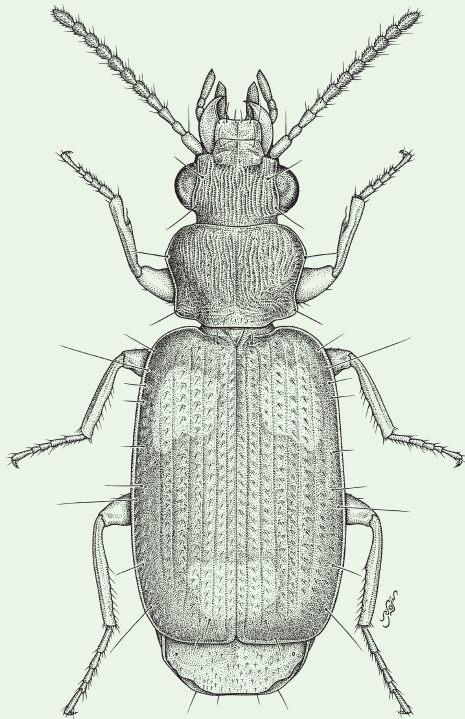


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On the Genus *Amyllocerus* (Coleoptera, Curculionidae, Entiminae), with Description of the Second Species from Laos

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Abstract A second species of the genus *Amyllocerus* of the tribe Cyphicerini: *Myllocerina* is described from the mountainous area of northeastern Laos under the name *A. wakaharai* sp. nov. This species is very similar to the nominotypical species, *A. abnormalis* (SHARP), which is endemic to Japan. Weevils of the genus inhabit oak-laurel forest together with the other member of the tribe, but are rather rare in the collection.

The vegetation of the mountainous areas of northern Laos is very similar to that of the warm temperate areas in Japan, and forms the so-called oak-laurel forest. Thus, the similar insect fauna is expected especially for herbivores associated with them. Actually, many species of weevils similar to or related with Japanese ones have ever been found from mountainous northern Laos in our recent survey.

Weevil of the genus *Amyllocerus* KOJIMA et MORIMOTO, 2006 was established recently for one of the rare Japanese species and is monotypic. The weevils inhabit evergreen oak forest, sometimes mixed with deciduous ones in Japan. The second species, which is very similar to the type species, was found from northeastern Laos beyond the previous distribution range of the genus and is described below.

The type materials are preserved in the Laboratory of Entomology, Tokyo University of Agriculture, Atsugi, Kanagawa, Japan.

Genus *Amyllocerus* KOJIMA et MORIMOTO

Amyllocerus KOJIMA et MORIMOTO, 2006, 201 (type species: *Myllocerina abnormalis* SHARP, 1896).

This genus is characterized by a combination of the following features among the

genera of the Myllocerina having two setae on the prementum: epistome short, transverse, barely reaching middle part of swinging fossae, angulate at three points on posterior margin; antennae robust and densely scaled and legs robust, tibiae more or less costate externally and angulate internally around middle.

Key to the Species

- 1(2): Forehead between eyes much wider than length of eye. Dorso-lateral carinae of rostrum weakly diverging posteriorly behind swinging fossae. Antennae with club twice as long as broad. Legs with tibiae triangularly expanded internally behind middle, femora each armed with sharp tooth outcurved. Length: 5.0–6.7 mm. Japan. *A. abnormalis* (SHARP)
- 2(1): Forehead between eyes slightly wider than length of eye. Dorso-lateral carinae of rostrum parallel-sided. Antennae with club 2.2 times as long as broad. Legs with tibiae triangularly expanded internally a little before middle, femora each armed with quadrate tooth, often incurved. Length: 5.4–7.0 mm. Laos.
 *A. wakaharai* sp. nov.

Amyllocerus wakaharai sp. nov.

(Figs. 1–8)

M a l e and F e m a l e. Length: 5.4–7.0 mm; width: 2.2–2.8 mm. Blackish brown, scaling very dense, appressed, completely concealing derm; scales predominantly rusty brown, broadly grayish before middle of elytra except bases, lateral pieces of meso- and metathoraces rusty brown, underside ash gray; ground scales circular, each puncture on head, pronotum and elytral intervals with decumbent, spatulate scales. Antennae with scape rusty brown scaled, funicle with grayish oblong-oval scales on 2nd to 6th segments, 1st and 7th with brownish oblong-oval to setae-like scales.

Head with forehead between eyes a little wider than length of eyes, flat, temples behind eyes with two rows of scales at narrowest part; eyes nearly circular, 1.2 times as long as wide. Rostrum wider than long (7 : 6), weakly tapered apically and distinctly expanded laterally at pterigya; dorso-lateral carinae parallel-sided and diverging anteriorly along inner margin of swinging fossae; epistome broadly concaved at anterior margin, angulate at three points on posterior margin; lateral carinae marginal; subsidiary carinae diverging posteriorly; postepistomal area depressed, but not demarcated. Antennae with proportions in length (width) of scape to club as: 170 (30) : 30 (17) : 34 (16) : 15 (16) : 15 (15) : 15 (15) : 15 (15) : 18 (18) : 72 (33).

Prothorax 0.8 times as long as wide, subparallel-sided or scarcely widening from base to a little before middle, hind corners weakly prominent. Scutellum circular, with dense scales. Elytra 1.5 times as long as wide, striae narrowly impressed, intervals weakly convex. Legs with tibiae triangularly expanded internally a little before middle, femora each armed with quadrate tooth, often incurved.

Venter with basal two ventrites weakly depressed in middle in male and only 1st ventrite depressed at base in female.

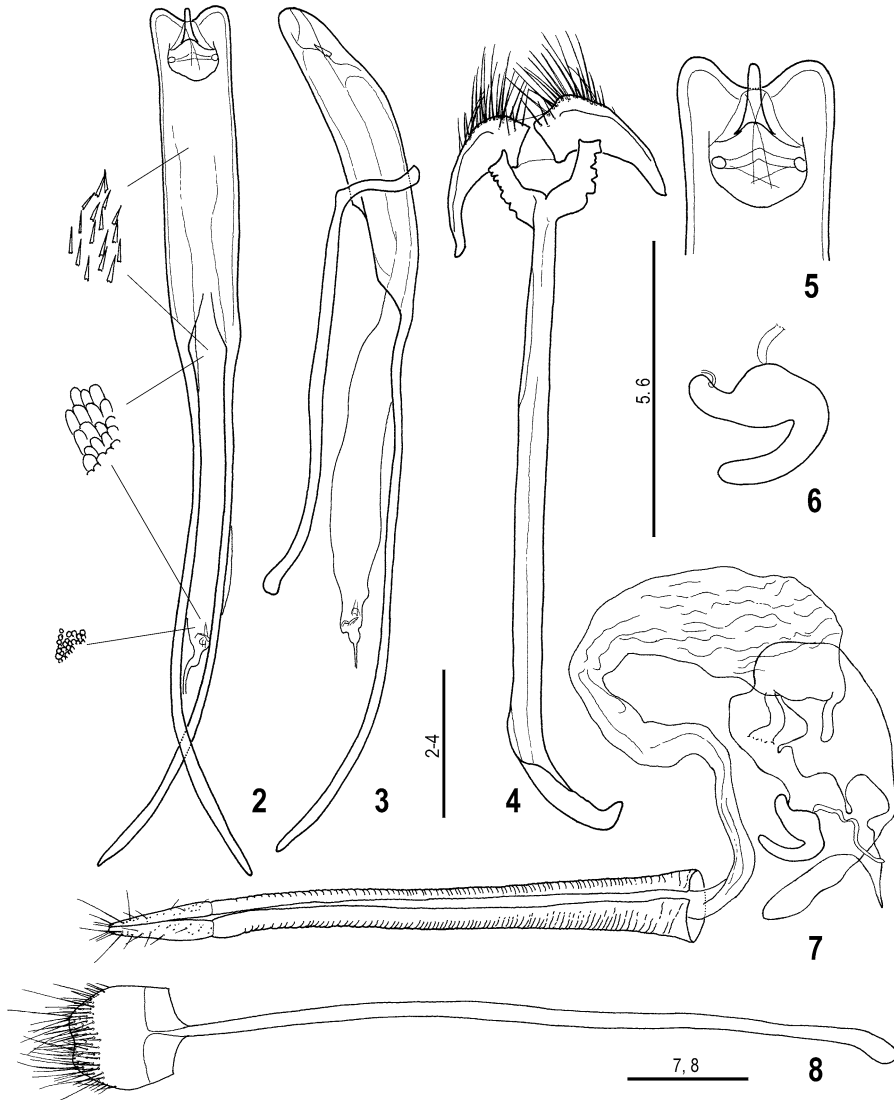
Terminalia as illustrated (Figs. 2–8). Aedeagus slender, weakly dilated apically, concave at apical margin; internal sac with asperities dense scale-like on distal third, spinous on median third. Spermatheca with cornu strongly curved at base, ramus weakly prominent, collum longer than wide.

Type materials. Holotype: male, 12 km E. Phongsawang (alt. 1,200 m), Xi-



Fig. 1. Habitus photograph of *Amyllocerus wakaharai* sp. nov., male.

engkhouang Prov., 21-VI-2007, H. WAKAHARA. Paratypes: 2 males, Ban Om (alt. ca. 1,200 m), Xiengkhouang Prov., 4-V-2008, T. YORO; 2 males and 2 females, Ban Bouak, E. Phongsawang, Xiengkhouang Prov., 28-X-2008, H. WAKAHARA; 1 male, 4 km east of Phonsavan, Xiengkhouang Prov., 18-VI-2008, J. YAMASAKO; 1 female, 7 km east



Figs. 2-8. Male and female terminalia of *Amyllocerus wakaharai* sp. nov. (2-5, male; 6-8, female) — 2, Aedeagus, dorsal; 3, aedeagus and tegmen, lateral; 4, sternite 8 and spiculum gastrale; 5, apex of aedeagus; 6, spermatheca; 7, ovipositor; 8, sternite 8. Scale=0.5 mm.

from Nongpet (alt. ca. 1,100 m), Xiengkhouang Prov., 19–VIII–2009, H. WAKAHARA.

Distribution. Laos (Xiengkhouang Prov.).

Etymology. Name of this new species is dedicated to Mr. Hiroyuki WAKAHARA, a keen lepidopterist working on biology of butterflies and our counterpart in Laos.

Amyllocerus abnormalis (SHARP, 1896)

Myllocerus (?) *abnormalis* SHARP, 1896, 108.

Amyllocerus abnormalis: MORIMOTO *et al.*, 2006, 201 (habitus photo, figures of male terminalia, spermatheca, metendosternite and antenna).

See MORIMOTO *et al.* (2006) for synonymy and redescription.

Specimens examined. Japan: Honshu. 1 male and 1 female, Hirai, Kozagawa-chô, Wakayama, 4–V–2006, H. KOJIMA (insecticide fogging). Kyushu. 1 female, Ookouchi Pass, Shiiba-mura, Miyazaki, 24–VII–2003, H. KOJIMA (insecticide fogging).

Distribution. Japan (Honshu, Shikoku, Kyushu).

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The authors thank Mr. H. WAKAHARA and his family for their arrangement of our trips, and Drs. K. MORIMOTO and S.-I. UÉNO for their review of the manuscript. We also thank Dr. K. KOHIYAMA for his kind preparation of an excellent habitus photograph. This study is supported in part by KAKENHI (21405019: head investigator: S. OKAJIMA).

要 約

小島弘昭・養老孟司: ヒゲブトクチプトゾウムシ属 (和名新称) (コウチュウ目ゾウムシ科クチプトゾウムシ亜科) とラオスからの第2種目の記載。—— これまで日本固有の単型属であったヒゲブトクチプトゾウムシ属の第2種目がラオスから見つかったので、命名・記載した。本種は基準種に酷似するが、腿節の歯状突起の形状や脛節の内突起の位置等の違いにより識別できる。本属は照葉樹林帯のシイ、カン類を中心としたブナ科植物に依存すると考えられるが、同族の他種と比べ採集される個体数はきわめて少ない。なお、種名は本種の採集者の一人で、現地調査でお世話になっているチョウ類研究家の若原弘之氏に献名した。

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- SHARP, D., 1896. The Rhynchophorous Coleoptera of Japan. Part IV. Otiorynchidae and Sitonides, and a genus of doubtful position from the Kurile Islands. *Trans. ent. Soc. Lond.*, **1896**: 81–115.

New Record of *Yoshiakia iwatensis* TAKIZAWA
(Coleoptera, Chrysomelidae, Alticinae) from Western Japan
with Note on the Colour Variation of Body

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Just recently, a new alticine chrysomelid, *Yoshiakia iwatensis* TAKIZAWA, 2009, was described from Iwate and Kanagawa Prefectures, Eastern Japan. Examining my collection of the Chrysomelidae, I was able to find many specimens of this species herein recorded, all of which were collected from Okayama and Kagawa Prefectures, both in Western Japan. TAKIZAWA (2009) recorded two distantly related plants, *Spiraea betulifolia* (Rosaceae) and *Magnolia obovata* (Magnoliaceae) as the host of this species, and pointed out the biological relation between this chrysomelid and the *Magnolia* plant which was considered to be an unusual host for the Chrysomelidae. The specimens from Okayama recorded here were collected by sweeping leaves of *Magnolia obovata*.

The colour variation not recorded in the original description is found, that is, the dorsal surface of the body varies from unicoloured black to chocolate brown, and the lateral margin of the pronotum is sometimes yellowish brown.

Specimens examined. 12 exs., Orogatawa, Hiruzen, Maniwa-shi, Okayama Pref., 7-VII-2007, Haruki SUENAGA leg. 15 exs., Mt. Daisen-zan, Mannou-chô, Kagawa Pref., 29-VII-2007, Haruki SUENAGA leg. Specimens recorded here are deposited in the Ehime University Museum and Haruki SUENAGA's private collection.

I thank Dr. H. TAKIZAWA for the identification of this species, and Prof. M. SAKAI and Assoc. Prof. H. YOSHITOMI of Ehime University Museum for their advice in writing this paper.

Reference

TAKIZAWA, H., 2009. Description of a new alticine genus (Coleoptera, Chrysomelidae) from Japan. *Elytra, Tokyo*, **37**: 149-154.

Study on the Cyphicerine Weevils of the Genus *Canoixus* ROELOFS (Coleoptera, Curculionidae, Entiminae)

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Abstract The genus *Canoixus* is reviewed taxonomically and a second species is described from Laos and Thailand under the name *C. nodulosus* sp. nov. The weevils were captured on leaves of *Diospyros* sp. of the family Ebenaceae alike the nominotypical species of the genus.

The weevil of the genus *Canoixus* ROELOFS is characteristic among the tribe by the unique features of the rostrum, the multisetose mandibles and so on, and belongs to the tribe Cyphicerini: Cyphicerina (MORIMOTO *et al.*, 2006). In their recent catalogue, ALONSO-ZARAZAGA & LYAL (1999) included E. Siberia, Laos and Thailand in the generic distribution probably based on the following species: *Canoixus costulatus* (MOTSCHULSKY, 1860) known from the Russian Far East and northern China and *C. nigroclavatus* AURIVILLIUS, 1891 from Thailand and Laos. However, the former is now assigned to the genus *Corymacronus* KOJIMA et MORIMOTO, 2006 of the Myllocerina (MORIMOTO *et al.*, 2006) and the latter was synonymized with *Cnaphoscapus decoratus* (FAUST, 1890) by MARSHALL (1944) based on examination of the type materials. Thus, the genus is presently monotypic and occurs in Japan, Taiwan and China (Fukien).

The weevil is not so common in the collection, but they are sometimes found on the Japanese persimmon tree, *Diospyros kaki*. A second species was discovered from Laos and Thailand. Laotian materials were also captured on leaves of *Diospyros* trees. These facts suggest the host association of this genus with the family Ebenaceae.

The type materials are preserved in the Laboratory of Entomology, Tokyo University of Agriculture, Atsugi, Kanagawa, Japan.

Genus *Canoixus* ROELOFS

Canoixus ROELOFS, 1873, 172 (type species: *C. japonicus* ROELOFS). — MORIMOTO *et al.*, 2006, 214.

For synonymy and diagnosis see MORIMOTO *et al.* (2006) except for the following features emended: antennae with 1st segment nearly as long as or shorter than 2nd, mentum with four, rarely five to six setae and ocular lobes of prothorax with vibrissae. This genus is characterized by the combination of the following characters: mandible multisetose, prementum usually with four, rarely five to six setae, rostrum almost parallel-sided, swinging fossae entirely dorsal and approximated each other, ocular lobes well-marked with vibrissae, female terminalia with bursa copulatrix terminates with more or less extended lobe, spermatheca with amorphous fin and prominence laterally, and extremely long gland.

Key to the Species

- 1(2): Rostrum transverse, 0.8 times as long as wide. Antennae with basal two segments of funicle subequal in length. Pronotum weakly depressed in middle on basal half. Elytra not tuberculated. Middle and hind femora normal, pedunculate. Probably parthenogenetic. Japan, Taiwan, China (Fukien).
 *C. japonicus* ROELOFS
- 2(1): Rostrum nearly as long as wide. Antennae with 2nd segment of funicle longer than 1st. Pronotum with weak median longitudinal carina devoid of scales. Elytra more or less tuberculated on 3rd, 5th and 7th intervals. Middle and hind femora depressed and widened at base. Laos, Thailand.
 *C. nodulosus* sp. nov.

Canoixus nodulosus sp. nov.

(Figs. 1–11)

Male. Length: 6.2–6.8 mm; width: 2.7–3.0 mm. Derm brown to black; scaling predominantly grayish to rusty brown, pronotum usually with three longitudinal dark stripes, lateral ones often extending posteriorly to anterior end of 4th interval of each elytron, elytra usually with pair of blackish patches or band behind middle; ground scales oval to circular, overlapping, each puncture on head and pronotum and elytral intervals with decumbent longer and spatulate scales, the latter scales arranged in a row on each interval, accumulated near top of elytral tubercles and born on minute shiny granules. Antennae with scape rusty brown scaled, funicle with grayish oblong-oval scales on 1st to 6th segments, 7th with brownish setae-like scales.

Head with frons 0.7 times as wide as base of rostrum, flat, median fovea slender, temple with two rows of scales at narrowest portion; eyes weakly convex, 1.3 times as long as wide. Rostrum 0.9 times as wide as long, slightly tapered apically, median carina

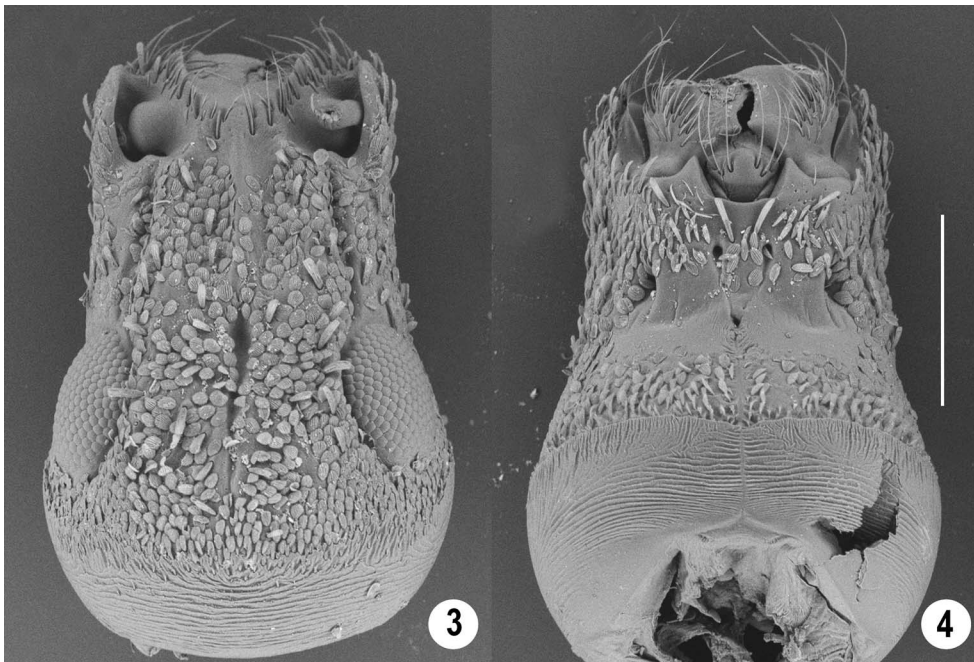


Figs. 1, 2. Habitus photographs of *Canoixus nodulosus* sp. nov. — 1, Male; 2, female.

shiny at apex and extending to median fovea on frons, dorsolateral carinae divergent posteriorly from base of swinging fossae close to eyes, posterior scrobes entirely dorsal; epistome symmetrical. Antennae with proportions in length (width) of scape to club as: 138 (23) : 25 (12) : 30 (12) : 18 (11) : 18 (11) : 15 (11) : 15 (11) : 18 (13) : 51 (23).

Prothorax 0.7–0.8 times as long as wide, side weakly rounded a little before middle, weakly constricted at basal 1/3 and then weakly expanded laterally to rectangular hind corners, anterior margin shallowly concave between ocular lobes, narrower than posterior margin, the latter bisinuate; disc with large and small punctures, weakly carinate longitudinally in middle and devoid of scales, distinctly depressed longitudinally on each side before 4th intervals and deepest at basal 1/3, and again shallowly depressed longitudinally along side margin. Scutellum lingulate, with small appressed scales.

Elytra 1.4–1.5 times as long as wide, subparallel-sided behind humeri, 3rd to 7th intervals more or less nodulated, 3rd intervals each with four, rarely five tubercles, 2nd one from base usually merged, 4th and 5th ones high and large, 5th intervals each with four tubercles, the 4th one situated at posterior end of interval, 7th intervals each with



Figs. 3, 4. SEM photographs of head of *Canoixus nodulosus* sp. nov. — 3, Dorsal; 4, ventral. Scale = 0.5 mm.

smaller tubercles except basal one at humerus high and large; striae regular except around tubercles making round.

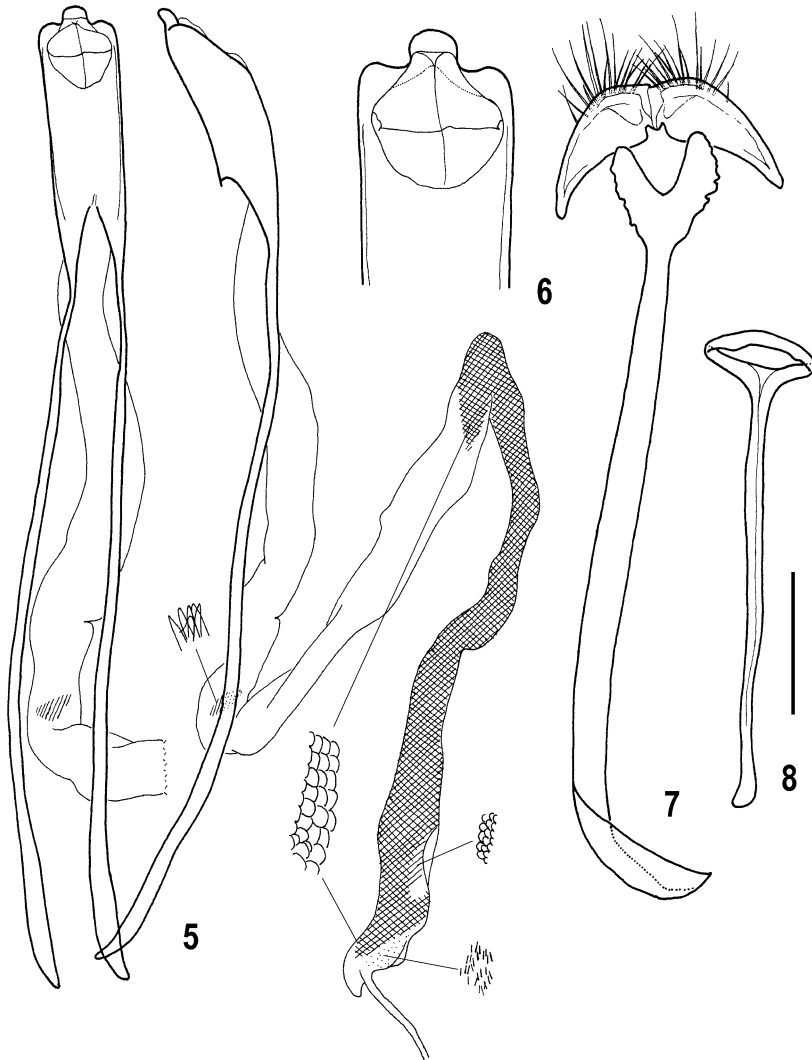
Legs with femora depressed and widened at base in middle and hind pairs, and flattened at base in fore pair.

Venter with 2nd ventrite not inflated.

Terminalia as illustrated (Figs. 5–8). Aedeagus slender, with round median projection at apex, apodeme much longer than aedeagal body, internal sac very long, Z-folded.

F e m a l e. Length: 6.0–8.0 mm; width: 2.7–3.4 mm. Very similar to male except elytra widest a little behind middle, 1.3–1.5 times as long as wide and venter with 2nd ventrite weakly inflated in middle. Terminalia as illustrated (Figs. 9–11). Bursa copularis terminates with extended long lobe.

Type materials. Holotype: male, Nr. Ban Namly (alt. 845 m), Phonsaly Prov., N20° 11' / E102° 06', 11-X-2009, G. OISHI. Paratypes: LAOS. 2 males, same data as the holotype; 1 male and 5 females, same data, H. WAKAHARA; 2 females, same data, N. NAKAMURA; 2 males and 1 female, 24 km south from Phonsaly (alt. 1,220 m), Phonsaly Prov., N21° 36' / E101° 58', 7-X-2009, H. WAKAHARA; 7 males and 5 females, 4 km north from Ban Ava (1,012 m), Phonsaly Prov., N21° 20' / E102° 02', 10-X-2008, H. WAKAHARA; 3 males and 4 females, same data, N. NAKAMURA; 1 male and 5 females,



Figs. 5–8. Male terminalia of *Canoixus nodulosus* sp. nov. — 5, Aedeagus; 6, apex of aedeagus, enlarged; 7, sternite 8 and spiculum gastrale; 8, tegmen. Scale=0.5 mm.

Lak 24 Antenna (alt. 1,220 m), 24 km southeast from Oudomxay, Oudomxay Prov., N20°35'/E102°04', 4–X–2009, H. WAKAHARA; 1 male and 1 female, Ban Phou Yang (alt. 1,300 m), near Salaphoukhun, N19°28'52.0"/E102°30'33.4", 2–IX–2009, T. YORO; 2 males and 3 females, Phou Yang (alt. 1,351 m), Luang Phabang Prov., N19°28'/E102°30', 6–V–2010, H. WAKAHARA; 2 males and 1 female, same data, J. KANTOH; 1 female, Mt. Phu-Pan, Ban Saleui, Xam Neua, 28~30–III–2005, J. YAMASAKO; 1 male and 1 female, Lac 25, 25 km E. from Phonsavan, Xiangkhoan Pr.,

7-VI-2008, J. YAMASAKO; 3 males and 4 females, Ban Om (alt. 1,162~1,200 m), Xieng Khouang Pr., 4-V-2008, H. KOJIMA; 3 females, same locality, 27-VIII-2009, H. KOJIMA; 1 female, same locality, 7-V-2010, H. KOJIMA. THAILAND. 1 male, Mae Hong Son, 10~14-III-2000, M. NISHIMURA.

Distribution. Laos (northern provinces) and N. Thailand.

Remarks. This species is easily separable from the nominotypical species in having the nodulose elytra and the femora flattened or depressed at base. The latter feature is also known in other genera of Cyphicerina: *Paramycter* MARSHALL, 1944, *Thlipsomerus* MARSHALL, 1944 and *Amrikus* PAJNI et SIDHU, 1982 (cf. PAJNI, 1990). However, their structures of the rostra are quite different from *Canoixus* and mandibles are trisetose in the aforementioned genera.

Canoixus japonicus ROELOFS, 1873

(Figs. 12-14)

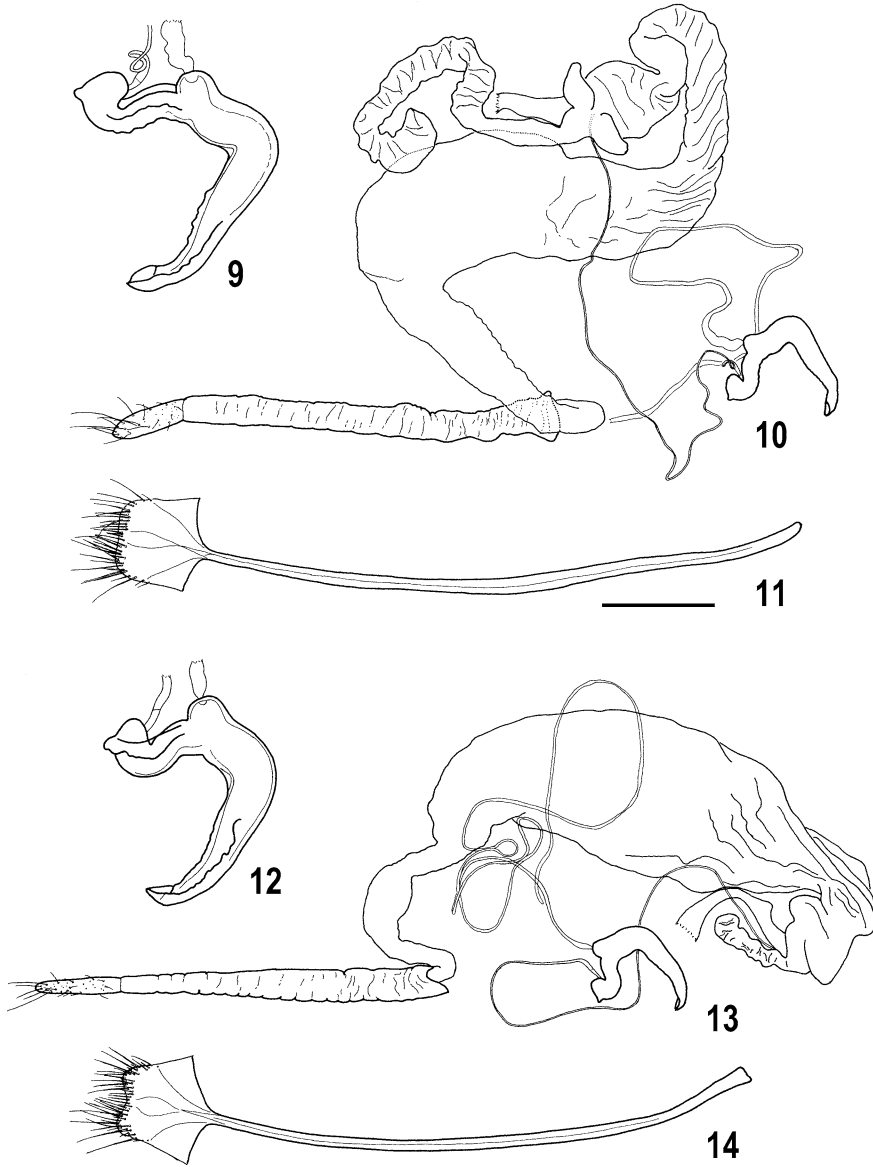
Canoixus japonicus ROELOFS, 1873, 172. — MORIMOTO *et al.*, 2006, 215 (redescription, habitus photo & figure of spermatheca).

See MORIMOTO *et al.* (2006) for synonymy and redescription except for the following features: 6.5-8.0 mm in length and female terminalia as figured, bursa copulatrix terminates with elongate lobe.

Specimens examined. 1 female, Ginzandaira, Niigata, 31-VII-1938, S. MIYAKAWA; 1 female, Suginami, Tokyo, 21-VII-1968, N. KINO; 1 female, Osawa, Mitaka, Tokyo, 2-V-1948, S. MIYAKAWA; 1 female, Kanai-chô, Machida-shi, Tokyo, 11-VII-1982, S. MIYAKAWA; 1 female, Kamakura, Kanagawa, 13-VII-1958, T. YORO; 1 female, same locality, 16-VII-2005, T. YORO; 1 female, same locality, 20-VII-2005, T. YORO; 1 female, same locality, 3-VIII-2007, T. YORO; 1 female, Nokendô, Kanagawa-ku, Yokohama-shi, Kanagawa, 10-VIII-1980, S. MIYAKAWA; 1 female, Kanao, Yorii-machi, Saitama, 6-VII-1984, S. MIYAKAWA; 1 female, Nagara-machi, Chiba, 5~7-VIII-1987, A. NISHIYAMA; 2 females, Matsuno, Ehime, 25-IX-2008, J. AOKI; 1 female, Mt. Yahirodake, Sasebo-shi, Nagasaki, 6-IX-1974, J. OKUMA; 4 females, same locality, 21-V-1981, J. OKUMA; 1 female, same locality, 29-V-1981, J. OKUMA; 4-VI-1982, same locality, J. OKUMA; 1 female, same locality, 2-V-1983, J. OKUMA; 1 female, same locality, 26-V-1983, J. OKUMA.

Distribution. Japan (Honshu, Shikoku, Kyushu, Yakushima), Taiwan, China (Fukien).

Remarks. SASAKI (1902) enumerated this species as a pest of *Zanthoxylum schinifolium* of Rutaceae, but the identification is questionable according to his figure, which looks like *Pseudocneorhinus bifasciatus* ROELOFS, 1880. The latter is known as a pest of various cultivated and ornamental plants including citrus trees (Japan. Soc. Appl. Ent. Zool., 2006).



Figs. 9-14. Female terminalia of *Canoixus* spp. (9-11, *C. nodulosus* sp. nov.; 12-14, *C. japonicus*).
 — 9, 12, Spermatheca; 10, 13, ovipositor; 11, 14, sternite 8. Scale=0.5 mm.

Acknowledgments

The authors thank Mr. H. WAKAHARA and his family for their arrangement of our trips, and Drs. K. MORIMOTO and S.-I. UÉNO for their review of the manuscript. We also thank Dr. K. KOHIYAMA for his kind preparation of excellent habitus photographs and Messrs. N. NAKAMURA, J. KANTOH, J. YAMASAKO, G. OISHI and M. NISHIMURA and the late Dr. S. MIYAKAWA for their kind offer of materials. This study is supported in part by KAKENHI (21405019: head investigator: S. OKAJIMA).

要 約

養老孟司・小島弘昭：サビクチブトゾウムシ属（和名新称）（コウチュウ目ゾウムシ科クチブトゾウムシ亜科）に関する研究。—— サビクチブトゾウムシ属の分類学的再検討を行い、ラオスおよびタイから本属の2種目となる種を発見し記載した。本種も基準種と同様カキノキから得られたことから、本属の種がカキノキ科植物に依存している可能性が示唆された。佐々木（1902）は、サビクチブトゾウムシ *C. japonicus* をミカン科のイヌザンショウの害虫として記録しているが、スグリゾウムシ *Pseudocneorhinus bifasciatus* ROELOFS の同定間違いの可能性が高い。

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Weevils of the Genus *Pinacopus* (Coleoptera, Curculionidae) from Laos

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Abstract Three new species of *Pinacopus*, *P. phousamsoumnus* sp. nov., *P. similis* sp. nov. and *P. brevis* sp. nov., are described from the mountain of central Laos. All of them are occurring sympatrically, similar to each other in the features of scales, rostrum and prothorax and easily distinguished from the previously known Laotian species from another mountain by the key given in this paper.

Many apterous beetles occur in the cloudy forests of Laotian mountains, where the peaks over 2,000 m in altitude. They belong to the families Tenebrionidae, Cerambycidae, Anthribidae and Curculionidae, and the last family is the most diversified in number of species. Member of the subfamily Molytinae is predominant among the family, and *Pinacopus* is one of them. The weevils are collected from shrubs, which are more or less covered with lichens, by beating method.

Eleven species of *Pinacopus* are known from mountainous areas of Malaysia (8 spp.), Thailand (1 sp.), Laos (1 sp.) and North India (1 sp.) (MARSHALL, 1932, 1942; KOJIMA & MORIMOTO, 2002; KOJIMA *et al.*, 2003). They are all localized due to the complete obliteration of the hind wings. Laotian species was described recently from the mountain (Phou Pan) of Houaphan Province, northeast Laos (KOJIMA *et al.*, 2003). Further species were found from another mountain (Phou Samsoum), only 125 km apart southward from previous locality, of Xiengkhouang Province, central Laos, and located at the northern end of the Annamese Cordillera. They consist of three species closely related to each other, and are clearly different from the previous Laotian species in the scaly structure.

The type materials are preserved in the Laboratory of Entomology, Tokyo University of Agriculture, Atsugi, Kanagawa, Japan.

Genus *Pinacopus* MARSHALL

Pinacopus MARSHALL, 1932, 348 (type species: *Pinacopus caudatus* MARSHALL, 1932; Hylobiinae: Anthonini: Cycloterina; Malaysia). — MARSHALL, 1942, 385 (key to the species; Malaysia, Thailand, India). — ASLAM, 1963, 63 (in a key to the genera of Hylobiinae; definition of the subfamily Hylobiinae), 65 (Cryptorhynchinae). — ALONSO-ZARAZAGA & LYAL, 1999, 195 (Molytinae: Molytini: Molytina). — KOJIMA & MORIMOTO, 2002, 425 (Malaysian spp.). — KOJIMA, *et al.*, 2003 (supplement to the Malaysian species and Laotian species).

Distribution. India (Assam), Laos, Thailand, Malaysia, Borneo (Sarawak; cf. MARSHALL, 1942).

Comments. The Laotian *Pinacopus* species are externally similar to *P. mishmensis* MARSHALL, 1942 known from Assam among congeners in having the conspicuous scaled derm. These species are distinguished from other congeners by combinations of the following features: antennae with 2nd funicular segment not longer than 1st; elytra with bicolorous scaly markings, without any trace of apical processes; femora each with a small obtuse tooth; and 1st abdominal ventrite without any tubercles in male.

Key to the Laotian Species

- 1(2): Recumbent scales not plumose, subrecumbent to erect scales not condensed to form tuft. Rostrum denticulate dorsally in male. Pronotum with median carina. Fore tibiae with fringe of long hairs along inner margin in male. Length: 5.4–8.0 mm. *P. satoi* KOJIMA et MORIMOTO
- 2(1): Recumbent scales plumose, suberect to erect scales more or less condensed to form tufts on pronotum and elytra. Rostrum not denticulate dorsally. Pronotum without median carina. Fore tibiae without fringe of long hairs along inner margin.
- 3(4): Elytra oblong-ovate, about 1.5 times as long as wide. Metasternum behind coxae as long as length of the latter. Length: 4.6–6.9 mm.
..... *P. phousamsoumnus* sp. nov.
- 4(3): Elytra ovate to broadly ovate, 1.4 times or less as long as wide. Metasternum behind coxae a little shorter than length of the latter.
- 5(6): Elytra ovate, 1.4 times as long as wide, subparallel-sided behind shoulders to middle, sometimes weakly rounded laterally in female. Hind tibiae with uncus arrowhead-shaped at tip in male. Abdominal ventrite with recumbent to subrecumbent scales directing posteriorly. Length: 4.1–5.8 mm.
..... *P. similis* sp. nov.
- 6(5): Elytra broadly ovate, 1.3 times as long as wide, weakly rounded laterally. Hind tibiae with uncus usual in shape. Abdominal ventrite with suberect scales directing inward on each side of median depression in male. Length: 3.7–4.6 mm.
..... *P. brevis* sp. nov.

Pinacopus satoi KOJIMA et MORIMOTO, 2003

(Fig. 16)

Pinacopus satoi KOJIMA et MORIMOTO, 2003, 408 (habitus photographs of female holotype, fore and hind tibiae of male, male and female terminalia).

See KOJIMA *et al.* (2003) for description. Additional description based on further materials is given below.

Male and Female. Length: 5.4–7.7 mm; width: 2.1–3.0 mm (male) and length: 6.1–8.0 mm; width: 2.5–3.3 mm (female). Metasternum behind coxae a little shorter than length of the latter.

Additional specimens examined. 3 males and 9 females, Phou Pan (alt. ca. 1,500–2,000 m), 13–VI–2009, H. KOJIMA; 6 males and 3 females, 23–VIII–2009, H. KOJIMA.

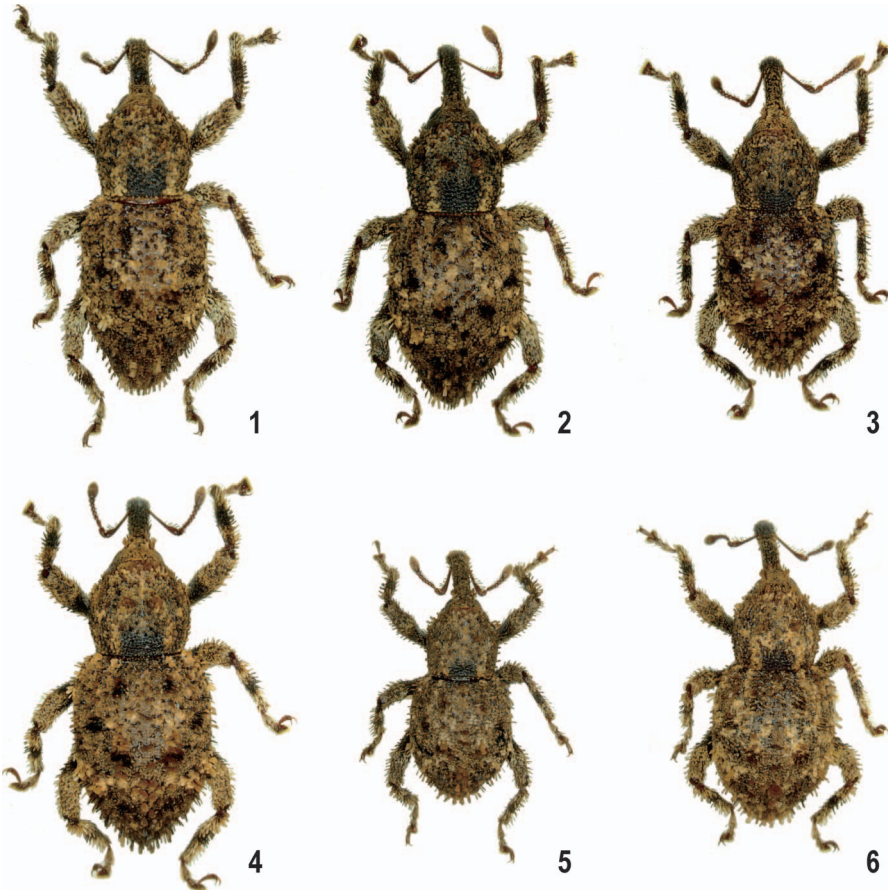
Distribution. Laos (Houaphan Prov.).

Pinacopus phousamsoumnus sp. nov.

(Figs. 1, 2, 7, 8, 13, 17, 18–23)

Male. Length: 4.6–6.0 mm; width: 2.0–2.6 mm.

Dull black, antennae and tarsi piceous, with dense round plumose recumbent and

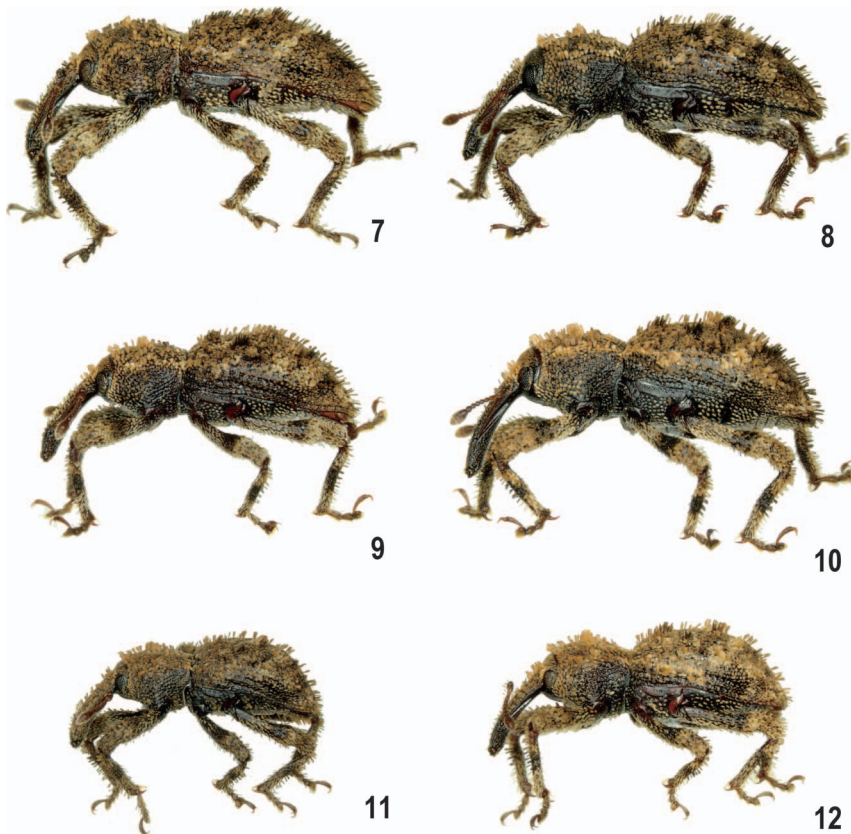


Figs. 1–6. Habitus photographs of the Laotian *Pinacopus* spp., dorsal. — 1, 2, *P. phousamsoumnus* sp. nov.; 3, 4, *P. similis* sp. nov.; 5, 6, *P. brevis* sp. nov. (1, 3, 5, male; 2, 4, 6, female).

suberect to erect spatulate to ovate scales yellowish and brownish gray to black in color above, and sparser and narrower recumbent to subrecumbent yellowish gray scales beneath, prothorax with ill-defined yellowish gray weakly round stripe on each side of median dark fleck, elytra with ill-defined yellowish gray oblique band behind middle.

Head with dense plumose scales, several spatulate erect scales adjoining eyes. Rostrum a little shorter than or nearly as long as pronotum, dorsum with very weak median and two lateral carinae not denticulate, interspaces with shallow subconfluent punctures, set with round plumose scales and oblong-ovate erect scales. Antennae with scape sparsely bearing elongate erect scales on apical half; funicle with 2nd segment a little shorter than 1st, 3rd to 5th slightly diminishing length distally, 5th to 7th subequal in length.

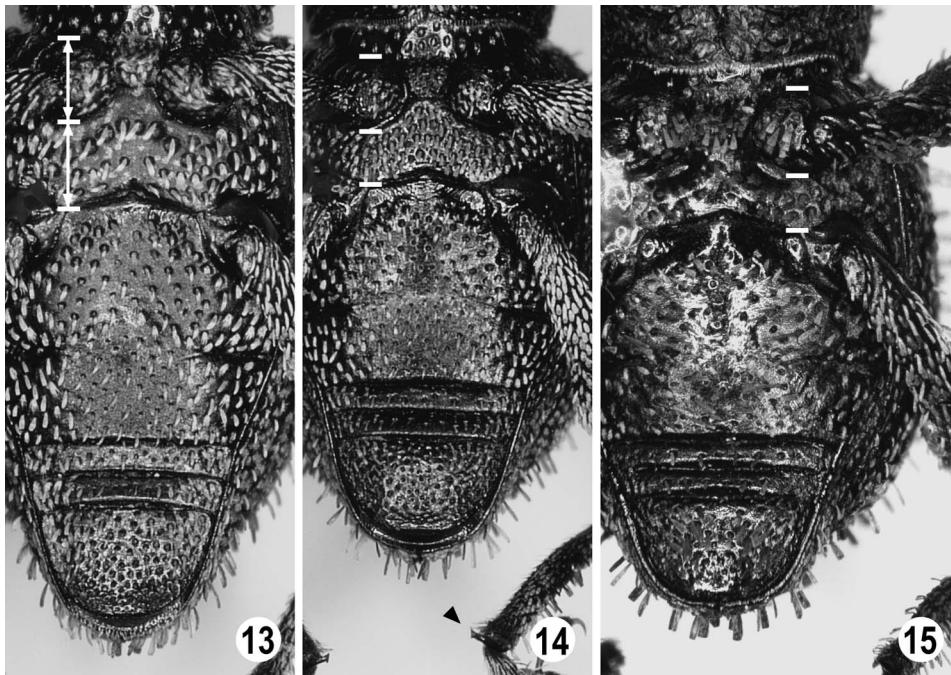
Prothorax nearly as long as wide, widest a little before middle, dorsum without any trace of median carina, reticulately punctate, each puncture filled with round plumose



Figs. 7–12. Habitus photographs of the Laotian *Pinacopus* spp., lateral. — 7, 8, *P. phousamsoumnus* sp. nov.; 9, 10, *P. similis* sp. nov.; 11, 12, *P. brevis* sp. nov. (7, 9, 11, male; 8, 10, 12, female).

scale, some of them irregularly replaced by ovate erect scales, which are more or less condensed to form pair of brownish gray scaly tufts behind apical margin and a little before middle, respectively. Elytra oblong-ovate, 1.5, rarely 1.6 times as long as wide, subparallel-sided behind shoulders to middle, conjointly rounded at apex, without any process; weakly striate, with row of separated punctures, each containing narrow plumose scale; intervals more or less rugulose, bearing ovate to spatulate erect scales generally concolorous with area in which it stands, scales condensed to form tufts as follows: 3rd interval with three tufts of blackish, often partly brownish scales and 5th interval with two scaly tufts, one is blackish and the other is yellowish gray. Legs densely with yellowish to brownish gray recumbent plumose and spatulate suberect to erect scales, which are dark brown to blackish in median part of femora and basal half of tibiae except extreme base; femora dentate, but usually concealed with scales especially on middle and hind pairs; tibiae with premucro indistinct in hind pair.

Metasternum behind middle coxae as long as length of the latter. Basal two abdominal ventrites weakly depressed in middle, sparsely punctate, each puncture with recumbent to subrecumbent scale directing posteriorly, 5th ventrite faintly depressed in



Figs. 13–15. Male ventrites of the Laotian *Pinacopus* spp. (white transverse bars indicate the anterior and posterior margins of mesocoxa and metasternum). — 13, *P. phousamsoumnus* sp. nov.; 14, *P. similis* sp. nov. (black triangular mark indicates the peculiar shape of uncus); 15, *P. brevis* sp. nov.

middle, densely punctate, set with subrecumbent scales, which are narrower or shorter on median depression than others.

Terminalia as illustrated (Figs. 18, 19, 21, 22), aedeagus with median lobe subparallel-sided on basal 2/3 and widened at orifice, inner sac without any trace of distinct sclerite and patch; spiculum gastrale robust.

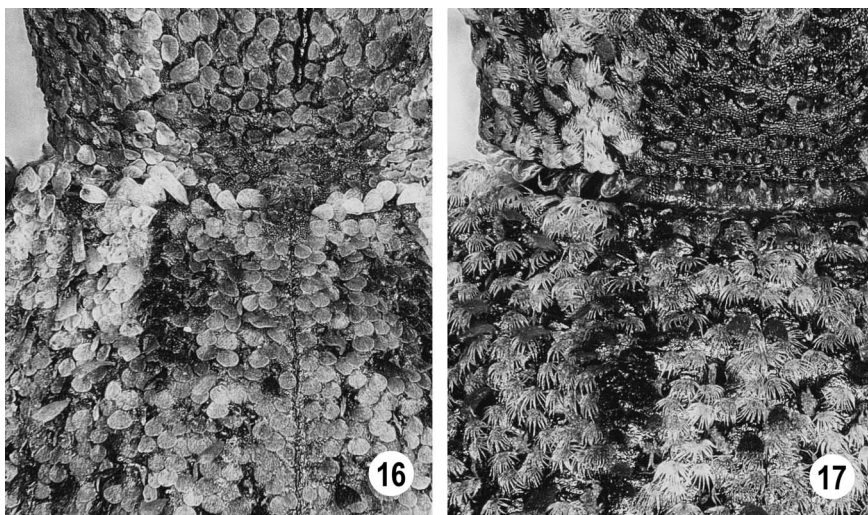
Female. Length: 5.0–6.9 mm; width: 2.2–3.0 mm. Resembles male, except rostrum as long as pronotum, dorsum with carinae indefinite; elytra 1.5, rarely 1.4 times as long as wide, hind tibiae with premucro small but distinct and basal two abdominal ventrites not depressed in middle.

Terminalia as illustrated (Figs. 20, 23), spermatheca with collum elongate and sinuate.

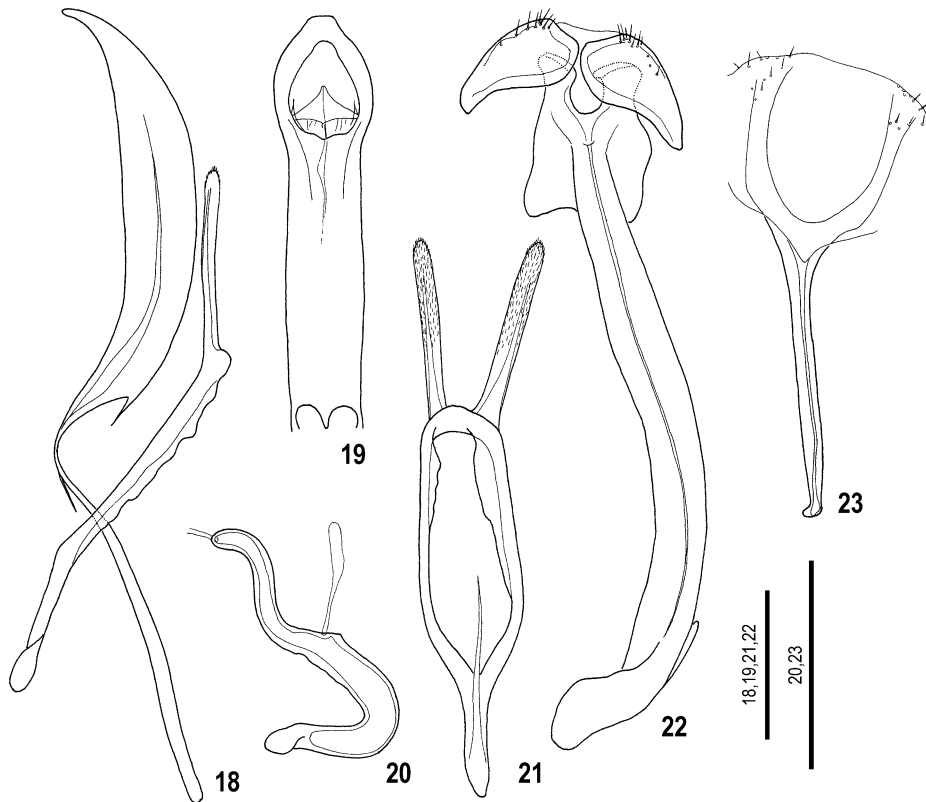
Type series. Holotype: male, Phou Samsoum (alt. 2,200–2,300 m), Xiengkhouang Prov., Laos, 2–V–2008, H. KOJIMA. Paratypes: 4 males and 2 females, Phou Samsoum (alt. 2,000 m), 23–VI–2007, H. WAKAHARA; 2 males and 6 females, same data as the holotype; 3 males and 4 females, 13.5 km east from Ban Muang (alt. 2,100 m), 2–V–2008, H. KOJIMA; 3 males and 1 female, Phou Samsoum (alt. 1,600–1,700 m), 14–V–2008, T. MIZUSAWA; 2 females, Phou Samsoum (alt. 2,100 m), 3–V–2008, T. NIISATO; 1 male, same locality, 15–V–2008, T. MIZUSAWA; 2 males and 3 females, same locality, 16–V–2008, J. YAMASAKO; 1 male and 1 female, Phou Samsoum (alt. 2,174 m), 8–V–2010, H. KOJIMA; 3 females, Phou Samsoum (alt. 2,331–2,356 m), 9–V–2010, H. KOJIMA. All in Xiengkhouang Prov., Laos.

Distribution. Laos (Xiengkhouang Prov.).

Etymology. The specific name is derived from the locality.



Figs. 16, 17. Scaly structures of basal parts of pronotum and elytra of the Laotian *Pinacopus* spp.
 — 16, *P. satoi* KOJIMA et MORIMOTO; 17, *P. phousamsoumnus* sp. nov.



Figs. 18–23. Male and female terminalia of *Pinacopus phousamsoumnus* sp. nov. — 18, Aedeagus and tegmen, lateral; 19, aedeagus, dorsal; 20, spermatheca; 21, tegmen; 22, sternite 8 and spiculum gastrale; 23, sternite 8, female. Scale = 0.5 mm.

Remarks. This and the two species to be described below are different from the previously known Laotian species and probably from the Assamese species, *P. mishmensis* MARSHALL, in having the plumose scales (Fig. 17; cf. Fig. 16). Three Laotian species herein described are also distinguished from *P. mishmensis* in having the suberect to erect scales more or less condensed to form the tufts on pronotum and elytra.

Pinacopus similis sp. nov.

(Figs. 3, 4, 9, 10, 14, 24–29)

Male and Female. Very similar to the preceding species except length: 4.1–4.9 mm and width: 1.9–2.3 mm (male) or length: 4.8–5.8 mm and width: 2.2–2.7 mm (female); pronotum 1.1 times as wide as long; elytra ovate, 1.4 times as long as wide, subparallel-sided behind shoulders to middle or weakly rounded laterally and widest at

middle; median parts of femora and tibiae blackish, femora dentate obsoletely, especially on middle and hind pairs, hind tibiae with uncus arrowhead-shaped at tip in male, metasternum behind middle coxae a little shorter than length of the latter, basal two and 5th abdominal ventrites weakly depressed in middle in male.

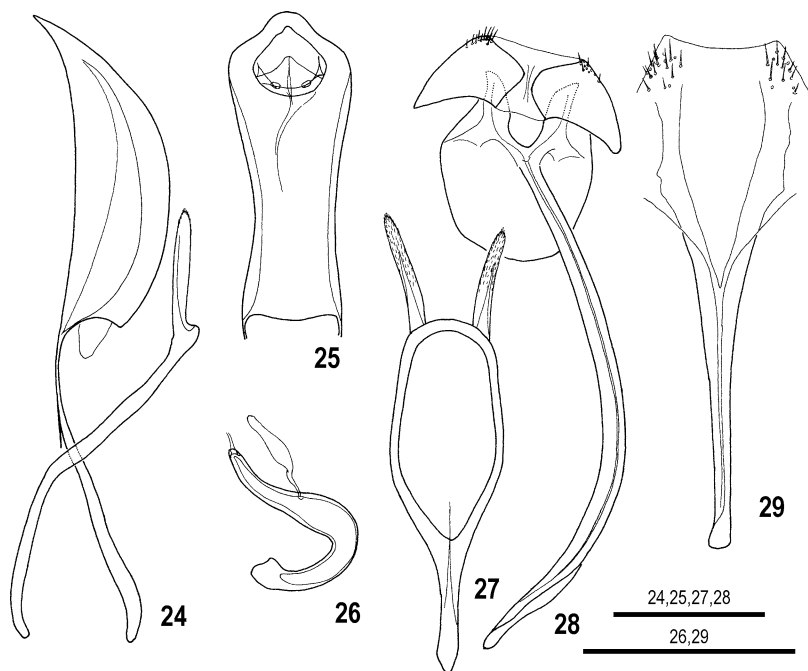
Terminalia as illustrated (Figs. 24–29), aedeagus with median lobe weakly narrowed in middle and widened at orifice; spiculum gastrale slender; spermatheca with collum elongate and weakly curved upward.

Type series. Holotype: male. Phou Samsoum (alt. 2,331–2,356 m), Xiengkhouang Prov., Laos, 9–V–2010, H. KOJIMA. Paratypes: 2 males and 2 females, same data as the holotype; 3 females, Phou Samsoum (alt. 2,300–2,400 m), 3–V–2008, H. KOJIMA; 2 males and 1 female, Phou Samsoum (alt. 2,331 m), 8–V–2010, H. KOJIMA; 1 female, Phou Samsoum (alt. 2,100 m), 16–V–2008, J. YAMASAKO. All in Xiengkhouang Prov., Laos.

Distribution. Laos (Xiengkhouang Prov.).

Etymology. The specific name is derived from the external similarity with the previous species.

Remarks. This is the intermediate species between the preceding and the next species in the body size and shape. The arrowhead-shaped uncus of the male hind tibiae



Figs. 24–29. Male and female terminalia of *Pinacopus similis* sp. nov. — 24, Aedeagus and tegmen, lateral; 25, aedeagus, dorsal; 26, spermatheca; 27, tegmen; 28, sternite 8 and spiculum gastrale; 29, sternite 8, female. Scale=0.5 mm.

is characteristic of this species (Fig. 14).

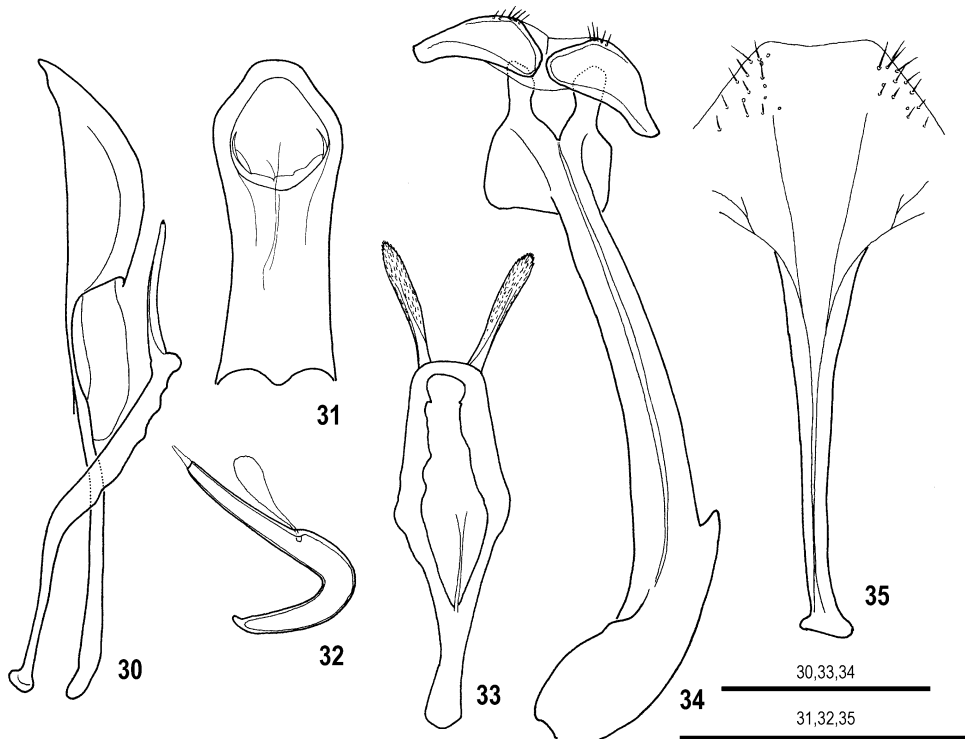
Pinacopus brevis sp. nov.

(Figs. 5, 6, 11, 12, 15, 30–35)

Male and Female. Very similar to the preceding species except length: 3.7–4.2 mm and width: 1.9–2.1 mm (male) or length: 4.6 mm; width: 2.3 mm (female); pronotum 1.0–1.1 times as wide as long; elytra broadly ovate, about 1.3 times as long as wide, weakly rounded laterally and widest at middle, hind tibiae with uncus ordinary in shape, basal two and 5th abdominal ventrites with narrowly elongate suberect scales directing inward on each side of median depression in male.

Terminalia as illustrated (Figs. 30–35), aedeagus with median lobe narrowed in middle and widened at orifice; spiculum gastrale robust; spermatheca with collum elongate and nearly straight.

Type series. Holotype: male. 13.5 km east from Ban Muang (alt. 2,100 m), Xiengkhouang Prov., Laos, 2–V–2008, H. KOJIMA. Paratypes: 1 male and 1 female, same



Figs. 30–35. Male and female terminalia of *Pinacopus brevis* sp. nov. — 30, Aedeagus and tegmen, lateral; 31, aedeagus, dorsal; 32, spermatheca; 33, tegmen; 34, sternite 8 and spiculum gastrale; 35, sternite 8, female. Scale=0.5 mm.

data as the holotype.

Distribution. Laos (Xiengkhouang Prov.).

Etymology. The specific name is derived from the broadly ovate body form.

Remarks. This is the smallest and broadly ovate species in Laos, and very rare in the collection. The suberect elongate scales of the male abdominal ventrite directing inward are a unique feature of this species (Fig. 15).

Acknowledgments

The author thanks Mr. H. WAKAHARA and his family for their arrangement of the field trips in Laos and Drs. T. YORO and S. OKAJIMA for their help in many ways. I am also indebted to Drs. K. MORIMOTO and S.-I. UENO for their critical review of manuscript, and Dr. T. NIISATO, Mr. J. YAMASAKO and Mr. T. MIZUSAWA for their kind offer of materials. This study is supported in part by KAKENHI (21405019; head investigator: S. OKAJIMA).

要 約

小島弘昭: ラオス産 *Pinacopus* 属について (コウチュウ目ゾウムシ科)。—— 中部ラオスの山地よりアナアキゾウムシ亜科に含まれる *Pinacopus* 属の3新種が見つかったので命名記載し、既知種1種を含むラオス産種の検索表を作成した。3新種は同所的に分布し、形態的特徴からたがいに近縁な種と考えられ、鱗片の構造などから既知種と容易に識別できる。今回の発見地と既知種の産地はわずか125 kmしか離れていないが、鱗片をはじめとする形態的特徴に顕著な違いが見られることは大変興味深い。

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- 1942. New Malaysian Hylobiinae (Col., Curcul.). *Ibid.*, (11), **9**: 370–390.

Record of Some Weevils (Coleoptera, Curculionoidea) New to the Fauna of Tanegashima, Japan

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Tanegashima is one of the Ōsumi Islands lying to the south of Kyushu, southwestern Japan. The weevil fauna of Tanegashima is poorly known and merely a total of 13 species have so far been recorded (KOJIMA & MORIMOTO, 2004; MORIMOTO *et al.*, 2006). The number is quite low when the rich flora exceeding thousand seed plant species is considered. The island is also interesting phytogeographically because of its location lying between Kyushu, mainland of Japan and the Ryukyus, and becomes distributional limits of southern and northern elements of many plants (SATAKE *et al.*, 1999). Thus, it is interesting to know how the situation of phytophagous insects associated with them is coincident with or not. Actually, southernmost records of some weevils are confirmed at this time as shown with asterisk (*) after the scientific name in the following list. The present paper is aimed to record the weevils new to the fauna as the basis for further studies.

The author thanks Drs. K. MORIMOTO and S.-I. UENO for their critical reading of the manuscript.

A n t h r i b i d a e

1. *Sphinctotropis laxa* (SHARP, 1891)
1 ex., Anjou – Hirokake, Nishinoomote-shi, 27-III-2010.
2. *Araecerus coffeae* (FABRICIUS, 1801)
1 ex., Shiwano, Nishinoomote-shi, 25-III-2010.

R h y n c h i t i d a e

3. *Auletobius uniformis* (ROELOFS, 1874)
1 ex., Maenohama-kaihinkouen, Minamitane-chou, 23-III-2010.
4. *Rhodocyrtus assimilis* (ROELOFS, 1874)*
2 exs., Nijyuuban, Nakatane-chou, 24-III-2010; 6 exs., Amanokura, Nishinoomote-shi, 26-III-2010; 4 exs., Injyoukaigan, Nakatane-chou, 27-III-2010; 4 exs., Anjou-Hirokake, Nishinoomote-shi, 27-III-2010.
5. *Deporaus mannerheimi* (HUMMEL, 1823)
1 ex., Shiwano, Nishinoomote-shi, 25-III-2010; 3 exs., Amanokura, Nishinoomote-shi, 26-III-2010.
6. *Involvulus cornix* SAWADA, 1993
1 ex., Nijyuuban, Nakatane-chou, 24-III-2010; 5 exs., Mihama-chou, Nishinoomote-shi, 24-III-2010.

N a n o p h y i d a e

7. *Nanophyes pallipes* ROELOFS, 1874
1 ex., Injyoukaigan, Nakatane-chou, 27-III-2010.

E r i r h i n i d a e

8. *Echinocnemus bipunctatus* ROELOFS, 1874
1 ex., Shiwano, Nishinoomote-shi, 25-III-2010.

C u r c u l i o n i d a e

9. *Nothomylocerus griseus* (ROELOFS, 1873)*
64 exs., Nishinoomote-shi (Oku, Amanokura, Anjyou-Hirokake), Nakatane-chou (Nijyuuban, Injyoukaigan) and Minamitane-chou (Houmannoike), 24~27-III-2010.
10. *Lepidepistomodes fumosus* (FAUST, 1882)*
5 exs., Amanokura, Nishinoomote-shi, 26-III-2010; 5 exs., Injyoukaigan, Nakatane-chou, 27-III-2010; 10 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
11. *Lepidepistomodes griseoides* (ZUMPT, 1937)
34 exs., Nishinoomote-shi (Oku, Shiwano, Amanokura, Anjyou-Hirokake), Nakatane-chou (Nijyuuban) and Minamitane-chou (Houmannoike), 24~27-III-2010.
12. *Anosimus decoratus* ROELOFS, 1873*
2 exs., Injyoukaigan, Nakatane-chou, 27-III-2010.
13. *Episomus turritus* (GYLLENHAL, 1833)*
1 ex., Amanokura, Nishinoomote-shi, 26-III-2010.
14. *Anthonomus bisignifer* SCHENKLING, 1934*
2 exs., Maenohama-kaihinkouen, Minamitane-chou, 23-III-2010.
15. *Anthonomus ryukyuensis* KOJIMA et MORIMOTO, 1994
28 exs., Maenohama-kaihinkouen, Minamitane-chou, 23-III-2010; 1 ex., Injyoukaigan, Nakatane-chou, 27-III-2010.
16. *Sphinxis pubescens* ROELOFS, 1875
3 exs., Minato, Nishinoomote-shi, 24-III-2010.
17. *Imachra maetai* (MORIMOTO, 1964)
2 exs., Minato, Nishinoomote-shi, 24-III-2010; 13 exs., Mihama-chou, Nishinoomote-shi, 24-III-2010 (on *Cinnamomum* sp.).
18. *Orchestes cylindricus* (MORIMOTO, 1984)
1 ex., Amanokura, Nishinoomote-shi, 26-III-2010; 1 ex., Injyoukaigan, Nakatane-chou, 27-III-2010.
19. *Orchestes horii* (KÔNO, 1937)
58 exs., Nishinoomote-shi (Oku, Minato, Mihama-chou, Amanokura), 24~26-III-2010.
20. *Ochyromera japonica* (ROELOFS, 1874)
12 exs., Oku, Nishinoomote-shi, 26-III-2010.
21. *Curculio funebris* (ROELOFS, 1874)
2 exs., Maenohama-kaihinkouen, Minamitane-chou, 23-III-2010; 1 ex., Oku, Nishinoomote-shi, 26-III-2010; 1 ex., Injyoukaigan, Nakatane-chou, 27-III-2010; 2 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
22. *Stereonychus japonicus* HUSTACHE, 1920*

- 1 ex., Oku, Nishinoomote-shi, 26-III-2010.
23. *Lepidomyctides nagaii* YOSHIHARA et MORIMOTO, 1994
1 ex., Minato, Nishinoomote-shi, 24-III-2010.
24. *Coeliodes amamianus* YOSHITAKE, 1999
6 exs., Maenohama-kaihinkouen, Minamitane-chou, 23-III-2010; 5 exs., Injyoukaigan, Nakatane-chou, 27-III-2010.
25. *Trichocoeliodes excavatus* (HUSTACHE, 1916)*
4 exs., Amanokura, Nishinoomote-shi, 26-III-2010.
26. *Euryommatus tokioensis* NAKANE, 1962*
1 ex., Anjyou, Nishinoomote-shi, 27-III-2010.
27. *Deretiosopsis nigrisetis* MORIMOTO, 1988
3 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
28. *Acicnemis shibatai* VOSS, 1971
4 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
29. *Cotasteromimus squamiger* MORIMOTO et MIYAKAWA, 1985
4 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
30. *Deiradocranus setosus* (MORIMOTO, 1962)*
3 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
31. *Microcryptorhynchus nipponicus* MORIMOTO et MIYAKAWA, 1985
11 exs., Anjyou-Hirokake, Nishinoomote-shi, 27-III-2010.
32. *Kojimazo lewisii* (WOLLASTON, 1873)*
2 exs., Minato, Nishinoomote-shi, 24-III-2010.

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Record of Some Weevils (Coleoptera, Curculionoidea) New to the Fauna of Sado Island, Japan

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Sadogashima (Sado Is.) is the fourth largest island except main islands (Hokkaido, Honshu, Shikoku, Kyushu) in Japan and located on the Sea of Japan off Niigata Prefecture. The weevil fauna of this island has been studied by several authors as a part of the faunal study of the prefecture mainly based on the collection made by the late Dr. K. BABA (MORIMOTO, 1979; SENOH, 1979, etc.). Later, several authors added some species to the fauna mostly in the revisional studies of particular taxa (SENOH, 1984; MORIMOTO, 1987; SAWADA, 1993; O'BRIEN *et al.*, 1994; KOJIMA & MORIMOTO, 1996; MORIMOTO *et al.*, 2006; ASANO *et al.*, 2010), and a total of 79 weevils are now on record. However, it seems not yet sufficient to clarify the fauna and 29 weevils new to the fauna were collected by the recent short surveys as recorded below.

Collector names are abbreviated as follows: HK: H. KOJIMA, HS: H. SAWADA, KT: K. TOKIWA and KW: K. WATANABE. The author thanks Mr. T. OKURA for his arrangement of the trips, Messrs. H. SAWADA, K. TOKIWA and K. WATANABE for their offering of materials and Drs. K. MORIMOTO and S.-I. UÉNO for their critical reading of the manuscript.

A n t h r i b i d a e

1. *Euparius oculatus* (SHARP, 1891)
3 exs., Mt. Dondenyama, 5–VIII–2009, HS.
2. *Ozotomerus japonicus* SHARP, 1891
4 exs., Mt. Dondenyama, 5–VIII–2009, HS.
3. *Uncifer truncatus* (SHARP, 1891)
1 ex., Mt. Dondenyama, 5–VIII–2009, HK.

R h y n c h i t i d a e

4. *Eugnamptus amurensis* (FAUST, 1882)
1 ex., Kanaishinbo, Hakuundai – Mt. Myoukenzan, 4–VIII–2009, KW.
5. *Neocoenorrhinus sanguinipennis* (ROELOFS, 1874)
7 exs., Mt. Kinpokusan, 4–VIII–2009, HK.

A p i o n i d a e

6. *Miniapion sulcirostre* (SHARP, 1891)

- 5 exs., Mt. Dondenyama, 5-VIII-2009; 5 exs., Mt. Kinpokusan, 4-VIII-2009; 1 ex., Matone, 10-IX-2010; 3 exs., Mt. Dondenyama, 10-IX-2010, all by HK.
7. *Sergiola griseopubescens* (ROELOFS, 1874)
1 ex., Sawasaki, 11-IX-2010, HK.

Dryophthoridae

8. *Sipalinus gigas* (FABRICIUS, 1775)
1 ex., Matone, 10-IX-2010, HK (adult head: dead body part).

Curculionidae

9. *Cyphicerus viridulus* (ROELOFS, 1873)
1 ex., Mt. Kinpokusan, 4-VIII-2009, HK.
10. *Lepidepistomodes fumosus* (FAUST, 1882)
1 ex., Mt. Kinpokusan, 4-VIII-2009, HK.
11. *Catapionus gracilicornis* ROELOFS, 1873
18 exs., Mt. Dondenyama, 5-VIII-2009, HK; 6 exs., 11-IX-2010, KT (including males).
Population of this species on Sado Is. is gamogenetic.
12. *Acalyptus carpini* (FABRICIUS, 1792)
5 exs., Kanaishinbo, Hakuundai - Mt. Myoukenzan, 4-VIII-2009, KW.
13. *Sphinxis crypticus* KOJIMA et MORIMOTO, 2000
2 exs., Mt. Kinpokusan, 4-VIII-2009, HK.
14. *Curculio sikkimensis* (HELLER, 1927)
1 ex., Matone, 10-IX-2010, HK; 1 ex., Mt. Dondenyama, 11-IX-2010, KT.
15. *Archarius pictus* (ROELOFS, 1874)
3 exs., Mt. Kinpokusan, 4-VIII-2009; 2 exs., Mt. Dondenyama, 5-VIII-2009, all by HK.
16. *Koreoculio antennatus* (KÔNO, 1930)
2 exs., Mt. Kinpokusan, 4-VIII-2009, HK.
17. *Rhamphus pulicarius* (HERBST, 1795)
15 exs., Mt. Dondenyama, 5-VIII-2009, HK.
18. *Orchestes amurensis* FAUST, 1887
5 exs., Mt. Kinpokusan, 4-VIII-2009; 20 exs., Mt. Dondenyama, 5-VIII-2009; 24 exs., Matone, 10-IX-2010, all by HK.
19. *Orchestes dorsoplanatus* ROELOFS, 1874
6 exs., Oosugi, 11-IX-2010, HK.
20. *Orchestes horii* (KÔNO, 1937)
13 exs., Sawasaki, 11-IX-2010, HK.
21. *Orchestes variegatus* ROELOFS, 1874
5 exs., Mt. Kinpokusan, 4-VIII-2009; 8 exs., Mt. Dondenyama, 5-VIII-2009, all by HK.
22. *Moreobaris rubricata* (HUSTACHE, 1921)
1 ex., Kanaishinbo, Hakuundai - Mt. Myoukenzan, 4-VIII-2009, KW; 1 ex., Mt.

- Dondenyama, 5-VIII-2009, HK.
23. *Sinauleutes bigibbosus* (HUSTACHE, 1916)
1 ex., Mt. Kinpokusan, 4-VIII-2009, HK; 1 ex., Kanaishinbo, Hakuundai-Mt. Myoukenzan, 4-VIII-2009, KW; 4 exs., Matone, 10-IX-2010, HK (on *Hydrangea serrata*).
 24. *Donus punctatus* (FABRICIUS, 1775)
1 ex., Hamaumetsu, 5-VIII-2009, HK.
 25. *Lixus maculatus* ROELOFS, 1873
2 exs., Mt. Dondenyama, 5-VIII-2009, HK.
 26. *Carcilia tenuistriata* HELLER, 1941
2 exs., Mt. Dondenyama, 5-VIII-2009, HS.
 27. *Pimelocerus insularis* (KÔNO, 1928)
1 ex., Mt. Dondenyama, 5-VIII-2009, HK.
 28. *Trachodes sasajii* MORIMOTO et MIYAKAWA, 1995
1 ex., Mt. Kinpokusan, 4-VIII-2009; 2 exs., Mt. Dondenyama, 5-VIII-2009, all by HK.
 29. *Cryptorhynchus lapathi* (LINNAEUS, 1758)
1 ex., Hakuundai, 10-IX-2010, KT.

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Food Plant of a Supralittoral Flightless Weevil, *Isonycholips gotoi* (Coleoptera, Curculionidae)

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Isonycholips gotoi CHŪJŌ et VOSS, 1960 (Japanese common name, Hamabe-zoumushi) is a supralittoral flightless weevil that is distributed along shorelines of sandy beaches in Japan, Korea, and the Maritime Territory of Russia (MORIMOTO, 2007). *Isonycholips gotoi* well feeds on sea grasses drift ashore (e.g., MORIMOTO, 1993; NAKAMURA, 1995; SAWADA, 2004), but this weevil would also occur under seaweeds drift ashore (MORIMOTO, 1984). Actually, many individuals of *I. gotoi* were observed under a composed mixture of sea grass and seaweeds drifted ashore (KOBAYASHI, personal observation). Thus, it is not yet confirmed whether *I. gotoi* feeds on seaweeds or not. In this paper, I performed non-choice feeding tests of *I. gotoi* for the commonly observed sea grass (tape grass) and seaweeds (sea tangle, sea lettuce, and gulfweed) occurring along the shorelines in Japan.

Materials and Methods

A total of 32 adult individuals of *I. gotoi* were sampled under a decomposed sea grasses and seaweeds drifted ashore at Masaki seaside beach in Iwate prefecture, Honshu. One plant species of sea grass, tape grass (Zosteraceae; *Zostera marina*, Jpn. common name, Amamo), and three plant species of seaweeds, sea lettuce (Ulvaceae; *Ulva* sp., Jpn. common name, Aosa), gulfweed (Sargassaceae; *Sargassum* sp., Jpn. common name, Hondawara), and sea tangle (Laminariaceae; *Laminaria* sp., Jpn. common name, Konbu) were used for non-choice feeding tests, since these plants were commonly found along the beaches of the northern part of Japan. Sea grass species was sampled from Akkeshi Town, Hokkaido, and seaweed species were sampled from Zenibako, Otaru City, Hokkaido.

Pieces of plants (about 0.1 g) were each placed in a transparent polystyrene case (65×55×

Table 1. Fecal pellets of adult individuals of *Isonycholips gotoi* for four plant species during 48 hours in non-choice feeding tests.

Plant species	(N)	Fecal pellets in each beetle
<i>Zostera marina</i> (Zosteraceae)	(8)	+, +, +, +, +, +, +, +
<i>Ulva</i> sp. (Ulvaceae)	(8)	–, –, –, –, –, –, –, –
<i>Sargassum</i> sp. (Sargassaceae)	(8)	–, –, –, –, –, –, –, –
<i>Laminaria</i> sp. (Laminariaceae)	(8)	–, –, –, –, –, –, –, –

N means the examined number of individuals.

20 mm), the bottom of which was covered with moist filter paper soaked in marine water. Eight weevil individuals were used for each treatment. A beetle was released into the case and was allowed to feed on one of four plant species during 48 hours. Prior to the examination, beetles were settled on starvation for 72 hours. Feeding tests were performed at 23°C in dark conditions. The condition of plant's pieces and beetle's fecal pellets were checked after 48 hours. To assess the difference between treatments, I performed Fisher's exact test (p -value was corrected with Bonferroni method).

Results and Discussion

Feeding traces of *Isonycholips gotoi* in all eight individuals were observed on tape grass, but none of them were confirmed on sea lettuce, gulfweed, and sea tangle. And numerical powdery fecal pellets of this weevil were recognized in the tape grass treatment, although these were not in other treatments (Table 1). The difference of fecal pellets between tape grass treatment and others were obviously significant ($p < 0.00016$). This result strongly indicates that this weevil feeds on a sea grass and well supports above previous reports (MORIMOTO, 1993; NAKAMURA, 1995; SAWADA, 2004). And also, the present study suggests that *I. gotoi* does not feed on seaweeds, even though they occurred under a mixture of sea grasses and seaweeds drifted ashore.

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A Revision of the Genus *Nepiodes*
(Coleoptera, Cerambycidae, Prioninae)
(Revisional Studies of the Genus *Megopis*
sensu LAMEERE, 1909–10)

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Abstract *Nepiodes* PASCOE, 1867 is confirmed as a full genus independent of the genus *Megopis*. *Megopis cognata*, *M. cinnamonea* and *M. ritsemai* which were placed by LAMEERE, 1919 in the genus *Megopis* subgenus *Nepiodes*, and *M. bowringi*, *M. terminalis*, *M. sulcipennis* and *M. costipennis* which were included in the subgenus *Megopis* in the same paper are placed in the genus *Nepiodes*. *Megopis ritsemai* is regarded as a subspecies of *N. cinnamoneum*. *Aerogrammus hefferni* KOMIYA is transferred to this genus. *Megopis (Nepiodes) multicarinata* FUCHS is transferred to this genus and regarded as a subspecies of *costipennis*. Two new subspecies of *N. cinnamoneum*, *miyakei* and *birmanus* subsp. nov., are described.

The genus *Nepiodes* PASCOE, 1867 was originally erected to receive *Nepiodes cognatus*. LAMEERE (1909) regarded it as a subgenus of the genus *Megopis*, placed *cinnamoneum* and *cognatus* in it and added *ritsemai* later (1912). At the same time, he (1909) placed *Megopis bowringi* GAHAN, *M. terminalis* GAHAN, *M. sulcipennis* WHITE and *M. costipennis* WHITE, in the first group of the subgenus *Megopis*.

When LAMEERE (1909, 1919) distinguished the subgenus *Nepiodes* from subgenus *Megopis*, he placed importance on the difference in “rebord latéral” of prothorax which is “distinct in full length, simply angled, not separated from episternal suture and not accompanied with callosity” in the former, while “not distinct in apical half, elevated upward and separated from episternal suture by a callosity anterior to coxal cavity” in the latter. However, these characters are rather rich in variations especially in the males and LAMEERE’s classification is not always agreeable. LAMEERE (1909) seemed to be

aware of this fact and wrote that this character appeared “at least in the female” but in *sulcipennis* and *costipennis multicarinatus*, examples which have no callosity and simply angled lateral margins are found also in the females. Then, these Asian *Megopis* sensu LAMEERE (1909) cannot well defined from *Nepiodes* by the characters mentioned by him while they are well distinguished from African *Megopis* by widely separated under eye-lobes. This fact was the main reason why KOMIYA & DRUMONT (2009) proposed to transfer them from *Megopis* to *Nepiodes*. We believe this observation that these Asian species in subgenus *Megopis* sensu LAMEERE, 1909 is closer to *Nepiodes* than to African *Megopis*, was supported by FUCHS (1966) and HÜDEPOHL (1994) because these authors placed the members of this group not in the subgenus *Megopis* but in the subgenus *Nepiodes* when they described each new species *multicarinata* or *lineata*.

In this paper, we will reconfirm *Nepiodes* as a full genus, give the generic characters and place *N. cognatus*, *N. cinnamoneum*, *N. bowringi*, *N. sulcipennis*, *N. costipennis*, and *N. terminalis* in it. We regard *Megopis (Nepiodes) multicarinata* FUCHS (1966) as subspecies of *costipennis* and transfer *Aerogrammus hefferni* KOMIYA (2004) to this genus. We will treat *M. (N.) ritsemai* LAMEERE as a subspecies of *N. cinnamoneum* and describe two new subspecies *N. cinnamoneum miyakei* subsp. nov. and *N. cinnamoneum birmanus* subsp. nov.

The abbreviations used in this paper are as follows: ADC – Alain DRUMONT collection, Bruxelles, Belgium; AWC – Andreas WEIGEL collection, Wernburg, Germany; BMNH – The Natural History Museum, UK; CHC – Carolus HOLZSCHUH collection, Villach, Austria; EVC – Eduard VIVES collection, Barcelona, Spain; FDC – Frédéric LEDUC collection, Herstal, Belgium; HSC – Herbert SCHMID collection, Vienna Austria; IRSNB – Institut Royal des Sciences Naturelles, Bruxelles; MNHN – Muséum national d’Histoire naturelle de Paris, France; NHRS – Swedish Museum of Natural History, Sweden; NSMT – National Museum of Nature and Science, Tokyo, Japan; RMNH – Nationaal Natuurhistorisch Museum, Leiden, The Netherlands. SMTD – Staatliches Museum für Tierkunde, Dresden, Germany. USNM – Smithsonian Institution, National Museum of Natural History, Washington D.C., USA. ZKC – Ziro KOMIYA collection, Japan; ZMAN – Zoölogisch Museum Amsterdam, The Netherlands. ZSMC – Zoologische Staatssammlung, München, Germany (Coll. K. E., Hüdepohl).

The special abbreviations of body parts used in this paper are the same as those previously used in this series 5–9 (see KOMIYA & DRUMONT, 2007, 2009).

Genus *Nepiodes* PASCOE 1867

- Nepiodes* PASCOE, 1867, Anns. Mag. nat. Hist., (3), 19: 410. — LANSBERGE, 1884, Not. Leyd. Mus. 6: 160.
 — LACORDAIRE, 1868, Gen. Col., 8: 156. — HEFFERN, 2005, Cat. Bib. Long. From Borneo, 10.
 — KOMIYA & DRUMONT, 2009, Elytra, 37: 314. — DRUMONT & KOMIYA, 2010, Catalogue of Palaearctic Coleoptera, 6, list of species: 87.
Megopis LANSBERGE, 1884, Not. Leyd. Mus. 6: 158 (pro parte).
Megopis (Megopis) LAMEERE, 1909, (premier groupe), Anns. Soc. ent. Belg. 53: 14 (pro parte). —

LAMEERE, 1913, Coleopt. Cat. Junk, (52): 41 (pro parte); 1919, Gen. Ins. Wytsman, (172): 75 (pro parte). — HAYASHI, 1971, Ent. Rev. Japan, **23**: 82.
Megopis (*Nepiodes*) LAMEERE, 1909, Anns. Soc. ent. Belg., **53**: 143; 1913, Coleopt. Cat. Junk, (52): 41; 1919, Gen. Ins. Wytsman, (172): 74. — FUCHS, 1966, Koleopt. Rdsch., **43/44** [for 1965/1966]: 19. — HÜDEPOHL, 1994, Entomofauna, **15**(15): 186.

Type species: *Nepiodes cognatus* PASCOE, 1867, Ann. Mag. nat. Hist., (3), **19**: 410.

This genus is close to the genus *Megopis* SERVILLE, 1832 in general features and size but conspicuously different in having eyes widely separated underside and elytron furnished with a distinct sutural spine.

M a l e. BL 20–38 mm, usually between 24–35 mm, slender. Eyes bulging, interspace between eyes about as long as or longer than length of each eyelobe both in dorsal and ventral views. Mandible less than a third of head length, bent inwards just before apex and furnished with a small tooth. Antennae about as long as or slightly shorter than body, segment 3 more or less depressed, A13 0.9–1.2 times as long as A14+5. Pronotum 0.6–0.8 times as long as wide, usually widest at base but sometimes constricted just anterior to base and widened again, then narrowed apicad; apical margin often minutely projected in dorsal view; lateral margin furnished with a small tubercle in some species (viz *bowringi*, *terminalis*, *sulcipennis* and a part of *costipennis*), which are usually placed at about basal fourth. EL/EW 2.8–3.5, each elytron furnished with 2–4 strong costae and a distinct spine on sutural end except *hefferni*. Legs slender and long, protibiae depressed obliquely, metatibiae strongly depressed laterally and more or less expanded apically.

Median lobe of male genitalia about as long as segment 4 of antennae, acutely pointed at apex and usually projected in bill-form, basal slit about two-thirds of whole length; lateral lobe 0.6–0.7 times of median lobe; paramere changing for two types, slender type and spoon-formed one.

F e m a l e. Similar to male in general feature but body usually larger, ratio of head and pronotum to body a little smaller, antennae shorter, (AL/BL 0.9–1.1 in male and 0.6–0.9 in female), apical half of elytra wider, legs shorter.

Notes. This genus is close to the genus *Megopis* in having segment 3 of antennae depressed dorso-ventrally, apical angle of pronotum not projected and much narrower than basal angle, but it is easily distinguished from the latter by remotely placed under eyelobes in ventral view. *Nepiodes cinnamoneum* species-group is somehow close to some species of the genus *Aegosoma* but different from the latter in having 3rd segment of antenna depressed and not thickened nor having an internal groove.

1. *Nepiodes cognatus* species-group

Nepiodes cognatus species-group is characterized in having head and eyes relatively large, basal angle of pronotum without clear projection and elytra not granulate but deeply punctuate. *Nepiodes cognatus* and *N. hefferni* comb. nov. belong to this group.

Nepiodes cognatus PASCOE, 1867

(Figs. 1, 24)

Nepiodes cognatus PASCOE, 1867, Ann. Mag. nat. Hist. (3), **19**: 410. — LANSBERGE, 1884, Not. Leyd. Mus. **6**: 160. — LACORDAIRE, 1868, Gen. Col., **8**: 157. — GEMMINGER & HAROLD, 1872, Catalogus Coleopterorum, 2777. — HEFFERN, 2005, Cat. Bib. Long. from Borneo, **10**.

Megopis cognata: LANSBERGE, 1884, Not. Leyd. Mus., **6**: 159, 160. (pro parte).

Megopis (Nepiodes) cognata: LAMEERE, 1909, Annl. Soc. ent. Belg., **53**: 145.

M a l e. Body chestnut-brown, inside of mandibles, eyes, elytral suture and joint parts on legs and antennae darker. Head, basal part of mandibles, pronotum and scutellum covered with sparse yellow pubescence, other parts of dorsal side very sparsely pubescent, ventral side thinly pubescent except each side of 1–4 abdominal sternites which are covered with sub-long hairs.

Head larger than prothorax, HL/HW about 1; eyes large and strongly bulging; interspace between eyes 0.4 times in dorsal side, 0.6 in ventral side which is shallowly longitudinally grooved. Antennae almost as long as body; segment 3 slightly shorter than segments 4+5 united; segment 3 depressed, flat or concave on ventral side and weakly convex dorsal side; segments 3–6 scattered by sparse granules, segments 4–11 depressed and carina running both internal and external side; segment 11 as long as segment 5.

Pronotum about 0.6 times as long as wide; disc ruggedly convex and shallowly concave at middle; lateral margin minutely triangularly projected at base, once shortly narrowed, then widened again at basal third and irregularly narrowed to apex; without lateral tubercle though widened part sometimes looking triangularly pointed. Scutellum covered with yellow pubescence.

Elytra haired at each side of scutellum and other parts sub-glabrous; lateral lines widest just after humeri and gradually narrowed to apices; each elytron furnished with distinct three costae (C3 absent), acutely pointed apicad and furnished with an acute apical spine but spine itself not so long.

Legs slender; tibiae shorter as compared with other species in the genus.

Penis very slender and elongated at apical part, parameres about 0.6 times as long as penis.

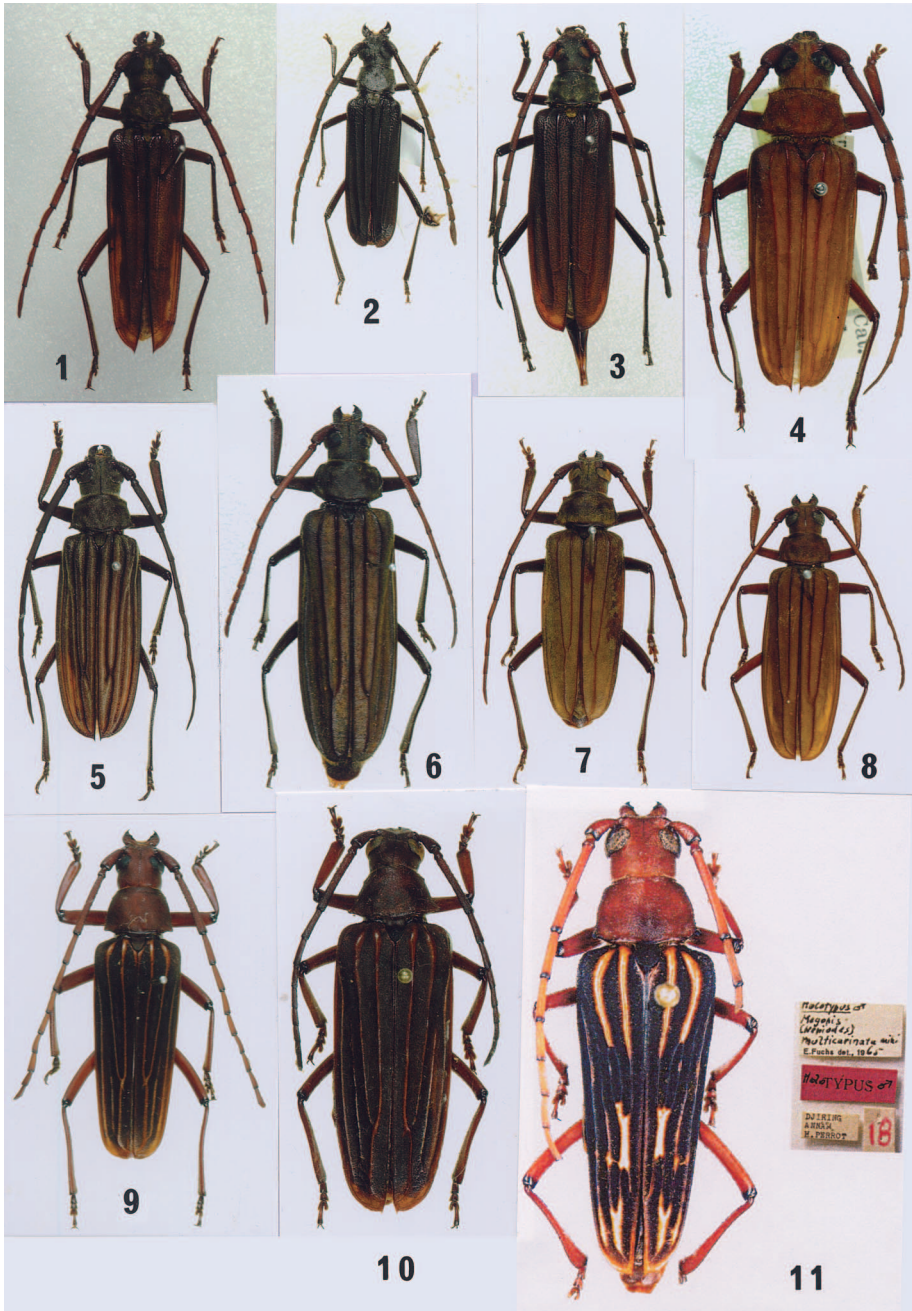
F e m a l e. Unknown.

BL. ♂, 17–27 mm.

Distribution. Northern Borneo (East Malaysia: Sabah, Sarawak).

Specimens examined. *Type material*: Holotype, ♂, with labels “Holo-type” (round, rounded with red), “Borneo”, “*Nepiodes cognatus* Pascoe, 1867”, BMNH.

Figs. 1–11. Habitus of *Nepiodes* spp. — 1. *N. cognatus* PASCOE, 1867, male. — 2, 3. *N. hefferi* (KOMIYA, 2004); 2, male, 3, female. — 5, 6. *N. sulcipennis* (WHITE, 1853); 5, male, 6, female. — 7, 8. *N. bowringi* (GAHAN, 1894); 7, male, 8, female. — 4. *N. terminalis* (GAHAN, 1906), male. — 9, 10. *N. costipennis costipennis* (WHITE, 1853); 9, male, 10, female. — 11, *N. costipennis multicarinatus* (FUCHS, 1966); 11, male (holotype) and labels.



Other materials: 3 ♂♂, Keningau, V-1992, ZKC; 1 ♂, same locality, ZKC; 2 ♂♂, Mt. Trus Madi, Sabah, IV-1996, ZKC; 1 ♂, same locality, 1-V-1996, ZKC; 1 ♂, Crocker Range, 5-VII-1995, ZKC; 1 ♂, same locality, 5-X-1999; 1 ♂, Maninegara, 20 km S of Miri, Sarawak, 10-V-1988, S. SHOE leg.; 1 ♂, Sarawak, VIII-1977, (ex. coll. Ph. MORETTO), ADC; 1 ♂, Ranau, Sabah, 25-IV-1997, ADC; 1 ♂, idem, 15-V-2005, ADC; 1 ♂, Crocker Range, Sabah, 20-III-2000, ADC; 1 ♂, Tawau, Sabah, 1-IV-2005, ADC; 1 ♂, Trus Madi, Sabah, E. Malaysia, 19-III-2005, ex ADC in IRSNB.

Nepiodes hefferni (KOMIYA, 2004), comb. nov.

(Figs. 2, 3, 24)

Aerogrammus hefferni KOMIYA, 2004, Elytra, Tokyo, 32: 190.

This species was described from Sumatra based on three females. Recently, males of this species were found and after the study of the males, the generic position of this species given by KOMIYA (2004) was confirmed to be an error. This species is a member of the genus *Nepiodes* and it is rather close to *N. cognatus*.

M a l e. Body black throughout, sometimes accompanied with feeble blue metallic tint; head, pronotum and scutellum covered with yellowish gray pubescence which is clear yellow only on scutellum, antennae and elytra glabrous, underside sparsely covered with gray pubescence for the most part. Head slightly larger than pronotum; interspace between eyes slightly shorter than each lobe in dorsal side and longer in ventral side. Antennae close to those of *cognatus* but the surface is coarser and the scattered granules extending from segment 3 to segment 8, segments 3-11 furnished with longitudinal depression running underside along external margin.

Pronotum 0.83-0.86 times as long as wide, basal margin hardly projected and widest a little posterior to the middle where a small tubercle is recognized. Scutellum sub-pentagonal, slightly longer than wide.

Elytra 3 times as long as wide, deeply punctured throughout; each side almost parallel in basal two-thirds and then slightly narrowed and rounded at apices; each elytron furnished with three distinct costae as in *cognatus*, sutural end angled but without spine.

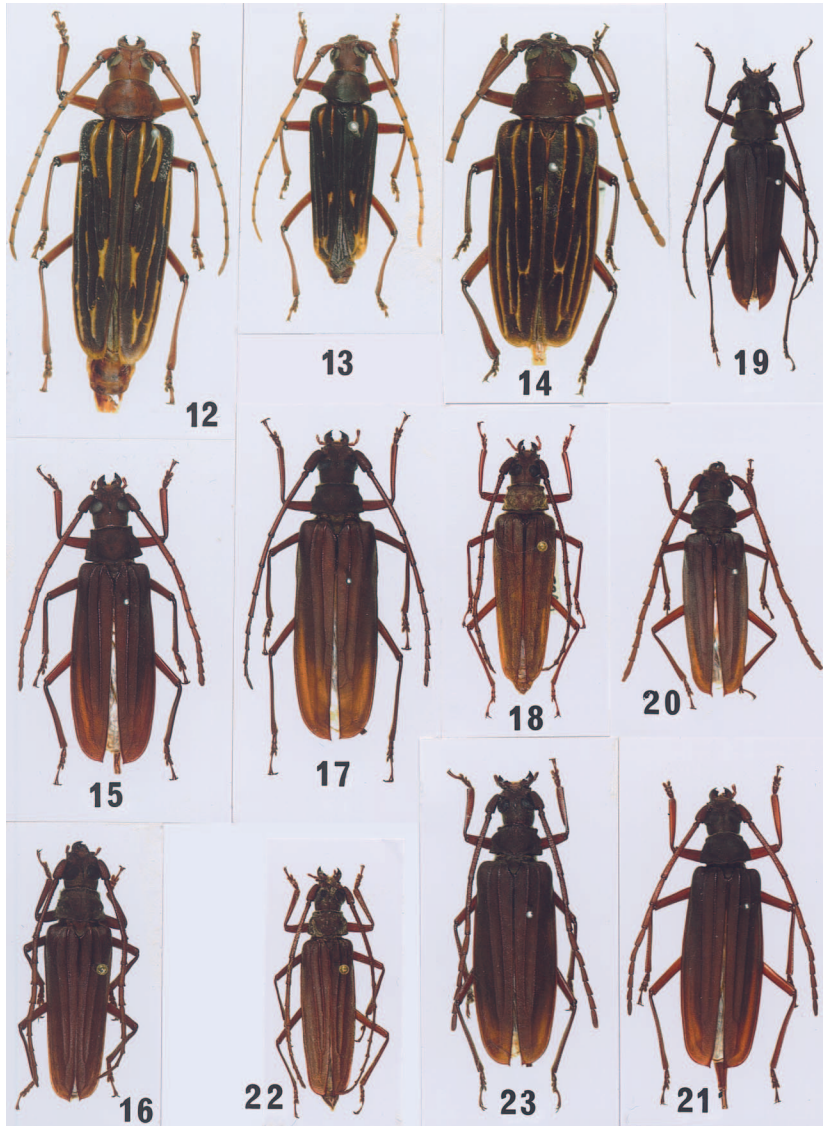
Male genital organs similarly formed to those of *cognatus* but shorter and smaller.

F e m a l e. Body chestnut brown, head, pronotum and femora dark brown; pubescence on body similar to that of the male. Head smaller than prothorax, antennae about 0.9 times as long as body, similarly formed to those of the male; pronotum trapezoidal, widest at base and straightly narrowed apicad. Elytra 2.6-2.7 times as long as wide, very deeply punctured for the most parts and punctures often black shiny in the bottom.

BL. ♂, 15-16 mm, ♀, 26-30 mm.

Distribution. Sumatra (West Sumatra, known only from Harau environments).

Specimens examined. Type materials: Holotype, ♀, with labels "Harau Valley, West



Figs. 12–23. Habitus of *Nepiodes* spp. — 12–14. *N. costipennis multicarinatus* (FUCHS, 1966); 12, female from type locality, 13, Male variation in Thailand, 14, Female variation at Tam dao. — 15, 16. *N. cinnamoneum cinnamoneum* (LANSBERGE, 1884); 15, female, 16, male. — 17–19. *N. cinnamoneum ritsemai* (LAMEERE, 1912), 17, 18, typical form of North Sumatra; 17, female, 18, male, 19, male variation of Is. Siberut. — 20–21. *N. cinnamoneum miyakei* subsp. nov.; 20, male, 21, female, both paratype. — 22, 23. *N. cinnamoneum birmanus* subsp. nov.; 22, male (Holotype), 23, female (paratype).

Sumatra, IV-1996", "Holotype, *Aerogrammus hefferni* Komiya, 2004", NSMT. Paratype: 1 ♀, same locality, V-1994, ZKC.

Other materials: 1 ♀, same locality, IX-1996, ex. coll. M. HUET, ADC; 1 ♂, same locality, IX-1998, ex. coll. HUET, ADC; 1 ♂, Harau Valley, 20 km N. of Payakumbuh, 600–800 m. alt., IX-2007, St. Jakl leg., ZKC.

Notes. This species is quite distinct from any other species but in general, close to *N. cognatus* and easily distinguished from the latter in quite different body color and very small sutural spines of elytra.

2. *Nepiodes sulcipennis* species-group

Nepiodes sulcipennis, *N. bowringi*, and *N. terminalis* form *sulcipennis* species group which has strongly depressed antennae as in *N. cognatus* but the pronotum and elytra are broader, not punctured, but granulate; having lateral spine at the basal third of pronotum; apex of paramere widened in spoon-form.

Nepiodes sulcipennis (WHITE, 1853)

(Figs. 5, 6, 25)

Aegosoma sulcipenne WHITE, 1853, Cat. Coleopt. B. M., Longic., 1: 31. — GEMMINGER & HAROLD, 1872, Cat. Coleopt., 2776. — GAHAN, 1906, Fauna of British India, 1: 48.

Megopis sulcipennis: LAMEERE, 1909, Anns. Soc. ent Belg., 53: 146; 1919, Gen. Ins., (172): 75. — KANO, 1930, Ins. Matsum., 5: 41. — YOSHIDA, 1931, Trans. nat. Hist. Soc. Formosa, 21: 271. — HUA, 2002, List of Chinese Insects, 2: 214. — WEIGEL, 2006, Checklist Bib. Long. Beetles Nepal, 497 & 509.

Megopis (Megopis) sulcipennis: HAYASHI *et al.*, 1988, Chin. J. Ent., 8: 167. — CHOU, 2004, Icon. Taiwan. Cer., 59.

Nepiodes sulcipennis: DRUMONT, SAMA & KOMIYA, 2010, Cat. Palaeart. Coleopt., 6, New Acts and Comments: 40. — DRUMONT & KOMIYA, 2010, ditto, list of species: 87.

Megopis lineata HÜDEPOHL, 1994, Entomofauna, 15(15): 186. (synonymy proposed by DRUMONT, SAMA & KOMIYA, 2010).

Megopis procer Ek-AMNUAY, 2002, Beetles of Thailand, pp. 99 (fig. 245-1) & 318 (misidentification).

Male. Body dark brown, elytra except costae and suture reddish brown. Head, pronotum, scutellum and elytra except costae covered with yellowish gray pubescence, legs and underside sparsely covered with white hairs which are especially long on gula, and pro- and metasterna.

Head small, interspace between eyes narrower than each lobe on dorsal side and as wide as on ventral side. Mandible 0.2 times as long as head; external side smoothly arched; internal line acutely hooked at apex and furnished with a small tooth at middle. Antennae usually as long as or slightly longer than body; segments 3–11 depressed and a distinct carina running along external side; internal side of segments 5–11 with less distinct carina; underside flat and sometimes shallowly concave; segment 3 about as long as segments 4+5.

Pronotum 0.6–0.7 times as long as wide, widest at base and straightly narrowed to

apex; with a small tubercle at basal third. Scutellum linguiform, margined by carina.

Elytra 2.5–2.8 times as long as wide; each elytron furnished with four strong costae, C1 and C2 distinct, running from humerus and meeting each other at about apical third, then becoming one line and ending just before apex, C3 weak, not meeting other costae, starting about basal third and disappearing at apical sixths, C4 distinct and running full length of elytron; intervals filled with longitudinal stripes conformed with whitish pubescent area at middle and granulate and less pubescent areas at each side; with a short but acute sutural spine at apex.

Legs relatively thicker than other congeners, depressed laterally especially on tibiae, tarsi wide and short, claw shorter than segments 2+3.

Underside finely punctured for the most parts.

Median lobe of male genitalia 5 times as long as wide, basal slit reaching two-thirds, lateral lobe slightly shorter than median lobe.

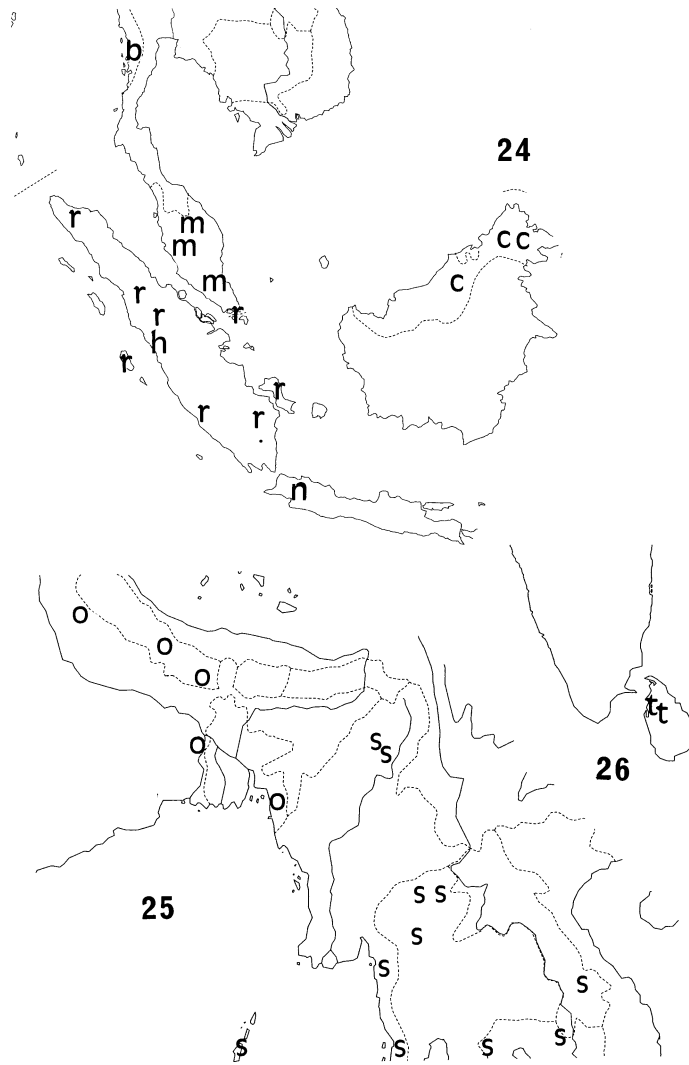
F e m a l e. Similar to the male in general feature, body larger, antennae 0.6 times as long as body, head and prothorax relatively smaller than male.

BL. ♂, 17–25 mm, ♀, 21–31 mm.

Distribution. Myanmar, Northern Thailand, Is Andaman, Cambodia (New record), Laos (New record). We suppose records from Nepal, China (Fujian, Taiwan) are errors in high possibility (see DRUMONT *et al.*, 2010).

Specimens examined. *Type materials:* Types designation. 3 ♂♂ syntypes are preserved in BMNH. We designate a male with the length 24 mm as the Lectotype which is attached with the labels: “SYNTYPE”, “Type”, “Tenasserim 44.24, handwritten”, “E. INDIES, Tenasserim, E. Packman Acquired by the B.M. 1844”, “Aegosoma sulcipenne White Type”, “Nepiodes sulcipennis (White, 1853), LECTOTYPE ♂, des. Komiya Z. & Drumont A., 2010” (rectangular, red, printed with black, attached by us). We designate the other two males as Paralectotypes: 1 ♂, 18 mm and 1 ♂, 22 mm both attached with five labels same with the Lectotype and we add a label “Aegosoma sulcipennis (White, 1853), PARALECTOTYPE ♂, des. Komiya Z. & Drumont A. 2010” (rectangular, red, printed with black).

Other materials: (Myanmar): 1 ♂, with labels “Teinzo, Birmanie, Fea Maggio 1886”, “Megopsis sulcipennis White, det. A. Lameere, 1913”, “Coll. R.I. Sc.N.B., Birmanie”, IRSNB; 1 ♂, “Birmanie, 1911”, IRSNB; 1 ♂, “Coll. I.R.Sc.N.B., sans localité, ex coll. Candèze”, “Megopsis sulcipennis white, det. A. Lameere, 1913”, “sec. Lameere, Col. Cat. Junk, xxii, 52, 1913, p. 41, Megopsis (Megopsis) sulcipennis White”, IRSNB; 1 ♂, Burmah, 1761, BMNH; 2 ♂♂, with labels “Tharrawaddy, Burmah”, “Aegosoma sulcipenne White”, BMNH; 1 ♂, N. Chin Hills, Burma. 95–28., BMNH; 1 ♂, with labels “India?”, “Ex Mus Parry”, “Fry Coll. 1905.100.”, “Aegosoma sulcipenne Wh, Rangoon”, BMNH; 1 ♂, with labels “Burmah”, “Pascoe coll. 93–60.”, “Aegosoma sulcipenne White”, BMNH; 1 ♂, with labels “Birma”, “Bowring. 63.47”, BMNH; 1 ♂, with labels “Burmah”, “Pascoe Coll. 93–60.”, “Aegosoma sulcipenne Wh, Rangoon”, BMNH; 1 ♂, with labels “Birmah”, “30604”, “Fry Coll. 1905.100.”, BMNH; 1 ♂, without locality, 5860, BMNH; 2 ♂♂, 1 ♀, Shatapra Myitkyina, Kachin



Figs. 24–26. Distribution map (24, Sunda area) of *N. cognatus* species-group and *N. cinnamoneum* species-group. — c, *N. cognatus*; h, *N. hefferni*; n, *N. cinnamoneum cinnamoneum*; r, *N. cinnamoneum ritsemai*; m, *N. cinnamoneum miyakei*; b, *N. cinnamoneum birmanus*. Distribution map (25, Indo-Indochina, 26, Sri Lanka) of *N. sulcipennis* species-group. — s, *N. sulcipennis*; o, *N. bowringi*; t, *N. terminalis*.

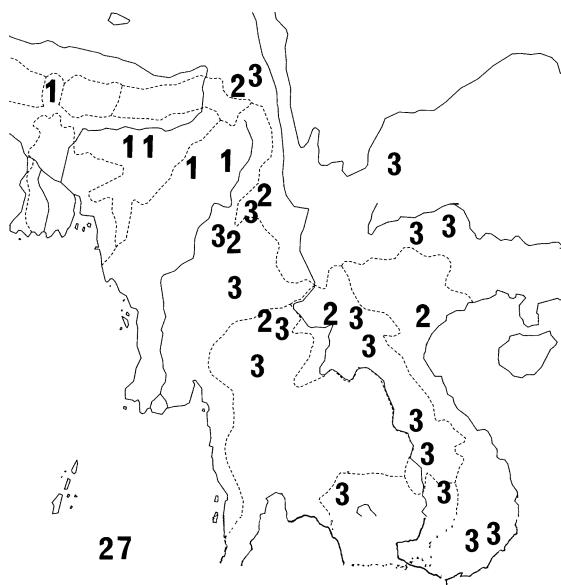


Fig. 27. Distribution map (27, Indochina) of *N. costipennis* species-group; 1, *N. costipennis costipennis*; 2 & 3, *N. costipennis multicarinatus* (3 indicates locality with typical specimens only and 2 indicates locality where transit form or peculiar variations are mixed with typical ones).

30-V-1998. 1 ♂, Near Tavoy, Tenasserim, IV~V-1995, ZKC.

(Thailand): 1 ♂, Wang Nusa, Lampang, 8-V-1989, ZKC; 1 ♂, Wiang Papao, Chiang Rai, 21-V-1990, ZKC; 1 ♂, same locality, 7-V-1999, ADC; 1 ♂, Fang, Chiang Mai, 24-V-1992, ZKC; 1 ♂, Lampang Khutran, 26-V-1996, Hikaru KAN leg., ZKC; 1 ♂, Hang Dong, Chiang Mai, VI-1989, ex coll. N. Mal, ADC; 1 ♂, Mae Hong Son vic., CW Mae Hong Son, 5-V-2004, R. GRIMM, Megopis (*Nepiodes*) *lineate* Hüdelpohl det. Adlbauer, ex. coll. K. Adlbauer, ADC.

(Laos): 1 ♂, Phu Sai Dao, 16-V-1997, ex. coll. LEHMANN, ADC; 2 ♂♂, Pakxe, 5 km W. Ban Nongmek, 520 m. 5-V-2003, leg LÖFFLER, AWC.

(Cambodia): 1 ♀, with labels "Coll. I.R.Sc.N.B., Cambodia", "Pursat pr., Phnom Samkos Wildlife Sanctuary, Pramaoy, 16-XI-2005, forest edge, light trapping, leg. K. SMETS & I. VAN", IRSNB.

(Is. Andaman); 2 ♂♂, Baratari, Andaman Is., 16-IV-2006, T. HASEGAWA leg., ZKC.

Nepiodes bowringi (GAHAN, 1894)

(Figs. 7, 8, 25)

Aegosoma Bowringi GAHAN, 1894, Anns. Mag. nat. Hist. 6(14): 226, — GAHAN, 1906, Fauna Brit. India, Coleopt., 1: 48.

Megopis (Megopis) bowringi: LAMEERE, 1909, Anns. Soc. ent. Belg., **53**: 146; 1919, Gen. Ins., (172): 75.

Megopis (Megopis) sulcipennis HAYASHI, 1971 (nec. WHITE), Ent. Rev. Japan, **23**: 82 & 97.

Nepiodes bowringi: DRUMONT, SAMA & KOMIYA, 2010, Cat. Palaearct. Coleopt., **6**, New Acts and comments: 40. — DRUMONT & KOMIYA, 2010, ditto, List of Species: 87.

This species is close to *sulcipennis* but distinguished by the following points:

1. Hairs on dorsal side yellow or yellowish gray.
2. Eyes smaller, interspace between eyes narrower, about as wide as each lobe in dorsal side and 1.3 times in ventral side.
3. Segment 3 of antennae less depressed and looking slenderer in dorsal view.
4. Costae on elytra thinner, C1, C2 distinct and C4 well observed but C3 hardly visible, intervals finely granulate and uniformly pubescent.

BL. ♂, 19–29 mm, ♀, 23–26 mm.

Distribution. Northeastern India (Assam, Arunachal Pradesh, Sikkim, Uttar Pradesh, West Bengal), Nepal and Bangladesh.

Specimens examined. Type materials: Types designation. Five syntypes ♂♂ and a syntype ♀ are preserved in BMNH. We designate a male with the length 23 mm as the Lectotype which is attached with labels: “SYNTYPE”, “Sylhet”, “Bowring. 63.47*” (rectangular, printed), “*Nepiodes bowringi* (Gahan, 1894), Lectotype ♂, des. Komiya Z. & Drumont A.” (attached by us). The other 4 ♂♂, 1 ♀ are designated as Paralectotypes: 1 ♂, 21 mm with labels same with the lectotype and we attached the label “*Nepiodes bowringi* (Gahan, 1894), Paralectotype, des. Komiya Z. & Drumont A.” (attached by us); 1 ♂, 22 mm, idem; 1 ♀, 26 mm, idem; 1 ♂, 29 mm with labels “SYNTYPE”, “N. India” (rectangular, printed), “Bowring. 63.47*” (rectangular, printed), “same Paralectotype label attached by us”.

Other materials: India (Assam): 1 ♀, “Assam, Patkai Mts”, “Fry Coll. 1905.100”, BMNH; 1 ♀, Assam, Patkai Mts., “Doherty”, “*Aegosoma Bowringi* ♀ Gahan, Compared with type. C. J. G.”, BMNH; 1 ♀, “Upper Assam, Dibrugarh (Plains) Rangagora, 1901–3, H. Stevens”, “*Aegosoma Bowringi* Gah”, “Brit. Mus. 1961–465”, BMNH.

India (Arunachal Pradesh): 3 ♂♂, 1 ♀, Bhalukpog, south Arunachal Pradesh, 11~14-V-1999, leg. E. KUCERA, ADC.

India (Sikkim): 1 ♂, “Sikkim, Rungbong Vall., Gopaldhara, 24-V-1911, H. Stevens”, BMNH; 1 ♂, “Coll. R.I.Sc.N.B., Sikkim”, “*Megopis bowringi*, det. A. Lameere, 1913”, 1 ♂, “Coll. R.I.Sc.N.B., Sikkim, ex. coll. Desbrocher”, 1 ♂, “Coll. R.I.Sc.N.B., Inde, India, ex. coll. de Moffarts”, “*Megopis bowringi*, det. Gilmour”, all in IRSNB; 1 ♀, “Sikkim, India”, “Bowringi Gahan”, “Bowringi Gah. Birma”, “Museum Leiden Verz. G. van Roon”, “Museum Leiden, Ex coll. G. van Roon”, RMNH.

India (Uttar Pradesh): 1 ♂, “Upper Assam, Silonbari, North Lakhimpur [Base of Hills], 1916–218, H. Stevens”, BMNH; 1 ♂, “Upper Assam, Dejo, North Lakhimpur [Base of Hills], 14-V-1910, H. Stevens”, “Andrewes Bequest. B. M. 1922–221”, *Aegosoma Bowringi* Gahan, BMNH.

India (West Bengal): 1 ♂, 1 ♀, “Gopaldhara, Bw., Darjeeling., 4, 720 ft.-14, H.

Stevens", "Brit. Mus. 1961-465", BMNH; 1 ♀, "India, Bengal", "Simson", "Fry Coll. 1905.100", BMNH.

(Nepal): 2 ♂♂, Nepal S., Ganesh village, near Khari Gaon, 700 m., Ankhu Khola, 24~25-V-1996, leg. AHRENS *et al.*, SMTD; 1 ♂, Taprejung, VII-2000, ZKC.

(Bangladesh): 4 ♂♂, 1 ♀, Mt. Arakan Yoma, nr. Chittagong, V-1997. H. LEHMANN leg., ZKC; 1 ♂, same locality and date, ADC.

(False Patria): 1 ♂, "Java", "42940", "Ex Mus Parry", "Fry Coll. 1905.100.", BMNH.

Nepiodes terminalis (GAHAN, 1906)

(Figs. 4, 26)

Aegosoma terminale GAHAN, 1906, Fauna Brit. India, 1: 49.

Megopis terminalis: LAMEERE, 1909, Anns. Soc. ent. Belg., 53: 146; 1919, Gen. Ins., (172): 75. — DRUMONT, 2003, Cah. Magellanes, 24: 5.

Nepiodes terminalis: DRUMONT, SAMA & KOMIYA, 2010, Cat. of Palaearct. Coleopt., 6, New Acts and Comments: 40.

M a l e. Body uniformly reddish brown, sparsely covered with yellow pubescence except antennae which are glabrous; pronotum, scutellum, gula, pro- and metasterna furnished with long hairs. Vertex, pronotum, elytra, gula and abdomen finely granulate, segments 1 & 2 of antennae punctured and segments 3 & 4 provided with sparse granules on underside.

Head relatively large, slightly longer than wide, eyes bulging, interspace between eyes 0.5 times as long as each lobe in dorsal side and 0.6 times in ventral side; mandibles short. Antennae 1.05 times as long as body, carina running on external side of segments 3-11 and internal side of segments 5-11, segment 3 depressed on underside and convex on dorsal side, segments 4-11 gradually strongly depressed to apex; apico-external angles of segments 3-8 and internal angles of segments 5-8 segments acutely pointed; segments 3 about as long as segments 4+5, segment 11 as long as segment 4.

Pronotum large, PL/PW 0.6, lateral line widest at basal angle which is triangularly projected and sub-straightly narrowed apicad; furnished with a tubercle at basal third and apical angle prominent; disc well convex at middle and small longitudinal depression at middle. Scutellum elongated linguiform, long and pointed at apex.

Lateral lines of elytra sub-parallel at basal two-thirds, slightly gradually narrowed at apical third and smoothly connected to subtruncate apices, then sinuate and connected to long and acute stutural spine (Fig. 4); each elytron furnished with four costae.

F e m a l e unknown.

BL. ♂, 25-31 mm.

Specimens examined. *Type materials*: Holotype, ♂, with labels "Ceylon", "Fry Coll. 1908.100.", "28740", "Aegosoma terminale Gahan, Type", BMNH.

Other materials: 1 ♂, in BMNH with labels "Kandy, Ceylan", "Megopis terminalis Gah.", "on loan from BM.", "Data unreliable See Brit. Mus. 1949-314.", "20", "68-

1960", "photographed", "43"; 1 ♂, in IRSNB with labels "Kandy Ceylon, H. Rolle, Berlin, SW11", "Baralipton gahani Lmr. Det. A. Lameere 191", "Coll R.I.Sc.N.B. Ceylon", "A. Lameere, Col. Cat. Junk, xxii, 52, 1913, p. 42, Megopis (Baralipton) Gahani Lmr."; 1 ♂, in USNM with labels "Sri lanka, Mate. Distr., blacklight trap, 12-IX-1975", "collected by D. M. Davies, S. Karunaratne, D. W. Balasooriya", "Megopis terminalis Gah., E. Fuchs det., 1964", "Loan from USNMNH 2026380"; 1 ♂, in ZSMC with labels "Sri lanka, Longi. XI-[19]85, Lestrade leg.", "Megopis terminalis Gah., Hüdepohl det. 1986", "Zool. Staatsslg. München", "Sammlung K. E. Hüdepohl"; 1 ♂ in ZSMC with labels "Sri lanka, Belihul Oya, VIII-19[82]", "Megopis (s.str.) terminalis Gah., Hüdepohl det. 1989", "Zool. Staatsslg. München", "Sammlung K. E. Hüdepohl"; 3 ♂♂, Wilpattu, nw. Sri Lanka, 8~10-VII-1982, N. NUIT leg. ZKC.

Note. This species is close to *N. bowringi* but usually larger, more reddish, basal angle of pronotum distinct, costae of elytra stronger and sutural spine longer. The specimen in IRSNB determined as *Megopis (Baralipton) gahani* by LAMEERE is obviously this species.

3. *Nepiodes cinnamoneum* species-group

Nepiodes cinnamoneum and its three subspecies, *ritsemai* stat nov., *miyakei* subsp. nov. and *birmanus* subsp. nov. belong to this species-group. This group is characterized by elongated and not strongly depressed segment 3 of antennae and less developed costae on elytra. LAMEERE (1919) regarded *cinnamoneum* and *ritsemai* as different species but *ritsemai* involves several local variations, some are close to, and the others are fairly different from *cinnamoneum*. So, we described two new subspecies and regard all of them as the subspecies of *cinnamoneum*.

Nepiodes cinnamoneum (LANSBERGE, 1884), comb. nov.

(Figs. 15, 16, 24)

Megopis cinnamoneum LANSBERGE, 1884, Not. Leyden. Mus., 6: 159. — LAMEERE, 1909, Mém. Soc. ent. Belg., 21: 167; (in part); 1912, Mém. Soc. ent. Belg., 21: 167; 1919, Gen. Ins., (172): 75.

Body almost uniformly reddish brown, eyes and inside of mandibles black; head, prothorax, scutellum, gena, gula, pro- and metasterna covered with sparse pubescence; vertex, pronotum and elytra granulate, segments 1-2 of antennae, tibiae and abdomen finely punctured; segments 3-11 of antennae sparsely but roughly and irregularly granulate, underside of segments 3 and 4 especially so.

Male. Head small, about as long as wide; mandibles 0.25 times as long as head, hooked at apices but not so sharply, internal tooth very small. Antennae about as long as body; segment 3 long and slender, narrowest at base and gradually widened apicad, feebly depressed underside; segments 4-11 depressed; lateral carina recognized on both sides of segments 6 or 7-11; segment 3 distinctly longer than segments 4+5; segment 11

as long as segment 6 and having vestigial trace of segment 12 at apical fourth.

Pronotum 0.8 times as long as wide, widest at base and sub-straightly convergent apicad, not having any spine or tubercle on lateral margin; basal and apical corners obtusely angled. Disc irregularly convex. Scutellum linguiform, much longer than wide; not pointed and narrowly rounded at apex.

Elytra 3.2–3.3 times as long as wide, widest just after humeri, then straightly narrowed to apical eighth and shortly rounded; each furnished with an acute but small spine at apex; costae on elytron less distinct than in other congeners, C1 and C2 shiny at about basal third and remainings covered with granules similar to intervals, C1 disappearing at about apical fifth, C2 running close to apex, C3 and C4 short, not well raised and not shiny; suture more or less dehiscent near apex.

F e m a l e. Close to male in color and structure but body larger; antennae 0.7 times as long as body, segment 11 as long as segment 7, trace of segment 12 more distinct; disc of pronotum irregularly convex and slightly concave at middle; elytra wider, about 2.5 times as long as wide.

BL. ♂, 16–30 mm, ♀, 36 mm.

Distribution. Java (West Java).

Specimens examined. *Type material*: The holotype ♂ reported from Mt. Gedeh by LANSBERGE (1884) has not been located in RMNH nor in several other possible institutions. However, we were examine 1 ♂ in ZMAN which agrees well with the description by LANSBERGE with the label “Java, G. Gedeh, Drescher, X–1915”. This specimen was wrongly identified as *Megopis costipennis* WHITE by F. F. TIPPMAN, in 1940.

Other materials: 1 ♂, “Java, Preanger, Dinewatie, VII–1915, J. B. Corporaal leg.”, “*Nepiodes cinnamonea* Lansb. Det. Dr. H. J. Veth”, ZMAN; 1 ♂, Nerderlands Indie, W. Java, W. Preanger, Soekaboemi, 19–XI–1936, 2000 ft., J. M. A. v. Groenendael, ZMAN; 1 ♂, “West Java, IV–1983”, “Sammlung KE. Hüdepohl”, “*Megopis* (*Nepiodes*) *cinnamonea* Lans. Hüdepohl det. 1988”, ZMSC; 1 ♂, Mt. Patuha, West Java, 30–IX–1995; 1 ♀, Gununghalimun, Java Barat, X–1999, ZKC.

Note. LANSBERGE (1884) described this species under the genus *Megopis* and noted that this species could be placed at the middle of *Megopis*, *Nepiodes* and *Aegosoma*. We agree with his view but we consider it better to place it in this genus because the male genital organs are similar to those of *N. cognatus*.

Nepiodes cinnamoneum ritsemai LAMEERE, 1912, stat. nov.

(Figs. 17–19, 24)

Megopis Ritsemai LAMEERE, 1912, Mém. Soc. ent. Belg., 21: 167. (pro parte).

Megopis cinnamonea: LAMEERE, 1909, Mém. Soc. ent. Belg. 21: 167.

Megopis (*Baralioptis*) *ritsemai*: ROBINSON & BODEN KLOSS, 1931, J. fed. Malay Stat. Mus., 8: 210.

This subspecies is close to *N. cinnamoneum cinnamoneum* but different in yellowish

color of elytra which are thickly pubescent and finely granulate; antennae longer and slenderer especially on segment 3, with segment 11 pointed apically.

Specimens from Is. Bangka are dark-colored and having long apical spines of elytra and may represent an independent subspecies, but we were able to examine only two examples and that was not satisfactory for us to define a new taxon.

BL. ♂, 18–37 mm, ♀, 21–37 mm.

Distribution. Indonesia (Sumatra, Is. Bangka (new record), Is. Siberut (new record)), Singapore.

Specimens examined. Type materials: Type designation. Two syntypes ♂♂ are preserved in RMNH. We designate a male with length 31 mm as the Lectotype which is attached with labels “Sumatra, Solok, P. O. Stolz” (rectangular, white, printed, with a black border), “Megopis Ritsemai Type Lam.” (rectangular, white, handwritten, “Ritsemai n. sp. Lam.” (rectangular, handwritten), “Photo N. mal 2009” (rectangular, orange, printed), “typ” (rectangular, red, printed), “*Nepiodes cinnamoneum* ssp. *ritsemai* (Lameere, 1912), LECTOTYPE ♂, des. Komiya Z. & Drumont A., 2010” (rectangular, red, handwritten and printed with black, attached by us). The other 27 mm ♂ is designated as Paralectotype which is attached with labels “Sumatra, H; E. Keil” (rounded, white, handwritten), “Taraentaeng” (rectangular, white, handwritten), “type” (rectangular, red, printed), “*Nepiodes cinnamoneun* ssp. *ritsemai* (Lameere, 1912), PARALECTOTYPE ♂, des. Komiya Z. & Drumont A., 2010” (rectangular, red, handwritten and printed with black, attached by us).

Other materials : Indonesia (Sumatra): 1 ♂, Nanggroe Aceh Darussalam province, Kabupaten Aceh Tengah, street Uning/Beutong, 37.8 km of Takengon, 1392 m., 04° 31' 43.0N-096° 39' 53.8E, 24~25-II-2009, at mv/uv light, primary lower montane rainforest, mountain slope with a large cleared woodland, much dead timber in clear area, agriculture (coffee, maize, spices), leg. U. & L. H. PAUKTSTADT, ex. coll. U. PAUKSTADT, ADC; 2 ♂♂, 1 ♀, same, street Takengon-Isaq, 17.3 km of Takengon, 1796 m., 04° 31' 18.4N-096° 50' 51.0E, 26~27-V-2008, disturbed primary lower montane rainforest, at arid slopes with *Pinus* sp., cleared woodlands with old dead timber (coffee, cocoa, fruit trees, spices), leg. U. PAUKTSTADT, ex. coll. U. PAUKSTADT, ADC; 7 ♂♂, same, street Takengon-Isaq, 21.9 km of Takengon, 1766 m., 04° 31' 18.4N-096° 51' 27.4E, 23~24-IV-2009, at mv/uv light, primary lower montane rainforest, mist forest in higher altitudes, eastern slope of mountain ridge, leg. U. & L. H. PAUKTSTADT, ADC; 4 ♂♂, same province, Kabupaten Nagan Raya, street Beutong/Meulaloh, Singah Mata Gayo, 17.6 km of Beutong, 1978 m., 04° 14' 3N-096° 31' 04.9E, 25~26-II-2009, at mv/uv light, primary lower montane rainforest, mountain pass with mist forest in higher altitudes, several pitcher plants (*Nepenthis*), some natural dead trees, leg. U. & L. H. PAUKTSTADT, ex. coll. U. PAUKSTADT, ADC; 1 ♂, same province, Kabupaten Gayo Lues, street Ise Ise/Blangkejeren, Pusat Gayo Mountains, 1427 m., 04° 14' 41.5N-097° 11' 09.8E, 8~9-IV-2008, primary lower montane rainforest, leg. U. PAUKTSTADT, ex. coll. U. PAUKTSTADT, ADC; 3 ♂♂, Lampong, South Sumatra, 5~20-XI-1999, ADC; 1 ♂, same locality, III-2002, leg. SUYADI, IRSNB; 2 ♂♂, Côte Ouest de

Sumatra, coll. WEYERS, ex. coll. Musée de Zoologie de l'Université Libre de Bruxelles, deposited in IRSNB; 1 ♂, same, 1300 m., VIII-1921, leg. F. J. PRATT, ZMAN; 1 ♂, Mt. Twang, West Sumatra, 3-IV-2005, ADC; 1 ♂, Benkoelen, Tambang Sawah, 1929, leg. E. DOUGLAS, coll. Dr. D. MAC GILLAVRY, ZMAN; 1 ♂, same, 16-XI-1930, ZMAN; 1 ♂, Bandar Baroe, 850 m., 10-II-1921, J. B. CORPORAAL leg., ZMAN.

Indonesia (Is. Bangka): 1 ♂, Is. Bangka, Indonesia, VI-2002, local collector. ZKC (new record).

Indonesia (Is. Siberut): 2 ♂♂, Bojakan env., northern Siberut, 150 m alt. XI-2007, St. JAKL leg., ZKC (new record).

Nepiodes cinnamoneum miyakei subsp. nov.

(Figs. 20, 21, 24)

This new subspecies is close to *N. cinnamoneum cinnamoneum* in body color but it has pubescent elytra as in *ristemai*.

Body color is reddish brown as in *cinnamoneum* but usually, antennae and legs more yellowish. Antennae thick as in *cinnamoneum*. Pronotum strongly convex at about apical two-thirds and more ruggedly convex on disc. Elytra pubescent as in *ristemai* but the pubescence is often thinner. The pubescence on head and pronotum also shorter and sparser than *ristemai*.

Specimens examined. Type series. Holotype, ♂, Maxwell's Hill, West Malaysia, 29-III-1979, Y. MIYAKE leg. in NSMT. Paratypes, 4 ♂♂, 1 ♀, Cameron High Land, IV-1993, ZKC; 3 ♂♂, same locality, FDC; 3 ♂♂, 1 ♀, same locality, ex. coll. F. LEDUC, ADC; 1 ♂, same locality, ex. ADC, deposited in IRSNB; 1 ♂, same locality, IV-1997, local collectors, ADC; 1 ♂, Malaysia, Pahang, Fraser's Hill, 1200 m., 8~9-IV-1992, light, B. GUSTAFSSON, H., H. HIPPA & G. SELLERHOLM leg., NHRS; 1 ♂, Malaysia, Pahang, Taman Negara National Park, Kuala Juram, E. of Merapoh, 04°39' N-102°08'E, 12-III-1999, edge primary rainforest (near dormitory) at light, J. P. & M. J. DUFFELS, M. ZAIDI & M. Y. RUSLAN leg., ZMAN. Malaysia (Johor): 1 ♂, Malaysia, Johor, Endau Ropin national Park, Junction logging road/access road, 02°31'35.3N-103°23'58E, 22-III-2001, forest edge, transect edge 5, M. A. SCHOUTEN leg. (wrongly determined as *Megopis sinica sinica* Det. WITHAAR), ZMAN; 1 ♂, Malaysia, Johor, Endau Rompin national Park, NERC, 02°31'45.4N-103°23'52.5E, 24-III-2001, secondary forest, transect secondary 6, M. A. SCHOUTEN leg. (wrongly determined as *Megopis sinica sinica* Det. WITHAAR), ZMAN.

BL. ♂, 22-36 mm, ♀ 32-33 mm.

Variation. Examples from Johor area mostly have dark body color with gray pubescence and distinguishable from the other area. However, the body structure is closer to that of the typical specimens, so that we included them in this subspecies.

Distribution. West Malaysia (Perak, Kelantan, Pahang, Johor).

Etymology. The subspecific name is dedicated to the late Mr. Yoshiichi MIYAKE for the memory of his works on Asian insects. He collected the holotype.

Nepiodes cinnamoneum birmanus subsp. nov.

(Figs. 22, 23, 24)

In the male, this new subspecies is close to *ritsemai* in slender and yellowish body, thickly pubescent pronotum and slender and long antennae but the shape of pronotum is strongly convex as in *miyakei* subsp. nov. Costae of elytra more developed as compared with the other subspecies. In the female, antennae long ($AL/BL=0.9$), elytra very thinly pubescent and more densely granulate.

Specimens examined. Type series. Holotype, 1 ♂, III–1995, Myanmar, Tenasserim, local collector, ex ADC, will be deposited in IRSNB. Paratypes, 4 ♂♂, same data as holotype, ADC; 1 ♂, Tenasserim, Burma, without collecting date, ZMSC; 3 ♂♂, same locality, 15–IV–1995, ZKC; 1 ♀, same locality, 17–V–1997, ZKC.

BL. ♂, 20–30 mm, ♀, 34 mm

Distribution. Myanmar (Tenasserim).

Etymology. The species name was taken from the old name of its distributing locality.

4. *Nepiodes costipennis* species-group

Nepiodes costipennis species-group is rather close to the *N. sulcipennis* species-group in body structure but is conspicuous not only in having peculiar elytra which are entirely glabrous and furnished with peculiar costae but also showing different sexual frequency which is much more abundant in female than in male. *Nepiodes costipennis* WHITE, 1853 and a distinct subspecies *multicarinatus* FUCHS, 1966 are included in this group.

Nepiodes costipennis (WHITE, 1853)

(Figs. 9, 10, 27)

Megopis costipennis WHITE, 1853, Cat. Coleopt. Brit. Mus. 7: 28. — GEMMINGER & HAROLD, 1872, Cat. Coleopterorum, 2776. — LAMEERE, 1909, Anns. Soc. ent. Belg., 53: 146.

Aegosoma costipenne: GAHAN, 1906, Fauna Brit. India, Ceylon and Burma, Coleopt., 1: 49.

Aegosoma lacertosa PASCOE, 1867, Ann. Mag. nat. Hist., 190 (3), 413.

Nepiodes costipennis costipennis: DRUMONT, SAMA & KOMIYA, 2010, Cat. of Palaearct. Coleopt., 6, New Acts and Comments, 40. — DRUMONT & KOMIYA, 2010, ditto, List of Species, 87.

Body reddish brown, elytra matt and black or dark reddish brown except costae which are reddish brown and shiny, eyes and apices of mandibles black, antennae and legs reddish brown and infuscate on each joint; dorsal side almost glabrous and very thinly pubescent on limited parts of head, pronotum, scutellum and elytra. Head and pronotum finely granulate. Underside mostly covered with short and sparse pubescence and provided with longer one on gula and triangular part of metasternum; abdomen punctate and the other parts of underside mostly finely granulate.

M a l e. Head about as long as wide, inter space between eyes as long as or slightly

longer than each eye-lobe on dorsal side and eyes much more separated on ventral side. Antennae as long as body, AL/BL 0.94–1.05; punctured on segment 1 and granulate on segments 2–4 or 6, remaining segments rather smooth on surface; segment 3 about as long as segments 4 + 5, slightly depressed on ventral side, lateral margin parallel in basal half and slightly widened apicad; carina running segments 3–11 of external side and segments 4 or 5–11 of internal side, ventral side of segments 4–11 flat or slightly concave.

Pronotum 0.6–0.7 times as long as wide, widest at base and straightly convergent apicad, lateral margin always strongly edged posterior to procoxal cavity but in anterior part varying from completely edged to almost rounded and sometimes replaced by a callosity developing from pro-episternum; basal angle usually triangularly projected in dorsal view but without distinct process; sometimes provided with a small tubercle at about basal fourth. Scutellum small, linguiform.

Elytra about three times as long as wide, widest just after humeri and sub-straightly narrowed to apical eighth and shortly rounded at apices; sutural end armed with short spine; each with distinct four costae which are similarly patterned to those of *N. sulcipennis*.

Legs long, distinctly thicker than antennae; pro-tibiae almost vertically depressed (slightly oblique); tarsi shorter than a half of tibiae, claws as long as segments 2 + 3 of tarsi.

Male genital organ similar to those of *N. sulcipennis*.

F e m a l e. Similar to male but body usually larger, antennae shorter, about 0.7 times as long as body, elytra 2.5–3.0 times as long as wide; a callosity on each side of prothorax which was rarely found in the male usually observed.

BL. ♂, 21–31 mm, ♀, 23–34 mm.

Distribution. India (Assam, Sikkim), Myanmar (Kachin, Sagain).

Specimens examined. *Type materials:* The holotypes of *Megopis costipennis* WHITE, 1853 and *Aegosoma lacertosum* PASCOE, 1867 are both preserved in BMNH and recently examined when the synonymy of these two taxa was confirmed in DRUMONT, SAMA & KOMIYA, 2010 (p. 38).

Other materials: India (Assam, Sikkim); 1 ♀, Coll. R.I.Sc.N.B. “Inde Silhet, ex. coll. Lacordaire”, “*Megopis costipennis* White cat. Brit. Mus., vii 28, Silhet Lacordaire”, “*Megopis costipennis* White det. A. Lameere 1913”, “sec. A. Lameere, Col. Cat. Junk. xxii, 52 1913, p. 41, *Megopis* (*Megopis*) *costipennis* White”, IRSNB; 1 ♀, “Coll. R.I.Sc. N.B., Coll. Nonfried, Hymalaya”, “*Megopis costipennis* P. Boppe vid.”, “Assam Sikkim, *costipennis* White, ex. coll. Desbrocher”, IRSNB; 4 ♂♂, 3 ♀♀, Bhalukpong, nord Assam, 1~10-V-1999, leg. E. KUCERA, ADC.

Myanmar (Kachin, Sagain): 2 ♂♂, 1 ♀, Birmanie du nord, Printemps – été 2004, PENG leg., ADC; 1 ♂, 1 ♀, Mt. Nwezin, nr. Putao, 16~20-VI-1998, S. NAGAI leg., ZKC; 1 ♂, S. Kumon Range, Zan-Phut, alt. 1,200 m, 3-VI-2000, Y. YAMAOKA, S. NAGAI & H. MIYAMA leg., ZKC; 1 ♀, same place and collectors, 29-V-2000, ZKC; 2 ♀♀, S. Kumon, Mt. Shwe-Taung, alt. 1,200, S. KOIWAYA & H. WAKAHARA leg., ZKC.

Nepiodes costipennis multicarinatus (FUCHS, 1966)

(Figs. 11–14, 27)

Megopis (*Nepiodes*) *multicarinata* FUCHS, 1966, Koleopt. Rdsch., **43/44** [for 1965/66]: 19.*Megopis* (*Megopis*) *costipennis*: GRESSITT & RONDON, 1970, Pacif. Ins. Mon., **24**: 17.*Nepiodes costipennis multicarinatus*: DRUMONT, SAMA & KOMIYA, 2010, Cat. Palaearct. Coleopt., **6**, New Acts and Comments: 40. — DRUMONT & KOMIYA, 2010, ditto, List of Species: 87.

In typical examples from southern Vietnam and Thailand, this subspecies differs from *costipennis* in having elytra black or charcoal-colored on intervals and antennae and legs slenderer. In *costipennis*, costae of elytra reddish brown, almost same-colored throughout elytra and similarly formed to those of other species in the genus but in *multicarinatus*, costae partly thickened, forming callosities here and there especially around meeting points of two costae and costae are blackish for the most part but on these callosities they become pale yellow; the distribution of pale yellow parts on costae of elytron is very variable but always appearing at the point placed at about apical third where C1 and C2 meet; yellow parts often appearing also on basal parts of C1 and C2, and just before apex where C2 and C3 meet; the other parts of costae almost black but sometimes pale yellow portions sporadically appear here and there.

BL. ♂, 17–24 mm. ♀, 19–33 mm.

Distribution. Vietnam, Cambodia, Laos, China (Yunnan, Guangxi, eastern Tibet), Thailand, Myanmar (Shan, Kachin, Mandalay).

Specimens examined. *Type materials*: The holotype male is preserved in Herbert SCHMID collection (HSC) with the following labels, “Djiring, Annam, H. Perrot”, “HoloTYPUS♂”, “Holotypus ♂, Megopis (*Nepiodes*) multicarinata mihi, E. Fuchs det., 1965”. The single paratype ♂ designated by Fuchs was found in the MNHN which was attached labels, “Djiring, Annam, H. Perrot”, “ParaTYPUS ♂”, “Muséum Paris, Donde, P. Dauquet”, “Paratypes ♂, Megopis (*Nepiodes*) multicarinata mihi, E. Fuchs det., 1966”, “*Nepiodes costipennis* ssp. multicarinatus Fuchs ♂, Det. A. Drumont, 2010”.

Other materials: (Vietnam): 1 ♂, 2 ♀♀, Baoloc, Southern Vietnam, V-2003, ZKC; 2 ♂♂, 4 ♀♀, Dalat env. 18~25-V-1998, ZKC; 5 ♀♀, Tamdao, Vinh Phu Prov., 2-VII-1995, ZKC; 2 ♀♀, Son La, Son La Prov., 1~12-VII-2008, ADC.

(Cambodia): 2 ♀♀, Ban San Keo, northeastern Kampuchea, VI-2002, ZKC.

(Laos): 2 ♀♀, Ban Saluei, Hua Phan Prov., 6~18-V-2004, F & L. KANTNR leg. ADC; 2 ♂♂, 1 ♀, Mt. Phonsali, Phonsali prov., 16~18-1996, ADC; 1 ♀, Mt. Phu Phan, IV-2008, S. COLLARD leg., ADC; and other 4 ♂♂, 10 ♀♀, from northern Laos, ZKC, ADC.

(China, Yunnan): 1 ♂, 2 ♀♀, Mt. Ai Lao Shan, Xinping county, 1~11-V-2006, ADC; 2 ♂♂, 2 ♀♀, Mt. Yingpanshan, Qiubei county, 1~16-V-2008, ADC; 1 ♂, 1 ♀, Hengduan Shan, 2500 m, VII-1999, ADC; 6 ♂♂, 3 ♀♀, Mt. Gaoligong shan, Gongshan county, VI-2007 & 20~30-V-2008, ZKC; and other 2 ♂♂, 7 ♀♀ from Yunnan, ZKC, ADC.

(China, Tibet): 1 ♂, Xiachayu, Chayu county, 22~28-VI-2006, ZKC.

(China, Guangxi): 5 ♂♂, 11 ♀♀, Mt. Qingwanglaoshan, Tianlin county, Baise city, 1~24-VI-2008, leg. local collectors, ADC.

(Thailand): 1 ♂, 3 ♀♀, Wiangpapao, Chiangrai, 22-V-1990, ZKC; 2 ♂♂, same locality, 15-VI-1992, ADC; 1 ♀, idem, 7-V-1999, ADC; 1 ♀, Fang, Chiangrai, 15-VI-1995, ADC; 5 ♀♀, Doipui, Chiangmai, V-1984, 3 ♀♀, Maetaeng, Chiangmai, VI-1995, ZKC; 1 ♂, 4 ♀♀, Chiangmai, IX-1997, ADC; and other 17 ♀♀, from Thailand.

(Myanmar, Kachin): 17 ♂♂, 23 ♀♀, Sikaw, 5~28-V-2009, leg. LI Jingke, ADC & ZKC.

Notes on the affinity of the two subspecies and geographical variations in subsp. multicarinatus.

The nominotypical subspecies is found from northeastern India and northern Myanmar, and subsp. *multicarinatus* is widely known from Vietnam, Cambodia, Laos, Thailand, southwestern China and northern Myanmar. In the type locality (southern Vietnam), most specimens are like Figs. 11 & 12 but example like Fig. 14 is more often found in wider area throughout Thailand, Myanmar, Laos, China (Yunnan, Tibet) and these two forms are smoothly transit to each other. However, the two subspecies are not simply allopatric. In the northern range of the distribution of *multicarinatus* throughout northern Myanmar (Kachin), northern Thailand (Chiangmai), northern Laos (Phonsali), northern Vietnam (Tamdao) and western China (eastern Tibet, western Yunnan), specimens somehow similar to subsp. *costipennis* are mixed in typical *multicarinatus* and also in these areas, the variations range seem to be wider than other area (not only *costipennis*-like examples but also some peculiar forms are observed especially in females). The Fig. 13. (from Tamdao, northern Vietnam) is an example of such peculiar forms. We believe these forms do not represent several independent taxa and such phenomenon suggests that some introgression between two subspecies is taking place.

Key to the Species of the Genus *Nepiodes*

1. Segment 3 of antennae about as long as segments 4+52.
- Segment 3 of antennae obviously longer than segments 4+5
(Java, Sumatra, Is. Banka, Is. Siberut, Singapor, Malaysian Peninsula, Myanmar)
.....*N. cinnamoneum*. (subspecies key is given bellow)
2. Elytra punctured3.
- Elytra not punctured4.
3. Male body brown, sutural spine of elytra acute and long
(East Malaysia (Borneo))*N. cognatus*.
- Male body black, with blue tint on elytra, sutural spine of elytra short and small
(West Sumatra)*N. hefferni* comb. nov.
4. Elytra pubescent and granulate5.

- Elytra glabrous and matt7.
- 5. C3 of elytron clearly recognized
(Myanmar (Kachin), Thailand (Chiangmai), Andaman, Laos, Cambodia)
.....*N. sulcipennis*.
- C3 of elytron hardly recognized6.
- 6. Apex of elytron subtruncated and armed with longer spines
(Sri Lanka)*N. terminalis*.
- Apex of elytron rounded and with short and small spine
(India (Bengal, Assam), Nepal, Bangladesh)*N. bowringi*.
- 7. Costa of elytra almost uniformly reddish, legs thicker
(India (Assam, Sikkim), Myanmar (Kachin, Sagain))*N. costipennis costipennis*.
- Costa of elytra furnished with yellowish callosities on meeting points of two costae
and the other parts black or dark brown, legs slenderer
(Vietnam, Thailand (Chiangmai), Myanmar (Kachin), Laos, China (Yunnan,
Guangxi, Tibet), Cambodia)*N. costipennis multicarinatus*.

Key to the Subspecies of *N. cinnamoneum*

- 1. Antennae about as long as body, elytra widest just after humerimale.....2.
- Antennae much shorter than body (0.7–0.9), elytra widest at about middle
.....female.....5.
- 2. Elytra glabrous or almost so
(W. Java)*N. c. cinnamoneum*.
- Elytra usually thickly pubescent3.
- 3. Pronotum suddenly roundly widened just after apical constriction, costae of elytra
usually more distinct4.
- Pronotum sub-straightly widened just after apical constriction, costae of elytra
usually weaker
(Sumatra, Is. Banka, Is. Siberut, Singapor)*N. c. ritsemai* stat nov.
- 4. Elytra reddish brown, body usually wider ($EL/EW < 2.5$), antennae thicker
(Malaysian peninsula)*N. c. miyakei* subsp. nov.
- Elytra yellowish brown, body slender ($EL/EW > 2.7$), antennae slenderer
(Myanmar Tennaserim)*N. c. birmanus* subsp. nov.
- 5. Elytra glabrous, antennae shorter ($AL/BL = 0.7$)*N. c. cinnamoneum*.
- Elytra more or less pubescent, antennae longer ($AL/BL > 0.7$)6.
- 6. Elytra more thickly granulate, antennae long ($AL/BL > 0.9$)
.....*N. c. birmanus* subsp. nov.
- Elytra less granulate, antennae shorter ($AL/BL = 0.75-0.85$)7.
- 7. Elytra more reddish, wider ($EL/EW > 2.6$), with pubescence shorter and sparser
.....*N. c. miyakei* subsp. nov.
- Elytra more yellowish, slenderer ($EL/EW < 2.4$), with pubescence longer and
thicker*N. c. ritsemai* stat nov.

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要 約

小宮次郎・Alain DRUMONT: *Nepiodes* 属 (コウチュウ目カミキリムシ科) の再検討。—— *Nepiodes* を独立の属と認め、以下の4種群7種3亜種に整理する。1. *cognatus* 種群, *N. cognatus*, *N. hefferni* comb. nov. (分布, スンダ地域)。2. *sulcipennis* 種群, *N. sulcipennis*, *N. bowringi*, *N. terminalis* (分布, インド〜スリランカ〜インドシナ)。3. *cinnamoneum* 種群, *N. cinnamoneum*, *N. c. ritsemai* stat. nov., *N. c. miyakei* subsp. nov. *N. c. birmanus* subsp. nov. (分布, スンダ地域)。4. *costipennis* 種群, *N. costipennis costipennis*, *N. c. multicarinatus*, (分布, ネパール〜インドシナ)。

Nepiodes 属は PASCOE (1867) によりボルネオの *N. cognatus* を基準種として記載された。LAMEERE (1909, 1919) はそれを *Megopis* 属の亜属として, *cognata*, *cinnamonea*, *ritsemai* の3種をこの亜属に含め、さらに *sulcipennis*, *bowringi*, *terminalis*, *costipennis* の4種を、これと別の *Megopis* 亜属とした。KOMIYA & DRUMONT (2009) は後者の4種は、複眼の距離がはなれ、翅端に明瞭な棘を持つ点で *Nepiodes* 属と近縁と考えられ、インド洋西部に分布する *Megopis* 属とは異なるため、*Nepiodes* 属に移すべきだと主張した。この論文はその主張に基づき、同属の詳細を再整理したものである。

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Two Unexpected New Species of the Genus *Variimorda* (Coleoptera, Mordellidae) from the Ogasawara Islands

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Abstract Two new very beautiful mordellids, *Variimorda hiromiae* sp. nov. and *V. maiae* sp. nov., are described from the Ogasawara Islands of Japan. They resemble *V. inomatai* TAKAKUWA from the same islands at first sight, but are markedly different from it particularly in the coloration of pygidium and pronotum as well as in the structure of the male genitalia. These new species are also apparently different from each other in the coloration of pronotum and the male genitalia. *Variimorda maiae* sp. nov. is divided into two subspecies, the nominotypical subspecies from Ani-jima and Otôto-jima of the Chichi-jima group and *V. maiae shoui* subsp. nov. from Haha-jima of the Haha-jima group.

Two species of the mordellid genus *Variimorda* MEQUIGNON, *V. inomatai* TAKAKUWA and *V. ihai boninensis* NOMURA, have been known from the Ogasawara Islands off ca. 1,000 km south from Tokyo of the Japanese mainland. The former species belongs to the group of *V. flavimana* (MARSEUL) and the latter comprises the group of *V. ihai* CHÛJÔ, and the two groups are also sympatrically distributed though members of the former are fundamentally allopatric.

Nine years ago, I caught a splendidly beautiful strange mordellid specimen belonging to the group of *V. flavimana* on Haha-jima Is. of the Ogasawara Islands in a special research expedition organized by the Kanagawa Prefectural Museum of Natural History in 1997–2003. It is similar particularly in the elytral maculation to *V. inomatai* from the same island, but apparently different from it in morphological characters. Sympatrical distribution of two species of this group was quite unexpected, though any additional specimen has not been collected since then, and it was recorded as *Variimorda* sp. in a list of insects of the Ogasawaras (TAKAKUWA, 2004).

Recently, I have had an opportunity to examine fairly ample materials of *Variimorda* collected by malaise traps on the Ogasawara Islands through the courtesy of Dr. Tomoyuki TSURU of Hokkaido University, Sapporo and my colleague researcher Mr. Haruki KARUBE. The results were quite marvelous; in the first place, the unknown species mentioned above was proved doubtlessly new to science and was found only on Haha-jima Is.; secondly, another new species considered to belong to the same lineage as the former was recognized from Ani-jima Is. and Otôto-jima Is. of the Chichi-jima

group and Haha-jima Is. of the Haha-jima group; and thirdly, in the latter species, the specimens from the Chichi-jima group and the those from Haha-jima Is. should be morphologically distinguished. Therefore, I am going to describe two new species and a new subspecies in the present paper.

The holotypes and several paratypes designated in this paper are deposited in the collection of the Kanagawa Prefectural Museum of Natural History, Odawara. The remaining paratypes are principally preserved in the collections of the National Museum of Nature and Science, Tokyo and the Forestry and Forest Products Research Institute, Tsukuba.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo for critically reading the original manuscript of this paper. My sincere thanks are also due to Dr. Tomoyuki TSURU of the Systematic Entomology, Department of Ecology and Systematics, Graduate School of Agriculture, Hokkaido University, Sapporo and to Mr. Haruki KARUBE of the Kanagawa Prefectural Museum of Natural History, Odawara for providing me with the valuable materials used in this paper, and to Mr. Akira OZONO of Fujisawa for taking photographs inserted in this paper.

Variimorda hiromiae sp. nov.

(Figs. 1-2, 7-13)

[Japanese name: Romi-kin'obihananomi]

Variimorda sp.: TAKAKUWA, 2004, Res. Rept. Kanagawa pref. Mus. nat. Hist, (12): 76.

Somewhat resembles *Variimorda inomatai* TAKAKUWA from Chichi-jima Is. and Haha-jima Is. of the Ogasawara Islands particularly in the elytral maculation, but apparently differs from it mainly in having the yellowish brown pygidium and the stouter male genitalia.

M a l e. Body yellowish brown to black, beneath bearing pale to yellowish pubescence all over; head above black except for frons, clypeus, labrum and almost all parts of mandibles which are yellowish brown; maxillae and labial palpi pale yellow; antennae pale brownish yellow in 1st-3rd segments, and gradually darkened towards terminal segments; pronotum dark brown though yellowish in lateral areas; mesothorax dark chestnut brown; metathorax blackish brown; abdominal segments brown though more or less yellowish at each posterior portion; elytra almost brownish black to black though light brown on humeri and the posterior portions like a pair of longitudinal fasciae; pygidium yellowish brown though darkened in apical half; legs light yellowish brown to light brown, with apical combs of hind tarsi and tibiae black.

Head well convex above, 1.45 times as wide as long, bearing yellow pubescence; eye large, oval, 1.12 times as long as wide; genae very narrow. Terminal segment of maxillary palpus almost right-triangular though shortest at outer margin and longest at apical margin. Antenna distinctly broad, about 1.31 times as long as width of head; 2nd

the shortest and cylindrical, 3rd subcylindrical, 4–10th weakly serrate, last segment elongated fusiform. Pronotum fully transverse, 1.48 times as wide as long, gently arcuate at sides, with posterior angles broadly rounded; above bearing yellowish pubescence though broadly with a vague dark macula at middle which bears blackish pubescence. Scutellum lingulate, bearing yellowish pubescence. Elytra apparently narrower than pronotum, about 2.15 times as long as wide, widest just behind humeri; sides very slightly attenuate posteriad, then rather abruptly, arcuately convergent to



Figs. 1–6. Habitus *Variimorda* spp. — 1, *V. hiromiae* sp. nov., ♂, holotype; 2, ditto, ♀, paratype; 3, *V. maiae* sp. nov., ♂, holotype; 4, ditto, ♀, paratype; 5, *V. maiae shoui* subsp. nov., ♂, holotype; 6, ditto, ♀, paratype. (Photos by A. OZONO.)

near each apex which is moderately rounded; surface clothed with blackish pubescence, decorated with golden yellow one as follows: a pair of very broad oblique fasciae from humeral parts to just before the middle, each of which does not reach sutural line and touches scutellum along basal margin; a pair of oblique zigzag broad fasciae behind the middle, each of which barely reaches sutural line and is vaguely connected with the former fascia at lateral side. Pygidium 0.53 times as long as elytra, abruptly attenuate posteriad behind the middle, then gently convergent to apex which is very narrowly truncate; dorsum gradually depressed apicad in posterior 2/5, bearing yellowish pubescence all over, with very few black setae in posterior area. Anal sternite parabolical, narrowly rounded at apex, 0.53 times as long as pygidium, 1.7 times as long as wide. Eighth abdominal sternite very thin, as illustrated; apical projection bilobed, with the emargination reaching apical 2/5. Fore tibiae curved inwards and downwards, beneath densely with short erect hairs on each anterior half.

Parameres stout, as illustrated. Left paramere broad and thick; membranous piece shortly knife-like, rather swollen and somewhat sclerotized, with several long setae only at base. Right paramere shorter than the left; sclerotized branch extremely broadly truncate at apex, the apical tip being narrowly rounded and the basal tip being huge though truncate at the apex; membranous piece broad and subparallel-sided, somewhat sclerotized.

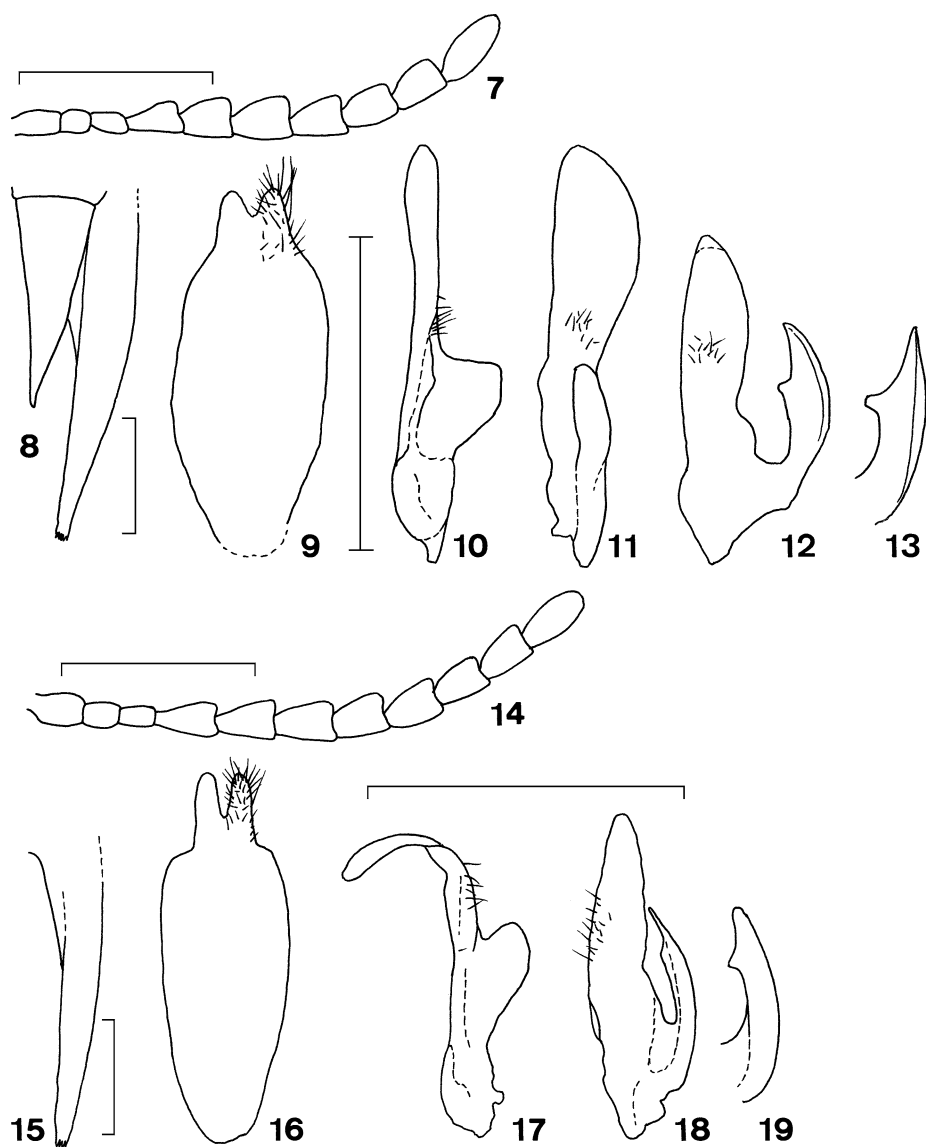
F e m a l e. Terminal segments of maxillary palpi obtuse triangular with arcuate outer and distinctly arcuate apical margins, twice as long as inner margin. Antennae shorter than in male, about 1.2 times as long as width of head. Pronotum longer than in male, 1.34 times as wide as long. Elytral yellowish maculation usually more developed than in male. Pygidium usually darker than in male, with a few black setae in posterior area; sides slightly emarginately attenuate apicad. Anal sternite shorter than in male, about a half shorter than pygidium; apex rather broadly truncate. Fore tibiae slightly curved downwards, beneath without erect hairs.

Length: 4.0–5.3 mm (incl. head and excl. pygidium).

Type series. Holotype: ♂, Mt. Kuwanoki-yama, Haha-jima Is., Ogasawara Isls., 22–VI–2001, M. TAKAKUWA leg., collected on a leaf of herb in forest. Paratypes: 11 ♂♂, 19 ♀♀, Sekimon, Haha-jima Is., 3–VII–2009, H. KARUBE leg. (collected by malaise traps).

Distribution. Haha-jima Is. of the Haha-jima group, Ogasawara Isls.

Etymology. The present new species is dedicated to my wife, Hiromi TAKAKUWA, who is the most sympathetic person for me and has always encouraged me to studying insects. The Japanese name of this new species is also dedicated to her, who is called “Romi”, a pet name, by her close friends.



Figs. 7-19. — 7-13. *Variimorda hiromiae* sp. nov., ♂, holotype. — 7, Right antenna; 8, pygidium and anal sternite in lateral view; 9, eighth abdominal sternite; 10, left paramere in inner view; 11, ditto in lateral view; 12, right paramere in inner view; 13, sclerotized branch of right paramere in lateral view. Scales: 0.5 mm. — 14-19. *Variimorda maiae* sp. nov., ♂, holotype. — 14, Left antenna in ventral view; 15, pygidium in lateral view; 16, eighth abdominal sternite; 17, left paramere in inner view; 18, right paramere in inner view; 19, sclerotized branch of right paramere in lateral view. Scales: 0.5 mm.

Variimorda maiiae maiiae sp. et subsp. nov.

(Figs. 3–4, 14–19)

[Japanese name: Mai-kin'obihananomi]

Variimorda sp.: SUGIURA, TSURU *et al.*, 2009, J. Ins. Conserv., London, **13**: 382.

Apparently related to the former new species, but definitely different from it in the following respects:

Body generally lighter. Antennae slenderer. Pronotum yellowish brown all over. Mesosterna quite yellow. Scutellum yellowish except for blackish margins. Elytra with a pair of large light brown areas on humeri and the surroundings including basal lines to scutellum and anterior parts of epipleura. Pygidium thinner and darker, moderately (in male) or densely (in female) with black setae in posterior area; dorsum very gently depressed apicad. Abdomen yellowish brown though more or less yellowish at each posterior portion. Male fore tibiae straight in dorsal view though curved downwards. Eighth abdominal sternite in male narrower; apical projection bilobed with much deeper emargination. Left paramere thinner, with membranous piece apparently reflexed at the middle. Right paramere distinctly narrower; sclerotized branch more shortly truncate at apex, the posterior tip being angulate; membranous piece gradually convergent apicad.

Length: 3.7–4.7 mm (incl. head and excl. pygidium).

Type series. Holotype: ♂, Ani-jima Is., Chichi-jima group, Ogasawara Isls., 19–VI ~21–VII–2006, S. SUGINO leg., collected by malaise trap. Paratypes: 7 ♂♂, 2 ♀♀, same collecting data as the holotype; 2 ♂♂, same locality as the holotype, 25–VI~10–VII–2007, S. SUGINO leg. (all collected by malaise traps).

Specimens examined. 2 ♂♂, 1 ♀, Otôto-jima Is., Chichi-jima group, Ogasawara Isls., 10–VII–2009, H. KARUBE leg. (collected by malaise traps).

Distribution. Ani-jima Is. and Otôto-jima Is. of the Chichi-jima group, Ogasawara Isls.

Etymology. This new species is dedicated to my daughter, Mai TAKAKUWA, who is now a sixth-grade student at the Department of Veterinary Medicine, Faculty of Agriculture, Kagoshima University, Kagoshima and has often deepened my argument about nature and zoology.

This new species is divided into two subspecies.

Variimorda maiiae shoui subsp. nov.

(Figs. 5–6)

Variimorda sp.: SUGIURA, YAMAURA *et al.*, 2009, Biodivers. Conserv., Dordrecht, **18**: 2110.

Differs from the nominotypical subspecies in the following characteristics: body colour in male distinctly more blackish, *e.g.*, basal yellowish parts of elytra reduced, pygidium blackish except for light part before the middle, and abdomen almost black except for dark yellowish brown anal sternite; pygidium somewhat longer in both male

and female, evidently longer than 2–4 abdominal segments combined in female; membranous piece of left paramere fusiform in male and not reflexed; sclerotized branch of right paramere broader at apex in male.

Type series. Holotype: ♂, Mt. Kuwanoki-yama, Haha-jima Is., Ogasawara Isls., 3–VII–2009, H. KARUBE leg., collected by malaise trap. Paratypes: 2 ♀♀, Nagahama, Haha-jima Is., 19–X~1–X–2005, S. SUGINO leg. (collected by malaise traps).

Distribution. Haha-jima Is. of the Haha-jima group, Ogasawara Isls.

Etymology. This new subspecies is dedicated to my son, Shou TAKAKUWA, who was absorbed in insect collecting in his boyhood and helped me in some research works.

要 約

高桑正敏: 小笠原諸島産キンオビハナノミ属(コウチュウ目ハナノミ科)の予期せざる2新種。——小笠原諸島からハナノミ科キンオビハナノミ属の2新種, *Variimorda hiromiae* sp. nov. (ロミキンオビハナノミ)と *Variimorda maiae* sp. nov. (マイキンオビハナノミ)を記載した。前種は母島から知られ, 同所的に分布する近縁種オガサワラキンオビハナノミ *Variimorda inomatai* TAKAKUWA に斑紋などが酷似しているが, 上翅肩部に明るい赤色紋をもち, 尾節板は明黄褐色, 肢もより明色な点で一見して区別できるほか, 雄交尾器側葉片の右片も形状を大きく違える。後種は兄島・弟島(父島列島)と母島から知られ, 明らかに前種と密接な系統関係にあるが, それとは前胸背板と中胸が黄~黄褐色なほか, 雄第8腹板はより細く, 雄交尾器側葉片も形状をかなり違えている。また, 後種の母島産個体は父島列島産のものと比較して尾節板が長く, 雄はとくに黒化がいちじるしいなど形態差が認められるので, *Variimorda maiae shoui* subsp. nov. という亜種名を与え, 父島列島の名義タイプ亜種と区別した。

今回記載された2種は, 明らかに東アジアに分布するキンオビハナノミ類の一員に含まれるが, 尾節板ないし前胸背板の色彩はほかに類を見ないほど特徴的である。この類は従来, 東アジアに異所的に分布する5種が知られていたが, 本新種2種の存在によって小笠原諸島母島だけが同所的に3種を産することになる。また, 系統的にごく近縁な2種が海洋島の小さい島に同所的に生息することも, 予期できないことであった。

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Elytra, Tokyo, **38**(2): 200, November 13, 2010

A New Record of *Platylister horni* (Coleoptera, Histeridae) from the Island of Okinawa-jima, the Ryukyus, Japan

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Platylister (Platylister) horni was described from Taiwan (BICKHARDT, 1913), and is additionally recorded from Amami-Ôshima, Iriomote-jima, Ishigaki-jima and Yonaguni-jima, the Ryukyus, Japan (CHÛJÔ, 1971; ÔHARA, 2008). I have had the opportunity to examine a specimen collected from the Island of Okinawa-jima, the Ryukyus. It is recorded below with the collecting data. New to Okinawa-jima.

1 ex., Yona-rindô, Okinawa-jima, the Ryukyus, Japan, 17~20-VI-1988, S. FUKUDA leg., housed in the Hokkaido University Museum.

I thank late Mr. K. EMOTO and Mr. J. ARAI (Tokyo) who provided me the valuable specimen.

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Redescription of the Type Species of the Genus *Stenomordella*, *S. longeantennalis* ERMISCH (Coleoptera, Mordellidae, Mordellini)

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Abstract The type species of the genus *Stenomordella*, *S. longeantennalis* ERMISCH, 1941 is redescribed on the basis of four type materials deposited at Staatliche Naturhistorische Sammlungen, Dresden. Ninth and tenth abdominal segments of male and eighth sternite of female are newly described in this type species.

Introduction

The family Mordellidae is one of the most difficult taxa to identify among the coleopteran families. One of the reasons of this difficulty is indistinctness of character states of higher taxa such as genera or subgenera. Therefore, it is important to redescribe the type species of every genera and subgenera to clarify the higher classification of Mordellidae.

Stenomordella ERMISCH, 1941, comprising only three species, is a small genus on the tribe Mordellini, and is known from the Oriental Region (Sri Lanka, China, Vietnam and Japan). This genus was erected by ERMISCH (1941) for a single species, *S. longeantennalis* ERMISCH, 1941, from southern China. Recently, HORÁK (2009) figured some parts of male genital segment (eighth sternite, phallobase, parameres and penis) of this type species, but he did not inspect type specimens.

In this short paper, I am going to redescribe the type species, *Stenomordella longeantennalis*, based on the four type materials deposited at the Staatliche Naturhistorische Sammlungen, Dresden, and observe ninth and tenth abdominal segments of male and eighth sternite of female for the first time.

The following abbreviations for institution and measurements are used in this paper. Institution: SNSD – Staatliche Naturhistorische Sammlungen, Dresden. Measurements: BL – body length between anterior angle of pronotum and apices of elytra; BT – maximal thickness of body; AL – antennal length; HL – length between apex of clypeus and posterior margin of head capsule; HW – maximal width of head; PL – length of pronotum along mid line; PW – maximal width of pronotum; EL – maximal length of elytra; EW – maximal width between outer margins of elytra; PYL – length of pygidium.

Stenomordella longeantennalis ERMISCH, 1941

Figs. (1–4)

Stenomordella longeantennalis ERMISCH, 1941, 116 [original description]. — HORÁK, 2009, 66 [figured male genitalia].

Type materials examined. Holotype (originally labeled “Type”): ♂, originally labeled “Kwangtseh – Fukien, J. Klapperich, 18.7.1937” interpreted as follows “Kwangtseh (= Hangchuan), Fujian Prov., China, 18–VII–1937, J. KLAPPERICH leg.” (SNSD). Paratypes (originally labeled “Cotypes”): 1♀, originally labeled “Shaowu – Fukien, (500 m) J. KLAPPERICH, 12.6.1937” interpreted as follows “Shaowu, Nanping, Fujian Prov., China, 12–VI–1937, J. KLAPPERICH leg.” (SNSD); 1♀, ditto, 16–VI–1937, J. KLAPPERICH leg. (SNSD); 1♂, ditto, 25–VI–1937, J. KLAPPERICH leg. (SNSD).

Distribution. China (Fujian, Yunnan and Jiangxi Prov.).

Diagnosis. This species is closely similar in general appearance to *S. saueri* HORÁK, 2009, but clearly distinguished from it by the following combination of morphological features: 1) clypeus and mouth parts dark brown in ground colour; 2) elytra and pygidium covered with pale yellow shining pubescence without hairy maculation; 3) apical lobe of male eighth sternite rather narrow; 4) ventral branch of right paramere rather long, reaching apical 1/10 of main lobe.

Redescription. Male. Body elongate tear-shaped. Coloration: black clouded with

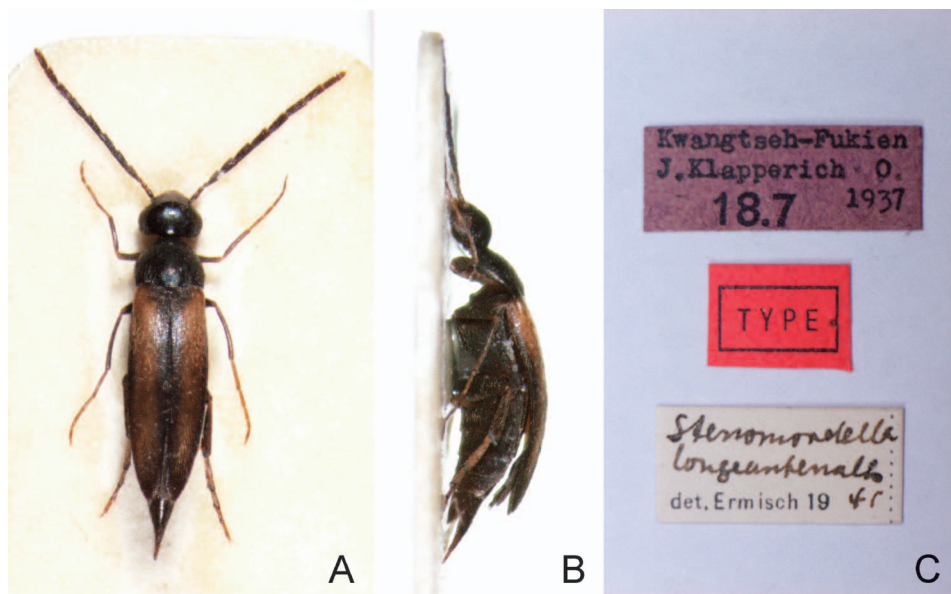


Fig. 1. Habitus of *Stenomordella longeantennalis* ERMISCH, ♂, holotype. — A, Dorsal view; B, lateral view; C, labels.

dark brown in ground colour; basal three segments of antennae, clypeus, mouth parts and all legs dark brown, elytra decorated with a pair of yellowish brown humeral maculations which reach half of 5th sternite. Almost all of body densely covered with

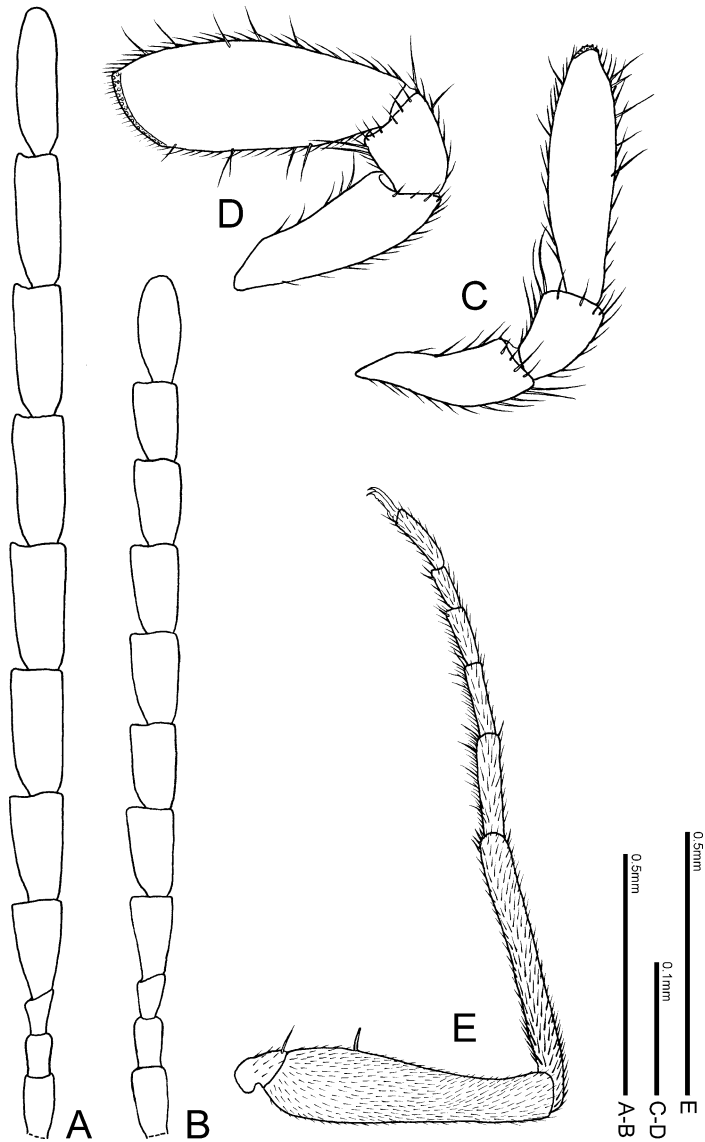


Fig. 2. *Stenomordella longeantennalis* ERMISCH, paratypes. — A, Right antenna, ♂, dorsal view; B, ditto, ♀; C, right maxillary palpus, ♂, dorsal view; D, ditto, ♀; E, right fore leg, ♂, dorsal view.

pale yellow shining pubescence, apices of each elytron and pygidium dark brown.

Head strongly convex, almost the same as long as wide. Eyes oval, not emarginate in front, sparsely haired; total breadth of both eyes occupying about 14% of head width when seen above; the diameter of a facet about 0.015 mm. Tempora narrow, almost same as wide as diameter of a facet. Antenna (Fig. 2 A) remarkably long, about 3.25 times as long as length of head, weakly serrate in 4th–10th segments: 1st and 2nd segments cylindrical; 3rd short and smallest, about 1.45 times as long as wide; each of 4th–10th about 2.0–3.3 times as long as wide; 11th elongate elliptical, about 4.35 times as long as wide; proportional lengths of segments from base to apex — 6.9 : 5.6 : 5.0 : 11.2 : 13.2 : 14.7 : 15.6 : 16.0 : 13.7 : 13.9 : 16.7. Maxillary palpus (Fig. 2 C) very slender: terminal segment spindle-shaped, about 3.8 times as long as maximum width.

Pronotum slightly longer than wide, about 1.26 times as long as length of head; lateral margins depressed posteriorly in profile; posterior angles rectangular in lateral view with tip weakly rounded. Scutellum triangular, wider than long, with apex widely rounded. Elytra about 2.97 times as long as humeral width, about 2.77 times as long as pronotum, tapered posteriorly and acute at each apex with tip weakly rounded; sides subparallel and moderately rounded. Pygidium short, about 2.76 times as long as basal width, about 0.36 times as long as elytron, slightly curved ventrad, gradually narrowed to the apex in dorsal view, pointed at tip. Anal sternite triangular, with apex widely rounded.

Fore leg (Fig. 2 E) slender: trochanter with a long dark brownish hair at apex of inner surface; femur moderately stout around base, with a blackish bristle near base on inner surface; tibia slender and almost straight, without characteristic hairs; tarsus long and slender, about 1.3 times as long as tibia, each of 1st–3rd segments long, straight and cylindrical, 4th segment also cylindrical, obliquely truncate at apex, jointed with terminal segment at apical oblique surface.

Hind leg slender: tibia bearing only one short apical comb running parallel to apical edge. Spurs of hind tibia almost straight; inner one about 0.6 times as long as 1st segment of hind tarsus, outer one about 0.43 times as long as inner one.

Male genital segments: Eighth sternite (Fig. 3 A) short and shield-shaped, about 1.27 times as long as wide, lobed at apex with tip rounded, short-haired in medio-apical area, long-haired on apical margin. Ninth sternite (Fig. 3 B) short and arrow-shaped, gradually extended to apical area, weakly lobed at apex with tip pointed. Ninth tergite (Fig. 3 C) divided into two plates, each of which is almost symmetrical and bean-shaped, connected at base with each other; each basal part narrowly projected to base, bearing large oblong plate just on dorsal surface of base; each apical part widely rounded. Tenth tergite (Fig. 3 C) composed of almost symmetrical two plates, each of which is elongated drop-shaped without hairs. Parameres completely asymmetrical; left paramere (Fig. 4 B) with normally thick main lobe, longer than right one, without ventral branch, apical area flat and rounded on apical margin, basal process hump-shaped and located at apical 1/4; right paramere (Fig. 4 C) with normally thick main lobe, constricted at middle, broadened to apex, ventral branch stout and slightly

incurved, branching near base, reaching apical 1/10 of main lobe. Penis needle-like, about 0.55 times as long as body length; apical lobe protrudent and rounded at tip.

Proportion of body (holotype and one paratype): BL/EW 3.78; BT/EW 1.36;

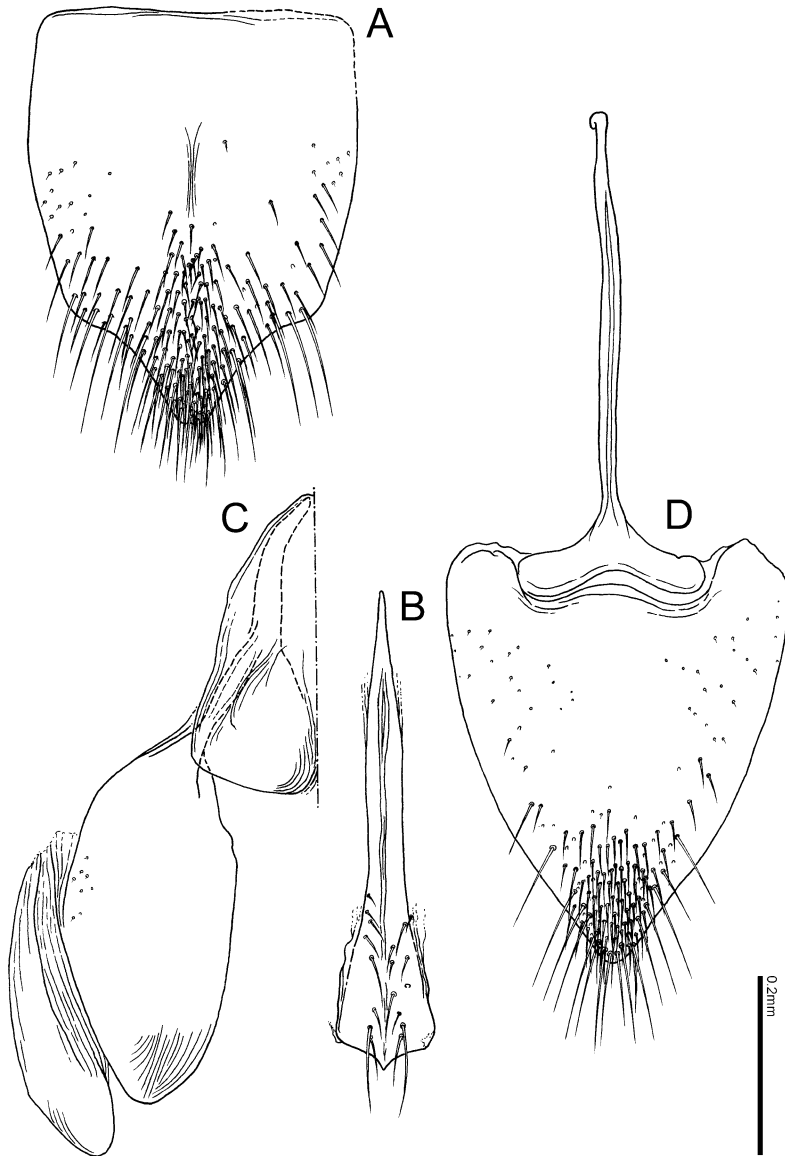


Fig. 3. *Stenomordella longeantennalis* ERMISCH, paratypes. — A, Eighth sternite, ♂; B, ninth sternite, ♂; C, right half of ninth and tenth tergites, ♂; D, eighth sternite, ♀.

HW/HL 1.05; AL/HL 3.25; PW/PL 0.94; PL/HL 1.26; EL/EW 2.97; EL/PL 2.77; PYL/EL 0.36.

Female. Closely similar in general appearance to male, but different from it mainly in the following respects: 1) antenna (Fig. 2 B) short, about 1.94 times as long as length of head, each of 4th–10th segments about 1.8–1.9 times as long as wide, 2) maxillary palpus (Fig. 2D) rather stout, terminal segment elongate securiform, about 2.7 times as long as maximum width, and 3) fore trochanter and femur without characteristic hairs.

Female genital segments: Eighth sternite (Fig. 3 D) shield shaped, about 0.32 times as long as body length; basal apodeme long, about 1.15 times as long as eighth sternite. Ovipositor short, sparsely covered with short and long hairs on apical surface.

Proportion of body (two paratypes): BL/EW 3.38; BT/EW 1.33; HW/HL 1.01; AL/HL 1.94; PW/PL 0.98; PL/HL 1.27; EL/EW 2.78; EL/PL 2.70; PYL/EL 0.34.

Measurement. Male (holotype and one paratype): BL 3.17–3.27 mm; EW 0.84–0.87 mm; BT 1.15–1.16 mm. Female (two paratypes): BL 3.07–3.61 mm; EW 0.92–1.06 mm;

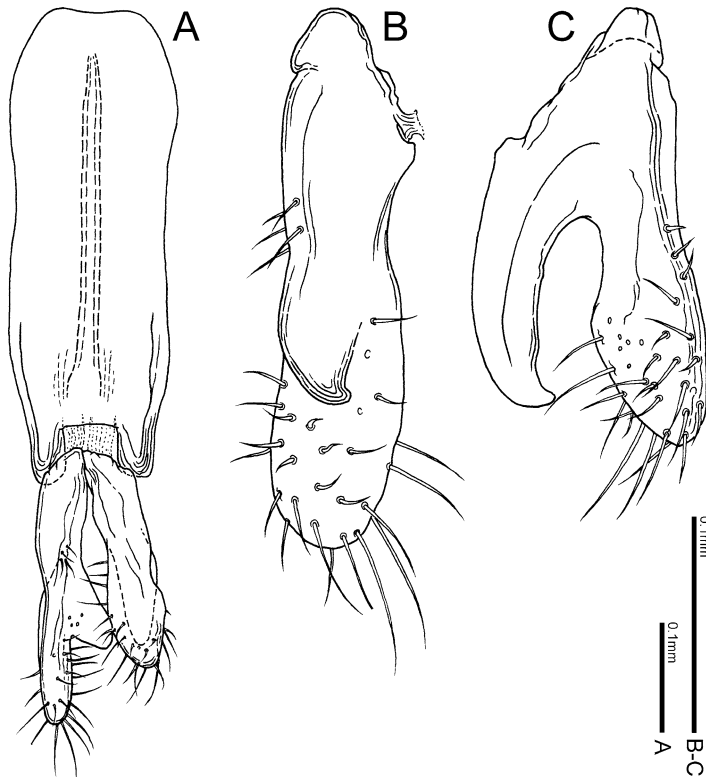


Fig. 4. *Stenomordella longeantennalis* ERMISCH, ♂, paratype. — A, Epimere and parameres, dorsal view; B, left paramere, inner view; C, right paramere, inner view.

BT 1.15–1.49 mm.

Acknowledgements

I wish to express my hearty thanks to Dr. Masahiro ÔHARA (Hokkaido University Museum, Sapporo) and Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for their kind guidance and critical review of the manuscript. I am also deeply indebted to Dr. Klaus-Dieter KLASS (SNSD) for loan of type materials. In closing, I am grateful for the 21st Century COE grant by the Japanese Ministry of Education, Culture, Sports, Science and Technology for the “Neo-Science of Natural History” Program (Leader: Hisatake OKADA).

要 約

鶴 智之：ホソハナノミ属の基準種 *Stenomordella longeantennalis* ERMISCH (コウチュウ目ハナノミ科ハナノミ族) の再記載。—— ハナノミ科ハナノミ族に属するホソハナノミ属の基準種 *Stenomordella longeantennalis* ERMISCH, 1941 について、ドイツ・ドレスデン動物学博物館に所蔵されている4つの総基準標本に基づき再記載を行った。本研究で、新たに雄第9、第10腹節および雌第8腹板の検討を行った。

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New Records of Two Lamiine Species (Coleoptera, Cerambycidae) from Taiwan

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In the recent field survey by the junior author, LIN was able to collect two unrecorded lamiine species from Taiwan. They are determined as *Apomecyna semihistrio* KUSAMA et TAKAKUWA, 1984, and *Cylindilla makiharai* HASEGAWA, 1992.

Apomecyna semihistrio KUSAMA et TAKAKUWA, 1984

Apomecyna semihistrio KUSAMA et TAKAKUWA, 1984, 11, pl. 54, figs. 390, 390a; type locality: Omoto, Ishigaki Is., Japan.

Specimens examined. 2 ♂♂, 2 ♀♀, Sindian City, Taipei County, 17-V-2003, Y.-L. LIN leg.; 1 ♀, Pihu, Pinglin Township, Taipei County, Y.-L. LIN leg.; 1 ♀, Nanshanchi, Nantou County, 16-V-1983, M. HASEGAWA leg.; 1 ♂, 1 ♀, Pinher, Taiwu Township, Pintung County, 17-XI-2002, Y.-L. LIN leg.; 1 ♂, ditto, 9-XI-2002, Y.-L. LIN leg.

Distribution. Miyako-jima Is., Ishigaki-jima Is., Iriomote-jima Is. and Yonaguni-jima Is. (Ryukyus, SW. Japan); Taiwan (new record).

Cylindilla makiharai HASEGAWA, 1992

Cylindilla makiharai HASEGAWA, 1992, 37, figs. 1, 3, 5, 7-9; type locality: Suda-rindô, Ishigaki-jima Is., Japan.

Specimens examined. 1 ♀, Mt. Dahan Shan, Chunrih Township, Pintung County, 27-V-2003, Y.-L. LIN leg.; 1 ♂, ditto, 21-V-2007, W.-S. LIN leg.

Distribution. Ishigaki-jima Is. and Iriomote-jima Is. (Ryukyus, SW. Japan); Taiwan (new record).

Note. The Taiwanese specimens examined have somewhat darker and slenderer body than that of Ishigaki-jima Is., Ryukyus, but there is no difference in male genitalia between the specimens from these two localities.

We thank Dr. Tatsuya NIISATO (Bioindicator Co., Ltd., Tokyo) for his kind help.

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A Peculiar Sexual Dimorphism Common between Two Species of the Genus *Attalus* (Coleoptera, Malachiidae) from Japan

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Abstract Sexual dimorphism common between two Japanese species of the genus *Attalus* is found for the first time on the abdominal tergite, and the structure is described.

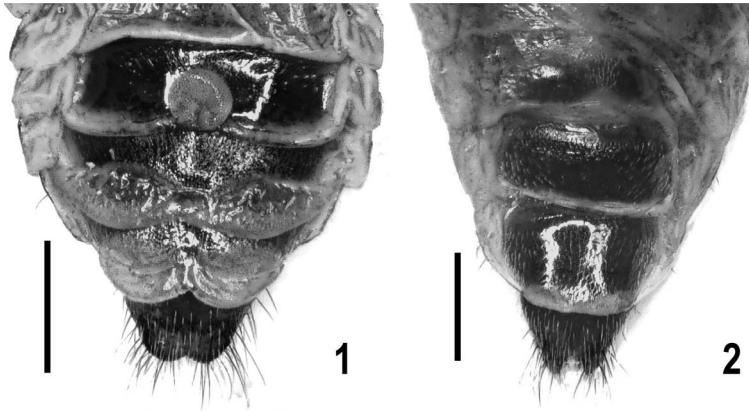
Introduction

Some malachiid beetles are known to present the obvious sexual dimorphism of cuticular modifications in the male head cranium, antennae, maxillary palps, pronotum, elytral apices, meso-tibiae and abdominal sternite: the so-called “excitator” which is most probably associated with the pheromone glands (EVERS, 1987, 1994; MAJER, 1987, 2002). These structures have been used for the taxonomic characters of higher classification (MARSHALL, 1954; EVERS, 1987, 1989, etc.).

Such a structure has not been known so far in the genus *Attalus* ERICHSON (EVERS, 1989). However, we found a peculiar sexual dimorphic structure common between the two Japanese *Attalus* species: *A. kaimon* NAKANE and *A. niponensis* PIC for the first time on the abdominal tergite.

Material and Methods

Two *Attalus* species, *A. kaimon* and *A. niponensis*, were collected at the Nakatane and Minamitane Towns, Tanegashima, Kagoshima Pref., southern Japan in March 2010. They were captured on the flowers of *Elaeagnus* sp. (Elaeagnaceae) and *Pittosporum tobira* (Pittosporaceae) at the same time. In total, five and 19 specimens of *A. kaimon* and *A. niponensis* were examined, respectively. *Nepachys japonicus*



Figs. 1-2. Abdominal tergites (5th to 7th) of *Attalus niponensis*, dorsal view. — 1, Male; 2, female. Scale=0.5 mm.

(KIESENWETTER), formerly classified in the genus *Attalus* as a subgenus, was also observed for comparison. Observation was made under stereoscopic and compound microscopes.

Result and Discussion

Males of *A. kaimon* and *A. niponensis* possess same distinctive structures on the posterior margins of 5th to 7th abdominal tergites (Fig. 1). Posterior margin of the 5th abdominal tergite possesses a round process, which is about 0.2 mm, membranous, bowl-shaped, and finely asperate on surface. Posterior margins of 6th and 7th abdominal tergites, each flabby and overlapping anterior margin of the succeeding segment. These structures are not observed in female at all (Fig. 2). This is the first discovery of the sexual dimorphism on the abdominal tergite in the Malachiidae and is possibly a kind of excitators known in other parts of the body, although the function is uncertain.

These two species belong to the subgenus *Attalus* s. str. At least, the above-mentioned structures were not observed in *Nepachys japonicus* (KIESENWETTER) of the tribe Attalini. It is necessary to confirm if these structures are common trait among closely related species belonging to the same genus, subgenus or not.

Acknowledgments

We thank Dr. S.-I. UÉNO for his critical reading of the manuscript, and Mr. T. SHIMADA (Shizuoka City) for his kindness in offering materials. The senior author also thank Messrs. T. IMAZAWA, Y. TAHIRA and Y. NAKAMURA (Teiso Kasei Co. Ltd.) for their help in many ways.

要 約

浅野 真・小島弘昭：日本産 *Attalus* 属 2 種に共通する特異な性的二型（コウチュウ目ジョウカイモドキ科）。—— ジョウカイモドキ科の雄成虫には、前頭、触角第 3 節、前胸背板、上翅後端、腹部腹板、中脚脛節に *excitator* とよばれる特異な構造が見られることがあり、これらの形質は属などの高次分類にも用いられてきた。これまで *Attalus* 属において *excitator* の存在は知られていなかったが、今回、カイモンヒメジョウカイモドキならびにムナキヒメジョウカイモドキの雄に共通して備わる特異な構造を腹部背板に発見したので記載した。

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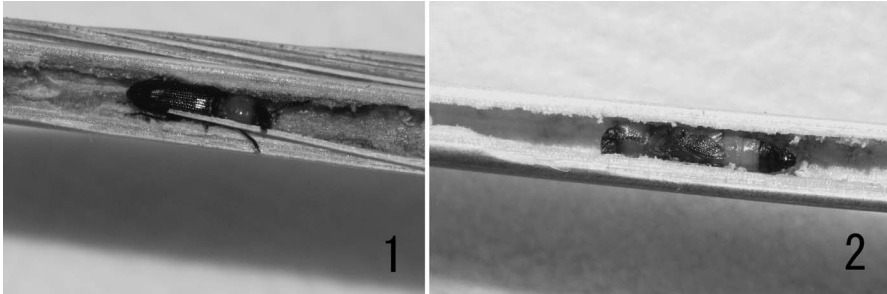
Elytra, Tokyo, **38**(2): 211-212, November 13, 2010

A Host Record of *Anadastus atriceps* (Coleoptera, Erotylidae, Languriinae, Languriini)

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The tribe Languriini has been known as a phytophagous group, and the larvae feed on culm, stem, leaf stalk or leaf costa such as grass, legume, oxeye, canola, fiddlehead fern, cycad, and so on (FUKUDA, 1957; HAYASHI, 1974; PIPER, 1978; WARD *et al.*, 2007). The larvae of some



Figs. 1-2. *Anadastus atriceps*. — 1, Adult in the culm of *Panicum bisulcatum*; 2, pupa.

species of the genus *Anadastus* feed on the culm of members of the family Poaceae, e.g., *A. filiformis* for *Setaria italic* (L.) P. BEAUV., and *A. praeustus* and *A. menetriesii* (= *A. fucosus*) for *Miscanthus sinensis* ANDERSSON in Japan (HAYASHI, 1974; KUROSAWA, 1968). It has also been reported that the adults of three Taiwanese species, *A. sauterianus*, *A. melanosternus* and *A. angustior*, feed on *Cycas revolute* THUNB. (KUBOTA, 1977), and *A. atriceps* found on *Xylaria polymorpha* (PERS.) GREV. (Xylariales, Xylariaceae) (KIRYŪ, 1954). We discovered the adult and the pupa of *Anadastus atriceps* (CROTCH, 1873) in the culm of *Panicum bisulcatum* THUNB. for the first time. They were situated at the end of feeding track across some internodes in the culm. Consequently, it is assumed that the larva feed on the inner surface and node in the culm.

We wish to express our gratitude to Mr. Leo TAKECHI (EUM) for showing us the habitat.

Specimens examined. 4 exs. (3 adults and 1 pupa), Takanoko-machi, Matsuyama City, Ehime Pref., Shikoku, Japan. 33° 49' 5" N/132° 48' 33" E, 11-X-2010, S. MATSUO leg., in the culm of *P. bisulcatum*.

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A New Cantharid Species of the Genus *Yukikoa* from
Western Honshû, Japan, with Additional Records of
Five Congeneric Species (Coleoptera, Cantharidae)

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Abstract A new cantharid species of the genus *Yukikoa* is described and illustrated from western Honshû, Japan, under the name of *Y. maniwana*. This is the westernmost distributional record of the genus. Some additional records are given for other members of the same genus.

The genus *Yukikoa* M. SATÔ, 1976 was established on the basis of *Themus wittmeri* NAKANE, 1963 from Osaka, Honshû, Japan. TAKAHASHI (2003) revised it and recognized eight species. All of them are endemic to Honshû and has been unknown from other areas of Japan or other countries.

Recently, we had an opportunity to examine one male specimen collected from north-central area of Okayama Prefecture, western Honshû, which is not included in the known distributional range of the genus. After a careful examination, it has become clear that the beetle must belong to a species new to science. It is the 9th member of the genus *Yukikoa*, and will be described in this paper under the name of *Yukikoa maniwana*.

On the other hand, we have tried to reexamine the specimens recorded as “*Yukikoa wittmeri*” before TAKAHASHI (2003). As the result, we were able to re-identify and correct some previous records. Besides, we also examined some specimens certainly belonging to *Yukikoa*. Therefore, we will record them additionally in this paper.

Before going into further details, 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. Our thanks are also due to the following friends of ours for their kind support in loaning specimens or in other ways: Mr. Akihiko WATANABE

(Kurashiki), Dr. Kenji OHARA (Tokushima Prefectural Museum = TKPM), Mr. Kazutaka YAMADA (TKPM), Dr. Masakazu HAYASHI (Hoshizaki Green Foundation), Mr. Kôji ARAI (= Kôji TOYODA, Ranzan, Saitama), Mr. Kunio SATÔ (Akashi), Mr. Takaaki NOMURA (Toyama), Dr. Toshifumi NONAKA (Kusaka), Mr. Yoshiyuki NAGAHATA (Yamagata), Dr. Hiroaki KOJIMA (Tokyo University of Agriculture), and Mr. Hirokazu FUKUTOMI (Ishikawa Insect Museum).

Materials and Methods

The holotype is deposited in the Kurashiki Museum of Natural History (KURA), and the other materials recorded in this paper are preserved in the collections of the Kurashiki Museum of Natural History (KURA), Tokushima Prefectural Museum (TKPM), Messrs. Kôji ARAI (KA), Isao KIRIYAMA (IK) and Kunio SATÔ (KS).

The methods used herein mainly follow OKUSHIMA (2005). The abbreviations used in the text are as follows: HW – width of head; PW – width of pronotum; PL – length of pronotum; EW – maximum width of conjoint elytra; HEW – humeral width of conjoint elytra; EL – length of elytra.

Yukikoa maniwana OKUSHIMA et TAKAHASHI, sp. nov.

(Figs. 1, 2)

Holotype. ♂, Yamanori-yama, Maniwa-shi, Okayama-ken, Honshû, Japan, 26-IV ~9-V-2009, A. WATANABE leg., FIT (KURA).

Distribution. Japan: western Honshû (Chûgoku Mountains, Fagetea crenatae Region).

Description. Male. Body mostly yellowish brown in dorsal view and mostly blackish brown in ventral view; head in dorsal view, pronotum, scutellum, elytra, mouth parts, tarsi and tibiae almost entirely yellowish brown; mandibles and claws mostly reddish brown; antennae, coxae, trochanters and femora almost blackish brown, but often a little pale-coloured at their segmental portions; ventral side of head and thorax mostly blackish brown to black, though partly pale brown; each abdominal ventrite yellowish brown, both lateral sides more or less blackish brown in 2nd to 6th segments. Body closely covered with brown pubescence which is shorter on 3rd to 11th antennal segments; apical margin of clypeus fringed with pale bristles.

Body relatively broad. Head slightly shorter than width; dorsum depressed between antennal sockets, on clypeus and in lateral areas before eyes; surface smooth without lustre and minutely rugose; clypeus slightly arcuate at apical margin, faintly indented at centre; eyes moderately small, globular and prominent, ratio of the diameter of an eye to interocular space 1 : 3; mandible strongly curved at basal 4th; each of labial and maxillary palpi with triangular apical segment; antennae almost filiform but weakly serrate in basal several segments, gradually thinning apicad, attaining to middle of elytra, 1st segment clavate, 2nd and 3rd a little dilated apicad, 4th to 11th subcylindrical,



Fig. 1. *Yukikoa maniwana* OKUSHIMA et TAKAHASHI, sp. nov., ♂ (holotype), from Yamanori-yama, Okayama-ken, Honshû, Japan.

comparative lengths of antennal segments as follows: — 21 : 10 : 12 : 17 : 17 : 18 : 18 : 17.5 : 17.5 : 16.5 : 19.5.

Pronotum transverse trapezoidal; PW/HW 1.63, PW/PL 1.67; anterior margin weakly emarginate; posterior margin weakly protruding; lateral margins feebly sinuate; all angles obtuse and rounded; disc convex, particularly so in the posterior areas of both sides of median line, strongly depressed in lateral areas and along the posterior margin; medio-longitudinal furrow clearly perceptible except near anterior margin; surface smooth without lustre and minutely rugose. Scutellum triangular with blunt apex.

Elytra relatively short and wide, distinctly dilated posteriad, broadest at posterior third; HEW/PW 1.04, EW/PW 1.43, EL/EW 1.64; dorsum closely and rugosely punctate, depressed along outer margin; each elytron provided with three vague costae.

Legs considerably slender; each femur mostly straight; each tibia mostly straight though feebly arcuate in basal part.

Aedeagus elongate; each ventral process of paramere moderately slender, broad at base and apical portion, and the latter forming a hook with pointed tip towards ventral

side; dorsal plate broad, apical margin weakly arcuate and shallowly emarginate at the middle, lateral sides faintly emarginate, ventral surface provided with a transverse protuberance at the middle of each side of dorsal plate. Median lobe simple at the apical portion; inner sac lengthened and swollen dorso-posteriorly, shorter than tegmen, provided with minute hairs at apical portion; each laterophyse stout and broad in ventral view and slender and curved in lateral view, with the tip towards the protuberance on the ventral side of dorsal plate, the apex obviously not reaching that of ventral process (Fig. 2).

Length of body: 13.7 mm (measured from the anterior margin of clypeus to the posterior margin of the 9th tergite in normal condition); breadth of body: 5.35 mm (measured at the widest part of conjoint elytra).

F e m a l e. Unkown.

Differential diagnosis. This new species resembles other known species of the genus *Yukikoa*, especially *Y. onzuiensis*, *Y. wittmeri*, *Y. akitai*, and *Y. mizunoi* having short elytra, all known from western Honshū, but can be easily distinguished from the others

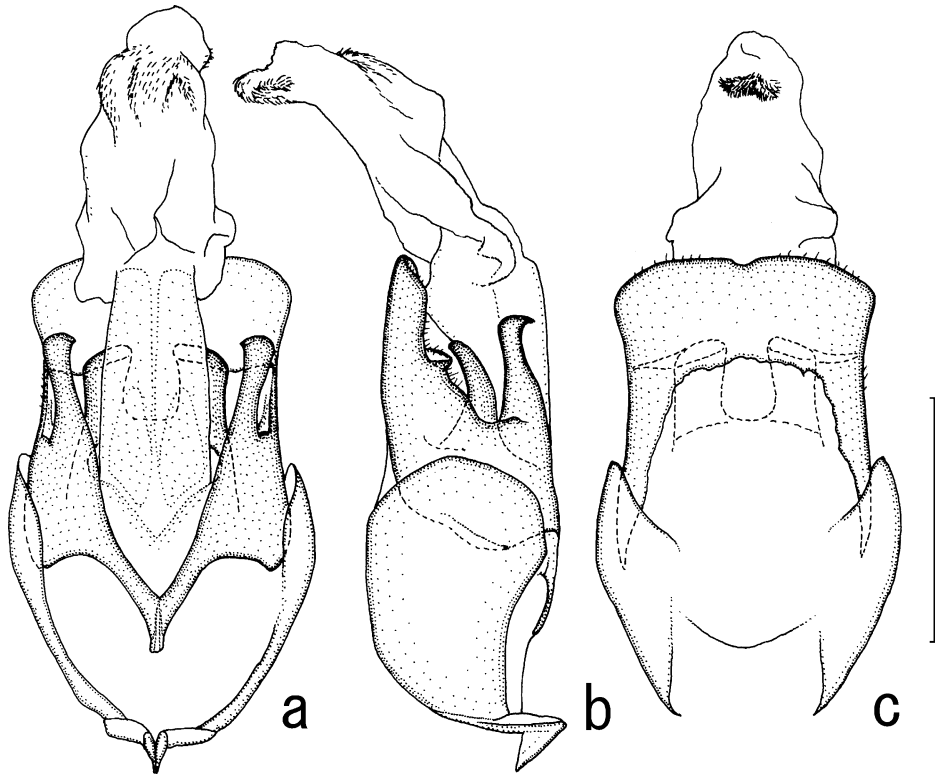


Fig. 2. Aedeagus of *Yukikoa maniwana* OKUSHIMA et TAKAHASHI, sp. nov.; a, ventral view; b, lateral view; c, dorsal view. (Scale: 1.0 mm.)

by the structure of aedeagus, particularly characteristic dorsal plate which is devoid of distinct emargination at the middle of apical margin.

Remarks. This new species occurs in the westernmost part of the hitherto known range of *Yukikoa*, though the type locality of *Y. maniwana* is only about 55 km distant from the nearest locality of *Y. onzuiensis*, and both of them lie on the Chûgoku Mountains, their aedeagi are widely different from each other. At the moment, it is difficult to find particular relationship between this and other species.

Biology. The holotype was collected by a flight interception trap (FIT) placed in the natural forest of *Fagetea crenatae* Region.

Etymology. The specific name is derived from the type locality, Maniwa-shi which is located in the northern area of Okayama Prefecture, western Honshû.

Yukikoa onzuiensis TAKAHASHI, 2003

Yukikoa onzuiensis TAKAHASHI, 2003, Jpn. J. syst. Ent., Matsuyama, 9: 86.

Additional specimens examined. 1♀, Kirigataki-keikoku, Kishida, Onsen-chô, Mikata-gun, Hyôgo-ken, 25-V-1986, K. SATÔ leg. (KS); 1♀, "OKAYAMA / Aida gun / Ushiroyama / VI. 20. 1972. / KOIWATA-Sa.", "ISHIDA-Masaaki / collection / no. 2337", "Themus/ wittmeri NAKANE /キイロシリプトジョウカイ/ d. Isida-Ma. 1972.", "Yukikoa ♀ / wittmeri (NAKANE) /キイロシリプトジョウカイ/ do. ISIDA-Ma. 1986" (TKPM).

Distribution. Japan: western Honshû (northwestern Kinki District to northeastern Chûgoku District, eastern Chûgoku Mountains, *Camellietea japonicae* to *Fagetea crenatae* Region).

Remarks. Though one female from Ushiro-yama located in northeastern Okayama Prefecture (by ISHIDA and KUSAKARI, 1986) and one female from Onsen-chô located in northwestern Hyôgo Prefecture (by SATÔ, 1993) were recorded as "*Yukikoa wittmeri*", respectively, it has become clear after our examination that both of these materials should be identified as *Y. onzuiensis*.

Yukikoa masatakai TAKAHASHI, 2003

Yukikoa masatakai TAKAHASHI, 2003, Jpn. J. syst. Ent., Matsuyama, 9: 90.

Additional specimen examined. 1♂, Ôami, Otari-mura, Nagano-ken, 5-V-1993, S. FURIHATA leg. (IK).

Comments for additional specimen. This specimen can be determined as *Y. masatakai* for the reason of differentiation from *Y. kamezawai* as follows: comparative lengths of 2nd and 3rd antennal segments 1.00 : 1.55; elytra relatively short, EL/EW 1.97; aedeagus with laterophyses short, not reaching the tips of ventral processes in lateral view.

Remarks. The locality of the specimen recorded above is about 10 km apart from

the type locality of *Y. kamezawai*. Both the localities lie on the right bank of the Hime-gawa River which has been regarded as the distributional border of the two species. This means that the present record is a violation of the territory of *Y. kamezawai* by *Y. masatakai*. Similar case can also be observed in a longicorn beetle *Mesechthistatus furciferus meridionalis* (HAYASHI, 1951) in the same area (e.g. TAKAKUWA, 1975). This longicorn beetle is crossing the Hime-gawa River from the left bank, and is likely to invade the original territory of *Mesechthistatus binodosus* (WATERHOUSE, 1881). It is interesting that the same distributional pattern can be seen between quite different taxonomic groups.

SATÔ (1976) recorded several specimens as “*Yukikoa wittmeri*” from Kamikôchi, Nagano Prefecture. All of them have been identified as *Y. masatakai*, and designated as a part of its type series in TAKAHASHI (2003).

Yukikoa kamezawai TAKAHASHI, 2003

Yukikoa kamezawai TAKAHASHI, 2003, Jpn. J. syst. Ent., Matsuyama, 9: 92.

Remarks. HAGA (1984) recorded one female from Mt. Amakazari, Nagano Prefecture, as “*Yukikoa wittmeri*”. This material has been designated as one of the paratypes of *Y. kamezawai*.

Yukikoa kanekoi TAKAHASHI, 2003

Yukikoa kanekoi TAKAHASHI, 2003, Jpn. J. syst. Ent., Matsuyama, 9: 94.

Additional specimen examined. 1♀, “YAMANASI ken / Kita dake, Miike / goya hugin, 2200 m / 1982-VII-4 / KUSAKARI-Kôiti”, “ISHIDA-Masaaki / collection / no. 2338”, “*Yukikoa* ♀ / *wittmeri* (NAKANE) / キイロシリブト / ジョウカイ / do. ISIDA-Ma. 1986” (TKPM).

Distribution. Japan: central Honshû (northern Japanese Alps, Fagetea crenatae to Vaccinio-Piceetea Region).

Remarks. One female from Mt. Kita-dake of Yamanashi Prefecture was recorded as “*Yukikoa wittmeri*” by ISHIDA and KUSAKARI (1986). However, it has become clear after our examination that the material should be identified as *Y. kanekoi*, though the median lobe of the 8th abdominal ventrite in the above specimen seems to be a little larger than in a specimen obtained from the type locality.

Yukikoa watanabei TAKAHASHI, 2003

Yukikoa watanabei TAKAHASHI, 2003, Jpn. J. syst. Ent., Matsuyama, 9: 96.

Additional specimens examined. 1♀, Ôyamabuchi, 1,200 m alt., Nakatsugawa-keikoku, Ôtaki-mura, Saitama-ken, 30-VI-1999, K. TOYODA leg. (KA); 1♂, Koakazawa, 1,100 m alt., Iri-kawa, Hakutai-san, Ôtaki-chiku, Chichibu-shi, Saitama-ken, 7-

VI-2008, K. ARAI leg. (KA); 1♀, near Sanjō-no-yu, alt. 1,000 m, Tabayama-mura, Yamanashi-ken, 7-VI-1997, K. TOYODA leg. (KURA).

Distribution. Japan: eastern Honshū (Kantō Mountains, Fagetea crenatae Region).

Remarks. Two females from Ôyamabuchi of Saitama Prefecture and Tabayama-mura of Yamanashi Prefecture were recorded by TOYODA (2000) as “*Yukikoa wittmeri*”. However, it has become clear after our examination that both of the materials should be identified as *Y. watanabei*. The collecting date of the specimen from Tabayama-mura was reported as “15. VI. 1997” in TOYODA (2000), but the exact date is shown as above from ARAI (= TOYODA)’s information.

Biology. The male from Koakazawa of Saitama Prefecture was collected by a light trap.

Unidentified Records and Materials

The following collecting data were recorded as “*Yukikoa wittmeri*” before TAKAHASHI’s revision (TAKAHASHI, 2003). However, we have been unable to confirm these records as yet.

Uncertain records. Honshū: 1ex., Funamata-rindō, Hinoemata-mura, Minamiaizugun, Fukushima-ken, 19-VI-1980, H. YAMAZAKI leg. (YAMAZAKI, 1980); 1ex., Ojiro-keikoku, Mikata-chō, Mikata-gun, Hyōgo-ken, 5-VI-1994, Y. NAGAHATA leg. (NAGAHATA, 1995); 1♂, Takahachi-yama, Yazu-gun, Tottori-ken, 27-V-1979, M. TÔYAMA leg. (TÔYAMA, 1984).

We also examined some female materials from Gumma, Tokyo and Toyama Prefectures, but we were unable to identify them correctly by their morphological characters. Of these, one female from Toyama was recorded as “*Themus wittmeri*” by NOMURA (1987). For the time being, we would like to regard these records and materials as unidentified *Yukikoa* species.

List of the Genus *Yukikoa* M. SATÔ, 1976

- Y. watanabei* TAKAHASHI, 2003 [Japanese name: Watanabe-shiributo-jōkai]
Known distributional area: Gumma-ken, Saitama-ken, Tokyo-to.
- Y. kamezawai* TAKAHASHI, 2003 [Japanese name: Kamezawa-shiributo-jōkai]
Known distributional area: Nagano-ken.
- Y. masatakai* TAKAHASHI, 2003 [Japanese name: Masataka-shiributo-jōkai]
Known distributional area: Nagano-ken.
- Y. kanekoi* TAKAHASHI, 2003 [Japanese name: Kaneko-shiributo-jōkai]
Known distributional area: Yamanashi-ken.
- Y. akitai* TAKAHASHI, 2003 [Japanese name: Akita-shiributo-jōkai]
Known distributional area: Mie-ken.
- Y. mizunoi* TAKAHASHI, 2003 [Japanese name: Mizuno-shiributo-jōkai]
Known distributional area: Shiga-ken.

- Y. wittmeri* (NAKANE, 1963) [Japanese name: Kihiro-shiributo-jôkai]
Known distributional area: Kyoto-fu, Osaka-fu.
- Y. onzuiensis* TAKAHASHI, 2003 [Japanese name: Onzui-shiributo-jôkai]
Known distributional area: Hyôgo-ken, Okayama-ken.
- Y. maniwana* OKUSHIMA et TAKAHASHI, sp. nov. [Japanese name: Maniwa-shiributo-jôkai]
Known distributional area: Okayama-ken.

要 約

奥島雄一・高橋和弘：日本産シリプトジョウカイ属の1新種と追加記録。——岡山県の中国山地からFIT（フライト・インターセプション・トラップ）によって1雄のみが得られたシリプトジョウカイ属の種を検討した結果、明らかな新種であることが判明したので、マニワシリプトジョウカイ *Yukikoa maniwana* OKUSHIMA et TAKAHASHI, sp. nov. と命名して記載した。シリプトジョウカイ属の種はこれまでに本新種を含めて9種が知られることになったが、それらのすべての種が本州に分布し、マニワシリプトジョウカイは、そのうちでもっとも西方に分布域を持っている。

本種は、いずれも西日本から知られるオンズイシリプトジョウカイ *Y. onzuiensis* TAKAHASHI, 2003, キイロシリプトジョウカイ *Y. wittmeri* (NAKANE, 1963), アキタシリプトジョウカイ *Y. akita-tai* TAKAHASHI, 2003, ミズノシリプトジョウカイ *Y. mizunoi* TAKAHASHI, 2003 などによく似ているが、雄交尾器の形態、とくに背板に深い切れ込みを持たないことによって容易に区別できる。

また、今回、TAKAHASHI (2003) による本属の再検討以前に「キイロシリプトジョウカイ」として記録された標本を可能な限り、再調査したところ、そのうちのいくつかはTAKAHASHI (2003) で記載された別種に同定された。あわせて、実見することのできた未記録標本のデータを公表した。それらのうち、長野県小谷村から追加記録されたマサタカシリプトジョウカイ *Y. masatakai* は、隣接する分布域をもつカメザワシリプトジョウカイ *Y. kamezawai* とのもとの分布境界と考えられるフォッサ・マグナ西縁の境界線を越えて東側で発見されたものであるが、同様の越境例はカミキリムシ科のチュウブマヤサンコブヤハズカミキリ *Mesecithistatus furciferus meridionalis* でも知られている。

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Octavius flavescens (KISTNER) (Coleoptera, Staphylinidae) from Japan and Taiwan

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The genus *Octavius* FAUVEL, 1873 belongs to the subfamily Euaesthetinae of the family Staphylinidae, and at present comprises 244 species from the Palaearctic, Ethiopian, Madagascan, Oriental, Oceanic and Neotropical Regions (PUTHZ, 1977). However, until now this genus has been unknown from Japan. In this report, we would like to report the first species of the genus *Octavius*, namely *O. flavescens* (KISTNER, 1961) from Japan. In addition, we also report additional records of this species from Taiwan.

* 106th contribution to the knowledge of Euaesthetinae.

Octavius flavescens (KISTNER, 1961)

(Figs. 1–5)

Doletica flavescens KISTNER, 1961, Parc Nat. Garamba. Miss. H. Saeger, *Bruxelles*, (21) (2): 20.*Octavius flavescens*: PUTHZ, 1980, *Revue suisse Zool.*, **87**: 749–751.

Specimens examined. [JAPAN]: 1 male: Okinawa Pref., W Ishigaki-jima, E slopes of Mt. Irabu, sifting decayed wood, 26–XI–2008, S. VIT (Museum Geneva); 2 males, 3 females: Ishigaki Is., Mt. Omotodake, 16–VI–1991, K. OGATA (NSMT: National Museum of Nature and Science, Tokyo, Japan; coll. PUTHZ); 1 male: Ishigaki Is., Mt. Bannadake, 18 to 22–IX–1981, K. MORIMOTO (NSMT); 1 female: Shikoku, Kagawa Pref., Kotohira-chô, Konpira-gu, 26–V–1998 (Tull.), H. MIZUSHIMA (coll. NAOMI); [TAIWAN]: 2 males, 1 female: Taitung Co., Rd. no. 9, Layeh (High Terrace), rotten staw, 400 m, 13–IV–2007, S. VIT (Mus. Geneva; coll. PUTHZ); 1 female: Taitung Co.: Rd. 24, Jhibhen, oppos. 1st Recr. area, litter of Canacea, 400 m, 12–IV–2007, S. VIT (Mus. Geneva); 1 male: Hualien Co., Rd. no. 23, km 14.5, mountain forest litter, 10–IV–2007, S. VIT (coll. PUTHZ).

Distribution. India, Indonesia (Sumatra), Thailand, Philippines, Taiwan, Japan (Shikoku: Kagawa; Okinawa: Ishigaki Is.).

Remarks. *Octavius flavescens* was first described from Sumatra by KISTNER (1961) based on 1 male and 5 females. And then, PUTHZ (1980) reported this species from Taiwan, Philippines and India. At present, it is known that this species is widely distributed in the Southeast Asia to East Asia except for Japan. The above records are new to the Japanese Archipelago. All the specimens of this species were collected under dead leaves, using sifter.

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Additional Records of *Microichthyurus pennatus*
(Coleoptera, Cantharidae, Chauliognathinae)

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Abstract Additional records of a brachelytrous cantharid beetle, *Microichthyurus pennatus* (LEWIS) are enumerated for clarifying its distribution in the main islands of Japan.

Microichthyurus pennatus (LEWIS, 1895) has been known to occur in the mainland of Japan other than Hokkaido. Although it has the characteristic appearance with a slender body, large eyes and very abbreviated elytra, its distributional records have been less accumulated to our knowledge at present. Recently, we had an opportunity to examine a series of Japanese *Microichthyurus* specimens deposited in the collections of Ehime and Kyushu Universities, and then the collecting data of *M. pennatus* are given below as its additional distributional records. The specimens recorded in the following section are preserved in the Ehime University Museum, Ehime University, Matsuyama (EUM); Entomological Laboratory, Kyushu University, Fukuoka (ELKU); Omogo Mountain Museum, Kumakôgen (OMM); and the collection of N. TAKAHASHI (NTC).

We wish to express our gratitude to Prof. O. TADAUCHI (ELKU) and Dr. H. YOSHITOMI (EUM) for loan of material deposited in their institutes. N. T. also thanks Messrs. Y. HIGASHIURA (Yamaguchi) and R. MATSUMOTO (Osaka Museum of Natural History) for offering invaluable materials.

Microichthyurus pennatus (LEWIS, 1895)

[Japanese name: Ôme-kobane-joukai]

(Fig. 1)

Biurus pennatus LEWIS, 1895, 114 (“Kashiwagi, Fukushima, and other places on the Nakasendo”, Honshu, Japan). — JACOBSON, 1911, 687. — ISHIHARA *et al.*, 1953, 79 (new to Shikoku).



Fig. 1. Habitus of *Microichthyurus pennatus* (LEWIS), female.

Ichthyurus pennatus: NAKANE, 1963, 172, pl. 86, fig. 25. — TAKAKURA, 1970, 67 (new to Kyushu).

Microichthyurus pennatus: WITTMER, 1972, 121 (comb. nov.). — DELKESKAMP, 1977, 477. — SATÔ, 1985, 118, pl. 19, fig. 32. — KAZANTSEV & BRANCUCCI, 2007, 297.

Specimens examined. [Honshu] (Osaka Pref.) 1 ♂, Hatsutani Vall., Toyono, 21-VI-1994 (Y. HIGASHIURA, NTC). [Shikoku] (Ehime Pref.) 1 ♀, Tsuchigoya, 15-VII-1998 (R. MATSUMOTO, NTC); 2 ♂♂, 2 ♀♀, Omogo, Iyo, 14-VII-1952 (S. MIYAMOTO, ELKU); 1 ♀, Omogo Vall., 18-VII-2007 (S. YANO, OMM); 2 ♀♀, Mt. Saragamine, Shigenobu-chô, 7-VIII-1995 (K. OKADA, EUM); 1 ♀, Odamiyama, Oda Town, 2~3-VIII-2003 (J. OGAWA, EUM); 2 ♂♂, 3 ♀♀, Komi, Yanadani, 15~16-VII-1994 (N. OHBAYASHI, EUM); 1 ♂, 1 ♀, same data (M. MINO, EUM); 1 ♀, same locality, 16-VII-1994 (Y. UTSUNOMIYA, EUM). (Kôchi Pref.) 1 ♀, Shimo-oriwatari, Yusuhara-chô, 14-VI-1997 (M. SAKAI, EUM); 2 ♀♀, Takano, Yusuhara-mura, 14~15-VI-1997 (H. NAKANISHI, EUM); 1 ♂, from Takano to Shimo-Oriwatari, Yusuhara, 14~15-VI-1997 (K. KASAHARA, EUM); 2 ♀♀, same data (N. OHBAYASHI, EUM). [Kyushu] (Fukuoka Pref.) 3 ♀♀, Inugatake (Buzen), 15-VII-1938 (HORI, KAWAHARA & YASUMATSU, ELKU); 1 ♀, Hikosan, 6-VIII-1951 (A. HABU, ELKU); 1 ♂, Mt. Hiko, 11-VII-1969 (K. KANMIYA, ELKU). (Ôita Pref.) 1 ♂, 1 ♀, Sobosan (Bungo), 29-VI-1932 (HORI, FUJINO & CHÔ, ELKU); 1 ♀, same locality, 4-VII-1932 (HORI, FUJINO & CHÔ, ELKU).

Distribution. Japan: Honshu, Shikoku, Kyushu.

Note. As compared with the features of this species referred to in a previous report (OKUSHIMA & ICHITA, 2000), few morphological differences are found in the material listed above.

要 約

高橋直樹・矢野真志：オオメコバネジョウカイ（コウチュウ目ジョウカイボン科コバネジョウカイ亜科）の追加記録。——オオメコバネジョウカイ *Microichthyurus pennatus* (LEWIS) は本州・四国・九州に分布することが知られており、細長い体型に著しく大きな複眼と短小な上翅を備える特徴的な外観をもつものの、これまでになされた分布に関する報告はあまり多くない。

今回愛媛大学および九州大学の所蔵標本を検討した結果、既知産地も含め、本州の1府1地点、四国の2県6地点、九州の2県3地点において本種の分布を確認した。なお OKUSHIMA & ICHITA (2000) において言及されている本種の特徴に対し、今回検した標本に顕著な形態的差異は認められなかった。

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Two Eirrhinid Weevils (Coleoptera, Eirrhinidae) Known as Rice Pests New to Laos

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In the recent surveys conducted at and around pesticide-free rice paddies in northeastern Laos, two erirrhinid weevils belonging to the Eirrhinini known as rice pests were collected. We are going to record them as the first representatives of this tribe from Laos.

The authors thank Mr. H. WAKAHARA and his family for their arrangement of the field trips in Laos. This study is supported by KAKENHI (21405019; head investigator: S. OKAJIMA).

1. *Notaris oryzae* (ISHIDA, 1902)

Specimens examined. 67 exs., Ban Muang (alt. 1,450 m) and Ban Om (alt. 1,162 m), Xiengkhouang Prov., 1~4-V-2008, H. KOJIMA & J. KANTOH; 170 exs., Ban Nasala (alt. 1,372 m) and Ban Don (alt. 1,111 m), Houaphan Prov., 14~16-VI-2009, H. KOJIMA.

Distribution. Japan, Korea, NE China, Russian Far East, Laos. New to Laos.

Comments. Though the weevil was originally described as a pest of rice and the larva is root-feeder (ISHIDA, 1902 a, b), it is presently not so common in rice paddies in Japan (MORIMOTO, 1984). In northeastern Laos, however, it is quite common on footpaths between rice fields and ridges of small river channels adjacent to rice paddies in mountain villages. The pest status is uncertain at present in Laos.

2. *Echinocnemus bipunctatus* ROELOFS, 1874

Specimens examined. 8 exs., Ban Muang (alt. 1,450 m), Xiengkhouang Prov., 1-V-2008, H. KOJIMA; 54 exs., Ban Na Muang (alt. 633 m), Ban Nasala (alt. 1,372 m) and Ban Don (alt. 1,111 m), Houaphan Prov., 11~16-VI-2009, H. KOJIMA; 10 exs., Muang Kham Hot Spring (alt. 567 m), Xiengkhouang Prov., 18-VI-2009, H. KOJIMA.

Distribution. Japan, SE China, Laos, Java. New to Laos.

Comment. Local farmers recognize this weevil as a pest of rice, but the damage is not so serious constantly.

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A New *Platycerus* (Coleoptera, Lucanidae) from the Baotianman Nature Reserve in Western Henan, Central China

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Abstract A new lucanid species of the genus *Platycerus* belonging to the group of *P. bashanicus* is described from the Baotianman Nature Reserve in western Henan, Central China, under the name of *P. canae*.

In my previous paper (IMURA, 2005, pp. 497–500), I recorded three lucanid species of the genus *Platycerus* from the Baotianman Nature Reserve in western Henan of Central China. They are *P. hongwonpyoi funiuensis*, *P. tabanai baotianmanus* and *P. businskyi*. Of these, the former two were newly described subspecies endemic to that region. The third one, known so far only from a single female, was later re-identified as *P. bashanicus* (IMURA, 2006a, '06b & '10a). However, its taxonomic account is not yet assignable, since no male specimen is available for study. In March of 2010, I visited the Baotianman Nature Reserve with the purpose of faunal survey for lucanid beetles and succeeded in collecting a series of the *Platycerus* specimens. In this series, I found an undescribed species belonging to the group of *P. bashanicus* most probably referable to the female of “*P. bashanicus*” recorded by myself in 2005. However, all the females collected this time are a little different from the hitherto known single female in coloration and body proportion, etc. Since identification of the species belonging to the group of *P. bashanicus* is usually difficult by using female specimens alone, there is room for consideration on the taxonomic relationship between them. Anyway, I am going to describe the taxon found during this survey as a new species named *P. canae*. Further investigation will be needed for clarifying the platycerine fauna of Baotianman, above all for the species belonging to the group of *P. bashanicus*.

I wish to express my sincere thanks to Messrs. FAN Ting (International Academic Exchange Center of the Academia Sinica, Chengdu) and Jaroslav TURNA (Czech Republic) for their kind help in various ways. Special thanks are due to Dr. Shun-Ichi UENO (National Museum of Nature and Science, Tokyo) for reading the manuscript of this paper.

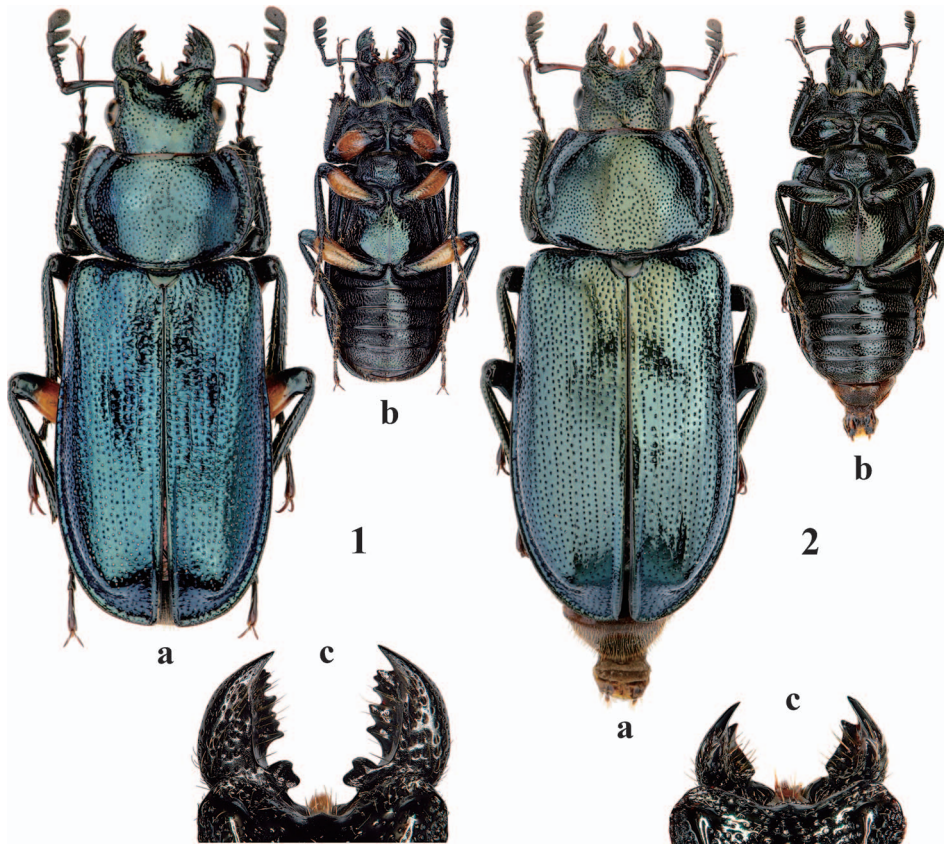
Platycerus canae IMURA, sp. nov.

(Figs. 1–3)

?*Platycerus businskyi*: IMURA, 2005, Elytra, Tokyo, 33, p. 497. fig. 1 (on p. 499).

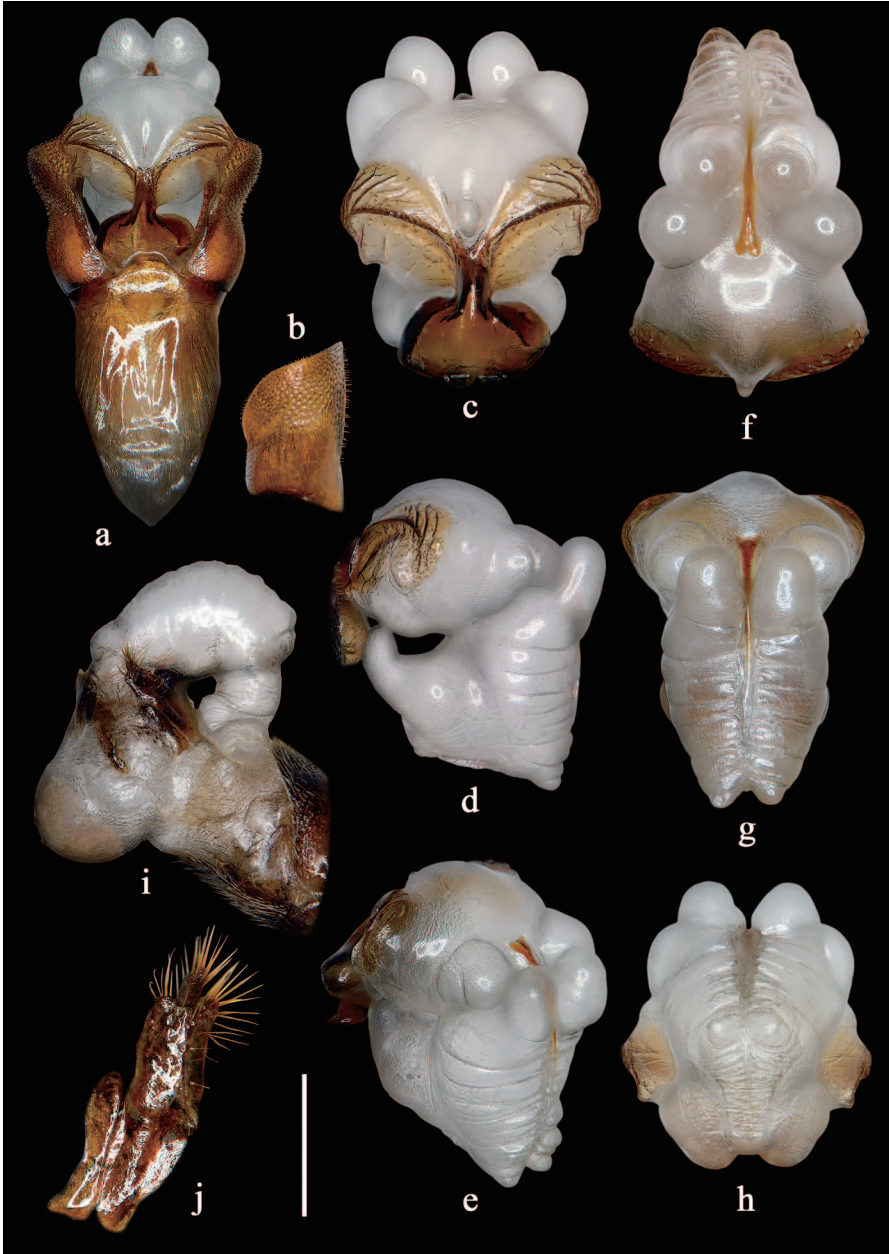
? *Platycerus bashanicus*: IMURA, 2006a, Elytra, Tokyo, **34**, p. 132; 2006b, Gekkan-Mushi, Tokyo, (426), p. 27; 2010a, The Genus *Platycerus* of East Asia, p. 126, fig. 9 (on p. 129).
Platycerus sp.: IMURA, 2010b, Gekkan-Mushi, Tokyo, (474), p. 2, figs. 1, 2

Medium to rather small-sized species belonging to the group of *P. bashanicus*, readily recognized by uniquely featured internal sac of the male genital organ.



Figs. 1–2. *Platycerus canae* sp. nov. from Baotianman in western Henan, Central China. — 1, ♂ (holotype); 2, ♀ (paratype); a, habitus in dorsal view; b, ditto in ventral view; c, mandibles in dorsal view.

Fig. 3. Genital organ of *Platycerus canae* sp. nov. from Baotianman in western Henan, Central China. — a–h, ♂; a, basal piece, parameres & penis in ventral view; b, right paramere in right lateral view; c, apical pair of sclerites of penis & fully inflated internal sac in ventral view; d, ditto in right lateral view; e, ditto in right subdorsal view; f, ditto in caudal view; g, internal sac in dorsal view; h, ditto (apical part) in dorsal view. — i–j, ♀; i, genital segment with everted vagina in left lateral view; j, left hemisternites in ventral view. Scale: 1 mm for a, b; 0.7 mm for c; 0.9 mm for d, e; 0.8 mm for f–h; 1.3 mm for i; 0.5 mm for j.



Male. Length (including mandibles): 9.9–11.8 (arithmetic mean: 11.0) mm. Dorsal surface glossy, with the coloration a little variable according to individuals, light greenish blue, dark blue, dark indigo or dark purple; venter black or brownish black, bearing a blue-greenish tinge on genae, meso- and metasterna; femora yellowish brown except for darker apical ends which are black with a faint blue-greenish lustre as well as tibiae; in some individuals, apical thirds or nearly halves of femora are blackish, so that the legs are entirely blackish at a glance in dorsal view; tarsi and claws dark brown to black with a faint reddish tinge.

Externally allied to all the five known species in the group of *P. bashanicus*, above all to *P. bashanicus*, but readily discriminated from them by peculiarly shaped internal sac of the male genital organ.

Male genitalia about two-fifths as long as elytra. Basal piece as in the other members of the same species group. Parameres short and robust, allied to those of *P. consimilis*, but frontal margin obviously emarginate at basal third in lateral view. Apical pair of penile plates as in *P. yeren*, though a little robuster and more remarkably rugulose on the surface; visor-like protrusions also as in *P. yeren*, though a little wider and more strongly sclerotized. Internal sac very unique in shape for a member of the group of *P. bashanicus*, having only two pairs of paraflagellar lobes; basal portion short and strongly inflated, bearing a very small basal median lobe as in *P. xiongmao*; median portion with only two pairs of paraflagellar lobes; 1st paraflagellar lobes hemispherical, situating a little apart from flagellum; 2nd paraflagellar lobes more strongly inflated and ovoid in shape, closely adhered to each other at the bases; pleats-like area very long and wide, with the dorsal surface almost flat; apical lobes short and small, obviously hooked inwards near apices.

Female. Length (including mandibles): 9.7–11.3 (arithmetic mean: 10.6) mm. Body above glossy, dark green more or less with a faint bluish or coppery tinge; venter and appendages almost as in male, though abdominal sternites are a little more brownish.

Closely allied to all the other five species belonging to the same species-group, and barely distinguishable by the external morphologies alone. Vagina most closely allied to that of *P. yeren*, though a little more strongly inflated in basal two-thirds. Hemisternites oblong-shaped, almost parallel-sided, gently arcuate on both outer- and inner margins, with the apical-inner angles roundly protruded.

Type series. Holotype: ♂, Baotianman Nature Reserve [宝天曼自然保护区], 1,580 m in altitude, 33° 30' 31–48" N/111° 56' 00–15" E, on the Fu'niu Shan [伏牛山] Mountains, in Neixiang Xian [内乡县], of Nanyang Shi [南阳市], western Henan, Central China, 22–III–2010, Y. IMURA leg. Paratypes (10 ♂♂, 7 ♀♀): 3 ♂♂, 4 ♀♀, same area (1,580–1,740 m in altitude), 21~22–III–2010, Y. IMURA leg.; 7 ♂♂, 3 ♀♀, same area (1,580–1,740 m in altitude), larvae collected in the field on 21~22–III–2010 and emerged in the laboratory in VI–2010.

Type depository. Holotype and a female paratype are deposited in the Osaka Museum of Natural History (collection number: OMNH TI 489). A pair of the

paratypes are in the collection of H. HUANG (Shanghai). All the remaining paratypes are in the collection of Y. IMURA.

Notes. As mentioned in the introduction, the female specimen of the *Platycerus* species hitherto recorded from Baotianman (IMURA, 2005, p. 497, fig. 1 (on p. 499); idem., 2006a, p. 132; idem., 2006b, p. 27; idem., 2010, p. 126, fig. 9 (on p. 129)) most probably belongs to the present species. However, the former has much shorter elytra than in any of the type specimens of the latter. In addition, the coloration of the former is much more bluish than that of the latter. Since total number of the specimens now available for comparative study is still inadequate, I suspend judgment on the taxonomical relationship between them. The female recorded in 2005 is therefore excluded from the type series of the present new species.

This new species inhabits, sympatrically with *P. h. funiuensis* and *P. t. baotianmanus*, the deciduous broadleaved forest composed mainly of *Quercus aliena* now widely preserved in the upper part of the Baotianman Nature Reserve at a height of 1,500–1,800 m. All the type specimens were collected early in the spring, hibernating mainly in the standing withered wood of deciduous broadleaved tree with the diameter of 20 centimeter or more, sometimes over 1 meter. The larvae prefer to feed on gray- to white-rotten parts of these dead woods. As in the other members belonging to the same genus of East Asia, this species leaves peculiar oviposition marks on the surface of its hood sources.

Etymology. This new species is named after my daughter, Kana [歌菜].

要 約

井村有希：中国河南省西部の宝天曼自然保護区から発見されたルリクワガタ属の1新種。——中国河南省西部の宝天曼自然保護区において発見されたルリクワガタ属の1種を新種と認め、*Platycerus canae* (カナルリクワガタ) という名を与えて記載した。本種は外部形態ならびに交尾器の基本形態から *P. bashanicus* 種群に属するものと考えられ、同種群中6番目の種となるが、既知の各種からは♂交尾器内囊の形態に顕著な特徴を有することにより容易に識別される。同自然保護区からは2005年、筆者によってすでに *P. bashanicus* 種群に属する1♀(当初は *P. businskyi* と同定され、のちに *P. bashanicus* へと同定名を変更されたが、その所属に関してはなお検討の余地ありとされていたもの) が記録されているが、今回発見された新種とは色彩や上翅長の比率などに明らかな違いがみられる。同種群に属する種は♀のみによる同定がきわめて困難であるため、2005年に記録された1♀の分類学的処遇については、対応する♂が発見されるまで、あるいは今回の新種の種内における変異幅がより正しく把握されるまで保留とし、タイプシリーズからは除外した。

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Elytra, Tokyo, **38**(2): 232, November 13, 2010

Occurrence of *Cafius algarum* (SHARP) (Coleoptera, Staphylinidae)
on the Island of Mageshima near Tanegashima
Island in Southwest Japan

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Only two species of staphylinid beetles have hitherto been reported from the Island of Mageshima near Tanegashima Island in Kagoshima Prefecture, Southwest Japan, by WATANABE & ONODA (1994). Examining the staphylinid beetles deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, I have found an unrecorded species from this island. It was obtained on July 25th, 1964, by Mr. H. YAMAZAKI.

Cafius algarum (SHARP), 1 ♂, 4 ♀♀.

I thank Mr. Hideo YAMAZAKI, Ichikawa-shi, for his kindness in giving me the specimens.

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A New Species of the Genus *Platycerus* GEOFFROY
(Coleoptera, Lucanidae) from Gansu, China

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Abstract A new species of the genus *Platycerus* allied to *P. rugosus* is described from southern Gansu, China, under the name of *P. yangi*.

No *Platycerus* lucanid beetle has hitherto been recorded from Gansu Province in China. We recently had an opportunity to examine a series of *Platycerus* specimens collected from the southern part of that province. The series contains a single species closely allied to *P. rugosus* OKUDA, 1997, and doubtless belongs to the same group as that composed of *P. rugosus* and *P. yingqii* HUANG et CHEN, 2009. However, it is readily recognized on peculiarly featured male genital organ. In this paper, we are going to describe it as a new species under the name of *P. yangi*. Terms for the genital organ employed herein are the same as those proposed by IMURA (2010).

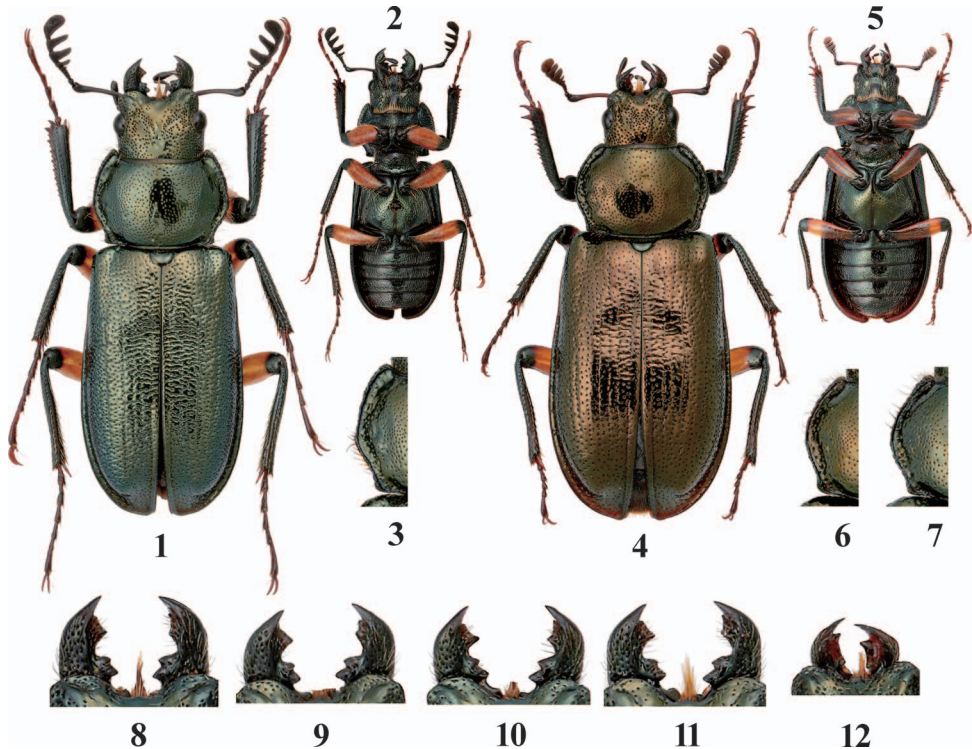
The first and second authors thank Dr. Wen-I CHOU (Taiwan) who suggested them a collecting trip to Zhouqu, Gansu, and to Mr. Xiao-Dong YANG who collected the type series of the new species. The third author thanks Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for critically reading the manuscript of this paper.

Platycerus yangi HUANG, CHEN et IMURA, sp. nov.

(Figs. 1–25)

Male. Body length including mandibles: 10.5–11.5 mm (holotype: 11.5 mm). Dorsal surface basically green and moderately shiny; femora light yellowish brown though a little reddish on ventral side, with the distal tips blackish; tibiae, metasterna and abdominal sternites black with bluish or green-bluish tinge.

Most closely allied to *P. rugosus* OKUDA, 1997, but differs from that species in the following points: 1) apical ventral tooth of left mandible unidentate as in *P. rugosus*, but a little different in shape, with the inner margin before median tip usually subequal in length to that behind median tip, while the former is usually longer than the latter in *P. rugosus*; 2) head and pronotum more sporadically punctate; 3) pronotal disc more widely depressed along lateral margins, above all in anterior halves; 4) elytra more narrowly rugoso-striate; 5) metatarsi subequal in length to metatibiae, while the former



Figs. 1–12. *Platycerus yangi* sp. nov. from Zhou-qu of Gannan in southern Gansu, China. — 1–3, 8–11, ♂ (1–3, holotype; 8–11, paratypes); 4–7, 12, ♀ (paratypes); 1, 4, habitus in dorsal view; 2, 5, ditto in ventral view; 3, 6–7, left part of pronotum in dorsal view; 8–12, mandibles in dorsal view.

is apparently shorter than the latter in *P. rugosus*; 6) paramere without semi-transparent fenestra near baso-inner angle on ventral side; 7) visor-like protrusions of penis much less strongly protruded ventrad; 8) 1st paraflagellar lobe of internal sac larger, more strongly inflated in basal portion and weakly hooked inwards at tip; 9) flagellum not bifurcated at basal tip and hardly curved inwards near apex; 10) apical lobe of internal sac not strongly bent inwards as in *P. rugosus* but nearly straightly protruded.

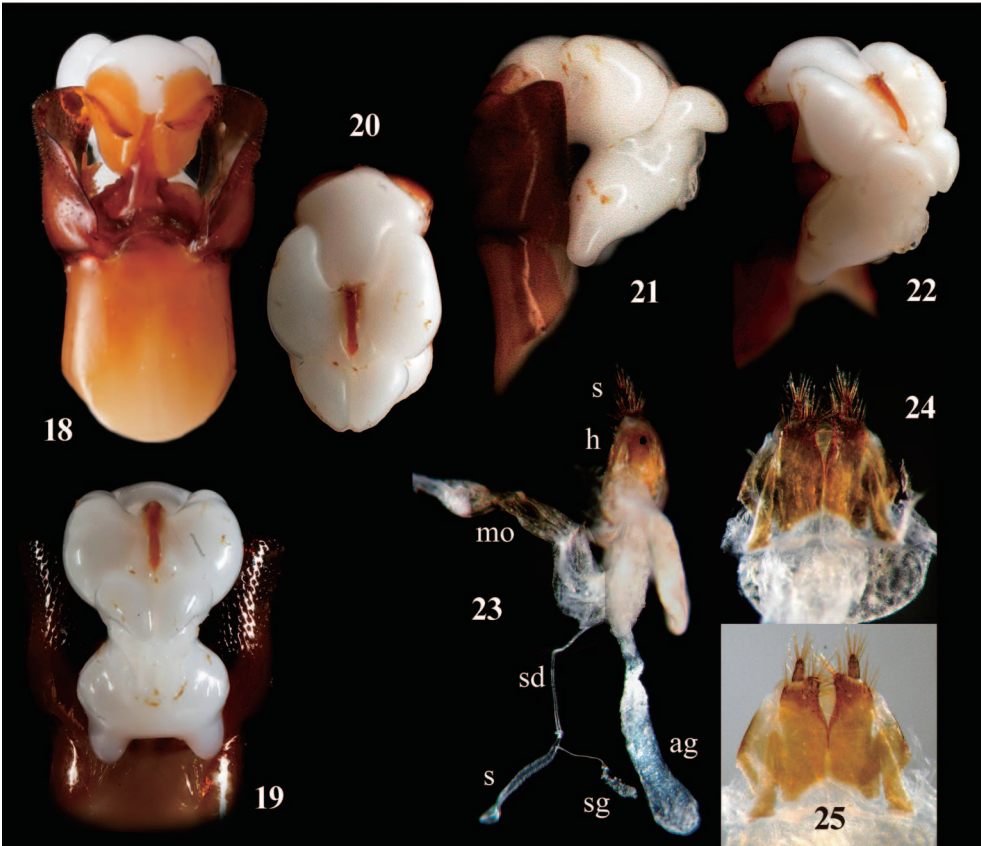
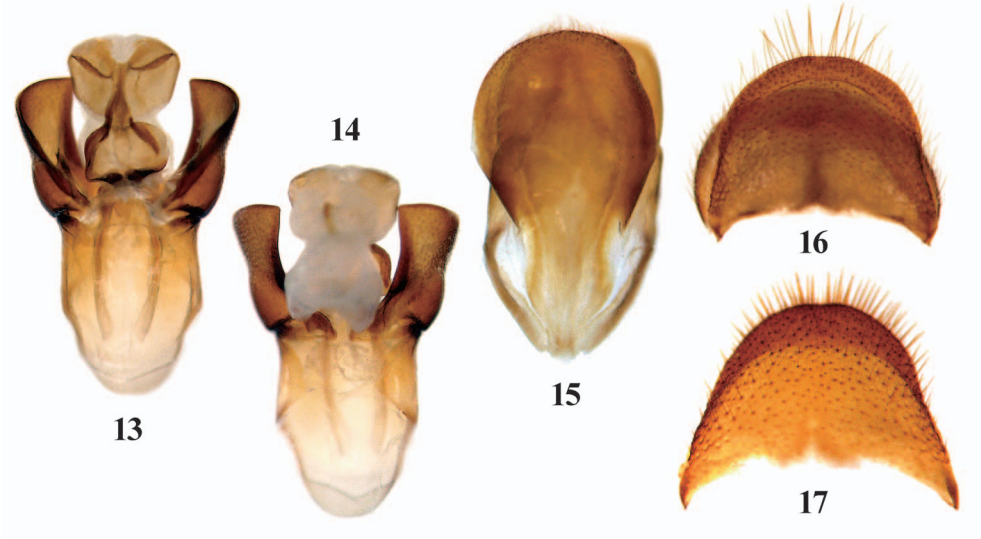
F e m a l e. Body length including mandibles: 10.0–11.5 mm. Dorsal surface basically greenish brown and more strongly shiny than in male; femoral colour as in male; protibiae entirely black, more or less with bluish or greenish tinge; meso- and metatibiae variable in coloration according to individuals, light brown in two specimens, partly brown with bluish tinge in two specimens and entirely black in one specimen; pro-, meso- and metasterna entirely black, more or less with blue-greenish metallic tinge; abdominal sternites entirely black with bluish tinge, and glossy.

Differs from *P. rugosus* in the following points: 1) dorsal surface more shiny; 2) punctures on head, pronotum and elytra smaller and more sparsely set; 3) pronotum not subtrapezoidal in shape as in *P. rugosus* but barrel-shaped, a little slenderer and less strongly narrowed towards apex, with areas along lateral sides less widely depressed and not reddish as in *P. rugosus*, hind angles less sharply pointed than in *P. rugosus*; 4) elytra a little shorter and robuster, more acutely narrowed towards apices than in *P. rugosus*; 5) abdominal sternites not reddish as in *P. rugosus* but entirely blackish with blue-greenish tinge; 6) tibiae usually much darker in coloration than in *P. rugosus*; 7) hemisternite robuster, nearly twice as long as wide, with the inner-apical tip more strongly protruded. Membranous part including bursal duct, spermatheca, spermathecal duct and accessory gland not remarkably different from those of other *Platycerus* species, so far as we have examined.

Type series. Holotype: ♂, China, Gansu, Tibetan Autonomous Prefecture of Gannan [甘南藏族自治州], Zhou-qu County [舟曲县], Sha-tan-lin-chang (forest farm) [沙滩林场], 2,662 m in alt., 6-III-2010, X.-D. YANG leg. in coll. Shanghai Normal University. Paratypes: 5 ♂♂, 5 ♀♀, same area as for the holotype (Shao-ha-gou, 2,535 m and Ren-min-chi-gou, 2,620–2,662 m), 6~10-III-2010, X.-D. YANG leg. (1 ♂, 1 ♀ in coll. Y. IMURA; 1 ♂, 1 ♀ in coll. H. HUANG; 3 ♂♂, 3 ♀♀, in coll. C.-C. CHEN).

Notes. Of the five paratype males examined, two are a little more bluish in dorsal coloration than in the holotype. Apical ventral teeth of the mandibles are a little variable in the shape according to individuals as shown in Figs. 8–11. Front angles of the pronotum also a little variable in the shape, a little shorter and less sharply pointed as in the holotype in some individuals as shown in Fig. 3. Lateral sides of the pronotum also a little variable in the shape, more remarkably subangulate in some individuals as shown in Fig. 3. One paratype male was dissected for examination of the genital organ, and no remarkable difference was recognized both in the sclerotized part and internal sac.

The present new species is unique in having pointed hind angles of the pronotum in both the sexes and triangularly unidentate apical ventral tooth of the male mandibles.



The former character state is commonly visible in four other Chinese species, namely, *P. hongwonpyoi* IMURA et CHOE, 1989, *P. tabanai* TANIKADO et OKUDA, 1994, *P. rugosus* and *P. yingqii*. On the other hand, the latter character state is shared by only two of these four, *P. rugosus* and *P. yingqii*. The genus *Platycerus* has been currently classified into two species-complexes according to the shape of hind angles of the pronotum; one is the *P. delicatulus* complex with the hind angles rounded, and the other is the *P. acuticollis* complex with the same angles pointed. On the molecular phylogenetic tree, however, morphology of the pronotal hind angles does not always run parallel with the molecular phylogenetic profile; the two types of character states, namely, rounded or pointed, appear randomly in different sublineages. Therefore, morphology of the pronotal hind angles cannot always be regarded as synapomorphy. Rather, this may be a simple parallelism without much taxonomical importance (IMURA & NAGAHATA, 2009; IMURA, 2010). As to the four Chinese species mentioned above, *P. hongwonpyoi* and *P. rugosus* appear in the same cluster on the molecular phylogenetic tree and are considered to belong to the same lineage. However, *P. tabanai* appears in different cluster which is composed of *P. dundai* IMURA et BARTOLOZZI, 1994 (also see IMURA, 2005) and its allied species, and seems to belong to another lineage. Although *P. yingqii* has not yet been analyzed, it is highly plausible that this species belongs to the former lineage judging from uniquely shaped apical ventral tooth of the male mandibles and larger lamellae of the male antennae. For the same reason, we regard that the present new species should belong to the *P. rugosus* lineage in the group of *P. hongwonpyoi*. A close similarity in the male genital morphology, above all in that of the internal sac, also strongly supports this view.

On the other hand, the female of this new species is quite unique as a member of the group of *P. hongwonpyoi* in having not widely depressed and not red-colored pronotal margins, blackish tibiae and entirely black-colored abdominal sternites, which remind us of the female of *P. businskyi* IMURA, 1996, the species with rounded pronotal hind angles and endemic to the southeastern part of the Qinling Mountains. Further molecular phyloanalysis will be needed to prove the true affinity of the new species.

Etymology. This new species is named after Mr. Xiao-Dong YANG [杨晓东] who collected the type series.

Figs. 13–25. Genital organ of *Platycerus yangi* sp. nov. from Zhou-qu of Gannan in southern Gansu, China. — 13–16, 18–22, male genital organ (13–16, paratype; 18–22, holotype); 17, 23–25, female genital organ (paratype). — 13, basal piece, parameres & penis in ventral view; 14, ditto in dorsal view; 15, 9th abdominal segment in ventral view; 16, last abdominal tergite in dorsal view; 17, ditto in dorsal view; 18, male genitalia with fully inflated internal sac in ventral view; 19, ditto in dorsal view; 20, fully inflated internal sac in caudal view; 21, ditto in right lateral view; 22, ditto in right subdorsal view; 23, whole female genitalia in lateral view (s – stylus; h – hemisternite; mo – median oviduct; s – spermatheca; sg – spermathecal gland; sd – spermathecal duct; ag – accessory gland); 24 – 25, sclerotized part of female genital organ in ventral view.

要 約

黄瀬・陈常卿・井村有希：中国甘肅省から発見されたルリクワガタ属の1新種。——中国甘肅省からはこれまでルリクワガタ属の記録がなかったが、筆者らはごく最近、同省南部甘南藏族自治州舟曲县から発見された同属の1種を検査する機会があり、詳細に検討を加えた結果、未記載種であるとの結論に達したため、*Platycerus yangi*（ヤンルリクワガタ）という名を与えて記載した。本種はチョウセンルリクワガタ種群に属し、同種群を構成する既知の3種のうちではサザナミルリクワガタにもっとも類縁が近いと考えられるが、外部形態・交尾器形態にみられるいくつかの顕著な特徴により、識別は容易である。本種の♀は、前胸背板後角の尖る既知の数種とはかなり異なった外部形態上の特徴を有している点において特異であり、その系統分類学上の位置を決定するためには、分子系統解析を含むさらなる検討が必要であろう。

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Taxonomic Study on the Genus *Psilopholis* BRENSKE
(Scarabaeidae, Melolonthinae, Melolonthini) with
Consideration of Divisions of the Subtribe Melolonthina

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Abstract A new species of the genus *Psilopholis* is described from the mountainous areas of Borneo, East Malaysia under the name of *P. gigantea*. *Tricholepis vestita* is synonymized with *Psilopholis grandis*, the type species of this genus. So-called generic characters of the genus *Psilopholis* are scrutinized. Division of the subtribe Melolonthina into two lineages by only the difference in the number of segments of the antennal club is not sustainable. The subtribe Melolonthina cannot be reasonably divided into the two lineages by any other morphological characters.

Up to the present, the melolonthine genus *Psilopholis* has been monotypical, represented by the species, *Psilopholis grandis* alone, which has been known from the Malay Peninsula to Borneo via Java. In the course of my activities for collecting SE Asian melolonthines, I have accumulated a series of remarkably large specimens closely resembling the type species from Borneo. Lately, I searched for accounts that fit for these large specimens, but was unable to find any. I have noticed from these scrutinies that this species belongs to a new species. Therefore, I decided to describe it herein. Because neither BRENSKE nor the succeeding researchers pointed out the generic characteristics in detail, I would like to describe them at this place. Furthermore, I will synonymize a SHARP's species with *P. grandis*.

The subtribe Melolonthina has been divided into two lineages only by the difference in the number of segments of the antennal club by European and American researchers as in LÖBL & SMETANA (2006) without adequate discussions. This subtribe includes so many genera of various shapes, and therefore it is doubtful whether or not this subtribe can be divided into two groups only by the difference in the antennal configuration.

Thus, I have searched for other new characters which may be useful for dividing this subtribe and for confirming if the above division is surely valid or not.

Before going further, I would like to express my cordial gratitude to Messrs. K. HARUSAWA, Osaka, A. ABE, Aomori and M. FUJIOKA, Tokyo for offering me their related materials.

Genus *Psilopholis* BRENSKE

Psilopholis BRENSKE, 1892, Berl. ent. Z., 37: 38.

Body moderately to extremely large, elongate and convex. Both dorsal and ventral surfaces densely covered with thick minute hairs, without any roundish or oval scales.

Clypeus quadrate, gently rounded at antero-lateral corners, with anterior margin straight; antennae 10-segmented with three small lamellae; mentum transverse and pot-shaped with lateral margin strongly emarginate in anterior half.

Prosternum with triangular process just posterior to the intercoxal space of pro-coxae; mesosternum without any intercoxal process. Lateral sides of abdominal sternites each devoid of whitish patches of short thick hairs.

Protibia with three distinct denticles; the 2nd denticle clearly approaching to the 1st one; 3rd denticle rather sharp.

Aedeagus depressed and wide; phallobase twice as long as or longer than parameres in dorsal view, widely cleft and gently concave in each of apico-lateral triangular portions.

Psilopholis grandis (CASTELNAU, 1840)

(Fig. 1)

Rhizotrogus grandis CASTELNAU, 1840, Hist. nat. 2, 1840, p. 133. (Java).

Tricholepis grandis: BRENSKE, 1892, Berl. ent. Z., 37: 38.

Psilopholis grandis: BRENSKE, 1892, Berl. ent. Z., 37: 61.

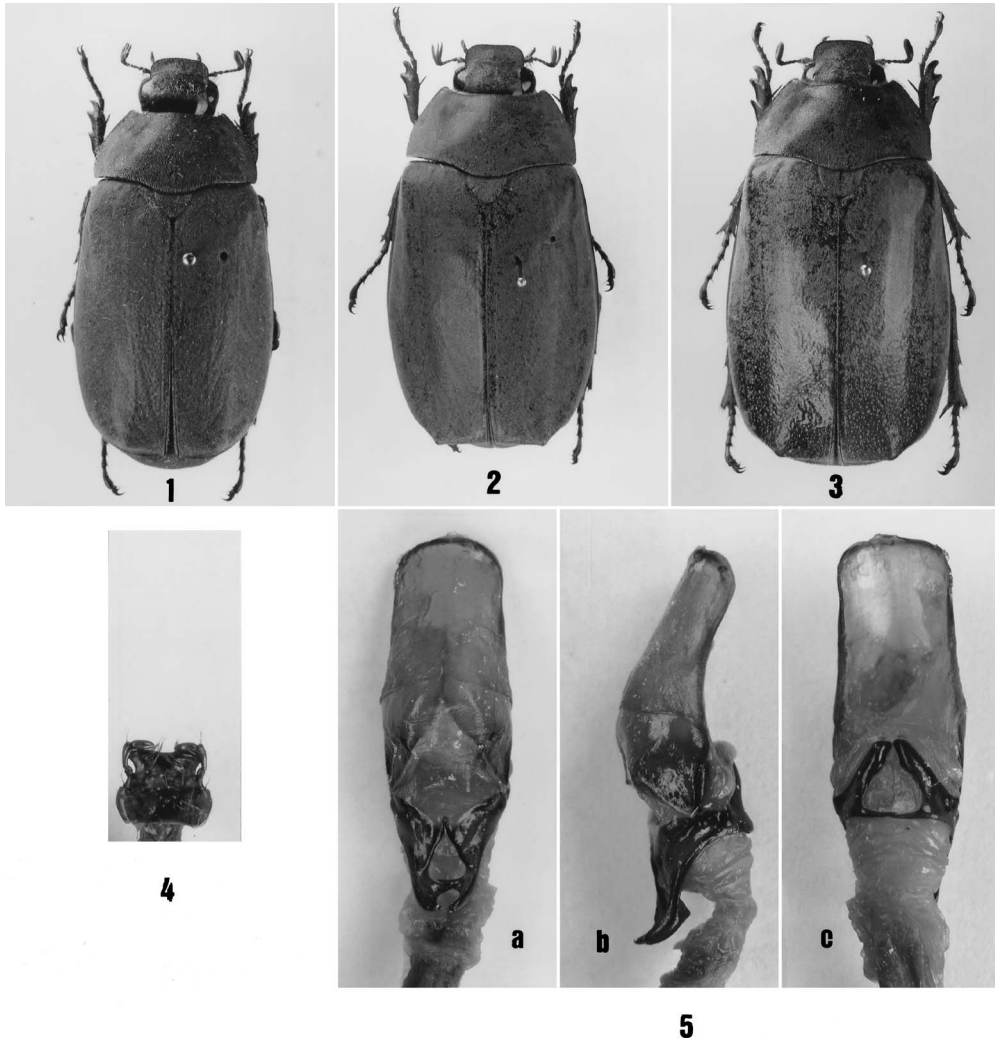
Tricholepis vestita SHARP, 1881, Notes Leyden Mus., 3, 232-233 (Sumatra). (*Syn. nov.*)

Distribution. Java, Sumatra, Borneo, Malay Peninsula.

Specimens examined. [Borneo] 1 ♂, Kimanis road (15 mi.), near Keningau, Sabah, 25-III-1992, K. HARUSAWA leg.; 3 ♂♂, Kimanis road (14 mi.), near Keningau, Sabah, 26-III-1992, K. HARUSAWA leg.; 1 ♂, near Kinabalu, N. Borneo, 24-VII-1988; 1 ♂, Keningau, Sabah, 24-III-1980, K. SUGINO leg. [Sumatra] 1 ♂, 2 ♀♀, Bukit Tinggi, W. Sumatra, VIII-1993; 2 ♀♀, Lembah Anai, near Bukit Tinggi, C. Sumatra, 26-XI-1987. [Malay Peninsula] 1 ♂, Tanah Rata, Cameron Highlands, 1-IV-1979; 1 ♂, 1 ♀, Cameron Highlands; 2 ♂♂, same locality as for the preceding specimens, 1987. All specimens belong to my personal collection.

Notes. I carefully read SHARP's original description of his *Tricholepis vestita*. It agrees well with the female characteristics of *Psilopholis grandis*. Accordingly, I regard *Tricholepis vestita* as a junior synonym of *Psilopholis grandis*.

In JUNK's Coleopterorum Catalogue, Pars 49 (1912), this species was recorded also from the Philippines and Amboina. I have examined many melolonthine materials from the Philippines up to the present, but I have never seen any specimen of this species from the area. Thus, the record of this species from the Philippines is doubtful, and therefore, I omit them from the distributional area of *P. grandis*. The record of *P. grandis* from



Figs. 1-5. — 1-3. Habitus of *Psilopholis* spp, ♂. — 1, *P. grandis*; 2, *P. gigantea*, ♂; 3, ditto, ♀.
 — 4, Mentum of *P. gigantea*; 5, Male genitalia of *P. gigantea*; (a) dorsal side; (b) lateral side;
 (c) ventral side.

Amboina is also perhaps based on misidentification. Accordingly, I also omit Amboina from the distributional area of *Psilopholis grandis*.

Psilopholis gigantea MATSUMOTO, sp. nov.

(Figs. 2, 3, 4, 5a, b, c)

Description. Length: 40.3–48.0 mm

Male. Body large and elongate. Dorsal surface bright brown to dark brown or dark reddish brown and almost covered with short yellowish hairs. Ventral surface dark brown or dark reddish brown.

Clypeus quadrate, rather strongly reflexed forward, almost straight along anterior margin and gently rounded at each antero-lateral corner; frons weakly convex, densely covered with short to long hairs, some of long hairs erect.

Pronotum wide, moderately produced laterad, strongly narrowed forward; lateral margin gently curved and serrate throughout. Elytra smooth, with five costae; only sutural and 5th costae conspicuous, 2nd to 4th inconspicuous or vestigial; apical knob becoming rather sharply raised tubercle. Pygidium with weak longitudinal sulcus from base to the middle.

Prosternum with feebly convex, triangular postcoxal process. Metasternum and metacoxae shining, densely with long hairs. Abdomen smooth, densely with short hairs, very sparsely so in medial portion and hairless in apical portion of the 6th sternite.

Metacoxa quadrate; lateral side arcuate and produced; upper and lower lateral corners much rounded. Metafemur with short and larger hairs on surface except in basal to median, long elliptical portion. Third denticle of protibia situated approximately medially; longer one of metatibial apical spurs sharp, pointed apically and far longer than the 1st metatarsal segment.

Parameres of male genitalia becoming less sclerotized apically on both dorsal and ventral sides, branching toward apex; ventral side especially reduced, giving an appearance of obtriangular sclerotized frame; internal sac very long and stout.

Female. Closely resembling male in almost all characters. Elytra densely covered with fine minute hairs in basal halves, rather sparsely with thicker hairs in apical halves; apical knob more weakly raised; apical two-fifths area rather strongly shining in medial rounded portion. Metafemur more or less stout; protibial denticles more rounded.

Distribution. Borneo Island (Sabah and Sarawak in the mountainous regions).

Type series. Holotype: 1 ♂, near Keningau, Sabah, 15-III-1988 (OMNH TI-483). Paratypes: 2 ♂♂, same data as for the holotype; 1 ♂, same locality as for the preceding specimens, 9~11-III-1988; 2 ♂♂, Mt. Kinabalu, N. Borneo, 28-IV-1984; 2 ♀♀, same locality as for the preceding specimens, IV-1994; 2 ♀♀, Kimanis road (15 mi.), near Keningau, Sabah, N. Borneo, 25-III-1992, K. HARUSAWA leg.; 2 ♂♂, 1 ♀, Kimanis road (14 mi.), near Keningau, Sabah, N. Borneo, 26-III-1992, K. HARUSAWA leg.; 1 ♂, Kimanis Road, Keningau, Borneo, 1-V-1988, M. YAGI leg.; 1 ♂, Mesilau, Sabah, N. Borneo, 14-IV-2006, A. ABE leg.; 1 ♂, Mt. Serapi, near Kuching, Sarawak, Borneo, 1-IX-1990; 1 ♀, same locality as for the preceding specimen, 20-IX-1990; 1 ♀, same locality as for the preceding specimen, 14-X-1989. The holotype is deposited in the Osaka Museum of Natural History, Osaka City and the remaining paratypes are all

housed in my personal collection.

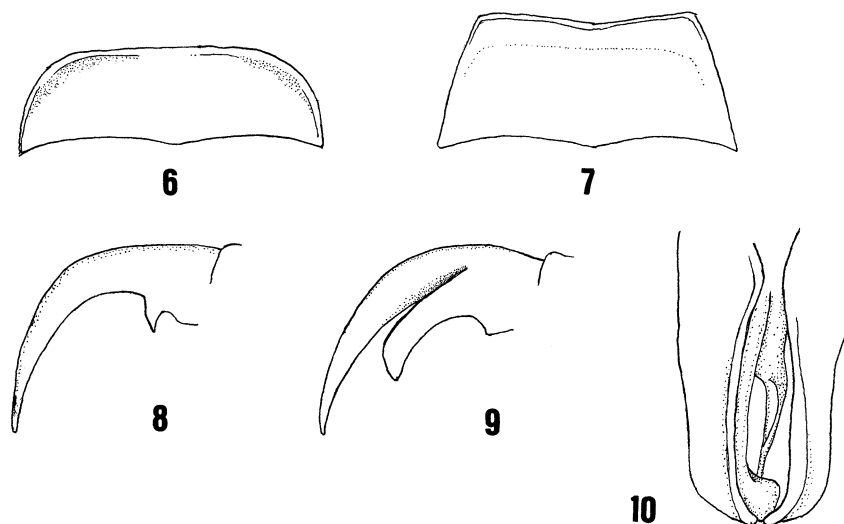
Etymology. This species was named after its very large body.

Notes. This new Bornean species of large body closely resembles the type species, *Psilopholis grandis* in its external morphology, so that it is rather difficult to point out the differences between the two. The new Bornean species can be differentiated from the hitherto known specimens of *Psilopholis grandis* as follows: 1) lateral margin of pronotum gently curved in male; 2) ventral side of paramere of male genitalia strongly reduced in sclerotization, becoming a shape like an obtriangular frame.

Psilopholis grandis is widespread from the Malay Peninsula, Sumatra to Borneo via Java. The body length is not different from one another at least among the populations of Sumatra, Borneo and the Malay Peninsula.

The specimens of *P. grandis* and those of the new species of very large body can be collected at the same time in the same locality at least at Kimanis Road of Keningau District of North Borneo. Accordingly, it cannot be regarded as a subspecies of *P. grandis* although this new species closely resembles *P. grandis*. These two species have a clear difference in the body length. The ranges of the body length of these two species do not overlap each other.

This indicates that these two species do not belong to the same species showing a very large variation in the body length, but that they are clearly independent species. For these reasons, I regard this species of very large body as a new species and give a new name, *P. gigantea*.



Figs. 6-10. — 6-7. Clypeus — 6, *Psilopholis grandis*; 7, *Stephanopholis melolonthoides*. — 8-9. Protarsal claw — 8, *Melolontha japonica*; 9, *Anoxia villosa*. — 10. Male genitalia of *Dasylepida ishigakiensis*.

Table 1. A list of species belonging to the subtribe Melolonthina examined for comparative study of the genera.

species	collection locality
<i>Melolontha melolontha</i> LINNÉ, 1758	France: 73, Macon
<i>M. japonica</i> BURMEISTER, 1855	Japan: Wakayama, Susami-chô, Samoto
<i>Anisopholis affinis</i> MOSER, 1914	W. Sumatra: near Bukit Tinggi, Harau Valley
<i>Exolontha pennata</i> (SHARP, 1876)	N. Thailand: near Chiang Mai
<i>Schoenherria sulcipennis</i> (CASTELNAU, 1840)	Philippines: C. Luzon, near Lucena, Kinabuhayan
<i>Polyphylla laticollis</i> LEWIS, 1887	Japan: Osaka, Toyosato
<i>P. schoenfeldti</i> BRENSKE, 1890	Japan: Amami-Oshima Is.
<i>Anoxia villosa</i> FABRICIUS, 1781	France: 33, Le grencaf; Italy: Mariwa Ravewwa
<i>A. australis</i> SHOENHERR, 1817	Spain: Murcia, Mar Menor, La Manga
<i>Engertia lii</i> KEITH, 2006	Philippines: Mindanao Is., Mt. Apo & Mt. Parker, Leyte Is., Mt. Balocawihay
<i>Exopholis hypoleuca</i> (WIEDEMANN, 1819)	W. Sumatra: near Bukit Tinggi, Harau Valley & Lembah Anai
<i>Asactopholis gracilipes</i> (SHARP, 1876)	N. Borneo: near Keningau
<i>Chaetocosmetes</i> sp. 1	Malaysia: Cameron H.L., Tanah Rata
<i>C.</i> sp. 2	Malaysia: Kedah
<i>Stephanopholis melolonthoides</i> (BRENSKE, 1892)	Philippines: N. Luzon, Asin Hot-spring
<i>Wadaia kaorui</i> ITOH, 1994	N. Borneo: Mt. Trus Madi & Mt. Kinabalu
<i>Psilopholis grandis</i> (CASTELNAU, 1840)	W. Sumatra: near Bukit Tinggi, Lembah Anai
<i>Lepidiota bimaculata</i> SAUNDERS, 1839	Thailand: Bangkok & near Chiang Mai
<i>Leucopholis tristis</i> BRENSKE, 1892	W. Sumatra: near Bukit Tinggi, Harau Valley
<i>Cyphochilus cretaceus</i> (NIJIMA et KINOSHITA, 1923)	Taiwan: Nantou, Nanshanchi & Sun Moon Lake
<i>C. feae</i> BRENSKE, 1903	N. Thailand: Chiang Mai
<i>Dedalopterus malyszi</i> BUNALSKI, 2002	N. Vietnam: Sapa
<i>Malaisius siamensis</i> LI et YANG, 1999	N. Thailand: Fang
<i>Dasylepida ishigakiensis</i> (NIJIMA et KINOSHITA, 1927)	Japan: Okinawa, Ishigakijima & Miyakojima Isls.
<i>D. fissa</i> MOSER, 1913	Taiwan: Nantou, Lienhwachi & Shizutou

Character Analysis of the Subtribe Melolonthina

The subtribe Melolonthina has been divided into the *Melolontha* lineage and the *Leucopholis* one only by the difference of the antennal club composed of three segments or more segments. For example, LÖBL & SMETANA (2006) listed the former as Melolonthini and the latter as Leucopholini.

I tried to investigate whether or not this division into two lineages can be supported by other characters when used the representative genera of the Palearctic and Oriental Regions for the subtribe Melolonthina. I listed up twenty-five representative species examined for this investigation in Table 1.

The characters for comparison need to be shared by as much genera as possible. I carefully selected them as follows:

Table 2. Comparison of the characters among representative species of the principal genera of the subtribe Melolonthina in the Palearctic and Oriental Regions. See the text about the content of the numbered characters in the matrix. The genus with a symbol (*) shows that it is recognized as either of two lineages in LOBL & SMETANA (2006).

lineage	species	character							
		1	2	3	4	5	6	7	8
<i>Melolontha</i> lineage	* <i>Melolontha melolontha</i>	0	0	1	0	1	0	0	0
	* <i>M. japonica</i>	0	0	1	1	1	0	0	0
	<i>Anisopholis affinis</i>	2	1	1	1	1	0	0	0
	* <i>Exolontha pennata</i>	0	0	1	0	0	0	0	0
	<i>Schoenherria sulcipennis</i>	0	0	1	1	1	0	0	0
	* <i>Polyphylla laticollis</i>	2	1	1	0	0	0	1	0
	* <i>P. shoefeldti</i>	2	1	1	0	1	1	1	0
	* <i>Anoxia villosa</i>	0	1	1	0	1	1	1	0
	* <i>A. australis</i>	0,1	1	1	0	1	1	1	0
	<i>Engertia lii</i>	2	0	1	1	1	1	1	0
<i>Leucopholis</i> lineage	<i>Exopholis hypoleuca</i>	3	0	0	0	0	0	0	1
	* <i>Asactopholis gracilipes</i>	2	0	0	0	0,1	0	0	1
	<i>Chaetocosmetes sp.1</i>	1	0	0	0	0	0	0	0
	<i>C. sp.2</i>	0,1	0	0	0	0	0	0	0
	<i>Stephanopholis melolonthoides</i>	2	1	0	1	0	0	0	0
	<i>Wadaia kaorui</i>	2	1	0	0	1	0	1	0
	<i>Psilopholis grandis</i>	0	0	0	0	0	0	0	0
	* <i>Lepidiota bimaculata</i>	2	0	0	0	0,1	0	0	0
	* <i>Leucopholis tristis</i>	2	0	0	1	1	0	0	0
	* <i>Cyphochilus cretaceus</i>	2	0	0	0	0	0	0	1
	* <i>C. feae</i>	2	0	0	1	0	0	0	1
	* <i>Dedalopterus malyszi</i>	2	0	0	0	0	0	0	0
	* <i>Malaisius siamensis</i>	0	0	0	0	0	0	?	1
	* <i>Dasylepida ishigakiensis</i>	1	0	0	0	0	0	1	1
	* <i>D. fissa</i>	1	0	0	0	0	0	1	1

Characters

1. integument of dorsal side (0) fine hairs only; (1) thick hairs; (2) rounded or rice-shaped scale; (3) glabrous
2. clypeus in male (0) rounded (e.g., Fig. 6); (1) strongly angulate (e.g., Fig. 7)
3. number of segments of antennal club (0) more than three segments at least in male; (1) three segments in both sexes
4. mesosternal process (0) absent; (1) more or less developed
5. maculations at sides of abdomen (0) not developed; (1) present as a patch
6. position of the denticle of protarsal claw in male (0) situated below the claw (e.g., Fig. 8); (1) occurring from inner side of the claw (e.g., Fig. 9)
7. difference in shape of claw between sexes (0) absent; (1) present
8. internal branching of each paramere of male genitalia (0) absent; (1) present (e.g., Fig. 10)

The eight characters enumerated above were examined for twenty-five species in the list. The resultant matrix is in Table 2. In this investigation, the only materials from Palearctic and Oriental Regions were examined.

This result seems to indicate that the division into two lineages cannot be supported what characteristics might be selected except for the number of the segments of antennal club. However, some genera may be able to form small groups by sharing above enumerated characters.

For example, *Polyphylla*, *Anoxia* and *Engertia* may form a genus-group by sharing the denticle of male protarsal claw occurring from its inner side, although *Polyphylla laticollis* does not share the characteristics. These three genera have their claws clearly differentiated between male and female.

In the same way, *Exopholis*, *Asactopholis*, *Dasylepida*, *Malaisius* and *Cyphochilus* share the branching parameres, so that their relationship must be carefully examined. *Cyphochilus*, *Dedalopterus* and *Malaisius* may be allied to one another by the mildly and roundly trapezoidal clypeus, although this is not shown in the result in Table 2.

In the subtribe Melolonthina, some genera may be related to each other and form genus-groups, but others cannot be combined with any other genera. So far as I have examined this result, it is impossible to assign all the genera in the subtribe Melolonthina either to the *Leucopholis* lineage or to the *Melolontha* one by any definite morphological characteristics. Thus, I would like to propose not to use the names of these two lineages and to state merely that the genus *Psilopholis* belongs to the subtribe Melolonthina here.

要 約

松本 武：ボルネオ島産の *Psilopholis* 属の 1 新種ならびにコフキコガネ亜族の慣例的な区分の正当性について。——コフキコガネ亜族の *Psilopholis* 属の特大種をボルネオ島から見出し、*P. gigantea* と命名した。本種は、基準種 *P. grandis* にきわめてよく似ているが、少なくともボルネオ島北部では同所的に生息していること、両者の体長差は歴然としており、変異の幅の重なり合うことがなく中間的な大きさの個体もないこと、♂交尾器側片の裏側には顕著な差があることなどから新種と考えられたのでここに記載した。*Psilopholis* 属の形質状態についての記述が少なかったため改めてここで記載した。スマトラ島から記載された *Tricholepis vestita* SHARP の記載を丹念に調べたところ、*P. grandis* の♀についての記述であることが判明したので、これを新参下位異名とした。

従来、コフキコガネ亜族は、触角葉片節の数の違いのみによって *Melolontha* 属または *Leucopholis* 属に近い 2 系列の属群に分けられてきたが、この区分が他の形質でも支持されるかどうか主要な属の代表種を使って検討した。多様な形態をもつこの亜族の属は触角以外の形質では 2 系列にはっきりと割り振ることができなかった。このため、コフキコガネ亜族を *Melolontha* 属系列、*Leucopholis* 属系列の 2 系列に分けることは合理的ではないと考えられるので、この呼称を使わないように提唱したい。今回、取り扱った *Psilopholis* 属は、単にコフキコガネ亜族に属するものであると述べるにとどめておきたい。

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An Old Record of *Hydaticus thermonectoides* (Coleoptera, Dytiscidae) from Kyushu Island, Japan

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Hydaticus thermonectoides SHARP, 1884 was originally described from Nagano Prefecture, central Honshu, Japan and has been known from Japan (central Honshu), South Korea, and China (Jiangsu, Zhejiang and Yunnan) (MORI & KITAYAMA, 2002; NILSSON, 2003). Recently, we have found a specimen of this species collected from the northern part of Kyushu Island about half a century ago. This is the first record of *H. thermonectoides* from Kyushu Island.

Specimen examined. 1♀, Mt. Hikosan, Soeda-machi, Fukuoka Pref., Kyushu, Japan, 15–VII–1954, H. KAMIYA leg. In the collections of the National Museum of Nature and Science, Tokyo.

Notes. This specimen was collected by the late Dr. Hiroyuki SASAJI (= KAMIYA). As aquatic

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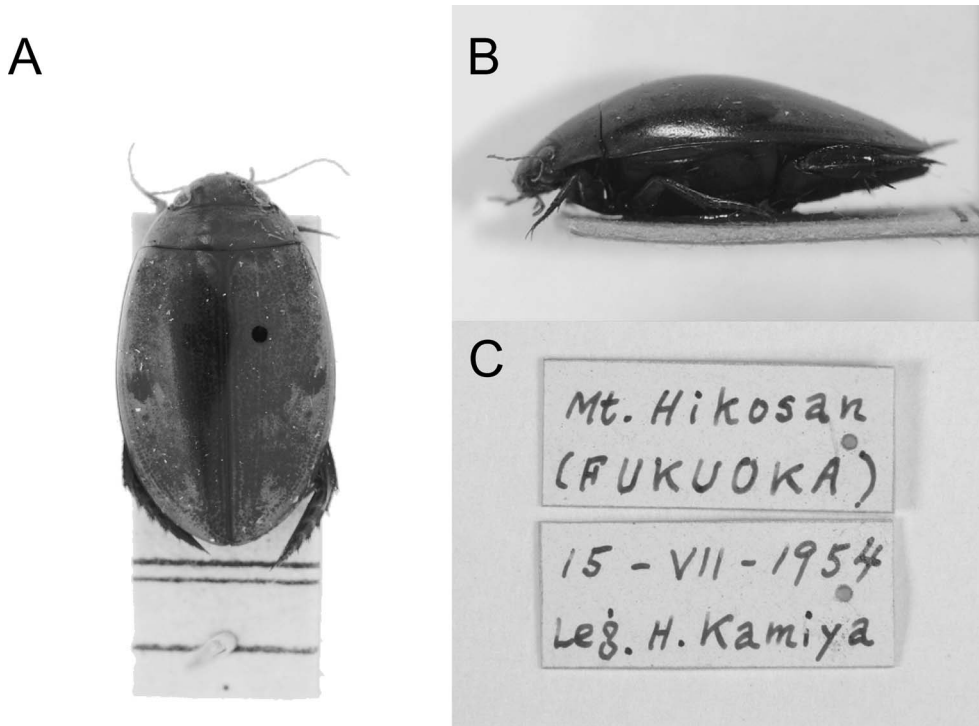


Fig. 1. *Hydaticus thermonectoides* SHARP, from Mt. Hikosan, Kyushu Island, Japan. — A, dorsal view; B, lateral view; C, labels.

environment has been declined, the present situation of this species is considered to be on the verge of extinction in Honshu, Japan (MORI & KITAYAMA, 2002). In spite of recent detailed survey of aquatic beetles in Fukuoka Prefecture, this species has not been discovered (INOUE & NAKAJIMA, 2009; NAKAJIMA & INOUE, 2009). Therefore, it may have become already extinct in Kyushu Island.

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Contributions to the Knowledge of the Quediina (Coleoptera,
Staphylinidae, Staphylinini) of China.
Part 38. Genus *Quedius* STEPHENS, 1829.
Subgenus *Raphirus* STEPHENS, 1829. Section 8

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Abstract Taxonomic data on the species of the genus *Quedius*, subgenus *Raphirus*, of the *pluvialis*-group (characterized here), from the People's Republic of China are provided. *Quedius pluvialis*, misidentified by SMETANA, 2007, is described as new under the name *Quedius shunichii* (from Sichuan), *Quedius oui* is described as new from specimens from Emei Shan, Sichuan, and the until now unknown male sexual characters are described for *Q. pluvialis* (known only from Emei Shan).

Key words: Taxonomy, new species, geographical distribution, Coleoptera, Staphylinidae, Staphylinini, Quediina, *Quedius*, subgenus *Raphirus*, *pluvialis* species-group, People's Republic of China.

Introduction

This is the thirty-eight of a series of papers on the Quediina of the People's Republic of China. It deals with the three species of the genus *Quedius* STEPHENS, 1829, subgenus *Raphirus* STEPHENS, 1829, of the *pluvialis*-group (characterized here).

Quedius (Raphirus) pluvialis SMETANA, 1998 was described from a single female taken at Emei Shan. Subsequently (SMETANA, 2007), I tentatively considered two males collected by UÉNO at Xilingxue Shan, Sichuan, "as conspecific with the holotype, unless different male(s) are found at Emei Shan". The two males were described and illustrated, with the emphasis on their primary and secondary male sexual characters. This description becomes now the description of the new species, *Q. shunichii*.

Recently, I had an opportunity to study a number of specimens of both sexes collected in 2009 by V. GREBENNIKOV on Emei Shan. The result was rather surprising, the series contained specimens of both sexes of two different species, neither one identical with the misidentified specimens from Xilingxue Shan. Since the tergite 10 of the female genital segment proved to be distinctive in the two Emei Shan species (Figs. 9, 15), it was not difficult to associate seven specimens (all taken from one habitat) with the female holotype of *Q. pluvialis* and to recognize the remaining specimens as members

of another, new species. The *pluvialis*-group contains therefore three species, the original *Q. pluvialis* from Emei Shan, the new species from Xilingxue Shan (*Q. shunichii* sp. n.) and the second species from Emei Shan (*Q. oui* sp. n.).

The *pluvialis*-group is quite distinctive within the subgenus *Raphirus*, being characterized by several derived characters, such as: meshed microsculpture on head and pronotum; highly developed male secondary characters present on abdominal sternites 5–8 (exception is *Q. oui* with these characters less developed, present on sternites 6 to 8, see the description); large, lightly sclerotized aedoeagus with large basal bulb; female genital segment with second gonocoxites long, narrow, each with minute stylus bearing long seta (see SMETANA, 1998, 103, Fig. 1), and with tergite 10 with long, dagger-like apical portion (Figs. 9, 15). Additional character states are the long antenna with even outer segments longer than wide, and the voluminous pronotum with obtusely rounded basal margin, markedly wider than elytral base.

The acronyms used in the text, when referring to the deposition of specimens are as follows:

- ASC Collection of Aleš SMETANA, Ottawa, Canada
- IZB Institute of Zoology, Chinese Academy of Sciences, Beijing, People's Republic of China
- NSM National Museum of Nature and Science, Tokyo, Japan

Quedius (Raphirus) shunichii sp. nov.

(Figs. 1–3)

Quedius (Raphirus) pluvialis SMETANA, 2007, 466 [misidentification, nec *Quedius (Raphirus) pluvialis* SMETANA, 1998, 99].

Description. Refer to the description in SMETANA, 2007, 466–468, and figures 8–14. Figures 8–10 are repeated here for convenience (as Figs. 1–3).

Length 8.6–9.0 mm.

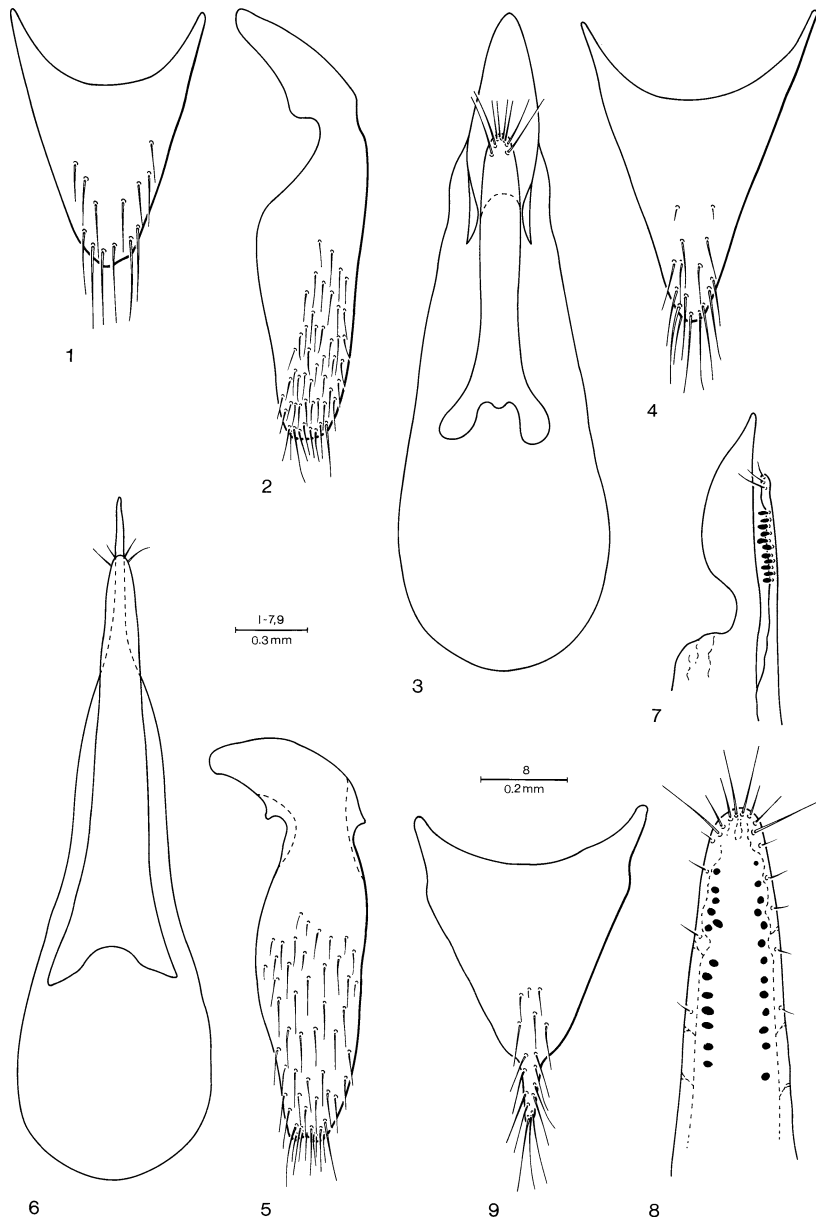
Type material. Holotype (male): China: “Xilingxue Shan Dujuanlin, 2,180 m, Dayi Xian C. Sichuan”/“SW CHINA 11–VI–2007 S. UÉNO leg.”/“*Quedius pluvialis* Smet. A. Smetana det. 2007”/“HOLOTYPE *Quedius shunichii* A. Smetana 2010”. In the SMETANA collection, Ottawa, Canada (to be eventually deposited in the Muséum d’histoire naturelle de Genève, Switzerland).

Paratype: same data as holotype, except for the last label “PARATYPE *Quedius shunichii* A. Smetana 2010”, 1♂ (NSM).

Geographical distribution. *Quedius shunichii* is at present known only from the type locality in central Sichuan.

Bionomics. The specimens were taken by sifting dead arrow-bamboo leaves, accumulated in a thicket of arrow-bamboo growing as undergrowth in a *Rhododendron* forest.

Recognition and comments. *Quedius shunichii* is the second largest species of the



Figs. 1-9. — 1-3. *Quedius shunichii*: 1, tergite 10 of male genital segment; 2, sternite 9 of male genital segment; 3, aedeagus, ventral view. — 4-9. *Quedius oui*: 4, tergite 10 of male genital segment; 5, sternite 9 of male genital segment; 6, aedeagus, ventral view; 7, apical portion of aedeagus, lateral view; 8, apical portion of underside of paramere; 9, tergite 10 of female genital segment.

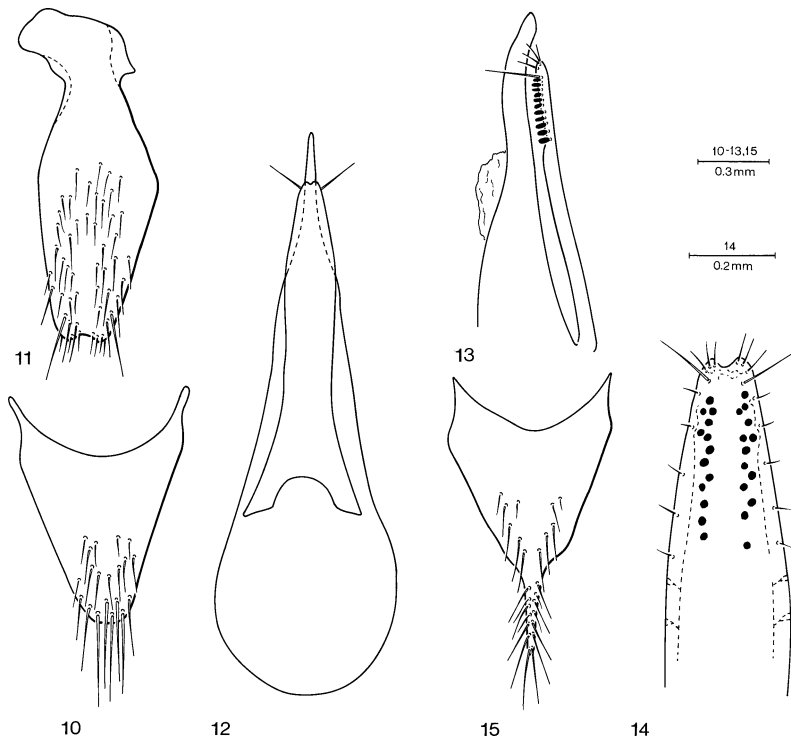
pluvialis-group. It differs from the both remaining species of the group by the highly developed male secondary sexual characters on abdominal sternites five to eight, and by the characteristic shape of the aedoeagus (Fig. 3). The males of *Q. pluvialis* have secondary sexual characters on sternites five to eight, but the characters are considerably simpler (see the description under *Q. pluvialis*).

Etymology. Patronymic. The species has been named in honour of Dr. Shun-Ichi UÉNO, National Museum of Nature and Science, Tokyo, in appreciation of our long lasting friendship, as well as in recognizing his outstanding contribution to the improvement of our knowledge of the beetle fauna of China and Japan.

Quedius (Raphirus) oui sp. nov.

(Figs. 4–9)

Description. Dark piceous to piceous-black, anterior portion of clypeus to various extent paler, rufobrunneous, elytra sometimes slightly paler; head and pronotum appearing dull. Maxillary and labial palpi brunneo-testaceous, antennae with first three segments rufobrunneous, middle segments somewhat darkened, outer four to five segments gradually becoming greyish-testaceous, legs piceous to piceous-black with slightly paler tarsi, medial faces of front tibiae rufo-brunneous. Head of rounded quadrangular shape, wider than long (ratio 1.18), posterior angles entirely rounded, obsolete. Eyes large, convex, tempora considerably shorter than eyes seen from above (ratio 0.23); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to posteriomedial margin of eye, separated from it by distance about as large as diameter of puncture, one puncture between it and posterior margin of head; temporal puncture touching posterior margin of eye; tempora without punctures; surface of head with dense, moderately coarse microsculpture of small isodiametric meshes changing gradually into slightly transverse meshes toward posterior margin of head; some scattered micropunctulae. Antenna long, segment 3 markedly longer than segment 2 (ratio 1.30), following segments markedly longer than wide, gradually becoming shorter, last segment elongate, shorter than two preceding segments combined. Pronotum voluminous, wider than long (ratio 1.19), widest at about posterior third, distinctly narrowed anteriorly, with lateral margins continuously arcuate with obtusely rounded base, transversely convex, lateral portions not explanate; dorsal rows each with three fine punctures, sublateral rows each with two or three punctures, posterior puncture (usually finer than the two previous) at about level of large lateral puncture (if only two punctures present, then posterior puncture before level of large lateral puncture); microsculpture similar to that on head but somewhat finer and denser, with micropunctulae more apparent. Scutellum with a few punctures, with fine submeshed microsculpture. Elytra very short, with apical margins each markedly oblique toward suture, at base markedly narrower than pronotum at widest point, slightly widened posteriorly, at suture considerably (ratio 0.66), at sides still markedly shorter (ratio 0.74) than pronotum at midline; punctuation moderately coarse



Figs. 10–15. *Quedius pluvialis*: 10, tergite 10 of male genital segment; 11, sternite 9 of male genital segment; 12, aedoeagus, ventral view; 13, apical portion of aedoeagus, lateral view; 14, apical portion of underside of paramere; 15, tergite 10 of female genital segment.

and dense, punctures slightly asperate, transverse interspaces between punctures about as large as diameters of punctures; pubescence piceous; surface between punctures with appreciable microscopical irregularities. Wings reduced to minute, non-functional stumps. Abdomen with tergite 7 (fifth visible) without whitish apical seam of palisade fringe; tergite 2 (in front of first visible tergite) entirely, finely and not densely punctate and pubescent; punctation of abdominal tergites finer than that of elytra, becoming gradually somewhat sparser toward apex of abdomen; pubescence piceous; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

Male. First four segments of front tarsus markedly dilated, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.27), segment 4 markedly narrower than preceding segments. Sternite 6 with apical margin vaguely, widely concave, with a small field of denser setae mediobasally; sternite 7 with apical margin moderately, subarcuately emarginate at middle, large triangular area before emargination depressed/flattened and smooth; sternite 8 with wide, deep, obtusely triangular medioapical emargination, large triangular area before emargination depressed and smooth. Genital segment with tergite 10 narrowly triangular, markedly,

evenly narrowed toward subacute apex, with a few setae at apex and on apical third, otherwise asetose (Fig. 4); sternite 9 with markedly differentiated basal portion, narrowly subtruncate to subemarginate apically, with two differentiated apical setae (Fig. 5). Aedoeagus (Figs. 6–8) very large, with voluminous basal bulb, median lobe of quite characteristic shape, anteriorly attenuated into long, narrow, dagger-like apical portion; paramere very long, shaped as in Figs. 6, 8, with narrowly arcuate apex reaching about apical third of the dagger-like apical portion of median lobe; sensory peg setae on underside of paramere forming two longitudinal rows, each with 9 to 14 setae; apex of paramere with two long setae and one equally long seta at each lateral margin below apex, and with two minute setae at each side between them; internal sac with complex sclerites.

Female. First four segments of front tarsus only slightly dilated, vaguely subbilobed, each with modified setae ventrally; segment two narrower than apex of tibia (ratio 0.78); segment four narrower than preceding segments. Sternite 8 with two long setae on each side. Genital segment with second gonocoxites long and narrow, each with extremely minute stylus bearing one long, strong seta; tergite 10 rather wide, markedly narrowed, apically rather abruptly narrowed into moderately long, dagger-like apical portion; setae present on dagger-like apical portion and for short distance medially in front of it, otherwise tergite asetose (Fig. 9).

Length 9.0–10.2 mm

Type material. Holotype (male): China: “P. R. CHINA, Sichuan, Emei Shan N29°32.806' E103°20.106', 03. vii. 2009, 2,349 m, sifting 15, V. Grebennikov”. Allotype (female): same data as holotype, but N29°33.605' E103°20.603'. 05. vii. 2009, 1947 m. Holotype temporarily in the Canadian National Collection of Insects, to be eventually deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing. Allotype in the SMETANA collection, Ottawa, Canada (to be eventually deposited in the Muséum d'histoire naturelle, Genève, Switzerland);

Paratypes: China: [Sichuan]: same data as allotype, 1 ♂, 3 ♀♀, in ASC and IZB; same data as holotype, but N29°33.775' E103°21.051', 29. vi. 2009, 1882 m, sifting 12, 1 ♂, 1 ♀ (ASC, IZB); same data as holotype, but N29°33.605' E103°20.633', 27. vi. 2009, 1947 m, sifting 11, 1 ♂ (ASC).

Geographical distribution. *Quedius oui* is at present known only from Emei Shan. It is likely endemic to that mountain range.

Bionomics. The specimens of the original series were taken by sifting layers of leaf litter on the broadleaved forest floor.

Recognition and comments. *Quedius oui* is the largest of the three species of the *pluvialis*-group. It differs from *Q. shunichii*, the second largest species of the group, by the absence of the male secondary sexual characters on the abdominal sternites five and six (see the description), and by the characteristic shape of the aedoeagus (Fig. 6). It differs from *Q. pluvialis* by the absence of the male secondary sexual characters on the abdominal sternite five (see the description of the male of *Q. pluvialis*), by the entirely different aedoeagus, and by the markedly larger tergite 10 of the female genital segment,

with shorter, more robust dagger-like apial portion (Figs. 9, 15). The female of *Q. shunichii* is not known at present.

Etymology. Patronymic, the species was named in honor of Mr. OU Dingxiang, the Deputy Secretary of Environmental Protection Agency, in appreciation of his support during the field work on Emei Shan.

Quedius (Raphirus) pluvialis SMETANA

(Figs. 10–15)

Quedius pluvialis SMETANA, 1998, 99.

New record. China: [Sichuan]: “P. R. CHINA, Sichuan, Emei Shan, N29° 32.932' E103° 20.466' 01. vii. 2009, 2310m, sifting 14, V. Grebennikov”, 3 ♂♂, 4 ♀♀ (ASC, ZIB).

Comments. The specimens were taken by sifting layers of leaf litter on the broadleaved forest floor.

Quedius pluvialis was described from a single female taken at Emei Shan, Sichuan, and the holotype was until now the only known specimen of the species. The previous description of the male of the species (SMETANA, 2007, 466) was a misidentification and referred actually to a new species (see *Q. shunichii* above).

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.33), segment 4 narrower than preceding segments. Sternite 5 with apical margin slightly bisinuate in middle, and with punctation and pubescence denser on middle portion of sternite; sternite 6 with apical margin subtruncate in middle, small square medial area before it flattened and smooth, square area bordered along each side by long, dark setae; sternite 7 with apical margin inconspicuously notched in middle, small square medial area before it flattened and smooth, medial area of sternite bordered along each side by long, dark setae extending to about basal third of sternite; sternite 8 with wide and deep, obtusely triangular medioapical emargination, small triangular area before emargination depressed and smooth. Genital segment with tergite 10 rather small, evenly narrowed toward arcuate apex, setose as in Fig. 10; sternite 9 rather short and wide, with markedly differentiated basal portion, widely subtruncate to subemarginate apically, with two differentiated subapical setae (Fig. 11). Aedoeagus (Figs. 12–14) similar to that of *Q. oui*, but in general smaller, with apical dagger-like portion markedly shorter; paramere markedly shorter and of somewhat different shape, with apex slightly emarginate, sensory peg setae on underside of paramere forming two longitudinal rows which are shorter and more irregular than those of *Q. oui* (Fig. 14).

Quedius pluvialis is the smallest species of the three species of the group, the length of the specimens studied fluctuates between 8.0–8.8 mm. An additional character, distinguishing it from the remaining two species of the group, is the presence of an additional setiferous puncture between the posterior frontal puncture and the puncture

at the posterior margin of the head.

要 約

A. SMETANA: 中国産ツヤムネハネカクシ亜族に関する知見. 38. ツヤムネハネカクシ属 *Raphirus* 亜属の 8. — 四川省の峨眉山から記載された *Quedius pluvialis* の雄を詳しく検討した結果, 2 新種の混在が確認されたので, それらを新たに記載し, 西岭雪山の固有種に *Q. shunichii* という新名を, また峨眉山固有の第二の種に *Q. oui* という新名を与えた.

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- 2007. Ditto. Part 28. Genera *Strouhalium* SCHEERPELTZ, 1962 (section 5) and *Quedius* STEPHENS, 1829 (subgenus *Microsaurus* DEJEAN, 1833, section 16 and *Raphirus* STEPHENS, 1829, section 5). *Ibid.*, **35**: 461–469.
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Lathrobium brachypterum and its New Relative (Coleoptera,
Staphylinidae) from Central Honshu, Japan

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Abstract *Lathrobium brachypterum* and its relative are dealt with. The former is redescribed based on the type specimen, and its male genital organ is described and illustrated for the first time. The latter is described as a new species under the name of *L. adachii* from central Honshu, Japan.

Lathrobium brachypterum described by SHARP (1889, p. 255) and its relative species form a peculiar group within the genus on account of medium-sized body and degenerated hind wings. Since SHARP's description, it has been reported by many entomologists from various localities of Honshu, Shikoku and Kyushu, Japan. However, it has been confused until now with its relatives due to similar body-size and facies. Therefore, I would like to illustrate the type specimen of *L. brachypterum* and its male genital organ is described and illustrated for the first time. Besides, a new species will be described in the present paper. It is closely similar in general appearance to *L. brachypterum*, but differs from it in the configuration of the male genital organ.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at the Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to the following colleagues for supplying me with many specimens for this study: Mrs. Shiho ARAI, Prof. Young-Bok CHO, Dr. Hiroki MIZUSHIMA, Mr. Seidai NAGASHIMA, Dr. Shûhei NOMURA, Mr. Hiroki ONO, Mr. Yasutoshi SHIBATA, Mr. Takashi SHIMADA, Dr. Shuji TACHIKAWA, Mr. Yoshiaki TAHIRA, and Mr. Koji ARAI, and also to Dr. Wataru SUZUKI and Mr. Yasutoshi SHIBATA for permission to use the photographs of the type specimen preserved in the British Museum (Natural History).

Lathrobium (Lathrobium) brachypterum SHARP

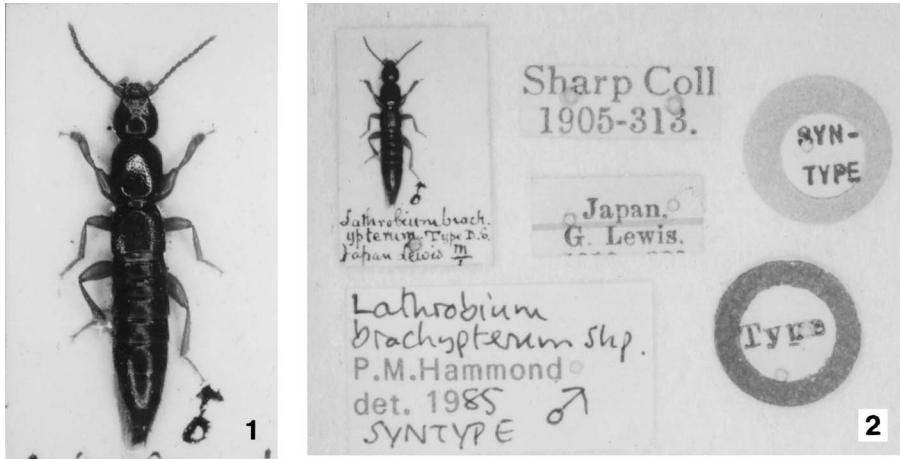
[Japanese name: Himekobane-nagahanekakushi]

(Figs. 1–3, 5–7)

Lathrobium brachypterum SHARP, 1889, Ann. Mag. nat. Hist., (6), **3**: 255.

Other references are omitted.

Body length: 6.9–8.9 mm (from front margin of head to anal end); 3.4–3.6 mm (from front margin of head to elytral apices).

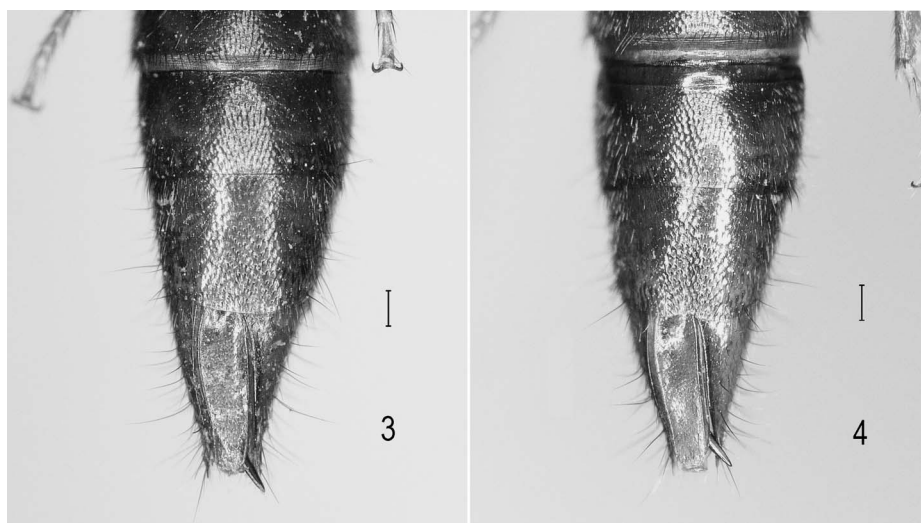


Figs. 1-2. *Lathrobium brachypterum* SHARP; habitus (1), labels attached to the type (2).

Body elongate, nearly parallel-sided and somewhat depressed above. Colour reddish brown to blackish brown and moderately shining, with labrum, palpi, legs and apical two abdominal segments brownish yellow.

Head subquadrate and somewhat depressed above, almost as long as wide, widest at posterior fourth and more strongly narrowed anteriorly than posteriorly, frontal area between antennal tubercles transversely flattened and glabrous along frons, provided with a relatively large setiferous puncture inside each antennal tubercle; surface much sparsely, somewhat coarsely and setiferously punctured, the punctures more or less becoming closer in latero-basal areas and covered with extremely microscopic coriaceous ground sculpture only visible under high magnification; eyes small and nearly flat, their longitudinal diameter less than a half the length of postocular parts which are gently arcuate. Antennae elongate, extending to the middle of pronotum and not thickened towards the extremity, two proximal segments polished, 3rd subopaque and the remainings opaque, 1st segment robust and dilated apically, twice as long as wide, 2nd constricted at the base, a half as long as and somewhat narrower than 1st ($2nd/1st = 0.83$), 3rd more than 1.5 times as long as wide, a little longer ($3rd/2nd = 1.33$) than though as wide as 2nd, 4th to 10th equal in both length and width to one another, each somewhat longer than wide ($length/width = 1.20$), somewhat shorter (each of 4th to 10th/ $3rd = 0.75$) than though as wide as 3rd, 11th fusiform, distinctly longer than wide ($length/width = 1.80$), 1.5 times as long as and as wide as 10th, subacuminate at the apex.

Pronotum elevated medially and slightly trapezoidal, only slightly narrowed posteriorly, a little longer than wide ($length/width = 1.14$), distinctly longer ($pronotum/head = 1.38$) and somewhat wider ($pronotum/head = 1.14$) than head; lateral sides almost straight except near anterior and posterior angles, anterior margin gently arcuate,

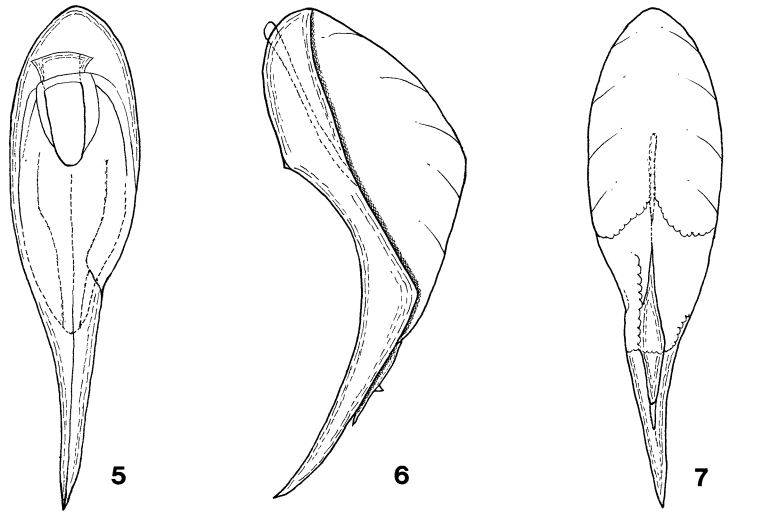


Figs. 3–4. Secondary sexual characters of abdominal sternites in the male; *L. (L.) brachypterum* SHARP (3), *L. (L.) adachii* sp. nov. (4). Scale: 0.2 mm.

posterior margin subtruncate, anterior angles obtuse and not visible from dorsal side, posterior ones narrowly rounded; surface more closely and more coarsely punctured than in medio-frontal area of head except for a narrow smooth median space through the length of pronotum. Scutellum subtriangular, surface provided with a few minute setiferous punctures and obscure ground sculpture. Elytra subtrapezoidal, slightly dilated posteriad and subdepressed above, somewhat transverse (width/length = 1.14), distinctly shorter (elytra/pronotum = 0.76) but slightly wider (elytra/pronotum = 1.04) than pronotum; lateral sides feebly arcuate, posterior margin emarginate at the middle, posterior angles broadly rounded; surface superficially and much more closely punctured than in pronotum, and covered with fine brownish pubescence. Hind wings degenerated to minute lobes which are about one-fourth as long as elytra. Legs moderately long; femora, tibiae and tarsi, all of which are similar in structure to those of other members of this species-group.

Abdomen elongate and slightly dilated towards the 7th segment, and then abruptly narrowed aipcad; 3rd to 7th tergites each closely aciculate and finely punctured, and closely covered with fine brownish pubescence, 8th and 9th tergites each more sparingly and more finely punctured and pubescent than in the preceding tergites; 8th sternite slightly produced posteriad or subtruncate at the middle of posterior margin, and flattened before the produced or subtruncate part, the flattened part provided with more closely covered with brownish pubescence than in other areas; 7th sternite truncate at the middle of posterior margin and longitudinally, shallowly depressed in front of truncate part; 6th sternite simple.

Genital organ well sclerotized except for the ventral side of median lobe. Median



Figs. 5-7. Male genital organ of *Lathrobium (Lathrobium) brachypterum* SHARP; dorsal view (5), lateral view (6), and ventral view (7). Scale: 1.0 mm.

lobe not extending to the apex of fused paramere, provided with an elongate sclerite on the ventral side, the sclerite being widest near the middle and narrowed both basad and apicad, and forming a small dorsal hook at the middle as seen from lateral side. Fused paramere somewhat asymmetrical and relatively narrow, slightly curved to the right, nearly parallel-sided in basal half and then abruptly narrowed towards the pointed apex as seen from dorsal side, and strongly curved dorsad in profile; dorsal surface provided with a fine longitudinal carina along the middle in apical half, though the carina becomes obscure in basal half.

F e m a l e. Similar in general appearance to male, but differs from it in the 8th abdominal sternite produced posteriad at the median part of posterior margin and narrowly rounded at the apex.

Specimens examined. 3 ♂♂, 3 ♀♀, Chisuji-no-taki, Miyanoshita, Hakone, Kanagawa Pref., Honshu, Japan, 1-VI-1969, Y. SHIBATA leg.; 1 ♂, 1 ♀, same locality and collector as above, 7-VI-1970; 1 ♀, Mt. Sengen, Miyanoshita, Hakone, Kanagawa Pref., Honshu, Japan, 23-V-1966, Y. WATANABE leg.; 1 ♂, 1 ♀, Mt. Kami-yama, Hakone, Kanagawa Pref., Honshu, Japan, 30-VI-1983, Y. WATANABE leg.; 2 ♂♂, same locality as above, 25-V-1974, Y. SHIBATA leg.; 2 ♂♂, 1 ♀, Hōki-zawa, Tanzawa, Kanagawa Pref., Honshu, Japan, 11-V-1996, Y. WATANABE leg.; 11 ♂♂, 5 ♀♀, Yōsui-zawa, Yamakita-machi, Kanagawa Pref., Honshu, Japan, 10-XI-2002, S. ARAI leg.; 3 ♂♂, 2 ♀♀, Toi-tōge, Izu, Shizuoka Pref., Japan, 30-III-2001, Y. WATANABE leg.; 1 ♂, 1 ♀, Yahazudai, Amagi-kōgen, Shizuoka Pref., Honshu, Japan, 4-V-2000, Y. WATANABE leg.; 1 ♂, 3 ♀♀, Amagi-tōge (850 m alt.), Kawazu, Shizuoka Pref., Honshu, Japan, 20-X-2000, S. NOMURA leg.; 2 ♂♂, 5 ♀♀, Mt. Tohgasa-yama, Nakaizu-machi, Shizuoka

Pref., Honshu, Japan, 12–VIII–1999, T. SHIMADA leg.; 1 ♂, 2 ♀♀, Mt. Manjirô, Kazawa-bunkiten (1,180m alt.), Nakaizu-machi, Shizuoka Pref., Honshu, Japan, 12–XI–2000, S. ARAI leg.; 1 ♀, Mt. Manzaburô, Mizuba (1,000 m alt.), Nakaizu-machi, Shizuokka Pref., Honshu, Japan, 12–XI–2000, S. ARAI leg.; 7 ♂♂, 9 ♀♀, Mt. Mitsumine, Shizuoka Pref., Honshu, Japan, 11–X–1982, Y. TAHIRA leg.; 1 ♂, 1 ♀, Ume-gashima-onsen, Shizuoka Pref., Honshu, Japan, 1–VI–1986, Y. WATANABE leg.; 7 ♂♂, 4 ♀♀, Fureoka-machi, Ôtsuki-shi, Yamanashi Pref., Honshu, Japan, 23–V–1982, Y. WATANABE leg.

Distribution. Japan (central Honshu).

Bionomics. The greater number of the above specimens were obtained by sifting dead leaves accumulated in deciduous broadleaved forests or extracted from leaf-litter on the mountain-side by Tullgren funnel.

Remarks. Similar to *L. monticola* SHARP (1889, p. 255) in the secondary sexual characters of abdominal sternites in the male, but differs from it in the larger body and configuration of male genital organ. Also similar to *L. satoi* Y. WATANABE (2003, p. 151) in configuration of male genital organ, but somewhat different from it in the narrower fused paramere.

***Lathrobium (Lathrobium) adachii* Y. WATANABE, sp. nov.**

[Japanese name: Adachi-himekobane-nagahanekakushi]

(Figs. 4, 8–10)

Body length: 7.6–8.0 mm (from front margin of head to anal end); 3.2–3.5 mm (from front margin of head to elytral apices).

The present new species is closely similar in body size and morphological characters to the preceding species, but slightly different from it in the following points:

Male. Head subquadrate and somewhat depressed above, a little transverse (width/length=1.11), widest at about posterior fourth and more strongly narrowed anteriorly than posteriorly, lateral sides less arcuate than in the preceding species; surface sparingly, setiferously and more coarsely punctured than in the preceding species, the punctures much sparser in medio-frontal area than in latero-basal areas, and covered with slightly coarser coriaceous ground sculpture all over than in the preceding species; eyes small and nearly flat, their longitudinal diameter less than one-third the length of postocular part which is slightly less expanded laterally than in the preceding species. Antennae moderately long, extending a little beyond the middle of pronotum and not thickened towards the apical segment, antennal articulation similar in that of the preceding species.

Pronotum elevated medially, subtrapezoidal and somewhat narrowed posteriorly, a little longer than wide (length/width=1.13), distinctly longer (pronotum/head=1.37) and somewhat wider (pronotum/head=1.10) than head; surface sparingly and coarsely punctured except for a narrow smooth median space through the length of pronotum as

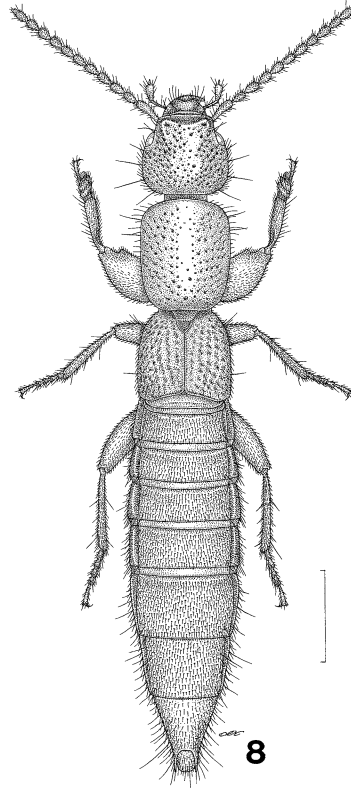
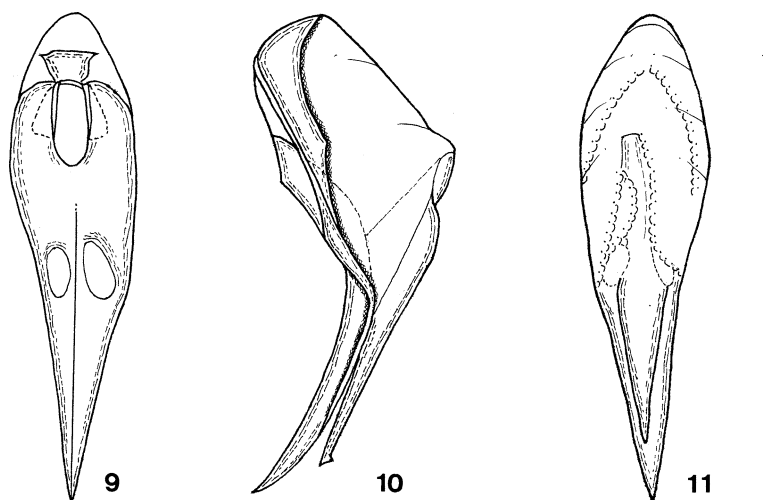


Fig. 8. *Lathrobium (Lathrobium) adachii* sp. nov., from Mt. Sengen-yama, Miyanoshta, Hakone, central Honshu, Japan. Scale: 1.0 mm.

in the preceding species. Scutellum subtriangular, surface provided with a few minute setiferous punctures as in the preceding species. Elytra subquadrate though slightly dilated posteriad, less transverse (width/length=1.05) than in the preceding species, distinctly shorter (elytra/pronotum=0.85) than though as wide as pronotum, lateral sides, posterior margin and posterior angles similar to those of the preceding species; surface slightly more densely and slightly more coarsely punctured than in the preceding species. Hind wings degenerated to minute lobes as in the preceding species. Legs moderately long, femora, tibiae and tarsi similar in structure to those of the preceding species.

Abdomen elongate, almost parallel-sided from 3rd to 7th segments and then abruptly narrowed towards the anal end, 3rd to 7th tergites each closely, superficially punctured and covered with fine brownish pubescence as in the preceding species, 8th and 9th tergites each more sparingly punctured and pubescent than in the preceding tergites; 8th sternite shallowly and semicircularly emarginate at the middle of posterior



Figs. 9–11. Male genital organ of *Lathrobium (Lathrobium) adachii* sp. nov.; dorsal view (9), lateral view (10), and ventral view (11). Scale: 1.0 mm.

margin and provided with long-subtriangular depression in front of the emargination, surface of the depression more closely provided with blackish brown setae than in other part; 7th sternite broadly and shallowly emarginate at the middle of posterior margin, bearing a linguiform depression before the emargination, surface of the depression covered with brownish pubescence as in other parts; 6th sternite simple.

Genital organ spindle-shaped and almost symmetrical, well sclerotized except for membreneous ventral side of median lobe. Median lobe extending to near the apex of fused paramere, with ventral sclerite subrhomboidal, widest near the middle and narrowed both basad and apicad, apex forming a minute dorsal hook as seen from lateral side. Fused paramere abruptly narrowed in apical two-thirds towards the acutely pointed apex as seen from dorsal side, strongly curved dorsad in apical half in profile, surface provided with a longitudinal carina along the median line, though the carina becomes obscure near the median foramen, and bearing an obviously elliptical depression on each side of the longitudinal carina near the middle.

F e m a l e. Similar in facies to the male, though the 8th abdominal sternite narrowed towards the narrowly rounded apex, gradually in basal two-thirds and abruptly so in apical third, and provided with a dull longitudinal elevation along the median line on the surface.

Type series. Holotype: ♂, Mt. Kami-yama, Hakone, Kanagawa Pref., Honshu, Japan, 30–VI–1983, Y. WATANABE leg. Allotype: ♀, same locality as above, 25–V–1974, Y. SHIBATA leg. Paratypes: 1 ♂, same data as the holotype; 2 ♂♂, 1 ♀, same locality as above, 25–V–1974, Y. SHIBATA leg.; 1 ♀, same locality and collector as above, 1–VI–1974; 3 ♂♂, 1 ♀, Mt. Daigatake, Hakone, Kanagawa Pref., Honshu, Japan, 3–III–2001,

H. MIZUSHIMA leg.; 1 ♂, 2 ♀♀, Mt. Sengen, Miyanoshita, Hakone, Kanagawa Pref., Honshu, Japan, 23-V-1966, Y. WATANABE leg.; 2 ♀♀, Chisuji-no-taki, Miyanoshita, Hakone, Kanagawa Pref., Honshu, Japan, 7-VI-1970, Y. SHIBATA leg.; 1 ♂, Ubako, Hakone, Kanagawa Pref., Honshu, Japan, 23-VI-1975, Y. SHIBATA leg.; 3 ♂♂, 3 ♀♀, Sengokuhara, Hakone, Kanagawa Pref., Honshu, Japan, 1-VI-1969, Y. SHIBATA leg.; 4 ♂♂, 1 ♀, Kamiyu, Hakone, Kanagawa Pref., Honshu, Japan, 24-VIII-2000, Y.-B. CHO leg.; 3 ♂♂, 3 ♀♀, Mt. Ôyama, Isehara, Kanagawa Pref., Honshu, Japan, 19-IV-2000, S. ARAI leg.; 7 ♂♂, 3 ♀♀, Fudakake, Kiyokawa Vill., Kanagawa Pref., Honshu, Japan, 19-X-2000, S. ARAI leg.; 5 ♂♂, 1 ♀, Makino, Fujino, Kanagawa Pref., Honshu, Japan, 19-VI-1987, Y. WATANABE leg.; 5 ♂♂, 5 ♀♀, Mt. Manjirô, Kozawa-bunkiten (1,180 m alt.), Nakaizu-machi, Shizuoka Pref., Honshu, Japan, 12-XI-2000, S. ARAI leg.; 2 ♂♂, 4 ♀♀, Mt. Manzaburô, Mizuba (1,000 m alt.); Nakaizu-machi, Shizuoka Pref., Honshu, Japan, 12-XI-2000, S. ARAI leg.; 1 ♀, same locality and date as above, S. NAGASHIMA leg.; 1 ♂, 4 ♀♀, Seiwa-kenmin-no-mori, Ozaki, Kimitsu-shi, Chiba Pref., Honshu, Japan, 21-IX-2004, H. ONO leg.; 5 ♂♂, 9 ♀♀, Mt. Mitake, Okutama, Tokyo Pref., Honshu, Japan, 3-V-1964, S. TACHIKAWA leg.; 8 ♂♂, 6 ♀♀, same locality as above, 18-V-1997, Y. WATANABE leg.; 1 ♂, Mizunozawa, Okutama, Tokyo Pref., Honshu, Japan, 2-V-1980, Y. WATANABE leg.; 1 ♂, 1 ♀, Mt. Takao, Tokyo Pref., Honshu, Japan, 6-VII-1976, Y. WATANABE leg.; 1 ♂, 2 ♀♀, same locality as above, 20-VII-2000, Kei. MATSUMOTO leg., 6 ♂♂, 5 ♀♀, Mt. Kumotori, Tokyo Pref., Honshu, Japan, 8-VII-1965, Y. WATANABE leg.; 4 ♂♂, 4 ♀♀, Suwa-jinja, Han'nou C., Saitama Pref., Honshu, Japan, 11-X-1998, K. TOYODA leg.; 1 ♂, 3 ♀♀, Kitamuki-jizou, Moroyama, Saitama Pref., Honshu, Japan, 11-X-1998, S. ARAI leg.; 1 ♂, same locality and date as above, K. TOYODA leg.; 1 ♂, Shishigataki, Moroyama, Saitama Pref., Honshu, Japan, 3-X-1998, K. TOYODA leg.; 2 ♀♀, Hashidate, Chichibu, Saitama Pref., Honshu, Japan, 17-VII-1999, S. ARAI leg.; 1 ♂, same locality as above, 7-VI-2002, K. TOYODA leg.

Type depositary. All the type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (central Honshu).

Bionomics. The type specimens were mainly obtained by shifting dead leaves accumulated in deciduous broadleaved forests on the hills and mountains. A small number of specimens were extracted from leaf-litter by Tullgren-funnel.

Etymology. The specific epithet of the present new species is dedicated to the late ex-Pref. Tsunamitsu ADACHI, Toyo University, who was one of the pioneers in taxonomy of the Japanese Staphylinidae.

要 約

渡辺泰明: ヒメコバネナガハネカクシ *Lathrobium brachypterum* SHARP および近縁の1新種。
— SHARP (1889) によって記載されたヒメコバネナガハネカクシおよび近縁の種は、いずれも

中型で、黒褐色を呈し、後翅が退化した特徴的種群を形成している。ヒメコバネナガハネカクシは原記載後、これまで多くの人達によって日本各地から記録されているが、同所的に生息し、色彩および類似した外部形態を呈する近似種と混同されてきた。そこで、私はヒメコバネナガハネカクシの基準標本を紹介するとともに、近縁の1新種をアダチヒメコバネナガハネカクシ *Lathrobium (Lathrobium) adachii* と命名・記載した。後者は前者と同様な形態的概観を呈するが、雄交尾器側葉の形状が異なることで区別される。なお、種小名は日本におけるハネカクシの分類学に関する先駆者の一人である安立綱光先生に献名したものである。

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Elytra, Tokyo, 38(2): 265, November 13, 2010

New Records of Three Staphylinid Species (Coleoptera) from the Island of Ishigaki-jima of the Ryukyus, Japan

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Examining the staphylinid beetles deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, I have found three unrecorded species from the Island of Ishigaki-jima of the Ryukyu Archipelago, Japan. They are recorded below with the collecting data.

1. *Rugilus (Eurystilicus) ceylanensis* (KRAATZ)
1 ♀, Takeda-rindō, Ishigaki-jima, Ryukyus, 23–IV–2003, H. SATŌ leg.
2. *Pinophilus rufipennis* SHARP
1 ♀, Takeda, Ishigaki-jima, Ryukyus, 28–III–1990, T. NONAKA leg.
3. *Neobisnius praelongus* (GEMMINGER et HAROLD)
7 ♀♀, Takeda, Ishigaki-jima, Ryukyus, 30–III–1990, T. NONAKA leg.

I thank Dr. Yoshifuki NONAKA and Mr. Hiroki SATŌ for their kindness in giving me the specimens.

Occurrence of *Pinophilus rufipennis* SHARP (Coleoptera,
Staphylinidae) on the Island of Miyako-jima of the
Sakishima Islands in Okinawa Prefecture, Japan

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Only three staphylinid species have hitherto been reported from the Island of Miyako-jima of the Sakishima Islands in Okinawa Prefecture, Japan by TAMAI & ARITA (1962), NOMURA (1995) and HAYASHI (2002).

Recently, I had an opportunity to examine one specimen of *Pinophilus rufipennis* SHARP (1884) which is unrecorded from the above-mentioned island. Its collection data are as given below.

1 ♀, Ueno-mura, Miyako-jima Is., Okinawa Pref., Japan, 11-IV-1975, H. SATÔ leg.

I wish to express my hearty thanks to Mr. Hiroki SATÔ, Annaka-shi, for his kindness in giving me the specimen, and Mr. Yasutoshi SHIBATA, Machide-shi, for his kind help in consulting with literature.

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SHARP, D., 1884. The Staphylinidae of Japan. *Trans. ent. Soc. London*, **1884**: 1-103.
TAMAI, S., & Y. ARITA, 1962. Collecting trip to the Ryukyu Islands. *Ageha (Matsuyama Insect-lovers' Assoc.)*, (10): 21-25 (In Japanese, with English title.)

Hind Wing Polymorphism Confirmed in the Coloninae (Coleoptera, Leiodidae)

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Abstract The occurrence of a hind wing polymorphism in the subfamily Coloninae is confirmed for the first time.

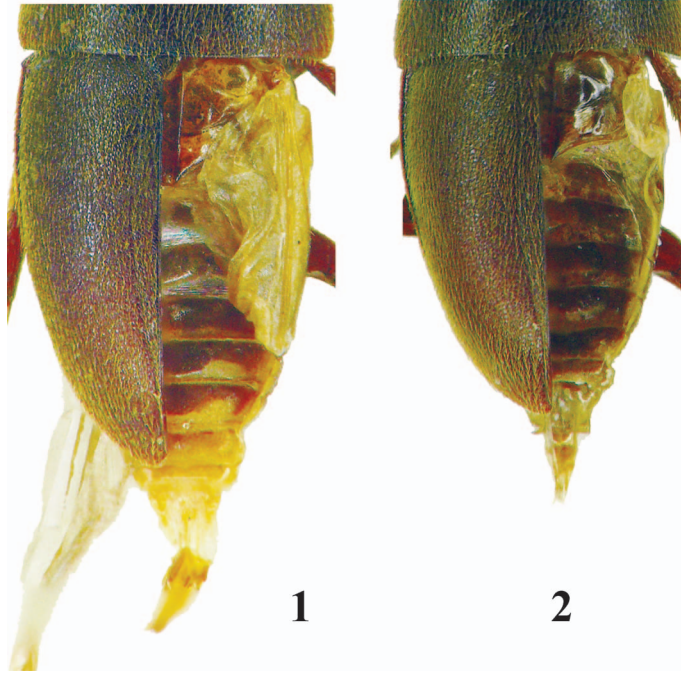
Nothing has previously been known on the occurrence of hind wing atrophy in any colonine beetle species, despite the existence of apterous condition ordinarily known in a wide range of other leiodid subfamily species (cf. NEWTON, 2005). Recently, I found some specimens of a brachypterous *Colon* species besides a specimen of macropterous condition from the Kamchatka Peninsula and Siberia in my collection. These specimens agreed with *Colon (Eurycolon) latum* KRAATZ. This species has a record of its trivial flight observed in Czech (FLEISCHER, 1903) and a widespread distributional range extending from Europe to Siberia (PERREAU, 2004). Very recently, the species was newly recorded from the Lazovsky Nature Reserve near Vladivostok, the Russian Far East (RŮŽIČKA, 2009). It is therefore likely to be considered showing as a northern Palaearctic distribution in a zoogeographical pattern, though unrecorded areas among Asian localities are spacious. As for specimens of RŮŽIČKA' record, their hind wings were confirmed as brachypterous condition, which was also confirmed in those of some localities in Central and Southeastern Europe, while specimens of macropterous condition were less commonly coexisting with them only at a few localities (RŮŽIČKA, pers. comm.).

I therefore show herein the occurrence of a hind wing polymorphism in the subfamily Coloninae for the first time. This brief paper is published to promote additional observations of the hind wing condition in colonine collections worldwide, because the condition has not been used as their diagnostic character (e.g., SZYMCAKOWSKI, 1969), and consequently has possibly been ignored from morphological observations of these specimens.

Colon (Eurycolon) latum KRAATZ, 1850

(Figs. 1–2)

Brachypterous specimens examined. 1 ♂, Berikul [ca. 56.2092°N 87.0572°E], Kuznetzkij Alatau, W. Siberia, Russia, 1–VI–1982, V. ERYSHOV leg.; 2 ♀♀, near Esso



Figs. 1-2. *Colon (Eurycolon) latum* KRAATZ, showing hind wing conditions. — 1, Macropterous condition, ♀, from Kuralzhycha Village, S. Uralskiy Khrebet, Russia; 2, brachypterous condition (0.43 mm in length), ♀, from Syrostan Village, S. Uralskiy Khrebet.

Village [ca. 55.9333°N 158.7°E], 600 m in alt., Kamchatskaya Oblast, Kamchatka Peninsula, Russia, 7-VII-2002; 1 ♂, 1 ♀, Kuralzhycha Village [Kuramshina?; ca. 55.1639°N 60.8378°E], Kyshtym District, Chelyabinskaya Oblast, S. Uralskiy Khrebet, Russia, 5-VII-2000; 1 ♂, 3 ♀♀, Syrostan Village [ca. 55.0608°N 59.9028°E], Miass District, Chelyabinskaya Oblast, S. Uralskiy Khrebet, 11-VI-2000; 3 ♂♂, 11 ♀♀, same locality, 12-VI-2000.

Macropterous specimen examined. 1 ♀, Kuralzhycha Village, Kyshtym District, Chelyabinskaya Oblast, S. Uralskiy Khrebet, 5-VII-2000. (All the specimens examined are in my collection.)

Discussion. The hind wing conditions of the specimens examined and their situations in Europe strongly suggest that *C. latum* clearly consists of macropterous and brachypterous individuals probably showing a geographical cline of their ratio in each population of its distributional range. The cline expected in this case is similar to the geographical cline of a wing dimorphism displayed in certain North European carabids (UDVARDY, 1969) but the geographical pattern of the case is still unclear judging from the present knowledge. Concerning the brachypterous specimens examined, their hind wings are undoubtedly reduced irrespective of the sex, varying the length even in

sympatric specimens. For example in specimens from Syrostan, their wings are reduced in length as follows: 0.1–0.2 mm in 2 ♂♂ and 5 ♀♀, 0.2–0.3 mm in 4 ♀♀, 0.3–0.4 mm in 1 ♂ and 2 ♀♀, 0.4–0.5 mm in 3 ♀♀, and 0.5–0.6 mm in 1 ♂. Similar variations were also observed in those of specimens from Slovakia and Lazovsky Nature Reserve (RŮŽIČKA, pers. comm.).

In any case, additional confirmation of wing conditions throughout the distributional range of this species is required to reinforce the prediction and observations based on geographically sporadic specimens.

I wish to express my deep gratitude to Dr. Jan RŮŽIČKA of the Czech Agricultural University, Praha, for giving me not only the information of hind wing conditions at my request but also important comments on the early draft of this paper. Special thanks are also due to Dr. Shun-Ichi UENO of the National Museum of Nature and Science, Tokyo, for critically reading the manuscript of this paper. Thanks are due to Messrs. Eduard Ya. and Oleg BERLOV, Irkutsk, for supplying with specimens which led me to the discovery of these phenomena.

要 約

西川正明：ヒゲブトチビシデムシ亜科（コウチュウ目タマキノコムシ科）に確認された後翅多型性。——タマキノコムシ科に所属する亜科の大部分に後翅を欠く甲虫が存在するにもかかわらず、ヒゲブトチビシデムシ亜科甲虫には、今までいかなる後翅の退化現象も知られていなかった。この度、シベリア産の *Colon (Eurycolon) latum* KRAATZ の標本のほとんどが短翅状態であることを見出したので、ヨーロッパの数カ所の状況とをあわせて、本亜科における後翅多型性の存在を初めて報告した。さらに、退化現象の有無の確認とともに本種には各産地内の長翅・短翅個体の比率に地理的クラインが生じている可能性があるため、所蔵標本の再調査の必要性を指摘した。

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Host Record of *Pseudorobitis axeli* (Coleoptera, Nanophyidae)

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Weevils of the genus *Pseudorobitis* REDTENBACHER, 1868 consist of two species, *P. axeli* (ALONSO-ZARAZAGA, 1989) from Japan (Yakushima and Amami-Ōshima Isls.) and Taiwan, and *P. gibbus* REDTENBACHER, 1868 from Shanghai, China (GIUSTO, 1993). No biological information is available on these weevils so far.

We collected a number of adults of *P. axeli* on flower buds of *Lagerstroemia subcostata* (Lythraceae) on Amami-Ōshima Is. We also found a number of larvae inside the fruits, and new adults of *P. axeli* emerged from them three months later.

We herein report the host association of *P. axeli* with Chinese crape myrtle, *L. subcostata*, for the first time. Associations with *Lagerstroemia* species have hitherto been known in several nanophyid weevils: *Ctenomerus lagerstroemiae* MARSHALL, 1923 and *Shiva trispinosus* PAJNI et BHATEJA, 1982 on *L. speciosa* (KANTOH & KOJIMA, 2009 b) and *Shiva taiwanus* KANTOH et KOJIMA, 2009 and *Nanophyes formosensis* KŌNO, 1930 on *L. subcostata* (KANTOH & KOJIMA, 2009 a). Thus, *Lagerstroemia* will also be a good place to look for the biology of *Pseudorobitis*.

We thank Dr. T. ISHIKAWA, Messers. A. INOUE, H. ONO, H. KARUBE and T. SŌYAMA for the donation of specimens.

Specimens examined. Japan: Amami-Ōshima Is. 17 males and 8 females, Yuwan, Uken Vil., 13~17-VIII-2002, H. ONO & J. KANTOH; 6 males and 3 females, same locality, 19-VIII-2005, A. INOUE; 6 males and 2 females, Yanma, Sumiyou-chō, 4-VII-2005, T. ISHIKAWA; 7 exs, Shimoyakugachi, Sumiyou-chō, 14-IX-2009, T. SŌYAMA (larvae from fruits); 1 male and 2 females, same locality (adults emerged from fruits in December). Tokunoshima Is. 1 female, Mikyō, 8-VII-1989, H. KARUBE leg. (New to Tokunoshima Is.)

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Discovery of *Eucurtiopsis ohtanii* (Coleoptera, Histeridae)
on an Oceanic Island of Japan

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Abstract *Eucurtiopsis ohtanii* (SAWADA) is recorded from Hachijō-jima Is., an oceanic island of Japan. The mode of arrival of this species to the island is discussed on the basis of previously proposed mechanisms for insects' dispersal.

Most members of chlamydopsinine histerid beetles are presumed to be myrmecophilous or termitophilous distributed in South-Central America, the Australian and the Oriental Regions, and Japan, but a large distributional gap has hitherto been known in Continental Asia, with the exception of *Ceratothister pheidoliphilus* REICHENSPERGER described from India. Although collecting efforts by a modern method to clarify the chlamydopsinine fauna recently started (CATERINO, 2000–2006; TISHECHKIN & CATERINO, 2007), it is rarely known on the species distribution like an inter-island distribution or a continental distribution with insular population. *Eucurtiopsis ohtanii* (SAWADA) is the only known representative of the former pattern distributed in both Honshu and Kyushu of the Japanese Islands. Unexpectedly, this species was discovered on Hachijō-jima Island of the Southern Izu Islands which is ca. 180 km distant from the southern tip of the Izu Peninsula, the nearest mainland of Japan (Fig. 1). Collecting data are as follows: 1 ♂, 1 ♀, Sueyoshi [ca. 33° 05' N 139° 50' E], Hachijō-jima Island, Tokyo, Japan, 25–VIII–2007, S. FUJINUMA leg. (a flight intercept trap set along the periphery of a forest).

This is the first record of this species not only on Hachijō-jima Is. but also on the oceanic island of Japan. The Izu Islands including Hachijō-jima Is. consist of ca. 100 volcanic islands and reefs probably existing almost at the present position from the Pleistocene onwards (TAKAHASHI, 1995). *Eucurtiopsis ohtanii* is a myrmecophile undoubtedly associated with a symbiotic host ant, *Pheidole fervida* Fr. SMITH (NISHIKAWA

& MARUYAMA, 1993, as a host of *Eucurtiopsis* sp.; NISHIKAWA, 1995). In summarizing from the known records, it has been caught from ant' nest and its surroundings from April to May and September to October (NISHIKAWA & MARUYAMA, 1993; SAWADA, 1994; ÔHARA, 1994; MIYATANI, 1996; SHIMANO, 1996, 1998; INAHATA, 2004), and at the flight by a flight intercept trap from May to June (INAHATA, 2004; SUZUKI, 2004; NOMURA *et al.*, 2006; YAMAMOTO, 2008), but ecological informations about the beetle are still fragmentary. Anyway, there is no positive evidence suggesting this species' migration to a remote island like Hachijô-jima only by flight. However, it is naturally recognized that *E. ohtanii* has migrated to this island from somewhere in the past, and has colonized in the nest of the ant migrating to the island like Hachijô-jima Is. In general, four mechanisms have been recognized for insects' dispersal onto an oceanic island (ZIMMERMAN, 1948) : (a) marine drift (=raft), (b) wind (=through the air, flying actively or passively), (c) aid from other organisms, and (d) transported intentionally or accidentally by human beings. Because the third mode may be excluded in the case of this species, its migration must have been realized by one of the remaining three. A rafting-like transportation by an ocean current and an aerial migration by flight have already been proposed for the formation of the xylophagous beetle fauna of the Izu Islands (KONISHI, 1950; UMEYA, 1961; IGUCHI, 1985). The rafting has little possibility in this species. Though there is a suitable ocean current as the Kuroshio, we consider that it is more difficult for the species than for xylophagous beetles, because the main habitat of its symbiotic host ant is rotten wood. Flight seems to be promising rather than

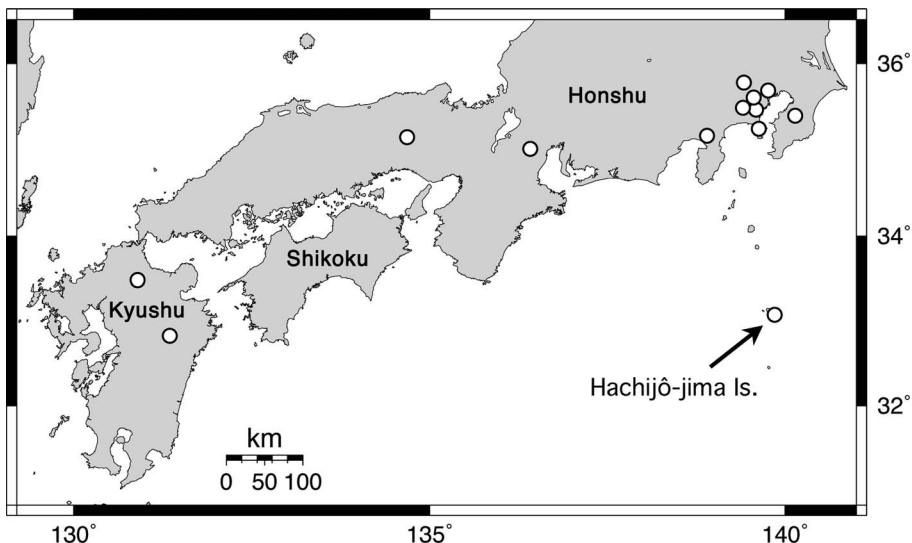


Fig. 1. Distribution of *Eucurtiopsis ohtanii* (SAWADA). Based on all published data in NISHIKAWA and MARUYAMA (1993), SAWADA (1994), ÔHARA (1994, 1999), NISHIKAWA (1995), MIYATANI (1996), SHIMANO (1996, 1998), INAHATA (2004), SUZUKI (2004), NOMURA *et al.* (2006), and YAMAMOTO (2008).

the preceding one. But a long-distance flight is difficult unless it is performed under an effective wind, because the species is regarded as having a low ability for flight. The human beings cannot be ignored especially in this island: *Protaetia pryeri pryeri* (JANSON) (Scarabaeidae) and *Opisthoptatia orientalis* (BURMEISTER) (Blattaria) are already recognized as immigrants transported from the subtropical area of Japan together with garden plants for sale. Thus, this case is really possible to migrate the species.

IGUCHI (1985) concluded that cerambycid beetle species belonging to the Honshu element on each island fauna of the Izu Islands reached from island to island by aerial migration, because the numbers of the species decreases with increasing distance from mainland Honshu. We basically accept his hypothesis. However, it is possible to expand its scope on the basis of the mechanism of the long-distance migration already clarified in plant hoppers (KISHIMOTO, 1975; NODA & KIRITANI, 1990; KIRITANI, 2002). Applying this to the case of microscopical beetles, *E. ohtanii* might be possible to migrate not only from island to island, but also directly from the Japanese mainlands other than Honshu when the necessary conditions given as the ascending air current to the boundary layer in a departure place, the existence of the low-level jet and the descending air current from the layer to an island are satisfied by the northward movement of the Baiu front. Unfortunately, it is not possible to find eventually a certain conclusion from the discussion, but we should pay more attention to the long-distance aerial migration of microscopical beetles that is possible under such seasonal condition of the weather of Japan.

Acknowledgements

We wish to express our thanks to Mr. Satoshi FUJINUMA of the Tokyo University of Agriculture, Atsugi, for giving us the opportunity to examine interesting materials. Thanks are also due to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo, and Dr. Masahiro ÔHARA of the Hokkaido University Museum, Sapporo, for their critically reading the original manuscript of this paper.

要 約

西川正明・福沢卓也：日本の海洋島からのアリノスコブエンマムシの発見。—— これまで、日本の本州と九州からのみ記録されていたアリノスコブエンマムシ *Eucurtiopsis ohtanii* (SAWADA) が、海洋島である八丈島から発見されたので記録した。同時に、本種の八丈島への到達手段について、他の昆虫で推測されている渡海法を突き合わせつつ論じた。

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A New Species of the Genus *Reicheiodes*
(Coleoptera, Carabidae) from Southwest Japan

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Abstract A new species of the genus *Reicheiodes* is described from the Island of Iriomote-jima, Southwest Japan, under the name of *Reicheiodes* (*Reichonippodes*) *nishii*.

Two species belonging to the genus *Reicheiodes* have hitherto been known from Japan (DOSTAL, 1993; BALKENOBL, 1995). Of these, *R. yanoi* (KULT) is known from the Kii Peninsula, central Honshu, and *R. igai* (NAKANE et S. UÉNO) from Shikoku and Kyushu, Southwest Japan.

In this paper, we are going to describe a new species of this genus under the name of *Reicheiodes nishii* from the Island of Iriomote-jima, Southwest Japan, as a third species.

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; GL – length of gena, measured parallel with the mid-line; eL – length of eye, measured parallel with the mid-line; PW – greatest width of pronotum; PL – length of pronotum, measured along the mid-line; PA – width of pronotal apex; 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. Hearty thanks are also due to Messrs. Yasuhiro NISHI and Stanislav VÍT for supplying us with important material.

Hearty thanks are also due to Dr. Martin FIKÁČEK, Messrs. Isao MATOBA, Ichiro OSHIO and Masataka YOSHIDA for their kind help.



Fig. 1. *Reicheiodes (Reichonippodes) nishii* MORITA et BULIRSCH, sp. nov.

***Reicheiodes (Reichonippodes) nishii* MORITA et BULIRSCH, sp. nov.**

[Japanese name: Iriomote-maruchibi-hyôtan-gomimushi]

(Fig. 1)

Diagnosis. Body large; eyes convex; genae short and convex (GL/eL 0.14); pronotum with narrow apex, PW/PA 1.68, 1.72; median line of pronotum wide; elytral striae coarsely punctate; elytra with three dorsal pores on interval III, three humeral pores, three preapical pores and two apical pores.

Description. L: 2.33–2.60 mm (M 2.47 mm). Body large. Colour brown and shiny; elytra polished; ventral side brown to dark brown; labrum, mandibles and legs slightly lighter than dorsum; antennae and palpi yellowish brown.

Head moderately convex; eyes small, but distinctly convex; frontal furrows wide, very deep, strongly divergent posteriad, and becoming shallower towards the post-gena level; anterior supraorbital pore situated at the mid-eye level; posterior one situated at a level of basal third of eyes; clypeus moderately convex and with both corners moderately produced; clypeal suture deep and forming a transverse furrow; areas between eye and frontal furrow with irregular wrinkles; vertex almost smooth or very finely and micro-

scopically punctate; genae moderately convex and arcuate; GL/eL 0.14 in 1 ♀; PW/HW 1.44 in 1 ♂, 1.47–1.49 (M 1.49) in 4 ♀♀; microsculpture vanished; antennae short and moniliform; relative lengths of antennal segments as follows:— II : III = 1 : 0.83, 1 : 0.90 in 2 ♀♀.

Pronotum strongly convex, round and widest at about middle; apex almost straight, not bordered; PW/PL 1.11 in 1 ♂, 1.12–1.15 (M 1.13) in 4 ♀♀; sides strongly arcuate from apical angle to posterior marginal pore, and rather slightly rounded between anterior and posterior marginal pores; PW/PA 1.68, 1.72 in 2 ♀♀; apical angles not produced and widely rounded at the tips; anterior pair of marginal setae situated at basal 4/5; anterior transverse impression deep, wide and irregularly punctate; median line deep, wide and impressed between anterior transverse impression and basal transverse furrow; posterior pair of marginal setae situated at basal 3/10; marginal gutters deep, adjoining anterior transverse impression and extended slightly behind the posterior pair of marginal pore; microsculpture almost vanished; surface very finely and partially punctate.

Elytra ovate, convex and widest at about middle; EW/PW 1.23 in 1 ♂, 1.17–1.22 (M 1.20) in 4 ♀♀; EL/EW 1.49 in 1 ♂, 1.44–1.49 (M 1.47) in 4 ♀♀; base rather strongly sloping to completely effaced humeri; sides moderately arcuate from base to widest part, and rather weakly so behind; apices rather narrowly produced, with obtuse sutural angle on each side; stria 1 clearly impressed, coarsely and sparsely punctate, but punctures become weaker towards apex; striae 2–4 very weakly impressed, and coarsely and sparsely punctate, but punctures vanished at basal 2/3; striae 5–7 similar to stria 4, but punctures vanished at middle; stria 8 lacking; basal pore situated at basal part of interval II; intervals slightly convex; interval III with three dorsal pores; the first pore situated at basal 1/7–1/5, the second at 3/10–2/5, the third at 1/2–3/5, respectively; shoulder with three humeral pores (FEDORENKO, 1996, p. 23); subapical part of side with three weak pores (= preapical pores: FEDORENKO, 1996, p. 23); apex with two apical pores.

Ventral surface smooth; anal sternite with two pair of setae which are on a shallow arc opened anteriorly.

Legs slender; claw segment of metatarsi without hairs on ventro-lateral side; claw smooth inside.

Type series. Holotype: ♀, Mt. Sonai-dake, 25–III–1994, Y. NISHI leg. (NSMT). Paratypes: 1 ♀, Mt. Sonai-dake, 25–III–1994, Y. NISHI leg.; 1 ♂, 2 ♀♀, near Kanbire Fall, 25–XII–2008, S. VÍT leg.

Range. The Island of Iriomote-jima, Okinawa Prefecture, Southwest Japan.

Notes. This new species is closely allied to *Reicheiodes igai* (NAKANE et S. UÉNO) (1953, p. 3). It is, however, distinguished from the latter by the following points: 1) body larger in average, 2) eyes more convex, 3) genae larger and more convex (GL/eL 0.14 in 1 ♀), 4) pronotum less convex between anterior and posterior lateral pores, 5) pronotum with narrow apex, PW/PA 1.68, 1.72, 6) median line of pronotum wider, 7) elytral base much more sloping, and humeri more effaced, and 8) elytral striae more coarsely punctate.

[In two specimens of *R. igai* from Mt. Torigata-yama, Kôchi Prefecture, PW/HW 1.40, 1.42; PW/PL 1.13, 1.13; PW/PA 1.55, 1.62; EW/PW 1.32, 1.32; EL/EW 1.36, 1.44.]

要 約

森田誠司・Petr BULIRSCH: 西表島から発見されたマルチビヒョウタンゴミムシ属 (新称) *Reicheiodes* の 1 新種。—— 西表島から発見されたマルチビヒョウタンゴミムシ属 *Reicheiodes* の 1 新種を記載しイリオモテマルチビヒョウタンゴミムシ *Reicheiodes (Reichonippodes) nishii* と命名した。本種は、比較的大型で、前胸背板の正中線が幅広く、上翅の条線の点刻は粗く、第 3 間室、肩部、側縁亜端部にそれぞれ 3 孔点、翅端に 2 孔点をもつなどの特徴がみとめられる。

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A New *Synuchus* (Coleoptera, Carabidae) from Taiwan

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Abstract A new species of the genus *Synuchus* is described from Taiwan under the name of *S. masumotoi* sp. nov.

The purpose of this paper is to describe a new platynine species from Taiwan under the name of *Synuchus* (*Synuchus*) *masumotoi* sp. nov.

The abbreviations used herein are the same as those explained in my previous papers.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo, for critically reading the original manuscript of this paper. Hearty thanks are also due to Dr. Kimio MASUMOTO for supplying me with important material.

I am deeply indebted to Dr. Jiří HÁJEK of the National Museum, Prague for his giving me the information of the type specimen of *Synuchus testaceus* (JEDLIČKA). Similar prompt aid was given by Dr. Svatopluk BILÝ.

Deep gratitude is also due to Mr. Ichiro OSHIO for his assistance in taking the photograph inserted in this paper.

Synuchus (*Synuchus*) *masumotoi* MORITA, sp. nov.

(Figs. 1–11)

Diagnosis. Body rather large, with wide pronotum; body black with weak iridescent lustre on elytra; terminal segments of palpi not dilated; hind angles of pronotum rounded, without postangular setae; elytral stria 7 approaching to the apex of stria 1; elytral apices not obliquely truncate; anal sternite (VI) deeply emarginate at apex in ♂; segments 1–3 of meso- and metatarsi bisulcate; claw serrate; aedeagus elongate and almost straight from basal 1/3 to apex in lateral view; right paramere weakly bent at basal 3/5; apical styli in ♀ elongate.

Description. L: 13.57–14.86 mm. Body rather large with wide pronotum. Body black; appendages dark brown; elytra with weak iridescent lustre.

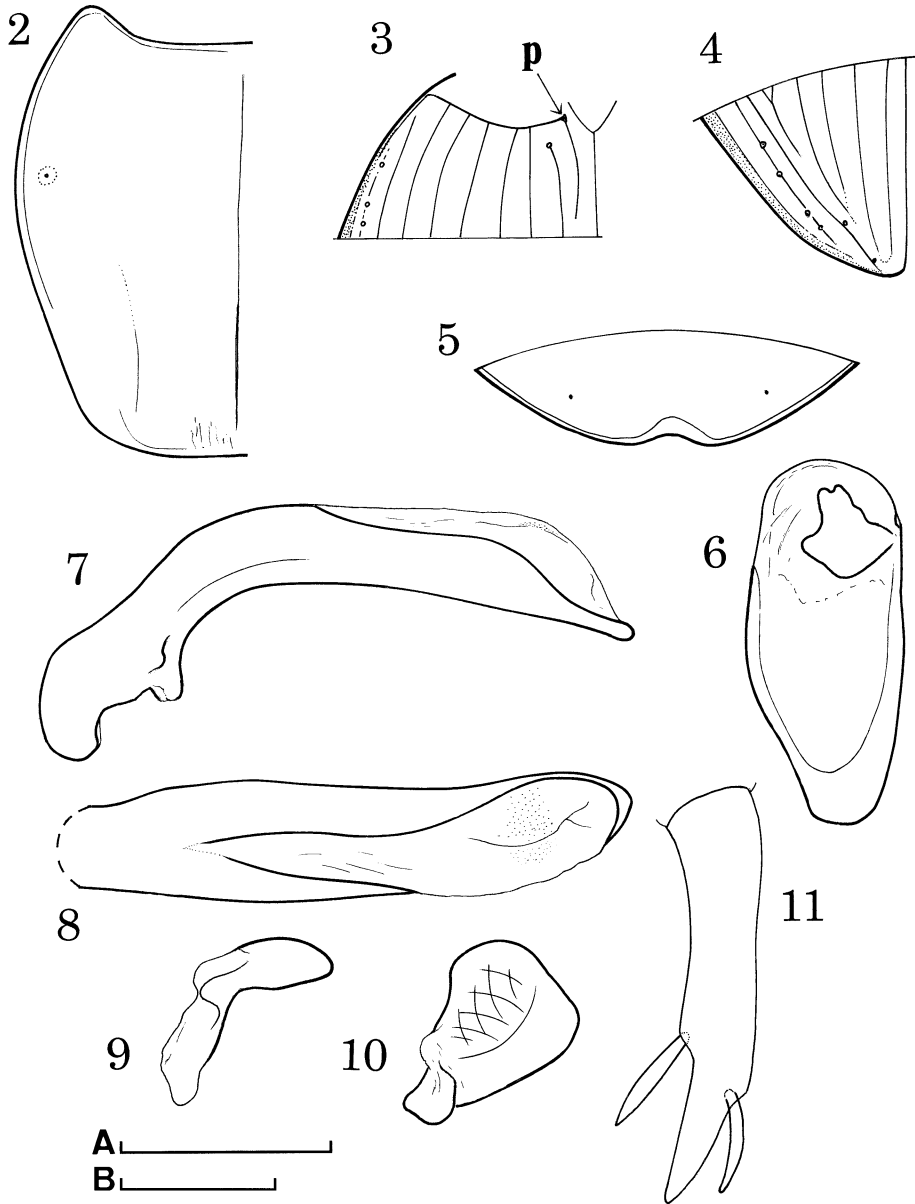
Head moderately convex, with weakly convex eyes; frontal furrows linear, very shallow and slightly divergent posteriad, or almost vestigial; anterior supraorbital pore foveolate and situated at a level of basal 2/3 of eyes; lateral grooves almost straight or



Fig. 1. *Synuchus (Synuchus) masumotoi* MORITA, sp. nov.

weakly curved along the eyes, and becoming shallower posteriad; posterior supraorbital pore situated a little behind the post eye level; microsculpture consisting of isodiametric meshes on frons, and of wide to transverse meshes on neck; genae variable in size, but always well convex; GL/eL 0.45, 0.65 in 2 ♀♀; mentum tooth rather wide and weakly bifid at the tip; apex of labrum weakly emarginate; terminal segment of labial palpus cylindrical and widest at about middle (not dilated); terminal segment of maxillary palpus widest at about middle; antennal segment 2 with a long seta; relative lengths of antennal segments as follows:— I : II : III : IV : V : VI : XI \approx 1 : 0.59 : 1.25 : 1.33 : 1.39 : 1.37 : 1.23 in ♂, \approx 1 : 0.55 : 1.20 : 1.25 : 1.26 : 1.22 : 1.14 in ♀.

Pronotum large, weakly convex and widest at about apical 3/8–2/5; PW/HW 1.62 in ♂, 1.56–1.62 (M 1.59) in 3 ♀♀; PW/PL 1.15 in ♂, 1.04–1.09 (M 1.07) in 3 ♀♀; PW/PA 1.43 in ♂, 1.42–1.48 (M 1.44) in 3 ♀♀; sides widely arcuate in front and very weakly so from basal third to hind angles; apical angles strongly produced and simply rounded at the tips; apex almost straight at middle and very weakly emarginate or almost oblique at the sides; median line finely impressed, not reaching apex nor base, and



Figs. 2-11. *Synuchus (Synuchus) masumotoi* MORITA, sp. nov. — 2, Left side of pronotum; 3, basal part of left elytron; 4, apical part of left elytron; 5, apical part of anal sternite in ♂; 6, genital segment, ventral view; 7, aedeagus, left lateral view; 8, aedeagus, dorsal view; 9, right paramere, left lateral view; 10, left paramere, left lateral view; 11, apical styli in female. — P: meeting point between basal border and scutellar striae. Scale: A, 1 mm for 5, 7-10; 2 mm for 2-4, 6; B, 0.2 mm for 11.

slightly widening and deepening near base; anterior marginal setae situated at the widest part or a little before that level, a little distant from the margin, and with foveolate roots; anterior transverse impression vestigial; basal foveae rather deep, narrow and smooth; hind angles rounded, without postangular setae; basal part with very shallow longitudinal wrinkles at the median part; base briefly bordered on each side; microsculpture consisting of fine transverse meshes.

Elytra elongate and moderately convex; EW/PW 1.29 in ♂, 1.26–1.33 (M 1.29) in 3 ♀♀; EL/EW 1.72 in ♂, 1.62–1.72 (M 1.66) in 3 ♀♀; shoulders completely effaced; sides weakly arcuate throughout, with no preapical emargination; apices rather rounded (not obliquely truncate); striae deep and weakly crenulate; scutellar striole rather long and situated on interval I; basal pore usually situated at the base of striae 1, rarely on interval I and close to base of stria 1; meeting point between basal border and scutellar striole deeply concave on each side; microsculpture very weakly impressed and composed of fine transverse lines; intervals moderately convex and impunctate; marginal series of umbilicate pores 19–21 in number; two dorsal pores situated on interval III and adjoining stria 2 or on the interval; the first pore situated at about basal 1/3–3/7 of elytra, the second one at a little behind the middle to basal 3/4; striae 1 and 2 clearly impressed throughout; stria 7 approaching to the apex of stria 1; apices of striae 3 and 4 anastomosed at a little before the elytral apices; elytral epipleuron gradually narrowed apicad; inner plica indistinct.

Ventral surface almost smooth; anal sternite (VI) deeply emarginate at apex in ♂, narrowly arcuate in ♀.

Legs long and slender; metatrochanter very short, with rounded apex; segments 1–3 of meso- and metatarsi bisulcate; segment 4 of metatarsi with two minute setae on dorso-apical part; claw segments of meso- and metatarsi with several setae on ventral side; claw serrate.

Genital segment elongated ovate, with short and wide handle.

Aedeagus elongate, moderately arcuate at basal third and almost straight from basal 1/3 to apex in lateral view; viewed dorsally, apical part very weakly curved towards the right, and with simply rounded apex. Right paramere weakly bent at basal 3/5, with simply rounded apex; left paramere triangular. Apical styli in ♀ elongate, with two robust spines.

Type series. Holotype: ♂, Mt. Tahanshanm, Pingtung Hsien, 13–III–2003, K. Masumoto leg. Paratypes: 1 ♀, Liukei, Kaohsiung Hsien, 18–XI–1984, native collector; 3 ♀♀, Mt. Tahanshanm, Pingtung Hsien, 13–III–2003, K. Masumoto leg.

Range. Taiwan.

Notes. According to the key given by LINDROTH (1956, p. 494), this species is similar in structure of hind angle of pronotum and meso- and metatarsi to *Synuchus testaceus* JEDLIČKA (1940, p. 4), but mainly differs from the latter in the larger body, wider pronotum and almost straight aedeagus.

要 約

森田誠司：台湾産ツヤヒラタゴミムシ属 *Synuchus* (コウチュウ目オサムシ科) の 1 新種。——益本仁雄博士によって台湾で採集されたツヤヒラタゴミムシ *Synuchus* を、新種とみなして記載し *S. masumotoi* と命名した。この種は、大型で、幅広い前胸背板と後角毛を欠くこと、雄の腹端節先端部が彎入し、基部 1/3 から先端までまっすぐな陰茎などの特徴をもつ。

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Additional Records of the Ogasawaran Endemic *Tomoxia relictta*
TAKAKUWA (Coleoptera, Mordellidae)

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Tomoxia relictta TAKAKUWA, 1985 was originally described from Haha-jima Is. of the Ogasawara Islands on a single female specimen. After that, additional collecting data of this species have not been available, though its occurrence on Ani-jima Is. was noted by SUGIURA *et al.* (2009). I herewith record the specimens of this species deposited in the collection of the Kanagawa Prefectural Museum of Natural History, Odawara.

Specimens examined. 1 ♂, Chichi-jima Is., Ogasawara Isls., 14-X-1973, IGA leg.; 1 ♀, Otôto-jima Is., 10-VII-2009, H. KARUBE leg. (collected by malaise trap).

Notes. The female specimen from Otôto-jima Is. is closely identical to the holotype from Haha-jima Is. The male specimen from Chichi-jima Is. is fundamentally similar to *T. nipponica* KÔNO from the Japanese mainlands on the structure of eighth abdominal sternite and parameres, and differs from the female specimens in the following characters: antennae distinctly slenderer; elytra apparently narrower than pronotum, with sides abruptly attenuate apicad; anal sternite parabolical, about a half shorter than pygidium; fore femora and tibiae markedly curved inwards.

Distribution. Ogasawara Isls. (Otôto-jima Is., Ani-jima Is. and Chichi-jima Is. of the Chichi-jima group; Haha-jima Is. of the Haha-jima group).

I deeply thank Mr. Ryuji OHBAYASHI of Tokyo and to Mr. Haruki KARUBE of the Kanagawa Prefectural Museum of Natural History, Odawara for providing me with the valuable materials used in this paper.

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A New Anophthalmic *Trechiana* (Coleoptera, Trechinae) from Gifu Prefecture, Central Japan

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Abstract A new blind trechine beetle of the genus *Trechiana* is described from the prospecting adits at the Tokuyama Dam site in Gifu Prefecture, Central Japan, under the name of *Trechiana misawai*. The new species is very similar to *Trechiana gracilior* S. UÉNO in male genital organ and occurs within the range of distribution of the latter.

In the autumn of 2008, the junior author carried out a faunal survey of the prospecting adits at the Tokuyama Dam site, in Ibigawa-chô (former Fujihashi-mura) of Gifu Prefecture, Central Japan, where some anophthalmic trechine beetles were obtained accidentally. In the following year, 2009, the authors tried to obtain additional materials at the same site and successfully obtained substantial number of the beetle. After a careful examination of these materials, the trechines are considered to be a distinct new species, although closely related to *Trechiana gracilior* S. UÉNO, which also occurs near the Tokuyama Dam site.

The abbreviations used in this paper are as follows: 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.

Before going further, the authors express their deep gratitude to Messrs. Koji HINO, Yasuo AOI, Kazumi KANEDA, Ms. Sanae HIROSE of the Japan Water Agency, Tokuyama Dam Operation & Maintenance Office and Mr. Masao KITSUKAWA of the Japan Water Resources Environment Technology Center for their permission and help to collect materials. Hearty thanks are also due to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo, for providing us with his publications, Dr. Yasuchika MISAWA of the Civil Engineering and Eco-Technology Consultants for help

in collecting materials, Mr. Kenji KITAYAMA, Hirakata-shi, and Mr. Yoshinori ITOH, Nagoya-shi, for their kind help in the course of the present study.

Trechiamma (s. str.) *misawai* MATSUI et MATSUI, sp. nov.

[Japanese name: Tokuyama-mekura-chibigomimushi]

(Figs. 1–9)

Length: 5.65–5.95 mm in ♂♂, 5.40–6.00 mm in ♀♀ (from apical margin of clypeus to apices of elytra).

A large species with small fore-body, narrow head, strongly cordate pronotum, elongated oval elytra, and in particular, male genitalia closely similar to that of *Trechiamma gracilior*. Colour brown, shiny; distal half of elytra somewhat paler; elytra, and sometimes also pronotum, weakly iridescent; palpi, antennae, and legs yellowish brown.

Head subquadrate, about as long as or slightly shorter than wide, and depressed above, with frontal furrows not particularly deep though clearly impressed, moderately diverged in front, widely so behind towards shallow neck constriction; frons and supraorbital areas gently convex; genae only slightly convex; neck very wide; labrum transverse, widely and shallowly emarginate at apex; mandibles slender, moderately arcuate at the apical portions, with acute apices; mentum tooth simple and large with round tip; antennae slender, reaching the middle of elytra, with antennomere 2 about three-fifths as long as antennomere 3 or 4, antennomeres 8–10 each about three times as long as wide, terminal antennomere evidently longer than scape but usually somewhat shorter than antennomere 3.

Pronotum cordate and convex, much wider than head, wider than long, widest at about two-thirds from base, and rather strongly contracted in front and behind; in ♂♂, PW/HW 1.46–1.55 (M 1.51), PW/PL 1.17–1.25 (M 1.21), PW/PA 1.41–1.51 (M 1.48), PW/PB 1.29–1.39 (M 1.34); in ♀♀, PW/HW 1.45–1.53 (M 1.49), PW/PL 1.17–1.26 (M 1.22), PW/PA 1.46–1.54 (M 1.49), PW/PB 1.30–1.39 (M 1.35); sides strongly and evenly arcuate, distinctly and deeply sinuate at about one-fourth from base, and then usually parallel or feebly divergent towards hind angles; apex slightly emarginate, with front angles a little produced and narrowly rounded; base straight or slightly emarginate, a little wider than apex; in ♂♂, PB/PA 1.06–1.15 (M 1.11); in ♀♀, PB/PA 1.07–1.19 (M 1.11); hind angles sharp but not produced, though sometimes slightly protruded posteriad.

Elytra elongated ovate and moderately convex, though depressed on the disc, much wider than pronotum, usually widest at about four-ninths from base, and equally narrowed towards base and towards apices; in ♂♂, EW/PW 1.56–1.66 (M 1.62), EL/EW 1.57–1.67 (M 1.62); in ♀♀, EW/PW 1.49–1.58 (M 1.53), EL/EW 1.60–1.68 (M 1.63); shoulders distinct though very obtuse, with prehumeral borders moderately oblique; sides weakly but evenly arcuate from behind shoulders to the level of the

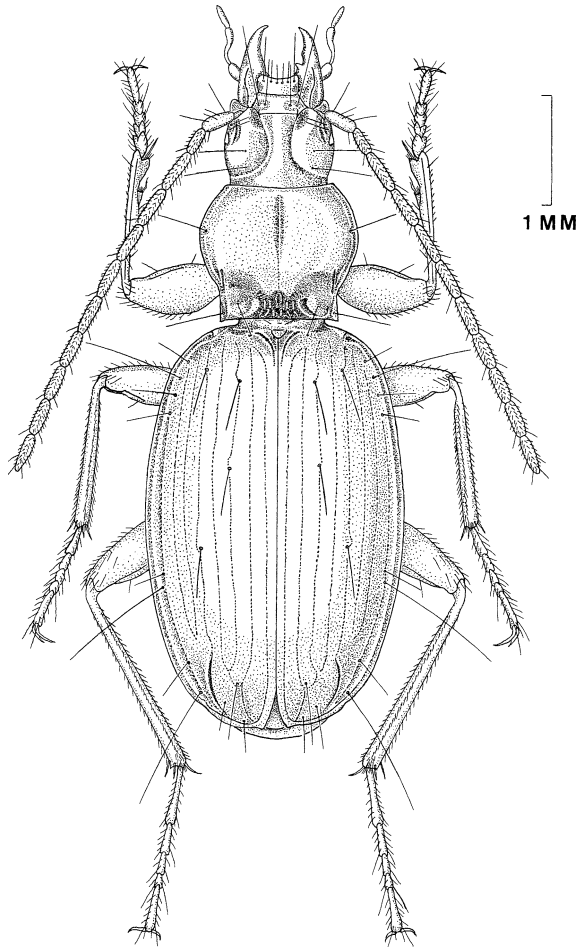
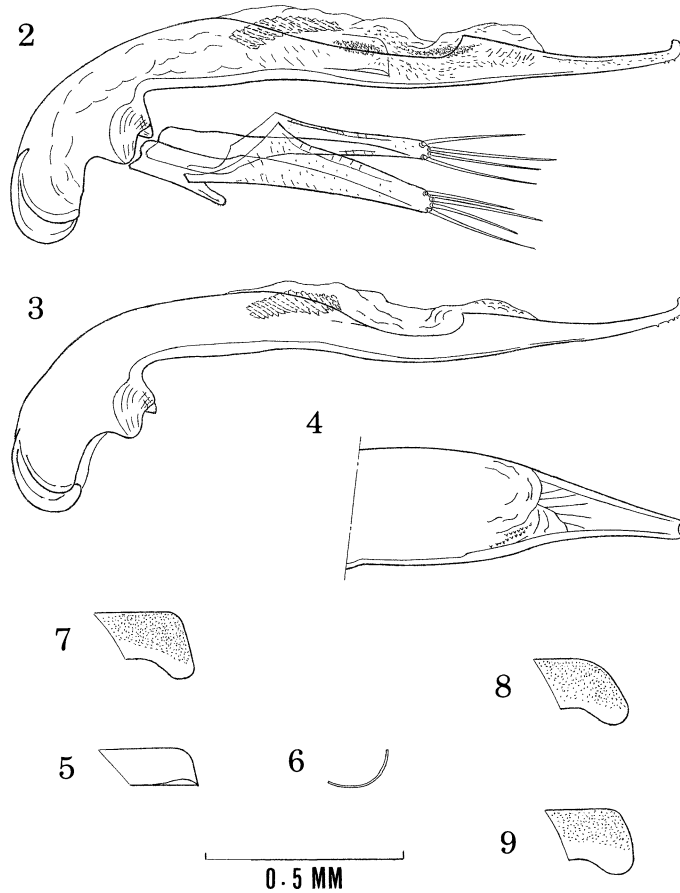


Fig. 1. *Trechiana misawai* MATSUI et MATSUI, sp. nov., ♂, from the Tokuyama Dam site.

seventh pore of the marginal umbilicate series; apices widely rounded with shallow but distinct preapical emargination, usually forming a small re-entrant angle at suture; striae relatively deep though superficial, vaguely crenulate, becoming shallower at the side though even stria 7 is entire; scutellar striole distinct though not long; apical striole deeply impressed, weakly curved in front, usually joining stria 5 without interruption but rarely joining stria 7; intervals slightly convex on the disc but flat at the side; two setiferous dorsal pores on stria 3 situated at $2/15-2/13$ and $1/3-5/12$ from base, respectively, those on stria 5 at $1/9-1/7$ and $5/9-5/8$ from base, respectively.

Legs fairly long though rather stout.

Male genital organ large, elongate and moderately sclerotized, and very similar to



Figs. 2-9. Male genitalia of *Trechiana (Trechiana) misawai* MATSUI et MATSUI, sp. nov., from the Tokuyama Dam site; left lateral view (2), the same, showing aedeagus with strongly reflexed apical part (3), apical part of aedeagus, dorsal view (4), separated copulatory piece, left lateral view (5), the same, apical view (6), the same, left dorso-lateral view (7), and the same, showing the variation in shape (8, 9).

that of *Trechiana gracilior* in both the shape and structure, but the proximal part of aedeagus is thinner in lateral view, the apical lobe narrower in both lateral and dorsal views and decisively differing from the latter in the shape of copulatory piece with rounded ventro-apical corner. Aedeagus about four-ninths as long as elytra, strongly flattened and gutter-shaped, very slightly arcuate before middle and slightly or often obtusely turned up in apical third; lateral walls much reduced, with a distinct convexity on the left side of apical orifice but not on the right; basal part relatively small, thin, and moderately bent towards the ventral side, bearing a heavily sclerotized sagittal aileron; basal orifice relatively small, with the sides deeply and subangulately emarginate; viewed

laterally, apical lobe long, narrow and almost straight, gradually tapering towards the extremity, which is distinctly reflexed; viewed dorsally, apical lobe narrow, inclined to the left and gradually narrowed towards the blunt tip; ventral margin slightly but widely sinuate in profile. Inner sac armed with a copulatory piece and three patches of teeth or scales; copulatory piece fairly large and moderately sclerotized, spatulate but variable to some degree, weakly rolled, with the ventro-apical corner obviously rounded and transparent; proximal teeth-patch composed of large, heavily sclerotized teeth, extending from left lateral to dorsal, with the apical portion sigmoidally curved on a horizontal plane; viewed dorsally, right apical teeth-patch elongated trigonal, consisting of small teeth, lying at the right dorsal side, just inside apical orifice; the third teeth-patch small, lying at the left dorsal side just behind the proximal. Styles long and slender, each bearing four long apical setae.

Type series. Holotype: ♂, allotype: ♀, prospecting adit, 360 m alt., 23-IV-2009, M. MATSUI, M. MATSUI & K. KANEDA leg. Paratypes: 2 ♂♂, 1 ♀, same locality, 360 m alt., 29-X-2008, Masafumi MATSUI & Y. MISAWA leg.; 8 ♂♂ (1 ♂ teneral), 9 ♀♀ (1 ♀ teneral), same locality, 360 m alt., 23-IV-2009, M. MATSUI, M. MATSUI & K. KANEDA leg.; 1 ♂, 2 ♀♀, same locality, 300 m alt., 23-IV-2009, M. MATSUI, M. MATSUI & K. KANEDA leg.; 2 ♀♀, same locality, 360 m alt., 2-XII-2009, K. KANEDA leg. The holotype and allotype will be kept in the collection of the National Museum of Nature

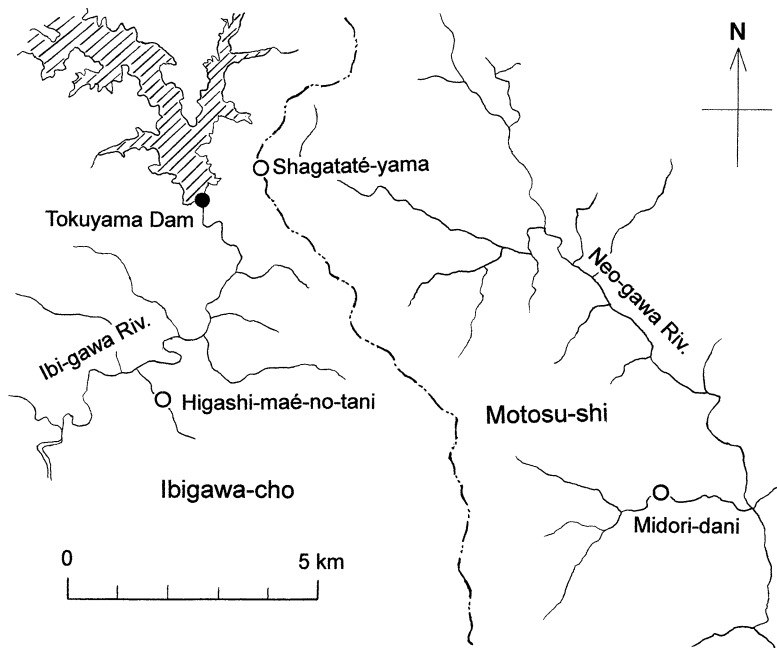


Fig. 10. Map showing the distribution of two *Trechiana* species. ● — *Trechiana misawai* sp. nov.; ○ — *Trechiana gracilior* S. UÉNO.

and Science, Tokyo.

Type locality. Prospecting adit at the Tokuyama Dam site (360 m alt.), in Ibigawa-chô of Gifu Prefecture, Central Japan.

Notes. Despite close resemblance to *T. gracilior* in male genitalia, the present new species is distinguished externally from it by the following details: the head is less transverse; the pronotum is usually more transverse and more contracted anteriorly, with wider base and more strongly, evenly arcuate sides that are deeply sinuate; the elytra are ampler at the basal part, with wider and more rounded apical part. The Tokuyama Dam site, the type locality of this new trechine, is located within the distributional range of *T. gracilior*. Furthermore, Shagataté-yama, the northernmost known locality of *T. gracilior*, is only 1.3 km distant to the east-northeast in a beeline from the Tokuyama Dam site (Fig. 10). Hence, in future, this new species would be found sympatrically with *T. gracilior*, since both the species seem to have a similar ecological niche. Although the mode of speciation is not clear for the present, the two species must have differentiated from their common ancestor that occurred somewhere on the present Ibi Hills. Individuals of *T. misawai* were mainly found from under abandoned boards used for adit construction. This new species belongs to the *ohshimai* complex.

Etymology. The specific name is dedicated to Dr. Yasuchika MISAWA, who continuously helps us in collecting valuable insect specimens.

要 約

松井正通・松井正文：岐阜県から発見された *Trechiana* 属メクラチビゴミムシの 1 新種。——岐阜県揖斐川町徳山ダムの試掘横坑より採集された個体に基づき、*Trechiana misawai* sp. nov. トクヤマメクラチビゴミムシを記載した。本種の ♂ 交尾器の構造・形態は近隣に棲息するネオメクラチビゴミムシ *Trechiana gracilior* S. UENO のそれに酷似するが、骨片および外部形態に明瞭な差異が認められる。

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Notes on Three Cave Trechines (Coleoptera, Trechinae) from the Western Part of Hubei, Central China

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Abstract Three cave-dwelling species of trechine beetles from the western part of Hubei are dealt with. They were originally described under two different genera, *Boreaphaenops* and *Superbotrechus*, but the former one of them is herewith divided into two independent genera in view of the striking difference in configuration adaptive to subterranean life. The new name given is *Yanzaphaenops*, and the type species is *Y. hirundinis* (S. UÉNO, 2005). Besides, two existing localities are recorded for *Superbotrechus bennetti* DEUVE et TIAN.

At the westernmost part of Hubei in Central China, a very deep gorge called Sanxia has been formed by the Yangtze River flowing from west to east, and the caverniferous limestone area is divided into two parts, the northern and the southern. Their subterranean faunas are considerably different from each other, and so far as concerned with trechine beetles, the southern part is mostly occupied by the members of *Cathaiaphaenops* (cf. DEUVE, 2000; UÉNO, 2000; DEUVE & TIAN, 2008; TIAN, 2008), while the caves in the northern part are sporadically inhabited by trechines belonging to a quite different lineage.

The species first made known from a cave lying at the northern side of the Yangtze River is *Boreaphaenops angustus* S. UÉNO (2002, p. 415, figs. 1–3) discovered in Lengre Dong Cave lying in Shennongjia Linqu. This is a medium-sized species of aphaenopsoid facies, whose true affinity has not been conclusively determined as yet. The second species was also found in a limestone cave lying in Shennongjia Linqu and was named *Boreaphaenops hirundinis* S. UÉNO (2005, p. 12, figs. 1–3). It is, however, so strikingly different in facies from *B. angustus* that its placement in *Boreaphaenops* is tentative and must be re-examined when more species could be discovered in Shennongjia or its neighbouring areas (cf. UÉNO, 2005, p. 12).

Since then, I have endeavoured to examine as many caves as possible, particularly on the western extension of Shennongjia, or the Daba Shan Mountains, but failed in finding out any troglomorphic trechines. On the other hand, an anophthalmic trechine beetle was recently discovered from a limestone cave located in Yichang Shi near the left bank of the Yangtze River, about 130 km distant to the southeast in a beeline from Lengre Dong Cave, the type locality of *Boreaphaenops angustus*. It was described by

DEUVE and TIAN (2009, p. 181, figs. 1–2) under the name *Superbotrechus bennetti*, and was carefully compared with *Boreaphaenops angustus*, though the authors concluded that the phylogenetical affinity of this new species was not certain at the present time.

Thus, taxonomical gap between *Boreaphaenops angustus* and *B. hirundinis* has not been bridged until now in spite of my painstaking efforts devoted in caves and of the discovery of a third species from the northern side of the Yangtze River. In view of this situation, I have decided to erect a new genus for *B. hirundinis*, which is much more highly adapted to the subterranean existence than *B. angustus*. On this occasion, I will also record two new localities of *Superbotrechus bennetti*, whose type cave was lost by road construction.

Before going into further details, I wish to express my deep appreciation to Mr. Hiroshi MIYAMA and Mr. FAN Ting for their kind help in field works.

Superbotrechus bennetti DEUVE et TIAN, 2009

(Fig. 1)

Superbotrechus bennetti DEUVE et TIAN, 2009, Bull. Soc. ent. Fr., 114, p. 181, figs. 1–2; type locality: “grotte Duandongzi” at Huanghua.

Length: 5.50–5.60 mm (from apical margin of clypeus to apices of elytra).

This interesting species does not show any aphaenopsoid modification, bearing complete frontal furrows on head, relatively short antennae not reaching elytral apices, wide prothorax with anteriorly protrudent front angles and sharply denticulate hind angles, elongate elytra with square shoulders, relatively stout and not exceedingly long legs, and so on. Since a detailed description was given by the original authors, it does not seem necessary to repeat it except for some numerical data.

Standard ratios of body parts (the abbreviations used are the same as those explained in previous papers of mine): HL/HW 1.00, 1.00; HL/PL 0.91, 0.95; PW/HW 1.24, 1.25; PW/PL 1.13, 1.19; PW/PA 1.40, 1.47; PW/PB 1.36, 1.39; PB/PA 1.03, 1.06; EW/PW 1.60, 1.60; EL/PL 3.29, 3.24; EL/EW 1.82, 1.70.

Specimens examined. 1 ♂, Jinshi Dong, 480 m alt., Xingping Cun, Huanghua Xiang, Yichang Shi, Hubei, 25–VI–2010, S. UÉNO leg.; 1 ♂, Qingrenquan Dong, 180 m alt., Xingping Cun, Huanghua Xiang, Yichang Shi, Hubei, 24–VI–2010, H. MIYAMA leg. Both deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

Notes. As was already mentioned, the small limestone cave in which the type specimens of *Superbotrechus bennetti* were collected, was destroyed by the construction of a new highway, and was forgotten even by local people. However, there are other caves opening on or under bluffs on both sides of the Duan’jiang He River. Most of them were not rich in the fauna, but we were able to find *Superbotrechus* in two commercialized caves. One of them, Qingrenquan Dong, is a draining cave not far from the lost type cave, and is developed along an underground stream flowing down through



Fig. 1. *Superbotrechus bennetti* DEUVE et TIAN, ♂, from Jinshi Dong Cave in Huanghua.

Fig. 2. *Boreaphaenops angustus* S. UÉNO, ♂, from Lengre Dong Cave in Shennongjia.

Fig. 3. *Yanzaphaenops hirundinis* (S. UÉNO), ♂, from Jin'yanxi Dong Cave in Shennongjia.

several cascades. The single known specimen of *Superbotrechus* was found among small gravel filling in a shallow trickle hole on the floor near the innermost of the tourists' passage. The other new locality, Jinshi Dong is located at the upper part of the ridge high above Qingrenquan Dong, though the two caves belong to the same village. There, our specimen of *Superbotrechus* was found quickly walking on a large flowstone about 1.5 m above the cave floor

***Boreaphaenops angustus* S. UÉNO, 2002**

(Fig. 2)

Boreaphaenops angustus S. UÉNO, 2002, *Elytra*, Tokyo, **30**, p. 415, figs. 1–3; type locality: Lengre Dong Cave in Shennongjia Linqu.

This is a peculiar species, markedly differing in facies from most aphaenopsoid trechines known from China. Body narrow and elongate; head elongate and nearly parallel-sided, with wide neck; frontal furrows abruptly evanescent behind; posterior pair of supraorbital setae almost always duplicate; antennae long but fairly stout, not reaching elytral apices. Prothorax elongated barrel-shaped, about as long as head, with

sides finely bordered throughout and bearing two pair of marginal setae; both front and hind angles rounded. Elytra elongated subovate, with very obtuse humeral angles and very oblique prehumeral borders; dorsum only gently convex before the middle, superficially striate, both scutellar and apical striae absent; stria 3 with three setiferous dorsal pores, none on other striae, preapical pore present; marginal umbilicate pores not aggregated except for the first three pores of the humeral set. Legs long and slender but not exceedingly long.

Range. Known so far only from Lengre Dong Cave in Muyu Zhen of Shennongjia Linqu in southwestern Hubei.

Genus *Yanzaphaenops* S. UÉNO, nov.

Type-species: *Boreaphaenops hirundinis* S. UÉNO, 2005.

As was described in detail in the original account, *Boreaphaenops hirundinis* shares many important character states with *B. angustus*. However, the former is different from the latter particularly in the following respects:— Head long, much longer than prothorax, and gradually narrowed posteriad towards neck, with two pair of supraorbital setae, the posterior pair of which are always simple and widely distant from the anterior pair; antennae very long and slender, exceeding elytral apices at least in ♂. Prothorax small, equally narrowed towards base and apex, with fine side-borders which are invisible in front; front angles rounded, hind angles subrectangular, postangular seta always absent. Elytra elongated ovate, much longer and wider than fore body; humeral angles evanescent, prehumeral borders very oblique and nearly straight; basal peduncle narrow, about a half as wide as prothorax; dorsum strongly convex, almost entirely striate, scutellar striae absent, apical striae obliterated; stria 3 usually with four setiferous dorsal pores; preapical pore present; marginal umbilicate pores as in *Boreaphaenops angustus*. Legs very long and slender, proportionally much longer than in *B. angustus*.

The differences given above seem to suffice for erecting a new genus for *Boreaphaenops hirundinis*. It will be called *Yanzaphaenops hirundinis* comb. nov.

Etymology. The new generic name, *Yanzaphaenops* is derived from “Yanzi” meaning a swallow in Chinese, and which has been used for the name of the type cave (Jin’yanxi Dong) and also for the name of the location of the cave (Yanzi Ya=Swallow Pass).

Yanzaphaenops hirundinis (S. UÉNO, 2005)

(Fig. 3)

Boreaphaenops hirundinis S. UÉNO, 2005, J. speleol. Soc. Japan, **29**, p. 12, figs.1–3; type-locality: Jin’yanxi Dong Cave in Shennongjia Linqu.

Yanzaphaenops can be recognized at first sight because of its highly specialized

aphaenopsoid facies.

Range. Known so far only from Jin'yanxi Dong Cave at the Yanzi Ya Pass of Hongping Zhen in Shennongjia, southwestern Hubei.

要 約

上野俊一: 中国湖北省西部に固有の洞窟性チビゴミムシ類3種について。—— 中国湖北省西部の石灰岩地域は、揚子江中流の三峡によって南北に二分されているが、洞窟性のチビゴミムシ相は、それぞれの地域で大きく異なり、峡谷の北側の地域には種類が少ない。ごく最近になって宜昌市の洞窟から *Superbotrechus bennetti* が発見されるまでに、この地域の洞窟から知られていたメクラチビゴミムシ類はわずかに2種で、いずれも神农架林区の洞窟にすみ、同属の別種だと考えられてきた。しかし、両者の外部形態には、地下生活に伴う形態的適応の程度にいちじるしい差異があって、これを埋めるような中間的な種も発見されないので、属を分割して2種の一方に新属を認めるのが、より適切な処置であろうと考えられるようになった。新たに提唱する属名は *Yanzaphaenops*, 属基準種は *Boreaphaenops hirundinis* である。なお、*Superbotrechus bennetti* の基準産地は、高速道路の建設工事のために破壊されて現存しないが、近傍地域の洞窟を精査した結果、この種の生息する洞窟が新たに2カ所発見され、宜昌市黄花郷の地下に、分布域の広がりのあることが明らかになった。それで、黄花郷新坪村の金獅洞と情人泉洞との2洞を、この種の新産地として記録した。

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New Records of *Copris* (*Sinocopris*) *uenoi* and *C. (S.) barclayi*
(Coleoptera, Scarabaeidae) from Kachin, Myanmar

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The last author (AA) collected *Copris* (*Sinocopris*) *uenoi* HANBOONSONG *et al.* and *C. (S.) barclayi* OCHI *et al.* from Kachin, Myanmar in July 2010. These are the first records of the two species from Myanmar.

Copris (*Sinocopris*) *uenoi* HANBOONSONG, MASUMOTO *et* OCHI, 2003

Copris uenoi HANBOONSONG, MASUMOTO *et* OCHI, 2003, *Elytra, Tokyo*, **31**: 106.

Specimens examined. 2 ♂♂, 2 ♀♀, 8 km north of Kangfang, Kachin, Myanmar, 12-VII-2010, A. ABE leg.

Distribution. Thailand, Myanmar (new record).

Copris (*Sinocopris*) *barclayi* OCHI, KON *et* BAI, 2009

Copris (*Sinocopris*) *barclayi* OCHI, KON *et* BAI, 2009, *Ent. Rev. Japan*, **64**: 209.

Specimens examined. 2 ♂♂, Kangfang, Kachin, Myanmar, 14-VII-2010, A. ABE leg.

Distribution. China (Yunnan), Myanmar (new record).

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Records of Some Marine Beetles New to the Island of Tanegashima, Japan

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Tanegashima is one of the Ōsumi Islands lying to the south of Kyushu, southern Japan. Marine beetle fauna of the island has been elucidated by several authors as a part of the faunal study of particular taxa (CHŪJŌ, 1975; WATANABE, 1989, 1991, 2010, etc.).

In a recent survey, we collected a number of marine beetles including those new to the island, and record them with some biological information. Some species show northern or southern limit of their distribution probably due to the location of the island lying between the mainland of Japan and the Ryukyus.

We thank Messrs. T. IMAZAWA, Y. TAHIRA and Y. NAKAMURA (Teiso Kasei Co. Ltd.) for their help in many ways.

C a r a b i d a e

1. *Bembidion chloropus* BATES
6 exs., Oomure, Nakatane Town, 23–III–2010.

S t a p h y l i n i d a e

2. *Aleochara squalithorax* SHARP
2 exs., Maenohama, Minamitane Town, 25–III–2010.
3. *Bryothinusa gangjinensis* AHN et JEON
5 exs., Minato, Nishinoomote City, 28–III–2010.
This is the southernmost record of this species and newly recorded from Japan. Beetles were collected under stones in *Kandelia obovata* mangrove forest.
4. *Diaulota pacifica* SAWADA
12 exs., Minato, Nishinoomote City, 24–III–2010.
This is the southernmost record of this species.
5. *Diaulota uenoi* SAWADA
7 exs., Asakawa, Nishinoomote City, 27–III–2010.
6. *Philonthus nudus* SHARP
2 exs., Haranosato, Nakatane Town, 24–III–2010.
7. *Prosthecarthron sauteri* RAFFRAY
3 exs., Minato, Nishinoomote City, 24–III–2010; 3 exs., same locality, 28–III–2010.

Beetles were collected under stones of *Kandelia obovata* mangrove forest.

Scarabaeidae

8. *Leiopsammodius japonicus* (HAROLD)
1 ex., Maenohama, Minamitane Town, 25-III-2010.
This is the southernmost record of this species.
9. *Psammodius kondoi* MASUMOTO
1 ex., Oomure, Nakatane Town, 23-III-2010; 3 exs., same locality, 28-III-2010.
This is the northernmost record of this species.
10. *Trichiorhyssemus asperulus* (WATERHOUSE)
1 ex., Haranosato, Nakatane Town, 24-III-2010.
This is the southernmost record of this species.

Limnichidae

11. *Babalimnichus masamii* SATÔ
1 ex., Shiwano, Nishinoomote City, 25-III-2010 (larva).

Elateridae

12. *Paracardiophorus sequens* (CANDÈZE)
7 exs., Oomure, Nakatane Town, 23-III-2010; 2 exs., Haranosato, Nakatane Town, 24-III-2010.

Malachiidae

13. *Laius asahinai* NAKANE
1 ex., Minato, Nishinoomote City, 24-III-2010; 14 exs., Shiwano, Nishinoomote City, 25-III-2010; 2 exs, Asakawa, Nishinoomote City, 27-III-2010 (all are larvae).

Tenebrionidae

14. *Nesocaedius minimus* (M. T. CHÛJÔ)
29 exs., Oomure, Nakatane Town, 23-III-2010; 7 exs., Haranosato, Nakatane Town, 24-III-2010.
This is the northernmost record of this species.

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Popularity of Different Coleopteran Groups Assessed by
Google Search Volume in Japanese Culture
— Extraordinary Attention of the Japanese to “Hotaru”
(Lampyrids) and “Kabuto-mushi” (Dynastines)
(Cultural Entomology)

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Abstract I investigated the popularity of different coleopteran groups (132 families, 2 subfamilies and 1 common group) in Japanese culture, as a part of a study on cultural entomology. Popularity was assessed by the Google search volume for Japanese coleopteran group names in katakana and hiragana scripts, using the Keyword Tool of Google AdWords. The search volume of “Hotaru” (lampyrid) and “Kabuto-mushi” (dynastines) in either or both Japanese syllabic scripts was enormously high relative to other coleopteran groups, indicating that lampyrids and dynastines are extraordinarily popular in Japanese culture. As a whole, a relatively small number of coleopteran groups were represented by a high search volume, while an abundance of other groups was represented by a low number, indicating the biased attention of Japanese to a small number of coleopteran groups. In addition, comparison of search volumes for different coleopteran families between Japanese syllabic scripts (hiragana and katakana) suggests that the attitude of the Japanese public toward lampyrids differs from their attitude toward other coleopteran groups.

Introduction

The field of cultural entomology examines the influence of insects on human practice for nourishment of the mind, soul, arts and humanities (HOGUE, 1987; MITSUHASHI, 2000; TAKADA, 2009, 2010), and contributes to provide much insight into our current attitudes towards insects and nature in general (SEAR, 1993). A fascinating question in cultural entomology is which and how insect groups are represented in human culture, *i.e.* the popularity of insects in human societies (COELHO, 2000; TAKADA, 2009). Previous studies on cultural entomology mentioned the influence of various insects on human practice with biased attention of humans to a small number of insect groups, such as dipterans, lepidopterans, hymenopterans, orthopterans and coleopterans (*e.g.*, MERTINS, 1986; LESKOSKY & BERENBAUM, 1988; COELHO, 2000, 2004; DICKE, 2004). However, these studies focused on the popularity of different insect orders in only certain cultural contexts or media (*e.g.*, music, cartoons) from western

culture. Thus, questions remain as to which and how lesser taxonomic groups of insect orders are represented in the culture of general public in regions other than western nations.

Coleoptera is the most attractive insect order in cultural entomology, because coleopterans influence various aspects of human practice and have cultural but ambiguous significance due to their extraordinarily diverse (TAKADA, 2010). Thus, many entomologists are interested in the popularity of different coleopteran groups. Although TAKADA (2010) mentioned that only a small number of coleopteran families, such as scarabaeids, lucanids, lampyrids, coccinellids and bupresdtids have an important role in human culture, there has been no numerical analysis of the popularity of different coleopteran groups, despite importance of coleopteran insects in human culture. Methodological constraints may have limited the cultural entomologist's attempt to investigate the popularity of different coleopteran groups (TAKADA, 2009).

I investigated the popularity of different coleopteran groups and examined which and how coleopteran groups are represented in Japanese culture. The Japanese have a highly developed tradition of aesthetic appreciation for insects and use them in various cultural contexts (HOGUE, 1987; KELLERT, 1993; COELHO, 2000; MITSUHASHI, 2000; LAURENT, 2001; TAKADA, 2009, 2010), indicating the importance of Japanese culture in light of cultural entomology. The popularity of different coleopteran groups was assessed by the Google search volume of group names. The search volume is the number of search queries matching each keyword result (in this case, the keyword was the Japanese name of a coleopteran taxon). This statistic is used as a yardstick to measure a term's intention, interest or popularity, and is thus applied for internet marketing and search engine optimization (BATELLE, 2005; RANGASWAMY *et al.*, 2009).

Material and Methods

I conducted a survey on the popularity of coleopteran groups on 10 August 2009, assessing the global monthly search volume using the Keyword Tool in Google AdWords (<http://adwords.google.com>). The global monthly search volume shows the approximate average monthly number of search queries matching each keyword result. This statistic (called 'search volume') applies to searches performed on Google and the search network over the past 12-month period. When Google AdWords has insufficient data on a particular keyword, it returns "not enough data". Such a case was regarded as no search volume (0) for the keyword.

The search volume of Japanese names of coleopteran groups was assessed in hiragana and katakana, which are Japanese syllabic scripts, components of the Japanese writing system. Hiragana is used for words for which there are no kanji, and in words for which the kanji form is not known to the writer or readers, or is too formal for the writing purpose. Katakana is most often used for the transcription of words from foreign languages, onomatopoeia and technical and scientific terms, such as the names of animal and plant species and minerals.

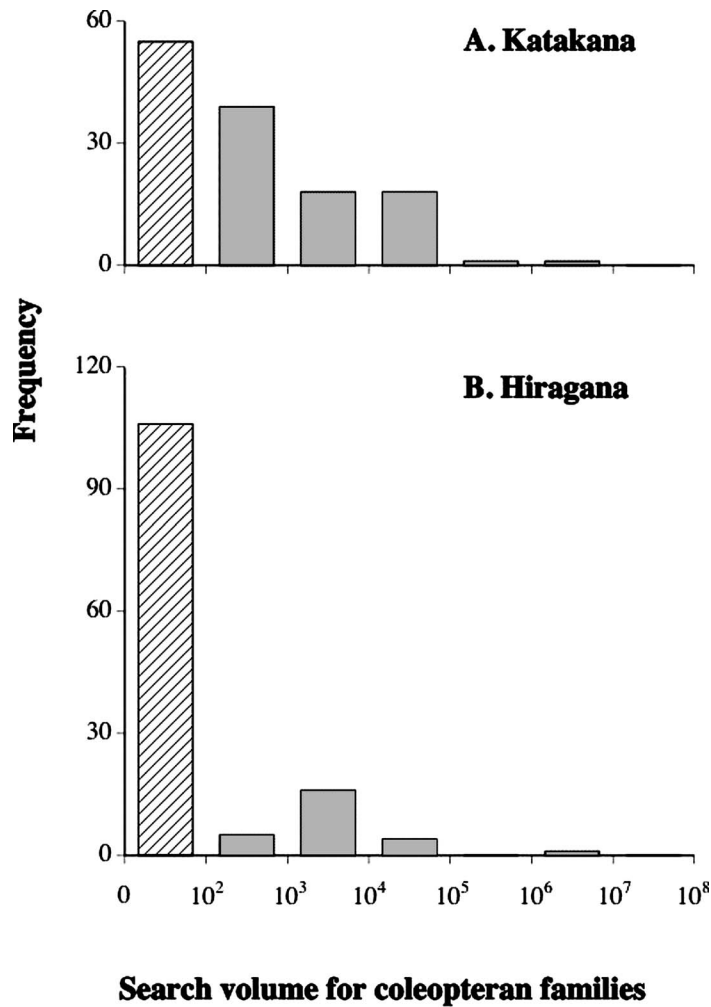


Fig. 1. Frequency distribution of Google search volumes for different coleopteran families in katakana (A) and hiragana (B) scripts.

I used 132 familial names of coleopterans listed in MORIMOTO and HAYASHI (1986) as keywords to evaluate the search volume of coleopteran groups (Table 1). We also examined the search volume of 2 subfamilial name (“Kabuto-mushi” and “Hanamuguri”) and 1 general name for several taxa (“Gomi-mushi” as a general term for carabids except for Carabinae) of coleopterans, because these names were largely different from the familial name mentioned above (*e.g.*, [Kogane-mushi] is the Japanese name for scarabaeids, and [Kabuto-mushi] is the Japanese name of dinastines in a broad sense and Japanese rhinoceros beetles, *Allomyrina dichotoma* (LINNÉ), which is a

Table 1. Google search volume for different coleopteran groups (132 families, 2 subfamilies and 1 common groups) in katakana and hiragana scripts.

Latin name	Japanese	Species	Search volume (Rank in families)	
			Katakana	Hiragana
Cupedidae	[Naga-Hirata-Mushi]	3	28 (64)	0 (27)
Rhysodidae	[Sesuji-Mushi]	10	16 (70)	0 (27)
Paussidae	[Higebuto-Osa-Mushi]	9	36 (58)	0 (27)
Cicindelidae	[Hanmyou]	22	5400 (11)	480 (12)
Carabidae	[Osa-Mushi]	1000	2900 (15)	320 (13)
Brachinidae	[Kubiboso-Gomi-Mushi]	10	16 (70)	0 (27)
Haliplidae	[Kogashira-Mizu-Mushi]	10	46 (51)	0 (27)
Phreatodtyidae	[Mukashi-Gengorou]	1	12 (77)	0 (27)
Noteridae	[Kotubu-Gengorou]	5	46 (51)	0 (27)
Dytiscidae	[Gengorou]	90	9900 (3)	1000 (6)
Gyrinidae	[Mizu-Sumashi]	15	880 (22)	880 (8)
Hydrophilidae	[Ga-Mushi]	80	720 (23)	1300 (4)
Histeridae	[Enma-Mushi]	84	91 (39)	0 (27)
Ptiliidae	[Mukuge-Kinoko-Mushi]	20	28 (64)	0 (27)
Leiodidae	[Tama-Kinoko-Mushi]	50	16 (70)	0 (27)
Catopidae	[Chibi-Shide-Mushi]	40	22 (68)	0 (27)
Silphidae	[Shide-Mushi]	38	1300 (20)	140 (19)
Staphylinidae	[Hanekakushi]	800	1900 (16)	110 (20)
Pselaphidae	[Arizuka-Mushi]	150	91 (39)	0 (27)
Scydmaenidae	[Koke-Mushi]	23	3600 (14)	46 (23)
Scaphidiidae	[Deo-Kinoko-Mushi]	70	16 (70)	0 (27)
Helodidae	[Maru-Hananomi]	40	46 (51)	0 (27)
Lucanidae	[Ku wagata-Mushi]	34	8100 (7)	720 (10)
Passalidae	[Kurotsuya-Mushi]	1	58 (47)	0 (27)
Trogidae	[Kobusuji-Kogane]	11	36 (58)	0 (27)
Geotrupidae	[Senchi-Kogane]	9	720 (23)	0 (27)
Scarabaeidae	[Kogane-Mushi]	390	9900 (3)	1900 (3)
Byrrhidae	[Marutoge-Mushi]	13	16 (70)	0 (27)
Psephenidae	[Hirata-Doro-Mushi]	16	170 (35)	0 (27)
Elmidae	[Hime-Doro-Mushi]	44	73 (43)	0 (27)
Dryopidae	[Doro-Mushi]	2	73 (43)	28 (26)
Buprestidae	[Tama-Mushi]	200	5400 (11)	1000 (6)
Elateridae	[Kometsuki-Mushi]	600	1600 (18)	170 (18)
Eucnemidae	[Kometsuki-Damashi]	66	46 (51)	0 (27)
Lycidae	[Beni-Botaru]	90	390 (29)	0 (27)
Lampyridae	[Hotaru]	40	135000 (1)	368000 (1)
Omethidae	[Hotaru-Modoki]	3	28 (64)	0 (27)
Cantharidae	[Joukaibon]	70	210 (33)	0 (27)
Dermestidae	[Katuobushi-Mushi]	40	9900 (3)	260 (14)
Bostrichidae	[Naga-Shinkui-Mushi]	21	110 (37)	0 (27)
Anobiidae	[Siban-Mushi]	54	9900 (3)	110 (20)

Table 1 (continued).

Latin name	Japanese	Species	Search volume (Rank in families)	
			Katakana	Hiragana
Ptinidae	[Hyouhon-Mushi]	7	91 (39)	0 (27)
Trogossitidae	[Kokunusuto]	20	1900 (16)	36 (24)
Cleridae	[Kakkou-Mushi]	50	58 (47)	0 (27)
Melyridae	[Joukai-Modoki]	40	73 (43)	0 (27)
Nitidulidae	[Keshikisui]	160	590 (27)	0 (27)
Cucujidae	[Hirata-Mushi]	28	170 (35)	0 (27)
Silvanidae	[Hoso-Hirata-Mushi]	24	36 (58)	0 (27)
Cryptophagidae	[Kisui-Mushi]	39	36 (58)	0 (27)
Languriidae	[Kometsuki-Modoki]	37	91 (39)	0 (27)
Erotylidae	[Oo-Kinoko-Mushi]	96	73 (43)	0 (27)
Corylophidae	[Mijin-Mushi]	29	36 (58)	0 (27)
Endomychidae	[Tentou-Mushi-Damashi]	47	720 (23)	91 (22)
Coccinellidae	[Tentou-Mushi]	162	14800 (2)	9900 (2)
Lathridiidae	[Himemaki-Mushi]	26	210 (33)	0 (27)
Colydiidae	[Hosokata-Mushi]	36	36 (58)	0 (27)
Mycetophagidae	[Ko-Kinoko-Mushi]	26	22 (68)	0 (27)
Melandryidae	[Naga-Kuchiki-Mushi]	82	16 (70)	0 (27)
Mordellidae	[Hananomi]	170	110 (37)	210 (15)
Oedemeridae	[Kamikiri-Modoki]	52	390 (29)	0 (27)
Pyrochroidae	[Akahane-Mushi]	19	46 (51)	0 (27)
Anthricidae	[Ari-Modoki]	60	58 (47)	0 (27)
Meloidae	[Tsuchi-Hanmyou]	15	480 (28)	0 (27)
Lagriidae	[Ha-Mushi-Damashi]	22	46 (51)	0 (27)
Alleculidae	[Kuchiki-Mushi]	25	28 (64)	0 (27)
Tenebrionidae	[Gomi-Mushi-Damashi]	305	1600 (18)	36 (24)
Cerambycidae	[Kamikiri-Mushi]	700	6600 (9)	880 (8)
Chrysomelidae	[Ha-Mushi]	500	5400 (11)	1300 (4)
Bruchidae	[Mame-Zou-Mushi]	23	260 (31)	0 (27)
Anthribidae	[Higenaga-Zou-Mushi]	157	260 (31)	0 (27)
Attelabidae	[Otoshibumi]	84	1000 (21)	210 (15)
Brentidae	[Mitsugiri-Zou-Mushi]	27	58 (47)	0 (27)
Apionidae	[Hosokuchi-Zou-Mushi]	28	16 (70)	0 (27)
Curculionidae	[Zou-Mushi]	634	8100 (7)	720 (10)
Rhynchophoridae	[Osa-Zou-Mushi]	37	46 (51)	0 (27)
Platypodidae	[Naga-Kikui-Mushi]	18	720 (23)	0 (27)
Scolytidae	[Kikui-Mushi]	305	6600 (9)	210 (15)
Other 55 Families		360	0 (78)	0 (27)
(Carabidae)	[Gomi-mushi]*		6600	320
Dynastinae	[Kabuto-mushi]		201000	18100
Cetoniinae	[Hanamuguri]		2900	140

*: General name for carabids except for Carabinae.

species belonging to dynastines, in a narrow sense).

To evaluate the search volume, I employed the browser Mozilla Firefox 2.0.0.2.0. The operating system was Mac OS 10.2.8 installed on a MacIntosh iBook G3 800 MHz (M8862J/A).

Results and Discussion

The search volume for “Hotaru”, which is lampyrids in Japanese, was the highest of the familial names of coleopterans in both hiragana and katakana, and these were over 100,000 searches for lampyrids in both katakana (135,000 searches) and Hiragana (368,000 searches) (Table 1, Fig. 1). The search volume for “Tentou-mushi” (coccinellids) in katakana was the second highest familial name in katakana, and was between 10,000 and 100,000 searches (14,800 searches). For familial names in katakana and hiragana, a search volume frequency of 1,000 to 10,000 searches occurred for 19 and 6 families, respectively. On the other hand, no search volume was obtained for 55 familial names in katakana and 106 familial names in hiragana, due to the lack of data on these keywords in Google AdWords. In addition to the names of coleopteran families, we examined for the search volume of 2 subfamilies and 1 general term for several taxa. When these results were included, the search volume for “Kabuto-mushi” (dynastines) was the highest of the coleopteran groups in katakana but not in hiragana (201,000 and 18,100 searches in katakana and hiragana, respectively).

These results indicated a trend in the popularity of different coleopteran groups in Japanese culture, but the search volumes were possibly higher for some coleopteran groups, due to the existence of homophones implying both a coleopteran taxon and others, such as “Koke-mushi” (implying both scydmaenids and bryozoan).

The search volume of “Hotaru” (lampyrids) and “Kabuto-mushi” (dynastines) in either or both Japanese syllabic scripts are enormously high relative to the other coleopteran groups, indicating that lampyrids and dynastines are extraordinarily popular in Japanese culture, as mentioned by several studies. Lampyrids are known as coleopteran groups with cultural significance in Japan. Historically, lampyrids have been appreciated as a pastime by many Japanese people and are well represented in literature, such as haiku and tanka poems, as a symbol of early summer or love, and in various topics in Japanese newspaper (DUNN, 2000; KOBORI & PRIMACK, 2003 a, b; YUMA, 2004; TAKEDA *et al.*, 2006; TAKADA, 2009, 2010). It is also known that dynastines (especially Japanese rhinoceros beetles) are very popular in Japanese popular culture and subcultures. Dynastines have been sold as pets in department stores in Japan since about the 1960’s, and are also frequently depicted in popular media, such as picture books, anime, comics, tokusatsu, computer games, advertisements, televisions, and films in Japan (LAURENT, 2001; GULLAN & CRANSTON, 2004; MIYANOSHITA, 2007; ANONYMOUS, 2009; TAKADA, 2009, 2010).

As a whole, a relatively small number of coleopteran groups was represented by an extraordinarily high search volume, while an abundance of other groups was represented

by a low search volume, indicating the biased attention of Japanese to only a small number of coleopteran groups, such as lampyrids, dynastines, coccinellids, dytiscids, anobiids, scarabaeids, curculionids and lucanids (Table 1, Fig. 1). It appears that most popular coleopterans have characteristics of (1) apparent morphological and ecological traits, (2) association with human survival (beneficial insects and pests), and/or (3) occurrence around human habitation, such as bioluminescence of lampyrids and large body and well-developed horns of dynastines, as mentioned by TAKADA (2010). On the other hand, most coleopteran species have characteristics of (1) unapparent morphological and ecological traits, such as a small body (1 to 5 mm in length), cryptic coloration and dwelling in closed and compact habitats and (2) occurrence far from human habitation (MORIMOTO & HAYASHI, 1986), and thus are perhaps not found and perceived by casual observers.

The pattern of the search volume of coleopteran groups differed between Japanese syllabic scripts (hiragana and katakana). The search volumes were extremely high for lampyrids and dynastines of coleopteran groups in katakana, against only lampyrids in hiragana (Fig. 1, Table 1). In addition, the search volume of lampyrids was clearly higher in hiragana than katakana, while the search volumes of other coleopteran groups, such as dynastines, were clearly higher in katakana than hiragana or almost the same in katakana and hiragana (Table 1). These results suggest that the attitude of the Japanese public toward lampyrids differs from their attitude toward other coleopteran groups, and that they have a special significance in Japanese culture, because Japanese syllabic scripts (hiragana and katakana) are chosen according to the writing purpose. This may suggest that lampyrids are often used symbolically for non-biological purposes as compared with all other coleopteran groups as dynastines, which are directly used for biological or biologically related purposes.

要 約

高田兼太: Google の検索数によって評価した日本におけるコウチュウ目に属する分類群グループの知名度—日本人は、ホタルとカブトムシが異常に好き。—文化昆虫学の研究の一環として、日本文化におけるコウチュウ目に属する各分類グループ(甲虫グループ: 132 科, 2 亜科, その他 1 甲虫グループ)の知名度を調べた。甲虫グループの知名度は、平仮名と片仮名で表記した甲虫グループの名前に対応した Google の検索数(インターネット・ユーザーが、Google を使ってあるキーワードを検索した回数)により評価し、Google の検索数は Google AdWords のキーワードツールを用いて査定した。調査の結果、甲虫グループの中でもホタルとカブトムシの Google 検索数(平仮名と片仮名、あるいはそのどちらかの結果)が極端に高く、コウチュウ目のなかではホタルとカブトムシの知名度が群をぬいて高いことがわかった。全体として、ごく僅かな甲虫グループの検索数が極めて高く、一方で他のほとんどの甲虫グループの検索数は低かったことから、極めて少数の甲虫グループのみが、日本人に注目されていることがわかった。加えて、甲虫グループの検索数のパターンは平仮名表記と片仮名表記で異なっており、ほとんどの甲虫グ

ループでは平仮名表記より片仮名表記のほうが検索数が高いのに対して、ホテルでは片仮名表記より平仮名表記のほうが検索数が高かった。これは、ホテルにむけられる日本人の意識が、カブトムシをはじめとする他の甲虫グループとは異なることを示唆するものであろう。

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Tachyerges decoratus (Coleoptera, Curculionidae) New to Japan

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Flea weevils of the genus *Tachyerges* SCHOENHERR, 1825 are known to associate with Salicaceae, and the larvae are leaf-miners (ANDERSON, 1989). Presently a total of 13 species are known from middle to high latitude of temperate to subarctic climate zones throughout the Holarctic Region except for two doubtful species in systematic position known from Sri Lanka and South Africa. Among them, five species, of which two are endemic, are known from Japan (MORIMOTO & MIYAKAWA, 1996). The sixth species, which is known to occur in Russia (Far East and European part) and Europe, was found from northern Japan as will be recorded below.

Tachyerges decoratus (GERMAR, 1821)

(Figs. 1–3)

Salix decoratus GERMAR, 1821, Mag. Ent., **4**: 331.

Rhynchaenus decoratus: GYLLENHAL, 1827, Ins. Suec., **4**: 601.

Orchestes (Tachyerges) decoratus: SCHOENHERR, 1836, Gen. Spec. Curc., **3**: 503. — HOFFMANN, 1958, Fauna de France, **62**: 1346 (key), 1347 (diagnosis, biology). — LOHSE, 1983, Käf. Mitteleur., **11**: 292 (key).

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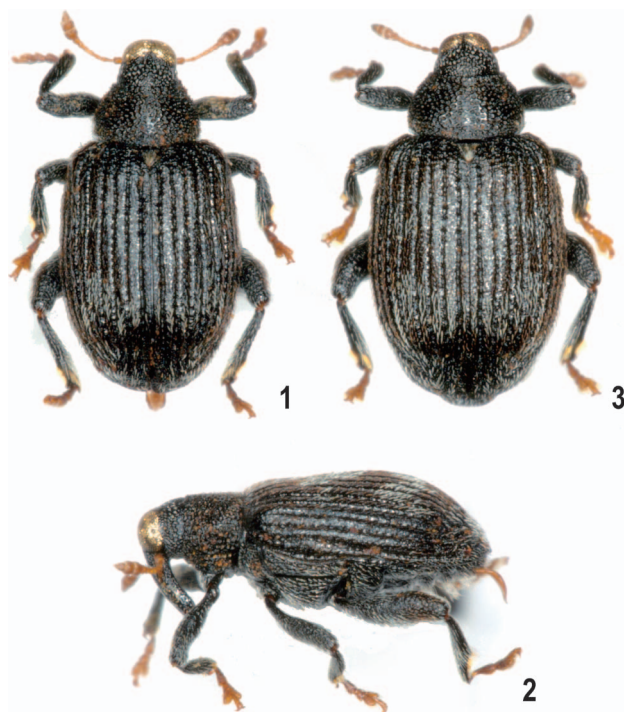
See KLIMA (1935) for synonymy and MORIMOTO & MIYAKAWA (1996) for a key to the *Tachyerges* species.

This species may be distinguished from other congeners by a combination of the following features: Derm black, with reddish brown antennae, unci of tibiae and tarsi; eyes subcontiguous; elytra ovate, 1.3–1.4 times as long as broad, with two grayish white bands usually formed of two to three rows of hairy scales on each interval and interrupted by striae, and venter with 2nd to 5th ventrites clothed with long hairs in male.

Specimens examined. 8 exs., Aiuchi, Shiura-mura, Aomori-ken, 30–VI–2000, M. HORIKAWA.

Distribution. Japan (Honshu); Russia (Far East and European part), Europe. New to Japan.

Biological note. Weevils were captured on *Salix gilgiana* (Kawayanagi in Japanese) in the lakeside.



Figs. 1–3. Habitus photographs of *Tachyerges decoratus* (GERMAR, 1821). — 1, Male, dorsal; 2, ditto, lateral; 3, female, dorsal.

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