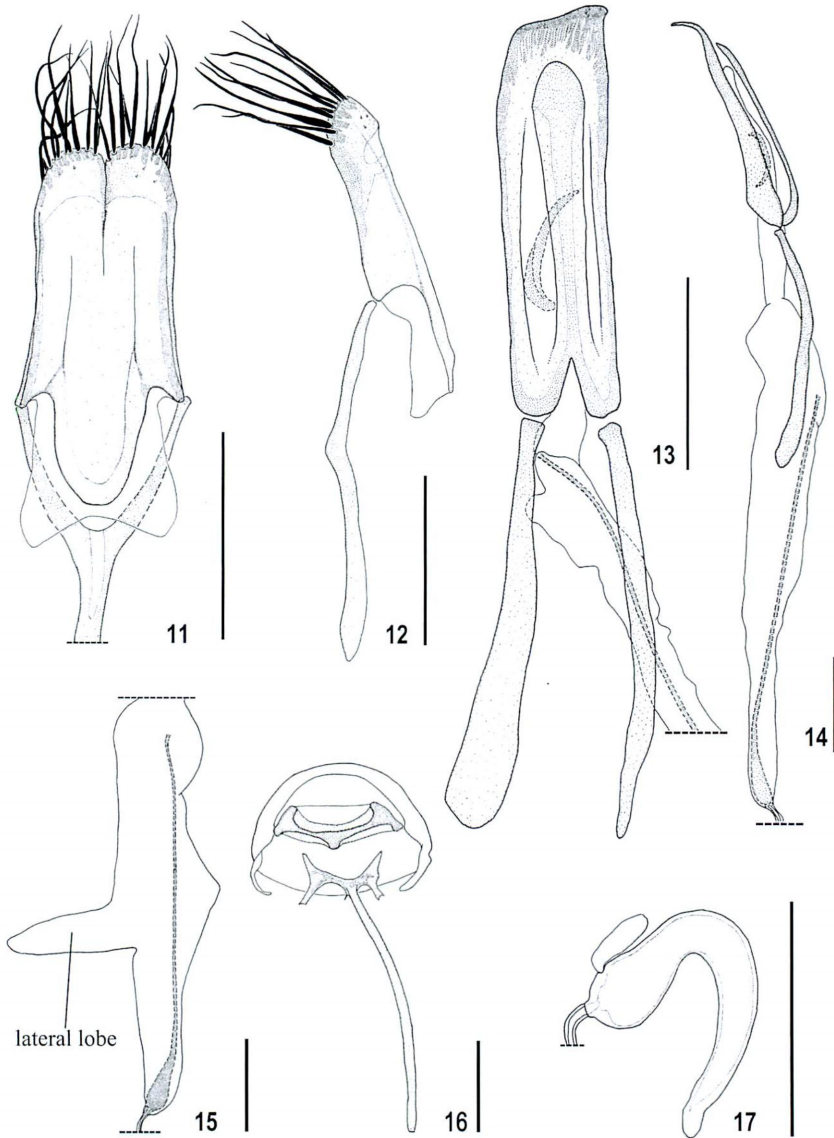


Figs. 7-10. *Shiva taiwanus* sp. nov. — 7, Head, male; 8, ditto, female; 9, antenna; 10, legs (trochanters, femora and tibiae) and variation of femoral denticles, male. Scale=0.2 mm.

6th subequal in length, a little shorter than 2nd, 5th slightly asymmetrical; club nearly as long as funicle, 3rd segment slightly longer than 1st and 2nd segments combined.

Thorax: — Prothorax 0.5-0.6 times as long as wide. Elytra 1.1-1.2 times as long as wide. Legs (Fig. 10) with femora each with long proximal and two, sometimes three smaller distal denticles; all tibiae mucronate, although mucro difficult to see on hind tibia.

Male terminalia: — Tegmen as in Figures 11, 12; tegminal plate nearly as long as apodeme plus ring; parameloid lobes short, separated by median notch, each lobe with single marginal row of 10-13 long setae. Aedeagus (Figs. 13 & 14) with pedon asymmetrical, curved rightwards distally and downturned at tip; tectum approximately half width of pedon. Apodemes and aedeagal body subequal in length. Internal sac with curved sclerite; flagellum very long, nearly twice as long as aedeagal body; lateral lobe



Figs. 11–17. *Shiva taiwanus* sp. nov. — 11, Tegmen, dorsal view; 12, ditto, lateral view; 13, aedeagus, dorsal view; 14, ditto, lateral view; 15, internal sac, distended, dorsal view; 16, tergite 8, sternite 8 and spiculum gastrale; 17, spermatheca. Scale=0.2 mm.

(Fig. 15) found when distended. Spiculum gastrale (Fig. 16) with a pair of lobes anteriorly on the plate and apodeme asymmetrically curved.

**F e m a l e.** Length: 2.2–2.5 mm; pronotal width: 1.1–1.3 mm; elytral width: 1.4–1.5 mm.

Similar to male except rostrum slender and thinner before antennal insertion, which is just beyond middle of rostrum, and tibiae not mucronate. Spermatheca (Fig. 17) simply C-sharped.

*Etymology.* This species was named after the locality.

*Type series.* Holotype, ♂, Fenshuiling, Manchou Hsiang, Pingtung Hsien, Taiwan, 29-V-2006, J. KANTOH leg. Paratypes: 1 ♂, Koshun (paratype of *Nanophyes formosensis*, NSMT-I-C-26437; National Museum of Nature and Science, Tokyo). 5 ♂♂, same data as the holotype. 4 ♂♂, 3 ♀♀, same locality as the holotype, 30-V-2006, J. KANTOH leg.; 1 ♂, 1 ♀, 30-V-2006, T. TSURU leg.; 8 ♂♂, 5 ♀♀, 31-V-2006, J. KANTOH leg. 2 ♀♀, Kenting Park, Taiwan, 24~26-V-1975, S. IMASAKA leg.; 1 ♂, 27-III-1976, M. ITO leg. 1 ♂, Chihpen-wenchuan, Peinan Hsiang, Taitung Hsien, Taiwan, 1-VI-2006, J. KANTOH leg.; 5 ♂♂, 2 ♀♀, 4-VI-2006, J. KANTOH leg.; 3 ♂♂, 1 ♀, 5-VI-2006, J. KANTOH leg., 1 ♀, 27~29-III-1995, H. KOJIMA leg. 1 ♂, Nanshanchi, Taiwan, 13-IV-1975, S. IMASAKA leg.; 1 ♂, 30~31-V-1975, S. IMASAKA leg.; 1 ♂, 13-VI-1976, M. ITO leg.; 1 ♀, 5-V-1979, K. EMOTO leg. 1 ♂, 1 ♀, Wulai, Taipei Hsien, Taiwan, 14-IV-1995, H. KOJIMA leg. 1 ♀, Liouguei Hsiang, Kaohsiung Hsien, Taiwan, 3-VIII-1976, K. MATSUDA leg.

*Distribution.* Taiwan (Taipei, Nantou, Kaohsiung Taitung, and Pingtung Hsiens).

*Biological note.* Weevils were captured on the flower buds of *Lagerstroemia subcostata* (Lythraceae) with several other nanophyid species.

### Discussion

Six *Shiva* species have been known only from India to date. Occurrence of the genus in Taiwan becomes the most easterly record in the range. With regard to the interspecific classification of the genus, ALONSO-ZARAZAGA (1990) tentatively divided it into three species groups based on the male genital structure. The present new species seemingly belongs to the *variabilis* group in having the tegmen notched apically and the long flagellum. However, this species is unique in having the asymmetrical apex of the pedon of the aedeagus and very long flagellum nearly twice as long as the aedeagal body. The maculation and coloration also differ from those of the other species of the *variabilis* group.

This species is also easily confused with *Nanophyes formosensis* sometimes coexisting on the same plant. Examination of the type series of *N. formosensis* revealed to be a mixture of two species and the paratype kept in the National Museum of Nature and Science, Tokyo is identified with *Shiva taiwanus*. In parenthesis, the species treated and figured by MORIMOTO (1964) as *N. formosensis* and ALONSO-ZARAZAGA (1989) as the type species of the genus *Psix*, which was renamed *Zherikhinia* (ALONSO-ZARAZAGA & LYAL, 1999) is based on misidentification (KANTOH, in prep.).

Though no biological information has ever been known for the genus, *Lagerstroemia* species will become a good place to look for the biology of this species as well as the other species possibly occurring in the intervening area of the range.



### Acknowledgments

We thank Drs. K. MORIMOTO (Kyushu University Museum, Fukuoka) and H. YOSHITAKE (National Institute for Agro-Environmental Science, Tsukuba) for their valuable comments. Thanks are due to Dr. S. OKAJIMA (Tokyo University of Agriculture) for his encouragement, Drs. S. NOMURA (National Museum of Nature and Science, Tokyo) and M. ÔHARA (Hokkaido University Museum) for their kind help to check the collections, and Mr. T. TSURU and the late Mr. K. EMOTO for their donation of the specimens.

### 要 約

関東準之助・小島弘昭: *Shiva* 属チビゾウムシの台湾からの発見と1新種の記載(コウチュウ目チビゾウムシ科). —— チビゾウムシ科の *Shiva* 属は, これまでにインドから6種が知られていたが, 今回, 台湾から1新種を見出し, *Shiva taiwanus* sp. nov. と命名し記載した. 本属の寄主植物は未知であったが, 本新種はミソハギ科のシマサルスベリ *Lagerstroemia subcostata* から複数種のチビゾウムシ, 特にオオチビゾウムシ *Nanophyes formosensis* と混じって採集された. また, 興味深いことに本種とオオチビゾウムシは, 所属が異なるにもかかわらず色彩, 模様などが非常によく似て混同しやすいが, 触角中間節の数が異なることから容易に区別可能である.

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## Records of the Nanophyid Weevils (Coleoptera, Nanophyidae) from Bali, Indonesia

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**Abstract** Weevils of the family Nanophyidae are recorded for the first time from Bali, Indonesia. Three genera and three species are recognized as follows: *Nanophyes proles* HELLER, *Ctenomerus lagerstroemiae* MARSHALL and *Shiva trispinosus* PAJANI et BHATEJA.

Bali is located at the southeastern periphery of the Sunda Shelf and a boundary of the WALLACE's Line. Thus, the fauna mainly consists of Asiatic organisms. No nanophyid weevil has ever been recorded from Bali while four species are known from Java just adjoining. In the recent surveys, the following three species, of which two are common to Java were recognized. We thank Dr. K. MORIMOTO (Kyushu University Museum, Fukuoka) for his valuable comments, Dr. S. OKAJIMA (Tokyo University of Agriculture), Mrs. K. SUMIARTHA, and W. SUSILA (Udayana University, Bali) and T. ISHIZAKI for their kind help in many ways. This study is financially supported in part by the Academic Frontier Cooperative Research Project, Tokyo University of Agriculture.

### *Nanophyes proles* HELLER

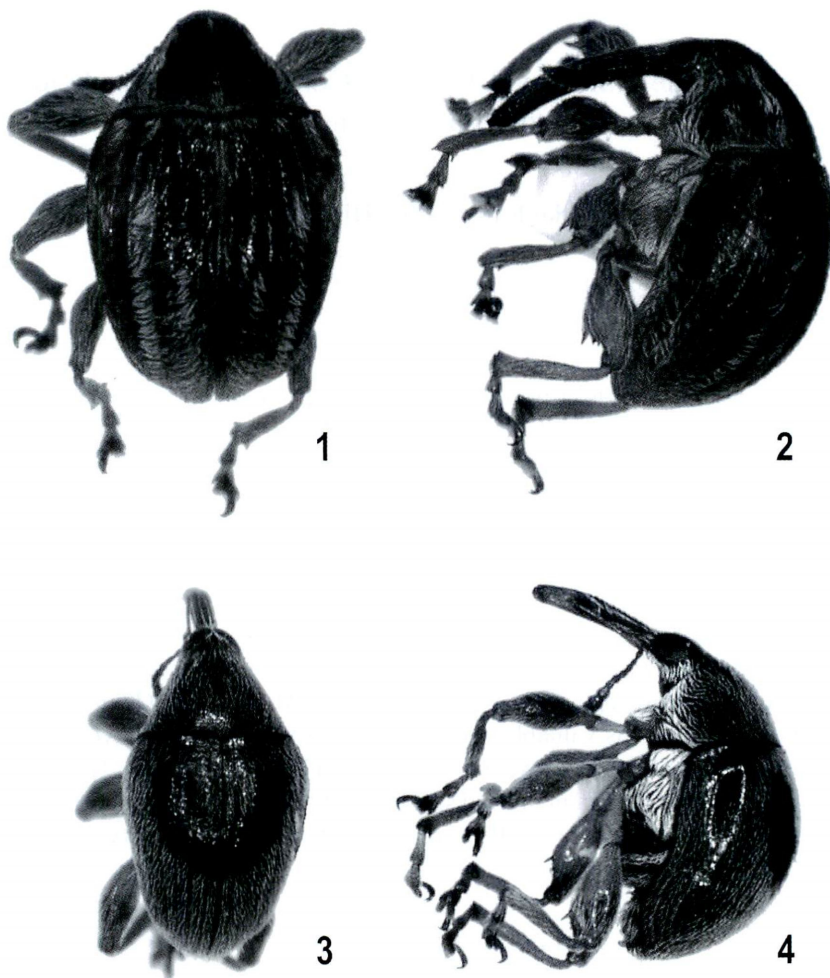
*Nanophyes proles* HELLER, 1915, 25 (Luzon). — MORIMOTO, 1964, 87 (Japan: Ryukyus, China: Fukien, Philippines, Java).

See MORIMOTO (1964) for references.

Weevils were known to associate with *Ludwigia octovalvis* of the family Onagraceae inhabiting in the humid place and make the fruit gall (Y. SAWADA, pers. comm.). A number of adults were collected from *L. octovalvis* in non-cultivated paddy field on Bali.

*Specimens examined.* 3 ♂♂, 3 ♀♀, Singo-Sari, Malang, Bali, Indonesia, 23–VIII–2005, T. ISHIZAKI leg. 7 ♂♂, 8 ♀♀, S 08°23'11.0", E 115°05'13.6", Pura Luhur, alt. 755 m, Munca-Sari, Tabanan, Bali, Indonesia, 9–XI–2007, J. KANTOH leg.; 4 ♂♂, 5 ♀♀, 10–XI–2007, J. KANTOH leg.

*Distribution.* Japan (Ryukyus), China (Fukien), Philippines (Luzon), Indonesia (Java, Bali). New to Bali.



Figs. 1-4. Habitus photographs of *Ctenomerus lagerstroemiae* MARSHALL (1, 2) and *Shiva trispinosus* PAJNI et BHATEJA (3, 4). — 1, Male, dorsal; 2, ditto, lateral; 3, male, dorsal; 4, ditto, lateral.

*Ctenomerus lagerstroemiae* MARSHALL

(Figs. 1 & 2)

*Ctenomerus lagerstroemiae* MARSHALL, 1923, 268 (Java; on fruits of *Lagerstroemia speciosa*).

This species was described based on six female specimens. Description of male is given below based on two males from Bali.

Length: 3.0–3.3 mm; width: 2.1–2.2 mm. Similar to female with the exception of rostrum shorter (1.5 mm), antennae inserted around apical third of rostrum and all tibiae mucronate.



Weevils were captured on the flower buds of *Lagerstroemia speciosa* with the following species.

*Specimens examined.* 2 ♂♂, 1 ♀, Pura Taman musi, Buleleng Prov., Bali, Indonesia, 13-XI-2007, J. KANTOH leg.

*Distribution.* Indonesia (Java, Bali). New to Bali.

### *Shiva trispinosus* PAJNI et BHATEJA

(Figs. 3 & 4)

*Shiva trispinosus* PAJNI et BHATEJA, 1982, 481 (India: Assam, Nagaland).

This species is easily recognized in having the nearly straight rostrum and the unique elytral macula between 1st and 4th intervals. Although there is a considerable distributional gap from its previously known locality, Balinese materials agree well with the original description and illustrations of this species including the male and female genital structure. No biological information was available, though a number of adults were captured on the flower buds of *Lagerstroemia speciosa*. The plant is so widely distributed in the tropical Asia from India to the northern Australia that the weevil may be found from the intervening area of the gap in future.

*Specimens examined.* 14 ♂♂, 9 ♀♀, same locality and date of *C. lagerstroemiae*.

*Distribution.* India, Indonesia (Bali). New to Bali.

## 要 約

関東準之助・小島弘昭：インドネシア，バリ島からのチビゾウムシ科の記録（コウチュウ目チビゾウムシ科）。—— これまでインドネシアのバリ島からチビゾウムシ科の記録はなかったが，最近の調査によって以下の3属3種のチビゾウムシの分布が明らかになった。

1, ハスオビチビゾウムシ *Nanophyes proles* HELLER. 水辺や湿り気の多い場所に生えるキダチキンバイに寄生することが知られ，その朔果にゴールを形成する（沢田，私信）。琉球以南の東南アジアに広く分布。

2, *Ctenomerus lagerstroemiae* MARSHALL. ジャワから雌個体に基づいて記載され，オオバサルスベリの実に寄生する。バリ産の雄個体に基づき，特徴を記載した。

3, *Shiva trispinosus* PAJNI et BHATEJA. インド北部から記載された種で，今回地理的にかなり離れたバリから発見された。雌雄交尾器を含め原記載の特徴とよく一致することから本種と同定した。熱帯アジアに広く分布するオオバサルスベリから得られたことから，今後，分布の空白地帯からも得られる可能性が高い。

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PAJANI, H. R., & B. R., BHATEJA, 1982. Indian Apionidae (Coleoptera: Curculionoidea) I. Taxonomic studies on subfamily Nanophyinae. *Orient. Ins., Delhi.*, **16**: 431–490.

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*Elytra, Tokyo*, **37**(1): 174, May 29, 2009

## A New Record of *Hydrocyphon mirabilis* (Coleoptera, Scirtidae) from Thailand

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*Hydrocyphon mirabilis* YOSHITOMI et M. SATÔ was described from China on the basis of one male specimen (YOSHITOMI & SATÔ, 2005). Recently I examined a specimen of this species collected from Thailand. I am going to record it for the first time from Thailand as below.

*Specimen examined.* 1 ♂ (genitalia examined; preserved in Staatliches Museum für Naturkunde, Stuttgart: SMNS), “THAI 13/5,1993 19.29N 98.18E SOPPONG 750m Vit Kubán leg.”

From the type locality, the new locality is about 1,300 km distance. But the male genitalia of the additional specimen are quite same shape to the holotype.

I thank Dr. Wolfgang SHAWALLER (SMNS) for his permission to loan the museum collections.

### Reference

YOSHITOMI, H., & M. SATÔ, 2005. Scirtidae of the Oriental Region, Part 8. New species and additional record of the genus *Hydrocyphon* (Coleoptera: Scirtidae). *Ent. Rev. Japan*, **60**: 153–206.

## A New Genus of the Acalyptini (Coleoptera, Curculionidae) with Five Segments in the Funicle

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**Abstract** A new genus and species of the flower weevil tribe Acalyptini is described from Sulawesi, Indonesia under the name *Meredoloides niisatoi* gen. et sp. nov. *Meredoloides* closely resembles in appearance *Meredolus* MARSHALL occurring in the Solomon Islands, but is characterized in having the antennae 5-segmented in the funicle. The weevils were found on the inflorescences of coconut palm, *Cocos nucifera*, which is also the host of *Meredolus*.

Fundamental number of the funicular segments in the antennae is seven in the family Curculionidae. They are often reduced in number to six and rarely to five or less in several taxa in parallel. The funicle is 7-segmented in all the previously known genera of the Acalyptini *sensu* KOJIMA & MORIMOTO, 2005. However, one species is provided with the antenna, which has five segments in the funicle and thus represents a new genus, was found from Sulawesi on the inflorescences of coconut palm. The weevil is very similar to *Meredolus* MARSHALL, 1935 from the Solomon Islands associated with the inflorescence of coconut palm except for the number of the funicle.

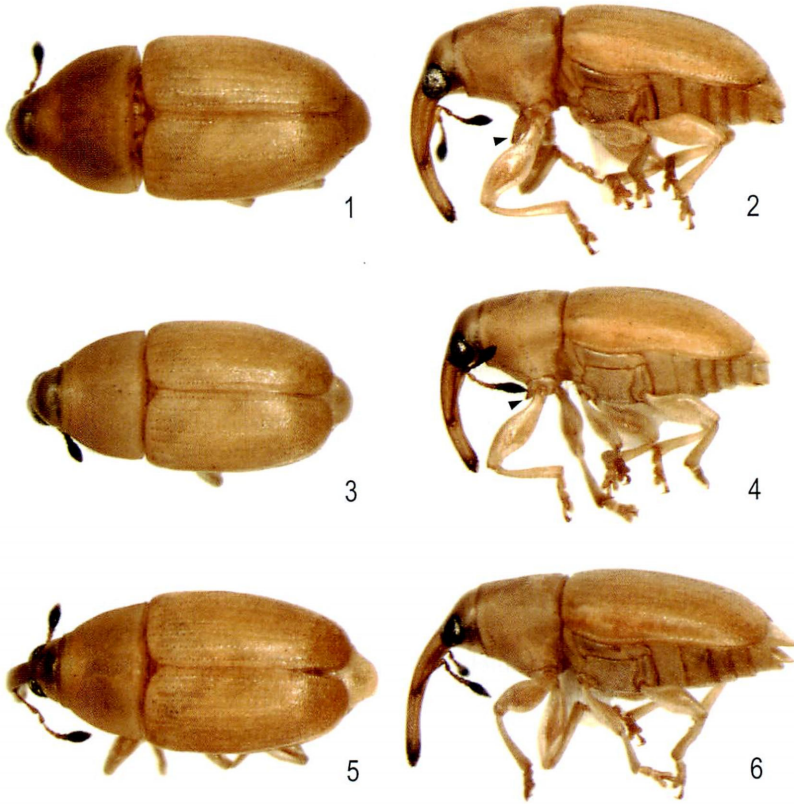
The type materials are preserved in the Laboratory of Entomology, Tokyo University of Agriculture, Atsugi, Kanagawa, Japan.

*Meredoloides* gen. nov.

Type species: *Meredoloides niisatoi* gen. et sp. nov.

Head with forehead slightly narrower than base of rostrum, with median fovea indefinite. Eyes weakly convex, their curvature not continuous with that of temple. Rostrum with shallow groove laterally forming false scrobe, extending beyond antennal insertion and antennal scape obliquely retracted to groove. Antennae with funicle 5-segmented; club with segmentation indefinite. Prothorax transverse, widest at or just a little before base, shallowly bisinuate at base, weakly constricted at apex. Scutellum distinct. Elytra leaving propygidium broadly exposed, with ten striae, 9th and 10th confused posteriorly. Legs with femora clavate, inerm; tibiae gradually widening from base to apex; tarsal claws simple and widely divaricate. Prosternum between fore coxae narrow, with ventral process, which is concaved dorsally, immediately in front of fore



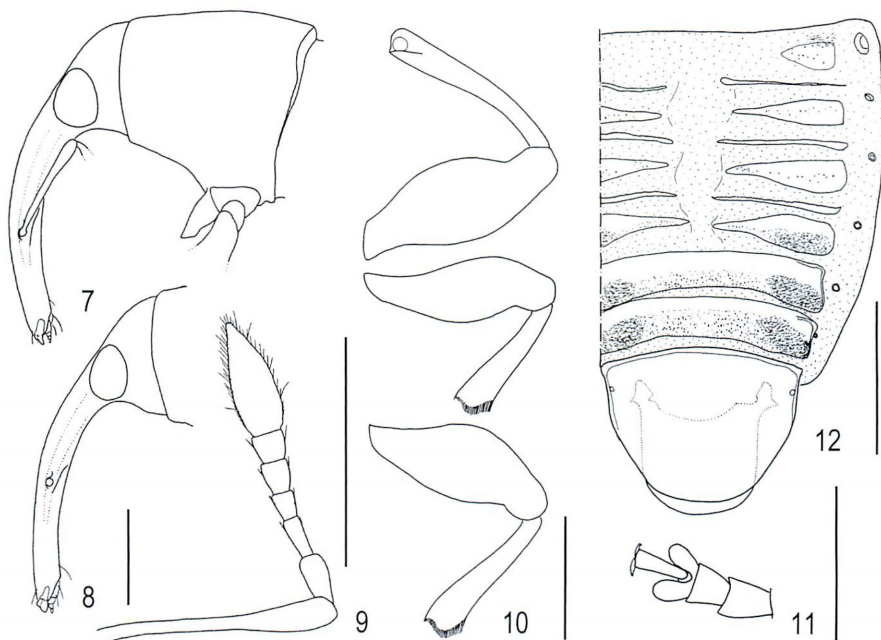


Figs. 1–6. Habitus photographs of *Meredoloides niisatoi* gen. et sp. nov. — 1, Large male, dorsal; 2, ditto, lateral; 3, small male, dorsal; 4, ditto, lateral; 5, female, dorsal; 6, ditto, lateral. Black triangular marks in Figs. 2 & 4 indicate the prosternal process.

coxae in male, the process greater in larger male and reduced in size in smaller male or faintly tuberculate instead of process in female; mesosternal process less than half as wide as middle coxa. Venter with 2nd ventrite as long as 1st behind coxae and as long as 3rd and 4th combined, 5th shorter than 3rd and 4th combined, with a pair of long erect setae.

*Etymology.* Resembling ('-oides', Greek) *Meredolus* MARSHALL.

*Comments.* *Meredoloides* closely resembles the monotypic genus *Meredolus* MARSHALL (type species: *M. cocotis* MARSHALL) in appearance among the known genera of Acalyptini in the following points: pale yellow in color, prothorax widest at or near base, femora edentate and prosternum with dorsally concaved process in front of fore coxae in male. However, *Meredoloides* is easily distinguished from *Meredolus* and other genera of Acalyptini in having the antennae 5-segmented in the funicle and the club segmented indefinitely. The latter is visibly at least 3-segmented in Acalyptini as usual.



Figs. 7-12. Characteristics of *Meredoloides niisatoi* gen. et sp. nov. — 7, Head and prothorax, lateral; 8, head, lateral; 9, antenna; 10, femora and tibiae; 11, tergite; 12, fore tarsus (7, 9-12, male; 8, female). Scale=0.5 mm.

*Meredoloides niisatoi* sp. nov.

(Figs. 1-17)

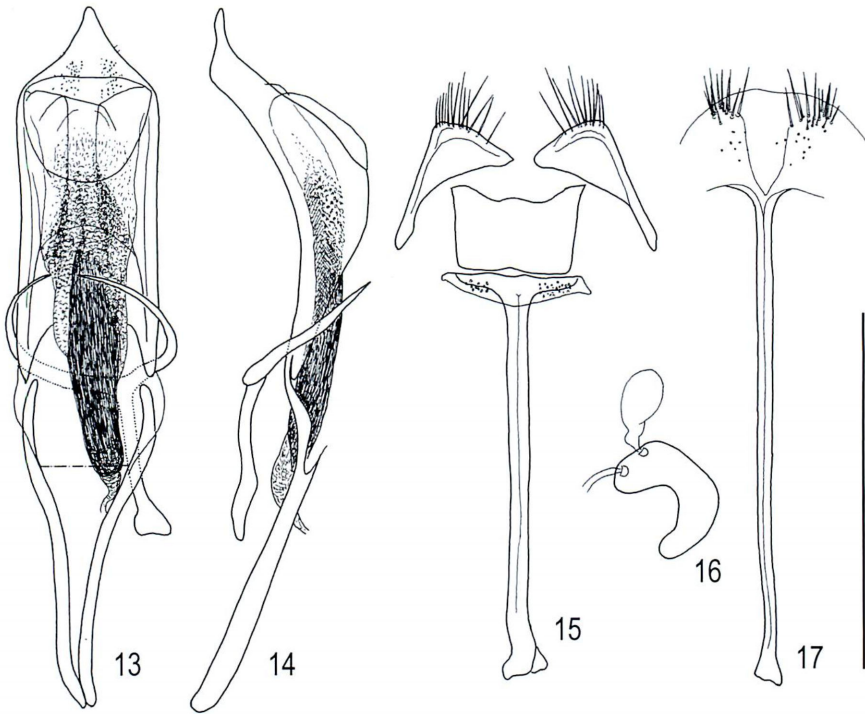
**Male.** Length: 2.5-3.1 mm; width: 1.2-1.4 mm.

Derm pale yellow except antennal club fuscous, with fine silky pubescence.

Head with very shallow fine close punctures. Rostrum slightly longer than pronotum. Antennae inserted a little beyond middle of rostrum; scape longer than funicle, hardly reaching eye; funicle with 1st segment about twice as long as broad, 2nd a little shorter than 1st, 3rd and 4th subequal in length, 2/3 times as long as 2nd, 5th nearly as broad as long, slightly shorter than 4th; club nearly as long as basal three segments of funicle combined.

Prothorax 1.5 times as wide as long, narrowing in regular curve from broadest base to apex, subapical constriction weak; dorsum with very shallow fine subconfluent punctures. Scutellum triangular. Elytra a little wider than prothorax, 1.2 times as long as wide; striae very shallow, with fine punctures, stria 1 slightly deeper than others; intervals flat, finely shagreened.

Terminalia as figured; sternite 8 paired, subtriangular, without sclerite between them; spiculum gastrale T-shaped, with subquadrate median sclerite; aedeagus broad, median lobe acuminate and abruptly curved at apex in lateral view, internal sac densely



Figs. 13–17. Male and female terminalia of *Meredoloides niisatoi* gen. et sp. nov. — 13, aedeagus and tegmen, dorsal; 14, ditto, lateral; 15, sternite 8 and spiculum gastrale; 16, spermatheca; 17, spiculum ventrale. Scale=0.5 mm.

spinulose on basal half.

**Female.** Length: 2.5–3.2 mm; width: 1.2–1.5 mm. Differs from male in having rostrum 1.3–1.4 times as long as pronotum and antennae inserted at middle of rostrum. Terminalia as figured; spermatheca C-shaped; spiculum ventrale slender, about four times as long as basal part.

**Etymology.** The species is named after Dr. Tatsuya NIISATO, who found this interesting weevil.

**Type material.** Holotype: male, Indonesia: S. Sulawesi, near Enrekang, 50 km SE of Parepare, 13–X–2008, T. NIISATO. Paratypes: 5 males and 9 females, same data as the holotype.

**Distribution.** Known only from the type locality of South Sulawesi, Indonesia.

**Comments.** Morphometrical variation occurs remarkably in male individuals. Although not quantified, larger males display positive allometry in size of the prosternal process. This would suggest the presence of fighting among males as is known in the other weevil with thoracic horn of similar origin (EBERHARD & GARCIA-C., 1998).

**Biological notes.** Weevils were captured on the inflorescences of coconut palm with



other members of Acalyptini: *Parimera* sp. and *Derelomorphus* sp. The former may be the undescribed species and the latter may be conspecific with *D. eburneus* MARSHALL known as potentially important pollinator of coconut in Malaysia (COCK, 1985).

### Acknowledgment

I thank Dr. T. NIISATO for his kind offer of materials and Dr. K. MORIMOTO for his review of the manuscript. This study is supported in part by the JSPS Tropical Bio-Resources Research Fund and KAKENHI (19770065).

### 要 約

小島弘昭：触角中間節が5節からなるデオゾウムシ族（コウチュウ目ゾウムシ科）の新属新種。——デオゾウムシ族の既知種は触角中間節が7節からなる。インドネシア・スラウェシ島のココヤシ花序から得られたデオゾウムシ族を調べたところ、触角中間節が5節からなる種が見つかったので、新属新種 (*Meredoloides niisatoi* gen. et sp. nov.) として命名・記載した。本属は、ソロモン諸島から知られ、同じココヤシを寄主とする *Meredolus* 属と外見が酷似するが、触角中間節数により既知のすべてのデオゾウムシ族の属と区別がつく。タイプ種大型雄では前胸基節前の突起が発達する相対成長が見られることから雄間の闘争行動の存在が示唆される。

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New Record of *Omoglymmius (Omoglymmius) caelatus*  
(Coleoptera, Rhysodidae) from Babeldaob and  
Carp Islands of Palau

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*Omoglymmius (Omoglymmius) caelatus* (Fig. 1) was described from Peleliu and Koror Islands of Palau (BELL & BELL, 1981). There is no additional record of this species. In this paper, we record this species for the first time from Babeldaob and Carp Islands of Palau.

*Specimens examined.* 1 ♂, 1 ♀, Babeldaob Is., Palau Isls., 11~12-IX-2002, M. SATÔ leg., SATÔ Collection Nos. 695-696; 2 ♂♂, Carp Is., Palau Isls., 13~15-IX-2002, M. SATÔ leg., SATÔ Collection Nos. 693-694.

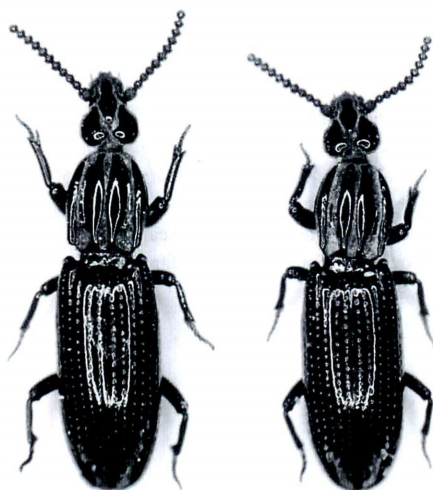


Fig. 1. *Omoglymmius (Omoglymmius) caelatus* (left, male; right, female).

Reference

BELL, R. T., & J. R. BELL, 1981. Coleoptera: Rhysodidae. *Insects of Micronesia*, 15(2): 51-67.

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1. 原稿は横書きとし、A4判用紙を用い、上下左右各3 cm以上の余白をあげ、ワープロ等で清書する。また、原稿1ページ目の上部には、少なくとも1/4ページ以上の余白をあげる。清書する活字の大きさは欧文14ポイント（和文12ポイント）、1ページあたり30行とし、句読点には「. , ; ・」を用いる。なお、欧文では、表題や見出しを含めて、いかなる場合にも大文字だけで表記しない。動植物の属およびそれ以下の学名には下線（イタリック書体指定）を、人名の2文字目以降に二重線（スモールキャピタル書体指定）を引く。
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4. 新タクサの命名記載をとまなう報文には、正基準標本（ホロタイプ）の全形写真あるいは図を掲載することが望ましい。
5. 文献は著者名のアルファベット順に並べて、下記で記す。

FLEUTIAUX, E., 1942. Entomological result from the Swedish Expedition to Burma and British India. Coleoptera, Elateridae, recueillis par René MALASSE. *Ark. Zool.*, 33A(18): 1-24.

WATANABE, Y., 1995. A new micropeplid species (Coleoptera) from Yunnan, Southwest China. *Elytra, Tokyo*, 23: 245-249.

——— & LUO, Z., 1991. The micropeplids (Coleoptera) from the Tian-mu Mountains in Zhejiang Province, East China. *Ibid.*, 19: 93-100.

6. 報文中の標本採集データは次のように略記する。

(例) 3♂♂, 1♀, Iryuda, Odawara-shi, Kanagawa Pref., C. Honshu, Japan, 9-V-2003, M. TAKAKUWA leg.

20 exs., Phu Pan (Mt.), 1,600 m alt., Ban Saleui, Houaphan Prov., NE Laos, 1-V-2002, H. YOSHITOMI leg.

7. 原稿には、原稿用紙と同質の表紙をつけ、これに表題、ランニングタイトル（簡略した報文表題、欧文50字以内）、著者名、連絡先を記し、赤字で原稿枚数、別刷部数（表紙の有無を明記）、そのほか連絡事項があれば記入する。また、電子データの入った電子媒体（CD、メモリースティックなど）をかならず添付する。

8. 図はすべて挿図（text-figure）として扱い、カラー写真などを除いて図版（plate）にしない。線画は耐水性黒色インク等で鮮明に描き、そのまま印刷できるようにする。印刷された図の拡大（縮小）率を示したい場合には図中にスケールを入れる。原図には薄紙のカバーをかけ、これに著者名、図の番号、上になる方向を示す。原図版上に取り扱い指定文字を入れたい場合には、かならず青鉛筆を用いる。なお、原図の大きさは台紙を含めてB4判以内とする。

9. 図の説明および表は、それぞれ別紙に書き、原稿末につける。図表のだいたいの挿入位置を、原稿本文に鉛筆で記入する。

10. 原稿の送付先は下記学会宛とする。

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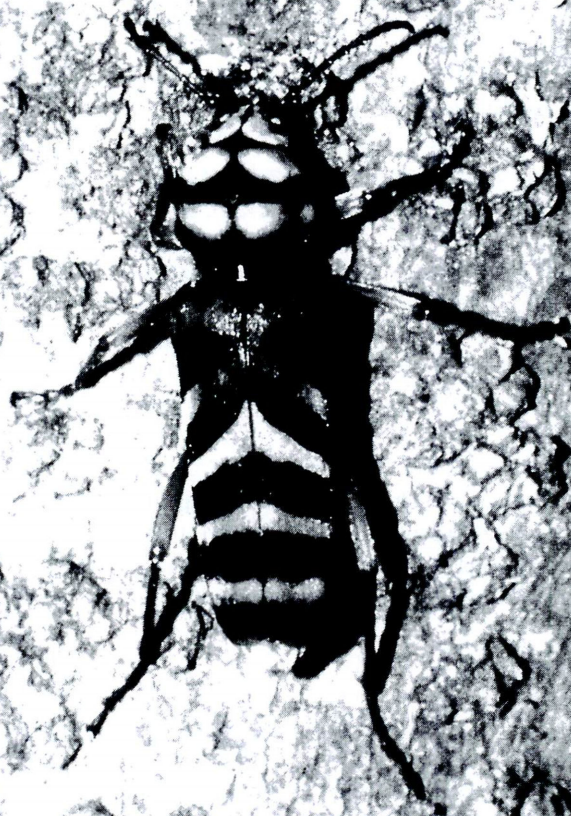
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