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A New Species of *Phaulimia* (Coleoptera, Anthribidae) from Japan

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Abstract A new species of the anthribid genus *Phaulimia* is described from Japan under the name of *P. tuberosa*. It is armed with two pairs of remarkable humps on the elytra.

Through the courtesy of Mr. Kazuyuki KAWADA of Tokyo, I have recently had an opportunity to examine an interesting species of *Phaulimia* collected from the Island of Iriomote-jima near the southwestern end of Japan. After a careful examination, it has become clear that this anthribid can be distinguished from the most closely similar species *Hypseus rufitarsis* JORDAN described from Sumatra by the colour of antennae, the shape of pronotum, the dorsal transverse carina of pronotum considerably removed from the basal margin of prothorax, the broad elytra, which are not gradually narrowed from the bases to the apices, and so on. It must be a new species, and will be described in the present paper.

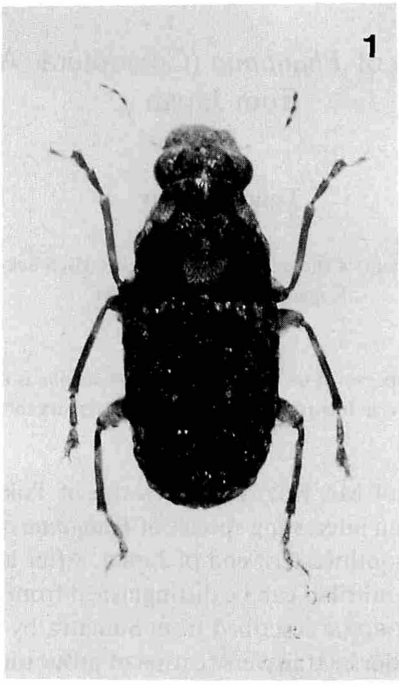
Before going further, I wish to express my sincere gratitude to Professor Y. WATANABE of the Laboratory of Entomology, Tokyo University of Agriculture, and Professor K. MORIMOTO of the Entomological Laboratory, Kyushu University, for their constant guidance and encouragement. I am much indebted to Dr. S.-I. UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his constant guidance and for reading the original manuscript of the present paper, and to Mr. K. KAWADA for his kindness in providing me with the specimen used in this study.

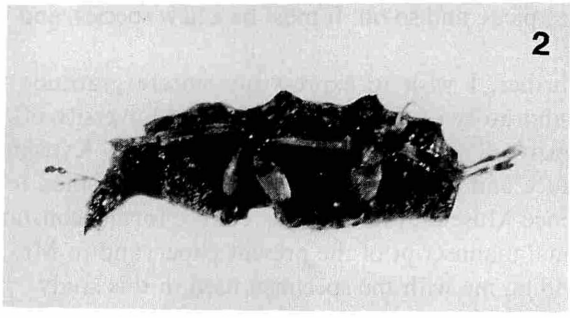
Phaulimia tuberosa SENOH, sp. nov.

(Figs. 1–2)

Length: 6.8 mm (from apical margin of rostrum to apices of elytra). Relatively robust and notably humped species.

Male. Colour predominantly black, basal halves of mandibles, a large part of rostrum, antennae, derm of pronotal markings, sub-basal parts of elytra and legs brown to reddish brown. Pubescence relatively dense, black and pale yellow; pale yellow hairs of pronotum forming a small oblong patch before the middle of dorsal transverse carina, and a distinct square one behind the middle of the carina, black hairs of each sternite forming a round patch at the lateral sides.





Figs. 1–2. *Phaulimia tuberosa* SENOH, sp. nov., ♂, from Iriomote-jima Is., South Japan; 1, dorsal, and 2, left lateral views.

Head elevated beneath eyes; eyes relatively large, strongly convex above, expanded latero-posteriorly and moderately approximate to each other; rostrum transverse, 1.86 times as wide as long, almost parallel-sided though somewhat narrowed in anterior fourth, anterior margin elevated in middle, disc somewhat depressed in middle of basal part and at both lateral sides; maximum width of rostrum about 2.3 times as wide as the shortest distance between eyes. Antennae short, hardly reaching the anterior margin of pronotum, basal two segments ovate, 9th triangular, apically dilated, about 1.4 times as long as wide, 10th also triangular, apically dilated, about 1.3 times as long

as wide, 11th oval, about 1.6 times as long as wide, proportions in length from 1st to 11th about 13 : 8 : 8 : 6 : 6 : 4 : 4 : 3 : 10 : 9 : 10.

Pronotum trapezoidal and convex above, about 1.25 times as wide as long, strongly broadened anteriorly in basal fifth, then subparallel-sided, and gradually narrowed in apical half; disc somewhat swollen at the centre; dorsal transverse carina widely distant from pronotal base, bisinuate at middle, straight on each side, and angulately connected with each lateral carina, the latter declivous, extending to apical third of side margin; carinula relatively long. Scutellum small. Elytra relatively broad, about 1.38 times as long as wide, subparallel-sided in basal three-fourths, then narrowed posteriorly, basal margin incurved at the middle; disc with two pairs of remarkable humps in subbasal and middle areas, and with a pair of distinct and three pairs of small ones in posterior third; strial punctures deep, their diameter smaller than the widths of intervals. Pygidium slightly inclined forwards, subtriangular, about 1.2 times as wide as long, lateral margins weakly reflexed, gradually convergent towards widely rounded apex.

Prosternum deeply punctate, and sparsely covered with pale yellowish hairs; metasternum weakly punctate, the punctures smaller and shallower than those on prosternum. Sternites weakly punctate similarly to metasternum; viewed from side, 1st to 4th visible sternites conjointly horizontal, the terminal one somewhat slanting. Legs relatively slender; anterior femur nearly as long as the median which is a little shorter than the posterior; anterior tibia nearly as long as the posterior which is shorter than the median; anterior, median and posterior tarsi subequal in length to one another.

Female. Unknown.

Holotype ♂, near Kanpira, Iriomote-jima Is., the Ryukyus, Japan, 25–VIII–1991, Kazuyuki KAWADA leg. The holotype is deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Distribution. Japan (Iriomote-jima Is.).

Notes. Because of the presence of conspicuous humps on the elytra and the peculiarity of dorsal transverse carina, this species is similar to *Hypseus rufitarsis* JORDAN (1928, p. 119) from Sumatra, but can be distinguished from the latter by the colour of antennae, the shape of pronotum, the dorsal transverse carina of pronotum considerably removed from the basal margin of prothorax, broad elytra not gradually narrowed from bases to apices, and so on.

要　　約

妹尾俊男：西表島から発見された*Phaulimia*属の1新種．――筆者は最近，東京都の川田一之氏のご好意により，西表島で採集された比較的幅広で上翅に2対の顕著な瘤をもつ*Phaulimia*属の1種を検する機会に恵まれた．この種はスマトラから記載されている*Hypseus rufitarsis* JORDAN, 1928によく似ているが，触角の色，前胸の形態，前胸背板横隆線が前胸の基部からより離れる，上翅が比較的に幅広く，基部から3/4までほぼ平行，などの点で異なり新種と判断されたので，コブメナガヒゲナガゾウムシ*Phaulimia tuberosa*と命名し，記載した．

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Notes on the Lepturine Genus *Pidonia* (Coleoptera, Cerambycidae) from East Asia

V. Two New Species of the Subgenus *Mumon* from Taiwan

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Abstract Two new species of the lepturine genus *Pidonia* are described from Taiwan. Both belong to the subgenus *Mumon*; one of them, *P.* (*M.*) *chienhsingi*, is related to *P. formosana*, while the other, named *P.* (*M.*) *sacrosancta* to *P. aestivalis*.

The present paper contains the result of my study on the species of the genus *Pidonia* obtained on mountainous areas of Taiwan. Two species are new to science and will be named *Pidonia chienhsingi* and *P. sacrosancta*. The holotypes of the new species to be described below will be deposited in the collection of the National Museum of Natural Science, Tai-chung, Taiwan.

In preparing this report, I wish to express my hearty thanks to Mr. Chien-hsing WENG, Republic of China Alpine Association, Taipei, for his kind help during my mountain-climbing and collecting trip in Taiwan. My thanks are also due to Mr. A. NISHIYAMA who gave me the opportunity to work with this interesting material.

Pidonia (*Mumon*) *chienhsingi* KUBOKI, sp. nov.

(Figs. 1–2, 4–5)

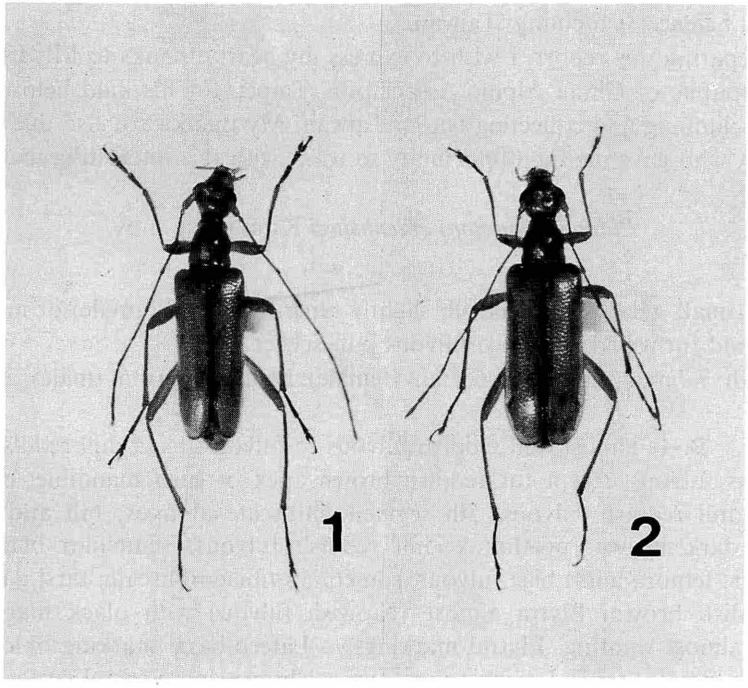
Body small, relatively roundish, slightly tapering apically (male) or more robust (female), and furnished with pale fulvous pubescence.

Length: 7.7 mm (male), 7.7–6.2 mm (female); breadth: 2.0 mm (male), 2.2–1.7 mm (female).

Color. Body almost dull reddish fulvous to fulvous; head dull reddish fulvous; mouthparts fulvous except for reddish brown apex of each mandible; eyes black; antennae dull reddish fulvous; 5th segment infuscate at apex; 6th and following segments dark brown; prothorax dull reddish fulvous; scutellum black; coxae, trochanters, femora and tibiae fulvous; sometimes tibiae infuscate; tarsi dark brown; claws reddish brown. Elytra almost yellowish fulvous with black margin; black markings almost wanting. Elytral markings:— Latero-basal marking oblong, small, very faintly present; apical marking very narrowly present. Ventral surface:— Head and thoraces almost dull reddish fulvous; meso- and metasterna black; abdomen fulvous.

Structure. Head a little broader across eyes than basal width of prothorax (male, 1.09: 1; female, 1.01: 1); terminal segment of maxillary palpus broadened apically, obliquely truncate at apex, with slightly curved outer margin in male; terminal segment of maxillary palpus club-shaped, gradually broadened in basal two-thirds and narrowed towards apex, obliquely truncate at apex, with curved outer margin in female; temples small, almost impunctate and shining, gradually narrowed posteriorly in anterior halves and gently constricted in posterior halves, with several setae; frons subvertical and transverse, covered with coarse punctures, bearing a fine but distinct median longitudinal furrow extending backwards to vertex; vertex fairly convex above, rather shining, sparsely and finely punctate and sparsely clothed with long pubescence; gula shining, very sparsely clothed with long pubescence.

Eyes relatively prominent, moderately faceted and shallowly emarginate at middle of internal margins. Antennae relatively long and slender, inserted just behind the level across frontal margins of eyes and slightly longer (male) or slightly shorter (female) than body; 1st segment distinctly dilated towards apex, weakly shining and sparsely clothed with fine pubescence; 2nd to 11th segments densely clothed with fine appressed pubescence and sparsely with fine erect pubescence; last segment 4.6 times (male) or 4.2 times (female) as long as width; comparative length of each antennal segment as



Figs. 1–2. *Pidonia* (*Mumon*) *chienhsingi* KUBOKI, sp. nov., from Mt. Pei-ta-wu Shan in southern Taiwan; 1, ♂; 2, ♀.

follows:— 5>1+2=3>4=6 (male) or 5>1+2>3>4=6 (female).

Prothorax longer than basal width (male, 1.09: 1; female, 1.07: 1), somewhat deeply constricted both behind apex and before base and roundly expanded laterally just before the middle; breadth across expanded portions distinctly shorter than base (1.07: 1); basal margin weakly bisinuate, obviously broader than apical margin (male, 1.40: 1; female, 1.48: 1); pronotum convex above, coarsely punctate and sparsely clothed with fine pubescence; posterior lateral setae long; prosternum shining, extremely thinly clothed with short pubescence; meso- and metasterna finely punctate, densely clothed with fine appressed pubescence. Scutellum small and triangular, slightly longer than broad and bearing thin pubescence on the surface. Elytra 2.39 times (male) or 2.34 times (female) as long as basal width, gradually narrowed posteriorly (male) or almost parallel-sided (female) and separately subtruncate roundly at apices; surface closely and finely punctate, sparsely clothed with suberect, fairly long pubescence; interspace between punctures narrower than diameter of each puncture.

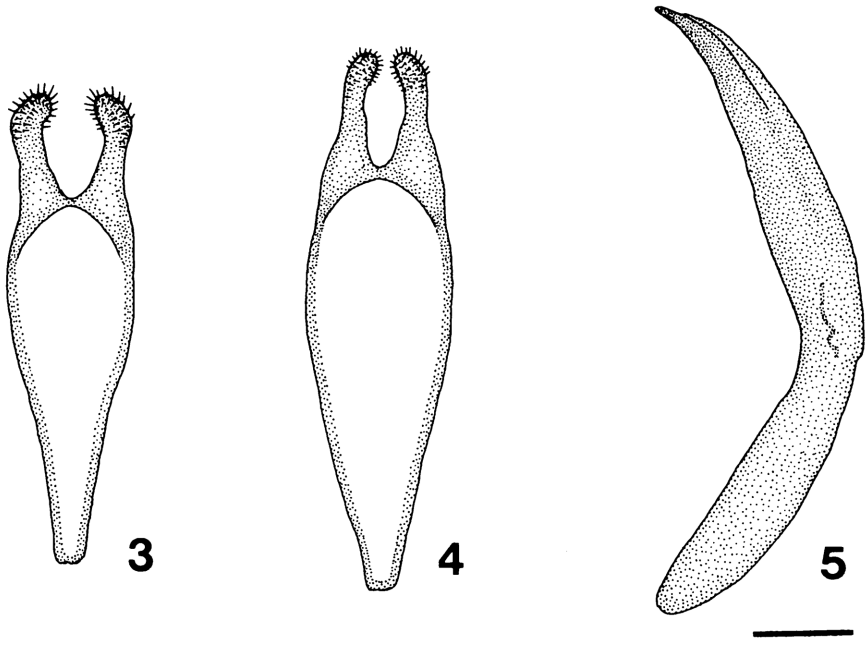
Legs relatively slender, finely punctate and clothed with short pubescence; femora clavate, with subappressed pubescence; hind femur not reaching elytral apex in both sexes; tibiae linear, with suberect pubescence; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus longer than the following two taken together; third segment strongly dilated apically and deeply emarginate at middle of apex.

Abdomen elongate and gradually narrowed towards apex; surface of each sternite densely covered with extremely fine pubescence; in male, apex of last sternite round and very shallowly emarginate at middle, apex of last tergite round and weakly mucronate; in female, apex of last sternite round, apex of last tergite truncate.

Male genitalia:— Median lobe long, relatively slender, weakly sclerotized, gradually sclerotized towards apex, moderately curved ventrally (Fig. 5) and acutely pointed at apex; lateral lobes distinctly shorter than median lobe, deeply bilobed at apex; each lobe elongate, relatively slender and gently curved inwards; apex of each lobe round, sparsely furnished with short terminal hairs (Fig. 4); endophallus long, thick and furnished with a pair of falcate sclerites; diverticulum relatively long, thick and almost parallel-sided with round apex.

Female genitalia:— Spermatheca fairly sclerotized, broad and sharply bent at apical third, with round apex; the part continuing to spermathecal duct barrel-shaped with some constrictions; spermathecal gland located at the outer corner; the part continuing to spermathecal gland somewhat swollen; spermathecal duct relatively thick; vagina enlarged basally; valvifer almost parallel-sided; basal segment of coxite gradually narrowed apically; apical segment of coxite round at apex, weakly sclerotized at each inner part and sparsely furnished with sensory pubescence; stylus large, broad, rather heavily sclerotized except for apex and gradually enlarged apically with sparse and long hairs at terminal area.

Type series. Holotype: ♀, Mt. Pei-ta-wu Shan, 2,050 m in altitude on the southwestern slope, in Tai-wu Hsiang of Ping-tung Hsien, 2–V–1991, M. KUBOKI leg.



Figs. 3–5. 3, *Pidonia* (*Mumon*) *formosana* TAMANUKI et MITONO; 4–5, *Pidonia* (*Mumon*) *chienhsingi* KUBOKI, sp. nov. —— 3–4, Lateral lobes of male genitalia, ventral view; 5, median lobe of the same, lateral view. Scale: 0.3 mm.

Paratypes: 1♂, 3♀♀, same data as for the holotype.

Distribution. Southern Taiwan.

This new species was collected from Mt. Pei-ta-wu Shan at the southern part of the Chung-yang Mountain Range. The vertical distribution of this species is shown in Fig. 11. Its distributional range is vertically limited to the upper part of the evergreen broadleaved forest zone.

I examined a total of 20 specimens belonging to the subgenus *Mumon* from Mt. Pei-ta-wu Shan and considered that they could be classified into two good species. These are *P. binigrosignata* HAYASHI and *P. chienhsingi* sp. nov. According to my investigation made on the southwestern slope of Mt. Pei-ta-wu Shan, *P. binigrosignata* is vertically distributed from 1,650 to 1,900 m in altitude and is one of the most dominant species. On the other hand, *P. chienhsingi* appears at an altitude of 2,050 m. These two species seem to be allopatric in distribution on Mt. Pei-ta-wu Shan.

Flight period. May.

Remarks. This new species is closely allied to *Pidonia formosana* TAMANUKI et MITONO, but can be distinguished from the latter by the following key:

1. Median lobe of male genitalia strongly curved ventrally; each lobe of lateral lobes relatively broad, weakly bending inwards at apical fourth; temples weakly expanded, gently curved in posterior halves; prothorax shallowly constricted

both behind apex and before base; disc of elytron coarsely and shallowly punctate ..... *P. formosana* TAMANUKI et MITONO.

— Median lobe of male genitalia moderately curved ventrally; each lobe of lateral lobes relatively slender and gently curved inwards; temples somewhat strongly expanded, somewhat abruptly constricted in posterior halves; prothorax somewhat deeply constricted both behind apex and before base; disc of elytron finely and deeply punctate ..... *P. chienhsingi* sp. nov.

The specific name is given after Mr. Chien-hsing WENG, Republic of China Alpine Association, Taipei, who is one of the most famous alpinists in Taiwan.

Pidonia* (*Mumon*) *sacrosancta KUBOKI, sp. nov.

(Figs. 6–7, 9–10)

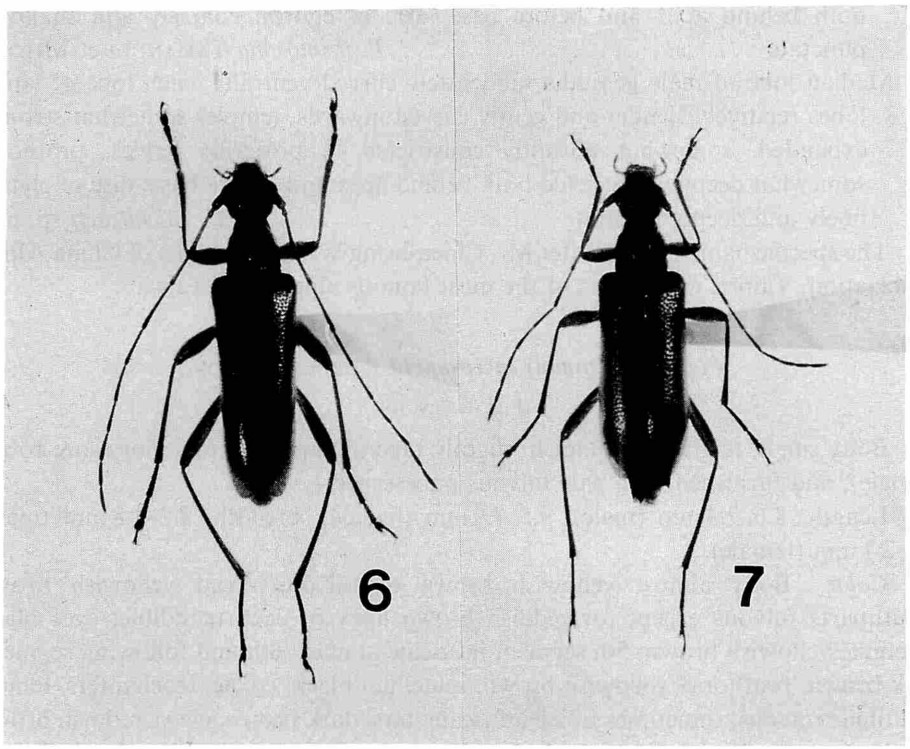
Body small, relatively roundish, slightly tapering apically (male) or more robust (female), and furnished with pale fulvous pubescence.

Length: 8.6–7.4 mm (male), 9.5–7.9 mm (female); breadth: 2.2–1.8 mm (male), 2.6–2.1 mm (female).

Color. Body almost yellowish brown to fulvous; head yellowish brown; mouthparts fulvous except for reddish brown apex of each mandible; eyes black; antennae yellowish brown; 5th segment infuscate at apex; 6th and following segments dark brown; prothorax yellowish brown; scutellum black; coxae, trochanters, femora and tibiae fulvous; sometimes tibiae infuscate; tarsi dark brown; claws reddish brown. Elytra almost yellowish fulvous; black markings almost wanting. Elytral markings:— Sutural marking very narrowly present, sometimes entirely lacking; latero-basal marking linear-oblong, small, very faintly present. Ventral surface:— Head and thoraces almost yellowish brown; meso- and metasterna darkened; abdomen fulvous.

Structure. Head a little broader across eyes than basal width of prothorax (male, 1.06: 1) or as broad as basal width of prothorax (female); terminal segment of maxillary palpus broadened apically, obliquely truncate at apex, with slightly curved outer margin in male; terminal segment of maxillary palpus club-shaped, gradually broadened in basal half and narrowed towards apex, obliquely truncate at apex, with curved outer margin in female; temples somewhat developed, almost impunctate and shining, gradually narrowed posteriorly in anterior halves and gently constricted in posterior halves, with several setae; frons subvertical and transverse, covered with coarse punctures, bearing a fine but distinct median longitudinal furrow extending backwards to vertex; vertex weakly convex above, rather shining, sparsely and finely punctate and sparsely clothed with long pubescence; gula shining, very sparsely clothed with long pubescence.

Eyes relatively prominent, moderately faceted and shallowly emarginate at middle of internal margins. Antennae relatively long and slender, inserted just behind the level across frontal margins of eyes; apical one segment surpassing elytral apices in male; antennae barely attaining elytral apices in female; 1st segment distinctly dilated



Figs. 6–7. *Pidonia* (*Mumon*) *sacrosancta* KUBOKI, sp. nov., from Pi-lu-shen-mu in eastern Taiwan; 6, ♂; 7, ♀.

towards apex, weakly shining and sparsely clothed with fine pubescence; 2nd to 11th segments densely clothed with fine appressed pubescence and sparsely with fine erect pubescence; last segment 4.8 times (male) or 3.9 times (female) as long as width; comparative length of each antennal segment as follows:— $5>1+2\geqq3\geqq6\geqq4$ (male) or $5>1+2=3\geqq4\geqq6$ (female).

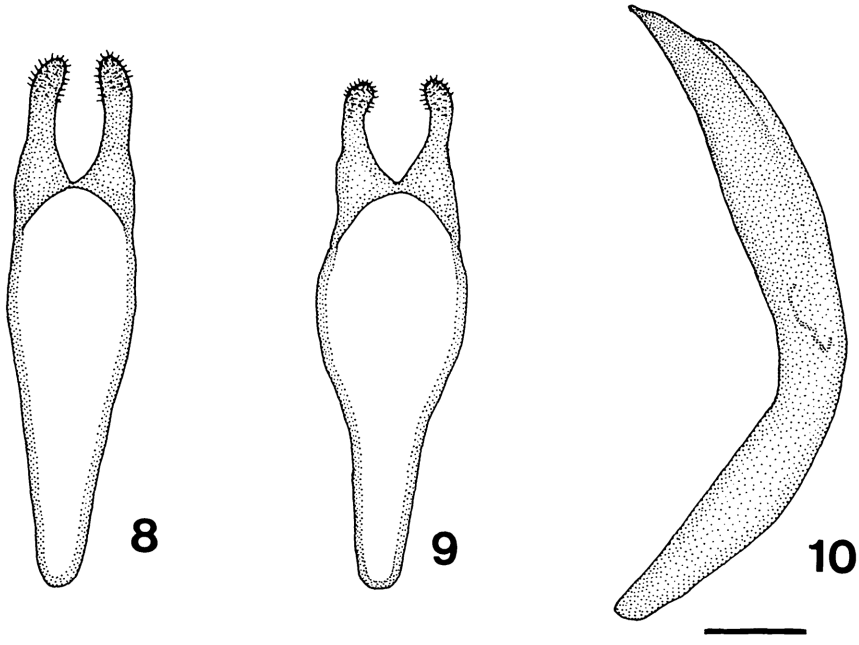
Prothorax longer than basal width (male, 1.08: 1; female, 1.02: 1), somewhat shallowly constricted both behind apex and before base and roundly expanded laterally just before the middle; breadth across expanded portions distinctly shorter than base (male, 1.11: 1; female, 1.08: 1); basal margin weakly bisinuate, obviously broader than apical margin (male, 1.45: 1; female, 1.48: 1); pronotum convex above, coarsely punctate and sparsely clothed with fine pubescence; posterior lateral setae long; prosternum shining, extremely thinly clothed with short pubescence; meso- and metasterna finely punctate, densely clothed with fine appressed pubescence. Scutellum small and triangular, slightly longer than broad and bearing thin pubescence on the surface. Elytra 2.54 times (male) or 2.35 times (female) as long as basal width, gradually narrowed posteriorly (male) or almost parallel-sided (female) and separately subtruncate roundly at apices; surface closely and finely punctate, sparsely clothed

with suberect, fairly long pubescence; interspace between punctures narrower than diameter of each puncture.

Legs relatively slender, finely punctate and clothed with short pubescence; femora clavate, with subappressed pubescence; hind femur not reaching elytral apex in male, not reaching elytral apex in female; tibiae linear, with suberect pubescence; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus longer than the following two taken together; third segment strongly dilated apically and deeply emarginate at middle of apex.

Abdomen elongate and gradually narrowed towards apex; surface of each sternite densely covered with extremely fine pubescence; in male, apex of last sternite round and very shallowly emarginate at middle, lateral angles weakly emarginate, apex of last tergite round; in female, apex of last sternite round, apex of last tergite subtruncate.

Male genitalia:— Median lobe long, relatively slender, weakly sclerotized, gradually sclerotized towards apex, ventrally bent at basal third (Fig. 10) and acutely pointed at apex; lateral lobes distinctly shorter than median lobe, deeply bilobed at apex; each lobe elongate, relatively slender and gently curved inwards; apex of each lobe round, sparsely furnished with short terminal haris (Fig. 9); endophallus long, thick and furnished with a pair of falcate sclerites; diverticulum relatively long, thick



Figs. 8–10. 8, *Pidonia* (*Mumon*) *aestivalis* KUBOKI; 9–10, *Pidonia* (*Mumon*) *sacrosancta* KUBOKI, sp. nov. —— 8–9, Lateral lobes of male genitalia, ventral view; 10, median lobe of the same, lateral view. Scale: 0.3 mm.

and almost parallel-sided with round apex.

Female genitalia:— Spermatheca fairly sclerotized, broad and sharply bent at apical third, with round apex; the part continuing to spermathecal duct barrel-shaped with some constrictions; spermathecal gland located at the outer corner; the part continuing to spermathecal gland somewhat swollen; spermathecal duct relatively thick; vagina enlarged basally; valvifer almost parallel-sided; basal segment of coxite gradually narrowed apically; apical segment of coxite round at apex, weakly sclerotized at each inner part and sparsely furnished with sensory pubescence; stylus obovate, rather heavily sclerotized except for apex and gradually enlarged apically with sparse and long hairs at terminal area.

Type series. Holotype: ♂, Pi-lu-shen-mu, 2,300–2,050 m in altitude, near Mt. Pi-lu Shan, Hwa-ling Hsien, 12–V–1978, M. KUBOKI leg. Paratypes: 12♂♂, 6♀♀, same data as for the holotype; 6♂♂, 3♀♀, Pi-lu-shen-mu, 30–V ~ 2–VI–1980, A. NISHIYAMA leg.; 19♂♂, 8♀♀, Pi-lu-shen-mu, 10–VI–1980, M. KUBOKI leg.

Distribution. Eastern Taiwan.

This new species was collected from Pi-lu-shen-mu at the northeastern part of the Chung-yang Mountain Range. The vertical distribution of this species is shown in Fig. 11. Its distributional range is vertically limited from the upper part of the evergreen broadleaved forest zone to the lower part of the evergreen needleleaved forest zone.

I examined a number of specimens belonging to the subgenus *Mumon* from Pi-lu-shen-mu and considered that they could be classified into two good species. These

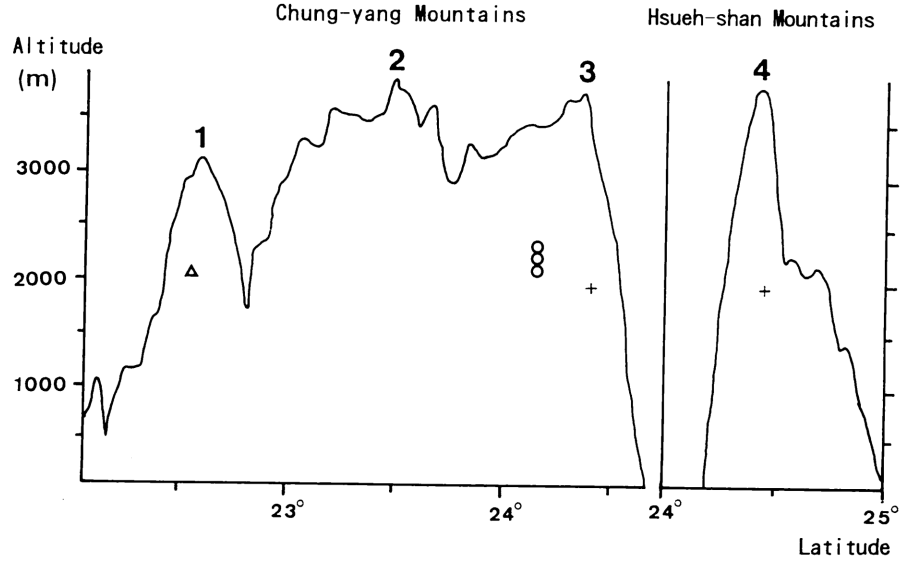


Fig. 11. Vertical distribution of two species belonging to the subgenus *Mumon* in Taiwan. Triangle: *P. chienhsingi.* Circles: *P. sacrosancta.* —— 1, Mt. Pei-ta-wu Shan; 2, Mt. Yu Shan; 3, Mt. Nan-hu-ta Shan; 4, Mt. Hsueh Shan. Cross marks indicate the location of Si-yuan-ya-kou, on the borders between the Chung-yang Mountains and the Hsueh-shan Mountains.

are *P. confusa* S. SAITO and *P. sacrosancta* sp. nov. According to my investigation made at Pi-lu–shen-mu, *P. sacrosancta* is vertically distributed from 2,050 to 2,300 m in altitude and is one of the most dominant species in this area. *Pidonia confusa* is sympatric with *P. sacrosancta* over most of its range but is apparently much more scarce.

Flight period. May to June.

Remarks. This new species is closely similar to *Pidonia aestivalis* KUBOKI, but can be distinguished from the latter by the following key:

1. Antennae relatively short, extending beyond elytral apex at the middle to apex of 11th segment in male, distinctly shorter than elytral apex in female; stylus of female ovipositor subdeltoid and abruptly enlarged apically ..... *P. aestivalis* KUBOKI.
— Antennae relatively long, extending beyond elytral apex at the base to middle of 10th segment in male, barely attaining elytral apices in female; stylus of female ovipositor obovate and gently enlarged apically ..... *P. sacrosancta* sp. nov.

要　約

窪木幹夫：東アジア産ヒメハナカミキリ属の知見．V．台湾で発見された*Mumon*亜属の2新種．——台湾の山岳地帯から採集された*Pidonia*属の2新種，*P.* (*Mumon*) *chienhsingi*と*P.* (*M.*) *sacrosancta*を記載した．前者は屏東縣泰武郷の北大武山から採集された．*P. formosana* TAMANUKI et MITONOに似ているが，雄の交尾器の中葉片の湾曲が弱く，側葉片先端の葉状部が細く，内側にやや弱く湾曲すること，頬が比較的強く膨れること，前胸部前後縁がやや深くくびれること，上翅の点刻が細かく深いことなどの差異によって区別できる．また，後者は花蓮縣秀林郷の碧禄—神木から採集された．*P. aestivalis* KUBOKIに似ているが，触角が比較的長く，雄では10節の基部から中央部で上翅端を超え，雌ではわずかに上翅端を超えないこと，雌の産卵管先端のstylusが卵形を呈することなどで区別できる．なお，新名*chienhsingi*は中華民國山岳協會の高山嚮導翁建興氏に献名した．

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Elytra, Tokyo, **23** (1): 14, May 15, 1995

New Localities of Two *Paramimistena* Species (Coleoptera, Cerambycidae) from Thailand

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The members of *Paramimistena* FISHER (1940, pp. 204–205) is small sized cleomenine cerambycid beetles, mainly characterized by the elliptical pronotum with close punctuation, short and broad elytra which are decorated with pale maculation, and short antennae and legs. About eight species of the genus have hitherto been recorded from NE India to Indochinese Peninsula. Through the courtesy of Messrs Kyoji TAZOE and Jun ITO, I was able to examine two *Paramimistena* species collected by themselves from northern Thailand. The two species have so far been known from the original localities of Laos, and I am going to record them as new localities from Thailand. I thank Messrs. K. TAZOE and J. ITO for their offering the materials.

Paramimistena enterolobii GRESSITT et RONDON

Paramimistena enterolobii GRESSITT et RONDON, 1970, Pacif. Ins. Mon., **24**, pp. 308–309, figs. 48-c, d; type locality: Laos: Nong Tevada, Vientiane Prov. (holotype); Km 17, Paksane.

Specimen examined. 1♀, suburbs of Chiang Mai City, N. Thailand, 22–VIII–1979, J. ITO leg.

Distribution. Laos, Thailand (new record from Thailand).

Paramimistena longicollis GRESSITT et RONDON

Paramimistena longicollis GRESSITT et RONDON, 1970, Pacif. Ins. Mon., **24**, pp. 309, fig. 48-e; type locality: Laos: Pakkading, Borikhane Prov. (holotype); Phon Tiou, Khammouane Prov.; Km 17, Paksane; Universite, Km 9, Vientiane Prov.; Phou Khao Khoay, Vientiane Prov.; Nong Tevada; Nong Pheng.

Specimen examined. 1♂, Doi Suthep, Chiang Mai Prov., N. Thailand, 6–III–1981, T. TAZOE leg.

Distribution. Laos, Thailand (new record from Thailand).

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Elytra, *Tokyo*, **23** (1): 15–16, May 15, 1995

マヤサンコブヤハズカミキリの越冬温度

江　崎　功　二　郎

〒920–21　石川郡鶴来町三宮ホ一　石川県林業試験場

Hibernation of *Mesechthistatus furciferus* (BATES) (Coleoptera, Cerambycidae)

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Abstract　Temperature in the litter layer under the snow is always more than 0°C at the hibernating site of *Mesechthistatus furciferus* (BATES).

1. 緒　　言

マヤサンコブヤハズカミキリ *Mesechthistatus furciferus* (BATES) は，近畿，中部および北陸地方の低地から高地まで分布する．本種は一年を通して見られ，とくに秋季には新鮮な個体がカエデやアザミ類などの枯れ葉を摂食しているのが観察され，春季には歩行している個体を，夏季には倒木上にいる個体を見ることが多い．冬季は，同属のフジコブヤハズカミキリ *M. fujisanus* HAYASHI のように，落葉層下で越冬する（平井，1980）ことが予測されるが，本種については明らかにされていない．

本報では，本種の落葉層中での越冬とそれに関連する温度および積雪高について報告する．

報告に際し，越冬環境調査にご協力していただいた石川県林業試験場の矢田　豊技師に厚くお礼申しあげる．

2. 材料および方法

石川県石川郡鶴来町樹木公園展示スギ林内（約50年生）に，まったく底を欠いたプラスチック容器（50×30×30 cm）を5cm程度地面に埋め込み，ヤマブドウの葉のついたツルを容器内の落葉層の半分が十分におおわれるように詰めて入れた．1993年11月18日に，この容器に，河内村内尾で9月下旬から10月上旬に採集した，マヤサンコブヤハズカミキリ20個体を入れ，個体が容器外へ移動しないように上部に網の蓋を取り付けた．12月21日まではヤマブトウを摂食する個体や歩行する個体が見られたが，22日には積雪が観測され，表面上個体が確認できなくなったので，上部の蓋を取り外して容器内に積雪があるようにした．

積雪高は容器の近くに高さが確認できるポールを垂直に固定して，原則として毎日，午前8:00から9:00までの間に測定した．温度は，容器内の落葉層中と積雪高の測定に用いたポールの地上高200 cmに，温度センサーを設置して測定した．

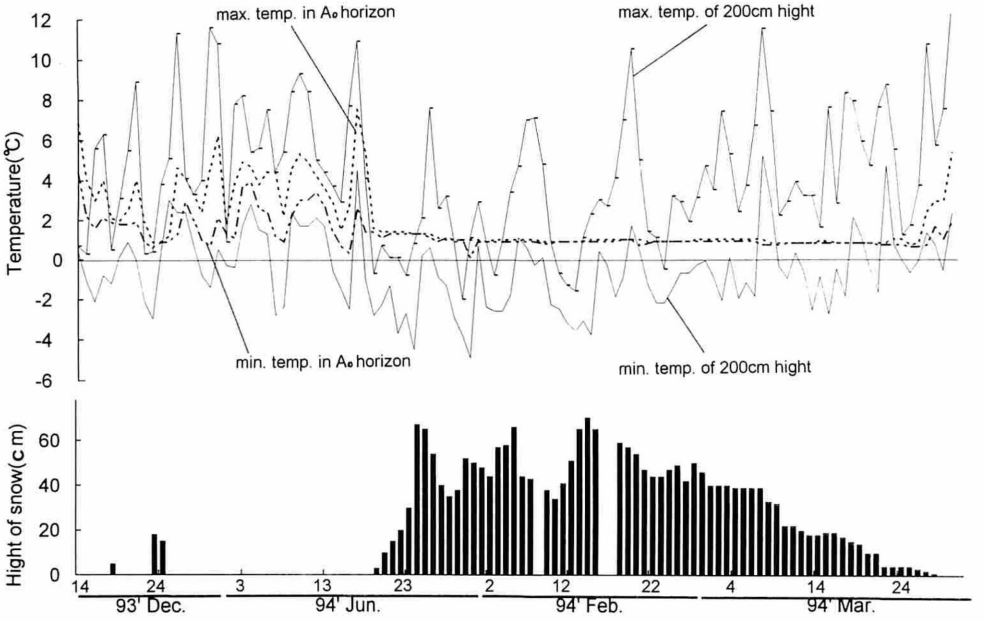

Fig. 1. Temperature and height of snow at the hibernating site of *Mesechthistatus furciferus* (BATES). (14/Dec. 1993~31/Mar. 1994.)

3. 結　　果

地表面に雪が見られなくなった4月1日の観察で，ヤマブドウの枯れ葉内にくるまっている個体を5個体確認した．その後の4日には6個体が不活発ではあるが活動しているのが観察されたので，ふたたび上部に蓋を取り付けその後の経過を調査したが，蓋の網に一部すき間があることが解り観察を中止した．1993年12月14日から1994年3月31日までの積雪高（1994年2月8, 16, 17日に欠測値が生じた），および落葉層内と地上高200 cmの1日の最低最高温度を図1に示した．図1より，積雪があるときは積雪高に関係なく落葉層内の最低最高温度は，ほぼ一致して0°C以上で安定することが示された．

4. 考　　察

江崎（1992）は，コブヤハズカミキリ *M. binodosus* (WATERHOUSE) の越冬観察で，落葉層内での越冬場所は環境条件によりかなり限定されると考察している．図1より，積雪下の落葉層中の温度はかなり安定していることが明らかなので，本種が限定した越冬場所を選択するとすれば，温度条件外の要因が関わっていることが示唆される．

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Elytra, Tokyo, **23** (1): 17–23, May 15, 1995

Notes on the Genus *Callirhipis* (Coleoptera, Callirhipidae) from the Ryukyu Islands and Taiwan

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Abstract Three species of the genus *Callirhipis* from the Ryukyu Islands and Taiwan are dealt with. One of them from Okinawa-hontô is new to science and is described under the name of *C. kurosawai*. Females of all the species are described for the first time. A key to the species is provided.

Through the courtesy of Dr. Y. KUROSAWA, I was able to examine a remarkable species of the genus *Callirhipis*, collected by himself on Okinawa-hontô of the Ryukyu Islands in 1984. This was a male specimen and recorded by KUROSAWA (1984) under the name of *Callirrhipis formosanus* PIC based on the knowledge at that time. Later, he carefully restudied the specimen and concluded that it might belong to a new species. However, he kindly gave me the opportunity to describe this interesting specimen, together with additional material including females obtained from decayed trees. According to my detailed study, it was proved that KUROSAWA's inference was correct. It is different not only from *C. formosana* PIC but also from *C. miwai* NAKANE in the structure of head, elytra, pronotum and male genitalia, as will be shown in the following description and a key to the species. The new name to be given is *C. kurosawai*.

At this opportunity, two previously known species of *Callirhipis* from the Yaeyama Islands and Taiwan will also be dealt with. Their females will be described for the first time and their male genitalia will be illustrated. These three species will be diagnosed in a key.

I wish to express my deep gratitude to Dr. Yoshihiko KUROSAWA for his kindness in giving me the opportunity to study the interesting material, to Dr. Shun-Ichi UÉNO for not only critically reading the manuscript of this paper but also examining the specimen, and to Dr. S. HISAMATSU, Dr. M. OWADA, Dr. M. SAKAI, Mr. H. FUJITA and Mr. Y. TAGAWA for their kind support in the literature and material.

Callirhipis kurosawai M. SATÔ, sp. nov.

(Figs. 1–3)

Callirrhipis [sic] *formosanus*: KUROSAWA, 1984, Coleopt. News, Tokyo, (66): 7.

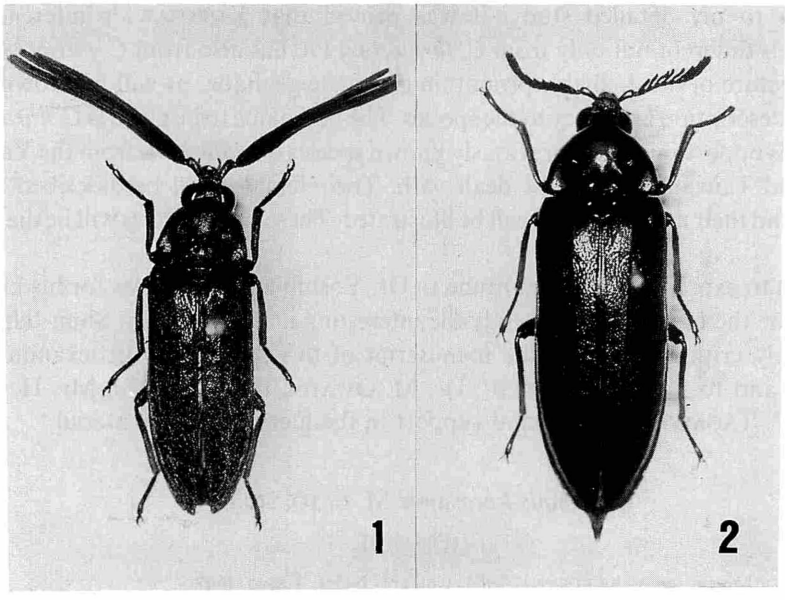
Male. Body elongate, subparallel-sided, well convex, rather shining, closely

covered with long, recumbent and bombycinous hairs above and with short, recumbent and flavescent hairs beneath. Colour mostly dark brown; head black; antennae, legs and ventral surface dark reddish brown, but the palpi and posterior margins of abdominal sternites are more or less light.

Head small, closely and somewhat rugosely punctate; vertex shallowly concave, with a distinct medium sulcus in front; margin of antennal cavities moderately ridged; clypeus transverse, microreticulate, with raised sides; labrum semicircular, rugosely punctate; eyes large, prominent, the distance between them about 1.7 times the breadth of an eye; antennae lamellate, long, 1st segment stout, 2nd short, 3rd to 10th rather short, each furnished with a long slender appendage, 11th very long.

Pronotum semicircular in outline, about 1.6 times as broad as long; surface closely, strongly and somewhat rugosely punctate, provided with a round fovea on each side just behind the middle and with a pair of round foveae just in front of scutellum, basal area depressed near the hind corners. Scutellum round, shallowly hollowed, finely and closely punctate.

Elytra subparallel-sided, gently narrowed posteriad, about 1.1 times as broad as pronotum, about 2.4 times as long as broad; surface somewhat closely and strongly punctate and furnished with variable, transverse or oblique, scar-like depressions which are pronounced in apical two-thirds, the punctures becoming sparser and smaller towards lateral and apical areas; each elytron provided with 5 vague costae and with a short longitudinal impression inside humerus, 1st costa short, oblique and recognized at base just lateral to scutellum.



Figs. 1–2. *Callirhipis kurosawai* M. SATÔ, sp. nov.; 1, male; 2, female.

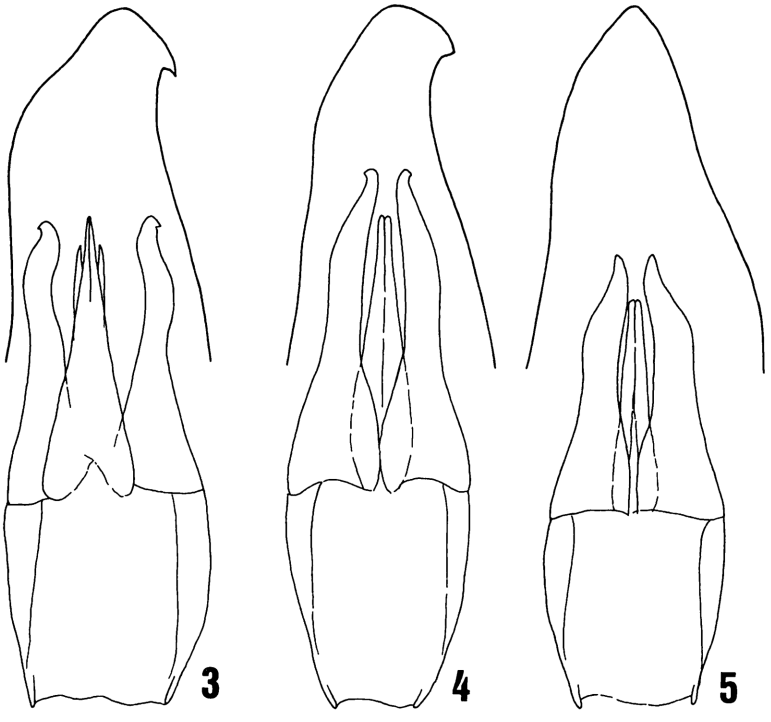
Ventral surface closely and distinctly punctate; prosternal process long, extending to between coxae, with dully pointed apex; mesosternum provided with a median pit for receiving prosternal process and with a pair of round hollows for receiving front trochanter in front and joining median furrow behind; metasternum with a median line; abdomen with 5 visible sternites, 1st narrowly projected at anterior middle to between hind coxae, 2nd to 5th rimmed at antero-lateral sides. Legs long, slender, closely covered with short flavescent haris; femora closely, transversely and rugosely wrinkled; tibiae almost straight.

Male genitalia stout; median lobe strongly tapered, with short apical carina; lateral lobes distinctly sinuate with angulate apex.

Length: 15.3–17.2 mm (from front margin of pronotum to elytral apices); breadth: 5.2–5.7 mm.

Female. Body robust, subparallel-sided, distinctly convex, well shining and sparsely covered with fine pubescence. Colour almost dark reddish brown, but the antennae, palpi, legs and ventral surface are reddish brown.

Head somewhat small; vertex shallowly concave; the distance between eyes about 1.3 times as the breadth of an eye; antennae pectinate, somewhat short, 1st segment



Figs. 3–5. Male genitalia and close up of the apex of lateral lobe. —— 3, *Callirhipis kurosawai* M. SATÔ, sp. nov.; 4, *C. miwai* NAKANE; 5, *C. formosana* PIC.

stout, 2nd small, 3rd to 10th short, each furnished with a long appendage which becomes gradually longer apicad, 10th about twice as long as 3rd and about 1.5 times as long as 4th, 11th long.

Pronotum about 1.6 times as broad as long; surface closely and finely punctate, integument microreticulate. Elytra about 1.2 times as broad as pronotum, about 2.4 times as long as broad; surface somewhat closely and distinctly punctate, intervals of punctures being rugose.

Ventral surface finely and closely punctate, closely covered with fine, short and flavescent hairs.

Female genitalia well sclerotized, large, elongate, upper coxite short, narrowed apically with dully pointed apex; lower coxite long.

Length: 16.8–21.7 mm (from front margin of pronotum to elytral apices); breadth: 6.0–7.3 mm.

Holotype: ♂, Yona, Okinawa-hontô, Ryukyus, 11～12–VII–1984, Y. KUROSAWA leg. Allotype: ♀, Nago Park, Okinawa-hontô, Ryukyus, 14–VII–1984, H. FUJITA leg. Paratypes: 1♂, same data as for the holotype; 1♀, same data as for the allotype.

All the specimens of the type series are preserved in the collection of the Natn. Sci. Mus. (Nat. Hist.), Tokyo.

This new species is closely related to *C. miwai* NAKANE, but is distinguished from it by having shallowly concave vertex and angulated apex of the lateral lobes of male genitalia.

I dedicate this species to Dr. Y. KUROSAWA, who is an eminent coleopterologist and the discoverer of this interesting species.

Callirhipis miwai NAKANE, 1985

(Fig. 4)

Callirhips miwai NAKANE, 1985, Rhopal. Mag., **8** (8): 36.
Callirrhipis [sic] *formosanus*: MIWA, 1933, Trans. nat. Hist. Soc. Formosa, **23**: 9.
Callirrhipis [sic] *marmorea*: CHÛJÔ, 1972, Mem. Fac. Educ., Kagawa Univ., (2), (208): 8.

This species was first recorded from "Is. Iriomote" by MIWA (1933) under the name of *C. formosanus* PIC. NAKANE (1985) considered that it was a new species and gave it a new name, *C. miwai* based on a male specimen collected at "Banna-dake, Ishigaki Is.".

On the other hand, CHÛJÔ (1972) recorded *C. marmorea* FAIRMAIRE from "Mt. Ban'na-dake, Is. Ishigaki" and noted that a comparison with *C. formosanus* is necessary.

Judging from the descriptions and locality records in addition to the present knowledge, all the Yaeyama specimens had better be considered conspecific.

I was able to examine a specimen of hitherto unknown female of this species, which will be described for the first time.

Male. Distance between eyes about 1.6 times the breadth of an eye. Pronotum

about 1.5 times as broad as long. Elytra slightly wider than pronotum, about 2.5 times as long as broad.

Length: 16.0 mm (from front margin of pronotum to elytral apices); breadth: 5.0 mm.

Female. Body robust, subparallel-sided, distinctly convex, well shining and sparsely covered with fine pubescence. Colour almost dark reddish brown, but the antennae, palpi, legs and ventral surface are reddish brown.

Head rather small; vertex uneven, distinctly concave, closely and rugosely punctate; the distance between eyes about 1.6 times the breadth of an eye; antennae pectinate, somewhat short, 1st segment stout, 2nd small, 3rd to 10th short, each furnished with a long appendage which becomes gradually longer towards apex, 10th about 2.2 times as long as 3rd and about 1.7 times as long as 4th, 11th long.

Pronotum about 1.5 times as broad as long; surface closely and finely punctate, integument obsoletely microreticulate. Elytra about 1.2 times as broad as pronotum, about 2.4 times as long as broad; surface closely and distinctly punctate, intervales of punctures being rugose and aciculate.

Ventral surface finely and closely punctate, closely covered with fine, short and flavescent hairs.

Female genitalia well sclerotized, large, elongate, upper coxite short, narrowed apically with dully pointed apex; lower coxite long.

Length: 20.0 mm (from front margin of pronotum to elytral apices); breadth: 6.7 mm.

Specimens examined. 1♂, Mt. Banna-dake, Ishigaki-jima, Ryukyus, 5–VII–1984, H. FUJITA leg.; 1♀, Omoto, Ishigaki-jima, Ryukyus, 30～31–VII–1981, M. OWADA leg.

Callirhipis formosana PIC, 1912

(Fig. 5)

Callirrhipis [sic] *formosana* PIC, 1912, Échange, **28** (325): 5. —— EMDEN, 1924, Ent. Mitt., **13**: 30. —— MIWA, 1928, Trans. nat. Hist. Soc. Formosa, **18**: 372.

Callirhipis formosana: NAKANE, 1985, Rhopal. Mag., **8** (8): 34.

This species was described by PIC (1912) from "Ile Formosa". Since then, it has been recorded by EMDEN (1924) from "Kosempo, Formosa". Both the records were based on male specimens only. This may be due to the fact that the males are more easily collected than the females, as the males are often attracted to light at night.

Recently, I had an opportunity to examine a female specimen of this species collected by Dr. S.-I. UÉNO "nr. Fen-chi-hu, Taiwan". I will describe it in the following lines.

Male. Distance between eyes about 1.8 times the breadth of an eye. Pronotum about 1.5 times as broad as long. Elytra about 1.1 times as broad as pronotum, about 2.6 times as long as broad.

Length: 14.7 mm (from front margin of pronotum to elytral apices); breadth: 4.7 mm.

Female. Body somwehat slender, subparallel-sided, well convex, shining and sparsely covered with fine pubescence. Colour almost dark reddish brown, but the antennae, palpi, legs and ventral surface are reddish brown.

Vertex moderately concave, closely and distinctly punctate; the distance between eyes about twice the breadth of an eye; antennae pectinate, somewhat short, 1st segment stout, 2nd small, 3rd to 10th short, each furnished with a long appendage which is almost of the same length, 10th about 1.6 times as long as 3rd and about 1.2 times as long as 4th, 11th long.

Pronotum about 1.5 times as broad as long; surface closely and finely punctate. Elytra about 1.2 times as broad as pronotum, about 2.6 times as long as broad; surface rather sparsely and finely punctate, interspaces being irregularly rugose and aciculate; costae obsolete.

Ventral surface finly and closely punctate, closely covered with fine, short and flavescent hairs.

Female genitalia well sclerotized, large, elongate, upper coxite short, narrowed apically with dully pointed apex; lower coxite long.

Length: 19.5 mm (from front margin of pronotum to elytral apices); breadth: 6.0 mm.

Specimens examined. 1♂, Nanshanchi, Nantou Hsien, Taiwan, 4–VI–1981, Y. TAGAWA leg.; 1♀, Ha-li-wei, nr. Fen-chi-hu, Taiwan, 8–VII–1961, S.-I. UÉNO leg.

Key to the Species of the Genus *Callirhipis* from the Ryukyu Islands and Taiwan

1 (6) Dorsum closely covered with bombycinous hairs. Antennae lamellate..... [Males]

2 (5) Body stout. Distance of antennal cavities rather broad.

3 (4) Vertex moderately concave; lateral sides of clypeus moderately ridged. Elytra distinctly punctate..... *C. kurosawai* M. SATÔ, sp. nov.

4 (3) Vertex distinctly concave; lateral sides of clypeus distinctly ridged. Elytra strongly punctate. ..... *C. miwai* NAKANE

5 (2) Body somewhat slender. Distance of antennal cavities narrow..... *C. formosana* PIC

6 (1) Dorsum sparsely pubescent. Antennae pectinate..... [Females]

7 (10) Elytra closely and distinctly punctate. Antennal appendages rather long and gradually becoming longer towards apex.

8 (9) Head shallowly concave; antero-lateral margins of antennal cavities and lateral sides of clypeus moderately ridged..... *C. kurosawai* M. SATÔ, sp. nov.

9 (8) Head distinctly concave; antero-lateral margins of antennal cavities and

lateral sides of clypeus evidently ridged. ..... *C. miwai* NAKANE

10 (7) Elytra rather sparsely and finely punctate. Antennal appendages short and almost of the same length. ..... *C. formosana* PIC

要　約

佐藤正孝：琉球列島および台湾産ナガクシヒゲムシ属に関する覚え書．——ナガクシヒゲムシ属の種として，琉球列島から3種，台湾から1種が従来，知られていた．それらの記載と記録を，最近，得られた標本とあわせて検討した結果，次の3種に整理した．それらのうち，1種を新種として記載するとともに，従来，雄だけしか知られていなかった既知の2種について雌を記載し，雄の交尾器も図示した．

Callirhipis kurosawai M. SATÔ オキナワナガクシヒゲムシ　分布：沖縄本島．黒沢（1984）によって *C. formosanus* PIC として記録されていた．

Callirhipis miwai NAKANE ナガクシヒゲムシ　分布：八重山群島．MIWA（1933）により *C. formosanus* PIC として，また CHÛJÔ（1972）により *C. marmorea* FAIRMAIRE として，それぞれ記録されていた．

Callirhipis formosana PIC タイワンナガクシヒゲムシ　分布：台湾．

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Elytra, Tokyo, **23** (1): 24, May 15, 1995

New Record of *Copelatus minutissimus* (Coleoptera, Dytiscidae) from the Ryukyu Islands

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In 1994, I was able to collect a small *Copelatus* species on Iriomote-jima by light trap. It is identical with *Copelatus minutissimus* BALFOUR-BROWNE originally described from Singapore. I will record it as a new distribution to the Ryukyuan fauna in the following lines.

Copelatus minutissimus BALFOUR-BROWNE

Copelatus minutissimus BALFOUR-BROWNE, 1939, Trnas. r. ent. Soc. Lond., **88**: 79. —— VAZIRANI, 1970, Orient. Ins., **4**: 315.

Body mostly reddish brown; elytra dark reddish brown; antennae, palpi, legs, and elytral base rather broadly and lateral sides narrowly yellowish. Dorsal surface shagreened. Each elytron provided with 6 striae and 1 accessory stria.

Length: 3.7–3.8 mm; breadth: 1.5–1.6 mm.

Specimens examined. 2♀♀, Ohtomi-rindô, Iriomote-jima, Ryukyus, 23, 25–VIII–1994, M. SATÔ leg.; 1♀, ditto, M. KIMURA leg.

Distribution. India, Singapore, Ryukyus.

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Elytra, *Tokyo*, **23** (1): 25–30, May 15, 1995

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

Hitoo ÔHIRA

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Abstract Three new species of the elaterid beetles are described from Japan and illustrated. They are named *Oedostethus ozakii*, *Gamepenthes yoshidai* and *Xanthopenthes hiramatsui*.

In the present study, I am going to describe three new species of elaterid beetles from Japan. They belong to two different subfamilies, Negastriinae and Elaterinae. The holotypes of each species described in this paper are preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Before going further, I wish to express my deep indebtedness to Dr. Shun-Ichi UÉNO of the National Science Muserum (Nat. Hist.), Tokyo, for his reading the manuscript and giving me useful suggestions, and to Messrs. Toshihiro OZAKI of Hirosaki, Masataka YOSHIDA and Yuuji KUROTA of Tokushima, and Hiroyoshi HIRAMATSU of Wakayama for their kindness in offering the specimens used in this study.

Oedostethus ozakii sp. nov. [Negastriinae]

(Fig. 1)

Male. Length 3.5 mm, width about 1.3 mm. Body elongate and nearly parallel-sided, moderately convex above; surface shining, black except for apical portion of posterior angles of pronotum and 7th sternite of abdomen more or less dusky brown; antennae blackish brown (2nd segment dusky brown) and legs pale yellow (femora dusky brown); vestiture pale yellow, fine and decumbent.

Head almost flattened between antennae, with a shallow median longitudinal concavity between eyes; surface more or less sinuous and uniformly punctate, but not scabrous; clypeal margin well ridged, rounded at middle. Antenna elongate, extending beyond posterior angle of pronotum at least by 2 apical segments; basal segment subovate, 2nd small and subcylindrical, 3rd subtriangular, a little shorter than 4th, 3rd to 10th segments rather weakly serrate.

Pronotum subquadrate, widest at middle, with sides slightly sinuate just before posterior angles, rounded at middle, thence gradually convergent towards anterior

angles; disc dome-like, with surface not scabrous, rather densely and uniformly punctate, bearing a shallow and smooth longitudinal line at middle; posterior angles projecting postero-laterad, each with a distinct carina above, which extends anteriorly along lateral margin to almost one-third of the pronotal length including posterior

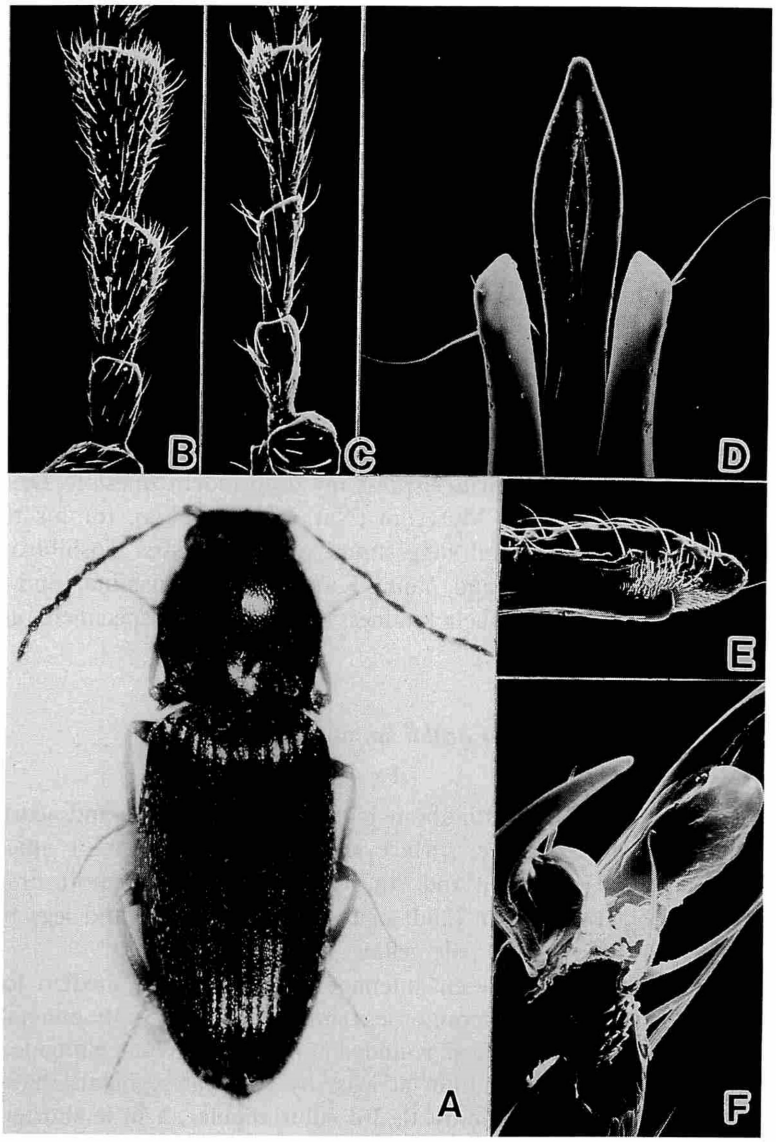

Fig. 1. *Oedostethus ozakii* sp. nov. —— A, Holotype (male); B, (male) and C, (female), 2nd to 4th segments of antenna; D, aedeagus, ventral aspect; E, apical portion of prosternal process, lateral aspect; F, ungula, hind leg.

angles. Scutellum lingulate, flattened, punctulate and pubescent. Apical portion of lateral aspect of prosternal process as figured (Fig. 1E).

Elytra about 2.2 times as long as their basal width, with sides nearly parallel in basal two-thirds, thence gradually convergent towards apices which are normally pointed; striae defined, deeply and regularly punctate; intervals rather flattened, punctulate and finely rugose. Legs slender and claws lobed at each inner base (Fig. 1F).

Apical portion of aedeagus (ventral aspect) as figured (Fig. 1D); median lobe gradually tapered towards obtusely pointed apex, with lateral lobes each sub-parallel-sided and more or less obliquely truncated apically.

Female. Very similar to male, but the antennae are shorter, barely reaching posterior angles of pronotum, with 3rd segment narrow and subcylindrical, more weakly serrate from 4th to 10th segments.

Holotype: ♂, Sukayu, Aomori Prefecture, 3–VII–1994, T. OZAKI leg. Paratypes: 14♂♂2♀♀, same date and locality as for the holotype.

Distribution. Honshu, Japan.

This new species is closely allied to *Oedostethus difficilis* (LEWIS, 1894) from Hokkaido, but can be distinguished from the latter by the smaller and more elongate body, coarser and denser punctures on pronotum, deeper striations on elytra and differently shaped aedeagus.

Gamepenthes yoshidai sp. nov. [Elaterinae]

(Fig. 2)

Male. Length 7 mm, width about 1.7 mm. Body elongate, nearly parallel-sided and moderately convex above; surface shining, black except for posterior angles of pronotum, elytral maculations and legs pale yellowish brown; antennae blackish brown (3 basal segments more or less yellowish brown), vestiture fulvous, decumbent, becoming longer on head and pronotum.

Head gently convex between eyes, flattened in subvertical portion between antennae; surface densely and coarsely punctate, each puncture umbilical; clypeal margin well ridged, rounded and weakly depressed at middle. Antenna elongate, extending beyond posterior angle of pronotum at least by apical two segments; basal segment robust and subcylindrical, 2nd and 3rd each small and subglobose; 4th axe-like in shape and about 1.5 times as long as 2nd and 3rd put together, a little longer than 5th, 3rd to 10th segments rather acutely serrate.

Pronotum subtrapezoidal, widest at posterior angles, with sides nearly straight and gradually convergent towards anterior angles; disc moderately convex, deeply and evenly punctate, each puncture simple, not umbilical, without median longitudinal smooth line or channel; posterior angles projecting postero-laterad, each with a distinct carina above. Scutellum triangular, with apex pointed apically.

Elytra about 2.6 times as long as their basal width, with sides almost parallel in

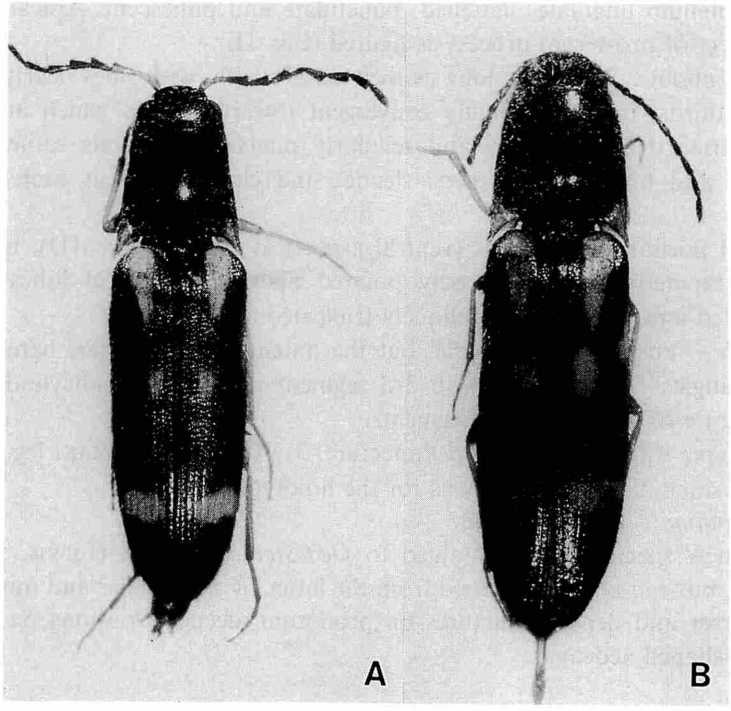

Fig. 2. *Gamepenthes yoshidai* sp. nov. —— A, Holotype, male; B, paratype, female.

basal three-fourths, thence rounded and gradually convergent towards apices which are bluntly truncated; striae defined, evenly and deeply punctate; intervals rather flattened, punctulate and irregularly rugose. Legs slender and claws simple.

Female. Very similar to male in structure and yellow patterns on elytra, but the body is robuster (length 7.5 mm) and the antennae are shorter, barely reaching posterior angles of pronotum (Fig. 2B).

Holotype: ♂, Mt. Takashiro (alt. 1,528 m), Tokushima Prefecture, 19–VII–1980, M. YOSHIDA leg. Paratype: 1♀, Mt. Tsurugi (alt. 1,955 m), Minokoshi, Tokushima Prefecture, 31–VII–1982, Y. KUROTA leg.

Distribution. Shikoku, Japan.

This new species is closely allied to *Gamepenthes pictipennis* (LEWIS, 1894) from Japan, but can be distinguished from the latter by the slender and more flattened body, trapezoidal pronotum with sparser punctures on the disc, and unique patterns on elytra.

Xanthopenthes hiramatsui sp. nov. [Elaterinae]

(Fig. 3)

Female. Length 9.5 mm, width about 2.2 mm. Body elongate, almost parallel-

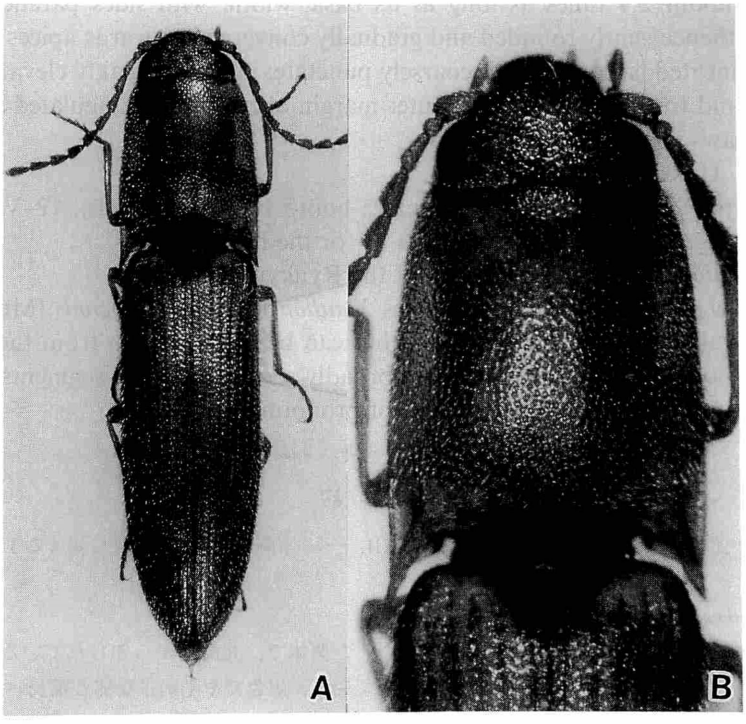

Fig. 3. *Xanthopenthes hiramatsui* sp. nov. —— A, Holotype, female; B, same, head and pronotum (enlarged).

sided and moderately convex above; surface shining, brownish yellow entirely except for basal margins of elytra and scutellum more or less darker and dusky brown; eyes black; vestiture fine and pale yellow.

Head gently convex between eyes, flattened in subvertical portion between antennae; surface coarsely and rugosely punctate; clypeal margin well ridged, rounded and weakly impressed at middle. Antenna rather short, not attaining to posterior angles of pronotum; basal segment robust and subovate; 2nd small and subglobose, 3rd subtriangular and a little shorter than 4th; 3rd to 10th moderately serrate and bearing a shallow median longitudinal carina.

Pronotum subcylindrical, widest across base, with sides nearly parallel at middle, thence weakly rounded and convergent towards anterior angles; disc dome-like, moderately densely and evenly punctate, each puncture seemingly umbilical, surface among punctures scarcely and minutely reticulate, without median longitudinal smooth line or channel; posterior angles projecting posteriorly and sharply pointed apicad, each with double carinae above, each outer carina shallower than the inner and situated along lateral margin. Scutellum flattened, triangular and obtusely pointed apicad.

Elytra about 2.9 times as long as its basal width, with sides parallel in basal two-thirds, thence gently rounded and gradually convergent towards apices which are obtusely truncated; striae defined, coarsely punctate; intervals weakly elevated, rather irregularly and transversely rugose. Outer margin of basal plate angulated at middle. Legs and claws simple.

Male. Unknown.

Holotype: ♀, Gushikami-son, Okinawa-hontô Is., Ryukyu Isls., 12–V–1978, H. HIRAMATSU leg. Paratype: 1♀, same data as for the holotype.

Distribution. Okinawa-hontô Is. of the Ryukyu Islands.

This new species somewhat resembles *Xanthopenthes granulipennis* (MIWA, 1929) from the Ryukyu Islands and Formosa, but can be distinguished from the latter by the smaller body and paler colour, more broadly serrate antennal segments from 3rd to 10th and more coarsely punctate disc of pronotum.

要　　約

大平仁夫：日本産コメツキムシ科の新種，XXXII. —— 本報告では，2亜科に属する3新種を記載した．

1. *Oedostethus ozakii*（ムツツヤミズギワコメツキ）

弘前市の尾崎俊寛氏が，青森県酸ヶ湯で見いだした個体で，北海道から知られている *O. difficilis*（LEWIS, 1894）ウスチャミズギワコメツキに類似している．黒色でやや扁平な体と細長い雄触角，より深い上翅の条線などが特徴的である．

2. *Gamepenthes yoshidai*（アワキマダラコメツキ）

徳島市の吉田正隆氏と黒田裕次氏によって，徳島県高城山と剣山から見いだされた．細長くてやや扁平な体と上翅の黄色の斑紋に特徴がある．

3. *Xanthopenthes hiramatsui*（コガタサメハダキコメツキ）

和歌山市の平松広吉氏が，沖縄本島の具志頭村でクチナシの花に飛来していた雌個体を得た．*X. granulipennis*（サメハダキコメツキ）に類似するが，小型で明るい淡黄褐色，触角の第3–10節がより幅広く鋸歯状をしているので識別できる．

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Elytra, Tokyo, **23** (1): 31–34, May 15, 1995

A New Rutelid Beetle of the Genus *Phyllopertha* (Coleoptera, Scarabaeidae) from Taiwan

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and

Chun-Lin LI

Laboratory of Insect Conservation, National Taiwan University, Taipei, Taiwan

Abstract A new species of rutelid beetle is described from Taiwan under the name of *Phyllopertha yangi*. It is somewhat allied to *P. diversa* WATERHOUSE.

In this paper, the authors will describe a new rutelid beetle from Taiwan. This belongs to the genus *Phyllopertha* STEPHENS, 1830. At the present time, this is the only species of the genus known from Taiwan.

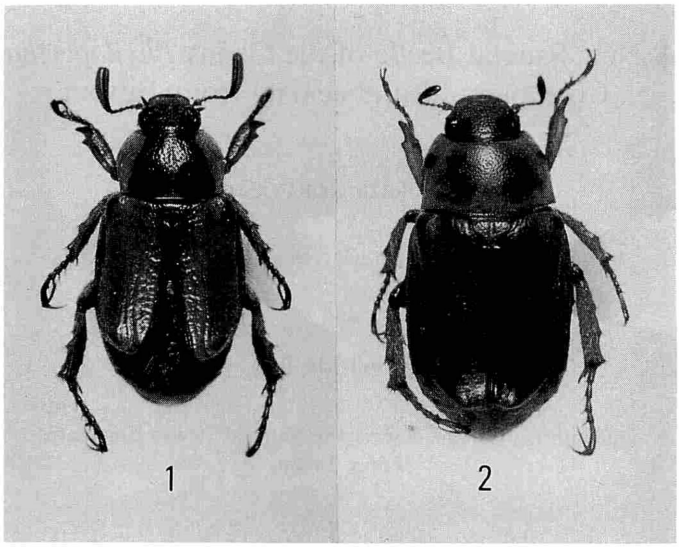
Before going further, the authors wishes to express their sincere gratitude to Messrs. C. YU of the Muh Sheng Museum of Entomology, Taiwan, and J. LO for their kind offer of materials for this study.

The holotype designated in the present study is deposited in the Insect Museum of the Department of Plant Pathology and Entomology, National Taiwan University (NTUIM), Taipei, Taiwan. Other specimen is preserved in KOBAYASHI's collection.

Phyllopertha yangi KOBAYASHI et LI, sp. nov.

[Japanese name: Taiwan-miyama-usucha-kogane]
(Figs. 1–3)

Male. Dorsal surface light yellowish brown to yellowish brown, with blackish maculations or lines as follows: posterior margin of clypeus, whole of frons and vertex, a pair of wide longitudinal lines of pronotum, scutellum with the exception of anterior margin, sutural and lateral margins of elytra, apical calli of elytra, and propygidium and lateral margins of pygidium; ventral surface black to blackish brown, mesepimera, hind coxae and sides of abdominal sternites yellowish brown to light yellowish brown; antennae dark yellowish brown (margins of clubs somewhat darker), middle and posterior femora light yellowish brown, anterior femora and tibiae yellowish brown,



Figs. 1–2. Habitus of *Phyllopertha yangi* sp. nov.; 1, male, 2, female.

with blackish inner area, tarsi dark yellowish brown; dorsal surface scattered with long suberect dark brown setae, mesosternum rather densely bearing tawny hairs; shining above and beneath.

Clypeus coarsely and densely punctate, anterior margin arched, clearly reflexed and bordered, frons and vertex coarsely and somewhat confluently punctate; fronto-clypeal suture gently arched. Antennal club almost as long as footstalk.

Pronotum 1.7 times as broad as its length, coarsely and rather densely punctate at the sides, though somewhat sparsely so at the middle, with the broadest point in the middle; sides roundly convergent to front, almost straightly convergent behind; anterior angles produced but not acute, posterior ones subangulate; all margins clearly bordered. Scutellum semicircular, very sparsely and finely punctate. Elytra coarsely, sparsely punctate, and with somewhat united punctures in part, the punctures forming several striae; intervals rather convex, almost impunctate. Epipleura somewhat broad at the base, reaching posterior corner; marginal membrane narrow, starting from near posterior margin of hind coxa.

Propygidium sparsely punctate, bearing irregular rows of hairs along posterior margin. Pygidium gently convex, sparsely and shallowly punctate, each puncture with a rather long tawny hair. Anterior margin of metasternum shortly projected between posterior coxae. Each abdominal sternite coarsely, rather sparsely punctate, scattered with long suberect yellowish hairs. Anterior tibia bidentate, apical spur short. Anterior tarsus rather broad and contracted. Middle and posterior femora sparsely punctate, rather densely bearing long tawny hairs. Middle and posterior tibiae bearing two oblique ridges on outer side, though the basal one of posterior tibia is inconspicuous.

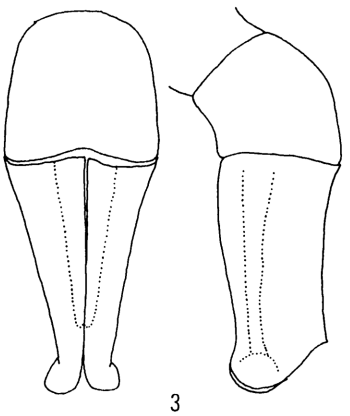


Fig. 3. Male genitalia of *Phyllopertha yangi* sp. nov.; left, dorsal view; right, lateral view.

Female. Reddish brown, rather shining. Antennal club blackish brown, with black maculations as follows: sides of eyes, four of pronotum, metasternum except at the middle, sides of each abdominal sternite, posterior corners of pygidium. Dorsal surface almost bare.

Pronotum finely and sparsely punctate, lateral margins curved before the middle, gently sinuate behind. Pygidium feebly convex, bearing several hairs on anterior margin. Abdominal sternites sparsely punctate, scattered with short hairs. Anterior tarsi of normal form, not contracted. Posterior femur very sparsely punctate, bearing a few short hairs.

Lenth: 8.5–9.5 mm; breadth: 4.0–5.0 mm.

Holotype: ♂, Mt. Anma-shan, Taichung Hsien, 29–IV–1992, C. K. YU leg. Paratype: 1♀, Mt. Lala-shan, Taoyuan Hsien, 13–V–1985, J. LO leg.

This species is somewhat allied to *P. diversa* WATERHOUSE, 1875, but can be separated from the latter by the following points: different coloration of pronotum and pygidium; much more coarsely and densely punctate elytra; much more evident, suberect setae on elytra in male. The new species is named *yangi* after Dr. Ping-Shih YANG of the Department of Plant Pathology and Entomology, National Taiwan University, R.O.C.

要　　約

小林裕和・李　春霖：台湾産ウスチャコガネ属の1新種．——台湾からウスチャコガネ属の1種を新たに記載し，*Phyllopertha yangi* と命名した．種小名は，国立台湾大学植物病虫害系の楊平世博士に献名したものである．

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Elytra, Tokyo, **23** (1): 34, May 15, 1995

Capnolymma brunnea (Coleoptera, Cerambycidae) Newly Recorded from Thailand

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In his recent study of the lepturine genus *Capnolymma*, OHBAYASHI (1994) recognized seven species including two new species of the genus from Southeast Asia based on a long series of materials recently collected and most of the type specimens. According to his study, an Indochinese species, *Capnolymma brunnea* GRESSITT et RONDON (1970, p. 33, fig. 7-g), has so far been known only from the original locality, Phon Tiou of Laos. In the past 30 years, however new materials of the species have been collected by Mr. K. KUME from nothern Thailand. They will be recorded below as a second locality of the species.

Specimens examined. 1♂, 1♀, Mt. Doi Sung, 700–800 m in alt., Chiang Mai Prov., Northern Thailand, 2～4–V–1994, K. KUME leg. Two specimens examined came flying to a mercury lamp.

Distribution. Laos, Thailand (new record from Thailand).

I would like to thank to Dr. Nobuo OHBAYASHI and Mr. Kunio KUME for their kindness in supplying the materials and valuable information about the species.

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Elytra, Tokyo, **23** (1): 35–42, May 15, 1995

Descriptions of Some Melolonthid Beetles (Coleoptera, Scarabaeidae) from Taiwan

Hirokazu KOBAYASHI

3–16, Kamishakujii-minamichô, Nerima-ku, Tokyo, 177 Japan

Abstract Five new species and one new subspecies of melolonthid beetles are described from Taiwan. They are: *Holotrichia pubifemorata*, *H. yui*, *H. hualiensis*, *H. shizumui*, *H. omeia inexpectata* and *Metabolus nitididorsis*.

In this paper, the author will describe six new melolonthid beetles from Taiwan. They belong to the genera *Holotrichia* and *Metabolus*. One of them was treated by NOMURA (1977) under the name of *H. rufescens* MOSER, but MOSER's species occurs in the Chinese Continent. There are some differences between genuine *H. rufescens* and the species distributed in Taiwan. Therefore, the author will regard the latter as a new species.

Before going further, the author wishes to express his sincere appreciation to Mr. Ching-Kin YU of the Muh Sheng Museum of Entomology, Taiwan, for his kindness in entrusting those valuable specimens to the author for investigation. The holotypes designated in this study are deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo, (NSMT), and of the Insect Museum of Department of Plant Pathology and Entomology, National Taiwan University, Taipei, Taiwan (NTUIM). Other specimens are preserved in the author's collection.

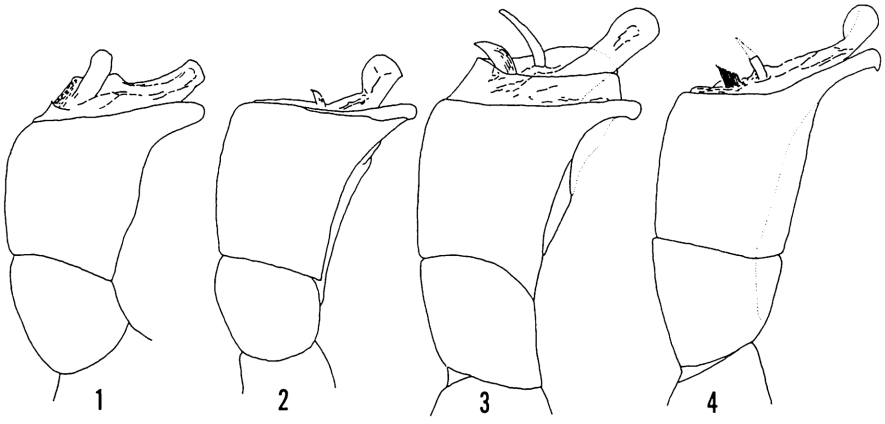
Holotrichia pubifemorata H. KOBAYASHI, sp. nov.

[Japanese name: Ashige-kuro-kogane]
(Figs. 1, 9)

Body reddish brown to dark reddish brown, head and scutellum somewhat dark-colored, antennae somewhat light-colored. Dorsal surface feebly shining, ventral surface (except for sides of 5th abdominal sternite), femora and tibiae rather strongly shining.

Clypeus weakly bilobate, margins bordered, surface coarsely and very densely punctate. Frons weakly convex, densely punctate as clypeus, fronto-clypeal suture widely arcuate, somewhat sinuate at middle. Vertex rather sparsely punctate, though smooth near posterior margin. Antennae 10-segmented, club composed of 3 lamellae, three-fourths as long as footstalk in male, shorter than that in female.

Pronotum 1.8 times as broad as its length, evenly and rather sparsely punctate,



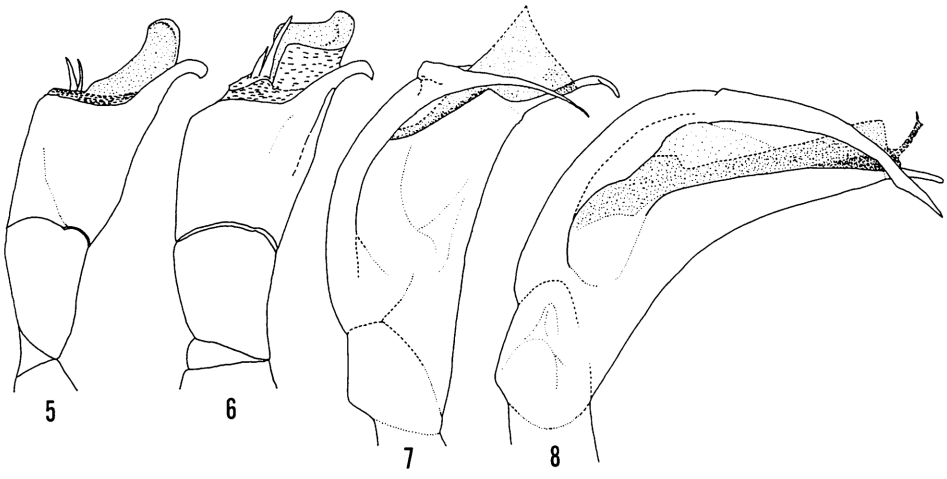
Figs. 1–4. Male genitalia of *Holotrichia* spp. —— 1, *H. pubifemorata* sp. nov.; 2–3, *H. yui* sp. nov. — 2, from Sungkang, 3, from Chusheh (holotype); 4, *H. hualiensis* sp. nov.

with a longitudinal depression in anterior half of the middle, with a shallow round depression on each posterior corner; anterior margin bordered, lateral margins curved just behind the middle, gradually convergent to apex and base, broadly crenate, fringed with sparse hairs; anterior angles subrectangular, posterior ones somewhat angulate, posterior margin dressed with a row of punctures. Scutellum broader than its length, rather densely punctate at sides, almost impunctate at the middle. Elytra each with a sutural and four discal costae, 1st costa broadened posteriorly and touching sutural one, two outer costae very fine and inconspicuous, intervals sparsely and finely punctate.

Pygidium feebly convex in male, almost flattened in female, sparsely and irregularly punctate, fringed with rather long hairs on apical margin. Ventral surface of thorax densely covered with yellowish brown, long tawny hairs. Abdominal sternites finely and very sparsely punctate, sides of 2nd sternite bearing short hairs, sides of the 5th one bearing long hairs, though the other ones glabrous; anal sternite sparsely punctate, feebly and transversely sulcate in male, almost flattened in female, with a row of rather long hairs beside the apical margin. Anterior tibiae slender and tridentate, apical tooth small and rather sharp in male, large and outwardly curved in female; inner apical spur of moderate length. Middle femora rather densely bearing long tawny hairs, which are as long as its breadth, or much longer. Posterior femora very sparsely punctate, each bearing long tawny hairs in basal half and near posterior margin. Posterior tibiae sparsely punctate, with terminal spurs slender in male, broad and curved in female, the longest one being much longer than basal tarsal segment, which is as long as the 2nd one.

Length: 22.0–24.0 mm; breadth: 12.0–13.0 mm.

Holotype: ♂, Tayulin (2,900 m alt.), Hualien Hsien, 5-VIII-1986, K. BABA leg. (preserved in NSMT). Paratypes: 1♀, same data as for the holotype; 1♀, Alishan,



Figs. 5–8. Male genitalia of *Holotrichia* spp. —— 5–6, *H. shizumui* sp. nov. — 5, from Chihtuan (holotype), 6, from Wushe. — 7–8, *H. omeia inexpectata* subsp. nov. — 7, from Tiengchih (holotype), 8, from Jiuyuetan.

Chiai Hsien, 26–VI–1970, T. KURODA leg.

This species is closely allied to *H. mizusawai* H. KOBAYASHI, 1986, but may be separated from the latter by the following points: ventral surface uniformly colored; clypeus more densely punctate; pronotum rather sparsely punctate; middle femora bearing dense hairs.

Holotrichia yui H. KOBAYASHI, sp. nov.

[Japanese name: Mokusei-kuro-kogane]
(Figs. 2–3, 10)

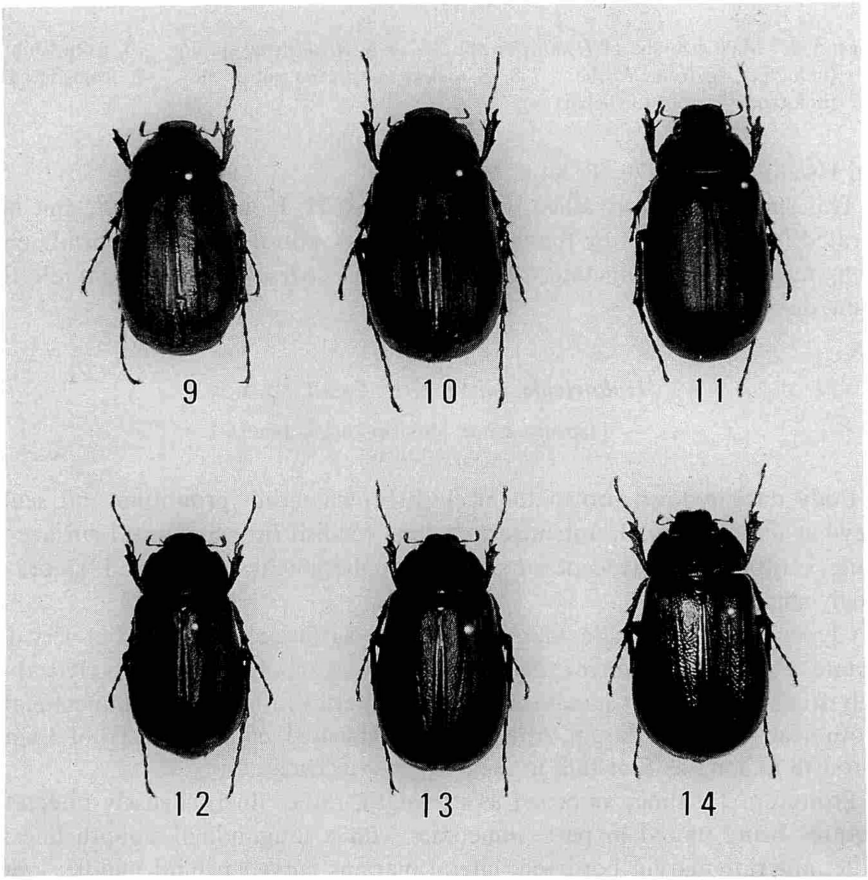
Body dark reddish brown to blackish brown, head, pronotum and scutellum somewhat dark coloured, antennae and tarsi reddish brown. Dorsal surface feebly shining, ventral surface (except for sides of 5th abdominal sternite) and femora rather strongly shining.

Clypeus weakly bilobate, margins bordered, surface rather finely but very densely punctate. Frons feebly convex, densely punctate as on clypeus, fronto-clypeal suture widely arcuate, somewhat sinuate at the middle. Vertex rather densely punctate, though smooth near posterior margin. Antennae 10-segmented, club composed of 3 lamellae, one-fourth as long as footstalk in male, shorter in female.

Pronotum 1.9 times as broad as its length, rather finely, densely punctate, the punctures being united in part, sometimes with a longitudinal smooth line at the middle; anterior margin bordered, lateral margins curved behind middle, gradually convergent to apex and base, broadly crenate and fringed with sparse hairs; anterior angles weakly produced, subrectangular, posterior ones somewhat angulate, posterior

margin dressed with a row of punctures. Scutellum broader than its length, rather sparsely punctate at sides, though almost impunctate at the middle. Elytra each with a sutural and four discal costae, 1st costa broadened posteriorly and touching sutural one, 3rd costa inconspicuous, intervals evenly and sparsely punctate.

Pygidium almost flattened in both sexes, finely and rather sparsely punctate, fringed with rather long hairs on apical margin. Ventral surface of thorax rather densely covered with yellowish brown, long tawny hairs. Abdominal sternites finely, sparsely punctate and each puncture with a microscopic hair, sides of 2nd sternite bearing minute hairs, sides of 5th one bearing long hairs; anal sternite rather densely punctate, feebly and transversely sulcate in male, almost flattened in female, with a row of rather long hairs beside anterior margin. Anterior tibiae slender and tridentate, apical and 2nd teeth large and blunt in female; inner apical spur rather long. Middle femora scattered with rather long tawny hairs, which are clearly shorter than its



Figs. 9–14. Habitus.——9, *H. pubifemorata* sp. nov.; 10, *H. yui* sp. nov.; 11, *H. hualiensis* sp. nov.; 12, *H. shizumui* sp. nov.; 13–14, *H. omeia inexpectata* subsp. nov.—13, male, 14, female.

breadth. Posterior femora sparsely punctate in apical halves, though coarse and somewhat aggregated behind, bearing two rows of hairs beside anterior and posterior margins, but the former usually indistinct. Posterior tibiae rather densely punctate, with terminal spurs slender in male, broad and curved in female, longer one much longer than basal tarsal segment, which is just shorter than the 2nd.

Length: 24.0–25.0 mm; breadth: 12.0–13.0 mm.

Holotype: ♂, Chusheh, Nantou Hsien, 14–VIII–1992, C. K. Yu leg. (preserved in NTUIM). Paratypes: 1♂, same data as for the holotype; 1♂, 3♀♀, same locality as for the holotype, 28–VIII–1992, C. K. Yu leg.; 1♂, Sungkang, Nantou Hsien, 22–VII–1990, C. K. Yu leg.; 1♂, Sungkang, Nantou Hsien, 26–IX–1992, C. K. Yu leg.

This species is somewhat allied to the preceding, but it may be separated from it by the following points: femora and tibiae blackish brown; antennal club much shorter in male; pronotum more densely punctate; abdominal sternites finely, sparsely punctate, each puncture with a microscopic hair.

Holotrichia hualiensis H. Kobayashi, sp. nov.

[Japanese name: Karen-kuro-kogane]
(Figs. 4, 11)

This species is very closely allied to the preceding species of *H. yui*, but may be separated from it by the following points:

Clypeus rather coarsely, granulately punctate. Frons rather finely, granulately punctate. Pronotum very densely, somewhat confluently punctate, anterior angles subrectangular, not produced. First intervals of elytra rather densely punctate. Middle and posterior femora rather densely punctate, very sparsely bearing hairs. Posterior tibiae coarsely and very densely punctate.

Length: 25.0 mm; breadth: 12.5 mm.

Holotype: ♂, Pilu–Shenmu, Hualien Hsien, 26–VI–1992, C. K. Yu leg. (preserved in NTUIM).

Holotrichia shizumui H. Kobayashi, sp. nov.

[Japanese name: Aka-kuro-kogane]
(Figs. 5–6, 12)

Holotrichia rufescens Nomura, 1977, Tôhô-Gakuhô, (27), pp. 90, 92 (nec Moser).

This species is very closely allied to the preceding species of *H. yui*, but may be separated from it by the following points:

Somewhat small-sized body. Pronotum rather densely punctate at middle, coarsely, very densely and somewhat confluently punctate at sides. Elytra with sutural and four discal costae, outer two costae narrow but evident. Pygidium more convex in both sexes, rather densely punctate.

Length: 22.0–23.0 mm; breadth: 11.0–11.5 mm.

Holotype: ♂, Chihtuan, Ilan Hsien, 7–VIII–1991, C. K. YU leg. (preserved in NTUIM). Paratypes: 1♂, 2♀♀, same data as for the holotype; 1♀, same locality as for the holotype, 16–VIII–1990, C. K. YU leg.; 1♀, Sulin, Taoyuan Hsien, 16–VIII–1990, C. K. YU leg.; 2♂♂, Lalashan, Taoyuan Hsien, 23–VI–1987, J. LO leg.; 1♀, Pilu Shenmu, Hualien Hsien, 3–VII–1992, C. K. YU leg.; 1♂, Wushe, Nantou Hsien, 24–VIII–1974, Y. SHIBATA leg.

This species was treated under the name of *H. rufescens* MOSER, 1912, from the Chinese Continent, but may be separated from it by the following points: body without purplish lustre; pronotum less than twice as broad as its length, lateral margin clearly crenate; basal tarsal segment of posterior tarsi shorter than the 2nd; antennal club shorter than the total length of 2nd to 7th segments united.

Holotrichia omeia inexpectata H. KOBAYASHI, subsp. nov.

[Japanese name: Harage-kuro-kogane]
(Figs. 7–8, 13–14)

This subspecies may be separated from the nominotypical one by the following points:

Dorsal surface black with dull lustre in general, but sometimes reddish brown. Clypeus and frons more coarsely, densely punctate, the latter either bearing very sparse hairs or bare. Pronotum sparsely, finely punctate, posterior angles somewhat angulated. Posterior femora sparsely punctate. Anal sternite widely excavated at middle in male. Basal segment of posterior tarsi almost as long as the 2nd one.

Length: 22.0–23.0 mm; breadth: 11.0–11.5 mm.

Holotype: ♂, Tiegchih, Kaohsiung Hsien, 27–VI–1982, C. K. YU leg. (preserved in NTUIM). Paratypes: 1♂, 1♀, same data as for the holotype.; 2♂♂, Chusheh, Nantou Hsien, 19–VII–1992, C. K. YU leg.; 1♀, Chusheh, Nantou Hsien, 19–V–1993, C. K. YU leg.; 1♂, Pilu-Shenmu, Hualien Hsien, 9–IX–1993, C. K. YU leg.; 1♂, 2♀♀, Guandaoshan, Nantou Hsien, 11–V–1987, J. LO leg.; 1♀, Lalashan, Taoyuan Hsien, 12–V–1985, J. LO leg.; 1♀, Tatungshan, Taipei Hsien, 10–VI–1977, H. SAKAINO leg.; 1♀, Wulai, Taipei Hsien, 18–VI–1968, T. KIKUCHI leg.; 2♂♂, Jiuyuetan, Nantou Hsien, 25–VI–1976, M. KUBOTA leg.; 8♂♂, 7♀♀, Tiegchih, Kaohsiung Hsien, 11–V–1978, H. SAKAINO leg.; 3♂♂, 4♀♀, Tiegchih, Kaohsiung Hsien, 3–V–1983, S. SAITO leg.; 2♂♂, 3♀♀, Fenkangshan, Kaohsiung Hsien, 30–IV–1986, K. BABA leg.

In Taiwan, this species is variable in the coloration of body, structure of male genitalia and shape of female pygidium. These varieties are, however, continuous and not geographical.

Metabolus nitididorsis H. KOBAYASHI, sp. nov.

[Japanese name: Tsuyahada-Kikogane]
(Figs. 15–16)

Body light yellowish brown to yellowish brown, shining. Head, pronotum and

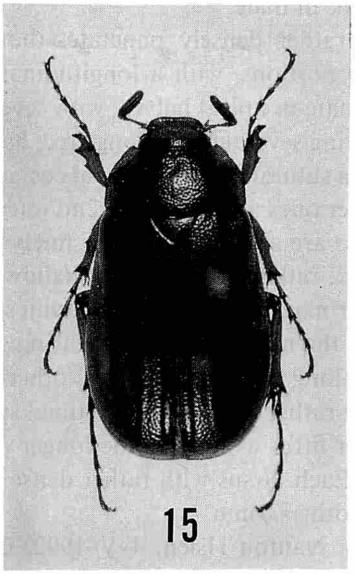


Fig. 15. Dorsal aspect of *Metabolus nitididorsis* sp. nov.

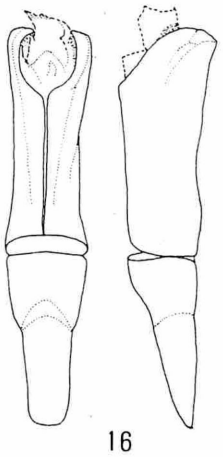


Fig. 16. Male genitalia of *Metabolus nitididorsis* sp. nov.; left, dorsal view; right, lateral view.

antennal club light reddish brown. Dorsal surface glabrous, except for posterior part of vertex and anterior and lateral margins of pronotum. Under surface of thorax rather densely covered with yellowish brown hairs.

Clypeus densely punctate, margins bordered and rather refracted, anterior margin feebly sinuate at middle. Frons densely punctate, punctures evidently larger than those on clypeus, with two boss-like elevations in the middle. Vertex finely, sparsely punctate, bearing inconspicuous short hairs on posterior parts. Antennae 9-segmented, club

slightly longer than footstalk in male.

Pronotum finely and rather densely punctate, though the punctures become somewhat larger on lateral portions, with a longitudinal depression on the middle; lateral margins vaguely crenate in apical halves, with several long hairs near anterior angles, anterior margin bearing several rather long erect hairs. Scutellum very sparsely, finely punctate. Elytra with a sutural and four lateral costae, 1st and 2nd costae evident and convex, though the outer ones are indistinct; 2nd interval coarsely, rather densely punctate, but the other ones are evenly and rather finely punctate.

Pygidium feebly convex, rather coarsely and shallowly punctate, bearing several rather long hairs on anterior margin. Abdominal sternites somewhat densely punctate at the sides, but sparsely in the middle, 2nd one bearing short hairs at the sides, and the 5th with several tawny long hairs at the sides, other parts almot bare. Anterior tibiae tridentate, apical spur rather long. Posterior tibial spurs different in length from each other, shorter one four-fifths as long as the longer one, which is slightly longer than basal tarsal segment. Each tarsus with rather dense hairs beneath.

Length: 12.5 mm; breadth: 7.0 mm.

Holotype: ♂, Chusheh, Nantou Hsien, 4–V–1992, C. K. YU leg. (preserved in NTUIM).

This species is closely allied to *M. formosanus* (NIIJIMA et KINOSHITA, 1927), but it may be separated from the latter by the following points: elytra glabrous; head without hair except for posterior margin of vertex; pygidium feebly convex, rather coarsely and shallowly punctate.

要　約

小林裕和：台湾産コフキコガネ亜科の6新種．——台湾から*Holotrichia*属の4種，1亜種，ならびに*Metabolus*属の1種を新たに記載した．このうちで，従来，*Holotrichia rufescens* MOSER としてきた種は，それとは異なる新種である．また，*Holotrichia omeia* CHANG として取り扱われてきた種は，原産地のものとは異なることから新亜種とした．

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KOBAYASHI, H., 1986. Scarabaeidae from Taiwan 13. *Gekkan-Mushi*, *Tokyo*, (179): 12–17.

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NOMURA, S., 1977. On the Melolonthini of Taiwan. *Tôhô-Gakuhô*, *Kunitachi*, (27): 85–109.

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Dung Beetles (Coleoptera, Scarabaeoidea) Collected from Sabah, Borneo (II)[1)]

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Abstract Eighteen species of dung beetles, collected by the Kyoto University Expeditions to Sabah, Borneo (1985, 1987), are recorded. Of these, *Onthophagus* (*Onthophagus*) *angustatus* BOUCOMONT is recorded for the first time from Borneo. In addition, three new species of the genus *Onthophagus* are described from Sabah, Borneo, under the names of *O.* (*Gibbonthophagus*) *fujiii* sp. nov., *O.* (*Paronthophagus*) *hidakai* sp. nov. and *O.* (*Onthophagus*) *ishiii* sp. nov.

In the present part, we are going to record 15 species of dung beetles (Coleoptera, Scarabaeoidea) and to describe three new species of the genus *Onthophagus* from Sabah, Borneo.

Onthophagus (*Gibbonthophagus*) *fujiii* sp. nov.

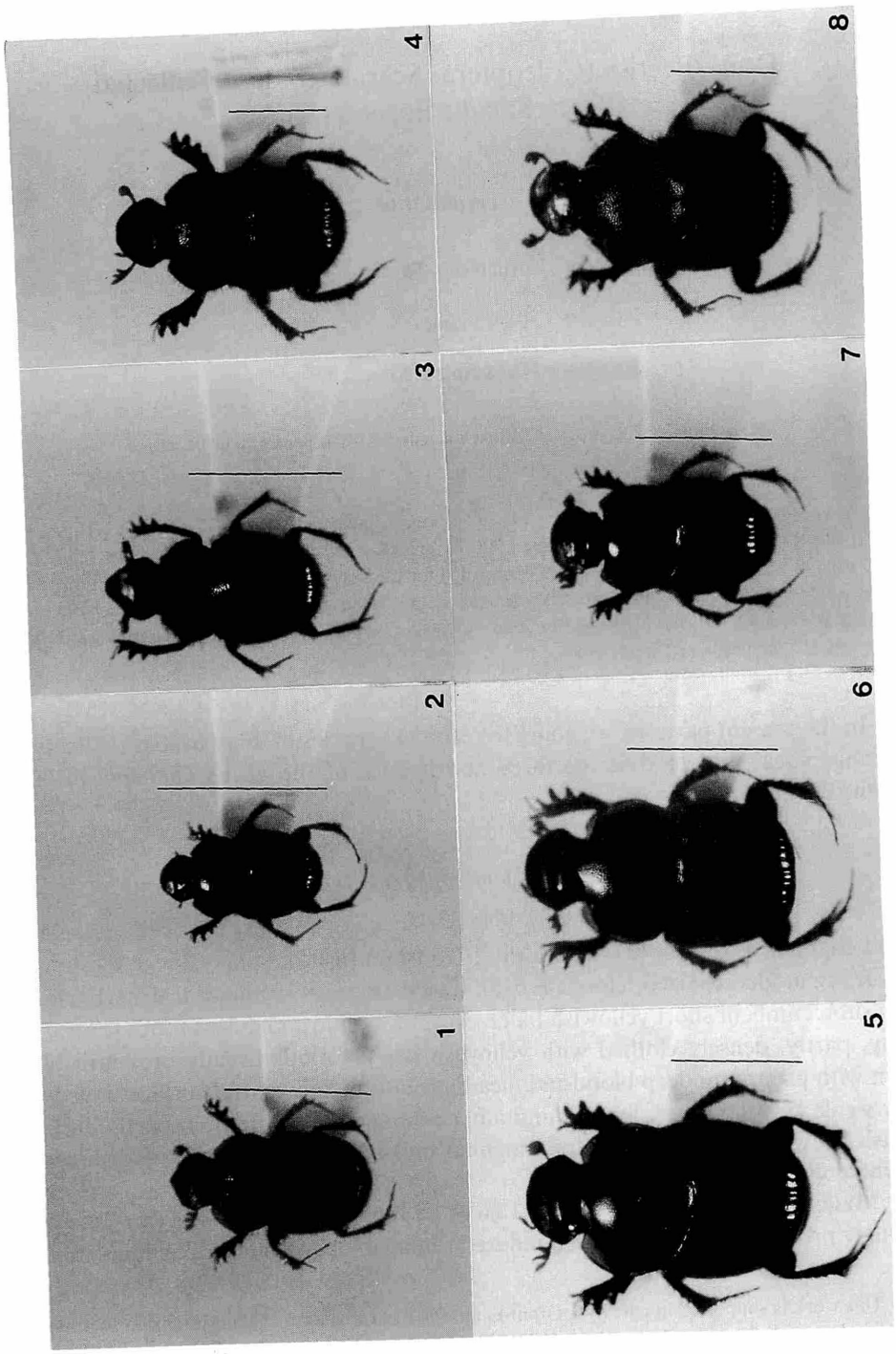
(Figs. 17–19)

Length: 7.0–7.9 mm (n = 5); width: 2.7–3.0 mm (n = 5).

Body moderate-sized, elongate oval; dorsal side mat, somewhat densely clothed with subrecumbent short yellowish hairs, except for almost glabrous head; ventral side shiny, partly, densely clothed with yellowish hairs. Colour usually brownish black, often with pronotum deep blood-red; head, pronotum and ventral surface tinged with very weak metallic lustre; femora and anterior angles of prosternum partly dark yellowish brown; mouth parts, palpi, antennal foot-stalks and protarsi reddish brown; antennal clubs yellowish brown.

Male: — Head almost flat, about 1.26 to 1.28 times as wide as long (n = 3); clypeus strongly produced forwards, with a reflexed rounded lobe at the middle, the remaining

1) This work is supported in part by a Grant-in-aid for Field Research of the Monbusho International Scientific Research Program, Japan (Nos. 60041037, 61043033, 62041049, 63043037).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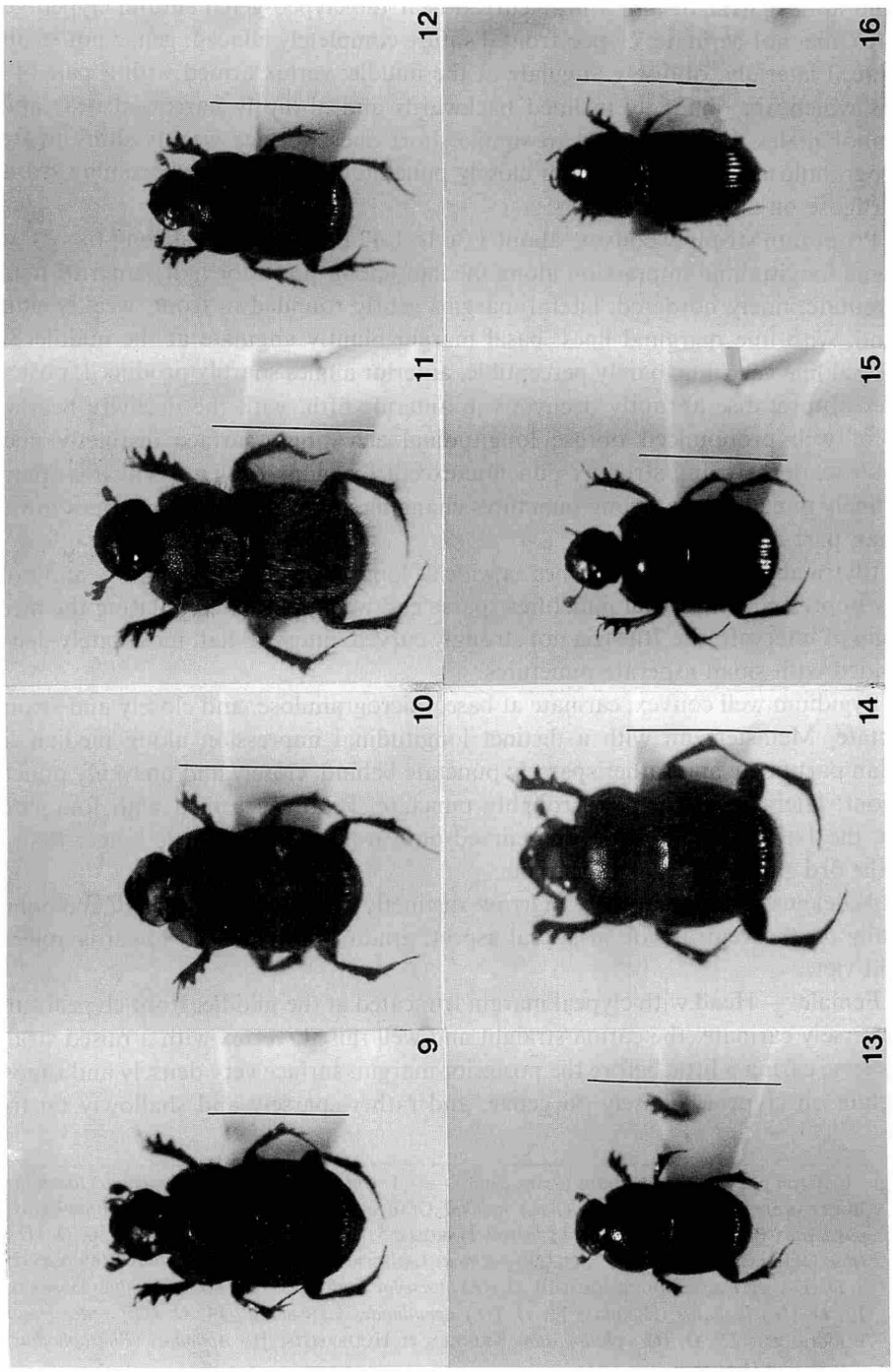
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margin almost straight and a little curved near the clypeo-genal suture; clypeo-genal sutures fine, not carinate; clypeo-frontal suture completely effaced; genae not strongly produced laterally, obtusely angulate at the middle; vertex armed with a pair of flat horns which are obliquely inclined backwards and abruptly narrowed near apices; in minor males, horns reduced to simple short ones; surface weakly shiny in front, microgranulose behind, and rather closely punctate, the punctures becoming stronger and rugose on clypeus.

Pronotum strongly convex, about 1.36 to 1.42 times as wide as long (n = 3), with a vague longitudinal impression along median line in posterior half; anterior margin emarginate, finely bordered; lateral margins gently rounded in front, weakly sinuate behind, with fine marginal lines; basal margin bluntly angulate at the middle, with marginal line very fine, barely perceptible; anterior angles sharply produced; posterior angles obtuse; disc abruptly declivous in anterior fifth, with the declivity bearing a pair of well pronounced obtuse longitudinal elevations; surface distinctly microgranulose, densely and strongly punctate except for shiny declivity which is sparsely and finely punctate, the strong punctures changing into shallow ocellate ones towards median part of the base.

Elytra about 1.33 to 1.41 times as wide as long (n = 3); striae shallowly and rather finely impressed, with strial punctures sparse and weak, faintly crenulating the medial margin of intervals; the 7th stria not strongly curved; intervals flat, moderately densely provided with small asperate punctures.

Pygidium well convex, carinate at base, microgranulose, and closely and strongly punctate. Metasternum with a distinct longitudinal impression along median line; median part finely and rather sparsely punctate behind, closely and unevenly punctate in front; lateral parts densely, roughly punctate. Protibiae armed with four lateral teeth; the 1st tooth sharp and well curved outwards, the 2nd a little longer than the 1st, the 3rd small, and the 4th minute.

Aedeagus robust. Parameres narrow, distinctly excavated in basal half and pointed apically on the ventral side in lateral aspect, gradually attenuated towards apices in dorsal view.

Female: — Head with clypeal margin truncated at the middle; front clypeal suture transversely carinate, the carina straight and well raised; vertex with a raised straight transverse carina a little before the posterior margin; surface very densely and rugosely punctate on clypeus, densely on genae, and rather sparsely and shallowly on frons

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Figs. 1–16 (on pp. 44–45). Habitus (scale: 5 mm). —— 1, *Onthophagus* (*Gibbonthophagus*) *taeniatus* BOUCOMONT; 2, *O.* (*Paronthophagus*) *hidakai* OCHI et KON, sp. nov.; 3, *O.* (*Onthophagus*) *pastillatus* BOUCOMONT; 4, *O.* (*O.*) *incisus* HAROLD; 5, *O.* (*O.*) *borneensis* HAROLD; 6, *O.* (*O.*) *ishiii* OCHI et KON, sp. nov.; 7, *O.* (*O.*) *pacificus* LANSBERGE; 8, *O.* (*O.*) *angustatus* BOUCOMONT; 9, *O.* (*O.*) *cervicapra* BOUCOMONT; 10, *O.* (*O.*) *obscurior* BOUCOMONT; 11. *O.* (*O.*) *vulpes* HAROLD; 12, *O.* (*G.*) *limbatus* (HERBST); 13, *O.* (*O.*) *aphodioides* LANSBERGE; 14, *O.* (*O.*) *waterstradti* BOUCOMONT; 15, *O.* (*O.*) *philipposum* KRIKKEN et HUIJBREGTS; 16, *Aphodius* (*Pharaphodius*) *marginellus* (FABRICIUS).

Onthophagus (*Onthophagus*) *limbatus*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 420.
Onthophagus (*Gibbonthophagus*) *limbatus*: KABAKOV & JANUSHEV, 1983, Fn. Ekol. Vietnama, Moscow, p. 159.
Copris nuchidens FABRICIUS, 1798, Ent. Syst. Suppl., p. 31.
Copris analis GERMAR, 1813, Mag. Ent. **1**, p. 115.

Specimens examined. 1 ex, Keningau, 17–VIII–1987; 1 ex., Sungai Manila, 5–VIII–1987; 1 ex., ditto, 9–VIII–1987; 1 ex., Brumas, 25–VII–1987; 1 ex., ditto, 27–VII–1987.

Distribution. China, Vietnum, Laos, Sumatra, Java, Borneo.

Onthophagus* (*Paronthophagus*) *hidakai sp. nov.

(Figs. 2, 20–25)

Length: 4.3–5.5 mm (n = 14); width: 2.3–3.1 mm (n = 14).

Body small-sized, oblong-oval, convex and distinctly constricted between pronotum and elytra; dorsal side shiny and sparsely clothed with subrecumbent yellowish hairs except for glabrous head and disc of pronotum, the hairs reflexed and longer near posterior angles of pronotum; ventral side also shiny, partly, rather sparsely clothed with yellowish hairs. Colour dark reddish brown to blackish brown; head and pronotum tinged with very weak metallic lustre; mouth parts, palpi and antennal footstalks reddish brown; antennal clubs yellowish brown.

Male: — Head 1.26 to 1.45 times as wide as long (n = 4); clypeus strongly produced forwards, subtrapezoidal in outline, with sides almost straight and reflexed, apex also reflexed, truncated or feebly rounded; fronto-clypeal suture barely recognized and not distinctly carinate; genal sutures weakly carinate before each junction of fronto-clypeal suture and genal one, and posterior part of genal suture not distinctly carinate; genae weakly produced laterally with margin broadly rounded; surface densely and rather unevenly punctate, the punctures becoming smaller on vertex and somewhat rugose on clypeus.

Pronotum strongly convex, about 1.30 to 1.39 times as wide as long (n = 4); anterior margin emarginate and bordered; lateral margins almost straight in front, slightly sinuate behind; basal margin obtusely angulate at the middle, without marginal line; anterior angles sharply produced forwards; posterior angles obtuse; surface moderately densely covered with strong punctures, the interspaces between punctures almost smooth and shiny.

Elytra about 1.44 to 1.55 times as wide as long (n = 4); striae strongly impressed, with strial punctures strong, distinctly crenulating intervals; the 7th striae almost parallel with the 6th; intervals feebly convex, shiny and weakly rugose on each side, with sutural interval bearing single, regularly arranged and longitudinal row of indefinite small punctures, the 2nd to 7th intervals bearing double similar longitudinal rows of small punctures, the 8th bearing three or four irregularly arranged and longitudinal rows of small punctures.

Pygidium strongly convex, carinate at base, densely punctate basally, sparsely so apically. Prothorax with anterior angles, not distinctly excavated beneath. Metasternum with a slight longitudinal impression along midline in posterior half, median part weakly elevated in a rhombic-shape posteriorly; median part sparsely and finely punctate behind, densely and strongly punctate in front; lateral parts densely, coarsely and ocellately punctate. Protibiae slender, well arcuate outwards, simple on inner margin, and roundly and weakly swollen near apical inner part, with four lateral teeth; the 1st tooth very sharp, the 2nd the largest, the 3rd a little smaller than the 3rd, and the 4th very small; the rest of outer margin denticulate. Mesotibiae slender and slightly incurved; mesotarsi with basal segment weakly arcuate, about 0.4 to 0.5 mm in length, and almost equal or a little shorter than the rest four segments combined; inner distal end of basal segment weakly produced into a sharp tooth. Metatibiae almost straight; metatarsi with basal segment strongly arcuate, about 0.7 to 0.8 mm (n=4) in length, 1.3 to 1.8 times as long as the rest four segments combined (n=4); inner distal end of basal segment slightly produced into a sharp tooth.

Aedeagus relatively large. Parameres subpentagonal from lateral aspect, strongly constricted before the middle, then gradually narrowing towards apices from dorsal aspect.

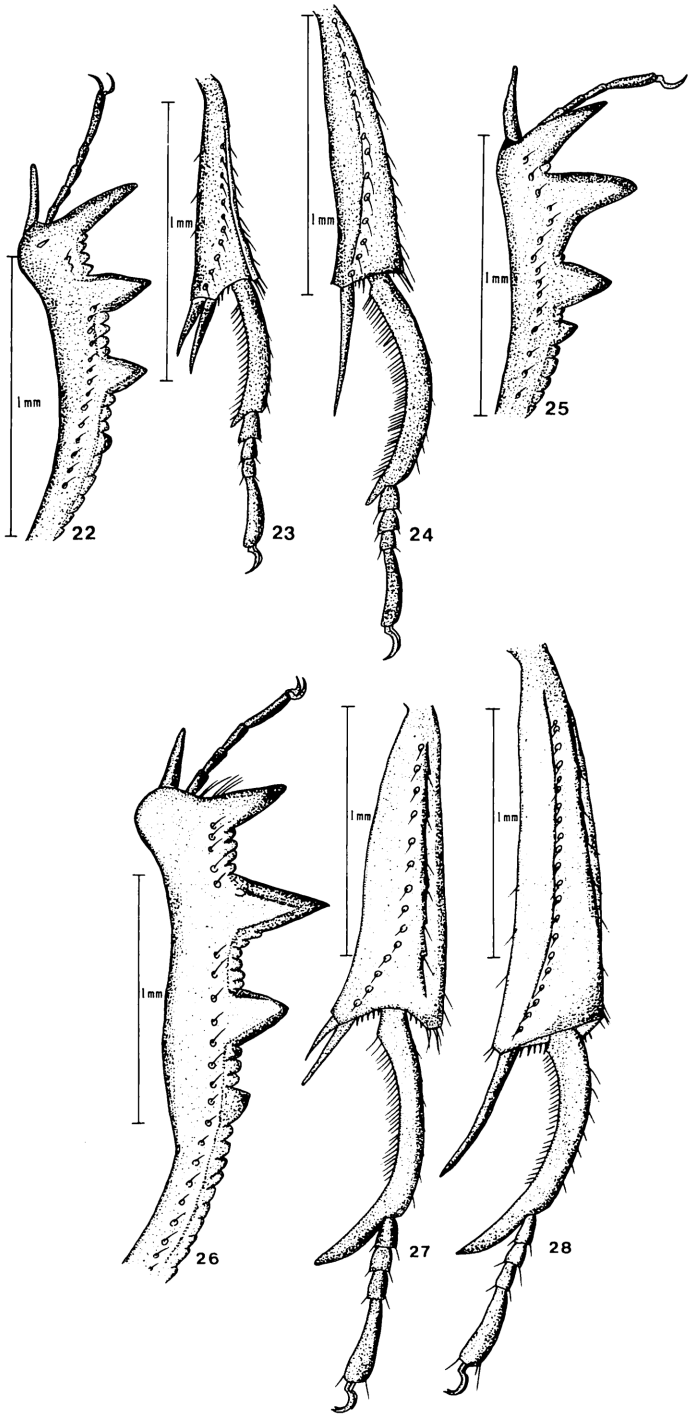
Female: — Head with clypeal margin sometimes weakly sinuate on each side; fronto-clypeal suture and genal ones more strongly carinate; clypeus more strongly rugose. Protibiae normal, with lateral four teeth stronger; the 1st tooth sharp and long, the 2nd almost the same as the 1st, but broader, the 3rd shorter than the 2nd, and the 4th minute.

Type series. Holotype: male, Brumas, Sabah, Borneo, 27–VII–1987, M. KON leg. Paratypes: 3♂♂, 7♀♀, same data as for holotype; 2♀♀, Sepilok, Sabah, Borneo, 4–VIII–1987, M. KON leg; 1♀, Sepilok, Sabah, Borneo, 5–VIII–1987, M. KON leg. The holotype is deposited in the collection of the Osaka Museum of Natural History, Osaka, Japan. One paratype (♀) is deposited in the collection of Museo Civico di Storia Naturale di Genova 'Giacomo Doria', one (♀) in the collection of the Muséum national d'Histoire naturelle, Paris, and eleven (3♂♂ and 8♀♀) in the private collection of OCHI.

Etymology. This species is named in honour of Prof. emer. T. HIDAKA, Kyoto University, who gave us the opportunity of performing the researches on the Bornean dung beetles.

Notes. The present new species is closely related to *Onthophagus falculatus* BOUCOMONT, 1914, from Java, but differs from it in the following characteristics: 1) body distinctly smaller; 2) clypeus not very broad, while in *O. falculatus*, it is fairly transverse; 3) meso- and metatarsi with basal segments weakly produced into a slight

Figs. 22–28. — 22–25. *Onthophagus* (*Paronthophagus*) *hidakai* OCHI et KON, sp. nov.; protibia, dorsal view, ♂ (22); mesotibia, dorsal view, ♂ (23); metatibia, dorsal view, ♂ (24); protibia, dorsal view, ♀ (25). — 26–28. *Onthophagus falculatus* BOUCOMONT; protibia, dorsal view, ♂ (26); mesotibia, dorsal view, ♂ (27); metatibia, dorsal view, ♂ (28).


1 mm
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28

tooth at the inner distal end; 4) in male, protibia with inner margin simple and well arcuate, while in *O. falculatus*, especially in major male, it is not simple and broadened near the middle.

Onthophagus (*Onthophagus*) *pastillatus* BOUCOMONT

(Fig. 3)

Onthophagus pastillatus BOUCOMONT, 1920, Annls. Soc. ent. Fr., **88** [for 1919], p. 318; 1921, Bull. Soc. ent. Fr., 1921, p. 92; 1924, Philip. J. Sci., **24**, p. 679. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.
Onthophagus (*Onthophagus*) *pastillatus*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 469.

Specimens examined. 1 ex., Sepilok, 6–VIII–1985; 1 ex., ditto, 8–VIII–1987.
Distribution. Borneo, Philippines.

Onthophagus (*Onthophagus*) *incisus* HAROLD

(Fig. 4)

Onthophagus incisus HAROLD, 1877, Annli. Mus. civ. Stor. nat. Genova, **10**, p. 52. —— LANSBERGE, 1883, Not. Leyden Mus., **5**, p. 59. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 301. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.
Onthophagus (*Onthophagus*) *incisus*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 390.
Onthophagus buffalo ARROW, 1907, Ann. Mag. nat. Hist., (7), **19**, p. 437. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 301.

Specimens examined. 1 ex., Sepilok, 31–VII–1987; 2 exs., ditto, 4–VIII–1987; 2 exs., ditto, 5–VIII–1987; 3 exs., ditto, 6–VIII–1987; 4 exs., ditto, 7–VIII–1987.
Distribution. Sumatra, Mentawei Is., Borneo.

Onthophagus (*Onthophagus*) *borneensis* HAROLD

(Fig. 5)

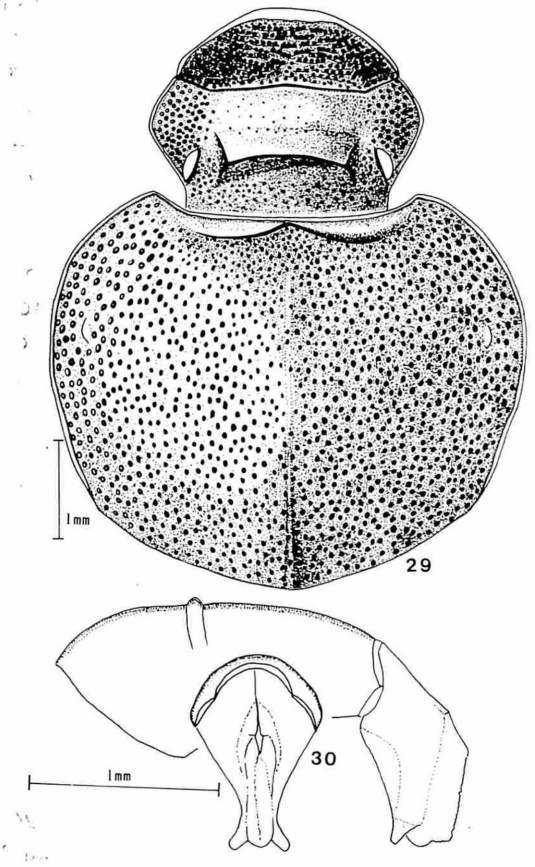
Onthophagus borneensis HAROLD, 1877, Annli. Mus. civ. Stor. nat. Genova, **10**, p. 57. —— LANSBERGE, 1883, Not. Leyden Mus., **5**, p. 61. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 273. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.
Onthophagus (*Onthophagus*) *borneensis*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 297.
Onthophagus borneensis ab. *rutilicollis* BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 274. —— BALTHASAR, 1963, Monogr. Scarab., **2**, p. 297.

Specimens examined. 1 ex., Sepilok, 31–VII–1987; 3 exs., ditto, 2–VIII–1987; 12 exs., ditto, 4–VIII–1987; 2 exs., ditto, 5–VIII–1987; 3 exs., ditto, 6–VIII–1987; 2 exs., ditto, 7–VIII–1987; 3 exs., ditto, 8–VIII–1987.
Distribution. Sumatra, Nias Is., Java, Borneo.

Onthophagus (*Onthophagus*) *ishiii* sp. nov.

(Figs. 6, 29, 30)

Length: 9.3 mm (n = 1); width: 5.2 mm (n = 1).



Figs. 29–30. *Onthophagus* (*Onthophagus*) *ishiii* OCHI et KON, sp. nov., ♂; head and pronotum, dorsal view (29); aedeagus, lateral and dorsal views (30).

Male: — Body moderate-sized, oblong-oval, strongly convex and constricted at the waist; dorsal side less shiny, almost glabrous; ventral side partly, densely clothed with yellowish hairs. Colour black, with pronotum having not very strong cupreous lustre; mouth parts, palpi and antennae reddish brown.

Head about 1.45 times as wide as long (n = 1); clypeus widely truncated in the middle, with sides almost straight and a little curved near clypeo-genal sutures; clypeal suture with genal and also frontal section strongly carinate; genae well produced laterally, with genal margin bluntly angulate at the middle; vertex with a strongly elevated transverse carina which is well arcuate forwards, sharp at the summit and about 1 mm in height; surface densely and strongly punctate, the punctures becoming smaller and sparser on frons and weakly rugose on clypeus.

Pronotum strongly convex, about 1.38 times as wide as long (n = 1), with a weak longitudinal impression along midline in posterior two-thirds; anterior margin

emarginate, finely bordered; lateral margins widely rounded and sinuate near posterior angles, with fine marginal lines; basal margin obtusely angulate at the middle, with marginal border effaced throughout; anterior angles well produced forwards, rounded apically; posterior angles obtuse; disc briefly declivous just behind anterior margin, with the upper edge of the declivity forming a slight broad triangular projection; surface densely covered with a little coarse and shallow punctures, the punctures becoming deeper and denser towards sides, the interspace between punctures feebly microgranulose.

Elytra about 1.55 times as wide as long (n = 1); striae shallowly and rather widely impressed and finely ridged on each side, with strial punctures dense and distinct, slightly crenulating the intervals; intervals weakly convex, strongly microgranulose except for shiny humeral callus, closely and very indefinitely punctate; the 7th striae almost parallel with the 6th.

Pygidium well convex, microgranulose, densely and strongly punctate. Metasternum with a median longitudinal impression along median line; median part densely and finely punctate behind, the punctures very fine and sparse in the middle, coarse on apical side; lateral parts irregularly and strongly punctate. Protibiae stout, armed with four lateral teeth; the 1st tooth sharp, the 2nd the longest of the four teeth, the 3rd a little shorter than the 2nd, and the 4th short but very wide, about twice as wide as the 3rd.

Aedeagus robust. Parameres narrow basally and pointed apically from lateral aspect, gradually and strongly attenuate in basal four-fifths, and divergent apically as strong projections from dorsal aspect.

Female unknown.

Type series. Holotype: male, Brumas, Sabah, Borneo, 24–VII–1987, M. KON leg. The holotype is deposited in the collection of the Osaka Museum of Natural History, Osaka, Japan.

Etymology. The specific name is dedicated to Dr. M. ISHII, Osaka Prefectural University, who gave the junior author field assistance and warm companionship during the survey in Sabah, Borneo.

Notes. The present new species is closely related to *Onthophagus usurpator* BALTHASAR, 1960, from India, but can be distinguished from it by the following characteristics; 1) head with a strongly elevated transverse carina on vertex whose summit is sharply edged and simple, while in *O. usurpator*, it is distinctly pointed on each side of the summit; 2) pronotum with a broad triangular projection just behind anterior margin, while in *O. usurpator*, it is narrowly but distinctly truncated at apex.

Onthophagus (*Onthophagus*) *pacificus* LANSBERGE

(Fig. 7)

Onthophagus pacificus LANSBERGE, 1885, Not. Leyden Mus., **7**, p. 17.—— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 280.—— BOUCOMONT & GILLET, 1921, Fn. ent. Indoc. fr. Scarab., p. 53.—— ARROW,

1931, Fn. Brit. Ind., Coleopt. Lamellic., **3**, p. 172. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.

Onthophagus (*Onthophagus*) *pacificus*: PAULIAN, 1945, Fn. Emp. fr., **3**, p. 112. —— BALTHASAR, 1963, Monogr. Scarab., **2**, p. 465.

Onthophagus pacificus var. *peguanus* BOUCOMONT, 1914, Annli. Mus. civ. Stor. nat. Genova, **46**, p. 215. —— BOUCOMONT & GILLET, 1921, Fn. ent. Indoc. fr. Scarab., p. 53. —— BALTHASAR, 1935, Fol. zool. hydrob., **8**, p. 339. —— PAULIAN, 1945, Fn. Emp. fr., **3**, p. 112. —— BALTHASAR, 1963, Monogr. Scarab., **2**, p. 465.

Onthophagus (incertae sedis) *pacificus*: KABAKOV & JANUSHEV, 1983, Fn. Ekol. Vietnama, Nauka, Moscow, p. 162.

Specimens examined. 1 ex., Sepilok, 30–VII–1985; 2 exs., ditto, 30–VII–1987; 20 exs., ditto, 1–VIII–1987; 3 exs., ditto, 2–VIII–1987; 45 exs., ditto, 4–VIII–1987; 2 exs., ditto, 5–VIII–1987; 10 exs., ditto, 6–VIII–1987; 50 exs., ditto, 7–VIII–1987; 20 exs., ditto, 8–VIII–1987.

Distribution. India, Myanmar, Thailand, Laos, Vietnam, Malay Peninsula, Sumatra, Java, Borneo.

Onthophagus (*Onthophagus*) *angustatus* BOUCOMONT

(Fig. 8)

Onthophagus angustatus BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 301.

Onthophagus (*Onthophagus*) *angustatus*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 275.

Specimens examined. 1 ex., Sepilok, 2–VIII–1985; 1 ex., ditto, 30–VII–1987; 1 ex., ditto, 1–VIII–1987; 2 exs., ditto, 4–VIII–1987.

Distribution. Sumatra, Borneo (new record).

Onthophagus (*Onthophagus*) *cervicapra* BOUCOMONT

(Fig. 9)

Onthophagus cervicapra BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 294.

Onthophagus (*Onthophagus*) *cervicapra*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 306.

Onthophagus verecundus BOUCOMONT, 1921, Bull. Soc. ent. Fr., **1921**, p. 89; 1924, ibid., **1924**, p. 114.

Specimens examined. 13 exs., Sepilok, 30–VII–1985; 15 exs., ditto, 30–VII–1987; 6 exs., ditto, 31–VII–1987; 32 exs., ditto, 1–VIII–1987; 3 exs., ditto, 2–VIII–1987; 58 exs., ditto, 4–VIII–1987; 13 exs., ditto, 5–VIII–1987; 1 ex., ditto, 6–VIII–1987; 6 exs., ditto, 7–VIII–1987; 1 ex., ditto, 8–VIII–1987; 4 exs., Keningau, 17–VIII–1987; 2 exs., ditto, 18–VIII–1987; 1 ex., Brumas, 23–VII–1987; 1 ex., ditto, 25–VII–1987; 2 exs., ditto, 26–VII–1987; 13 exs., ditto, 27–VII–1987.

Distribution. Sumatra, Java, Borneo, Philippines.

Onthophagus (*Onthophagus*) *obscurior* BOUCOMONT

(Fig. 10)

Onthophagus babirussa var. *obscurior* BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 294.

Onthophagus (*Onthophagus*) *obscurior*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 457.
Onthophagus obscurior: HANSKI, 1983, Acta zool. fenn., **167**, p. 45.

Specimens examined. 16 exs., Sepilok, 30–VII–1985; 40 exs., ditto, 30–VII–1987; 24 exs., ditto, 31–VII–1987; 209 exs., ditto, 1–VIII–1987; 58 exs., ditto, 2–VIII–1987; 214 exs., ditto, 4–VIII–1987; 45 exs., ditto, 5–VIII–1987; 31 exs., ditto, 6–VIII–1987; 62 exs., ditto, 7–VIII–1987; 49 exs., ditto, 8–VIII–1987; 148 exs., Keningau, 17–VIII–1987; 31 exs., ditto, 18–VIII–1987; 25 exs., Brumas, 23–VII–1987; 2 exs., ditto, 24–VII–1987; 7 exs., ditto, 25–VII–1987; 4 exs., ditto, 26–VII–1987; 13 exs., ditt, 27–VII–1987.

Distribution. Borneo.

Onthophagus (*Onthophagus*) *vulpes* HAROLD

(Fig. 11)

Onthophagus vulpes HAROLD, 1877, Annli. Mus. civ. Stor. nat. Genova, **10**, p. 54. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 300. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.
Onthophagus (*Onthophagus*) *vulples*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 587.

Specimens examined. 1 ex., Sepilok, 7–VIII–1987.

Distribution. Malay Peninsula, Sumatra, Java, Borneo, Sulawesi.

Onthophagus (*Onthophagus*) *aphodioides* LANSBERGE

(Fig. 13)

Onthophagus aphodioides LANSBERGE, 1883, Not. Leyden Mus., **5**, p. 63. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 278. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.
Onthophagus (*Onthophagus*) *aphodioides*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 276.

Specimens examined. 4 exs., Sepilok, 31–VII–1987; 2 exs., ditto, 4–VIII–1987; 2 exs., ditto, 5–VIII–1987; 1 ex., ditto, 6–VIII–1987; 6 exs., ditto, 7–VIII–1987.

Distribution. Java, Borneo, Sulawesi.

Onthophagus (*Onthophagus*) *waterstradti* BOUCOMONT

(Fig. 14)

Onthophagus waterstradti BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 291. —— HANSKI, 1983, Acta zool. fenn., **167**, p. 45.
Onthophagus (*Onthophagus*) *waterstardti*: BALTHASAR, 1963, Monogr. Scarab., **2**, p. 589.

Specimens examined. 1 ex., Sepilok, 30–VII–1987; 22 exs., ditto, 1–VIII–1987; 34 exs., ditto, 3–VIII–1987; 26 exs., ditto, 4–VIII–1987; 26 exs., ditto, 5–VIII–1987; 4 exs., ditto, 6–VIII–1987; 21 exs., ditto, 7–VIII–1987; 14 exs., ditto, 8–VIII–1987; 1 ex., ditto, 16–VIII–1987; 6 exs., Keningau, 17–VIII–1987; 1 ex., Brumas, 25–VII–1987; 1 ex., ditto, 27–VII–1987.

Distribution. Borneo.

Onthophagus (*Onthophagus*) *philipposum* KRIKKEN et HUIJBREGTS

(Fig. 15)

Onthophagus philipposum KRIKKEN et HUIJBREGTS, 1987, Zool. Med., Leyden, **61**, p. 132.

Specimens examined. 6 exs., Sepilok, 2–VIII–1987; 1 ex., ditto, 4–VIII–1987; 1 ex., ditto, 7–VIII–1987; 1 ex., Keningau, 17–VIII–1987; 1 ex., ditto, 18–VIII–1987.

Distribution. Borneo.

Family Aphodiidae

Tribe Aphodiini

Aphodius (*Pharaphodius*) *marginellus* (FABRICIUS)

(Fig. 16)

Scarabaeus marginellus FABRICIUS, 1781, Spec. Ins., **1**, p. 21.

Aphodius marginellus: HAROLD, 1862, Berl. ent. Z., **6**, p. 141. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 340.

Aphodius (*Pharaphodius*) *marginellus*: SCHMIDT, A., 1913, Arch. Naturg., **79**, p. 125; 1922, Das Tierreich, **45**, p. 63. —— BALTHASAR, 1941, Atti Soc. ital. Sci. nat., **80**, p. 142. —— PAULIAN, 1941, Fn. Fr., **38**, p. 153. —— BALTHASAR, 1964, Monogr. Scarab., **3**, p. 66. —— MASUMOTO, 1977, Elytra, Tokyo, **5**, p. 3. —— STEBNICKA, 1986, Stuttg. Beitr. Naturk., (A), 397, p. 11. —— DELLACASA, M., 1987, Mem. Soc. ent. ital., **66**, p. 392. —— ISHIDA & FUJIOKA, 1988, List Lamel. Japan, p. 20. —— MASUMOTO, DELLACASA & KIUCHI, 1990, Ent. Rev. Japan, **45**, p. 153.

Aphodius attritus BALTHASAR, 1933, Ent. NachrBl., **7**, p. 55. —— STEBNICKA, 1986, Stuttg. Beitr. Naturk., (A), (397), p. 11.

Specimens examined. 205 exs., Sungai Manila, 5–VIII–1987; 17 exs., ditto, 7–VIII–1987; 620 exs., ditto, 9–VIII–1987; 46 exs., Keningau, 18–VIII–1987.

Distribution. India, Indochina, China, Taiwan, Japan, Malay Peninsula, Sumatra, Borneo, Philippines, New Guinea.

Aphodius (*Trichaphodius*) *reichei* HAROLD

Aphodius reichei HAROLD, 1859, Berl. ent. Z., **3**, p. 210. —— BOUCOMONT, 1914, Annls. Soc. ent. Fr., **83**, p. 340.

Aphodius (*Trichaphodius*) *reichei*: SCHMIDT, A., 1913, Arch. Naturg., **79**, p. 136; 1922, Das Tierreich, **45**, p. 132. —— BALTHASAR, 1943, Mitt. Münch. ent. Ges., **33**, p. 117. —— PAULIAN, 1945, Fn. Emp., fr., **3**, p. 102. —— OCHI, 1986, Ent. Rev. Japan, **41**, p. 57. —— DELLACASA, M., 1987, Mem. Soc. ent. ital., **66**, p. 399.

Specimens examined. 1 ex., Sungai Manila, 5–VIII–1987.

Distribution. India, Indochina, China, Taiwan, Malay Peninsula, Sumatra, Java, Borneo, Philippines, Sulawesi, New Guinea, Australia.

Type Specimens Examined for Comparison

The acronyms for the collection of the Museo Civico di Storia Naturale di

Genova 'Giacomo Doria' and that of the Muséum national d'Histoire naturelle, Paris, are MSNG and MNHN, respectively: *Gymnopleurus maurus* SHARP (MNHN); *G. planus* SHARP (MNHN); *G. sparsus* SHARP (MNHN); *G. stipes* SHARP (MNHN); *Onthophagus andonarensis* BOUCOMONT (MNHN); *O. bangueyensis* BOUCOMONT (MNHN); *O. cervicapra* BOUCOMONT (MNHN); *O. dayacus* BOUCOMONT (MNHN); *O. eschscholtzi* BOUCOMONT (MNHN); *O. falcuratus* BOUCOMONT (MNHN); *O. foedus* BOUCOMONT (MNHN); *O. kangeanus* PAULIAN (MNHN); *O. laevis asiaticus* BOUCOMONT (MNHN); *O. mentaveiensis* BOUCOMONT (MNHN); *O. neervoorti* BOUCOMONT (MNHN); *O. pacificus peguanus* BOUCOMONT (MNHN); *O. pastillatus* BOUCOMONT (MNHN); *O. pavidus* HAROLD (MNHN); *O. sarawacus* HAROLD (MSNG); *O. semicupreus* HAROLD (MSNG); *O. subcornutus* BOUCOMONT (MNHN); *O. taeniatus* BOUCOMONT (MNHN); *O. tagal* BOUCOMONT (MNHN); *O. waterstradti* BOUCOMONT (MNHN).

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Correction for Part I

p. 295, l. 5, "Borneo (new record)"→"Borneo", p. 293, l.11, *yamacuhii*→*yamauchii*

要　　約

越智輝雄・近　雅博：ボルネオ，サバ州で採集された糞虫．—— ボルネオ，サバ州への，京都大学の学術調査（1985, 1987）において採集された糞虫34種を記録した．これらのうちエンマコガネ属の1種，*Onthophagus* (*Onthophagus*) *angustatus* BOUCOMONTはボルネオから初めて記録された．それに加えてエンマコガネ属の4新種を記載し，それぞれ*O.* (*Phanaeomorphus*) *johkii* OCHI et KON, sp. nov., *O.* (*Gibbonthophagus*) *fujiii* OCHI et KON, sp. nov., *O.* (*Paronthophagus*) *hidakai* OCHI et KONおよび *O.* (*Onthophagus*) *ishiii* OCHI et KON, sp. nov.と名づけた．さらに，これまでタイワンダイコク *Catharsius* (*Catharsius*) *molossus* (LINNÉ)の下位同物異名とされていた*C.* (*C.*) *dayacus* LANSBERGEを有効な種である

と見なし，今回の調査で採集された個体に基づいて再記載した．

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Elytra, Tokyo, **23** (1): 61–69, May 15, 1995

Three New Species of the Passalid Beetles (Coleoptera, Passalidae) from Borneo

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Abstract Two new species of the genus *Aceraius* and one new species of the genus *Ophrygonius* are described from Borneo. *Aceraius symmetricus* sp. nov. has a strange left mandible, *A. katsurae* sp. nov. is related to *A. boucheri*, and *O. planus* sp. nov. is related to *O. inaequalis*.

Aceraius symmetricus sp. nov.

(Figs. 1–3)

Black and shining; rather flat.

Antenna with six rather long lamellae. Labrum with anterior border slightly emarginate, anterior angles rounded. Right mandible: anterior lower tooth rather large, sharp, smaller than lowest terminal tooth; dorsal border behind upper terminal tooth indistinctly convex. Left mandible: anterior lower tooth smaller than lowest terminal tooth, bifid, upper tip sharp, lower tip rounded; upper terminal tooth with a rather large swelling at the dorsal base; upper tooth low, located just before the middle of mandible. Anterior border of middle part of mentum bi-emarginate, and the ridge along anterior border extending to lateral pieces; lateral piece divided into two portions by the transverse ridge, one forming the anterior lower portion and the other posterior higher portion (in ventral view); middle part smooth and hairless, lateral piece rather densely hairy.

Head symmetrical, with anterior angle angulate, but not projecting anteriorly. Outer tubercle nearly acute isosceles triangular, both (internal and external) borders slightly emarginate, apex rounded. Inner tubercle distinct, a little pedunculate in lateral view. Central tubercle low, frontal ridge extending to base of inner tubercle, accompanied with anterior groove. Parietal ridge a little raised near distal ends, supraoccipital ridge strongly bent inward at the lateral ends, and joining supraorbital ridge. Frontal area semicircular, smooth and hairless; the depressed area of head finely rugose anteriorly, densely covered with hair-bearing punctures before and behind parietal ridge. Hypostomal process smooth or with scattered punctures antero-externally.

Pronotum polished, median groove very fine, anterior angle not produced anteriorly, lateral marginal groove with a series of dense hair-bearing punctures, scar

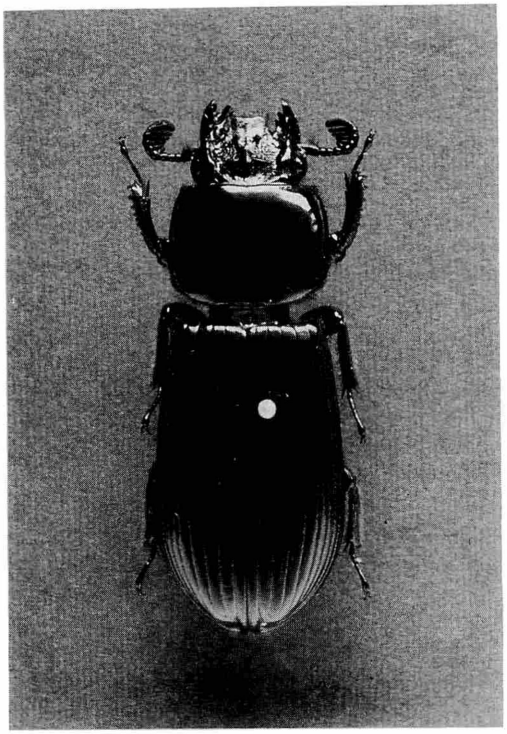

Fig. 1. *Aceraius symmetricus* sp. nov.; dorsal aspect.

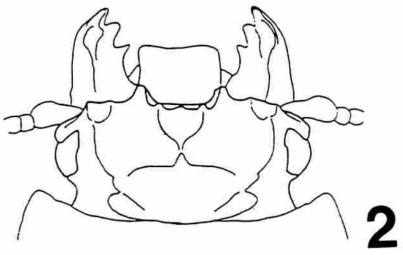

Fig. 2. *Aceraius symmetricus* sp. nov.; head.

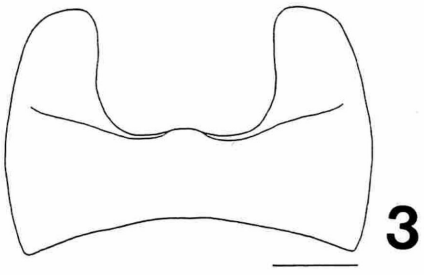

Fig. 3. *Aceraius symmetricus* sp. nov.; mentum (scale: 1 mm).

densely covered with hair-bearing punctures.

Elytra widest at basal 2/3, grooves finely but rather distinctly punctured, anterior vertical protion with scattered hairs between suture and fifth groove, and with rather dense ones in front of shoulder.

Posterior plate of prosternum almost coriaceous and opaque, but smooth and shining at the middle. Mesosternum polished, scar narrow, sharply defined, extending to near posterior border, finely roughened. Central area of metasternum polished;

lateral area sharply defined throughout, rather densely covered with hair-bearing punctures; anterior intermediate area rather densely covered with hair-bearing punctures; posterior intermediate area smooth with confluent dents along central and lateral areas. Second to fourth abdominal sternites with rather large lateral scars, respectively.

Length: 38–40 mm; elytral width: 14–15 mm.

Holotype: ♀, V～VI–1994, Crocker Range near Keningau, Sabah, Borneo; paratypes: 2♀♀, same data as the holotype; 1♀, VI～VII–1994, same locality as the holotype. The holotype will be preserved in the National Science Museum (Nat. Hist.), Tokyo.

This new species is distinct in having the symmetrical head and the swelling of the left upper terminal tooth.

Aceraius katsurae sp. nov.

(Figs. 4, 5a, 6)

Black and shining; rather convex.

Antenna with three short and three somewhat longer lamellae. Labrum hairy,

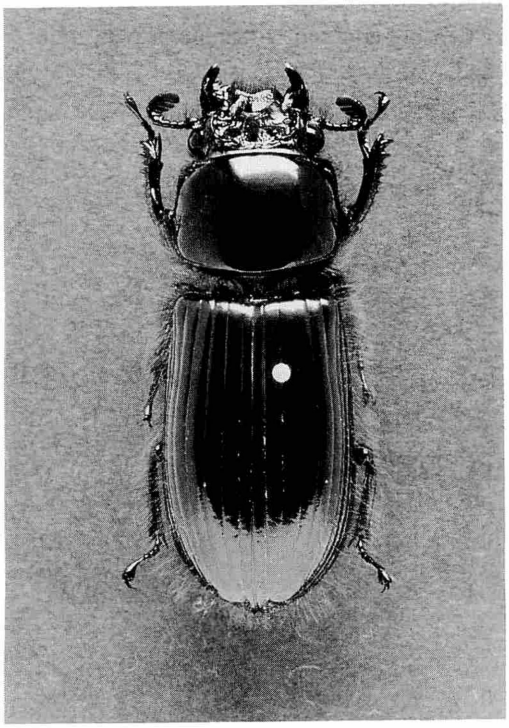

Fig. 4. *Aceraius katsurae* sp. nov.; dorsal aspect.

angles rounded, anterior border emarginate, left angle more projecting anteriorly than the right one. Right mandible: lowest terminal tooth distinct, located a little more anteriorly than anterior tip of upper denticle of anterior lower tooth; lower denticle of anterior lower tooth located more posteriorly than anterior tip of upper denticle; anterior tip of upper denticle of anterior lower tooth nearly rectangular, posterior one obtuse. Left mandible: anterior lower tooth much larger than lowest terminal tooth, bifid above and below at the apex; upper tooth highly raised at posterior part of mandible. Mentum without scar; middle part sparsely, lateral pieces densely covered with hair-bearing punctures. Eye gibbous, more strongly projecting externally than eye canthus.

Head asymmetrical, anterior angle of head not projecting anteriorly, located more posteriorly than apex of inner branch of supraorbital ridge. Left outer tubercle produced internally, obliquely truncate at distal end; external border with a slight swelling near base, internal apex slightly bent downward. Right outer tubercle short, produced anteriorly, obliquely truncate at distal end; external apex located more anteriorly than internal one, acute, and very slightly pointed outward; internal apex very obtuse. Inner tubercle rather large; ridge between the two inner tubercles emarginate in dorsal view. Frontal ridge accompanied with anterior groove, extending behind inner tubercle. Parietal ridge weakly curved, and a little raised near distal end; supraorbital ridge joining supraoccipital one. Frontal area rough and hairless; the depressed area rather densely covered with hair-bearing punctures.

Pronotum polished with hair-bearing punctures in marginal grooves and lateral

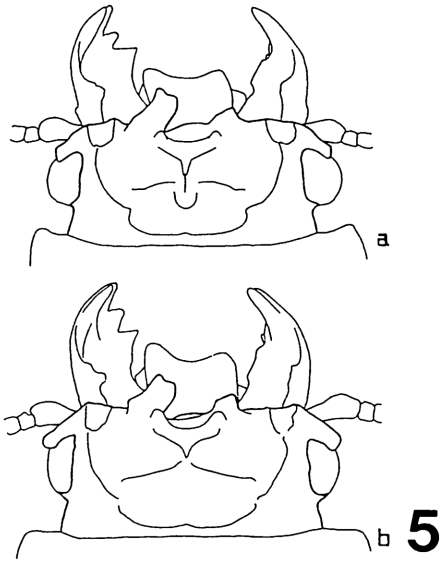

Fig. 5. *Aceraius* spp., head; a, *A. katsurae* sp. nov.; b, *A. boucheri* KON, ARAYA et JOHKI.

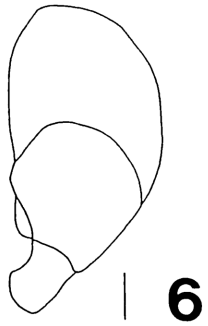

Fig. 6. *Aceraius katsurae* ap. nov.; male genitalia, lateral view (scale: 0.5 mm).

scars, and along lateral borders; median groove indistinct.

Seventh rib of elytron rather sparsely hairy; eighth rib hairless; ninth rib densely hairy anteriorly, sparsely hairy posteriorly; tenth rib rather densely hairy just behind shoulder, hairless at the remaining portion.

Posterior plate of prosternum rather densely hairy at the middle. Mesosternum hairless; scar finely rough, short. Central area of metasternum smooth; anterior intermediate and lateral areas densely hairy; posterior intermediate area smooth at the middle, densely hairy along posterior border, with irregular dents along central area. Second abdominal sternite rather densely hairy posteriorly. Distal end of fifth tarsus with hood-like projection dorsally in all legs.

Male genitalia as shown in Fig. 6.

Body length: 39–43 mm; elytral width: 14–15 mm.

Holotype: ♂, VI～VII–1994, Crocker Range near Keningau, Sabah, Borneo; paratypes, 1♂, same data as the holotype; 1♂, V～VI–1994, same locality as the holotype. The holotype will be preserved in the National Science Museum (Nat. Hist.), Tokyo.

This new species is very similar to *A. boucheri* KON, ARAYA et JOHKI, though distinguished from the latter as follows: body a little larger, eye gibbous, elytra more densely hairy, and hairs much longer.

Aceraius boucheri KON, ARAYA et JOHKI

(Fig. 5b)

Aceraius boucheri KON, ARAYA et JOHKI, 1993, p. 712.
Aceraius moescheri: KON & JOHKI, 1992, p. 211 (not KUWERT).

Specimen examined. 1♀, VI～VII–1994, Crocker Range near Keningau, Sabah, Borneo.

Genus *Ophrygonius* ZANG

Ophrygonius ZANG, 1904, p. 697.——GRAVELY, 1914, p. 196.
Ophrygonius: GRAVELY, 1914, pp. 284, 320 (part); 1918, pp. 79, 86 (part).——HINCKS & DIBB, 1935, p. 79 (part); 1958, p. 22 (part).——BOUCHER, 1993, pp. 156, 157, 158 (part).

Type species: *Ophrygonius quadrifer* ZANG (monotypical).

The genus *Ophrygonius* was established by ZANG (1904), and the generic definition was later modified by GRAVELY (1914, 1918) and BOUCHER (1993), mainly based on the shape of mandibles.

In this paper, the present author regards the genus *Ophrygonius* as the original definition with a little adjustment, that is, as having the following combination of characters: 1) antenna with four lamellae, fifth and sixth antennal segments without pubescence, 2) labrum with anterior border more or less bisinuate, 3) dentition of mandibles complete, teeth not modified, upper teeth located at the middle, not highly

raised, 4) mentum without primary scar, 5) frontal ridge without groove, 6) frontal area quadrangular, 7) pronotum with deep median groove, 8) punctures of elytron distinct, weak in dorsal grooves, strong in lateral ones.

Ophrygonius planus sp. nov.

(Figs. 7, 8a, 9)

Black and shining; flat.

Antenna with four short lamellae. Labrum with anterior border very slightly bisinuate; right angle more strongly rounded. Right mandible: anterior lower tooth smaller than lowest terminal tooth, and smaller than left anterior lower tooth. Left mandible: anterior lower tooth a little larger than lowest terminal tooth, not bifid. Middle part of mentum smooth and hairless, with a pair of large depressions along anterior border; lateral piece with scattered hair-bearing punctures.

Head with anterior angle sharply angulate, but not strongly projecting anteriorly. Left outer tubercle a little larger than right one, but similar in shape to each other, its external border produced antero-internally and slightly bent anteriorly near apex, with an obtuse convexity near base, internal border produced anteriorly and bent

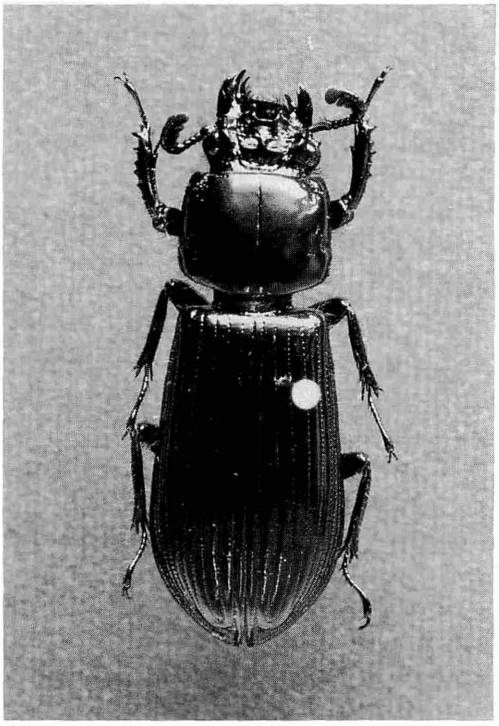

Fig. 7. *Ophrygonius planus* sp. nov.; dorsal aspect.

externally near apex. Inner tubercle obtuse, located at the base of outer tubercle; ridge between the two inner tubercles bisinuate. Central tubercle obtuse in lateral view; frontal ridge very fine near central tubercle, indistinct at the middle, obtuse and costate anteriorly, and reaching inner tubercle; parietal ridge slightly sinuate. Frontal area smooth and hairless, slightly depressed, parallel anteriorly; the depressed area of head almost hairless, with a few hairs behind parietal ridge. Hypostomal process smooth and hairless.

Pronotum polished with deep median groove, anterior border weakly sinuate, anterior angle not produced anteriorly, lateral border serrate anteriorly; side with scattered punctures behind anterior angle and in lateral scar, and with a few hairs under scar and along lateral border.

Elytra widest at basal 2/3; punctures of first to fifth grooves small and rounded but distinct, those of sixth to ninth grooves transverse, larger than those of dorsal ones, tenth groove with one or two rows of small punctures. Anterior vertical portion sparsely hairy, hairs long in front of shoulder; seventh rib with much scattered hairs near base, eighth rib hairless, ninth rib with rather scattered hairs at basal 1/3, tenth rib hairless, and tenth groove with scattered hairs at basal 1/4.

Prosternum almost coriaceous, with posterior plate sparsely hairy at the middle; median keel rather smooth and shining. Mesosternum polished at the middle, lateral scar large triangular, rugose, extending to posterior border. Central area of metasternum polished; lateral area widened posteriorly, sharply defined from inter-

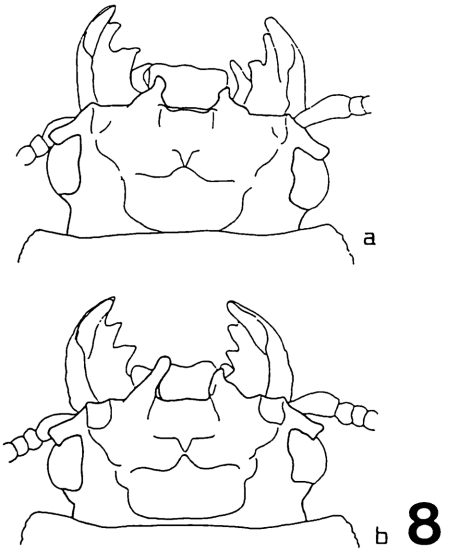

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Fig. 8. *Ophrygonius* spp. head; a, *O. planus* sp. nov.; b, *O. inaequalis* (BURMEISTER).

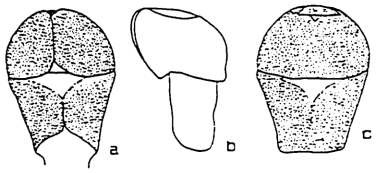

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Fig. 9. *Ophrygonius planus* sp. nov.; male genitalia: a, dorsal view, b, lateral view, c, ventral view (scale: 0.5 mm).

mediate area; anterior intermediate and lateral areas rather densely covered with hair-bearing punctures; posterior intermediate area almost smooth with scattered dents at the middle. Second abdominal sternite with rather scattered hair-bearing punctures; third to fifth ones with narrow lateral scars, which are finely punctured and extending to near the middle; sixth one with lateral scars extending along posterior border. Anterior tibia with seven external teeth including apical one; middle tibia with rather scattered hairs; posterior tibia as middle one.

Male genitalia as shown in Fig. 9.

Length: 26 mm; elytral width: 9 mm.

Holotype: ♂, V～VI–1994, Crocker Range near Keningau, Sabah, Borneo. The holotype will be preserved in the National Science Museum (Nat. Hist.), Tokyo.

This new species is related to *O. inaequalis* (BURMEISTER), but is easily distinguished by the shape of their outer tubercles of head.

Ophrygonius inaequalis (BURMEISTER)

(Fig. 8b)

Passalus inaequalis BURMEISTER, 1844, p. 468.
Basilianus inaequalis: KAUP, 1871, p. 56.
Ophrygonius inaequalis: ZANG, 1905, p. 192.——GRAVELY, 1914, pp. 227, 285, 320, 332, pl. 12, fig. 24–24a; 1918, pp. 87, 89, pl. 1.
Basilianus sinkepicus KUWERT, 1898, p. 339 (after GRAVELY).
Ophrygonius quadrifer ZANG, 1904, p. 697, text-fig. 3; 1905, p. 192 (syn. of *O. inaequalis*).

The identification was made by the GRAVELY (1914, 1918)'s redescription and key.

Specimens examined. 1♀, VI–1990, Mt. Serapi, Sarawak, Borneo; 1♀, V–1993, Sipura Is., Mentawai Islands, Sumatera Barat.

Acknowledgement

I would like to thank Dr. S.-I. UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for reviewing this manuscript. My thanks also goes to Mr. M. FUJIOKA, Tokyo, for his help to my study of the passalid beetles.

要　約

岩瀬一男：ボルネオ産クロツヤムシ類の3新種．——ボルネオ産のクロツヤムシから，*Aceraius*属の2種と*Ophrygonius*属の1種を新種として記載した．*A. symmetricus* sp. nov. は左右対称の頭部をもち，左大顎の上面先端近くに明瞭な瘤状突起をもつことを特徴とする．*A. katsurae* sp. nov. は*A. boucheri*に似ているが，体は大型，眼が大きくまた上翅の毛も長く密であることで区別される．*O. planus* sp. nov. は*O. inaequalis*に近縁であるが，より左右対称に近い頭部をもち，上翅の側方に毛のあることで区別される．なお，*Ophrygonius*属の範囲としては，ZANGの原記載に近いものを設定し，GRAVELYやBOUCHERの考え方とは異なるものである．

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Elytra, Tokyo, **23** (1): 70, May 15, 1995

A New Record of *Acanthocis quadridentatus* (Coleoptera, Ciidae)

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Acanthocis quadridentatus NOBUCHI et WADA (1959, p. 52, fig. 2) was originally described on the basis of one male specimen collected at Shiroyama, Kagoshima Pref., Kyushu, Japan. No additional record of the species has been published thereafter. In the course of my revisional study of the Japanese Ciidae, I confirmed the occurrence of *A. quadridentatus* on Shikoku and the Nansei Islands. They are as follows.

Specimens examined. [Shikoku] 〈Ehime Pref.〉 3 exs., Shiroyama, Matsuyama, 6–VII–1991, M. SAKAI leg. 〈Kôchi Pref.〉 2 exs., Cape Ashizuri-misaki, 24–VIII–1968, M. TSUJI leg. [Kyushu] 〈Nagasaki Pref.〉 3 exs., Sakamoto, 28–X–1974, Y. WADA leg. [Nansei Isls.] 〈Yaku-shima Is.〉 1 ex., Kosugidani, 8–VIII–1971, K. TAKEMURA leg. 〈Nakano-shima Is. of the Tokara Isls.〉 1 ex., 11–VII–1960, M. SATÔ leg. 〈Okinawa-hontô Is.〉 3 exs., Kanna, Ginoza-son, Kunigami-gun, 22–VII–1993, M. KIMURA leg.; 4 exs., Yona, Kunigami-gun, 20～21–IV–1994, M. KAWANABE leg. 〈Ishigaki-jima Is.〉 2 exs., Mt. Banna-dake, 23–IV–1994. M. KAWANABE leg. 〈Iriomote-jima Is.〉 11 exs. Urauchi, 26–IV–1994, M. KAWANABE leg.; 13 exs., Nakamagawa-rindô, 29–IV–1994, M. KAWANABE leg.

Distribution. Japan (Shikoku, Kyushu, Nansei Isls.).

Host fungi. Phellinus gilvus (SCHW.: FR.) PAT. (Nendotake in Japanese) and *Fomitopsis vinosa* (BERK.) IMAZ. (Budôtake in Japanese).

I express my deep gratitude to Professor Dr. Y. WADA of Nagasaki Univ., and Mr. M. KIMURA of Naha-shi, Okinawa Pref., for kindly supplying specimens.

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Elytra, *Tokyo*, **23** (1): 71–75, May 15, 1995

New Cave-dwelling *Catops* (Coleoptera, Cholevidae) from the Abukuma Hills, Central Japan

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Abstract A new cave-dwelling species of the cholevid genus *Catops* is described from the Abukuma Hills of northeastern Honshu in Central Japan, under the name of *Catops sonei* sp. nov.

The cave-dwelling cholevid beetle, *Catops ohbayashii* JEANNEL (1954, p. 40; SZYMCZAKOWSKI, 1962, pp. 3–4, figs. 5–6), has been known to be limited in distribution to the western part of Honshu, especially around Lake Biwa-ko. In the eastern part of Honshu, however, no cave dweller belonging to the genus *Catops* has been known up to the present, with the exception of *C. sparcepunctatus* JEANNEL rather frequently found in caves lying in low mountain areas (*e.g.*, YOSHIDA & NOMURA, 1952).

Recently, one specimen of a *Catops* was found by Mr. Shinzaburo SONE, one of the energetic biospeologists, from Kawauchi-dô Cave lying at the eastern foot of Mt. Otakine-yama in the central part of the Abukuma Hills, Fukushima Prefecture. It was submitted to me for identification together with several other cholevids from the same locality through the courtesy of Mr. Sumao KASAHARA. Additional specimens of the same species were obtained by the same biospeologist from two different caves in the southern part of the Abukuma Hills, Ibaraki Prefecture, and I was able to examine them through the courtesy of Dr. Shun-Ichi UÉNO. After a close examination, I have come to the conclusion that they apparently belong to a new species of the *longulus* group (*sensu* JEANNEL, 1936, pp. 346–349, and SZYMCZAKOWSKI, 1964, p. 154) in the genus *Catops*. In some respects, it is more closely similar to *C. angustipes apicalis* PORTEVIN (1914, pp. 216–217; JEANNEL, 1936, pp. 356, 381, fig. 850) than to *C. ohbayashii*. The new species will be described in the present paper. 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 Science Museum (Nat. Hist.), Tokyo, not only for his kindness in critically reading the original manuscript of this paper, but also for giving me the opportunity to examine the new species. Hearty thanks are also due to Messrs. Sumao KASAHARA, Shinzaburo SONE and Masao TÔYAMA for their kindness in supplying interesting materials or literature.

Catops sonei M. NISHIKAWA, sp. nov.

[Japanese name: Abukuma-chibishidemushi]
(Figs. 1–6)

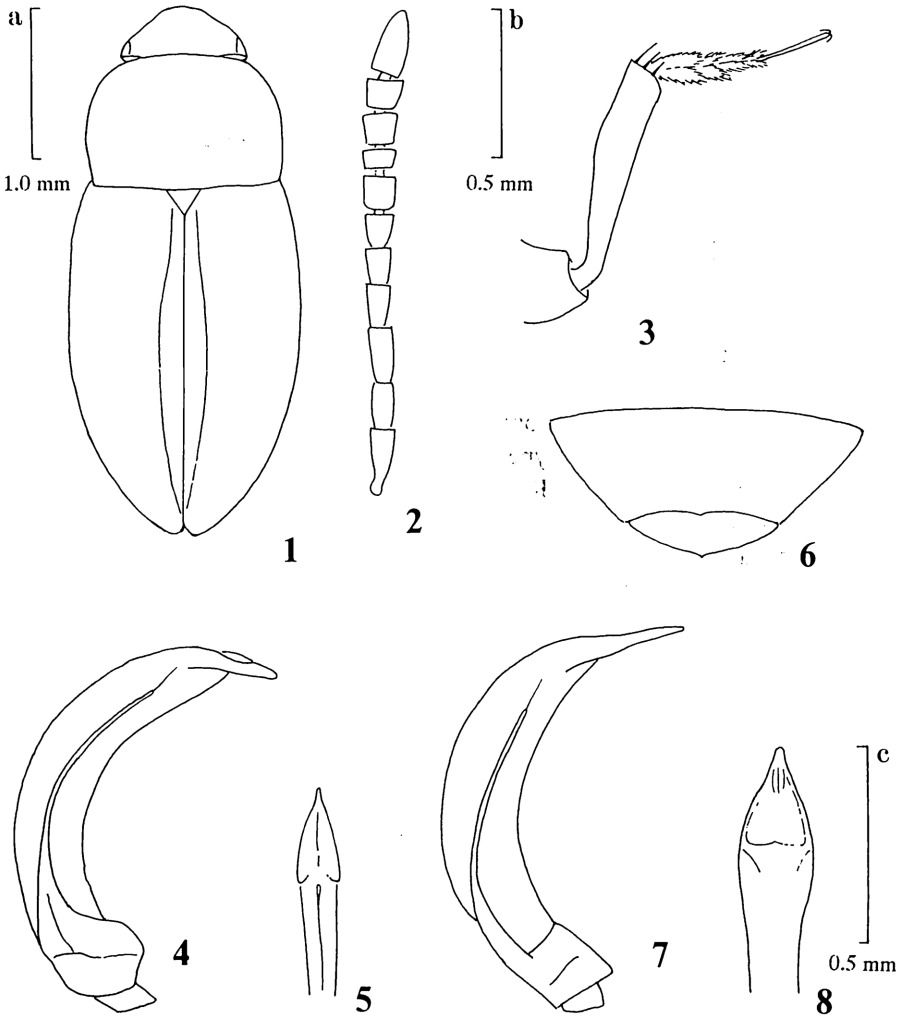
Male. Length 3.80–4.05 mm (in normal condition), width 1.65–1.73 mm. Body elongate, elliptical, with shiny, yellowish brown, relatively long, adpressed pubescence; labrum and maxillary palpi reddish brown; mouth-parts paler; head blackish brown, with front margin reddish; antennae clear reddish brown except for segments VII–X darker; pronotum and scutellum blackish brown; elytra blackish brown, though the basal portions are reddish, entirely bearing opalescent lustre; epipleura reddish brown; legs almost reddish brown; ventral surface dark reddish brown, though the apical half of each abdominal sternite is paler.

Head gently convex, subtrapezoidal, with front margin straight, wider than long, widest at the level of occipital carina (length : width = ca. 1 : 1.3); labrum transverse, subtrapezoidal, well emarginate at the front margin, with sparse punctuations; maxillary palpus with last segment conical, almost as long as the preceding one; frons clothed with punctures somewhat larger but denser than those on labrum; vertex punctate as on frons; eyes slightly reduced but completely faceted, moderately prominent; horizontal diameter of eye about 4/7 as long as the distance between antennal socket and occipital carina. Antennae long and slender, reaching about basal 1/7 of elytra; segments II–IV equal in length to one another, VI as long as wide, VII and IX equal in width to each other, VIII transverse, about 1.7 × as wide as long, XI elongate, pyriform. Segmental measurements (length followed by width) in the holotype as follows: I, 0.20, 0.10; II, 0.15, 0.09; III, 0.20, 0.09; IV, 0.15, 0.09; V, 0.13, 0.10; VI, 0.11, 0.11; VII, 0.13, 0.14; VIII, 0.08, 0.13; IX, 0.10, 0.14; X, 0.11, 0.13; XI, 0.23, 0.13.

Pronotum transverse, trapezoidal, gently convex, widest at the middle, with base narrower than elytral base, PW/HW 1.51–1.53 (M 1.52), PW/PL 1.40–1.53 (M 1.47); front and basal margins almost straight, strongly marginate in the former; front angles rounded; sides arcuate, gently marginate; hind angles obtuse; surface densely clothed with asperate punctuations. Scutellum triangular, punctate as on elytra. Hind wings full.

Elytra elongate-ovate, gently convex, widest at the middle, EW/PW 1.14–1.17 (M 1.16), EL/PL 2.62–2.89 (M 2.76), EL/EW 1.59–1.67 (M 1.63); sides arcuate, strongly converging towards apices in apical halves, the apices separately rounded; disc with suture complete, slightly angulate at the sutural end, with sutural stria and traces of four or five striae; surface granulate-punctate; microsculpture formed by short transverse wrinkles; epipleura ending at about apical 1/5, punctate as on elytra. Pygidium also punctate as on elytra. Ventral surface almost asperate-punctate, though the mesosternum is partially foveate, with microsculpture formed by oblique wrinkles.

Legs long and slender, with profemur smooth on under side; protibia gently expanded from basal 1/4 along inner margin; protarsus with basal three segments slightly dilated, the first one 2/3 as wide as the apex of protibia; mesotarsus with the



Figs. 1–8. *Catops* spp.; 1–6, *Catops sonei* M. NISHIKAWA, sp. nov., from Ohkaneda-dô Cave at the southern part of the Abukuma Hills, Ibaraki Pref., Central Japan; 7–8, *Catops angustipes apicalis* PORTEVIN, 1914, from Sakuragi-chô, Yokohama in Kanagawa Pref., Central Japan. —— 1, Outline of body, ♂; 2, right antenna, ♂; 3, protibia, protarsus and apical part of profemur, ♂; 4, 7, male genitalia in lateral view; 5, 8, apical part of aedeagus in dorso-apical view; 6, abdominal sternites V and VI, ♀. (Scales: a for Fig. 1, b for Figs. 2–3 and c for the others.)

first segment the longest, distinctly thicker than the remainder; metafemur transversely depressed in middle.

Aedeagus symmetrical, slender, subparallel-sided except for acuminate apical portion, with apex distinctly projected in dorsal view; in lateral view, aedeagus arcuate, thick also in apical portion, with apical lobe short, strongly bent inwards. Parameres

slender, reaching about apical 1/4 of aedeagus. Basal piece ample.

Female. Length 3.90 mm (in normal condition), width 1.73 mm. Similar to male in general appearance. Measurements of body parts similar to those of the male, i.e., PW/HW 1.46, PW/PL 1.46, EW/PW 1.21, EL/PL 2.82, EL/EW 1.59. Segmental measurements of antenna (length followed by width) in the allotype as follows: I, 0.18, 0.08; II, 0.13, 0.08; III, 0.18, 0.08; IV, 0.14, 0.08; V, 0.10, 0.09; VI, 0.10, 0.10, VII, 0.13, 0.11; VIII, 0.06, 0.10; IX, 0.10, 0.13; X, 0.10, 0.11; XI, 0.23, 0.11. Mesosternum weakly elevated in medio-apical portion, partially foveate, with microsculpture intricate. Abdominal sternites normal, with sternite V somewhat depressed in middle, feebly bisinuate and minutely protuberant at the middle of apical margin, sternite VI also protuberant at the same portion as the preceding one. Pro- and mesotarsi normal.

Type series. Holotype: ♂, Ohkaneda-dô Cave at the southern part of the Abukuma Hills, Ohkaneda, Kitaibaraki-shi, Ibaraki Pref., E Honshu, Central Japan, 17–VII–1994, S. SONE leg. Allotype: ♀, Hanazono-dô Cave at the southern part of the Abukuma Hills, Hanazono, Kitaibaraki-shi, Ibaraki Pref., 17–VII–1994, S. SONE leg. Paratypes: 1♂, Kawauchi-dô Cave at the central part of the Abukuma Hills, Kawauchi-mura, Fukushima Pref., E Honshu, Central Japan, 4–V–1992, S. SONE leg.; 1♂, same data as for the holotype. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo, except for one paratype specimen from Kawauchi-dô Cave which is preserved in the collection of mine.

Notes. The paratype specimen from Kawauchi-dô Cave is slightly different from the specimens of the type population at the southern part of the Abukuma Hills in the ratio of body parts, i.e., PW/HW 1.42, PW/PL 1.34 and EW/PW 1.25. However, no specific difference is found in the aedeagal configuration between them.

As was pointed out in the introduction, the present new species is closely similar to *Catops angustipes apicalis* PORTEVIN, but is clearly different from the latter in the following points: eyes slightly reduced, inner margin of protarsi more expanded in male, and aedeagus slender in preapical portion with apex strongly projected, though the apical lobe is short in lateral view. The new species from Ohkaneda-dô and Hanazono-dô Caves was taken by baited traps together with *C. sparcepunctatus* JEANNEL. The cholevid collection from Kawauchi-dô Cave will be reported in a separate paper.

要　約

西川正明：阿武隈高地産チビシデムシ属の洞窟性の1新種．——本州の東北部の洞窟からは，じゅうらい，洞窟性のチビシデムシは知られていなかった．しかし，阿武隈高地の洞窟群のうち，数ヵ所の洞窟からもたらされたチビシデムシ属の種のひとつは，検討の結果，アカアシチビシデムシ *Catops angustipes apicalis* PORTEVIN に近縁の新種と認められた．そこで，これにアブクマチビシデムシ *Catops sonei* M. NISHIKAWA, sp. nov. と命名して記載した．

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Elytra, Tokyo, **23** (1): 75, May 15, 1995

Occurrence of *Ocypus* (*Xanthocypus*) *weisei* HAROLD (Coleoptera, Staphylinidae) in China

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Examining the staphylinid collection at the National Science Museum (Nat. Hist.), Tokyo, I have found an unrecorded species from China. It agrees with *Ocypus* (*Xanthocypus*) *weisei* HAROLD widely distributed in Japan and Korea. Its collecting data are as follows:

2♂♂, 2♀♀, Xingshan, Beijing, China, 1–VII–1992, S. UÉNO leg.

I am deeply thankful to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kindness in giving me the opportunity of studying the specimens.

Elytra, Tokyo, **23** (1): 76, May 15, 1995

Occurrence of *Nipponophloeostiba verrucifera* (Coleoptera, Staphylinidae, Omaliinae) on Iriomote-jima Island of the Ryukyus, Japan

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The omaliine genus *Nipponophloeostiba* Y. WATANABE is a monotypic genus established for *Nipponophloeostiba verrucifera* Y. WATANABE (1962, p. 77). This species has so far been known only from the Izu Islands off central Honshu and Yakushima Is. off southern Kyushu, of Japan (WATANABE & SHIBATA, 1972; WATANABE, 1990). Recently I had an opportunity to examine some specimens of this species collected from Iriomote-jima Is. as recorded below. It is suggested that this omaliine has a wide distributional range between the Izu and the Ryukyu Islands.

Specimens examined. 1♂, 2♀♀, Kanpira-no-taki, Iriomote-jima Is., Yaeyama Isls., the Ryukyus, 11-III-1995, H. SATÔ leg.

Distribution. Izu Isls. (Mikura-jima Is., Miyake-jima Is., Hachijô-jima Is.), Yakushima Is., Iriomote-jima Is.

I express my hearty thanks to Prof. Yasuaki WATANABE (Laboratory of Entomology, Tokyo University of Agriculture) for his continuous guidance. My deep gratitude is also due to Mr. Hiroki SATÔ of the same laboratory for kindly supplying me with interesting specimens.

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Elytra, Tokyo, **23** (1): 77–88, May 15, 1995

Taxonomic and Faunistic Contributions to the Knowledge of Palaearctic Quediina (Coleoptera, Staphylinidae, Staphylinini)

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Abstract Taxonomic and faunistic data on Palaearctic Quediina, mainly on the species of the genus *Quedius*, are provided. *Quedius* (*Microsaurus*) *kalabi* is described and illustrated as new from specimens from Kyrgyzstan (Tian Shan); *Quedius* (*Quedionuchus*) *armipes* SHARP, 1889 is redescribed and illustrated from specimens from Kunashir Island; *Quedius* (*Distichalius*) *loebli* SMETANA, 1978 is placed in synonymy with *Q. fagelianus* COIFFAIT, 1967 (new synonymy); *Quedius* (*Raphirus*) *sparsutus* FAUVEL, 1875 and *Q.* (*Raphirus*) *lederi* BERNHAUER, 1902 are placed in synonymy with *Q. sublimbatus* MÄKLIN, 1853 (new synonymies); sexual characters, both male and female, are described and illustrated for *Quedius* (*Raphirus*) *walteri* KORGE, 1971 from north-eastern Anatolia.

The present paper is the first of a series of papers intended to present results of my recent studies on the Palaearctic members of the subtribe Quediina.

The specimens mentioned in the paper are deposited in several collections and the abbreviations used in the text, when referring to these collections, are as follows:

ASCC (A. Smetana collection, Ottawa, Canada)
NHNG (Muséum d'Histoire naturelle, Genève, Switzerland)
MKCC (M. Kocián collection, Praha, Czech Republic)

Quedius (*Microsaurus*) *kalabi* sp. nov.

(Figs. 1–6)

Entirely, including appendages, rufo-testaceous, elytra and abdomen becoming inconspicuously paler toward apex. Head of obtusely quadrangular shape, about as long as wide, parallel-sided behind eyes, posterior angles broadly arcuate; eyes very small and flat, not protruding from lateral contours of head, tempora about 2.5 as long as eyes seen from above (ratio 2.46); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture and temporal puncture both situated much closer to posterior margin of head than to posterior margin of eye; two small setiferous punctures between posterior frontal puncture and posterior margin

of head; tempora with some fine punctures posteriorly; surface of head with very fine and dense microsculpture of mostly transverse waves and with scattered micropunctulation. Antenna rather short, segment 3 distinctly longer than segment 2, segments 4 and 5 as long as wide, segments 6–10 wider than long, gradually becoming shorter and wider, segment 10 distinctly transverse, last segment about as long as two preceding segments combined. Pronotum slightly wider than long (ratio 1.14), basal margin broadly rounded, lateral margins distinctly, slightly arcuately narrowed anteriad; dorsal rows each with two fine punctures; sublateral rows each with two punctures, posterior puncture situated slightly before level of large lateral puncture; surface of pronotum with microsculpture similar to that of head, micropunctulation indistinct to entirely obsolete. Scutellum impunctate, surface with very dense and fine microsculpture of transverse lines. Elytra short, at base narrower than pronotum at widest point, inconspicuously widened posteriad, at suture distinctly (ratio 1.28), at sides slightly (ratio 1.12) shorter than pronotum at midline; punctation fine, moderately dense, vaguely asperate, transverse interspaces between punctures mostly about 2.5 as large as diameters of punctures; pubescence brownish; surface between punctures with very fine and rather dense micropunctulation. Wings reduced to non-functional stumps. Abdomen with tergite 7 (fifth visible) lacking whitish apical fringe of palisade setae; punctation and pubescence of tergites slightly finer and denser than that on elytra, punctation simple, evenly covering tergites, gradually becoming vaguely sparser toward apex of abdomen; surface between punctures with exceedingly fine and dense microsculpture of transverse striae.

Male. First four segments of front tarsus strongly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment two vaguely wider than apex of tibia (ratio 1.10); segment four narrower than preceding segments. Sternite 8 with two strong setae at each side; with moderately wide, shallow, subangulate medio-apical emargination, small triangular area before emargination flattened (Fig. 1). Genital segment with tergite 10 strongly narrowed toward subtruncate apex, with two strong apical setae and with numerous finer, variably long setae on apical portion (Fig. 2); sternite 9 subemarginate apically, densely setose, with three stronger lateral setae in front of apical margin (Fig. 3). Aedoeagus (Figs. 4–5) small; median lobe with short apical portion with narrowly arcuate to obtusely triangular apex bearing minute tooth on face adjacent to paramere just below apex. Paramere large, covering most of median lobe, gradually dilated anteriad and then narrowed into narrowly emarginate apex not quite reaching apex of median lobe; two fine apical setae on each side of medial emargination, two similar setae at each lateral margin quite below apex; underside of paramere with one irregular group of sensory peg setae close to apical margin on each side of medial emargination, each with seven or eight peg setae, and with one irregular, lateral, group of six sensory peg setae on each side around widest point of paramere. Internal sac without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but distinctly less dilated and with less numerous modified pale setae ventrally; segment

two vaguely narrower than apex of tibia (ratio 0.92). Genital segment with tergite 10 short and wide, distinctly pigmented medio-apically, markedly narrowed toward subacute apex, with numerous unequally long setae at anterior margin and on apical portion (Fig. 6).

Length 8.5–9.3 mm.

Type material. Holotype (male): [Kyrgyzstan]: "SU – Tien Shan NE part of Terskey Ala Too ridge 3000–3600 m". In the collection of the Naturhistorisches Museum, Wien, Austria.

Allotype (female): [Kyrgyzstan]: "SU – Tien-Schan Mts, – 3000–3500 m NO part of Terskey Ala Too ridge JETY-OGUZ, – 20 km SW From Przewalsk J. Kaláb leg. 23.–30. 6. 1989"/"QUEDIUS (Microsaurus) sp. n. ♀". In the Smetana collection, Ottawa, Canada.

Paratype (male): same data as holotype. In the Smetana collection, Ottawa, Canada.

Geographical distribution. *Quedius kalabi* is at present known only from the type locality on the northwestern slopes of the Terskey Alatau Khrebet of the Tian Shan massive in Kyrgyzstan.

Bionomics. Nothing is known about the collection circumstances of the specimens. Based on the pale general coloration of both the body and the appendages, and on the very small size of the eyes, it seems probable that *Q. kalabi* occurs in subterranean burrows of some animal, probably a rodent.

Recognition and comparisons. *Quedius kalabi* may be rather easily recognized by the combination of both the external characters, and the male and female sexual characters. It is to some extent similar to *Q. dui* SMETANA, 1989 from Punjab (Himachal Pradesh) with which it shares the positions of both the posterior frontal and temporal punctures, and the general shape of the aedoeagus; however, *Q. dui* differs, in addition to the male sexual characters, including the differences on the median lobe and on the paramere of the aedoeagus (see figs. 25 and 27 in SMETANA, 1989, and Figs. 4–5), by the presence of only two punctures in each of the dorsal rows on the pronotum, by the stouter form and darker coloration, etc.

Etymology. Patronymic. The species was named in honor of Mr. J. KALÁB, Jinacovice, Czech Republic, who collected the allotype.

Quedius (*Microsaurus*) *tenellus* (GRAVENHORST)

Staphylinus tenellus GRAVENHORST, 1806, 54.
Quedius tenellus: COIFFAIT, 1978, 168.

New records. [Rossia]: Buryat rep. Baikal. Bolsaja Ceremsana, 460 m, 20 ~ 25–VII–92, M. TRYZNA (ASCC, MKCC) 2.

Comments. This is a northern species, widely distributed from Fennoskandia eastward through Siberia to the Lake Baikal area and to northern Mongolia (SMETANA, 1967, 215).

Quedius (Distichalius) fagelianus COIFFAIT

Quedius (Microsaurus) fagelianus COIFFAIT, 1967, 391; 1978, 180.
Quedius (Distichalius) loebli SMETANA, 1978, 121 (*syn. nov.*).

New record. [Lebanon]: Hasroun près de Becharré, 1,500 m, 3–IV–75, C. BESUCHET (MHNG) 1.

Comments. *Quedius fagelianus* is at present known from Lebanon and Israel.

COIFFAIT (l.c.) assigned this species to the subgenus *Microsaurus*. He suggested that it is related to the species of the "groupe de *Q. lateralis*", particularly to *Q. fissus*, based on the fact that the apical portion of the median lobe in *Q. fissus* is also divided into two branches, although not as deeply as in *Q. fagelianus*. Subsequently, he established a separate monotypic "groupe de *Q. fagelianus*" for it, within *Microsaurus* (COIFFAIT, 1978, 180).

The character state of the divided apical portion of the median lobe apparently developed independently at least twice within *Quedius*. It appears rarely, except it is frequent in the species of some Asiatic species-groups of the subgenus *Distichalius* (see SMETANA, 1995). I have little doubt that *Q. fagelianus* belongs to the taxon that is at present recognized as the subgenus *Distichalius*, based both on the external characters (elytral punctation) and the apically divided median lobe of the aedoeagus.

I have not studied the type specimens of *Q. fagelianus*; however, there is little doubt that the name *Q. loebli* is a junior synonym of *Q. fagelianus* (new synonymy).

Quedius (Quedionuchus) armipes (SHARP)

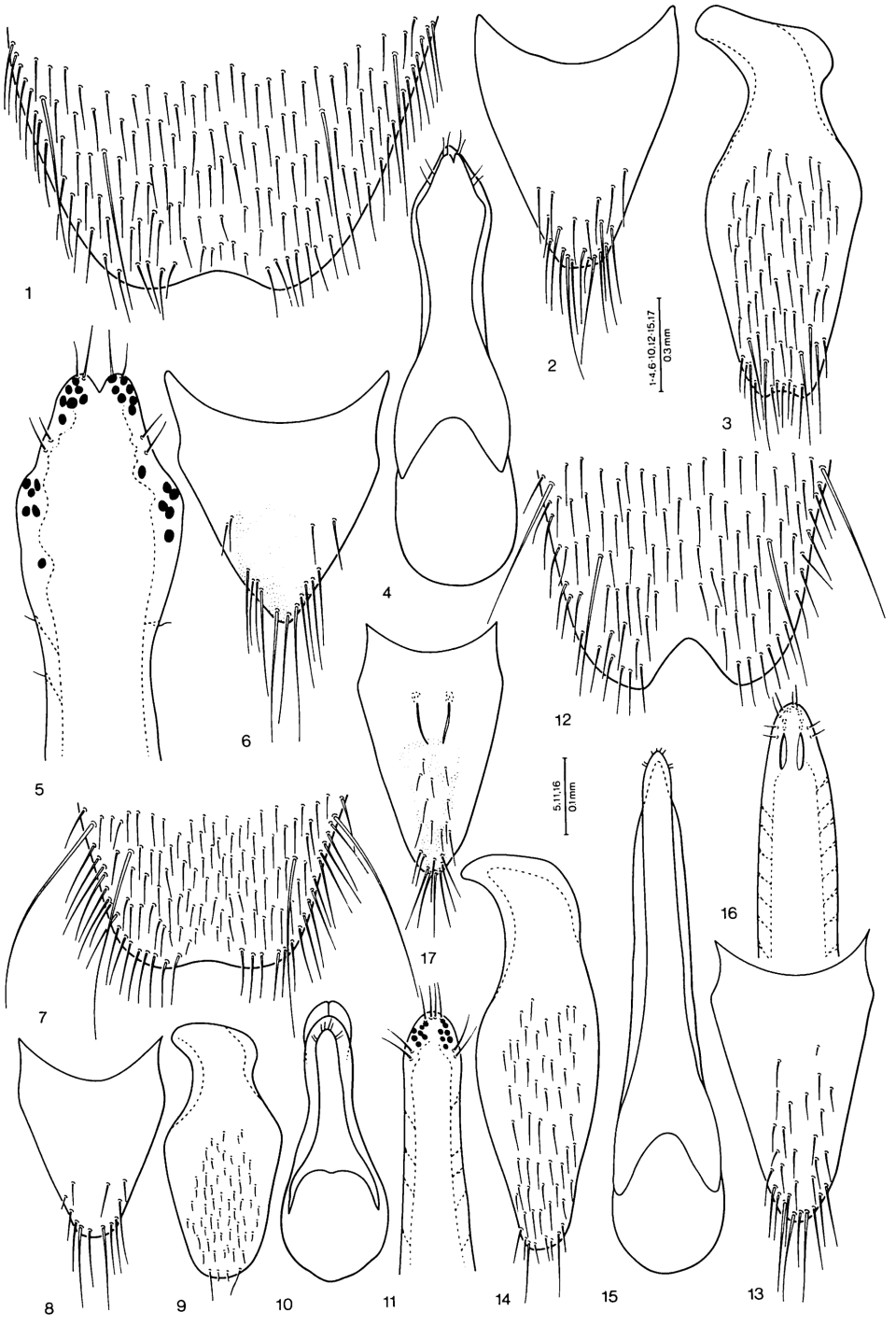
Quedionuchus armipes SHARP, 1889, 34.
Quedius armipes: BERNHAUER & SCHUBERT, 1916, 419; ADACHI, 1957, 179.

New records. [Rossia]: Kunashir, three different localities in the vicinity of Mendeleevo, 13–IX–72, 18–IV– and 22–V–77, POTOTSKAYA (ASCC) 3.

Comments. The species has never been adequately described; therefore a detailed description is given below.

Description. Piceous with black head, apical margins of abdominal tergites and apex of abdomen usually inconspicuously paler; maxillary and labial palpi testaceo-brunneous, antennae brunneo-piceous or brunneous with first three segments darkened; legs brunneous with paler tarsi, medial faces of middle and hind femora piceous-black. Head of rounded quadrangular shape, distinctly wider than long (ratio 1.30),

Fig. 1–17. — 1–6. *Quedius kalabi*: 1, apical portion of male sternite 8; 2, tergite 10 of male genital segment; 3, sternite 9 of male genital segment; 4, aedoeagus, ventral view; 5, apical portion of underside of paramere; 6, tergite 10 of female genital segment. — 7–11. *Quedius armipes*: 7, apical portion of male sternite 8; 8, tergite 10 of male genital segment; 9, sternite 9 of male genital segment; 10, aedoeagus, ventral view; 11, apical portion of underside of paramere. — 12–17. *Quedius walteri*: 12, apical portion of male sternite 8; 13, tergite 10 of male genital segment; 14, sternite 9 of male genital segment; 15, aedoeagus, ventral view; 16, apical portion of underside of paramere; 17, tergite 10 of female genital segment.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slightly narrowed behind eyes, posterior angles obtusely rounded; with distinct transverse impression between eyes; eyes small, only slightly convex; tempora markedly longer than eyes seen from above (ratio 1.33); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to posterior margin of head, two additional setiferous punctures mediad of it; temporal puncture situated somewhat closer to posterior margin of head than to posterior margin of eye, one additional setiferous puncture between it and posterior margin of eye; surface of head with very fine and dense microsculpture of transverse striae, with interspersed micropunctulation. Antenna short, segment 3 somewhat longer than segment 2, segment 4 about as long as wide, segment 5 slightly, segments 6–10 distinctly transverse, last segment shorter than two preceding segments combined. Scutellum impunctate, with extremely fine microsculpture of transverse striae with intermixed micropunctulation. Pronotum slightly wider than long (ratio 1.10), widest at about middle, moderately rounded basally, only slightly transversely convex, about equally narrowed both anteriad and posteriad, lateral margins each flattened to inconspicuously concave posteriorly; dorsal rows each with three punctures; sublateral rows each with only one puncture near anterior margin; microsculpture on pronotum similar to that on head but interspersed micropunctulation finer. Elytra moderately long, flat, at base about as wide as pronotum at widest point, hardly widened posteriad, at suture slightly (ratio 1.20), at sides distinctly (ratio 1.30) longer than pronotum at midline. Each elytron with punctation limited to two irregular, longitudinal rows of punctures, one close to suture, other at about lateral third; with slight longitudinal impression along suture; with several spine-like setae on humerus and with one humeral and two lateral long setae; surface slightly, irregularly wrinkled, with dense and fine, submeshed microsculpture gradually becoming more superficial toward elytral apex. Wings fully developed. Abdomen with tergite 7 (fifth visible) bearing whitish apical seam of palisade fringe; punctation of abdominal tergites fine and moderately dense, becoming somewhat sparser toward apex of each tergite and in general toward apex of abdomen, first visible tergite with sparse and extremely fine punctation on middle area; pubescence piceous; surface between punctures with exceedingly dense and fine microsculpture of transverse striae. Ventro-medial margin of hind femora expanded, except near apex, expanded portion with numerous, strong, spine-like black setae.

Male. First four segments of front tarsus moderately dilated, subbilobed, each densely covered with modified pale setae ventrally; segment two narrower than apex of tibia (ratio 0.80); segment four somewhat narrower than preceding segments. Sternite 8 with two long setae on each side; with rather narrow and shallow, arcuate medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 7). Genital segment with tergite 10 small, strongly narrowed toward arcuate apex, with two long and several shorter setae at apical margin, and with several small setae in front of them (Fig. 8); sternite 9 short and wide, with arcuate apex, densely setose and with two minute apical setae (Fig. 9). Aedoeagus (Figs. 10–11) small, short and wide; median lobe with apex subarcuate, with two latero-apical sclerites, apical

portion with small tooth on face adjacent to paramere. Paramere not quite reaching apex of median lobe, narrow, subparallel-sided with arcuate apex; four fine setae at apex and two similar setae at each lateral margin below apex; sensory peg setae on underside of paramere arranged into two irregular apical groups, each with six or seven peg setae. Internal sac simple, without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but slightly less dilated.

Tergite 10 of the genital segment was severely damaged in the only female available; it cannot be described or illustrated.

Length 7.9–8.8 mm.

Geographical distribution. *Quedius armipes* is at present known from the Japanese Islands of Kyushu and Honshu (SHIBATA, 1984, 130) and from Kunashir, the southernmost island of the Kuril Islands.

Bionomics. Collection circumstances of the specimens are not known, but it is assumed that they were taken from under the bark of trees.

Quedius (Raphirus) walteri KORGE

(Figs. 12–17)

Quedius walteri KORGE, 1971, 44; COIFFAIT, 1978, 182.

New records. [Turcia]: "Turk.-Rize 7. '76, Vallée d.l. Firtina 1400 m; Vít lgt." (ACSS) 1; Borcka, Balikli Dagi, 14–VI–92, M. JANATA (ASCC, MKCC) 2.

Comments. The species was until now known only from the two female specimens, collected at Ilica in the valley of Ardesen (Kackar-Daglari). The two new records seem to indicate that the species is widely distributed in the mountains of northeastern Anatolia.

KORGE (1971, 44) discussed the difficulty he had with the subgeneric assignment of this species. He eventually chose to place it tentatively in the subgenus *Microsaurus*, but pointed out that it may actually belong to the subgenus *Sauridus* (recently considered as a junior synonym of *Raphirus* — see *e.g.* SMETANA, 1988, 183). Both the characters on the aedoeagus and the external characters, particularly the presence of only one additional setiferous puncture between the posterior frontal puncture and the posterior margin of the head (see SMETANA, 1988, 183) leave little doubt that *Q. walteri* belongs to the subgenus *Raphirus* (see above).

The species was described in detail by KORGE (1971, 44) and therefore only the male and female sexual characters, including those on the genital segments, are added here.

Male. First four segments of front tarsus strongly dilated, sub-bilobed, each very densely covered with modified pale setae ventrally; segment two about as wide as apex of tibia; segment four narrower than preceding segments. Sternite 8 with wide and deep, obtusely triangular medio-apical emargination, small triangular area before emargination slightly flattened and smooth (Fig. 12). Genital segment with tergite 10

fairly narrow and elongate, narrowly arcuate apically, with two stronger apical setae, and with additional weaker setae at apical margin and on apical portion (Fig. 13); sternite 9 as in Fig. 14, with subarcuate apex bearing two apical setae. Aedoeagus (Figs. 15–16) very narrow and elongate; median lobe narrowed into subacute apex, with small tooth just below apex on face adjacent to paramere; paramere narrow and very elongate, almost parallel-sided with narrowly obtuse apex, slightly exceeding apex of median lobe, narrower than median lobe except covering very apex of median lobe anteriorly; four extremely small setae at apex and two similar setae at each lateral margin below apex; underside of paramere without sensory peg setae, but with two short, longitudinal medial carinae just below apex; internal sac simple, without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but somewhat less dilated; segment two slightly narrower than apex of tibia (ratio 0.85). Genital segment with tergite 10 quite distinctive, narrowed toward narrowly arcuate apex, with middle portion longitudinally elevated, elevated portion with two fine longitudinal carinae at base; narrow medio-apical portion pigmented; with five apical setae and with some additional setae on apical portion (Fig. 17).

The configuration of both the apical portion of the paramere of the aedoeagus (lacking sensory peg setae, but bearing two longitudinal carinae) and tergite 10 of the female genital segment (middle portion elevated and provided with two basal longitudinal carinae) are unique features of this species.

Quedius (*Raphirus*) *transsylvanicus* WEISE

Quedius transsylvanicus WEISE, 1875, 356; SMETANA, 1962, 139.

New record. [Ukraina]: Zakarpatskij reg., Kvasy env., 23–VII–92, O. HOVORKA (MKCC) 1.

Comments. This is an endemic species of the northeastern Carpathians, particularly of the Czernahora massive. Only very few recent records are known.

Quedius (*Raphirus*) *novus* EPPELSHEIM

Quedius novus EPPELSHEIM, 1892, 331; COIFFAIT, 1963, 389.

New records. [Uzbekistan]: Zeravanskij chr., Aman Kutan, 1,250 m, 9–VI–89, O. HOVORKA (ASCC) 1; Zaamin. zapovednik, 15–VI–90, J. MAREK (ASCC. MKCC) 6.

Comments. *Quedius novus* seems to be widely distributed in the mountainous areas of Central Asia, but very few recent records are known at present.

Quedius (*Raphirus*) *sublimbatus* MÄKLIN

Quedius sublimbatus MÄKLIN, 1853, 190; SMETANA, 1971, 219.
Quedius sparsutus FAUVEL, 1875, XXXIV; GRIDELLI, 1922, 124; 1924, 124; COIFFAIT, 1978, 250 (*syn. nov.*).

Quedius lederi BERNHAUER, 1902, 699; GRIDELLI, 1922, 129; 1924, 124 (nec COIFFAIT, 1967) (*syn. nov.*).
Quedius arcticus MUNSTER, 1920, 57; SMETANA, 1965, 47.
Quedius wuorentausi BERNHAUER, 1927, 96; SMETANA, 1971, 220.

New record. [Rossia]: Buryat rep. Baikal. Bolsaja Ceremsana, 460 m, 20 ~ 25–VII–92, M. TRYZNA (MKCC) 1.

Comments. This is a circumpolar species, widely distributed throughout the northern portions of Eurasia and North America (see SMETANA, 1967, 217 for a distributional map).

Due to this wide distribution, the species was named many times, based on specimens from both the Palaearctic and Nearctic Regions. Some of the synonymy was presented already by SMETANA (1965, 47, *Q. arcticus*; 1971, 220, *Q. wuorentausi* and some additional names based on Nearctic specimens), but COIFFAIT (1967, 417; 1978, 205) still recognized *Q. arcticus* as a valid species and never even mentioned *Q. sublimbatus*.

Quedius sparsutus. FAUVEL (1975, XXXIV) described the species from specimens from the Lake Baikal area ("Région du Baïkal, Irkutsk, en julliet et septembre (*Radde*)". I have not seen the original specimens. However, based on COIFFAIT's redescription and illustrations of the aedoeagus (1978, 115, fig. 46 D–F; 250) of the species (COIFFAIT used FAUVEL's original specimens for the redescription), there is no serious doubt that the name *Q. sparsutus* is a junior synonym of *Q. sublimbatus*.

Quedius lederi. BERNHAUER (1902, 699) described the species from a single specimen from the Lake Baikal area ("ein im Baikalgebiete aufgefundenes Exemplar (Bang-Haas)"). The female holotype at the Field Museum of Natural History, Chicago, is labelled as follows: dark blue square label/"Baikal Bang-Haas"/"Lederi Rtt."/"Lederi Brh. leg. Leder Type."/"Chicago NH Mus M. Bernhauer Collection". The specimen does not specifically differ from the specimens of *Q. sublimbatus*; the name *Q. lederi* is a junior synonym of *Q. sublimbatus*. My corresponding determination label has been attached to the holotype.

There seems to be some confusion concerning the identity of the holotype of *Q. lederi*. GRIDELLI (1924, 124) cited under *Q. sparsutus* "Lago Baical, Tun kun, Sajan (Bang-Haas); un esemplare ♂ comunicatomi da Bernhauer, (tipo del *Lederi*)". The holotype (see above) is actually a female, with different labels, so the specimen sent by BERNHAUER to GRIDELLI could not have been the actual "type". But since both specimens obviously belong to the same taxon, the confusion does not affect the nomenclature. COIFFAIT (1978, 205) repeats the data given by GRIDELLI (l.c.) as the type locality for *Q. lederi* in his sense (= *Q. jenisseensis*, see below).

Quedius (*Raphirus*) *jenisseensis* (J. SAHLBERG)

Raphirus jenisseensis J. SAHLBERG, 1880, 72.
Quedius jenisseensis: GRIDELLI, 1924, 167; SMETANA, 1976, 24.
Quedius lederi: COIFFAIT, 1967, 417; 1978, 205 (nec BERNHAUER, 1902, 699).

New records. [Rossia]: Buryat rep. Baikal. Bolsaja Ceremsana, 460 m, 20 ~ 25–VII–92, M. TRYZNA (ASCC, MKCC) 8; Primorskij Kraj, 5 km E Kraskino, 13 ~ 16–VII–92, D. BOUKAL (ASCC, MKCC) 3.

Comments. *Quedius jenisseensis* was until now known only from northern Siberia, from about the Kanin Peninsula in the west to the Lena river basin in the east (SMETANA, 1976, 25). The new records presented, extend the distributional range considerably southward. The record from near Kraskino is of particular interest, since the locality is in the extreme southwestern portion of the Primorskij Kraj, near the border with China and North Korea.

COIFFAIT (1967, 417; 1978, 205) redescribed the species under the name *Q. lederi* BERNHAUER, 1902. He stated that *Q. lederi* is a species quite distinct from *Q. sparsutus* FAUVEL, 1875 and not a synonym of the latter, as proposed by GRIDELLI (1922, 129; 1924, 124) and followed by all subsequent authors. It is not known what specimens COIFFAIT used for the redescription. See also comments section under *Q. sublimbatus*.

Quedius (Raphirus) fellmani (ZETTERSTEDT)

Staphylinus fellmani ZETTERSTEDT, 1838, 62.
Quedius fellmani: SMETANA, 1971, 233.

New record. [Rossia]: Southern Kamchatka: "Mutnovski-Vulkan", 26–VII–91, R. PREDEL (MSCC) 1.

Comments. This is the second record of this northern circumpolar species from Kamchatka (see SMETANA, 1976, 28).

Velleiopsis marginiventris FAIRMAIRE

Velleiopsis marginiventris FAIRMAIRE, 1882, CLXIV; MARKOVITCH, 1915, 148–150; COIFFAIT, 1978, 288.

New record. [Turcia]: Anatolia bor., cca 7 km NW Köse, 1,700–2,000 m, 20–VII–76, W. HEINZ (ASCC) 1.

Comments. Very few records of this very rare, spectacular species are known. It is at present known from Bulgaria and from Asia Minor.

The collection circumstances of this specimen are unfortunately not known, except that it has been taken in a mixed *Quercus-Populus* forest. The two original specimens of this species were found on a cliff among climbing vines ("sur la falaise, dans un sentier au milieu des vignes", FAIRMAIRE, 1882, CLXV) near Varna, Bulgaria. I suspect that the species may live in subterranean galleries of an animal, or in nests of social Hymenoptera.

Velleiopsis marginiventris (the type species of the genus) agrees in general habitus and particularly in the quite characteristic configuration of the antenna with the Nearctic species of *Megaquedius* CASEY, 1915. It is possible that *Velleiopsis* and *Megaquedius* in fact represent one taxon that may be a member of the old Tertiary fauna. This has to be confirmed by a comprehensive study of the supraspecific taxa

of the Quediina.

Acknowledgements

The holotype of *Quedius lederi* from the BERNHAUER collection has been made available to me by Dr. A. F. NEWTON, JR., Field Museum of Natural History, Chicago, Illinois. His assistance is gratefully acknowledged. I also thank Dr. D. E. BRIGHT and A. DAVIES from the Biological Resources Division, CLBRR, Ottawa, for their criticisms of the manuscript, and Mr. Go SATO for finishing all drawings.

要　約

A. SMETANA：旧北区産ツヤムネハネカクシ亜族に関する分類学的ならびに生物地理学的知見．——ツヤムネハネカクシ亜族のうち，とくにツヤムネハネカクシ属について，若干の知見をまとめた．キルギスタンから新種*Quedius* (*Microsaurus*) *kalabi*を記載し，千島の国後島産の材料に基づいて*Q.* (*Quedionuchus*) *armipes*を再記載した．また，*Q.* (*Raphirus*) *walteri*の雌雄生殖器を記載図示し，他のみっつを同物異名として整理した．

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Elytra, *Tokyo*, **23** (1): 89–93, May 15, 1995

Notes on the Species of *Nazeris* (Coleoptera, Staphylinidae) from Taiwan

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Abstract Two additional new staphylinid species belonging to the *Nazeris femoralis* group are described from Taiwan, *N. aestivalis* sp. nov. and *N. vernalis* sp. nov.

Up to the present time, six species and one subspecies of *Nazeris* have been described from several localities of Taiwan. Four of them belong to the *N. femoralis* group which is recognized on having a distinct hook on each hind trochanter in the male. In the present paper, I am going to describe two new additional species of this species-group under the names of *N. aestivalis* sp. nov. and *N. vernalis* sp. nov. The localities of all the known species of this group in Taiwan will be shown on a sketch map (Fig. 7).

Nazeris aestivalis sp. nov.

(Fig. 1–3)

Body a little shiny, reddish brown, apical segments of abdomen slightly darkened, antennae except for basal three or four segments and legs (femora, tibiae and tarsi) yellowish brown; pubescence on body pale yellow to dark brown.

Length: 5.3 mm.

Head quadrate, a little longer than wide (1.06 : 1), coarsely, closely and rather regularly punctate but the puncture arrangement is slightly disturbed on subdepressed frons; labrum clearly quadridentate, widely and triangularly notched in middle, the inner two teeth somewhat thick and slightly longer than the outer two; vertex evently convex; eyes relatively small, each longitudinal diameter shorter than a half length of postgena, which are nearly parallel-sided, widely angulate to neck; antennae reaching behind the middle of pronotum, all segments clearly elongate, 1st segment very robust and nearly as long as the following two segments combined, 2nd segment the shortest but wide, each segment of 3rd to 10th respectively shorter than the preceding one, 11th slightly longer and wider than 10th. Ventral surface of head similarly but more regularly punctate than on dorsal surface; mentum shiny and submentum less shiny.

Pronotum oval, longer than wide (1.15 : 1), as long as and narrower than head (0.91 : 1), widest at apical third, from which the sides are strongly rounded apicad and

gradually rounded basad; disc much more coarsely and much more deeply punctate than on head, the punctures becoming less coarse laterad, median line narrow and present in basal third, two or three erect setae near the widest point rather short and not outstanding.

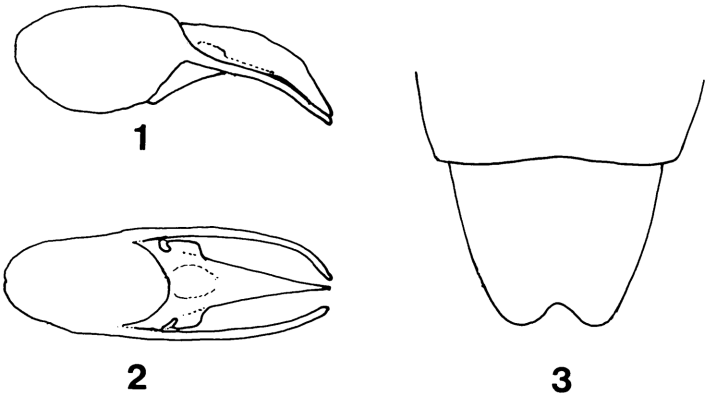
Elytra triangularly abbreviated with strongly effaced shoulders, distinctly shorter than pronotum (0.78 : 1), width at the widest point near apex about twice as wide as base and scarcely narrower than pronotal width; surface slightly undulate, coarsely, closely and a little rugosely punctate, the size of punctures being intermediate between those on head and pronotum. Prosternum coarsely and transversely seriately punctate, median carina rather dull and weakened at apex. Scutellum perceptibly punctate.

Abdomen slightly enlarged laterad, with basal tergite a little less coarsely punctate than on head, the punctures decreasing in size toward apical tergite, those on each sternite coarser than on the corresponding tergite, those on the apicalmost tergite very fine and obsolete. In the male, 7th sternite very weakly depressed in middle and barely sinuate at apical margin, 8th sternite scarcely or not depressed along middle and rather widely but finely excised at apical margin in middle; hind femora without any long hairs, hind trochanters uncinate on outer side.

Aedeagus slender, moderately sclerotized, apical part of median lobe composed of two parts, the basal part slightly depressed in middle and provided with a pair of remarkable wing-like processes clearly angulate at shoulders, and the apical part straightly narrowed toward sharply pointed tip, which extends only a little beyond the apex of fairly thin and slightly incurved apophysis.

Holotype: ♂, Near Tungpu, Nantou Hsien, Taiwan, 25–VIII–1987, Y. SHIBATA leg. (Tokyo University of Agriculture Collection, Tokyo). Paratype: 1 ♀, the same data as for holotype.

The present species is closely similar in general appearance and in aedeagal construction to *N. matsudai*, but is easily distinguished from the latter by the median



Figs. 1–3. *Nazeris aestivalis* sp. nov.; 1, aedeagus in lateral view; 2, same in ventral view; 3, outline of the 7th and 8th sternites in ♂.

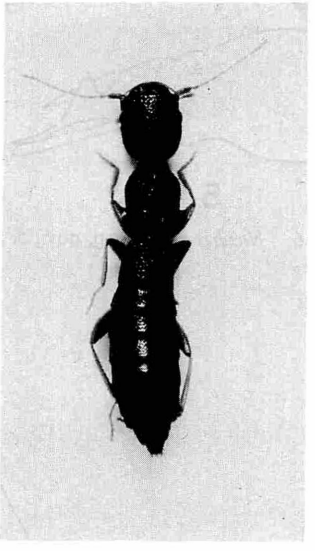


Fig. 4. Holotype of *Nazeris vernalis* sp. nov.

lobe of male genitalia without any constriction in apical half, the male 7th sternite slightly depressed in middle, the male 8th sternite more narrowly excised at apical margin, and the body lighter in color.

Nazeris vernalis sp. nov.

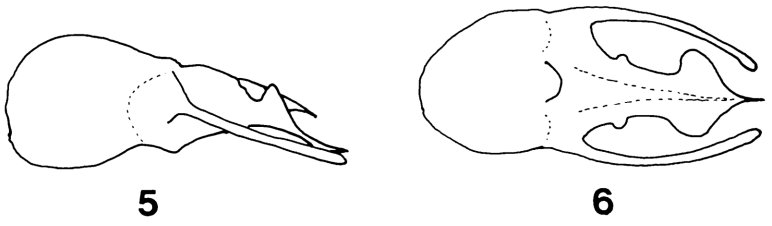
(Fig. 4–6)

Body a little shiny, black mandibles, labrum, basal two segments of antennae and coxae inclusive of trochanters reddish brown, mouth parts, the remainings of antennae and legs yellowish brown; pubescence on body yellowish brown to brownish black.

Length: 5.0–5.3 mm.

Head subquadrate, slightly longer than wide (1.07 : 1), coarsely, closely, deeply and more or less uniformly punctate, the punctures even on subdepressed frons hardly or not disturbed in arrangement; labrum with inner teeth a little longer than the outer; vertex evenly convex, postgenae subparallel-sided, slightly and sublinearly narrowed behind and widely angulate to neck; eyes moderately sized, its longitudinal diameter about a half length of postgena; antennae slender, exceeding middle of pronotum, all segments clearly longer than wide, 1st segment robust and longest, 2nd the shortest, 3rd to 10th gradually shortened distad, 10th approximately equal in length to 2nd and shorter than 11th. Ventral surface of head similarly punctate to dorsal surface.

Pronotum ovate, longer than wide (1.16 : 1), narrower (0.90 : 1) and scarcely shorter than head, widest at apical third, thence lateral sides more gently rounded basad



Figs. 5–6. *Nazeris vernalis* sp. nov.; 5, aedeagus in lateral view; 6, same in ventral view.

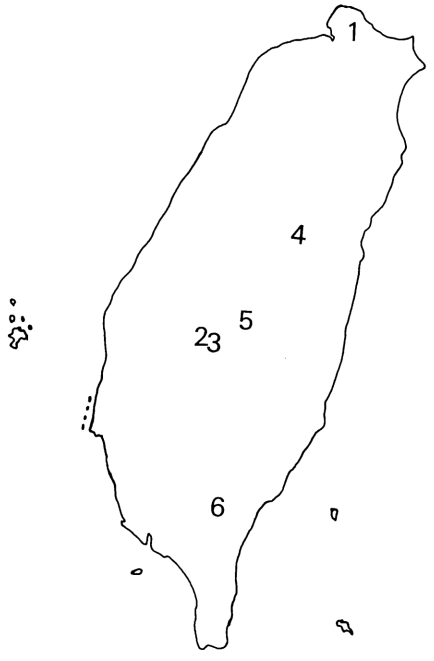


Fig. 7. Map showing the distribution of the group of *Nazeris femoralis* in Taiwan; 1 — *N. matsudai*, 2 — *N. femoralis*, 3 — *N. persimilis*, 4 — *N. uenoi*, 5 — *N. aestivalis*, 6 — *N. vernalis*.

than apicad, without characterized erect long setae near the widest point; discal punctures coarse, close and deep, much coarser and much deeper than on head, and somewhat irregular in arrangement on both sides of median line which is situated in basal third and sometimes hardly visible.

Elytra widened behind, not strongly constricted at shoulders, widest near apex, as wide as pronotal width, slightly undulate and coarsely, rugosely punctate, the punctures a little irregular in form due to the slight undulations. Prosternum with median carina diminishing apicad in height, and almost invisible near apical margin.

Abdomen without any microsculpture, and with punctures usually diminished distad in size. In the male, 5th sternite scarcely, 6th sternite perceptibly and 7th

sternite feebly depressed along middle and hardly sinuate at apical margin, 8th sternite not depressed and widely, relatively shallowly excised at apical margin in middle; each hind trochanter furnished with a distinct hook, hind femur bearing six or seven, erect and not long hairs on inner side of apical half.

Aedeagus rather sclerotized, very peculiar in shape, median lobe provided with two pairs of prominences at the lateral sides, the basal pair being small, the apical pair strongly and roundedly expanded to form a squid-like apical part, its apical tip sharply pointed though hardly extending beyond the tip of apophysis.

Holotype: ♂, Mt. Peitawushan (1,500 m), Pingtung Hsien, Taiwan, 1–V–1992, A. SMETANA leg. (Canadian National Collection, Ottawa). Paratypes: 1♂, 3♀♀, same data as the holotype, 1♂, 1♀, Mt. Peitawushan (2,000 m), Pingtung Hsien, Taiwan, 23–V–1991, A. SMETANA leg.

The present species resembles *N. femoralis* in general appearance but differs in the following points: aedeagus quite different in shape, the male 7th sternite more deeply and more distinctly depressed, and the male hind femora bearing much shorter and less prominent hairs.

Acknowledgement

I am deeply indebted to Dr. A. SMETANA, Ottawa, and Mr. Y. SHIBATA, Tokyo, for their kindness in offering the material used in this paper.

要　約

伊藤建夫：台湾産*Nazeris*属ハネカクシについて．——台湾産の*Nazeris*属ハネカクシはすでに6種および1亜種が知られ，そのうちの4種は雄の後転節に鉤状突起をもつ*femoralis*群に属する．本論文では，この群の種を2種追加記載するとともに，同種群の全種の分布図を示した．

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Elytra, Tokyo, **23** (1): 94, May 15, 1995

First Record of *Tetrabothrus japonicus* (Coleoptera, Staphylinidae, Aleocharinae) from Honshu, Japan

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The aleocharine beetle *Tetrabothrus japonicus* NAKANE (1991, p. 111) was described based on the specimens collected from Kagoshima and Miyazaki Prefectures, Kyushu. Additional record has been unknown since the original description. Recently, I have examined a specimen of this species collected from the Boso Peninsula, Kwanto District, Honshu. The members of the genus *Tetrabothrus* BERNHAUER are widely distributed in the Oriental and Australian Regions. The collecting data mentioned below are not the first record from Honshu for the species but mark the northern most record for the genus.

Specimen examined. 1♂, Chikura-chô, Chiba Pref., Honshu, 22–V–1991, K. AOKI leg. Obtained at light.

I express my hearty thanks to Prof. Yasuaki WATANABE (Laboratory of Entomology, Tokyo University of Agriculture) for his continuous guidance. Deep gratitude is also due to Mr. Kazuhiko AOKI (Urawa-shi) for kindly supplying me with the interesting specimen.

Reference

NAKANE, T., 1991. Notes on some little-known beetles (Coleoptera) in Japan. 8. *Kita-Kyushu no Konchu, Kokura*, **38**: 111–115.

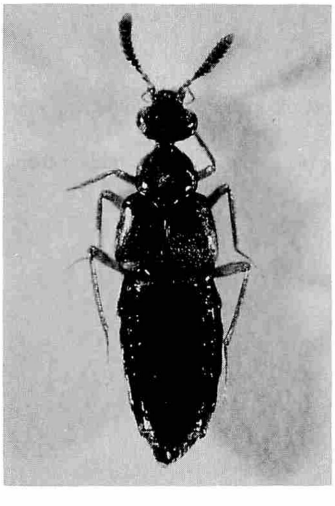

Fig. 1. *Tetrabothrus japonicus* NAKANE from Chikura-chô, central Honshu.

Elytra, Tokyo, **23** (1): 95–102, May 15, 1995

Two New Carabid Beetles from Nagano Prefecture, Central Honshu, Japan

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Abstract Two new carabid beetles, *Pterostichus* (*Nialoe*) *ishizukai* sp. nov. and *Trichotichnus* (*Trichotichnus*) *kisonis* sp. nov., are described from Nagano Prefecture, central Honshu, Japan.

Two unnamed carabid beetles occur in Nagano Prefecture, central Honshu, Japan. One of them belongs to the subgenus *Nialoe* of the genus *Pterostichus*, and seems related to *P.* (*N.*) *rhanis rhanis* TSCHITSCHÉRINE. It was found in recent years on the low mountain in Akashina-chô. The other one belongs to the *leptopus* group of the genus *Trichotichnus*. It was recently collected along the upper course of a branch stream of the River Kiso-gawa in Nagiso-machi. Both the unnamed beetles are, however, clearly discriminated from their relatives by their characteristic facies and configuration of aedeagi, and must be new to science. In this article, I will describe the former species under the name *Pterostichus* (*Nialoe*) *ishizukai* sp. nov., and the latter under the name *Trichotichnus* (*Trichotichnus*) *kisonis* sp. nov. The abbreviations used herein were already explained in previous papers of mine.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO, head of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo, for his advice and for reading the manuscript of this paper. Thanks are also due to Professor Kiyohiko IKEDA of Yamanashi University, Messrs. Katsumi ISHIZUKA of Saitama Prefecture and Kôichi MATSUI of Nagano Prefecture for their kind support in field researches.

Pterostichus* (*Nialoe*) *ishizukai sp. nov.

[Japanese name: Akashina-nagagomimushi]
(Figs. 1–3)

Description. Length (measured from apex of labrum to apices of elytra) 14.7–15.7 mm; width 5.3–5.7 mm. Stout. Black and shiny, though the elytra are opaque in the female; labrum, mandibles, antennae and tibiae dark reddish brown; palpi and tarsi reddish brown.

Head moderately convex; eyes convex; post-genae strongly contracted behind, gently swollen; labrum and clypeus gently emarginate at each apex; clypeal suture

distinct; frontal furrows distinct, linearly impressed at bottoms, divergent posteriad in posterior parts; supraorbital areas convex; lateral grooves deep, extending to a little behind the post-eye level; surface minutely punctate on frons; microsculpture slightly and partially visible, formed by fine isodiametric meshes; antennae longer in male than in female, reaching the basal third of elytra in male.

Pronotum cordate, convex, though the basal part is depressed, widest at apical third, ca. 1.4 times as wide as head (PW/HW 1.35–1.42, mean 1.40), as wide as base

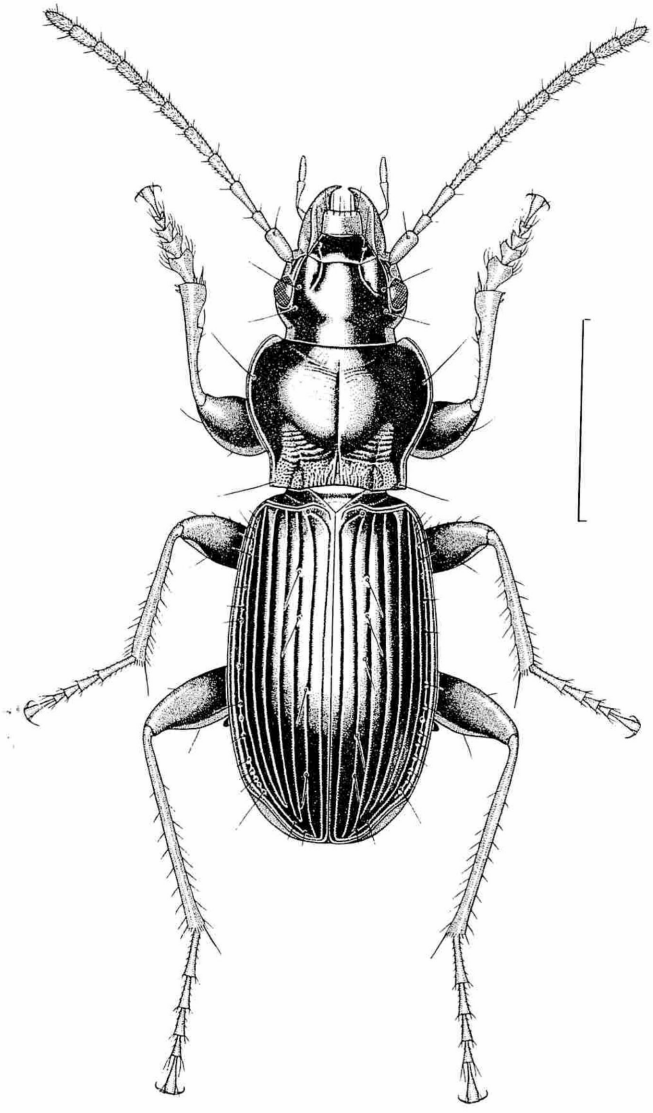

Fig. 1. *Pterostichus* (*Nialoe*) *ishizukai* sp. nov., ♂, from Akashina-chô in Nagano Pref. Scale 5 mm.

in almost the same proportion (PW/PBW 1.36–1.48, mean 1.43), ca. 1.34 times as wide as long (PW/PL 1.30–1.39, mean 1.34); lateral margins well arcuate, then strongly convergent posteriad and sinuate before base, basal parts almost parallel, or a little divergent posteriad, often with small notches; apical margin gently emarginate, apical angles somewhat produced, rounded at the tips; basal margin almost as wide as the apical in male, sometimes a little narrower in female, gently emarginate at the median part, basal angles rectangular; median line deeply impressed, widening at basal part and reaching the basal margin; basal foveae wide and shallow, though sometimes distinctly depressed at basal parts, strongly and ruggedly punctate, apical parts distinctly ruffled; basal part between the foveae ruggedly rugose; both apical and basal transverse impressions weak, though the latter is sometimes rather distinct; surface with irregularly transverse wrinkles; microsculpture partially and slightly visible, formed by fine transverse meshes.

Apterous. Elytra subovate, convex, widest at about middle, ca. 1.2 times as wide as pronotum (EW/PW 1.17–1.23, mean 1.20), ca. 2.5 times as long as pronotum (EL/PL 2.43–2.58, mean 2.47), ca. 1.6 times as wide as base (EW/EBW 1.53–1.61, mean 1.57), ca. 1.53 times as long as wide (EL/EW 1.48–1.58, mean 1.53); basal border gently curved, extending to shoulder, and meeting with lateral border at an obtuse but defined angle; shoulders rounded; lateral margins gently arcuate from behind shoulders to preapical emargination, which is distinct; apices rounded, sutural angles rounded, though sometimes obtusely angulate in male; scutellar striole short, lying on interval 1 and connected with basal border; striae deep, smooth; intervals convex in male, rather flat in female; interval 3 with four to five dorsal pores, anterior one or two adjoining stria 3 at basal fifth to third, the remainings adjoining stria 2 irregularly arranged at about middle to apical fifth; marginal series of pores 19–22 in number, widely spaced at middle; microsculpture well visible, formed by nearly isodiametric meshes in male, strongly impressed isodiametric meshes in female.

Basal three segments of meso- and metatarsi externally sulcate. Venter almost smooth, though the inner side of prepisterna, mesosternum and mesepisterna, and sternite 3 are punctate; prosternal process furrowed at the middle, unbordered at the apex; in male, terminal sternite triangularly and deeply excavated at middle, apical margin with an asymmetrical wide projection, whose apex is obliquely truncate, each

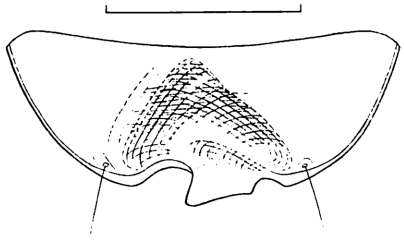

Fig. 2. Terminal sternite in the male of *Pterostichus* (*Nialoe*) *ishizukai* sp. nov., from Akashina-chô in Nagano Pref. Scale 2 mm.

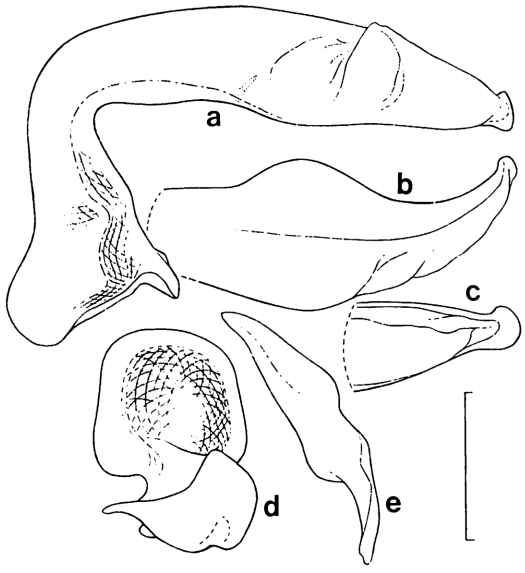

Fig. 3. Male genitalia of *Pterostichus* (*Nialoe*) *ishizukai* sp. nov., from Akashina-chô in Nagano Pref. —— a–c, Aedeagus: a, left lateral view; b, dorsal view, basal part omitted; c, apical part in left lateral veiw; d, left paramere; e, right paramere. Scale 1 mm.

side of the projection distinctly emarginate, left emargination being larger and deeper than the right one in ventral view.

Aedeagus strongly bent at basal third at about 90 degrees, then almost straightly extending to apex in lateral view, widely and distinctly tumid at apical third of the right side, with the apical part curved rightwards in dorsal view; apical lobe widely rounded at apex, with the upper margin generally somewhat produced in left lateral view; left paramere square, arcuate at apex; right paramere rather variable in length in apical half, usually tapered towards apex, which is pointed.

Type series. Holotype: ♂, Kemi, Akashina-chô, Nagano Pref., 7～8–VI–1994, S. KASAHARA leg.; allotype: ♀, same data as for the holotype. Paratypes: 3♀♀, same data as for the holotype; 5♂♂, 13♀♀, same locality as for the holotype, 9～18–VI–1994, S. KASAHARA & K. ISHIZUKA leg.; 1♀, same locality, 12–VIII–1992, K. ISHIZUKA leg.

The holo- and allotypes are preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo. The paratypes are deposited in my collection.

Notes. The present new species is closely related to *P.* (*N.*) *rhanis rhanis* TSCHITSCHÉRINE from the Mikuni and the Taishaku Mountain Ranges in northern Kwantô, but is easily distinguished from the latter by stouter body with wider pronotum and different configuration of male genitalia with roundly enlarged apical lobe. It was found in coexistence with a large number of a local form of *P.* (*N.*) *asymmetricus* BATES by baited pit-fall traps set in a broadleaved secondary forest on a low altitude

mountain.

The species was named after Mr. Katsumi ISHIZUKA, who is a specialist of moths and a friend of mine.

Trichotichnus* (*Trichotichnus*) *kisonis sp. nov.

[Japanese name: Kiso-tsuyagomokumushi]
(Figs. 4–5)

Discription. Male. Length (measured as in the preceding species) 9.55–9.80 mm; width 3.60–3.65 mm. Black, shiny, weakly iridescent on elytra; labrum, mandibles and lateral margins of pronotum reddish brown; appendages and apical margins of elytra brownish yellow; venter dark reddish brown.

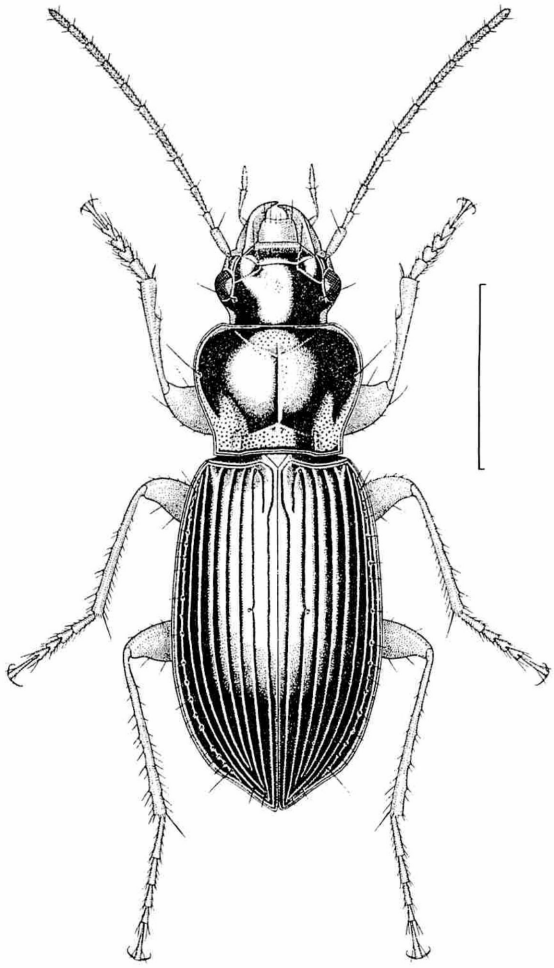

Fig. 4. *Trichotichnus* (*Trichotichnus*) *kisonis* sp. nov., ♂, from Nagiso-machi in Nagano Pref. Scale 3 mm.

Head gently convex; eyes convex; post-genae strongly contracted behind; labrum subtrapezoidal, gently raised at the middle of apex; clypeal suture fine; frontal oblique grooves distinct, roundly depressed around the grooves in front; supraorbital setae inserted at the post-eye level; surface smooth, though weakly and irregularly punctate on frons; microsculpture partially and barely visible, formed by almost isodiametric meshes; antennae moderately long, reaching the basal third of elytra.

Pronotum cordate, convex, widest at apical third, ca. 1.4 times as wide as head (PW/HW 1.38–1.40, mean 1.39), ca. 1.35 times as wide as base (PW/PBW 1.33–1.36, mean 1.35), and as wide as long in almost the same proportion (PW/PL 1.32–1.40, mean 1.35); lateral margins evenly well arcuate, then strongly convergent posteriad and gently sinuate before base; lateral reflexed borders fine; marginal setae inserted at apical two-fifths; apical margin almost straight, finely bordered, though obsolete at the middle, apical angles hardly produced, rounded at the tips; basal margin wider than the apical, almost straight, though slightly sinuate on each side, finely but clearly bordered throughout, basal angles rectangular, more or less produced laterad, acute at the tips; basal foveae wide, strongly and ruggedly punctate; outer sides and basal part between the foveae strongly punctate; median line fine but distinct; apical and basal transverse impressions rather distinct, strongly punctate; surface punctate in apical, lateral and basal areas, median part smooth, though weakly wrinkled; microsculpture almost invisible.

Wings reduced, two-thirds as long as, and a half as wide as each elytron; Elytra subovate, convex, widest at about middle, ca. 1.3 times as wide as pronotum (EW/PW 1.26–1.29, mean 1.28), ca. 2.8 times as long as pronotum (EL/PL 2.68–2.85, mean

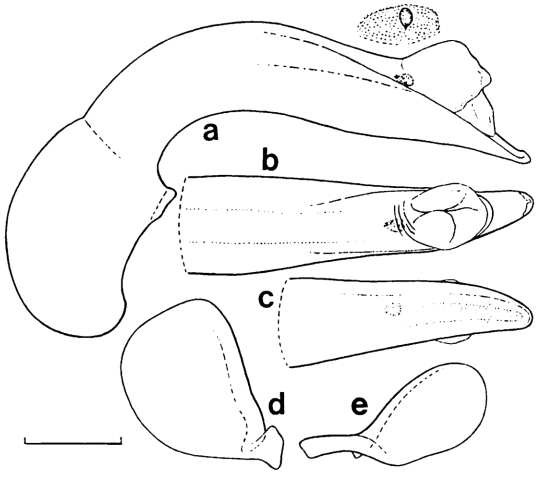

Fig. 5. Male genitalia of *Trichotichnus* (*Trichotichnus*) *kisonis* sp. nov., from Nagiso-machi in Nagano Pref. —— a–c, Aedeagus: a, left lateral view, and copulatory piece with membranous part in dorsal view; b, dorsal view, basal part omitted; c, apical half in ventral view; d, left paramere; e, right paramere. Scale 0.5 mm.

2.76), ca. 1.5 times as wide as base (EW/EBW 1.46–1.50, mean 1.48), ca. 1.6 times as long as wide (EL/EW 1.58–1.62, mean 1.61); basal border gently curved, very minutely dentate at shoulder; shoulders very obtusely but mal-definedly angulate; lateral margins gently divergent from behind shoulders to the widest level, then roundly convergent posteriad, apices rather pointed, though the apex of each elytron is rounded; scutellar striole long, lying on interval 2, and arising from basal pore together with stria 2; stria 1 connecting with basal border; striae fine but clearly impressed throughout; intervals convex; interval 3 with a dorsal pore, adjoining stria 2 a little before the middle; microsculpture barely visible, formed by very fine transverse meshes. Protibiae not sulcate on each inner side. Venter shiny; prosternum and median parts of sternites 4–5 punctate and minutely pubescent; mesosternum, and pro-, meso- and metepisterna punctate; prosternal process punctate and pulrisetose at the apex.

Aedeagus thick in basal part, arcuate and tapered towards apex in lateral view; apical half relatively slender, gently curved rightwards at the apical part in dorsal view; apical lobe longer than wide, rounded at apex, apical margin bordered above, the border interrupted at middle; apical part of ventral side shallowly depressed at middle; inner sac containing a small sclerotized piece, which is ovate, not peg-like; left paramere wide, truncate at apex; right paramere relatively wide, rounded at apex.

Type series. Holotype: ♂, Ohdaira-tôge, Nagiso-machi, Nagano Pref., 23–IX–1994, S. KASAHARA leg. Paratypes: 2♂♂, same data as for the holotype. The holotype is preserved in the same collection as for the preceding species. The paratypes are deposited in my cabinet.

Notes. The present new species somewhat resembles *T.* (*T.*) *yukihikoi* HABU known from the southwestern part of the Kwantô Mountains and Mt. Fuji in general appearance, but is easily distinguished from the latter by having longer elytra with impunctate intervals and different configuration of aedeagus, whose copulatory piece is not peg-shaped as in the latter.

要　約

笠原須磨生：長野県産ゴミムシ類の2新種．—— 長野県で採集されたオサムシ科甲虫Carabidaeの，ナガゴミムシ属*Pterostichus*とツヤゴモクムシ属*Trichotichnus*に属する各1新種を記載した．

1) アカシナナガゴミムシ*P.* (*Nialoe*) *ishizukai*は，明科町の山林でみつかった．ミヤマナガゴミムシ*P.* (*N.*) *rhanis* TSCHITSCHÉRINEの近縁種と考えられるが，体が幅広く，陰茎の先端片がまるく拡がっている点も特異で，後者との識別はよういである．なお，本種は，トラップにより，きわめて多数のベーツナガゴミムシ*P.* (*N.*) *asymmetricus* BATESの地方型とともに採集された．

2) キソツヤゴモクムシ*T.* (*Trichotichnus*) *kisonis*は，ツヤゴモクムシ種群*Leptopus* groupに含まれる種で，南木曽町の木曽川に注ぐ支流の源流部で発見された．外観は一見，ハコネツヤゴモクムシ*T.* (*T.*) *yukihikoi* HABUに似ているが，より長い上翅の間室に点刻がなく，陰茎の前半部が，より細長く，内袋の骨片も扁平な卵形で，後者のように，とがったクサビ形ではない．

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Elytra, Tokyo, **23** (1): 102, May 15, 1995

Morionidius insularis (Coleoptera, Carabidae) Found on the Tokara Islands, Southwest Japan

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The morionine carabid beetle, *Morionidius insularis* KASAHARA et OHTANI, 1992, was originally described from Is. Yaku-shima, off southern Kyushu, Japan. It has hitherto been known only from the type locality. Through the courtesy of Mr. Motohiko TANIKADO, I have recently examined two male specimens of the same species collected by Mr. Masakazu TABANA on Is. Naka-no-shima of the Tokara Islands. I record it herewith as a new locality of this interesting saproxylophilous beetle.

Specimens examined. 2♂♂, Kusuki, Is. Naka-no-shima, Tokara, Kagoshima Pref., 27–III–1994, M. TABANA leg. Both dug out from the core of a large rotten log inhabited by termites.

The Naka-no-shima individuals are almost identical with the Yaku-shima ones in their characteristic facies and genitalia, though the elytra of the former are somewhat shorter (EL/EW 1.64–1.67) than those of the latter (EL/EW 1.67–1.71). Length 15.8–19.4 mm; width 5.5–6.7 mm.

I am grateful to Messrs. Masakazu TABANA and Motohiko TANIKADO for their kind supplying with valuable specimens.

Reference

KASAHARA, S., & N. OHTANI, 1992. Occurrence of *Morionidius* (Coleoptera, Carabidae) in Japan. *Elytra, Tokyo*, **20**: 161–166.

Elytra, Tokyo, **23** (1): 103–107, May 15, 1995

A New *Amara* (Coleoptera, Carabidae) from Central Honshu, Japan

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Abstract A new zabrine carabid beetle, *Amara* (*Bradytus*) *ondai* sp. nov., is described from central Honshu, Japan. It is mainly characterized by the convex genae and the reduced hind wings.

Six years ago, a small zabrine carabid beetle belonging to the subgenus *Bradytus* was obtained by Mr. ONDA on Mt. Akaguna-yama, Gunma Prefecture, central Honshu, Japan, and was submitted to me for identification through the courtesy of Mr. SUDA. According to my study, this zabrine beetle had reduced hind wings and belonged to a species theretofore unrecorded from Japan, possibly to an undescribed species. I was, however, unable to describe it, since only a single specimen was available for taxonomic study. Later, in the autumn of 1992, I visited the same mountain with Mr. SUDA and was able to obtain many additional specimens of the same species. After a careful examination, it became evident that the species in question must belong to a new species. In this paper, I am going to describe it under the name of *A.* (*B.*) *ondai*.

The abbreviations used herein are as follows: HW – greatest width of head; PW – greatest width of pronotum; PL – length of pronotum, measured along the median line; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra; WL – greatest length of hind wing.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kindness in reading the manuscript of this paper. Dr. F. HIEKE of Humboldt University read the descriptive part of this paper and gave me important advice. I would like to acknowledge continuing guidance and encouragement of Dr. HIEKE. My thanks are also due to Messrs. Hideo OHKAWA, Kengo ONDA and Tôru SUDA for their kind help, and to Dr. Yûki IMURA for giving me valuable information concerning the type material of *Amara* (*Bradytus*) *simplicidens* MORAWITZ preserved in the Zoological Institute, Academy of Sciences, St-Peterburg.

Amara (*Bradytus*) *ondai* MORITA, sp. nov.

[Japanese name: Onda-marugata-gomimushi]
(Figs. 1–6)

Description. Length: 7.25–8.10 mm (from apical margin of clypeus to apices of elytra).

Rather small species. Body strongly convex above. Colour blackish brown and shiny; clypeus, labrum, antennae, mandibles, legs and ventral side dark brown.

Head small and convex; eyes small and flat; genae usually convex; frontal furrows clearly impressed, short and a little divergent behind and usually arcuate inwards at the posterior ends; apex of labrum strongly emarginate; apical margin of clypeus almost straight or slightly emarginate, and with transverse impression; mentum tooth variable according to individuals, usually simply rounded, sometimes widely rounded, extremely rarely bifid; anterior supraorbital pores situated at the mid-eye level, posterior ones situated at the post-eye level; surface densely and finely punctate; microsculpture almost vanished; antennae relatively slender; relative lengths of antennal segments as follows: I : II : III : IV : V : VI : XI ≒ 1 : 0.61 : 1.09 : 0.93 : 0.92 : 0.89 : 1.10.

Pronotum transverse, strongly convex and widest at a level a little before the middle; apex almost straight at middle and emarginate at the sides or widely emarginate throughout, clearly bordered at the sides, the borders becoming narrower near apical angles, but not bordered at the median part; apical angles strongly produced and rounded at the tips; sides rather strongly arcuate, distinctly sinuate a little before hind angles; anterior marginal setae inserted a little before the widest part; a small depression rarely present on each side at a level of the widest part; median line clearly impressed, not reaching apex but almost reaching base; basal fovea shallow with two linear bottoms on each side and with coarse punctures; posterior transverse impression short and clearly impressed; hind angles almost rectangular or acute, and with carinae; disc microscopically or finely punctate; base indistinctly bordered, almost straight at the median part, and slightly oblique at the sides; microsculpture almost vanished.

Elytra ovate, strongly convex and widest at about 2/5 from base; wings reduced, WL/EL ≒ 0.44; sides gently arcuate, preapical sinuation very shallow; shoulder with

Table 1. Standard ratios of body parts in *Amara* (*Bradytus*) *ondai* MORITA, sp. nov.

	PW/HW	PW/PL	PW/PA	PW/PB	PA/PB	EW/PW	EL/EW
7♂♂	1.61–1.70	1.43–1.50	1.39–1.47	1.12–1.16	0.78–0.82	1.14–1.20	1.23–1.30
Mt. Hikage-yama	(1.65)	(1.47)	(1.44)	(1.15)	(0.80)	(1.16)	(1.27)
5♀♀	1.62–1.70	1.45–1.53	1.41–1.46	1.11–1.16	0.77–0.82	1.14–1.17	1.23–1.34
Mt. Hikage-yama	(1.66)	(1.49)	(1.43)	(1.15)	(0.80)	(1.16)	(1.29)
1♂	1.68	1.52	1.43	1.16	0.81	1.16	1.29
Mt. Akaguna-yama							
4♀♀	1.62–1.72	1.46–1.52	1.43–1.45	1.13–1.17	0.79–0.80	1.13–1.17	1.23–1.33
Mt. Akaguna-yama	(1.66)	(1.51)	(1.44)	(1.15)	(0.80)	(1.16)	(1.28)

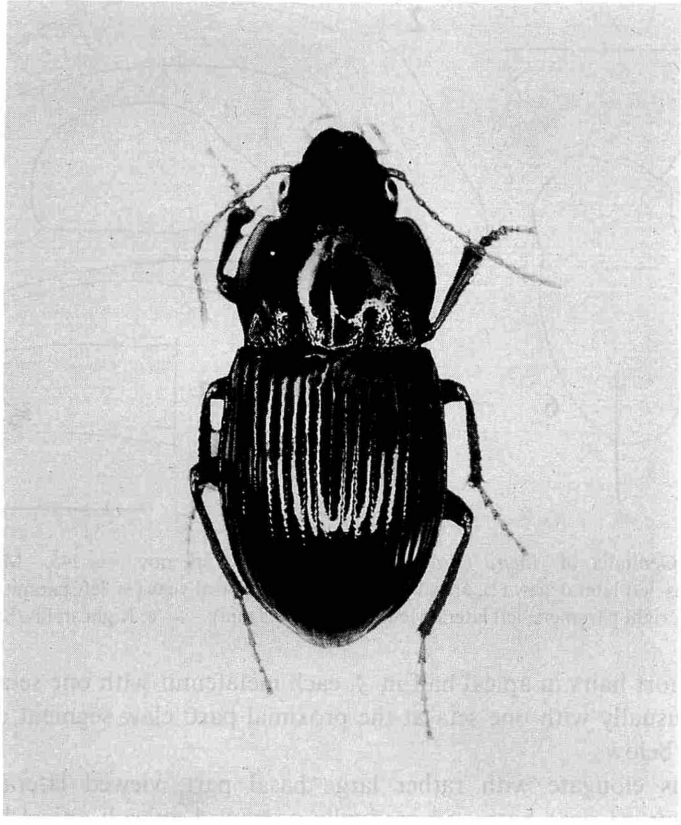
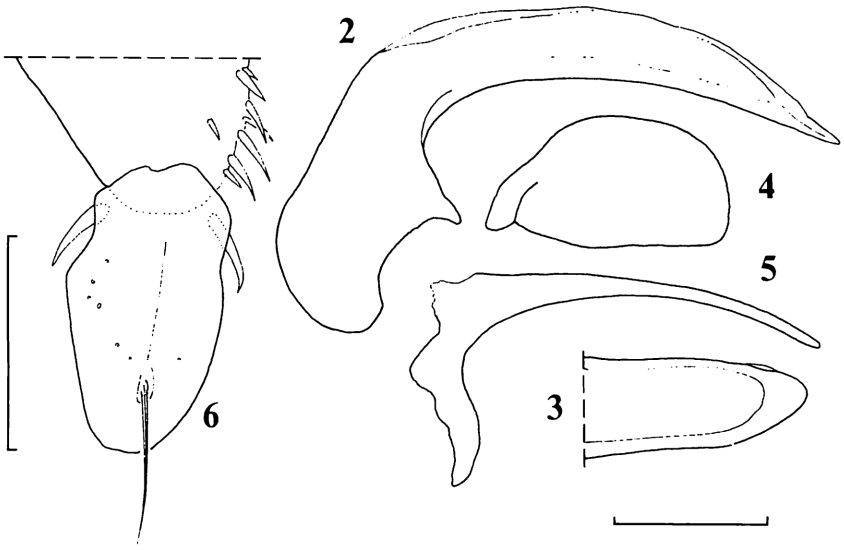


Fig. 1. *Amara* (*Bradytus*) *ondai* MORITA, sp. nov., ♂, from Mt. Hikage-yama in Ueno-mura, Gunma Prefecture.

a tooth on each side; intervals weakly convex and finely punctate; striae strongly impressed and weakly punctate; scutellar striole usually short, rarely almost rudimentary; stria 1 not reaching basal border and close to the apical end of scutellar striole; remaining striae reaching basal border which is almost straight; apices conjointly rounded; marginal series composed of 6+7 pores; microsculpture vanished.

Prosternum with a large impressed area at middle in ♂; sides of gula and area between eye and mentum with several oblique wrinkles; prosternum and prepisternum with fine punctures and partially with coarse punctures; microsculpture of hypomeron composed of fine longitudinal meshes; mesosternum, mesepisternum, metepisternum, sides of metasternum and sternites with coarse punctures; epipleuron partially with microscopic punctures and microsculpture composed of longitudinal meshes; anal sternite with one seta in ♂, two setae in ♀ on each side.

Protibia with simple terminal spur; outer apical corner of protibia not produced; mesotibia with a small tubercle near the ventro-apical part; inner side of metatibia



Figs. 2–6. Genitalia of *Amara* (*Bradytus*) *ondai* MORITA, sp. nov. —— 2–5. Male genitalia; aedeagus, left lateral view (2), apical part of aedeagus, dorsal view (3), left paramere, left lateral view (4), right paramere, left lateral view (5), (scale: 0.5 mm). —— 6, Right stylus (Scale: 0.3 mm).

with many short hairs in apical half in ♂; each metafemur with one seta on posterior margin and usually with one seta at the proximal part; claw segment of tarsus with several hairs below.

Aedeagus elongate with rather large basal part; viewed laterally, aedeagus moderately curved near base and gradually narrowed apicad; apical lobe narrowly rounded in dorsal view; right paramere long, weakly curved, and with rounded apex; left one semicircular. Apical styli in female rather broad, and with rounded apex.

Type series. Holotype: ♂, Mt. Hikage-yama, 18–IX–1993, S. MORITA leg.; allotype: ♀. same locality as for the holotype, 15–X–1994, S. MORITA leg. Paratypes: 5♂♂, 3♀♀, Mt. Hikage-yama, 19–IX–1992, S. MORITA leg.; 8♂♂, 2♀♀, same locality, 18–IX–1993, S. MORITA leg.; 3♂♂, 3♀♀, same locality, 15–X–1994, S. MORITA leg.; 1♂, Mt. Akaguna-yama, 11–VI–1989, K. ONDA leg.; 5♀♀, same locality, 18–IX–1993, S. MORITA leg.

Localities. Mt. Hikage-yama (type locality), 1,180 m alt., Ueno-mura, and Mt. Akaguna-yama, 1,400 m alt., Fujioka-machi, Gunma Prefecture, central Honshu, Japan.

The holo- and allotypes are preserved in the National Science Museum (Nat. Hist.), Tokyo. The paratypes are distributed to Dr. HIEKE's collection and the private collection of the author.

Notes. This new species is separable from the other members of the subgenus by having a combination of the following characters: 1) convex genae, 2) flat eyes, 3) reduced hind wings, 4) structure of scutellar striole, 5) lack of microsculpture on dorsal

side, and 6) right paramere with rounded apex.

According to Dr. HIEKE (pers. comm.), this new species reminds us of *Amara* (*Bradytus*) *exarata* DEJEAN (1828, p. 509) from North America. Incidentally, LINDROTH (1968, p. 680) gave an account of that species as follows:—[body] very short and convex; shiny because of reduced microsculpture,... eyes small, little prominent,... prothorax with front margin truncate and sides only slightly sinuate before the sharp, somewhat denticulate hind-angles,... right paramere with simple, pointed tip. Needless to say, there is a very wide geographical gap between the ranges of the two species.

The discovery of this new species is of deep interest in the following two points. 1) Although all the species of the subgenus *Bradytus* hitherto known are fully winged, this new species has reduced hind wings. 2) In 1978, HABU regarded *Pseudobradytus* as a subgenus of *Amara* by having wide and short apical styli in the female. However, this organ of the new species shows an intermediate state between those of *Bradytus* and *Pseudobradytus*.

要　約

森田誠司：群馬県産マルガタゴミムシの1新種．——群馬県日影山および赤久縄山で採集されたマルガタゴミムシの1新種，*Amara* (*Bradytus*) *ondai* を記載した．本種は，複眼が扁平で，後翅が縮小されることなどの特徴によって，すべての *Bradytus* 亜属の種類から容易に識別される．

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Elytra, Tokyo, **23** (1): 108, May 15, 1995

A New Record of *Orthocis schizophylli* (Coleoptera, Ciidae)

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Orthocis schizophylli (NAKANE et NOBUCHI) (1955, p. 47, fig. 1) is one of the rare species of Japanese ciids, so far known from Honshu and Shikoku. This species was originally described from Noziri and Karuizawa, Nagano Pref., Aoyama, Tokyo, and Saikyo University (=Kyoto Prefectural Univ.), Kyoto Pref. After that, MIYATAKE (1985) recorded it from Shikoku without exact locality and date. These are probably all the records of *O. schizophylli* known up to the present.

In the course of my revisional study of the Japanese Ciidae, I confirmed for the first time the distribution of *O. schizophylli* in Hokkaido, Kyushu and Tsushima Is., Japan. They are as follows.

Specimens examined. [Hokkaido] 1♀, Kamishihoro-chô, 11～12-V-1990, K. HAGA leg.; 1♂, 2♀♀, Kawayu, Teshikaga-chô, 10-VII-1990, M. KAWANABE leg. [Honshu] 〈Niigata Pref.〉 1♂, 1♀, Kurokawa, N-Echigo, 19-VII-1957, K. BABA leg. 〈Osaka Pref.〉 1♀, Minoo, 29-IV-1959, H. KONISHI leg. [Shikoku] 〈Ehime Pref.〉 1♂, Komenono, Matsuyama, 10-V-1975, T. WATANABE leg. [Kyushu] 〈Fukuoka Pref.〉 1♂, Tausu-ichinotake, Mt. Hikosan, 27-V-1970, Y. TAKAKURA leg.; 1♂, Mt. Fukuchiyama, 24-V-1970, Y. TAKAKURA leg. 〈Nagasaki Pref.〉 1♂, Todorokikyo nr. Taradake, 9-VII-1991, M. KAWANABE leg. [Tsushima Is.] 2♂♂, 4♀♀, Sago, Kamiagata-chô, 16-V-1978, S. HISAMATSU leg.

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

Biological notes. This species has been collected from the fruiting bodies of *Schizophyllum commune* FR.: FR. (Suehirotake in Japanese), and can also be collected by beating dead branches of hardwood.

I express my hearty thanks to Mr. K. HAGA, Minami-Uonuma-gun, Niigata Pref., for his kind supply of specimens.

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Elytra, Tokyo, **23** (1): 109–117, May 15, 1995

Discovery of a New Trechodine (Coleoptera, Trechinae) in the Russian Far East

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Abstract A new genus and new species of trechodine trechid beetle is described from the southern part of the Sikhote-Alin Mountains in the Russian Far East, under the name of *Eotrechodes larisae*. It is closely similar to *Thalassophilus* WOLLASTON distributed over Europe and the Macaronesian islands, though its true affinity is not certain. *Eotrechodes* is the first representative of the subtribe Trechodina in East Asia north of 30°N.

An almost unbelievable event in the study of the carabid subfamily Trechinae was recently made in the Russian Far East. It is the discovery of a new representative of the subtribe Trechodina at the southern part of the Sikhote-Alin Mountains.

This subtribe has its main distributional range in the Southern Hemisphere, and in East Asia, only a small number of species have sporadically been known in the regions south of 30°N, mostly south of 20°N, that is, Luzon in the Philippines (JEANNEL, 1926, pp. 488, 491; UÉNO, 1988), Thailand (DEUVE, 1987, p. 145; UÉNO, 1989, 1990), Myanmar (BATES, 1892, p. 298; JEANNEL, 1926, pp. 488, 490), and East Nepal (UÉNO, 1981). It has been unknown from such northern regions as Mainland China, Taiwan, Japan and Korea, although the trechid fauna is already clarified fairly well especially in Japan and Taiwan. It is therefore most unexpected that a trechodine should occur in the Primorskij Territory at a latitude of more than 43°N.

In the summer of 1994, one of the authors (SUNDUKOV), who is carrying on the

faunistic survey of carabid beetles on Mt. Olkhovaya at the northern part of the Partizanskij Range, collected three specimens of a strange trechid from beneath stones lying on the banks of a narrow stream. In October, he took this collection along to his supervisor (LAFER) at Vladivostok, and a close examination revealed that the beetle must belong to a new species of the tribe Trechodini theretofore unknown from anywhere in Northeast Asia. Very unfortunately, the specimens kept on a layer of cotten wool were considerably damaged by mold mites, which had eaten up the interior including the genitalia of one of the two males known and had dismembered some antennae and legs, but as a whole, they could afford close taxonomic study.

In view of the complete basal borders of the elytra and the absence of copulatory piece, the Primorskij species should be classified into the subtribe Trechodina of the tribe Trechodini (cf. CASALE & LANEYRIE, 1982, pp. 9–11, 36–47), but its generic assignment is not easy. In general appearance, it resembles the members of *Thalassophilus* WOLLASTON (1854, p. 71), especially to its type species, *T. whitei* WOLLASTON (1854, p. 71, pl. 2, fig. 5; JEANNEL, 1926, pp. 514, 518, fig. 300; MACHADO, 1992, p. 144, figs. 45–46) from Madeira and the Canaries. It is, however, different from the western genus in cephalic and male genitalic conformation, as will be noted on later pages. It does not seem to have a direct relationship to *Trechodes* BLACKBURN (1901, p. 119; JEANNEL, 1926, pp. 479, 484) and *Himalotrechodes* S. UÉNO (1981, p. 61), to either one of which belong the trechodines hitherto known from South Asia. It is, however, possible that other species of the same subtribe will be found in future in the wide intervening areas of trechodine distribution in East Asia, since occurrence of trechodines is always sporadical in that part of the world. Under the present situation, the best way for the present authors to do is to erect a new genus for the reception of the Primorskij species and to leave the phylogenetic problem for future investigations. The new name to be given for the new trechid is *Eotrechodes larisae* in dedication to Larisa SUNDUKOVA, who has encouraged and helped her husband's survey of carabid beetles on Mt. Olkhovaya.

The abbreviations employed in this paper are the same as those explained in previous papers of the first two authors'.

Genus ***Eotrechodes*** gen. nov.

Type species: *Eotrechodes larisae* S. UÉNO, LAFER et SUNDUKOV, sp. nov.

Belonging to the subtribe Trechodina and similar in many respects to *Thalassophilus*, but the genae are pubescent, the labrum is not deeply cleft, the submentum is only sexsetose and the mentum bears a pair of additional setae, each elytral apex is widely rounded independent of the other, and the aedeagus is short, high, simply rounded at the apex of short apical lobe, and devoid of sclerotized teeth.

Relatively small trechodine of elongate body form, with fairly long antennae and rather short legs; fore body small, hind body large, elongate and nearly parallel-sided. Body glabrous on the dorsal surface but sparsely covered with suberect pubescence

on the ventral surface; microsculpture present throughout. Inner wings fully developed. Colour dark brown, with lighter elytra and pale appendages.

Head subquadrate, gently transverse, with deep frontal furrows not angulate at middle; two pair of supraorbital pores lying on lines slightly convergent behind, the anterior pair not far apart from the posterior; eyes small but completely faceted, convex beyond the contour of genae, the latter tumid and sparsely pubescent; neck very wide. Labrum transverse, with the apical margin shallowly emarginate and sexsetose. Mandibles short and stout, though falcate and acute at the apical parts, tridentate, with premolar tooth sharp on right mandible. Mentum not fused with submentum, with a short seta on each side in addition to the ordinary pair; epilobes sharply protrudent; mentum tooth porrect, simply triangular and rather narrow; submentum sexsetose including the pair close to buccal fissures; ligula truncated at apex, with a pair of long and two pair of short setae; paraglossae fairly broad and rather short, straightly divergent anteriad. Maxillae fairly long though stout, with lacinia moderately curved at the apical part. Palpi short and stout; penultimate segments widely dilated towards apices, quadrisetose in labial palpus, almost glabrous but provided with one or two short hairs on the external face near the apex in maxillary palpus; apical segments elongated subconical with blunt extremities, slightly longer than penultimate segment in both palpi. Antennae long, filiform and fairly stout.

Pronotum small, transverse obtrapezoidal, with completely bordered sides and very obtuse hind angles; two pair of marginal setae present, at the widest part and slightly before hind angles, respectively; median line deeply impressed on the disc, though not reaching the two borders; apical transverse impression vague; basal transverse impression deep, linear and continuous, forming a wide chevron; basal foveae small and mal-defined, not externally delimited by postangular carinae.

Elytra ample, more than three times as long as pronotum, nearly parallel-sided, and widely depressed above, with apices separately rounded and forming a large re-entrant angle at suture; shoulders square; basal borders complete, with marginal gutters merging into sutural striae at the innermost; inner striae entire and deeply impressed, outer ones obliterated; scutellar striole absent; apical striole deep though short, strongly curved, and merging anteriad into stria 3; apical carina short but prominent; stria 3 with two setiferous dorsal pores; preapical pore situated on interval 3 adjoining stria 2 within the field of apical striole; basal pore lying on basal border at the base of interval 3, but usually devoid of seta; two apical pores lying side by side along apical border; marginal umbilicate pores aggregated and regularly ranged.

Ventral surface somewhat uneven; prosternum with sparse hairs at the median part; venter of hind body sparsely pubescent, the pubescence becoming denser on the median parts of abdominal sternites; anal sternite with a pair of marginal setae in ♂, two pairs in ♀. Legs rather short; protibiae moderately dilated towards apices, slightly curved inwards at the apical parts, externally grooved, and provided with rows of hairs; tarsi fairly short, segment 4 with a hyaline ventral apophysis in pro- and mesotarsi; in ♂, two proximal segments of each protarsus rather widely dilated, inwardly

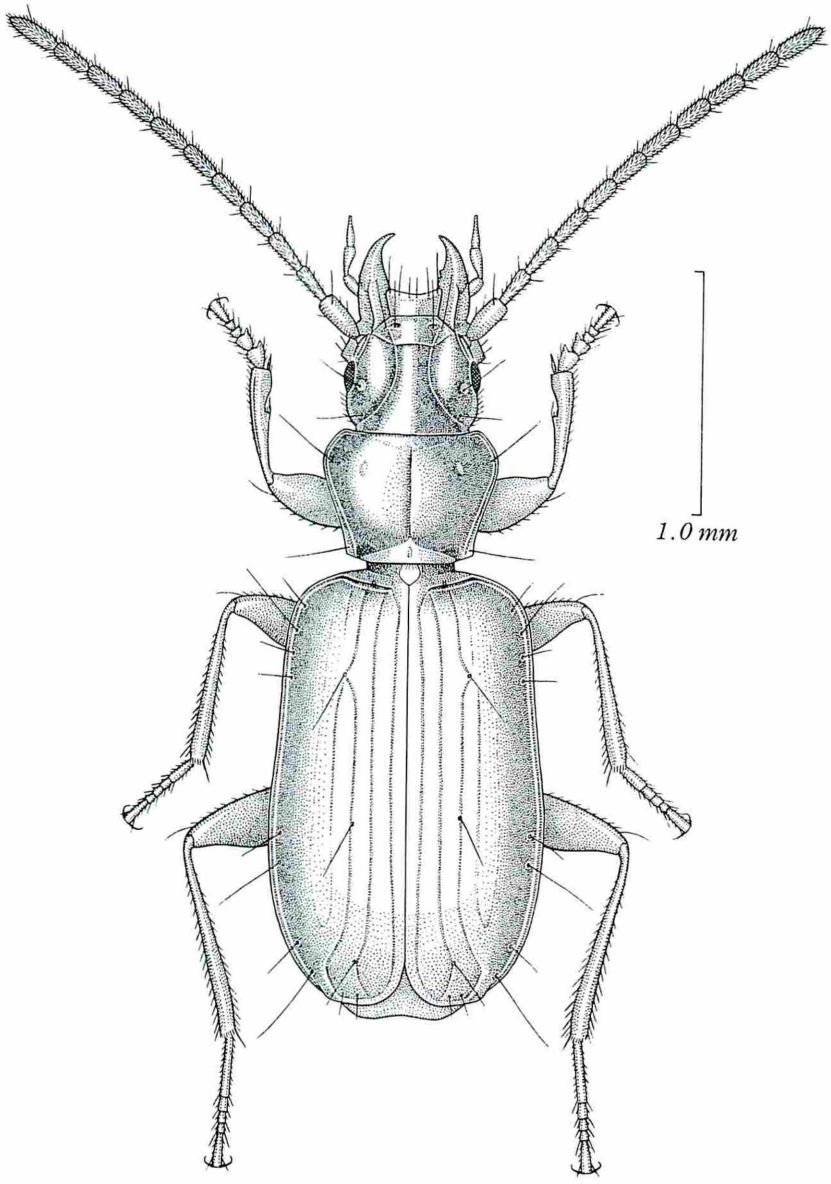

Fig. 1. *Eotrechodes larisae* S. UÉNO, LAFER et SUNDUKOV, gen. et sp. nov., ♂, from Mt. Olkhovaya of the Partizanskij Range.

denticulate at apices, and furnished beneath with adhesive appendages.

Aedeagus short and high, gutter-shaped, widely open on the dorsal side and surmounting membraneous inner sac, with asymmetrical lateral walls highest at about middle; basal part abruptly bent ventrad and formed by two asymmetrical lobes

protruded anteriorly; apical part curved to the left, with short apical lobe simply rounded at the tip; inner sac inerm though scaly. Styles conspicuously asymmetrical; left style much larger than the right, with large subtriangular apical part connected with small basal part by a contorted peduncle; right style short, especially at the apical part; parameral setae numerous, consisting of seven or eight setae of unequal length and thickness.

Range. Known so far only from the southern part of the Sikhote-Alin Mountains in the Primorskij Kray of the Russian Far East.

Notes. As was noted in the introduction of this paper, the type species of this new genus closely resembles certain members of *Thalassophilus*, not only in facies but also in the elytral striation and chaetotaxy as well as in the supernumerary of parameral setae. Of the seven species of *Thalassophilus* hitherto described, four Macaronesian and one Spanish species are more or less subterranean, usually apterous and often anophthalmic (JEANNEL, 1926, pp. 515, 519; JEANNEL, 1938, p. 3; MACHADO, 1990, p. 370; ERBER, 1990, pp. 1, 6; OROMI & BORGES, 1991, p. 2), whereas the remaining two are riparian, with full wings and perfectly faceted eyes. One of the two epigean species, *T. longicornis* (STURM, 1825, p. 83, pl. 151, figs. *a*, *A*; JEANNEL, 1926, pp. 514, 515, figs. 295–299, 301), is widely distributed in Europe and is the best known member of the genus. If *Eotrechodes* is really related to *Thalassophilus* as is indicated by their outward similarity, they would provide another good example of Euro-Siberian distribution of riparian trechids just like *Trechoblemus* and *Lasiotrechus*, even though *T. longicornis* has been unknown from the Siberian part of Russia. There are, however, several important peculiarities opposing to this conclusion. The pubescent genae, shallowly emarginate labral apex, different labial chaetotaxy, and large re-entrant angle of elytral apices are characteristic of *Eotrechodes* and are unknown in any species of *Thalassophilus*. Besides, the aedeagus is short and high with a very short simple apical lobe in *Eotrechodes*, which is very unusual for a member of the Trechodina. In *Thalassophilus* and most other genera of the subtribe, with the exception of the New Caledonian genus *Sporades* (cf. UÉNO, 1966), the apical part of aedeagus is more or less prolonged and either reflexed or dorsally hooked at the extremity. This is true even in such specialized genera as *Canarobius* and *Spelaeovulcania* from Canary lava caves (MACHADO, 1987, pp. 323–334, 1992, pp. 138–151).

It should be noted here that most characteristics common between *Eotrechodes* and *Thalassophilus* are plesiomorphic. These include elongate body form, unmodified pronotal base, unmodified elytral striation including apical striole, pubescent venter, and supernumerary of parameral setae. Besides, their distributional ranges are isolated at the eastern and western sides of the Eurasian Continent, respectively, both distant to the north from the general subtribal range. All these facts seem to indicate that the two genera may represent the remnants of old fauna that existed in the Northern Hemisphere in the past. However, this does not necessarily mean that they have been derived from a common ancestor. It seems more plausible, at least to the present authors, that they are the descendants of two different ancestral stocks that dispersed

northwards along either side of the continent.

Eotrechodes larisae S. UÉNO, LAFER et SUNDUKOV, sp. nov.

(Figs. 1–3)

Length: 2.85–2.95 mm (from apical margin of clypeus to apices of elytra); 3.15–3.25 mm (including mandibles).

Dark brown, head usually black except for clypeus, elytra brown, translucent, always evidently lighter than fore body, shiny throughout, with weak iridescence on elytra; labrum and mandibles reddish brown; palpi, antennae, epipleura and legs yellowish brown.

Head large, subquadrate, wider than long, with deep frontal furrows moderately arcuate throughout; frons and supraorbital areas moderately convex, sometimes transversely wrinkled inside each frontal furrow; anterior supraorbital pore foveolate; microsculpture sharply impressed, consisting mostly of wide meshes but partially of isodiametric ones; eyes small though moderately convex, either a little longer than (♂♂) or as long as (♀) genae, which are about four-fifths as long as eyes in ♂; neck constriction sharply marked at the sides; antennae long and fairly stout, usually reaching the middle of elytra, segment 2 the shortest though only slightly shorter than 3, which is slightly shorter than 4, segment 5 longer than 4 or 6 but evidently shorter than the terminal, which is the longest, segments 6–9 each cylindrical and more than twice as long as wide.

Pronotum small, transverse obtrapezoidal, widest at about three-fourths from base or slightly before that level, and much more gradually narrowed towards base than towards apex; PW/HW 1.18–1.24 (M 1.21), PW/PL 1.33–1.38 (M 1.35), PW/PA 1.32–1.33 (M 1.32), PW/PB 1.33–1.34 (M 1.34); sides narrowly bordered throughout, rather strongly but briefly arcuate in front, almost straightly convergent posteriad, and briefly sinuate just before hind angles, which are nearly rectangular though clearly rounded at the tips; apex slightly emarginate, only slightly wider than base, PA/PB 1.01–1.02 (M 1.01), with front angles rounded; base straight at middle, anteriorly oblique on each side and slightly emarginate; disc gently convex, with a small oblong foveole on each side at apical two-sevenths; median line deepened posteriad but not extending beyond basal transverse impression; microsculpture distinct, consisting of irregular transverse lines partially forming wide meshes, especially at the posterior lateral parts; basal area either smooth or somewhat uneven; no postangular carinae.

Elytra large, elongate, very gradually dilated posteriad from square shoulders, and widest at about apical third; EW/PW 1.58–1.61 (M 1.59), EL/PL 3.26–3.38 (M 3.33), EL/EW 1.52–1.60 (M 1.55); bases transverse, with basal borders slightly recurved and straightly extending to near scutellum; shoulders prominent; sides rather widely reflexed throughout, nearly parallel to each other in basal third behind shoulders, gently and almost straightly divergent posteriad in middle third, and then gently arcuate to apices, each one of which is widely rounded; dorsum widely depressed, with gentle

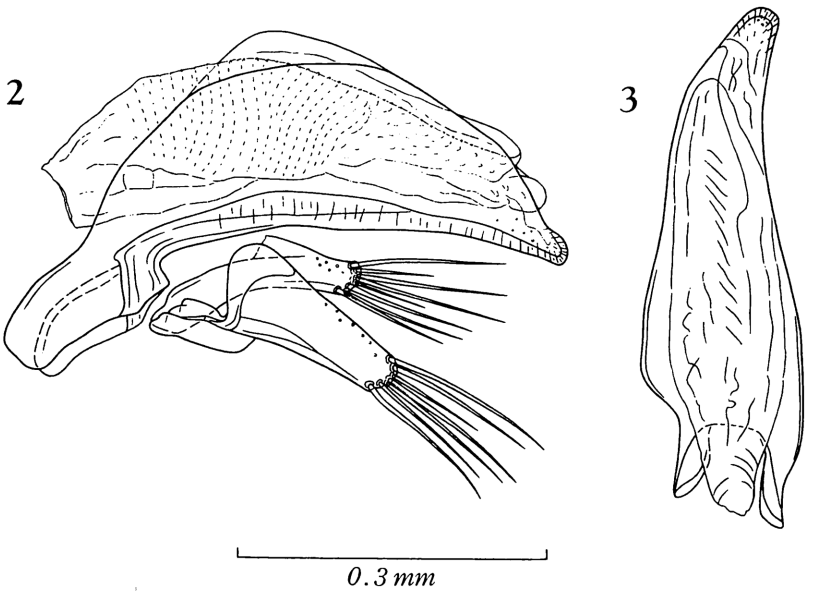

Fig. 2–3. Male genitalia of *Eotrechodes larisae* S. UÉNO, LAFER et SUNDUKOV, gen. et sp. nov., from Mt. Olkhovaya of the Partizanskij Range; left lateral view (2), and dorso-apical view of aedeagus (3).

apical declivity; microsculpture formed by fine transverse lines though largely obliterated; striae 1–3 entire, deeply impressed and impunctate, 4 also deep but usually obliterated in basal part before the anastomosis with stria 3 at the level of anterior dorsal pore, stria 5 much shallower than inner ones and fragmentary, 6–8 vestigial and almost completely vanished though vestiges of stria 8 are usually perceptible near the middle and apical sets of marginal umbilicate pores; stria 3 outwardly curved at the apical part and merging into apical striole without forming anastomosis with stria 2, which extends to apex through an outward curve; intervals 1–4 rather strongly convex, almost costate in the middle; stria 3 with two setiferous dorsal pores at about 1/5 and 4/7 from base, respectively; preapical pore lying in the field of apical striole, either equally distant from apex and from suture or nearer to apex than to suture, and always nearer to apical striole than to suture.

Legs as described under the genus; tarsomere 1 about as long as tarsomeres 2–3 together in mesotarsus, slightly longer than tarsomeres 2–4 together in metatarsus.

Male genital organ moderately sclerotized. Aedeagus three-tenths as long as elytra, short, high, and gently arcuate, with the dorsal margin of left lateral wall semicircularly rounded in profile; right lateral wall obviously higher than the left; basal lobes elongate and asymmetrical, left lobe being larger and a little longer than the right, each slightly reflexed outwards; apical part moderately curved to the left, gradually narrowed towards widely rounded apex in dorsal view, briefly produced into rather a broad lobe

and widely rounded at the tip in lateral view; ventral margin widely but slightly bisinuate in profile. Inner sac wholly scaly though devoid of copulatory piece and sclerotized teeth. Styles broad, left style much larger and broader than the right, bearing either seven (left) or eight (right) apical setae of unequal size.

Type series. Holotype: ♂, allotype: ♀, paratype: 1♂, 21–VII–1994, Yu. N. SUNDUKOV leg. The holotype and the paratype are deposited in the collection of the Laboratory of Entomology, Institute of Biology and Pedology, Vladivostok. The allotype is preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Mt. Olkhovaya, ca. 700 m in altitude, at the northern part of the Partizanskij Range of the southern part of the Sikhote-Alin Mountains, in Partizanskij Co., Primorskij Kray, Russian Far East.

Notes. As was already mentioned in the introduction, this interesting species was discovered on the southern slope of Mt. Olkhovaya of the Alexeevskij Ridge, a western branch at the northernmost part of the Partizanskij Range. Its location is about 18 km southwest of the village of Lazo in a bee-line. The three specimens known were collected on the pebbly bank of the middle course of the Olkhovy Stream at an altitude of about 700 m. This collecting site lies in a secondary mixed forest dominated by *Tilia amurensis* and *Abies nephrolepis*, and was dimly shaded by their leaves on that hot day. The stream-bed was rather narrow at that particular point, only 2.0–2.5 m wide. The beetles were found from under stones 50–60 cm removed from the water edge. Incidentally, the Olkhovy Stream is a tributary of the Alexeevka River which empties into the Partizanskaya River. It is therefore possible that other localities of *Eotrechodes* could be found in the future at the northeastern part of the Partizanskaya Basin.

要　約

上野俊一・G. Sh. LAFER・Y. N. SUNDUKOV：ロシア沿海州におけるミズギワチビゴミムシの発見．——ミズギワチビゴミムシ亜族の甲虫類は，主として南半球に分布し，北半球からの記録がひじょうに少ない．とくに東南アジアでは，北緯20°以北における記録が皆無で，日本や朝鮮半島にはおそらく分布しないものと考えられてきた．したがって，その1種がさらに北方の沿海州で発見されたことは，さまざまな観点から特筆するに値する．このミズギワチビゴミムシは，外見がヨーロッパとマカロネシア諸島に分布する*Thalassophilus*属のものによく似ているが，いくつかの重要な差異が認められるので，新属新種と認め，*Eotrechodes larisae*と命名して記載した．両属の類似点は，すべて祖先的な形質だと考えられるので，これらのチビゴミムシはおそらく別個に遺存されたものだろう．見掛けほど直接的な類縁関係は，多分ないように思われる．

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New Replacement Name for *Lamprotrechus* S. UÉNO, 1975 (Coleoptera, Trechinae)

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Lamprotrechus S. UÉNO (1975, p. 144) is an isolated genus in the carabid subfamily Trechinae, erected for *L. convexiusculus* S. UÉNO (1975, p. 147, figs. 7–9; 1985, p. 85, pl. 16, fig. 2), a small humicolous species endemic to the subalpine forest on the Island of Yaku-shima off southern Kyushu, Southwest Japan. It belongs to the *Agonotrechus* series and is monotypical at present.

Recently, Dr. Y. BOUSQUET and Dr. A. SMETANA of the Biological Research Division, Agriculture Canada, Ottawa, informed me that the name *Lamprotrechus* was preoccupied by *Lamprotrechus* REUTER (1882, p. 40), originally described as a subgenus of *Gerris* in the heteropteran family Gerridae and currently regarded as a junior synonym of *Limnogonus* STÅL, 1866. I therefore propose herewith a new replacement name for the trechine genus.

Genus *Nesiotrechus* S. UÉNO, nom. nov.

pro *Lamprotrechus* S. UÉNO, 1975, Mem. natn. Sci. Mus., Tokyo, (8), p. 144; type species: *Lamprotrechus convexiusculus* S. UÉNO, 1975.

nec *Lamprotrechus* REUTER, 1882, Öfvers, finska Vetensk.-Soc. Förh., Helsingfors, **25**, p. 40; as subgenus of *Gerris*, type species: *Gerris leptocerus* REUTER, 1882.

I wish to express my cordial thanks to Dr. Y. BOUSQUET and Dr. A. SMETANA for informing me of the above homonymy and giving me the opportunity to propose a replacement name. I am also deeply indebted to Dr. Kunio ARAYA for taking trouble to make a Xerox copy of REUTER's paper, which is not easily found in Japan.

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New or Least Known Carabid Beetles (Coleoptera, Carabidae) from the Dabashan Mountains at the Northeastern End of Sichuan Province, Central China

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Abstract Seven species of the genus *Carabus* and two species of the genus *Cychrus* are recorded from the Dabashan Mountains at the northeastern end of Sichuan Province, Central China. Of these, seven are newly described as follows: *Carabus* (s. str.) *pseudolatipennis bashanensis* subsp. nov., *C.* (s. str.) *vigil dabashanus* subsp. nov., *C.* (*Leptocarabus*) *yokoae chengkouensis* subsp. nov., *C.* (*Coptolabrus*) *formosus wanxianicus* subsp. nov., *C.* (*C.*) *pustulifer wakoi* subsp. nov., *Cychrus bispinosus dabashanensis* subsp. nov. and *C. uenoi* sp. nov.

In the summer of 1994, a long series of insect specimens were obtained by native collectors from the Dabashan Mountains stretching along the borders between Sichuan and Shaanxi Provinces in Central China, and all the examples belonging to the tribes Carabini and Cychrini were brought to me for identification and taxonomic study. The collection contains seven species of the genus *Carabus* (s. lat.) and two species of the genus *Cychrus*, and I have already described the most remarkable new species belonging to the former under the name of *Carabus* (*Shunichiocarabus*) *uenoianus* IMURA in one of my entomological papers recently published (IMURA, 1995), in view of its taxonomical importance.

In the present paper, I am going to give a list of all the remaining species included in the same collection, seven of which will be described as new to science.

The abbreviations used herein are the same as those explained in my previous papers, and all the holotypes of newly described taxa will be preserved in the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Before going into further details, I wish to thank Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the manuscript of this paper. Hearty thanks are also due to Messrs. Wakô KITAWAKI, Osaka, and Kiyoyuki MIZUSAWA, Yokosuka, for their kind assistance.

1. ***Carabus*** (s.str.) ***pseudolatipennis bashanensis*** IMURA, subsp. nov.

(Figs. 1, 7–8)

Description. Length: 20.6–23.2 mm (including mandibles). Entirely black, though the lateral margins of elytra often bear faint bronze or dark greenish lustre. Allied to the nominotypical subspecies distributed from southwestern Shaanxi to southern Gansu, but easily distinguishable from it by the following points: 1) pronotal disc a little less strongly convex above, with the hind angles more strongly and sharply protrudent posteriad; 2) apical lobe of aedeagus shorter, almost parallel-sided and not obviously dilated towards apex in lateral view; 3) copulatory piece much wider, about twice as long as wide, whereas it is narrower and about three times as long as wide in the nominotypical form.

Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 25–VI–1994, in coll. NSMT. Paratypes (including allotype): 1♂, 10♀♀, same locality as for the holotype, 25–V ~ 14–VII–1994, in colls. Y. IMURA and K. MIZUSAWA.

2. ***Carabus*** (s. str.) ***vigil dabashanus*** IMURA, subsp. nov.

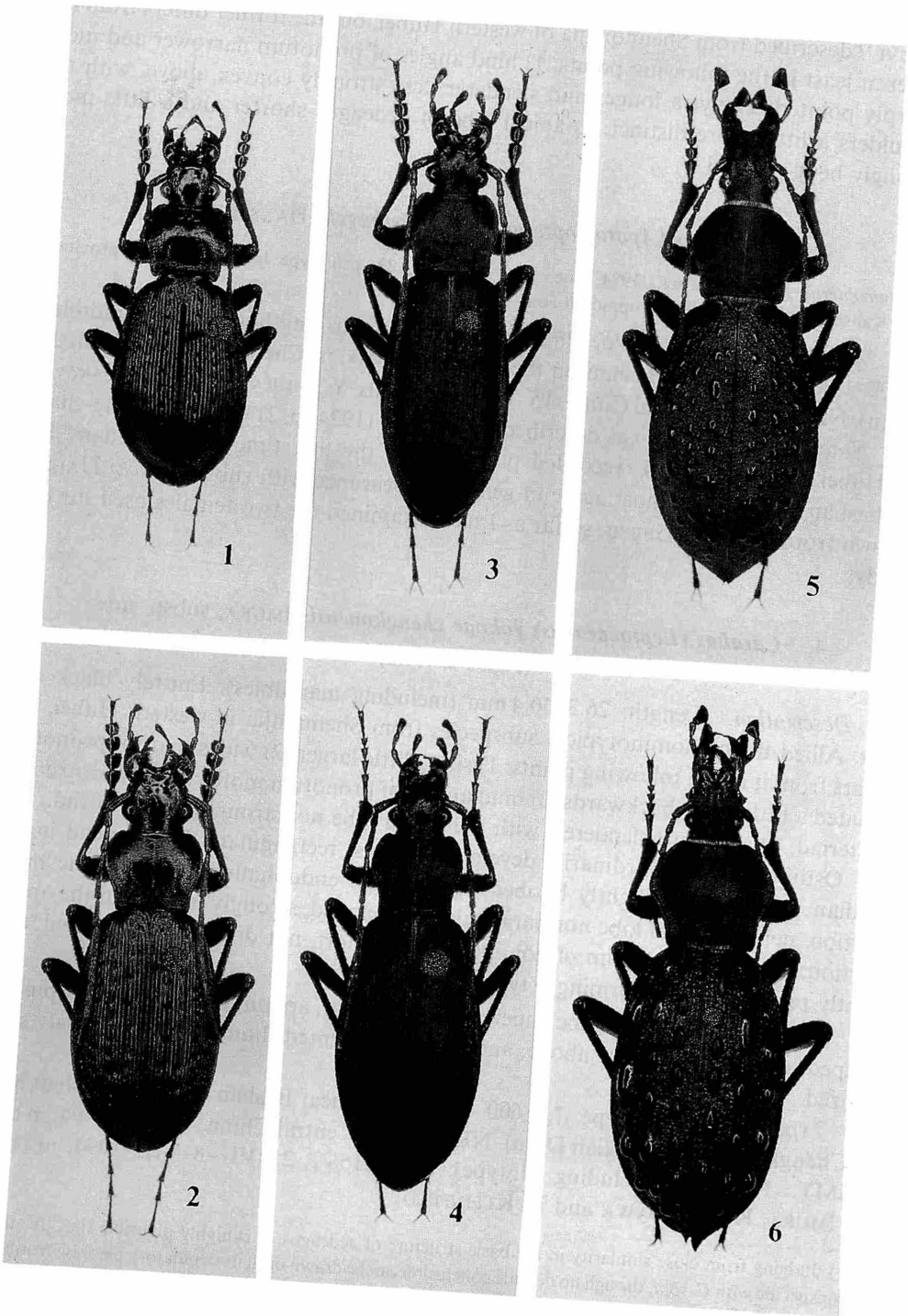
(Figs. 2, 9–10)

Description. Length: 21.4–26.8 mm (including mandibles). Entirely black, with faint bronze or dark bluish lustre. Differs from the nominotypical subspecies and subsp. *pseudoparis* DEUVE in the following points: 1) frons more minutely punctate; 2) antennae a little longer, obviously extending to the middle of elytra in male; 3) pronotal disc less strongly convex above, with the surface less strongly punctato-lugulose; 4) hind angles of pronotum narrower and more sharply pointed; 5) tertiary intervals of elytra not contiguous but segmented by invasion of large primary foveoles to form the so-called chain-striae just as primary intervals; 6) apical lobe of aedeagus a little slenderer and not obviously dilated towards apex.

Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 25–VI–1994, in coll. NSMT. Paratypes (including allotype): 18♂♂, 45♀♀, 15–V ~ 17–VII–1994, in colls. Y. IMURA and K. MIZUSAWA.

Notes. This new subspecies is comparable also with *Carabus ohshimaorum*

Figs. 1–6. Holotypes (1–3, 5–6) and allotype (4) of *Carabus* spp. from near Bashan on the Dabashan Mountains in northeastern Sichuan, Central China. —— 1, *Carabus* (s. str.) *pseudolatipennis bashanensis* subsp. nov., ♂; 2, *C.* (s. str.) *vigil dabashanus* subsp. nov., ♂; 3–4, *C.* (*Leptocarabus*) *yokoae chengkouensis* subsp. nov., 3, ♂, 4, ♀; 5, *C.* (*Coptolabrus*) *formosus wanxianicus* subsp. nov., ♂; 6, *C.* (*C.*) *pustulifer wakoi* subsp. nov., ♂.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DEUVE[1] described from Shennongjia of western Hubei, but the former differs from the latter at least in the following points: 1) hind angles of pronotum narrower and more sharply pointed; 2) elytra longer and slenderer, less strongly convex above, with the shoulders a little more distinct; 3) apical lobe of aedeagus shorter and a little more strongly bent vantrad.

3. *Carabus* (*Apotomopterus*) *hupeensis buycki* HAUSER, 1924

Apotomopterus Buycki HAUSER, 1924, Soc. Ent., Stuttgart, **39**, p. 6: type locality; Chinae provinciae Kansu pars meridionalis, ad oppidum Hoei-shien.

Specimens examined. 2♀♀ (28.5 mm and 29.7 mm in length including mandibles), 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 15–V–1994, in colls. Y. IMURA and K. MIZUSAWA.

Notes. This species was described by HAUSER (1924, p. 2) from "Tan-che-chan" of Hubei Province, and is recorded probably for the first time from Sichuan. The Dabashan specimens almost agree in general appearance with subsp. *buycki* HAUSER known from southern Gansu, so far as I have examined the two females used for this study.

4. *Carabus* (*Leptocarabus*) *yokoae chengkouensis* IMURA, subsp. nov.

(Figs. 3–4, 11–12)

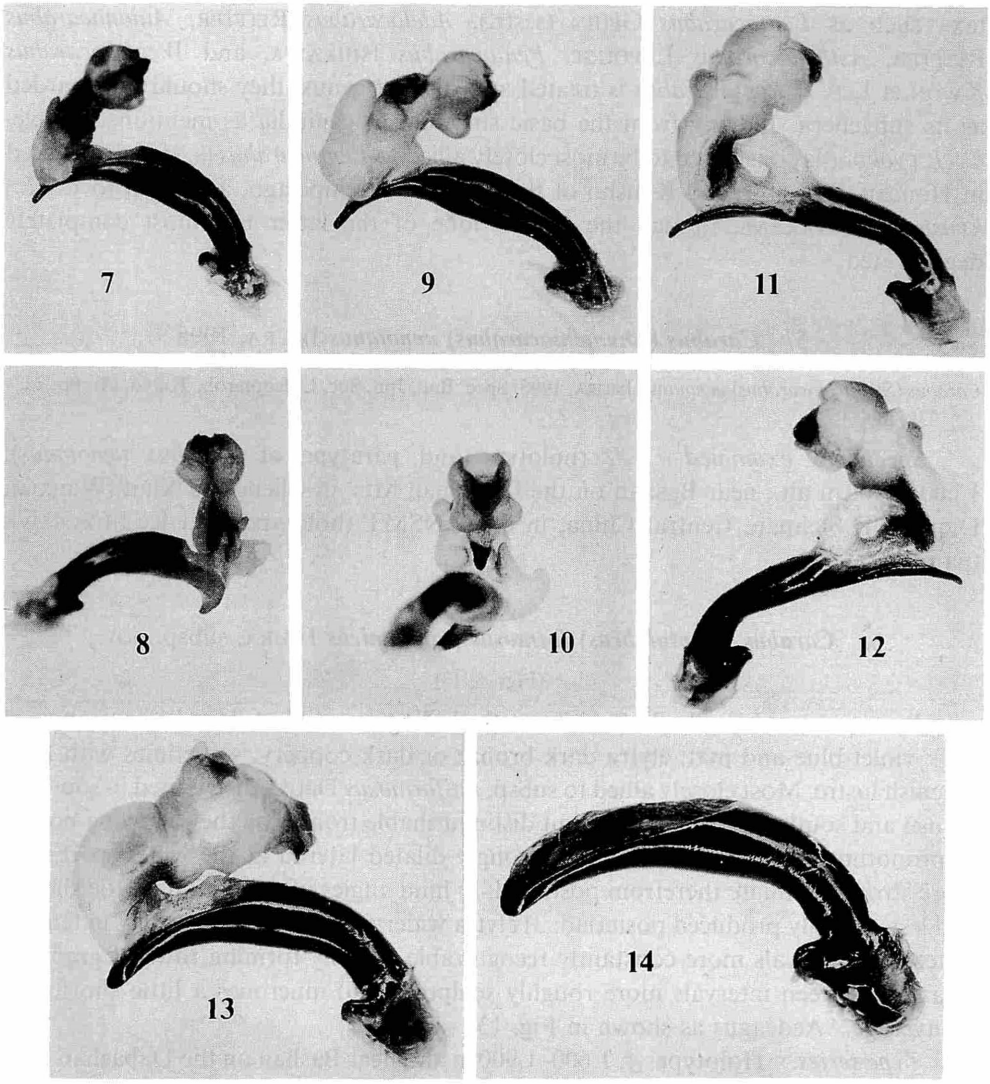
Description. Length: 26.3–30.4 mm (including mandibles). Entirely black and mat. Allied to the nominotypical subspecies from Shennonjia in western Hubei, but differs from it in the following points: 1) size a little larger; 2) widest part of pronotum situated a little more backwards; 3) hind angles of pronotum more strongly protrudent posteriad; 4) aedeagus slenderer, with the apical lobe not strongly bent ventrad.

Ostium lobe extraordinarily developed, almost rectangularly bent apicad in the median portion, and slightly bilobed at the apex; endophallus simple in the basal portion, neither lateral lobe nor paraligula is developed, strongly inflated in the apical portion, with peripheral rim of gonopore small, short, not distinctly sclerotized, and lightly pigmented, not forming a typical aggonoporius.

Femele genitalia with the inner plate of ligular apophysis very small, spindle-shaped, obviously concave above, and lightly pigmented though rather strongly sclerotized.

Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 14–VII–1994, in coll. NSMT. Paratypes (including allotype): 15♂♂, 15♀♀, 25–VI ~ 8–VIII–1994, in colls. Y. IMURA, K. MIZUSAWA and F. KLEINFELD.

1) Judging from close similarity in the basic structure of aedeagus, it is highly plausible that this taxon is conspecific with *C. vigil*, though no definite conclusion can be drawn until its copulatory piece is scrutinized. Nothing was mentioned in the original description about the organ.



Figs. 7–14. Male genital organ of *Carabus* spp. from near Bashan on the Dabashan Mountains in northeastern Sichuan, Central China. —— 7, 9, 11, 13, 14, aedeagus with fully everted endophallus (except for 14) in right lateral view; 12, ditto in left lateral view; 8, 10, endophallus in basal view, showing copulatory piece. —— 7–8, *Carabus* (s. str.) *pseudolatipennis bashanensis* subsp. nov.; 9–10, *C.* (s. str.) *vigil dabashanus* subsp. nov.; 11–12, *C.* (*Leptocarabus*) *yokoae chengkouensis* subsp. nov.; 13, *C.* (*Coptolabrus*) *formosus wanxianicus*; 14, *C.* (*C.*) *pustulifer wakoi* subsp. nov.

Notes. The subgenus *Leptocarabus* in the present sense includes several higher taxa such as *Leptocarabus* GÉHIN (s. str.), *Adelocarabus* REITTER, *Aulonocarabus* REITTER, *Asthenocarabus* LAPOUGE, *Pentacarabus* ISHIKAWA, and *Weolseocarabus* KWON et LEE. If *Leptocarabus* is treated as a distinct genus, they should be regarded as its subgenera. Judging from the basic structure of genitalia as mentioned above, *C.* (*L.*) *yokoae* is considered to be most closely allied to *Leptocarabus* (s. str.) distributed in Honshu, Shikoku, and Kyushu of the Japanese Archipelago, above all to *C.* (*L.*) *kyushuensis* NAKANE, though the ostium lobe of the latter is almost completely degenerated.

5. *Carabus* (*Shunichiocarabus*) *uenoianus* IMURA, 1995

Carabus (*Shunichiocarabus*) *uenoianus* IMURA, 1995, Spec. Bull. Jpn. Soc. Coleopterol., Tokyo, (4), pp. 227–232, figs. 1–2.

Specimens examined. 2♀♀ (holotype and paratype of *Carabus uenoianus*), 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, in colls. NSMT (holotype) and K. MIZUSAWA (paratype).

6. *Carabus* (*Coptolabrus*) *formosus wanxianicus* IMURA, subsp. nov.

(Figs. 5, 13)

Description. Length: 33.6–40.7 mm (including mandibles). Head and pronotum dark violet-blue and mat; elytra dark bronze or dark coppery, sometimes with faint greenish lustre. Most closely allied to subsp. *latiformosus* DEUVE distributed in southern Gansu and southwestern Shaanxi, but distinguishable from it by the following points: 1) pronotum more transverse, more strongly dilated laterad at the widest part, and more strongly sinuate therefrom posteriad; 2) hind angles of pronotum a little shorter and less strongly produced posteriad; 3) elytra wider and robuster especially in female; 4) tertiary intervals more constantly recognizable, usually forming rows of granules; 5) areas between intervals more roughly sculptured; 6) mucrones a little shorter on an average. Aedeagus as shown in Fig. 13.

Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 30–VII–1994, in coll. NSMT. Paratypes (including allotype): 2♂♂, 8♀♀, 3–VI ~ 20–VIII–1994, in colls. Y. IMURA and K. MIZUSAWA.

7. *Carabus* (*Coptolabrus*) *pustulifer wakoi* IMURA, subsp. nov.

(Figs. 6, 14)

Description. Length: 38.8–44.7 mm (including mandibles). Head and pronotum dark bluish violet and mat; elytra dark, with weak bronze or deep greenish lustre

which is stronger and more metallic on the marginal areas. Distinguishable from all the known subspecies by the following characteristics or by combination of them: 1) pronotum wider and robuster, strongly dilated laterad and angulate at the widest part, with the lateral margins less strongly reflexed above; 2) basal foveae of pronotum very shallow or often hardly recognizable; 3) elytra more oblong-shaped, with the sides almost parallel-sided in median portions; 4) innermost primary callosities of elytra obviously weaker than median and outermost ones; 5) tertiary intervals constantly recognizable as rows of granules. Aedeagus as shown in Fig. 14.

Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 30–VII–1994, in coll. NSMT. Paratypes (including allotype): 5♂♂, 1♀, 3–VI ~ 30–VII–1994, in colls. Y. IMURA and K. MIZUSAWA.

Derivatio nominis. This new subspecies is named after Mr. Wakô KITAWAKI, Osaka.

8. *Cychrus bispinosus dabashanensis* IMURA, subsp. nov.

(Figs. 15, 18–19)

Description. Length: 15.2–20.0 mm (including mandibles). Most closely allied to the nominotypical subspecies described from the western part of the Qinling Mountains in Shaanxi Province, but distinguishable from it by the following points: 1) size a little larger on an average; 2) pronotum slenderer, widest at about the middle, and acutely narrowed therefrom towards apex; 3) spine-like hind angles of pronotum much shorter, their apices not reaching the basal margin of pronotum; 4) elytra matter, and areas between intervals more vaguely punctate; 5) prepisterna and epipleura also more vaguely punctate,and the surface of the latter obviously scattered with small granules.

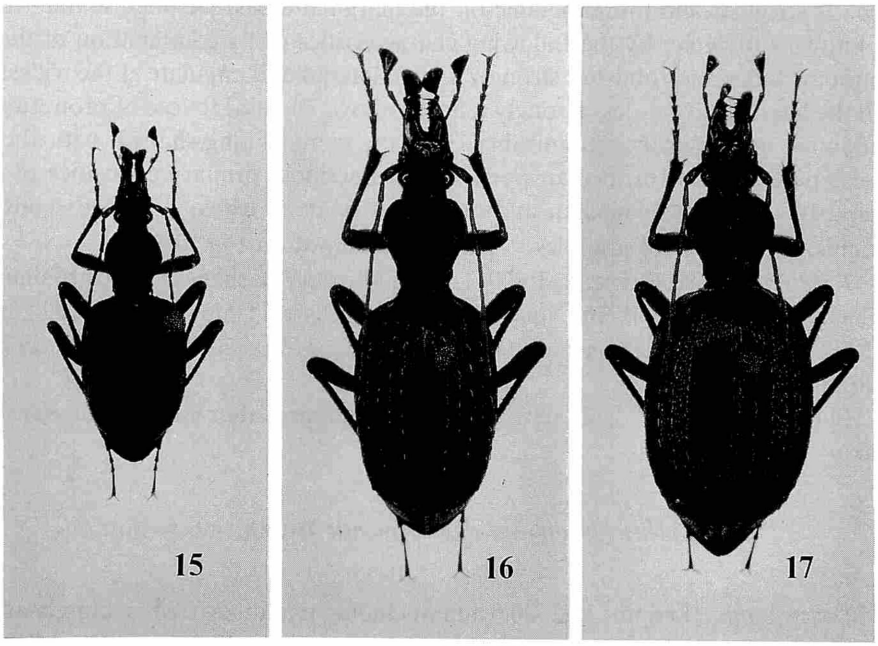
Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 14–VII–1994, in coll. NSMT. Paratypes (including allotype): 112 exs., 14–VII ~ 14–VIII–1994, in colls. NSMT, Y. IMURA and K. MIZUSAWA.

9. *Cychrus uenoi* IMURA, sp. nov.

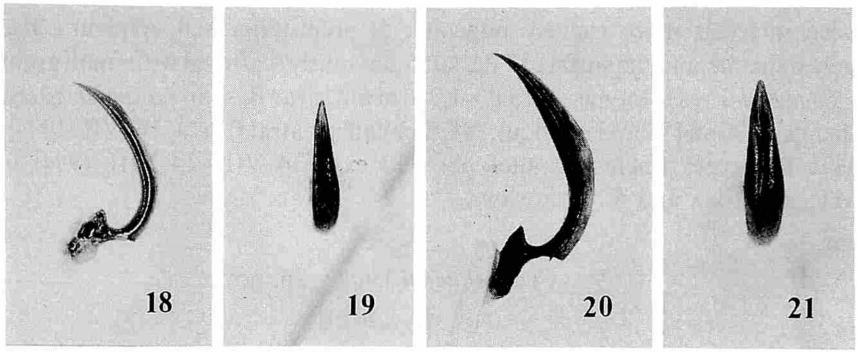
(Figs. 16–17, 20–21)

Description. Length: 21.8–26.8 mm (including mandibles). Most closely allied to *C. sinicus* DEUVE of the Qinling Mountains in Shaanxi Province, but distinguishable at first sight from it by much larger size and matter body.

Head as in *C. sinicus*, with the inner teeth of mandibles tridentate, but the basalmost tooth is completely separated from the median one, and a little shorter than the other two (in *C. sinicus*, it is nearer to the median tooth and much shorter); outer edges of head before eyes more strongly raised and widely margined to form distinct ridges; basalmost parts of frontal furrows obliquely and very deeply guttered at about the



Figs. 15–17. Holotypes (15, 16) and allotype (17) of *Cychrus* spp. from near Bashan on the Dabashan Mountains in northeastern Sichuan, Central China. —— 15, *C. bispinosus dabashanensis* subsp. nov., ♂; 16–17, *C. uenoi* sp. nov., 16, ♂, 17, ♀.



Figs. 18–21. Aedeagus of *Cychrus* spp., in right lateral view (18, 20) and dorsal view (19, 21), from near Bashan on the Dabashan Mountains in northeastern Sichuan, Central China. —— 18–19, *C. bispinosus dabashanensis* subsp. nov.; 20–21, *C. uenoi* sp. nov.

mid-eye level; frons more strongly depressed as a whole, with the longitudinal depression along the mid-line very deep.

Pronotum also as in *C. sinicus*, with the sides more narrowly contracted towards base, and the margins more strongly reflexed above especially near hind angles; PW/HW

1.38–1.54 (M 1.44), PW/PL 0.97–1.03 (M 1.00), PW/PAW 1.48–1.67 (M 1.57), PW/PBW 2.17–3.52 (M 2.97), PAW/PBW 1.40–2.33 (M 1.89); epipleura wider, more strongly rounded upwards, and obviously dilated posteriad in lateral view; disc matter and vaguely punctate; basal foveae deeper.

Elytra large, robust, and more oblong in shape, with the shoulders distinct; EW/PW 1.68–2.05 (1.86), EL/EW 1.53–1.64 (M 1.58); areas between intervals vaguely punctate and rather coarsely granulate; epipleura distinctly and rather coarsely scattered with small granules (they are not granulate but only punctate in *C. sinicus*).

Prepisterna much more vaguely punctate than in *C. sinicus*; abdominal sternites shallowly but obviously scattered with transversely set rows of small punctures, whereas they are not remarkably recognizable in *C. sinicus*; aedeagus with the apical portion more elongate, less strongly bent ventrad with the ventral margin almost straight in lateral view, widest at about apical third, and rather acutely narrowed therefrom to apex which is a little obtusely pointed in dorsal view.

Type series. Holotype: ♂, 1,600–1,900 m alt., near Bashan on the Dabashan Mts. in Chengkou Xian (Wanxian Diqu), NE Sichuan, Central China, 30–VII–1994, in coll. NSMT. Paratypes (including allotype): 4♂♂, 2♀♀, 14–VII～30–VII–1994, in colls. NSMT, Y. IMURA and K. MIZUSAWA.

Derivatio nominis. This remarkable new species is dedicated to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo.

要　　約

井村有希：中国四川省大巴（Daba）山脈のオサムシ．—— 中国四川省北東端の大巴（Daba）山脈からオサムシ7種とセダカオサムシ2種を記録し，そのうちのななつを下記のごとく記載した．1）*Carabus* (s. str.) *pseudolatipennis bashanensis* subsp. nov.：基亜種に近いが，前胸背板後角がよりするどく突出し，陰茎先端と交尾片の形態が異なる．2）*C.* (s. str.) *vigil dabashanus* subsp. nov.：基亜種および亜種*pseudoparis* DEUVE に近いが，上翅第3次原線が鎖線を形成し，陰茎先端が広がらない．湖北省の神农架から記載された*C. ohshimaorum* DEUVE（独立種として記載されたが，陰茎の基本形態は*C. vigil*とほとんど変わりがないので，後者の1亜種としての位置づけが妥当だろう）にもきわめて近いが，前胸背板，上翅ならびに陰茎先端の形態が異なる．3）*C.* (*Leptocarabus*) *yokoae chengkouensis* subsp. nov.：湖北省神农架から記載された基亜種よりも前胸背板後角がよりつよく突出し，陰茎先端はより細長く，腹側への湾曲が弱い．こんかい，基亜種の記載では述べられなかった雄交尾器内袋と雌交尾器についても検討をくわえたところ，本種はわが国に分布する狭義のクロナガオサムシ類，なかでもキュウシュウクロナガオサムシにもっとも類縁が近いらしいことが判明した．4）*C.* (*Coptolabrus*) *formosus wanxianicus* subsp. nov.：甘粛省南部から陝西省南部にかけて分布する亜種*latiformosus* DEUVE にひじょうに近いが，前胸背板の形態が異なり，上翅基面はより粗で，第3次間室がより顕著な顆粒列として認められる．また，雌では上翅の幅がいちじるしく広がるものが多い．5）*C.* (*C.*) *pustulifer wakoi* subsp. nov.：前胸背板が最広部においてつよく側方へ突出し，辺縁はあまりつよく上方へ反らず，基部凹陥はほとんど認められないほど浅く，上翅は特徴的な箱形で，第3次間室が顆粒列としてつねに認められることなどにより，既知の諸亜種から識別される．6）*Cychrus*

bispinosus dabashanensis subsp. nov.：秦岭山脈西部から記載された基亜種にもっとも近いが，前胸背板は前方に向けてつよく狭まり，後角の棘状突起ははるかに短く，上翅基面，前胸背板側片および上翅側片の点刻がはるかに弱く，全体に光沢がきわめて鈍い点などにより識別はやさしい．7) *C. uenoi* sp. nov.：秦岭山脈の*C. sinicus* DEUVE に近いが，外部形態，交尾器形態ともに顕著な違いが認められるので，新種として記載した．本種は，中国産セダカオサムシのなかでも最大級のもので，雌では大顎を含めた体長が27 mm ちかくに達する．

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A New *Pseudocranion* (Coleoptera, Carabidae) from Mt. Taibai Shan on the Qinling Mountains in Shaanxi Province, Central China

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Abstract A new species belonging to the subgenus *Pseudocranion* of the genus *Carabus*(s.lat.) is described from Mt. Taibai Shan on the Qinling Mountains in Shaanxi Province, Central China, under the name of *C.*(*P.*) *kitawakiellus* nov.

Up to the present, eighteen species of the genus *Carabus*(s.lat.) are recorded from the Qinling Mountains in Shaanxi Province, Central China (cf. IMURA, 1993 a, b, 1994), though the carabid fauna of the high altitudinal area of the same mountain range is poorly investigated as yet. I had recently an opportunity to examine a short series of insect specimens consisting mainly of the genus *Carabus* obtained from near the summit of Mt. Taibai Shan, the highest peak of the same mountain range, and found a strange species belonging to the subgenus *Pseudocranion* in the collection. After caraful comparative study, I have come to the conclusion that the species in question must be new to science, as will be described in the following lines (the abbreviations used in the text are the same as those explained in my previous papers).

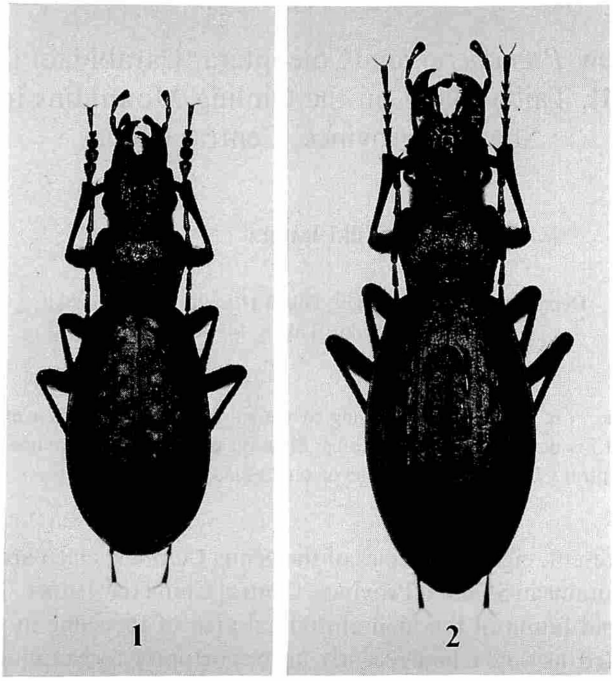
Before going further, I wish to express my cordial thanks to Dr. Shun-Ichi UÉNO of the National Science Museum, Tokyo, for kindly reviewing the original manuscript. Also I wish to thank Mr. Wakô KITAWAKI, Osaka, for kindly giving me the opportunity to examine the materials used for the present study.

Carabus (*Pseudocranion*) *kitawakiellus* IMURA, sp. nov.

(Figs. 1–6)

Length: 18.8–23.5 mm (including mandibles). Small-sized species for the subgenus, characterized by marked macrocephalism, comparatively small pronotum, wide and less prominent primary callosities of elytra, and short and robust apical lobe of aedeagus, etc. Body above dark coppery and not shiny, except for depressed- and marginal parts of head, pronotum and elytra which are bluish green with metallic lustre. Venter and appendages black or dark brown, except for mandibles and antennae which are a little reddish.

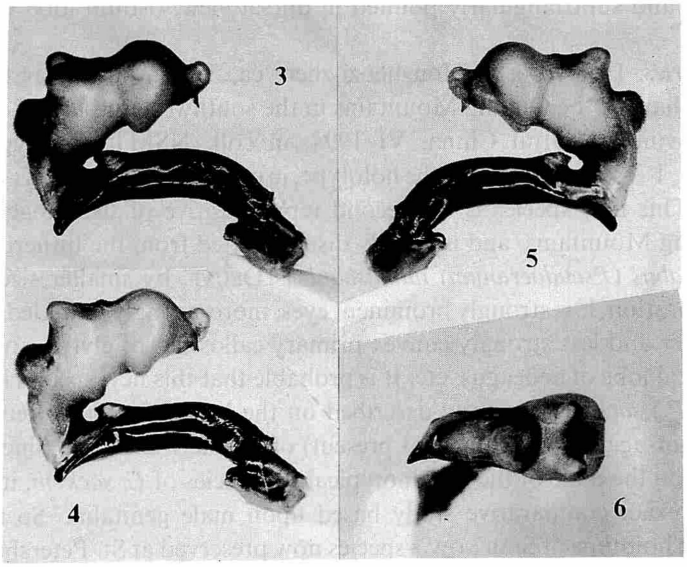
Head almost as in the other species belonging to the same subgenus, but mac-



Figs. 1-2. *Carabus*(*Pseudocranion*) *kitawakiellus* IMURA, sp. nov., from Mt. Taibai Shan on the Qinling Mountains in Shaanxi Province, Central China; 1, ♂ (holotype); 2, ♀ (allotype).

rocephalism is more conspicuous, especially in female; eyes less prominent laterad than those of the other members, more remarkably so in male; genae below eyes strongly extending laterad, with the sides feebly dilated posteriad; external angles of cardo-stipes joints conspicuously prominent laterad, its apices being visible beyond the sides of genae in dorsal view in female; frontal fullows distinct, with the surface smooth in apical parts, and strongly rugose in basal ones; frons strongly convex above, with the surface irregularly rugose and roughly punctate; dorsal surface of head behind eyes also irregularly and strongly rugose though hardly punctate; anterior tooth of right mandibular retinaculum much reduced; labial palpus quadri- or pentasetose; median tooth of mentum a little shorter than the lateral lobes, obviously produced ventrad, with the apex obtusely pointed; submentum asetose and transversely striate; antennae reaching basal third of elytra in male (in female, apical three or four segments are absent); relative lengths of scape and segments 2–4 as follows:— 1 : 0.7 : 1 : 0.8.

Pronotum transverse and widest at about apical third; PW/HW 1.20–1.21, PW/PL 1.39–1.42, PW/PAW 1.27–1.34, PW/PBW 1.27–1.28, PAW/PBW 0.95–1.00; apical margin moderately emarginate; front angles obtuse and barely produced anteriad; sides gently rounded in front and weakly sinuate posteriad; hind angles triangularly protrudent posteriad though short, with the apices not so strongly pointed; basal



Figs. 3-6. Aedeagus (with endophallus fully everted) of *Carabus*(*Pseudocranion*) *kitawakiellus* IMURA, sp. nov., from Mt. Taibai Shan on the Qinling Mountains in Shaanxi Province, Central China; 3, right lateral view; 4, right ventro-lateral view; 5, left lateral view; 6, posterior view.

margin weakly bisinuate; disc slightly convex above, asperous and scabrous except for two pairs of longitudinally arranged hump-like convexities on each side of the mid-line near centre, whose surface is rather sparsely punctate; lateral margins bi- or trisetose, one or two setate near the widest part and one slightly before hind angles; basal foveae rather deeply concave; median longitudinal line narrow but clearly impressed.

Elytra elongated oval, rather strongly convex above, and widest at about or a little behind the middle; EW/PW 1.56–1.59, EL/EW 1.69–1.72; shoulders effaced in male and a little more distinctly marked in female; sculpture triploid heterodyname; primaries the widest though not strongly convex above, frequently and rather regularly interrupted by shallow primary foveoles to form rows of elliptical callosities; secondaries much narrower, a little less strongly raised, and almost contiguous though partly crenulate or segmented by small, irregularly shaped secondary foveoles; tertiaries indicated by irregularly and rather coarsely set rows of large granules which show a tendency to fuse with adjacent primaries and secondaries; striae between intervals shallow and often becoming unclear.

Pro-, meso-, metepisterna and sides of sternites irregularly wrinkled; sternal sulci absent; metacoxa bisetose, proximal setae absent; legs slender though not so long, basal four segments of male foretarsus dilated with hair pads on the ventral surface. Male genitalia as shown in Figs. 3–6; aedeagus robust, subcylindrical in median portion, and gently arcuate towards apex which is very short and obtusely rounded in tip in

lateral view, and subtriangularly pointed in dorsal view; ostium lobe very short and unilobate.

Type series. Holotype: ♂, Houzhenzi-zhen, ca. 3,700m alt., near the summit of Mt. Taibai Shan on the Qinling Mountains in the southwestern part of Zhouzhi Xian, Shaanxi Province, Central China, VI–1994, in coll. NSMT. Paratypes (including allotype): 1♂, 1♀, same data as for the holotype, in colls. Y. IMURA and K. MIZUSAWA.

Notes. This new species is the second representative of the subgenus occurring on the Qinling Mountains, and is readily discriminated from the hitherto known one, namely, *Carabus* (*Pseudocranion*) *taibaishanicus* DEUVE, by smaller size, much more greenish coloration, less strongly prominent eyes, more strongly wrinkled upper surface of head, wider and less strongly convex primary callosities of elytra, and shorter and robuster apical lobe of aedeagus, etc. It is probable that this new species is most closely allied to *C.*(*P.*) *sackeni* SEMENOW described on the basis of a single female specimen from near Lun-ngan-fu (=Pingwu at present) of northern Sichuan. Since nothing has been known on the male of the nominotypical subspecies of *C. sackeni*, it is impossible to make an exact comparative study based upon male genitalia. So far as I have examined the holotype of SEMENOW's species now preserved at St. Petersburg, however, the Taibai Shan species differs from it by having much more strongly rugose dorsal surface of head, longer antennae and legs, more transverse pronotum, slenderer elytra, and much less roughly sculptured elytral disc, etc.

要　約

井村有希：秦岭山脈太白山から発見されたニセキンオサムシの1新種．——中国陝西省秦岭山脈の主峰，太白山（標高3,767m）の山頂付近から得られたニセキンオサムシ亜属の1種を新種と認め，*Carabus* (*Pseudocranion*) *kitawakiellus* IMURA, sp. nov. という名を与えて記載した．同山脈から知られていた同亜属の*C.* (*P.*) *taibaishanicus* DEUVE よりも小型で，緑色味が強く，複眼の突出が弱く，上翅間室隆起部がより平担で，陰茎先端が短いので，両者の識別は容易である．本種にもっとも類縁が近いと思われるのは，四川省北部から記載された*C.* (*P.*) *sackeni* SEMENOW であろう．後者の雄が未知であるために，雄交尾器形態に基づく比較は不可能だが，サンクト・ペテルブルクに保管されている正基準標本を検したところ，太白山の種のほうが頭部の皺が強く，触角と肢がより長く，前胸背板はより横長で，上翅はやや細長く，各間室の隆起がはるかに弱い．

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