

Study on Asian Carabidae, I.
(Coleoptera)

By NOBORU ITO

In this paper I am going to describe two new species, *Hyphaereon borneensis* sp. nov. from North Borneo and *Calathomimus shibatai* sp. nov. from Taiwan.

In starting the series of the study on Asian Carabidae, I wish to express my deep gratitude to Mr. TAICHI SHIBATA, who has been constantly guiding me for my study of insects over a long time and kindly offering the valuable materials and literature. Also I must heartily thank Mr. MASAFUMI OHKURA and Mr. MICHITAKA CHÛJÔ for their tendering a lot of important literature and my deep acknowledgement is due to the members of Osaka Coleopterological Society for their contributions of many valuable materials and their good advices.

Hyphaereon borneensis sp. nov.

Body elongate, *Colpodes*-like, shiny, moderately iridescent on elytra and faintly on pronotum, black, antennae and legs brown, mandibles blackish brown.

Head rather convex, wholly smooth but shallowly and transversely rugose on frons, labrum straight at apex, clypeus not emarginate and completely bordered apically, clypeal suture thin but clear, gradually deepened laterally, frontal impressions extending obliquely from both sides of clypeal suture to eyes, moderately deep and becoming shallow behind, eyes distinctly protrudent in a hemisphere, postgenae substraightly narrowed, only obtusely angulate at the junction of neck-constriction and hardly tumid, so the protrusion of eyes fairly prominent, a supraorbital seta situated at one-fourth from hind level of eye, antennae

slender, reaching basal fourth of elytra, 3rd joint equal in length to 4th, distance between genuine ventral margin of eye and buccal fissure very short and both the margin and the fissure appear to be adjoining to each other, mandibles slender and fairly produced, pointed at apices, ligula faintly convergent behind, truncate and 2-setose at apex, paraglossae not free and produced beyond apex of ligula, mentum subtransverse, median tooth short, blunt at apex, epilobes right-triangular and wide; microsculpture almost invisible, but transverse meshes observed clearly on apical area of clypeus and faintly near supraorbital setae.

Pronotum subcordiform, one and two-fifths times as wide as head and a half wider than long, almost impunctate, only on lateral furrows and basal area sparsely and minutely punctate, sides arcuately narrowed in front and straightly behind from the widest point at apical fourth, then subsinuate before base, apex shallowly emarginate, base as wide as apex, straight or faintly bisinuate, their borders uninterrupted, lateral furrow gradually widened behind from middle and fallen into basal fovea, each basal fovea ill-defined, oblong-oval and isolated from lateral margin by a slight convexity which extended to middle of side, median line clear and reaching both apex and base, front transverse impression shallow but well marked, hind transverse impression obscure, apical angles narrowly rounded, basal ones obtusely angulate, with a small tooth at each tip; microsculpture of transverse meshes, rather clearly visible on the most part but invisible here and there.

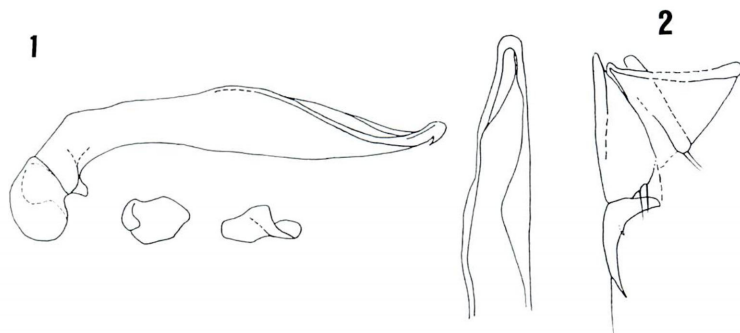
Winged. Elytra oblong and not well convex, without any punctures, one and two-fifths times as wide as pronotum and a half longer than wide, sides subparallel or slightly arcuately widened from base to apical fourth, hardly sinuate before apex, apex relatively narrow, tip of each elytron angulate but edentate, base shallowly bisinuate, widely rounded at shoulder, intervals quite flat on disc, a little convex apico-laterally, 3rd interval with a row of 6-8 setiferous pores along 2nd stria, scutellary striae fairly long, marginal series interrupted in middle, composed of 10+(10-15) umbilicate pores; microsculpture observed barely as transverse lines.

Underside almost smooth and glabrous, very obscurely rugose on apical areas of pro- and metasterna and on lateral areas of abdomen, and very sparsely ciliate along middle of prosternum and of abdomen, metepisterna two-fifths longer than wide, 6th segment of abdomen clearly bordered throughout and in both sexes 4-setose at apical margin which is moderately sinuate on each side, and widely notched at middle in ♂, only arcuate in ♀.

Fore tibiae longitudinally sulcate, inner side of the sulcus subcarinate near base, hind tarsi hardly shorter than the width of head inclusive

of eyes and 2-setose beneath along each side of 5th joint (in paratype ♀, missing in holotype ♂).

Aedeagus (Fig. 1) slender and long, in lateral view, apical part fully produced toward apex, well sclerotized distally, and faintly curved dorsally before apex, apex thickened and rounded, sharply hooked beneath, the hook directed toward base, in dorsal view, hardly widened in middle, membranous field occupying on large part of dorsal side, narrowed before apex and rounded at base, apical lamella subtrapezoidal, widely subcarinate along rounded outer margin, in ventral view, longitudinally



Figs. 1, 2. Genitalia of *Hyphaereon borneensis* sp. nov.
1, Male; 2, Female.

convex beneath and unbordered at sides, basal part distinctly smaller than in usual Harpaline species, widely and deeply depressed on each lateral area, the depression running from margin of basal orifice to near dorsal side along suture between apical and basal parts; left paramere subhexagonal, relatively smaller than usual, right paramere a little longer than the left; basal segment of styluses (Fig. 2) elongate-triangular, rounded and 2-setose at outer corner, apical segment fairly curved upward and sharpened at apex, with a small spine at basal two-fifths of each outer margin and with a long seta at apical two-fifths of inner margin.

Length: 7.5–8.0 mm. Width: 2.75–3.0 mm.

Holotype: ♂, Sapulut, North Borneo, 8. IV. 1982, M. YAMAMOTO leg. (in T. SHIBATA's coll.); paratypes: 1 ♀, ditto, 1 ♀, Crocker range, North Borneo, 18. IV. 1982, M. YAMAMOTO leg.

This new species is closely allied to *Hyphaereon reflexus* MACLEAY (in ANDREWES's redescription, 1919¹⁾), but is different from the latter by the eyes hemispherically

¹⁾ ANDREWES, H. E., 1919; On the types of Oriental Carabidae in the HOPE Department of the Oxford University Museum. Trans. Ent. Soc. Lond., (1/2): 156–157.

prominent, the distance between the genuine ventral margin of eye and the buccal fissure much shorter, and the 6th ventral segment of female bears four setae at apical margin instead of two.

Calathomimus shibatai sp. nov.

Body oblong-oval, shiny, fairly iridescent on elytra, black, antennae, legs, and lateral margins of pronotum yellowish brown, mandibles, labrum, and lateral margins of and sutural intervals of elytra reddish brown.

Head small, not more than three-fifths as wide as pronotum, quite impunctate as far as examined in 80 magnification, clypeus unbordered and depressed on apical area, clypeal suture shallower than usual, obscure in middle, and gradually deepened laterally, frontal impressions divergent behind, clearly marked, though shallow, especially just before eyes, vertex not raised, obscurely and transversely rugose, eyes not so prominent as hemispherical, postgenae more or less tumid and gently narrowed behind, then making a blunt angle with neck-constriction, antennae passing a little beyond pronotal base, 3rd joint as long as 4th, genuine ventral margin of eye approaching closely to buccal fissure, mandibles sharp and long, gently curved inward, paraglossae free in front from just before apex of ligula and a little protrudent beyond the apex, median tooth of mentum faintly produced, not bifid and rounded at apex, epilobes large, rectangular at each outer corner; microsculpture composed of obscure transverse lines or meshes, visible near supraorbital setae and sides of clypeal suture and on the clypeo-apical depression.

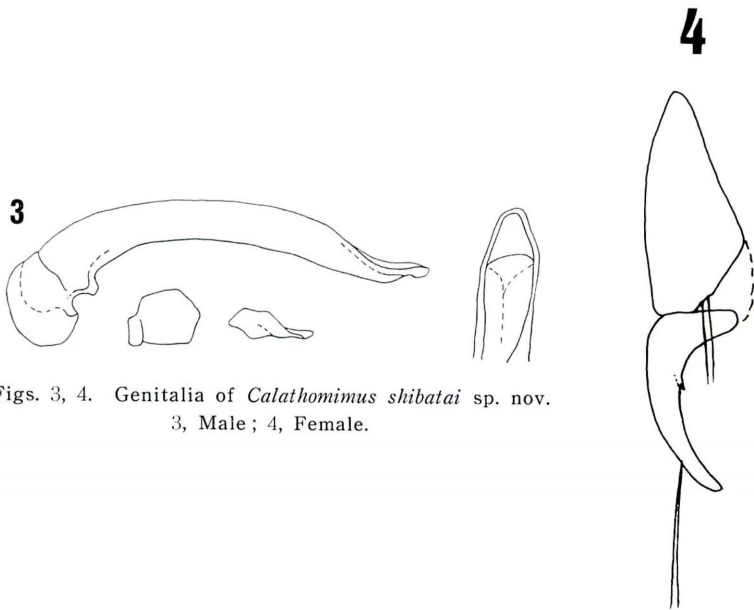
Pronotum subquadrate, gently arcuate at sides, the widest point at a little before middle, where being a half wider than long, apex fairly emarginate, base one-fourth wider than apex and slightly bisinuate, lateral furrow running in front from middle along lateral margin, thence gradually removed from the margin and fallen into basal fovea, space between the furrow and the margin slightly convex, basal foveae shallow and obscure in shape (it seems to be the prolongation of the furrow), front transverse impression wide and very shallow but less vague than the hind transverse one, basal angles obtuse and narrowly rounded, surface almost smooth on disc, residual part of pronotum, lateral furrows, basal area, and middle apical area, covered with punctures rather coarse and moderate in density; microsculpture consisting of transverse meshes and lines, obscure on disc and clearly observed on lateral and basal areas.

Winged. Elytra elongate, subparallel at sides, and flattened on disc, not punctate anywhere, one and three-fifths times as long as wide and

a little wider than pronotum, basal border deeply bisinuate, shoulder angles not rounded and a little wider than rectangular, each apex of elytra produced, apical tip angulate and edentate as in the previous new species; striae rather wide, impunctate but clearly crenulate, intervals almost flat, a little convex apico-laterally and basally, 3rd interval with a row of five setiferous pores along 2nd stria, scutellary striae fairly long, marginal series divided into two groups, fore group consisting of 9 umbilicate pores, hind one of 12-13 pores; microsculpture not well clear, forming chiefly transverse lines but transverse meshes in part.

Underside almost smooth, metepisterna with a few punctures, prosternum sparsely ciliate on medio-apical area, prosternal process sparsely setose at apical margin, metepisterna a half longer than wide, abdomen sparsely ciliate along middle, especially 5th and 6th segments bearing not more than several cilia, outer margin of 6th completely bordered, in ♂ shallowly and not angularly notched and 2-setose, in ♀ narrowly arcuate and 4-setose.

Fore tibiae clearly sulcate on upper side, fore and mid tarsi biserially squamulose beneath basal four joints, hind tarsi relatively long, one-third longer than the width of head inclusive of eyes in holotype (♂), as long as the width in paratype (♀), 2- or 3-setose beneath along each side of claw joints.



Figs. 3, 4. Genitalia of *Calathomimus shibatai* sp. nov.
3, Male; 4, Female.

Aedeagus (Fig. 3) slender and fairly produced apically, with a distinctly small basal part (those characteristics are similar to the previous new species), apical part, in lateral view, gently curved and shallowly sinuate near apex, sclerotized distally from apical fifth along dorsal margin, a little thickened at apex, in dorsal view, narrow and subparallel-sided, membranous field large, clearly sutured from chitinized part, apical lamella as long as wide and carinulate at outer margin, the carinula wide and rounded at its ridge, ventral side not bordered at both margins, shallowly and roundedly concave just before apex, basal part ovaly depressed on each lateral area, the depression occupying space between middle of basal part and suture of basal and apical parts and slant at opposite side to the suture; left paramere subquadrate, right paramere elongate-subtrapezoidal, a little longer than the left, both parameres comparatively small; apical segment of styluses (Fig. 4) rather long, slender, fairly curved inward, tapering apically but not pointed at tip, and with a small spine at basal fifth on each inner margin and with two setae at apical fifth of outer margin.

Length: 7.5-8.0 mm. Width: 2.8-3.0 mm.

Holotype: ♂, Liukuei, Kaohsiung Hsien, Taiwan, 12. VIII. 1972, Y. MAEDA leg. (in T. SHIBATA's coll.); paratype: 1 ♀, ditto, 1. V. 1970, Y. KIYOYAMA leg.

This new species resembles *Calathomimus limbatus* ANDREWES, judging from the original description, in the following points, the lack of elytral pattern and the small head, but it is distinguished from the latter by the pronotum punctate instead of impunctate, the elytral intervals almost flat, and the elytral shoulder angles not acutely angulate. Also the new species is similar to *Coleolissus teradai* HABU in shape of the body, but is easily distinguishable from the latter by the body smaller in size and more elongate, the elytral apex angulate, and the last ventral segment of abdomen bears only one seta on each side, etc.

A New *Phellopsis* Species from South Korea (Zopheridae, Coleoptera)

By KIMIO MASUMOTO

Laboratory of Entomology, Tokyo University of Agriculture,
1-1, Sakuragaoka 1-chôme, Setagaya-ku, Tokyo, 156 Japan

Abstract A new species of the genus *Phellopsis* (Zopheridae) is described from South Korea. A key to all the Asian species is also given.

The genus *Phellopsis* LECONTE, 1862, comprises seven species, four in North America and the remaining in East Asia.

Recently, Dr. YŪKI IMURA, who has been vigorously studying the East Asian Carabidae, brought me a *Phellopsis* specimen collected in South Korea by a liquid trap. The beetle resembles *P. suberea* LEWIS widely distributed in the montane zone of Japan, but it has many distinguishable characteristics. I tried to check a record concerning the *Phellopsis* from Korea and its neighbouring areas. I concluded that the Korean species is, though a relative is hitherto known from the Amur District, new to science and is the 4th on the Asian Continent.

The present author wishes to express his sincere gratitude to Dr. YŪKI IMURA, for contribution of the material specimens and also for drawing the beetle very precisely, Dr. OTTÓ MERKL, Természettudományi Múzeum, Budapest, not only for permitting to a loan of the allied species preserved in the Múzeum, but also for providing me the literature concerned, and to Messrs. SHIGEAKI KONDO and KEN FUJIWARA, for offering comparative materials from Japan.

The holotype to be described will be preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo, and a paratype will be deposited in the Természettudományi Múzeum, Budapest.

Phellopsis imurai sp. nov.

(Figs. 1-2, 4)

Brownish black; each surface mat and clothed with fine scale-like hairs. Elongate, flattened, constricted between pronotum and elytra. Apterous.

Male: Head moderately produced forwards, finely, irregularly granu-

late posteriorly; clypeus flattened, microshagreened and sparsely punctate, gently bent downwards anteriorly and dully truncate in front, with clypeo-genal borders evidently impressed; genae distinctly raised, with outer margins produced laterad; eyes transverse in dorsal view, distance

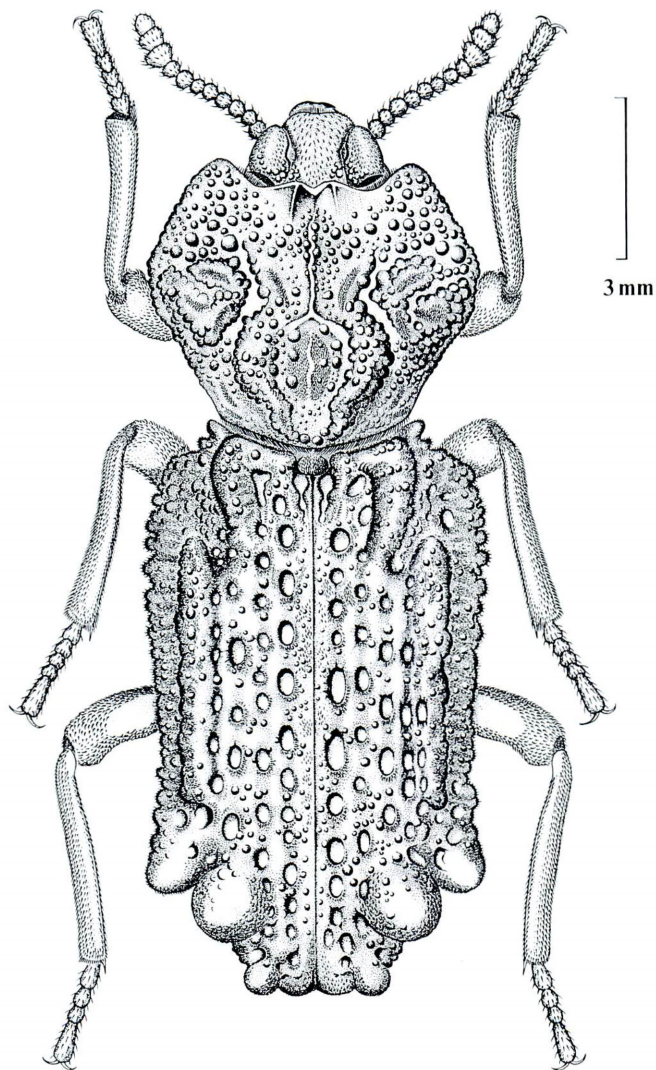
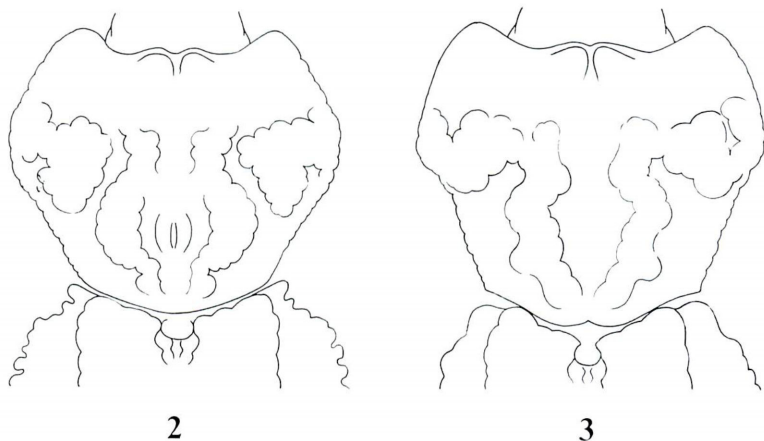


Fig. 1. *Phell'opsis imurai* sp. nov., ♂.

between them about 3 times their own transverse diameter. Antennae submoniliform, reaching the middle of pronotum, with three apical segments large, 9th and 10th dilated to each apex.

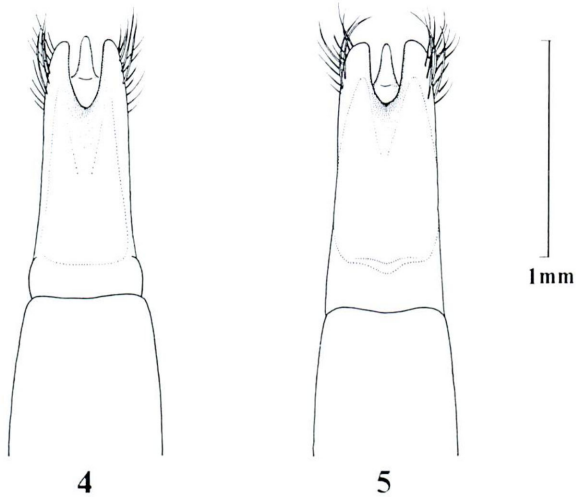
Pronotum subhexagonal, a little less than 1.2 times as wide as long, widest at apical $\frac{2}{5}$; apical margin widely, gently emarginate though sublunar widely in middle; base feebly produced posteriad; lateral margins rounded in anterior halves, almost straightly narrowed towards base in posterior halves; disc flattened, irregularly granulate, with a large irregularly shaped tubercle at the middle on each side, also with a small tubercle near apex on each side, and with a somewhat roundly curved ridge in posterior $\frac{2}{3}$ on each side; front angles roundly produced forwards; hind angles obtuse. Scutellum somewhat transverse ovate, depressed.

Elytra 1.74 times as long as wide, twice length and nearly same width of pronotum, widest at apical $\frac{1}{4}$; dorsum flattened though feebly thickened posteriorly, thickest at apical $\frac{1}{6}$; disc sparsely, irregularly granulate, with rows of strong, somewhat oblong punctures, which are apart from each other; 3rd interval ridged in basal $\frac{1}{4}$, the ridge gently curved outwards, with a distinct, hemispherical tubercle at apical $\frac{1}{6}$, and also with a small tubercle at apex; 5th interval distinctly ridged from basal $\frac{1}{4}$ to apical $\frac{3}{8}$, the ridge almost straight; 7th interval ridged, the ridge almost horizontally protruded and carinulate, with a distinct tubercle at apical $\frac{1}{4}$, which is produced postero-laterad; base widely triangular, with each end pointed obliquely forwards.



Figs. 2, 3. Fore bodies.

2, *P. imurai* sp. nov.; 3, *P. suberea* LEWIS.



Figs. 4, 5. Male genitalia, dorsal views.
4, *P. imurai* sp. nov.; 5, *P. suberea* LEWIS.

Anal segment rather simply, transversely impressed.

Female: Compared with male, body more elongate and subparallel-sided, and pronotum widest nearly at the middle.

Body length: 15.5–18 mm.

Type series. Holotype: ♂, near Panjae, 1,220 m alt., on NE slope of Mt. T'aebaek-san, Kangwon-do, 9. VI. 1990, Y. IMURA leg. Paratypes: 1 ex., near Popkye-sa Temple, ca. 1,400 m alt., on SE slope of the peak Ch'onwang-bong, Chiri-san Mts., Kyongsangnam-do, 7. VI. 1989, Y. IMURA leg.; 1 ex., near Sangwon-sa Temple, ca. 900 m alt., on SE slope of the peak Piro-bong, Odae-san Mts., Kangwon-do, 7. VI. 1990, Y. IMURA leg.; 1 ex., near Wolchong-sa Temple, ca. 800 m alt., on S slope of the Odae-san Mts., Kangwon-do, 8. VI. 1990, Y. IMURA leg.

Key to the Asian species of the genus *Phellopsis*

- 1 (6) Pronotum with a large, irregularly shaped tubercle in middle on each side.
- 2 (3) Body more elongate, with elytra rather subparallel-sided; ridge in 3rd elytral interval almost straight, ridge in 5th gently arcuate; rows of punctures on elytra not strong, often longitudinally conjoint with each other, hence seemingly they are fine longitudinal impressions. 14–21 mm. Japan. *P. suberea* LEWIS
- 3 (2) Body less elongate, with elytra widened towards base; ridge in 3rd elytral interval distinctly arcuate outwards, ridge in 5th almost straight; rows of punctures on elytra stronger, rounded or oblong.
- 4 (5) Pronotum more strongly widened, with front angles more distinctly produced forwards; elytra more strongly produced apically, with ridges less strongly but

- vaguely widely raised. 15.5-18 mm. South Korea. *P. imurai* sp. nov.
- 5 (4) Pronotum less strongly widened, with front angles less distinctly produced forwards; elytra less strongly produced apically, with ridges more strongly but narrowly raised. 16-18 mm. "Chabarofka" and "Nikolajevsk" (East Siberia).
 *P. amurensis* (HEYDEN)
- 6 (1) Pronotum without large tubercle in middle on each side. 18 mm. "Gan-su merid." (China). *P. chinensis* (SEMENOW)

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A New Species of *Lilioceris* from Sabah, Malaysia (Chrysomelidae: Criocerinae)

By M. S. MOHAMEDSAID

Jabatan Zoologi, Universiti Kebangsaan Malaysia, 43600 Bangi, Malaysia

Abstract *Lilioceris hitam* n. sp. is described from Sabah, Malaysia.

Introduction

The chrysomelid beetles of the subfamily Criocerinae from Sabah (formerly known as North Borneo) are represented by two genera: *Lema* FABRICIUS and *Lilioceris* REITTER. *Lilioceris* can be separated from *Lema* in having the tarsal claws free, not fused at base. At present, the genus *Lilioceris* is represented by one species in Sabah, out of seven species known from Borneo. The species, *Lilioceris sandakana* (ACHARD), was described in 1921 by MAURICE PIC under the name of *Crioceris curtipennis* PIC, and later new name was given as *sandakana* by ACHARD, because of its homonymy. In this paper the author describes a new species of *Lilioceris* from Sabah, Malaysia.

Lilioceris hitam MOHAMEDSAID, new species (Figs. 1, 2)

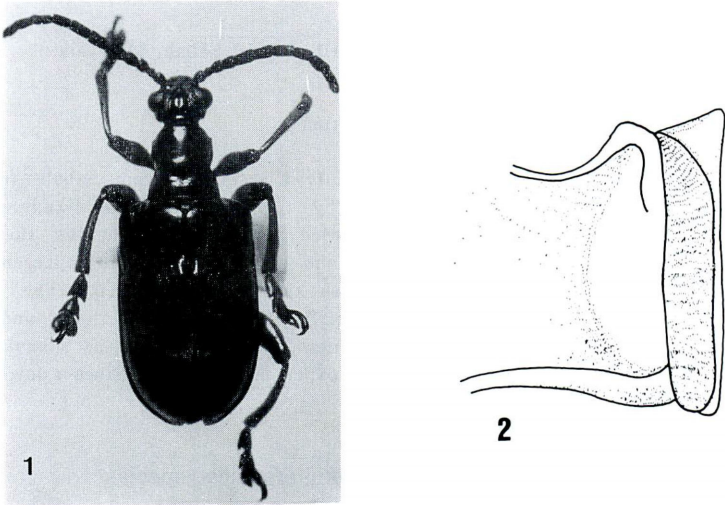
Black. Length 10 mm, width 4 mm. Body elongate, subparallel. Scutellum pubescent.

Head as broad as the basal part of prothorax, widest across eyes; sides behind eyes subparallel, then strongly constricted forming the neck; vertex grooved along middle, triangularly raised, delimited from orbits with very deep grooves; orbits rugose, sparsely covered with long pubescences; interantennal space depressed in centre, impunctate; frontoclypeus large, convex, sparsely covered with long pubescences; labrum truncate apically, sparsely covered with long pubescences; gena about four-fifths as deep as eye, sparsely covered with pubescences. Mandibles prominent, strongly curved. Eye prominent, deeply notched internally, the distance between eyes $1.5\times$ as wide as the diameter of the eye. Antennae stout, extending to end of basal one-sixth of the elytra; seg-

ment 1 oval, slightly longer than broad; segments 2-11 closely covered with very fine pubescences; 2 the shortest; 3 as long as broad, slightly shorter than 4; 5 the longest; 6-7 subequal, slightly shorter than 5; 8-10 subequal; 11 slightly narrowed.

Prothorax longer than broad, widest at base, deeply constricted at each side near middle; disc fairly smooth, impunctate, with a depression in middle, subbasally.

Scutellum as long as broad, covered with silvery pubescences.



Figs. 1, 2. *Liliocerus hitam* n. sp.
1, Dorsal view; 2, Sternum and episternum.

Elytra $1.6\times$ as long as broad, subparallel, the apices truncate; disc largely smooth, shiny, with a few moderately large punctures on basal swelling; humeri prominent, bounded within by longitudinal grooves.

Ventral surfaces covered with silvery pubescences; metasternum glabrous in middle and lateral sides bordering the densely pubescent metepisternum. Legs largely reddish brown, except for the apical part of femora, tarsi black; hind femora extending slightly beyond the fourth abdominal sternite.

Holotype, Malaysia, Sabah, Kinabalu Park, 26 April 1987, N. WAHID leg.

The type will be deposited in the Department of Zoology, Universiti Kebangsaan Malaysia (UKM). The species name, *hitam*, is derived from the Malay word meaning black.

Comments: This species at once can be separated from the other *Liliocerus*

species known from Borneo as well as from the Philippines and Indo-Malayan regions by its largely black colour. However, other characters of the new species which differ from the other species known from the region are herein provided. The following ten species differ in having the scutellum glabrous [*clarkii* (BALY), *dimidiata* (LACORDAIRE), *distigma* (WEISE), *eximia* (BALY), *impressa* (FABRICIUS), *luzonica* (WEISE), *ornata* (BALY), *quadripustulata* (FABRICIUS), *sandakana* (ACHARD), *saundersi* (BALY)]. The following species possess different elytral characters: punctures arranged in rows, striated [*crassipennis* (CLARK), *dichroa* (BLANCHARD), *nucea* (LACORDAIRE), *semipunctata* (FABRICIUS), *unipunctata* (FABRICIUS)]; elytral coloration yellowish brown [*obesa* (BALY)], yellowish brown, with rows of small piceous spots [*philippinensis* (JACOBY)], yellowish brown, with basal half black [*gracilicornis* (WEISE)], yellowish brown, with black markings in middle [*unipunctata* (FABRICIUS), *binotata* (BALY)]. *Lilioceris celebensis* (JACOBY), although possesses pitch-black elytral coloration, the general body coloration yellowish brown, the antennae much longer, of nearly half the length of the body, with the apical segments pale flavous.

Acknowledgements

The support of IRPA Project No. 4-07-03-07, which enabled the author to study chrysomelid beetles in the collection of Prof. S. KIMOTO, Kurume University, Japan, is gratefully acknowledged. The author thanks Prof. KIMOTO for his permission to work in his laboratory and reading the manuscript.

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

By TATEO ITO

Nazeris shibatai sp. nov.

Body robust, subdepressed above, shiny, blackish brown, basal three segments of abdomen, mouth parts and basal two segments of antennae reddish brown, the other segments of antennae and legs sordid yellow (femora slightly darkened); pubescence on body blackish brown but yellowish brown on mouth parts, some apical segments of antennae and legs. Length: 4.3-5.0 mm.

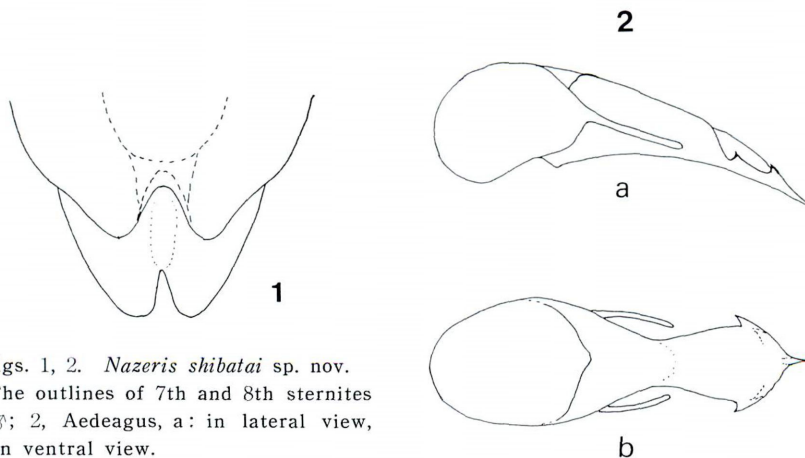
Head subquadrate, as long as or scarcely longer than wide, not microsculptured anywhere, coarsely and closely punctate but on frons a little sparsely and on narrowly depressed areas near eyes more or less finely and rugosely punctate, four teeth of labrum distinctly pointed, the inner two teeth thicker and a little longer than the outer two, frons shallowly depressed, vertex slightly and evenly convex and impressed in an irregular V-shape, the ends of the impression extending to antennal prominences, eyes moderately sized, each longitudinal diameter subequal in length to a half of postgenae, which are subparallel at sides and widely angulate before neck, antennae fully reaching middle of pronotum, all segments longer than wide, 1st segment robust and large, a little longer than the following two segments together, 3rd about a half longer than 2nd and gradually thickened to 10th, which shorter than twice of its width and smaller than 11th. Under side of head punctate like on the upper side but weakly microsculptured, the microsculpture wholly and regularly aciculate, mentum smooth, submentum weakly and coarsely scabrous.

Pronotum nearly short-oval, longer than wide (1.14 : 1), a little narrower (1 : 1.12) and scarcely shorter than head, submarginal three long erect setae separated from each other by unequal distances, the middle one of them placed just in front of the widest point at apical third, from there lateral sides more rapidly rounded apically than basally, disc with punctures almost very coarse, rather sparse, deep, somewhat irreg-

ular in arrangement or size and a little finer laterally, median line rather wide and long, reaching basal half, finely and obscurely impressed in the line, and distinctly depressed on each side. Scutellum coarsely and not shallowly punctate. Elytra widest near apex, the width more than twice as wide as base and scarcely narrower than the width of pronotum, sides strongly convergent toward base, especially at shoulders, surface strongly, rugosely and not finely undulate, with punctures coarse, rather deep but slightly distorted in shape by the strong undulations.

Prosternum entirely carinate medianly, coarsely rugosely punctate except finely rugulose and impunctate subapical part.

Abdomen slightly enlarged laterally, widest at 6th segment, from which tapered apically and basally, without any microsculptures, with punctures coarse and close on basal tergites, fine and rather sparse on apical tergites, those on sternites much deeper and stronger than on tergites. In the male 6th sternite subentirely faintly depressed along middle, 7th sternite also faintly and widely depressed, with two depressions on the depressed area, in which basal depression semicircular and shallow (but distinctly deeper than the depression on 6th sternite), and gradually deepened toward base, the apical one narrow, arched, very deep, bearing a close yellowish and characteristic pubescence, apical margin of 7th sternite strongly excised in middle (Fig. 1), weakly sinuate on latero-apical sides, bearing a tuft of some short, black and sub-stiff hairs near each apical angle of the excision, the position of the tufts placed more inside than those of *N. optatus*, 8th sternite narrowly and triangularly excised at middle of apical margin, with a shallow and impunctate depression before the excision, the width of which about 2.5



Figs. 1, 2. *Nazeris shibatai* sp. nov.
1, The outlines of 7th and 8th sternites in ♂; 2, Aedeagus, a: in lateral view, b: in ventral view.

times as deep as its width.

Legs moderately lengthened, without any distinct characters.

Aedeagus (Fig. 2) relatively small, symmetrical, median lobe constricted at apical third, slightly curved ventrally and tricuspidate on apical part in ventral view, the apical cusp evidently pointed, the other lateral cusps projecting outward and slightly incurved, each lateral side of median lobe armed with another hook, but the hooks rather weak and pointing upward, so invisible from ventral side, apophyses simply filiform, ill-chitinized and easily flexible.

Holotype: ♂, Mt. Kongo, Osaka Pref., 10. VIII. 1986, T. ITO leg. (T. SHIBATA coll.). Paratypes: 15 ♂♂, 9 ♀♀, same data as holotype; 6 ♂♂, 3 ♀♀, Mt. Iwawaki, Osaka Pref., 30. IV. 1986, T. ITO leg.; 3 ♂♂, 4 ♀♀, Mt. Kooya, Wakayama Pref., 1. V. 1985, T. ITO leg.; 5 ♂♂, 1 ♀, Mt. Kasuga, Nara Pref., 18. X. 1985, T. ITO leg.

Specimens examined: 1 ♂, same data as holotype; 1 ♂, Mt. Kohjin, Nara Pref., 18. VII. 1976, T. ITO leg.

The present species is allied to *N. optatus* (SHARP) in the secondary sexual features, but it is clearly different from the latter by the following points: The tufts of the male 7th abdominal sternite composed of much shorter and softer hairs, the apical depression of the male 7th sternite closely with yellowish pubescence, the aedeagus quite differently shaped, the median lobe hooked on lateral sides, the apophyses much thinner and simpler in structure, the male 8th sternite less deeply excised, the upper side of head and abdomen without any microsculptures and more shiny, the inner two teeth of labrum acuter and more prominent, the pronotum a little shorter and its punctures coarser, the punctures on head a little closer and deeper, the body robuster and darker.

After my observation on the holotype of *N. optatus*, I have known that the fig. 4, which was illustrated by me in 1986, is indicative of the aedeagus in *N. shibatai* sp. nov. from Mt. Kohjin, Nara Pref., and is not the aedeagus of *N. optatus*. The specific name is dedicated to Mr. TAICHI SHIBATA, who is the adviser of the Osaka Coleopterological Society, and to whom I am heartily grateful for his constant guidance and encouragement in my studying on Staphylinidae.

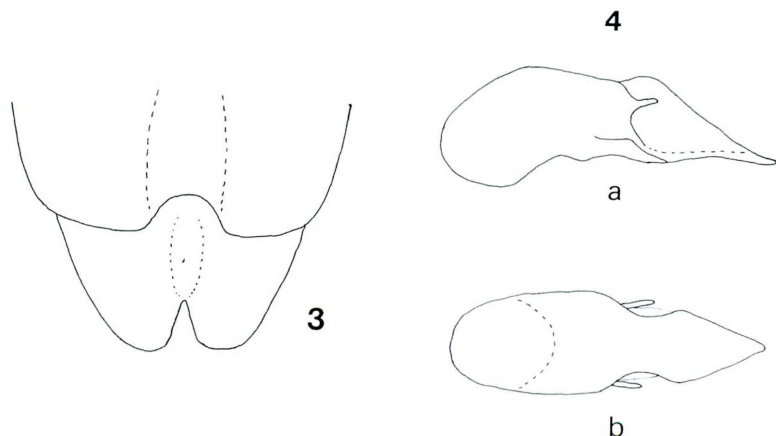
Nazeris pacificus sp. nov.

Head subquadrate, as wide as long, coarsely, closely and rather regularly punctate, somewhat irregularly and weakly microsculptured, the microsculpture almost aciculate, which on vertex weak as well as on frons except smooth marginal areas, on postgenae close and seemingly reticulate, spaces among punctures slightly uneven, inner two teeth of labrum clearly truncate at apex and much shorter than the outer ones, frons shallowly depressed, vertex with a wide V-shaped impression, eyes small, their longitudinal diameters slightly less than a half length of subparallel-sided postgenae, 1st segment of antennae long-

er than the following two segments together, 2nd more than a half length of 3rd. Under side of head with microsculpture distinct and uniformly aciculate, and punctures like on the upper side but spaces among punctures rather even, mentum smooth, submentum weakly and finely scabrous.

Pronotum short-oval, a little longer than wide (1.09 : 1), as long as and a little narrower than head (1 : 1.09), widest at apical third, roundedly narrowed apically and more gently narrowed basally, coarsely, deeply rather sparsely and a little irregularly punctate, median line relatively wide, short, not beyond basal half, and distinctly depressed on each side, three long erect setae submarginally placed near the widest point and separating unequally from each other. Scutellum deeply punctate. Elytra distended toward apex, shoulder angles entirely effaced, the width at the widest point nearly before apex about twice as wide as base and equal to the pronotal width, surface closely, not finely and rugosely undulate, coarsely, closely and irregularly punctate. Prosternal carina entire and distinct.

Abdomen gradually widened toward 6th segment, then narrowed toward apical segments, microsculpture weak and strigulate, but not or scarcely visible on basal two segments, punctures more or less wholly close on tergites, coarser basally and finer apically, those on sternites deeper and stronger than on tergites. In the male 6th sternite weakly depressed along middle, 7th sternite from near base to apex with a median depression rather deep, horseshoe-shaped, slanting apically and



Figs. 3, 4. *Nazeris pacificus* sp. nov.

3, The outlines of 7th and 8th sternites in ♂; 4, Aedeagus, a: in lateral view, b: in ventral view.

more sparsely and more finely punctate than on the outsides of the depression, apical margin semicircularly excised in middle (Fig. 3), with a tuft of very long stiff and acuminate hairs situated on each apical angle of the excision, the tufts incurved and their tips gathering together at a point, 8th sternite triangularly excised at middle of apical margin, surface with a median depression very weak, narrow and impunctate, the depth of the excision about twice as deep as its width.

Aedeagus (Fig. 4) small, median lobe slightly narrowed at apical third, and depressed ventrally along middle, apical part equilateral-triangulate, straightly convergent toward apex, the apex not pointed, apophyses extremely reduced, very slender and short (it seems to be a rudimental trace).

Holotype: ♂, Muroto Cape, Kochi Pref., 4. VI. 1988, T. ITO leg. (T. SHIBATA coll.).
Paratypes: 15 ♂♂, 18 ♀♀, ditto, 4 & 5. VI. 1988, T. ITO leg.

Specimen examined: 1 ♂, same data as holotype.

The present species resembles apparently the preceding species in color, pubescence and punctures, but excepting the major differences of the secondary sexual features and aedeagi, there are some minor differences between both the species as follows: The upper side of head and the abdomen have a microsculpture instead of having none, the inner teeth of labrum are truncate and short, the eyes small, each longitudinal diameter is less than a half length of postgenae and the body length is 4.0-4.7 mm, while in the latter species the labral inner teeth are sharpened and long, the longitudinal diameter of eye is about a half length of postgenae and the body length is 4.3-5.0 mm.

And the present species is also related to *N. optatus* in the presence of the microsculpture on head and abdomen, the pronotal conspicuous setae and the abdominal tufts, but it can be recognized by the median lobe of aedeagus which is not pointed at tip, the apophyses reduced and very much smaller, the 7th sternite in the male less strongly depressed and less deeply excised as well as the 8th one, the tufts consisting of longer hairs and their tips touching each other, the eyes comparatively smaller, the pronotum proportionally wider and the body robuster and darker in color.

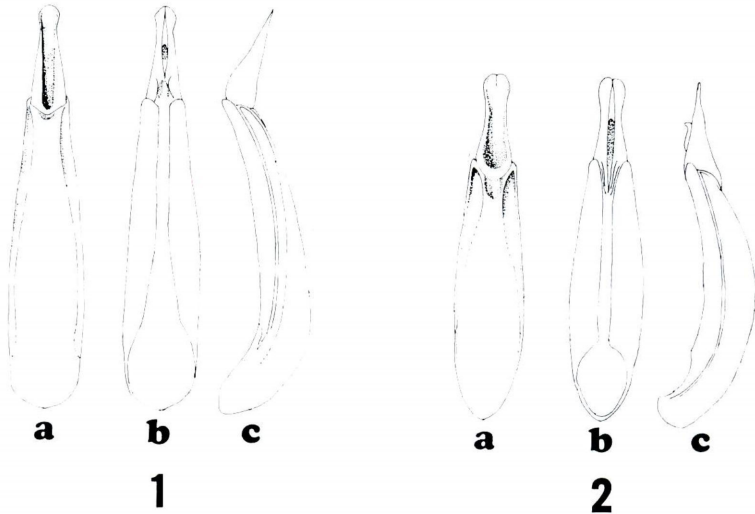
Studies on the Tenebrionidae of SHIBATA
Collection Mainly from SE. Asia. II.
(Coleoptera)

By KIYOSHI ANDO

Abstract Seven species of the genus *Scotaeus* (Tenebrionidae) are recorded from Malaysia, Borneo, Indonesia (Nias Is., Java and Sulawesi), Philippines, Vietnam and China. Of those two species are newly described here under the names of *S. borneensis* sp. nov. and *S. masumotoi* sp. nov.

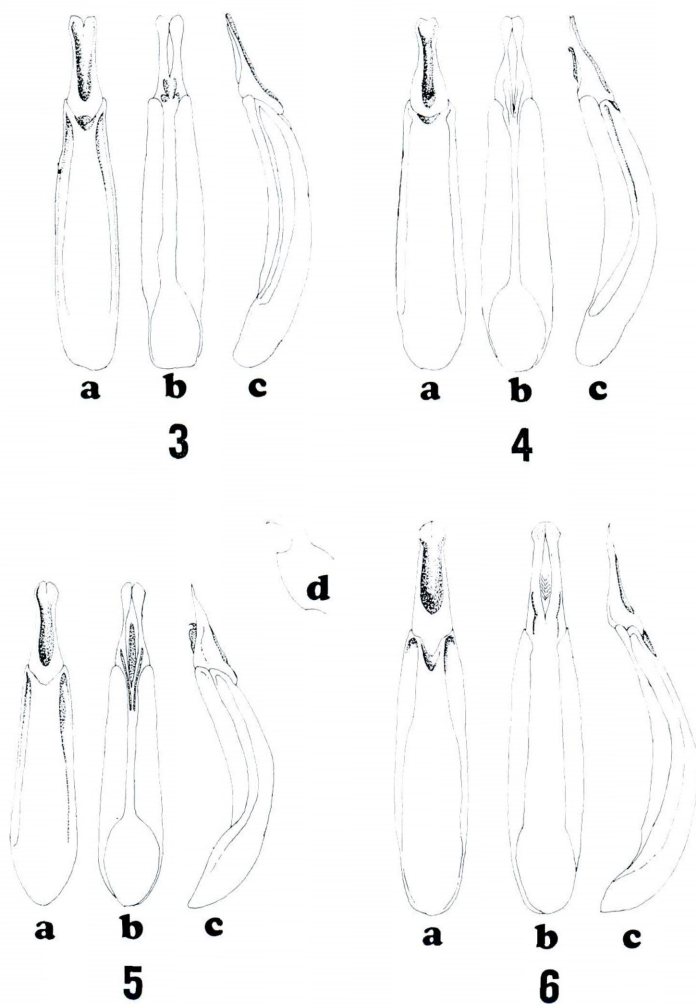
Scotaeus corallipes HOPE
(Figs. 2a-c, 8 & 13)

Specimens examined: [Malay Peninsula] 1 ♂, Gap, 6. IV. 1978, Y. KIYOYAMA leg.; 2 ♀♀, Cameron Highland, 1973-1975, native collector; 1 ♀, Kuara Kurai, 1. V. 1975, Y.



Figs. 1, 2. Male genitalia of *Scotaeus* spp.: a, dorsal view; b, ventral view; c, lateral view.
1, *S. dentipennis* GEBIEN; 2, *S. corallipes* HOPE.

KIYOYAMA leg. [Borneo Is.] 1 ♀, Sapulut, Sabah, 6. IV. 1982, M. YAMAMOTO leg.; 1 ♂, 3 ♀♀, Keningau, Sabah, 14, 27 & 29. V. 1989, M. ITOH leg.; 1 ♀, same locality, 5. VI. 1989, M. ITOH leg.; 1 ♂, same locality, 11. VI. 1989, M. ITOH leg.; 1 ♂, 1 ♀, same locality, 1-22. IV. 1988, M. ITOH leg.; 1 ♀, same locality, 10-20. X. 1989, M. ITOH leg.; 2 ♂♂, 1 ♀, Sabah, 11 & 27. IV. 1981, S. NAGAI leg.; 1 ♀, nr. Keningau, 22. VI. 1988, M. ITOH leg.; 1 ♀, Emubalut, E. Karimantan, Indonesia, 11. II. 1986, S. OKADA leg.



Figs. 3-6. Male genitalia of *Scotaeus* spp.: a, b, c, ditto; d, apex of median lobe.

3, *S. seriatopunctatus* HELLER; 4, *S. borneensis* sp. nov.;
5, *S. masumotoi* sp. nov.; 6, *S. focalis* GEBIEN.

[Sunda Is.] 1 ♀, Nias Is., near Sumatra, Indonesia, VI. 1986, native collector.
 Distribution: Malay Peninsula*, Borneo, Nias, Sumatra, Java.

Scotaeus dentipennis GEBIEN

(Figs. 1a-c, 7 & 14)

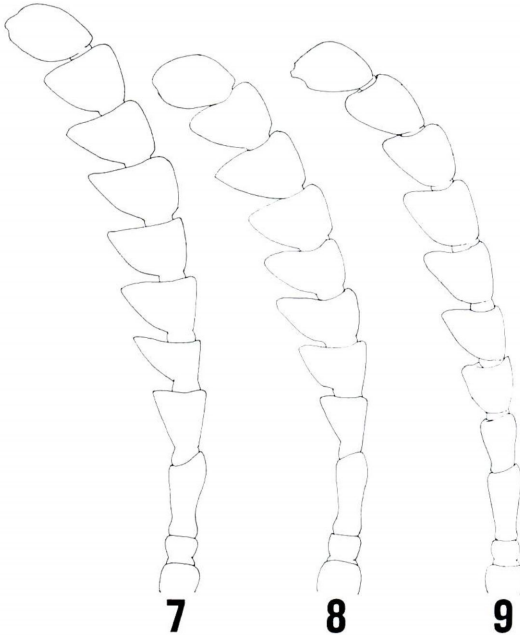
Specimens examined: [Malay Peninsula] 1 ♂, 1 ♀, Cameron Highland, 1977-1978, native collector.

Distribution: Malay Peninsula*, Borneo, Java.

Scotaeus seriatopunctatus HELLER

(Figs. 3a-c, 9 & 15)

Specimens examined: [Philippines] 1 ♂, 4 ♀ ♀, Mt. Apo, Cotabato, S. Mindanao, VI & VII. 1985, native collector; 1 ♀, same locality, 4-9. III. 1978, K. OKUBO leg.; 1 ♂, 2 ♀ ♀, S. Mindanao, I. 1983, native collector; 1 ♂, Capatan (alt. 1,100 m), Mindanao, 1-2. XII. 1969, I. HIURA leg.; 1 ♂, Laggiang Road nr. Rawis, Samar Is., 6-7. VI. 1983,



Figs. 7-9. Male right antennae of *Scotaeus* spp.

7, *S. dentipennis* GEBIEN; 8, *S. corallipes* HOPE; 9, *S. seriatopunctatus* HELLER.

*) Asterisk shows the species which has hitherto been unrecorded from the district.

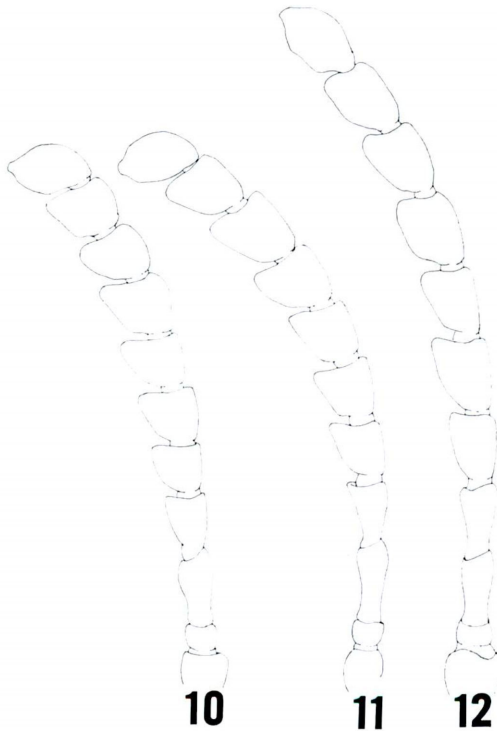
M. TAO leg. [Borneo Is.] 1 ♀, Crocker Range, 8. VIII. 1982, S. NAGAI leg.
 Distribution: Philippines, Borneo*.

Scotaeus fruhstorferi GEBIEN
 (Fig. 16)

Specimens examined: [Vietnam] 1 ♀, Tamdao, N. Vietnam, 5. VII. 1990, M. ITOH leg.
 Distribution: Vietnam.

Scotaeus focalis GEBIEN
 (Figs. 6a-c, 12 & 17)

Specimens examined: [China] 1 ♂, Fukien, Kuantun, 22-28. VII. 1946, TSUNG-SEN leg.; 1 ♂, 1 ♀, 1-10. VII. 1946, TSUNG-SEN leg.; 1 ♀, same locality, 5-14. VIII. 1946, TSUNG-SEN leg.



Figs. 10-12 Male right antennae of *Scotaeus* spp.
 10, *S. borneensis* sp. nov.; 11, *S. masumotoi* sp. nov.; 12, *S. focalis* GEBIEN.

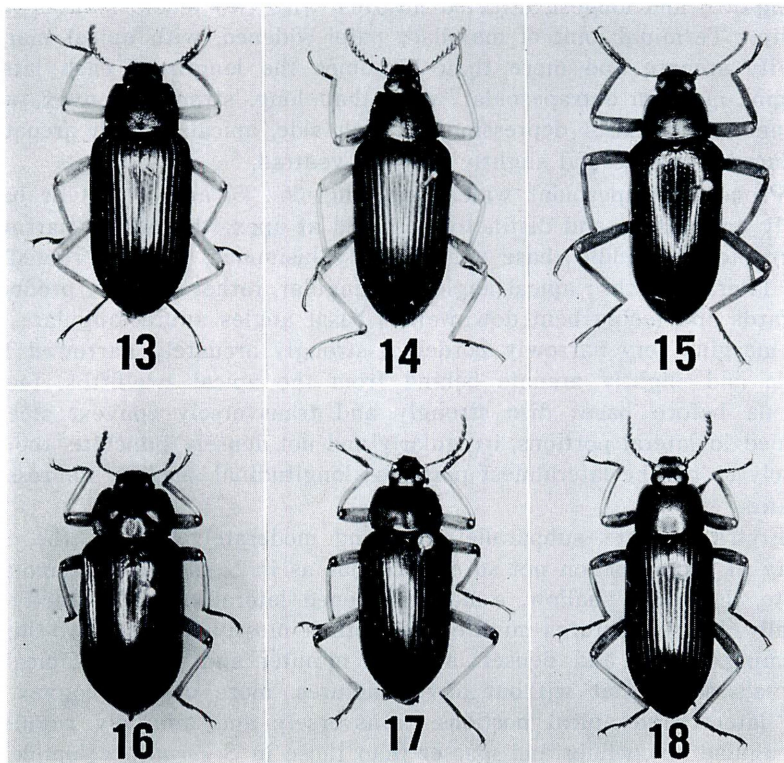
Distribution: China.

Notes. In his original description on the basis of a female specimen, GEBIEN (1935) stated that remarkably short proportion of the hind femora is one of the very important specific characteristics. Since the female hind femora of all species, but *S. seriatopunctatus*, do not project beyond the apical margin of each 4th abdominal segment, the characteristic, as GEBIEN pointed out, is not available for the distinction between *S. focalis* and the other *Scotaeus* species. The female hind femora of the genus *Scotaeus* are generally shorter than those of the male.

Scotaeus borneensis sp. nov.

(Figs. 4a-c, 10 & 18)

Male, elongate, subparallel-sided; dorsal and ventral surfaces, antennae and tarsi pitchy black, mouth organs in part, femora and tibiae



Figs. 13-18. 13, *S. corallipes* HOPE, ♂; 14, *S. dentipennis* GEBIEN, ♂; 15, *S. seriatopunctatus* HELLER, ♂; 16, *S. fruhstorferi* GEBIEN, ♀; 17, *S. focalis* GEBIEN, ♂; 18, *S. borneensis* sp. nov., ♂.

smudgy yellow.

Head trapezoidal, a little longer than wide, with punctures rather dense, irregular in arrangement and sparsely inclusive of two or three different sizes; clypeus almost flattened, strongly produced towards apex, subtruncate or very slightly emarginate at apex, clypeal suture narrow and distinctly impressed; genae flattened, feebly reflexed along outer margins, not widened laterally and strongly arcuately narrowed towards apex; frons convex, sloping rather steeply forwards; eyes strongly convex above and laterally, compactly faceted; ocular sulci rather wide, becoming vestigial backwards; antennae clearly serrate (Fig. 10), strongly dilated towards apices except three basal joints, each joint gently rounded in inner margin, every apico-inner angle not so acute as in *S. corallipes*, 3rd joint a little shorter than 11th, 7th shorter than 6th or 8th, 8th to 10th a little wider than long and equal in length to each other, 11th oblong-oval and longest, directed inwards, with two feeble sinuses near the tip. Terminal joint of maxillary palpi widened, with apical margin slightly arcuate and more than 1.5 times the length of each lateral margin; mentum obtrapezoidal, wider than long, strongly convex, with a rounded ante-basal depression on each side, apical margin arcuately produced forwards and slightly directed ventrad.

Pronotum trapezoidal, wider than long (36 : 25) and widest at base, gently emarginate and distinctly bordered at apex, the border narrowly interrupted at middle; base very slightly bisinuous, finely bordered in both lateral fourths; apical angles rectangular, rather strongly produced forwards and feebly bent downwards; basal angles subrectangular; lateral margins very narrowly bordered, strongly arcuately narrowed forwards and slightly arcuate behind from the apical two-fifths, feebly sinuous before base; disc strongly and transversely convex, steeply inclined in lateral portions, irregularly and not densely punctate, though densely so on the lateralmost portions; longitudinal median impression obscure.

Elytra elongate, subparallel-sided and moderately convex, the convexity of basal portion not so conspicuous as in *S. corallipes*; punctate-striate, the striae shallow, a little deepened laterally and distinctly so apically, their punctures minute and distinct mostly in basal two-thirds, becoming larger and denser laterally, minuter and vestigial apically; intervals nearly flat without any punctures, more or less convex on both lateral and apical portions, transversely and minutely rugulose, the rugulae much finer and sparser than those in *S. corallipes*; epipleura slightly convex.

Prosternum glabrous, depressed in middle, prosternal process long and smooth, very elevated between procoxae, then sloping gradually

and narrowed posteriad; mesosternum distinctly ridged in U-shape, the ridge very close to metasternum; abdominal segments moderately convex, three basal segments densely rugose, minutely and densely punctate, though the punctures less dense than those in *S. corallipes*, abdominal process strongly produced frontad between metacoxae, basal segment deeply and longitudinally depressed in middle, two apical segments densely, minutely and irregularly punctate, anal segment shallowly and roundedly depressed subapically, the depression with a pair of longitudinal rows of hairs. Male genitalia as in Figs. 4a-c.

Legs comparatively shorter than those of *S. corallipes*; hind femur not projected beyond 4th segment of abdomen; tibia sparsely pubescent beneath in apical third, fore tibia gently incurved, middle tibia slightly so and dilated towards apex, feebly twisted in lateral view, hind one elongate and straight; tarsus simply slender, with thick dark brown pubescence beneath except terminal joint, middle tarsus nearly as long as fore tibia, relative length of hind tarsal joints as follows:— 33 : 9 : 9 : 31.

Female unknown.

Length: 20-21 mm; width: 7.0-7.9 mm.

Holotype: ♂, Keningau, Sabah, N. Borneo, 3. VI. 1989, M. ITOH leg. Paratype: 1 ♂, same locality as for holotype, 28. V. 1989, M. ITOH leg.

The holo- and paratypes are deposited in the private collection of Mr. T. SHIBATA, Osaka.

The new species is closely allied to *S. corallipes* HOPE, but the former is easily separated from the latter by the characteristics as shown below.

S. corallipes HOPE

Ocular sulci narrow.

Pronotum moderately convex, sublinearly narrowed forwards in apical two-fifths; the apical angles produced forwards.

Elytra gradually narrowed posteriad, convex, in lateral view, the highest point at basal sixth, gradually descendent thence to apex; the intervals transversely, distinctly and rather densely rugulose.

S. borneensis sp. nov.

Ocular sulci wide.

Pronotum strongly convex, arcuately narrowed forwards in apical two-fifths; the apical angles feebly bent downwards.

Elytra subparallel-sided, convex, in lateral view, the highest point almost in median third, gradually descendent thence to both basal and apical directions; the intervals transversely, finely and sparsely rugulose.

Scotaeus masumotoi sp. nov.

(Figs. 5a-d, 11 & 19)

Elongate; dorsal and ventral surfaces, antennae and tarsi pitchy

black, coxae, femora and tibiae coral, mouth organs partially dark reddish brown.

Head trapezoidal, a little wider than long (29 : 25); clypeus strongly produced and a little widened frontad, slightly emarginate or subtruncate at apex, flat, infrequently deeply and unevenly depressed in middle,

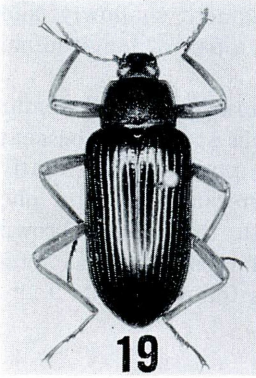


Fig. 19. *S. masumotoi* sp. nov., ♂.

coarsely and rather densely punctate, the punctures sparsely intermixed with minute ones, clypeal suture strongly and deeply impressed, but indistinctly impressed on lateral sides; genae densely punctate, rounded and slightly reflexed along outer margins; frons slightly or moderately convex, a little narrower than an eye, distinctly or weakly and longitudinally depressed in middle, sparsely and coarsely punctate, the punctures medium-sized, but intermixed with minute ones as on clypeus; ocular sulci wide and deep, extending behind eyes; eyes convex above and laterally, densely faceted; antennae serrate (Fig. 11), eight apical joints dilated towards each apex, with inner margin not rounded but sublinearly dilated towards apex, 2nd joint being shortest, 3rd a little shorter than 11th, 4th to 6th subequal in length and shorter than 7th, 8th as long as 9th, 6th to 9th a little wider than long, 10th subquadrate and apparently shorter than 3rd, 11th being longest, oblong and directed inwards, with apex distinctly pointed in the male and obliquely truncate in the female; mentum similar in shape to that of the preceding species, but rather narrow and almost as long as wide, apical margin more strongly produced frontad.

lateral towards apex, 2nd joint being shortest, 3rd a little shorter than 11th, 4th to 6th subequal in length and shorter than 7th, 8th as long as 9th, 6th to 9th a little wider than long, 10th subquadrate and apparently shorter than 3rd, 11th being longest, oblong and directed inwards, with apex distinctly pointed in the male and obliquely truncate in the female; mentum similar in shape to that of the preceding species, but rather narrow and almost as long as wide, apical margin more strongly produced frontad.

Pronotum trapezoidal, wider than long (31 : 24), widest before base; apical margin rather weakly emarginate, narrowly and strongly bordered in both lateral fourths; base moderately bisinuous, finely bordered in both lateral thirds; apical angles subrectangular, slightly produced frontad; lateral margins weakly arcuate from the widest point to apical fourth, thence rather strongly and arcuately narrowed to apex, narrowly bordered, the borders weakly reflexed; disc transversely and not strongly convex, steeply inclined in lateral portions, sparsely punctate, the punctures very irregular in size and arrangement, thickened in lateral portions; longitudinal median impression obscure, deepened before base.

Elytra elongate, widest behind humeri, gently and gradually diminishing in width towards apex, almost simply punctate-striate, the striae rather deep, a little deepened apically and still deeper laterally, the

punctures dense, those on 1st and 2nd striae finer and more obscure than the remaining ones; intervals slightly convex medianly and strongly so laterally, slightly rugulose, the rugulae not reaching striae and their punctures, 5th interval shorter than 6th, 4th sometimes combined with 6th behind apex of 5th; epipleura sloping internally and scarcely rugulose.

Prosternum widely depressed at middle in apical portion, prosternal process elongate and flattened, moderately elevated between the coxae, then sloping a little and strongly narrowed posteriad; mesosternal median ridge U-shaped and touching metasternum; metasternum finely rugulose and almost impunctate except for lateral sides sparsely punctate, metasternal sulcus narrower than metacoxa; abdomen moderately convex, finely and sparsely punctate, though the punctures on anal segment sparse rather than dense; each segment distinctly and semi-circularly depressed laterally, 1st segment widely and longitudinally depressed in middle, anal segment in the male with an oval ante-apical depression, which bears a pair of longitudinal rows of hairs, anal segment in the female shallowly depressed along apical margin; male genitalia (Figs. 5a-d) weakly curved downwards in apical three-fourths, basal piece strongly and constantly sulcate along lateral sides in dorsal view, parameres deeply and longitudinally depressed medianly in dorsal view.

Legs in the male slender; each femur weakly incurved, fore femur thickened before middle, middle and hind ones thickened near apex, hind femur distinctly projected beyond apical margin of 4th abdominal segment; tibia elongate, fore tibia slightly incurved, very slightly twisted in apical portion, clothed with yellowish pubescence inside in apical half, middle and hind tibiae slightly curved dorsally, each with sparse pubescence inside in apical third; tarsus very slender, with dark yellow pubescence beneath, claw-joint of hind tarsus nearly as long as other three joints together, relative length of hind tarsal joints as follows:—25 : 8 : 8 : 29.

Legs in the female moderate in length and rather robust; hind femur just reaching apical margin of 4th abdominal segment; tibia very sparingly pubescent beneath in apical portion, fore tibia slightly incurved, thickened medianly, with upper side convex and under side flattened, middle tarsus distinctly curved dorsally; claw-joint of fore tarsus distinctly longer than the rest together (48 : 32), relative length of hind tarsal joints as follows:—15 : 7 : 8 : 30.

Length : 18–21 mm ; width : 6.7–7.8 mm.

Holotype : ♂, Rante Pao, C. Sulawesi, 2. VI. 1984, M. TAO leg. Paratypes : 1 ♂ and 5 ♀♀ ; 1 ♂, Pulau Melah, Java, 20. V. 1982, M. TAO leg. ; 2 ♀♀, same locality

and collector as for holotype, 14. VI. 1982 & 17. II. 1985; 1 ♀, Coffee plant, Sulawesi, 12. VI. 1982, M. TAO leg.; 1 ♀, Palopo, Sulawesi, 7. VI. 1982, M. TAO leg.; 1 ♀, nr. Poso, C. Sulawesi, 7. II. 1990, M. ITOH leg.

Holotype is deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo and paratypes are deposited in the private collections of Mr. K. MASUMOTO, Yokohama and of mine.

The new species is closely allied to *S. corallipes* HOPE, but it is distinctly different in the following points: The widest point of pronotum situated before base, whereas in *S. corallipes* situated at base, the male genitalia more strongly curved in lateral view as shown in Figs. 5a-c, the stria punctures of the elytra more distinct, becoming denser and stronger in lateral portions, the rugulae of the elytral intervals never reaching the striae with their punctures, the punctures of the abdominal segments sparser.

Acknowledgements

In autumn of 1989, many tenebrionid specimens from Southeast Asia obtained by Mr. KIMIO MASUMOTO were submitted to me for study. I will examine these materials together with the SHIBATA Collection in this series from now on. I wish to express my hearty thanks to Mr. KIMIO MASUMOTO, Laboratory of Entomology, Tokyo University of Agriculture, for his warmest assistance in giving me the opportunity of studying the Asian tenebrionids.

A New Species of the Genus *Madrasostes*
from Japan
(Coleoptera, Ceratocanthidae)

By TERUO OCHI

Abstract A new ceratocanthid species, *Madrasostes hisamatsui* sp. nov., is described from Ishigakijima Is. and Iriomotejima Is. of the Yaeyama Islands, Japan.

Three years ago Mr. SADANARI HISAMATSU of Ehime University reported the occurrence of a strange beetle of Ceratocanthidae from Ishigakijima Is. of the Ryukyus at the annual meeting of the Shikoku branch of the Entomological Society of Japan. This is the first record of this family from Japan, which was unknown to us at that time.

A little earlier than this, another interesting species of this family had been discovered by the Osaka University Biology Club from Nakanoshima Is. of the Tokaras. Two friends of mine and I were entrusted with the study of these interesting materials by the Osaka University Biology Club. As the first step, we had the loan of two specimens which had been collected from Iriomotejima Is. and preserved in the Osaka Museum of Natural History and compared these ones with the specimens from the Tokaras. After close examination, we came to the following conclusion: Both the specimens from Nakanoshima Is. and Iriomotejima Is. belong to the ceratocanthid genus *Madrasostes* PAULIAN, 1975, but are apparently different, though closely related to each other and so new to science.

In 1990, we published the results of our research, which includes original description of the species from Nakanoshima Is. and its ecological note in the Japanese Journal of Entomology, Vol. 58 (1).

The species from Yaeyama Islands, however, has been still undescribed. So, I will describe HISAMATSU's species here with his consent.

Before going further, I wish to express my hearty thanks to Mr. SADANARI HISAMATSU, who gave me an opportunity to study this interesting species and kindly loaned me the valuable specimen preserved in the collection of the Entomological Laboratory, Ehime University, Matsuyama. I am deeply indebted to Messrs. YORIO MIYATAKE and ITARU KANAZAWA for the loan of the specimens in the Osaka Museum of Natural History. Special thanks are also due to Mr. HISAYUKI ARIMOTO for taking photographs in this paper.

Madrasostes hisamatsui sp. nov.

(Figs. 1-10)

Body convex, strongly shining, entirely black, ventral surface dark reddish brown; antennae reddish brown; legs almost black except reddish femora.

Head subpentagonal, broader than long (1.7 : 1.2); clypeus broadly and triangularly produced at the middle, with the margin distinctly serrate, median tooth acute; genae weakly produced, with genal angles obtuse, genal margin distinctly sinuate posteriorly; eyes rather small and narrow from dorsal aspect; ocular canthus broad, well developed posteriorly, and extending to apical five-sixths of eye; clypeo-genal suture very weak, slightly notched at the margin; surface densely, deeply and unevenly covered with large elliptical punctures in post-median part and at apical part, strongly and arcuately sculptured before the middle, all the punctures and sculptures arranged in almost concentric circles; antennae ten-segmented.

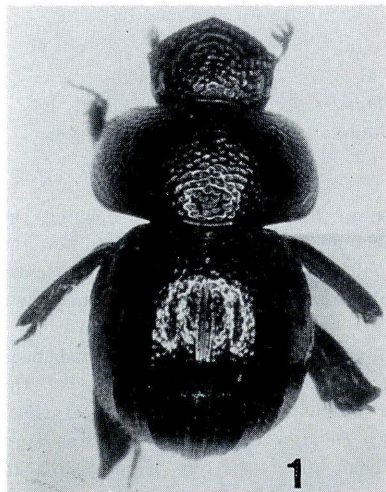
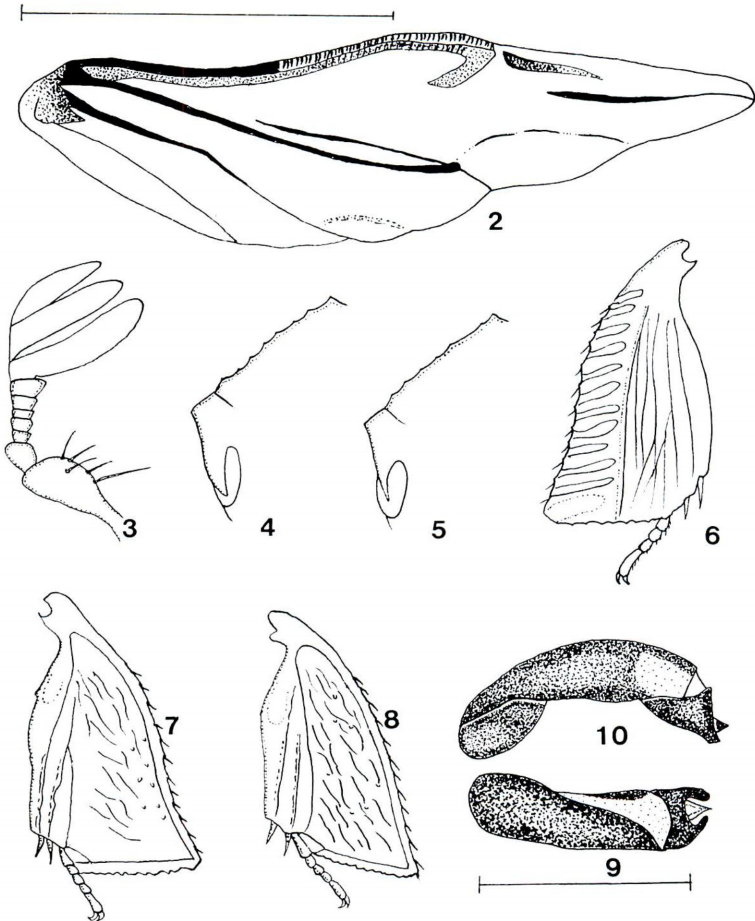


Fig. 1. *Madrasostes hisamatsui* sp. nov. (dorsal view).

Pronotum simple, strongly convex, and broader than long (2.9 : 1.8); apical margin bisinuate, broadly bordered by a double ridge; lateral margins broadly rounded in posterior two-thirds, then slightly sinuate to apical angles, which are widely truncate, with the inner angle obtusely angulate and the outer rounded; lateral border gradually broadened from apex to base; basal margin slightly bisinuate, widely and roundly produced at the middle, where the marginal line is broadest; surface coarsely and densely covered with horseshoe-shaped punctures which are open anteriorly, each bearing a fine yellowish seta, the interspace between punctures shining and smooth. Scutellum densely and confluent covered with a few transverse horseshoe-shaped punctures in the middle.

Elytra convex, about as wide as long (2.8 : 2.8), and almost circular in outline; disc with four weak dorsal longitudinal costae, the first costa most strongly defined near apex, gradually fading away before the middle, the second almost the same as the first, but developed better,

the third defined in posterior two-thirds and fourth defined in posterior half, sutural margin bearing a fine median stria in posterior two-thirds, the first interval medially bearing two irregular striae in posterior two-thirds, the second and third also bearing two similar striae in posterior half, the fourth bearing three distinct deep striae, of which the outer one is longer than the rest, the fifth bearing a deep and broad stria in



Figs. 2-4, 6-7, 9-10, *Madrasostes hisamatsui* sp. nov.; 5, 8, *Madrasostes kazumai* OCHI, JOHKI et NAKATA.

2, hind wing (scale, 2 mm); 3, antenna, dorsal view; 4, 5, heads, dorsal view; 6, metatibia, ventral view; 7, 8, metatibiae, dorsal view; 9, aedeagus, dorsal view (scale, 1 mm); 10, aedeagus, lateral view.

the middle extending from apex to humeral area, and also bearing a similar short stria in basal third near lateral margin; surface shallowly, somewhat densely and unevenly covered with horseshoe-shaped punctures, which are open posteriorly, longitudinally and rather regularly arranged, setigerous, and larger than those on pronotum, the inner part between two median striae of the first to third intervals almost impunctate and smooth. Hind wings short, distinctly reduced, about 4 mm in length.

Epipleura with a carina strongly elevated in basal half, then gradually becoming obsolete posteriorly. Protibiae rather stout, each with two external teeth, the first one of which is acute and the second blunt; the outer margin serrate behind the teeth. Mesotibiae oblong, 3.2 times as long as wide, with the inner margin distinctly sinuate, the outer serrate. Metatibiae subtriangular, about twice as long as wide; ventral surface broadly and longitudinally elevated and bearing several longitudinal carinae on the inner part, transversely sculptured on the outer part; dorsal surface longitudinally elevated and bearing three longitudinal carinae on the inner part, obliquely and somewhat densely rugose on the outer part; outer margin serrate, with apical angle pointed. Metatarsi distinctly shorter than the apical width of metatibiae.

Male genitalia as illustrated.

Length : 5.4-5.7 mm; width : 2.8-2.9 mm.

Holotype: ♀, Mt. Bannadake, Ishigakijima Is., Yaeyama Islands, the Ryukyus, Southwest Japan, 9. IV. 1974, T. KINOSHITA leg. Paratypes: 1 ♂, Shirahama, Iriomotejima Is., Yaeyama Islands, 10. III. 1975, M. TANAKA leg.; ditto, 1 ♀, 12. III. 1975, M. TANAKA leg.; 1 ex., Nakamagawarindo, Iriomotejima Is., 12. X. 1989, T. NONAKA leg.; 16 exs., Urasoko, Ishigakijima Is., 22. III. 1990, T. NONAKA & T. HANATANI leg.; 19 exs., Mt. Omotodake, Ishigakijima Is., 25. III. 1990, T. NONAKA & T. HANATANI leg.

The holotype is deposited in the Entomological Laboratory, Ehime University.

Notes. The present new species is closely allied to *M. kazumai* OCHI, JOHKI et NAKATA from the Tokaras, but differs from it in the following characteristics: 1) eye smaller and narrower, and the ocular canthus well developed posteriorly and extending to apical five-sixths of eye, while in *M. kazumai*, it is large and broad, and the ocular canthus is not much developed and extending to apical two-thirds of eye: 2) elytra almost circular in outline, and disc with four weak dorsal longitudinal costae, while in *M. kazumai*, they are subrectangular in outline, and the disc has four strongly and distinctly defined costae.

Madrasostes kazumai OCHI, JOHKI et NAKATA

Madrasostes kazumai OCHI, JOHKI et NAKATA, 1990, Jpn. J. Ent., 58 (1) : 31-34.

Specimen examined: 1 ♀, Kusunoki, Nakanoshima Is., the Tokaras, Southwest Japan, 25. VIII. 1989, H. OKADA leg.

Complementary description. Hind wings short, distinctly reduced, about 3.5 mm in length. Metatibiae subtriangular, with dorsal surface longitudinally elevated and bearing three longitudinal carinae on the inner part, densely and obliquely rugose on the outer part; outer margin serrate, with apical angle sharp and spinose at the tip.

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On the Geographical Distribution of Some Leaf Beetles
in Korea with a Description of *Psylliodes takizawai* sp. n.
(Coleoptera, Chrysomelidae)

By BLAGOY GRUEV

University of Plovdiv, Bulgaria

The paper presents a list of 57 species of Lamprosomatinae, Eumolpinae, Chrysomelinae, Alticinae, Hispinae and Cassidinae collected in Korea. Five of the species (*Altica fragariae*, *Aphthona chinensis*, *Crepidodera nigricoxis*, *Phyllotreta austriaca* and *Sphaeroderma balyi*) are herein newly recorded to the fauna of the Korean Peninsula, and one — *Psylliodes takizawai* — is new to science.

I thank Dr. P. BERON, Dr. M. JOSIFOV, Dr. S. ANDREEV and Dr. A. POPOV of the National Natural History Museum, Sofia for collecting materials; Dr. O. MERKL of the Hungarian National Museum, Budapest and Dr. R. DEMOISSEAU of the Institut Royal des Sciences Naturelles de Belgique, Bruxelles for loan of materials; Mrs. S. SHUTE of the British Museum (Natural History) for comparing the specimens of *Aphthona chinensis* with the type; Dr. H. TAKIZAWA of the Japan Tobacco Inc., Kanagawa and Dr. M. DACCORDI of the Museo Civico di Storia Naturale, Verona for identification of some of the species; Prof. Dr. S. KIMOTO of the University of Kurume for various and valuable assistance.

Abbreviations:

- AV, LZ — A. VOJNITS et L. ZOMBORI leg.
B — Hungarian National Museum, Budapest.
BG — B. GRUEV leg.
Bx — Institut Royal des Sciences Naturelles de Belgique, Bruxelles.
D, D — DELY et DRASKOVITS leg.
GC — Author's collection.
HS, TV — H. STEINMANN et T. VASARHELYI leg.
HT — Dr. H. TAKIZAWA det.
JP, AV — J. PAPP et A. VOJNITS leg.
MD — Dr. M. DACCORDI det.
MJ — Dr. M. JOSIFOV leg.
PB — Dr. P. BERON leg.
PB, AP — Dr. P. BERON et Dr. A. POPOV leg.
PB, SA — Dr. P. BERON et Dr. S. ANDREEV leg.
S — National Natural History Museum, Sofia.
T, F — TOPÁL et FORRÓ leg.

Subfamily **Lamprosomatinae***Oomorphoides cupreatus* (BALY, 1873)

Lamprosoma cupreatum BALY, 1873, Trans. Ent. Soc. London: 82.

Kangwon-do, Kumgang-san, 19. IX. 1980, T, F, 1 ex. (B), HT.

Known in Korea from: Myoko-san; Kyonggi-do, Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo) nr. Kaesong; Kangwon-do, Kumgang-san, Go-song chon; Palkong-san; Kangwon-do, Seolag-san (GRESSITT & KIMOTO, 1961; GRUEV, 1978; TAKIZAWA, 1980, 1985).

Oomorphoides nigrocoeruleus (BALY, 1873)

Lamprosoma nigrocoeruleum BALY, 1873, Trans. Ent. Soc. London: 82.

Pyongyang Pukdo, Myonhyang-san, on the trek to Isonnam-waterfall, grassy place, 14. IX. 1986, BG, 1 ex. (GC).

Known in Korea from: Kangwon-do, Kumgang-san, Guriong chon (GRUEV, 1978).

Subfamily **Eumolpinae***Aoria rufotestacea* FAIRMAIRE, 1889

A. rufotestacea FAIRMAIRE, 1889, Ann. Soc. Ent. France, ser. 6, 9: 70.

Hwanghae-do, Suyang-san nr. Haeju, 7. VI. 1987, PB, 1 ex. (GC).

Known in Korea from: Kangwon-do, Kumgang-san; Palkong-san (GRUEV, 1978; TAKIZAWA, 1980).

Basilepta fulvipes (MOTSCHULSKY, 1860)

Nodostoma fulvipes MOTSCHULSKY, 1860, In SCHRENCK's Reisen Amurl., 2: 176.

Pyongyang Namdo, Pyongyang, 6. VIII. 1982, PB, AP, 1 ex. (GC), 27. VII. 1989, MJ, 1 ex. (GC), Taesong-ho, 13. IX. 1979, HS, TV, 2 exs. (B), Ryongak-san, 12 km west from Pyongyang, 17. VII. 1974, MJ, 2 exs. (GC); Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 4 exs. (GC).

Known in Korea from: North Korea; Pyongyang Pukdo; Pyongyang Namdo; Pyongyang; Sa-gam; Pyong-sung; Tesson; Kangwon-do, Kumgang-san; Suyong-san nr. Haeju; Daesong-san; Taegu; Palkong-san; Dongmeong; Sainei; Cheju-do (GRESSITT & KIMOTO, 1961; GRUEV, 1978, 1980; TAKIZAWA, 1980, 1985).

Basilepta pallidulum (BALY, 1874)

Nodostoma pallidulum BALY, 1874, Trans. Ent. Soc. London: 169.

Kangwon-do, Thesong nr. Kosong, 13-17. VIII. 1977, MJ, 3 exs. (GC).

Known in Korea from: Kangwon-do, Gang-won, Ok-ru gong, Kumgang-san (GRUEV, 1980).

Bromius obscurus (LINNAEUS, 1758)

Chrysomela obscura LINNAEUS, 1758, Syst. Nat., ed. 10 : 375.

Pektu-san, 2,000-2,500 m, 18. VII. 1977, D, D, 1 ex. (B); Yangkang-do, Samch'on, 5. IX. 1989, MJ, 1 ex. (GC).

Known in Korea from: Pyongyang Pukdo, Myonhyang-san (TAKIZAWA, 1985).

Chrysochus chinensis BALY, 1859

Ch. chinensis BALY, 1859, Ann. Mag. Nat. Hist., (3) 4 : 125.

Seoul, 2 exs. (Bx).

Known in Korea from: Heian-Hokudo, Kankyo-Nando; Inch'on (Chemulpo); Tae-gu; Seoul; Suwon; Hwanghae-do, Kugatsu-san; Taiyudong (GRESSITT & KIMOTO, 1961; TAKIZAWA, 1980, 1985).

Demotina modesta BALY, 1874

D. modesta BALY, 1874, Trans. Ent. Soc. London : 164.

Kangwon-do, Kungang-san, IX. 1960, 1 ex. (GC).

Known in Korea from: Taegu, Palkong-san; Dongmeong; Cheju-do (TAKIZAWA, 1980, 1985).

Pagria signata (MOTSCHULSKY, 1858)

Metachroma signata MOTSCHULSKY, 1858, Etud. Ent., 7 : 110.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 14 exs. (GC); Pyongyang Namdo, Taesong-ho, 13. IX. 1979, HS, TV, 7 exs. (B); Kangwon-do, Kungang-san, Samil-po, 9. VIII. 1977, MJ, 3 exs. (GC); Suyang-san nr. Haeju, 300 m, 16. IX. 1989, MJ, 4 exs. (GC); Ryanggang-do, Hyesan, 8. X. 1978, AV, LZ, 1 ex. (B); Hwanghae-do, Songhwa, 17. IX. 1979, HS, TV, 3 exs. (B).

Known in Korea from: Kangwon-do, Kungang-san, Samil-po, Go-song chon; Pyongyang Namdo, Pyongyang; Tesson; Pyong-sung-li, Zamo-san; Taegu, Kumi nr. Taegu; Palkong-san; Dongmeong; Cheju-do (GRUEV, 1978, 1980; TAKIZAWA, 1980, 1985).

Subfamily **Chrysomelinae***Chrysolina aurichalcea* (MANNERHEIM, 1825)

Chrysomela aurichalcea MANNERHEIM, 1825, In HUMMEL, Essais Ent., 4 : 39.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 11 exs. (GC), 28. VIII. 1989, MJ, 1 ex. (GC), Myonhyang-san, Chongchon Valley, 12. IX. 1980, T, F, 2 exs. (B); Pyongyang Pukdo, 10-12. VI. 1987, PB, 1 ex. (GC); Pyongyang Namdo, Yonpung-ho, 10 km southwest from Kaechon, 1. X. 1978, AV, LZ, 1 ex. (B) and Taesong-ho, 26. IX. 1978, AV, LZ, 1 ex. (B); Hwanghae-do, Sinpyong, Pyonghwa-ri, 14. X. 1978, AV, LZ, 1 ex. (B) and Sohung-ho, 20 km southeast from Sariwon, 29. IX. 1978, AV, LZ,

1 ex. (B); Kangwon-do, Kumgang-san, 18. IX. 1980, T, F, 4 exs. (B).

Known in Korea from: Pektu-san; Dongmeong; Palkong-san; Cheju-do (GRUEV, 1980; TAKIZAWA, 1980, 1985).

Chrysolina exanthematica (WIEDEMANN, 1821)

Chrysolina exanthematica WIEDEMANN, 1821, In GERMAR, Mag. Ent., 4 : 178.

Pyongyang Namdo, Pyongyang, Lyongak-san, 20. IX. 1979, HS, TV, 1 ex. (B);
Pyongyang Pukdo, Myonhyang-san, Chonchon Valley, 12. IX. 1980, T, F, 2 exs. (B).

Known in Korea from: North Korea; Cheju-do (GRESSITT & KIMOTO, 1963; JOLIVET, 1975).

Chrysolina interlucea MEDVEDEV, 1970

Ch. interlucea MEDVEDEV, 1970, Trudy biol.-pochvenn. Inst., Vladivostok, 2 : 159.

Pyongyang Pukdo, Myonhyang-san, on the trek to Isannam-waterfall, grassy place in a wood, 16. IX. 1986, BG, 1 ex. (GC), MD.

Known in Korea from: North Korea, nr. Pyongyang (MEDVEDEV, 1970).

Chrysolina sulcicollis (FAIRMAIRE, 1887)

Chrysolina sulcicollis FAIRMAIRE, 1887, Rev. d'Ent., 6 : 330.

Kangwon-do, Kumgang-san, 50-400 m, 25. VIII. 1982, PB, SA, 1 ex. (GC), HT.

Known in Korea from: Gensan; Kyonggi-do, Odae-san (GRESSITT & KIMOTO, 1963; TAKIZAWA, 1985).

Chrysolina virgata (MOTSCHULSKY, 1860)

Dlochrysa virgata MOTSCHULSKY, 1860, In SCHRENCK's Reisen Amurl., 2 : 224.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, along spring-shore, BG, 1 ex. imago and 2 exs. larvae (GC).

Known in Korea from: Gensan; Seichin; Cheju-do; Kwang-nung; Kyonggi-do; Sogwangsa (BECHYNÉ, 1950; GRESSITT & KIMOTO, 1963; TAKIZAWA, 1985).

Chrysolina populi LINNAEUS, 1758

Ch. populi LINNAEUS, 1758, Syst. Nat., ed. 10 : 370.

Seoul, 1 ex. (Bx).

Known in Korea from: North Korea; Keisho-Hokudo; South Korea; Suigen; Kim Hon-kyu; Inch'on (Chemulpo); Cheju-do; Unggi; Kengi nr. Kaesong; Kyongsangbuk-do, Yangsa nr. Pohang; Kyonggi-do, Seoul; Suwon; Pyongyang Pukdo, Myonhyang-san; Hamkyong Pukdo, Najin; Tayudong, Sainei (GRESSITT & KIMOTO, 1963; KIMOTO & KAWASE, 1966; JOLIVET, 1975; GRUEV, 1978; TAKIZAWA, 1985).

Gastrolina depressa BALY, 1859

G. depressa BALY, 1859, Ann. Mag. Nat. Hist., (3) 4 : 61.

Pyongyang Pukdo, Myonhyang-san, 400-700 m, 12. VIII. 1982, PB, AP, 5 exs. (S, GC).

Known in Korea (KIMOTO, 1964, no detailed data).

Gonioctena fulva (MOTSCHULSKY, 1860)

Spartophila fulva MOTSCHULSKY, 1860, Etud. Ent., 9: 41.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC).

Known in Korea from: Palkong-san; Kangwon-do, Seolag-san; Hamkyong Pukdo, Najin (TAKIZAWA, 1980, 1985).

Paropsides duodecimpustulatus var. *hieroglyphica* GEBLER, 1825

P. duodecimpustulatus var. *hieroglyphica* GEBLER, 1825, In HUMMEL, Essais Ent., 4: 55.

Kangwon-do, Kumgang-san, Ryukhaam, VII. 1961, 1 ex. (GC), MD.

Known in Korea (CHÛJÔ, 1941).

Phaedon brassicae BALY, 1874

Ph. brassicae BALY, 1874, Trans. Ent. Soc. London: 174.

Pyongyang Pukdo, 10-12. VI. 1987, PB, 1 ex. (GC).

Known in Korea (KIMOTO, 1969, no detailed data).

Plagioderia versicolora (LAICHARTING, 1781)

Chrysomela versicolora LAICHARTING, 1781, Verz. Tirol. Ins., 1: 148.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 1 ex. (GC), Sa-gam Lake, 15. IX. 1979, HS, TV, 1 ex. (B); Pyongyang Namdo, Chinnamp'o (Namp'o), 13. IX. 1986, BG, 1 ex. (GC); Yonpung-ho nr. Kaechon, AV, LZ, 1 ex. (B).

Known in Korea from: Keisho-Hokudo; North Korea; Dagelet; Dock-do; Kangwon-do, Kumgang-san; Pyongyang Pukdo, Sa-gam Lake; Pyongsung-do, Bek-sung-li; Zamo-san; Pyongyang Namdo, Chinnamp'o (Namp'o), Vaudo, Pyongyang; Taegu; Palkong-san; Kangwon-do, Seolag-san; Tesson (GRESSITT & KIMOTO, 1963; JOLIVET, 1974; GRUEV, 1978, 1980; TAKIZAWA, 1980, 1985).

Subfamily **Alticinae**

Altica ampelophaga koreana (OGLOBLIN, 1925)

Haltica koreana OGLOBLIN, 1925, Rev. Russ. d'Ent., 19, 2: 93.

Yangkang-do, Samch'on, 5. IX. 1989, MJ, 1 ex. (GC). Aedeagus examined.

Known in Korea from: Seishin; Suigen; Mt. Mozan-Rei, Mozan-Gun, Kankyo-Hokudo; Ryanggang, Karim River nr. Bochonbo; Ryanggang, Chann Plateau nr. Samziyan; Pektu-san, Explosion Lake (OGLOBLIN, 1925; CHÛJÔ, 1942; GRUEV, 1980).

Altica caerulescens (BALY, 1874)

Graptodera caerulescens BALY, 1874, Trans. Ent. Soc. London: 190.

Pyongyang Namdo, Pyongyang, Lyongak-san, 20. IX. 1979, HS, TV, 1 ex. (B), Kyollyong Basin, 30 km north from Pyongyang, 30. IX. 1978, AV, LZ, 6 exs. (B), Taesong-ho, 13. IX. 1979, HS, TV, 1 ex. (B); Hwanghae-do, Songwan, 17. IX. 1979, HS, TV, 4 exs. (B).

Known in Korea from: Suigen; Sakusyu; Syoyo-san; Zen-san, Seiryori; Keizyo; Keiki-do; Dagelet; Dock-do; Sokom nr. Sunan; Pyongyang Namdo, Bongwa-ri, Lyongak-san, Pyongyang, Bongha-ri nr. Tedong River; Kyonggi-do, Pakyon-san (Bagyon-san), Sanchon tong nr. Kaesong; Kangwon-do; Cheju-do (JOLIVET, 1974; GRUEV, 1978).

Altica fragariae (NAKANE, 1955)

Haltica fragariae NAKANE, 1955, Sci. Rep. Saikyo Univ., 2, 1: A 38, pl. 3, fig. 20. Pyongyang Namdo, Chinnamp'o (Namp'o), 13. IX. 1986, BG, 1 ex. (GC). Aedeagus examined.

Known from Japan and China. New to Korea.

Altica oleracea (LINNAEUS, 1758)

Chrysomela oleracea LINNAEUS, 1758, Syst. Nat., ed. 10: 372.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 1 ex. (GC). Aedeagus examined.

Known in Korea from: Kangwon-do, Chonne, Kumgang-san; Pektu-san; Pyongyang Namdo, Tesson; Pyongyang Pukdo, Myonhyang-san, Sangwon-am; Hwanghae-do, Kaesong, Pakyon-san (Bagyon-san) (WARCHALOWSKI, 1969; GRUEV, 1978, 1980).

Aphthona chinensis BALY, 1877

A. chinensis BALY, 1877, Trans. Ent. Soc. London: 295.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 2 exs. (females) (GC). Compared with the type in British Museum (Natural History) by Mrs. SHARON L. SHUTE. Aedeagus examined.

Aedeagus (fig. 1) narrowed in apical part, with apex semicircular; underside with a very slightly raised longitudinal keel in the middle and with weak irregular oblique ridges near the keel; upperside with depressed concave area in the middle; profile slightly curved apically.

Known from East China. New to Korea.

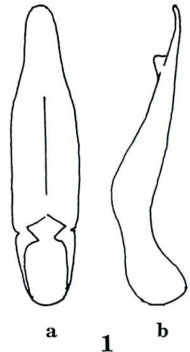


Fig. 1. Aedeagus of *Aphthona chinensis* BALY.
a. ventral view; b. lateral view.

Aphthona modesta WEISE, 1887

A. modesta WEISE, 1887, Arch. Naturgesch.: 200.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC), Myonhyang-san, Mutung-waterfall, 14. IX. 1980, T, F, 20 exs. (B); Kangwon-do, Kumgang-san, 12. X. 1978, AV, LZ, 42 exs. (B), 27. IX. 1979, HS, TV, 5 exs. (B).

Known in Korea from: Cheju-do; Kangwon-do, Kumgang-san; Manmul-san, Guryon chon; Pyongyang Namdo, Pyongyang; Hwanghae-do, Kaesong; Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo), San-chon tong (HEIKERTINGER, 1944; GRUEV, 1977, 1978).

Batophila acutangula HEIKERTINGER, 1921

B. acutangula HEIKERTINGER, 1921, Kol. Rundschau, 9: 91.

Pyongyang Pukdo, Myonhyang-san, on the trek to Isonnam-waterfall, 14. IX. 1986, BG, 2 exs. (GC); Kangwon-do, Kumgang-san, 12. X. 1978, AV, LZ, 2 exs. (B).

Known in Korea from: Hamkyong Pukdo, Kyongsong, Onp'o-ri; Hamkyong Namdo, Ch'ongjin; Pyongyang Namdo, Pyongyang; Pyongyang Pukdo, Myonhyang-san, Munsu-tong Valley, Sangwon-am; Ryanggang, Chann-Pay, Sam-zi-yan; Kangwon-do, Kumgang-san, Manmul-san; Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo); Palkong-san; Pektu-san (WARCHALOWSKI, 1969; GRUEV, 1978, 1980; TAKIZAWA, 1980).

Chaetocnema breviuscula (FALDERMANN, 1837)

Haltica breviuscula FALDERMANN, 1837, Nouv. Mém. Mosc., 5: 349.

Pyongyang Namdo, Chinnamp'o (Namp'o), salt place at sea side, 13. IX. 1986, BG, 2 exs. (GC).

Known in Korea from: Hamkyong Namdo, Chikha-ri, Ch'ongjin (GRUEV, 1977).

Chaetocnema concinnicollis (BALY, 1874)

Plectroscelis concinnicollis BALY, 1874, Trans. Ent. Soc. London: 208.

Pyongyang Namdo, Pyongyang, 6. VIII. 1982, PB, AP, 1 ex. (GC); Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 1 ex. (GC).

Known in Korea from: Pyongyang Namdo, Sa-gam, Pyongyang-City Park; Hwanghae-do, Pakyon-san (Bagyon-san) nr. Kaesong; Hamkyong Namdo, Ch'ongjin-ho; Kangwon-do, Chonne; Pyongyang Pukdo, Myonhyang-san, Munsu-tong Valley; Taegu, Kumi nr. Taegu; Palkong-san; Dongmeong (WARCHALOWSKI, 1969; GRUEV, 1978, 1980; TAKIZAWA, 1980).

Chaetocnema heikertingeri LJUBISHEV, 1963

Ch. heikertingeri LJUBISHEV, 1963, Rev. Ent. USSR, 42, 4: 858-863.

Kangwon-do, Thesong nr. Kosong, 28. VIII. 1989, MJ, 2 exs. (GC). Aedeagus examined.

Known in Korea from: Pyongyang Namdo, Tesson; Pyongyang Pukdo, Sa-gam (GRUEV, 1980).

Chaetocnema kimotoi GRUEV, 1980

Ch. kimotoi GRUEV, 1980, Ent. Rev. Japan, 34, 1/2 : 35.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 1 ex. (GC).

Known in Korea from: Pektu-san; Pyongyang Pukdo, Sa-gam; Kangwon-do, Kungang-san (GRUEV, 1980).

Chaetocnema koreana CHÛJÔ, 1942

Ch. koreana CHÛJÔ, 1942, Trans. Nat. Hist. Soc. Formosa, 32 : 33.

Yangkang-do, Samch'on, 5. IX. 1989, MJ, 7 exs. (GC). Aedeagus examined.

Known in Korea from: Bazi-san, Kankyo-Hokudo; Kangwon-do, Kungang-san; Pyongyang Pukdo, Sa-gam; Pektu-san (CHÛJÔ, 1942; GRUEV, 1978, 1980; TAKIZAWA, 1980).

Crepidodera mroczkowskii (WARCHALOWSKI, 1969)

Chalcoides mroczkowskii WARCHALOWSKI, 1969, Ann. Zool. Warsz., 27, 11 : 230.

Hwanghae-do (Hwanghae Namdo), Yangkang-do, Samch'on, X. 1980, 1 ex. (GC). Aedeagus examined.

Known in Korea from: Hamkyong Namdo, Ch'ongjin-si, Musan-ryong; Hamkyong Pukdo, Kyongsong, MehYang-ri; Pyongyang Pukdo, Myonhyang-san, Hapiro Valley (WARCHALOWSKI, 1969).

Crepidodera nigricoxis ALLARD, 1878

C. nigricoxis ALLARD, 1878, In SCHNEIDER et LEDER, Beitr.

Kauk. Käfern. Verh. Naturf. Brünn, 17 : 340.

Yangkang-do, Samch'on, 5. IX. 1989, MJ, 2 exs. (GC).

Spermatheca examined (fig. 2). No differences between the European and the Korean specimens (coloration, puncturation, spermatheca etc. ; s. GRUEV, 1975—*Chalcoides nigricoxis*).

Known from Southeastern Europe and Caucasus. New to Korea and respectively to East Asia.



2

Fig. 2. Spermatheca of *Crepidodera nigricoxis* ALLARD.

Hemipyxis plagioderoides (MOTSCHULSKY, 1850)

Oedionichis? plagioderoides MOTSCHULSKY, 1850, Etud. Ent., 9 : 27.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 2 exs. (S, GC).

Known in Korea from: Kangwon-do, Kungang-san, Manmul-san, Go-song chon; Hwanghae-do, Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo); Kyongsangbuk, Palkong-san in Taegu; Cheju-do (GRUEV, 1978; TAKIZAWA, 1985).

Longitarsus godmani (BALY, 1876)

Thymis godmani BALY, 1876, Trans. Ent. Soc. London : 583.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC), 16. IX. 1986, BG, 1 ex. (GC), Chonchon River, 12. IX. 1980, T, F, 1 ex. (B), Pyongyang, 8. VIII. 1982, PB, AP, 1 ex. (GC); Kangwon-do, Kumgang-san, 27. IX. 1979, HS, TV, 1 ex. (B).

Known in Korea from: Pyongyang Namdo, Pyongyang, Bongha-ri; Pyongyang Pukdo, Myonhyang-san, Hyangsan, Hyngsam-ri; Palkong-san, Kyonggi-do, Seoul (WARCHALOWSKI, 1969; GRUEV, 1978; TAKIZAWA, 1980, 1985).

Longitarsus scutellaris (REY, 1873)

Thymis scutellaris REY, 1873, In MULSANT et REY, Ann. Soc. Linn. Lyon (n. s.), 20 : 231.

Pyongyang Namdo, Pyongyang, 8. VIII. 1982, PB, AP, 1 ex. (GC).

Known in Korea from: Pyongyang Namdo, Pyongyang, Changlyong-san, Desang-san, Tesson; Karim River nr. Bochonbo; Pyongyang Pukdo (GRUEV, 1978, 1980).

Longitarsus succineus (FOUDRAS, 1860)

Teinodactyla succinea FOU DRAS, 1860, Ann. Soc. Linn. Lyon (n. s.), 6 : 240, 330.

Hwanghae-do, Sonhwa, 17. IX. 1979, HS, TV, 2 exs. (B); Kangwon-do, Kumgang-san, Samil-po, 9. VIII. 1977, MJ, 9 exs. (GC).

Known in Korea from: Pyongyang Namdo, Pyongyang, Maram, Tesson; Hamkyong Namdo, Kyongsong, Onp'o-ri, Dyuyr nr. Ch'ongjin, Hongwon, Yongpong-ri; Hwanghae-do, Pakyon (Bagyon)-waterfall; Pyongyang Pukdo, Myonhyang-san, Hyangsan-chon; Changlyong-san, Pyong-sung, Beksung-li, Zamo-san; Pyongyang; Pektu-san; Kangwon-do, Kumgang-san; Kumi nr. Taegu; Palkong-san; Cheju-do (WARCHALOWSKI, 1969; GRUEV, 1978, 1980; TAKIZAWA, 1980, 1985).

Luuperomorpha preyeri (BALY, 1874)

Aphthona ? preyeri BALY, 1874, Trans. Ent. Soc. London : 198.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC).

Known in Korea from: Hwanghae-do, Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo); Pyongyang Namdo, Chinnamp'o (Namp'o), Vaudo (GRUEV, 1980).

Luuperomorpha xanthodera (FAIRMAIRE, 1888)

Luuperocnemus xanthoderus FAIRMAIRE, 1888, Ann. Soc. Ent. London, 32 : 43.

Hwanghae-do, Songhwa, 17. IX. 1979, HS, TV, 2 exs. (B); Kangwon-do, Samil-po, 29. IX. 1979, HS, TV, 1 ex. (B).

Known in Korea from: Palkong-san, Dongmeong, Taegu (TAKIZAWA, 1980).

Manobia parvula (BALY, 1874)

Crepidodera parvula BALY, 1874, Trans. Ent. Soc. London: 185.

Kangwon-do, Kumgang-san, IX. 1960, 1 ex. (GC), HT.

Known in Korea from: Kyongsangbuk-do, Haeinsa (TAKIZAWA, 1985).

Nonarthra cyaneum BALY, 1874

N. cyaneum BALY, 1874, Trans. Ent. Soc. London: 210.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 4 exs. (GC).

Known in Korea from: Pyongyang Namdo, Sunan, Sunch'on, Pyong-sung, Bek-sung-li, Zamo-san, Changlyong-san, Bongha-ri on Tedong; Hamkyong Namdo, Hongwon; Hamhyng-ri, Hamchu; Pyongyang Pukdo, Myonhyang-san, Hyngsan-chon Valley; Hwanghae-do, Kaesong, Pakyon-san (Bagyon-san); Palkong-san (WARCHALOWSKI, 1969; GRUEV, 1978, 1980; TAKIZAWA, 1980).

Philopona vibex (ERICHSON, 1834)

Haltica vibex ERICHSON, 1834, Nov. Acta 16, Suppl. 1: 273.

Kangwon-do, Kumgang-san, on the trek to Kuryon-waterfall, 50-400 m, 28. VIII. 1982, PB, AP, 1 ex. (GC).

Known in Korea (HEIKERTINGER, 1922; KIMOTO, 1965; no detailed data).

Phyllotreta austriaca HEIKERTINGER, 1909

Ph. austriaca HEIKERTINGER, 1909, Verh. zool.-bot.

Ges. Wien, 40: (9).

North Korea: "Prov. Ryang-gang, Karim River, 10 km northeast from Bochonbo, 1,100 m, 27. VII. 1975, JP, AV", 1 ex. (B). The specimen is wingless. Aedeagus (fig. 3) parallel-sided, pinched in apical part; underside with two sharp longitudinal ridges in the middle; profile with slightly curved apex.

Known from Austria, Rumania (Transsylvania), Poland and Siberia (Ussuri-land and Tomsk). New to Korea.

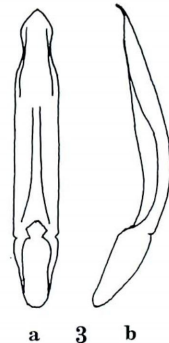


Fig. 3. Aedeagus of *Phyllotreta austriaca* HEIKERTINGER. a. ventral view; b. lateral view.

Phyllotreta kolzei WEISE, 1887

Ph. kolzei WEISE, 1887, Arch. Naturgesch., 53: 197.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC).

Known in Korea from: Hwanghae-do, Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo) nr. Kaesong (GRUEV, 1978).

Phyllotreta rectilineata CHEN, 1939

Ph. rectilineata CHEN, 1939, Sinensia, 10, 1-6 : 50.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC).

Known in Korea from: Kangwon-do, Kungang-san (GRUEV, 1978).

Phyllotreta striolata (FABRICIUS, 1803)

Crioceris striolata FABRICIUS, 1803, Index Syst. Eleuth.: 38.

Pyongyang Namdo, Pyongyang, 6. VIII. 1982, PB, AP, 6 exs. (S, GC), 20. IX. 1979, HS, TV, 1 ex. (B), Chinnamp'o (Namp'o), 22. IX. 1979, HS, TV, 2 exs. (B), 8. VII. 1974, MJ, 1 ex. (GC); Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 2 exs. (S, GC), 16. IX. 1986, BG, 2 exs. (GC); Hwanghae-do, Suyang-san nr. Haeju, 20. V. 1975, MJ, 1 ex. (GC).

Known in Korea from many localities in Hwanghae-do, Pyongyang-do, Kangwon-do, Kyongsangnam-do, Kyonggi-do, Hamkyong-do, Cheju-do (WARCHALOWSKI, 1969; JOLIVET, 1973; GRUEV, 1977, 1978; TAKIZAWA, 1980, 1985).

Psylliodes attenuata (KOCH, 1803)

Haltica attenuata KOCH, 1803, Ent. Hefte, 2 : 34.

Pyongyang Pukdo, Myonhyang-san, 16. IX. 1986, BG, 2 exs. (GC); Kangwon-do, Kungang-san, Samil-po, 9. VIII, 1977, MJ, 3 exs. (GC).

Known in Korea from: Suigen; Hokusammen; Keisho-Hokudo; Puryong, Ch'ongjin-si, Musu-ri; Pyongyang Namdo, Mang-yong dae; Pektu-san, Explosion Lake; Pyongyang; Taegu, Kumi nr. Taegu (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969; GRUEV, 1978, 1980; TAKIZAWA, 1980).

Psylliodes cucullata gansuica JACOBSON, 1922

P. cucullata gansuica JACOBSON, 1922, Ann. Mus. Zool. Acad. Sci. Russ., 23 : 526.

Pyongyang Namdo, Pyongyang, 11. IX. 1979, HS, TV, 1 ex. (B); Yongpung-ho, 10 km southwest from Kaechon, 1. X. 1978, AV, LZ, 1 ex. (B).

Known in Korea from: Pyongyang Namdo, Tesson; Pyongyang Pukdo, Sa-gam (GRUEV, 1980).

Psylliodes takizawai sp. n.

The new species was confirmed by Dr. HARUO TAKIZAWA.

Locus typicus. North Korea: Kangwon-do, Kungang-san, Ryukhaam, 10-12. VII. 1977, netting in grasses, D, D, 1 male — holotype, Nr. 352 (B).

Diagnosis. Differs from *P. punctifrons* BALY in having surface of body strongly shagreened, mat; apical portion of hind tibia longer; aedeagus differently shaped.

Description. Body elongate elliptic, moderately convex, black with blue nuance. Antenna with basal 3 segments yellow, the rest segments brown; fore legs yellowish-red, hind femora blackish-brown. Surface of head, pronotum and elytron shagreened, weakly shining, mat. Frons densely punctured. Interantennal ridge short and wide, moderately raised. Antennae as long as $\frac{2}{3}$ of body; segments 1, 4 and 10 equal in length, longest; segments 2, 3 and 5-9 shorter, nearly equal in length. Pronotum subrectangular, clearly broader than head (with eyes), $\frac{1}{3}$ as wide as long; anterior angles prominent; disc very densely punctured. Elytron ovoid; narrowed behind middle, with humeral tubercles raised and somewhat elongate; rows of punctures not strong and deep but clear; interstices flat and densely punctured, 3-4 times broader than rows. Hind wings developed. Hind tibia slender, not curved; apical portion after joint of first tarsal segment about $\frac{1}{4}$ of tibial length. First tarsal segment broadened, as wide as third. Aedeagus (fig. 4) narrowed in apical half; underside with deep (narrowed basally) longitudinal depression; in profile regularly curved.

Length: 3 mm; width: 1.5 mm.

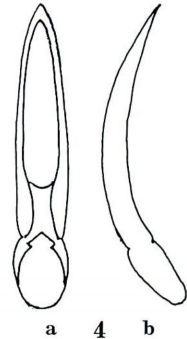


Fig. 4. Aedeagus of *Psylliodes takizawai* sp. n. a. ventral view; b. lateral view.

Sphaeroderma balyi JACOBY, 1885

S. balyi JACOBY, 1885, Proc. Zool. Soc. London: 735.

Kangwon-do, Kumgang-san, 12. X. 1978, AV, LZ, 1 ex. (B); Hwanghae-do, Kaesong, Pakyon-san (Bagyon-san), Pakyon popo (Bagyon popo), 9. IX. 1971, 1 ex. (B), HT, Suyong-san, 27. IX. 1978, AV, LZ, 2 exs. (B), HT.

Known from Japan. New to Korea.

Subfamily **Hispinae**

Dactylispa angulosa (SOLSKY, 1871)

Hispa angulosa SOLSKY, 1871, Horae Soc. Ent. Ross., 8 : 262.

Pyongyang Pukdo, Myonhyang-san, 10-12. VI. 1987, PB, 1 ex. (GC); Pyongyang Namdo, Taesong Lake, 13. IX. 1979, HS, TV, 5 exs. (B); Hwanghae-do, Sohung-ho, 20 km southeast from Sariwon, 29. IX. 1978, AV, LZ, 2 exs. (B), Pakyon (Bagyon), 20 km from Kaesong, MJ, 1 ex. (GC); Kyongsong, Onp'o-ri, 1. IX. 1970, MJ, 1 ex. (GC).

Known in Korea from many localities in all the provinces (GRUEV, 1978, 1980;

TAKIZAWA, 1980, 1985; AN, KWON & LEE, 1985).

Dactylispa excisa (KRAATZ, 1879)

Hispa excisa KRAATZ, 1879, Dtsch. Ent. Zschr., 23 : 140.

Ch'ongjin, 31. VIII. 1970, MJ, 1 ex. (GC).

Known in Korea from: Palkong-san; Sudo-san; Myonhyang-san; Kaji-san (TAKIZAWA, 1980; AN, KWON & LEE, 1985).

Hispellinus chinensis GRESSITT, 1950

H. chinensis GRESSITT, 1950, Lingn. Sci. Journ., 23 : 96.

Pyeongyang Namdo, Taesong-ho, IX. 1960, 1 ex. (GC).

Known in Korea from: Taegu; Palkong-san; Dongmeong; Sainei (TAKIZAWA, 1980, 1985).

Subfamily **Cassidinae**

Cassida fusciorufa MOTSCHULSKY, 1866

C. fusciorufa MOTSCHULSKY, 1866, Bull. Soc. Nat. Mosc., 39, 1 : 178.

Suyang-san nr. Haeju, 20. V. 1975, MJ, 1 ex. (GC); Kangwon-do, Thesong nr. Kiyang, 6. VII. 1974, MJ, 1 ex. (GC).

Known in Korea from many localities in all the provinces (CHÛJÔ, 1942; GRUEV, 1980; TAKIZAWA, 1980; BOROWIEC, 1985; AN, KWON & LEE, 1985 a).

Cassida nobilis LINNAEUS, 1758

C. nobilis LINNAEUS, 1758, Syst. Nat., ed. 10 : 363.

Yangkang-do, Samch'on, 13-19. VII. 1974, MJ, 1 ex. (GC).

Known in Korea from: Hokusammen; Hayang Up, Taegu (AN, KWON & LEE, 1985 a).

Cassida piperata HOPE, 1842

C. piperata HOPE, 1842, Proc. Ent. Soc. London, 1 : 62.

Hwanghae-do, Kaesong, 25. VIII. 1982, PB, 1 ex. (GC); Kangwon-do, Wonsan, Songdowon Park, 20. IX. 1980, T, F, 1 ex. (B), 15 km west from Wonsan, 8. VII. 1977, MJ, 1 ex. (GC); Seoul, 31. I. 1928, 1 ex. (Bx).

Known in Korea from: Chinnamp'o (Namp'o), Kokai, Seidaimongwai, Cheju-do, Hanla-san, Seoul, Pongwansa, Koegoni, Hibangsa, Taegu, Bijindo Is., Hongdo Is., Gugdo Is., Chilbal-do, Palkong-san, Deogjeog Is., Sorak-san, Kamch'on Myon, Kumo-san, Naeyo-san, Tokto Is., Ullungdo Is., Kukhan-san, Tobong-san, Yokjido Is., Odae-san, Ch'ujado Is., Jungmun Is., Galdo Is., Huksando Is., Wando Is. (GRUEV, 1977; TAKIZAWA, 1980, 1985; AN, KWON & LEE, 1985 a).

Thlaspidia lewisii (BALY, 1874)

Coptocyclus lewisii BALY, 1874, Trans. Ent. Soc. London: 214.

Pyongyang Pukdo, Myonhyang-san, 10-12, VI. 1987, PB, 1 ex. (GC); 22. V. 1987, MJ, 1 ex. (GC); Kangwon-do, Kumgang-san, 200 m, 10. VIII. 1977, MJ, 1 ex. (GC).

Known in Korea from: Kumgang-san; Palkong-san; Taegu; Bambutoso; Kongosan; Zyogen an; Myoko-san; Gucheondong; Sambang; Kwangnung; Yongmu-san; Myonhyang-san; Poch'on; Wangbang-san; Songni-san; Hibangsa; Chiri-san; Kwaesan; Ch'onma-san; Pukhan-san; Tobong-san; Kaji-san; Wonhyo-san; Ch'iaak-san; Obong-san; Odae-san; Solak-san (GRUEV, 1977; BOROWIEC, 1985; TAKIZAWA, 1985; AN, KWON & LEE, 1985 a).

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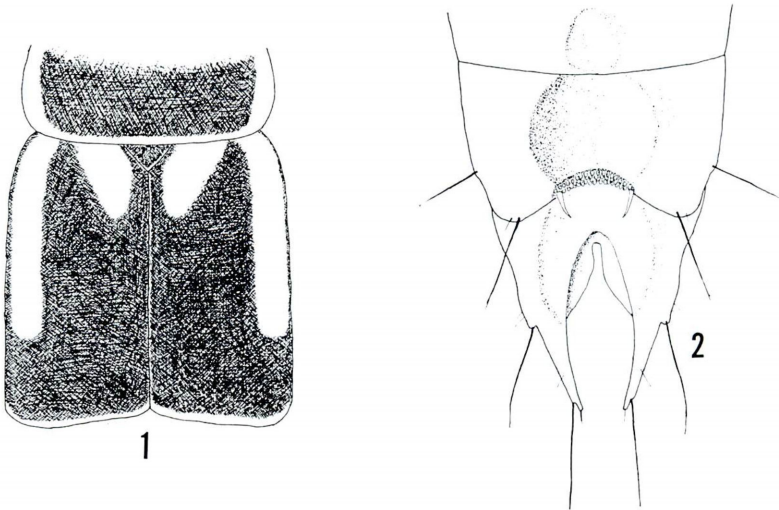
Notes on Staphylinidae from Taiwan, V.

By YASUHIKO HAYASHI

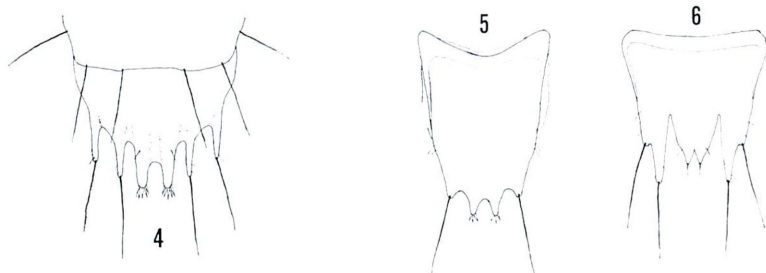
Tachinus (s. str.) *masaohayashii* sp. nov. (Figs. 1-9)

Body stout, moderately convex, weakly shining and generally covered with fine microsculpture consisting mostly of elongate meshes; dark brown, basal 2 segments of antennae and legs brownish yellow, pronotum widely yellow on lateral sides but narrowly so on both apex and base, each apex of elytra and abdominal segments also narrowly yellow, each elytron (fig. 1) with 2 yellow vittae, whose inner vitta is subtriangulate, short, neither extending behind beyond basal third nor touching suture, outer one narrow, elongate and extending behind but not touching apex or lateral margin. Length: 4.5-5.8 mm.

♂: Head nearly three-fifths as wide as pronotum, weakly convex but vaguely depressed inside antennal insertions, minutely and sparsely punctate; microsculpture fine, but a little coarser and partly irregular



Figs. 1, 2. 1, elytra; 2, ♂ 6th, 7th and 8th sternites.

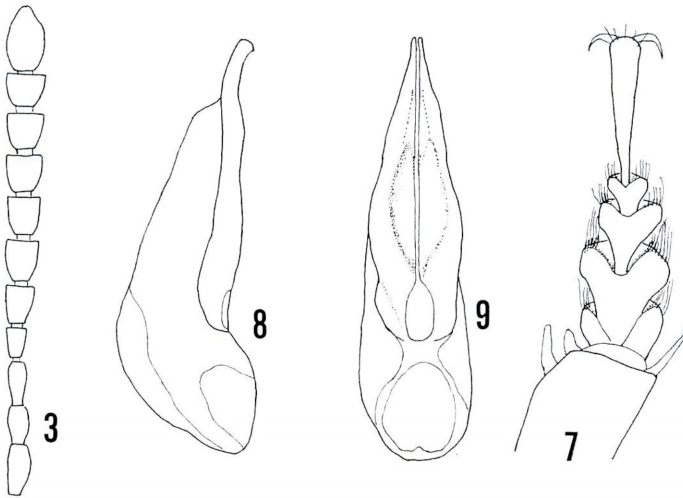


Figs. 4-6. 4, ♀ 7th and 8th sternites; 5, ♂ 8th tergite; 6, ♀ 8th tergite.

behind clypeo-frontal suture or before occiput; clypeus without visible pubescence; clypeo-frontal suture not impressed, but indicated by a fine, smooth and faintly raised line; median line fine, smooth, faintly raised, as long as longitudinal diameter of eye and running behind from the middle of clypeo-frontal suture. Antennae (fig. 3) moderately long, reaching elytral humeri enough and gradually thickened distally from 2nd segment; basal 4 segments polished, 1st to 7th and 11th segments more or less longer than wide, 8th and 9th almost as long as wide, 10th a little wider than long, and each segment with relative length as following ratios: 8.0-6.0-7.0-4.0-6.0-6.0-6.0-5.5-5.5-5.0-10.0. Mentum finely and sparsely punctate as on submentum and with finely reticulate microsculpture, submentum with transversely striolate microsculpture; gular plate weakly and evenly convex, strongly dilated behind from the middle, surface without punctures and with microsculpture conspicuous and transversely striolate on front half but transversely tiled-like on hind half.

Pronotum considerably wider than long (3 : 2), a little narrower (29 : 33) and much shorter than elytra (20 : 33), and widest at basal third; sides gently arcuate, more strongly narrowed in front than behind; front margin more or less emarginate, front angles widely rounded and feebly produced, hind margin weakly arcuate and somewhat sinuate laterally near rounded hind angles; punctures like on head, also similar microsculpture rather coarser and more irregularly arranged before the middle; median line fine, smooth and running from basal third to basal sixth.

Elytra subquadrate, nearly as long as wide, slightly dilated behind, sides nearly straight, humeral margins bearing a few small spinules, apical margin of each elytron weakly arcuate and widely rounded at outer angles; punctures a little larger than and as dense as those on pronotum, pubescence hardly visible, very thin and minute, microsculpture more strongly impressed and finer than that on pronotum.



Figs. 3, 7-9. 3, ♂ antennae; 7, ♂ right protarsus; 8, ♂ genitalia, left lateral view; 9, ditto, ventral view.

Abdomen gently narrowed toward apex, dorsal punctures like on pronotum, but seemingly roughened because of those accompanied with microgranules, and a little finer than those on ventral side; pubescence distinct, much longer than those on fore body; microsculpture on dorsal side a little finer and on ventral side slightly coarser than those of elytra; lateral bristles (sensu HAYASHI in 1987) present only on 7th segment; 3rd and 4th tergites each with a pair of median oblong tomentous flecks; 6th sternite (fig. 2) shallowly and subovally depressed medianly before apical margin, the depression more finely and sparsely punctate than as usual; 7th sternite (fig. 2) very deeply and widely depressed medianly, the depression clearly defined, minutely and sparsely punctate, with a long bristle arising from each latero-apical corner and with microsculpture much finer and weaker than as usual, on remaining area of the sternite (the area except the depression) punctures dense, coarse and elongate-oval, apical margin of this sternite widely emarginate in the middle and gently arcuate laterally, the emargination bordered by a narrow area which is coarsely and densely granulate, and bearing a curved, stout and short spine on each lateral side of the area; 8th tergite (fig. 5) quadrilobed at apex, the lobes moderately long, outer lobes a little thicker than the inner ones, reaching a level of extreme base of median incision and each with a bristle at tip, inner lobes with 3 short setae at each tip, and lateral sides each with 2 fine short

setae at the end of paratergite; 8th sternite (fig. 2) deeply bifurcate like a forceps of an earwig (Forficulidae), lateral sides weakly sinuate and weakly protuberant behind near base of the forceps, a long bristle on the protuberance, the forceps stout and long, nearly two-thirds length of the sternite, coarsely, shallowly and subovally punctate, each process with a long bristle at nick before the blunt tip, marginal area of the crotch (between the forceps) conspicuously grooved, the groove folded down inside, and surface of this sternite shallowly depressed medianly.

Profemora coarsely and very sparsely punctate, sparsely and poorly pubescent; protibiae with several markedly long and stout spines at apical and hind margins; protarsi (fig. 7) distinctly dilated in basal 3 segments; all tarsal segments not pubescent, with finely setiferous margins.

Male genitalia (figs. 8, 9) nearly symmetrical, fusiform and weakly curved ventrally; penis subfusiform, thickened toward base, rounded at apex and base, weakly chitinised and rather membranous in dorso-median part; parameres well-chitinised, subfusiform, very finely and deeply cleft (near basal orifice), a little wider in apical half than penis, adhered to penis except apical fifth, in lateral view, minutely hooked ventrally at apex, in ventral view subelliptically and deeply depressed in the middle; basal orifice small and elliptical.

♀: Hind margin of 7th sternite (fig. 4) weakly arcuate and bearing equidistantly 4 long bristles; 8th tergite (fig. 6) trilobed, deeply incised between the lobes, the median lobe triangulate, abruptly narrowed behind from near the apex, which is shallowly notched and with a fine short seta at each tip, lateral lobes narrow, stout, fully beyond median lobe, nicked about on a level of the apex of median lobe and each with 2 long bristles, one at the nick and the other at the tip; 8th sternite (fig. 4) with 3 pairs of elongate lobes, median lobes the widest, the shortest and each with 5 fine and short setae at rounded tip, intermediate lobes the narrowest, the longest and each with a long bristle at blunt tip as well as in lateral lobes, lateral lobes stout and thickened; protarsi not dilated.

Holotype: ♂, and allotype: ♀, Mt. Alishan, Chiai Hsien, 22. VI. 1971, Y. MAEDA leg. (in coll. T. SHIBATA). Paratypes: 3 ♂♂, 2 ♀♀, same data as the holotype.

The new species is very closely allied to *T. crotchii* HORN from North America in the general appearance and the male genitalia, but in the new species the elytron is bimaculate, the median lobe of the female 8th abdominal tergite is bifid at the apex, the apical margin of the male 7th sternite is rather simply and deeply emarginate and the parameres of the male genitalia are clearly cleft, while in *crotchii* the elytron has only one macula, the median lobe of the female 8th tergite is trifid at the apex, the apical margin of the male 7th sternite sinuously and shallowly emarginate and the parameres of the male genitalia are not cleft and

contiguous to each other.

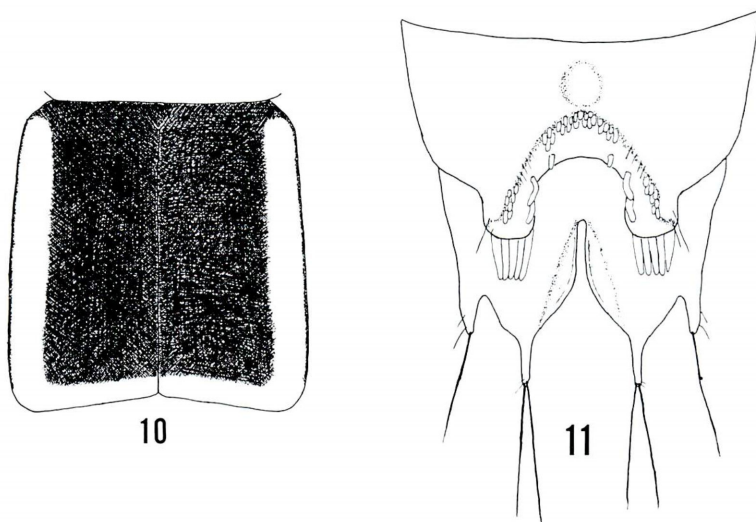
This new species belongs surely to *rufipes*-group in having similar form of the male genitalia and the secondary sexual features, and easily distinguishable from *T. rufipes* (DEGEER) from Palearctic Region, North Africa and North America by the presence of distinct elytral maculae.

The specific name is dedicated to Dr. MASAO HAYASHI, who is the managing director of the Japan Coleopterological Society and stands foremost among today's scholars of longicorn beetles.

Tachinus (s. str.) *alishanensis* sp. nov. (Figs. 10-16)

Body narrowly fusiform, moderately convex and shining; dark brown to blackish brown, mandibles pitchy, maxillary palpi yellowish pitchy, other mouth organs and legs pale yellow, basal 1 or 2 segments of antennae sordid yellow, pronotum widely yellow on lateral sides but narrowly so on apex and base, elytra (fig. 10) widely yellow along lateral sides and apex (except lateral margin), hind margins of abdominal segments narrowly yellowish. Length: 3.3-3.7 mm.

♂: Head a little narrower than two-thirds as wide as pronotum, nearly flattened, minutely and sparsely punctate; microsculpture of fine striations as a finger-print, but weak and rather coarse, which is a little coarser and partly vestigial on vertex; clypeus not pubescent except margins; clypeo-frontal suture not impressed but recognised by a weakly



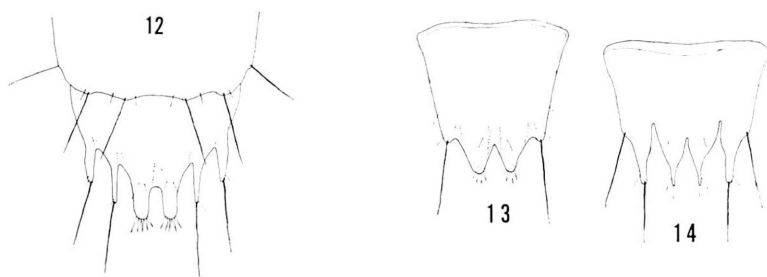
Figs. 10, 11. 10, elytra; 11, ♂ 7th and 8th sternites.

raised line; median line indicated by an interrupted fine impression, a little longer than longitudinal diameter of eye and running behind from the middle of clypeo-frontal suture. Antennae moderately long, reaching fully elytral humeri, slightly thickened distally from 3rd segment; basal 4 segments polished, basal 6 and 11th segments more or less longer than wide, 7th to 10th segments a little wider than long, and each segment with relative length as follows: 7.0-4.0-6.0-3.0-4.5-4.5-3.5-3.5-3.5-3.5-9.0. Mentum with weak microsculpture consisting of transverse elongate meshes, finely, very sparsely and irregularly punctate as well as on submentum, which is devoid of visible microsculpture; gular plate evenly and weakly convex, constricted in middle, weakly widened in front but strongly so behind, finely, deeply, closely and transversely rugose on front half but coarsely and not sparsely so on hind half.

Pronotum subquadrate, nearly two-thirds as long as wide, a little narrower (32 : 35) and much shorter than elytra (7 : 13), and widest at about basal third; sides weakly arcuate in basal two-thirds, arcuately narrowed in front from apical third; apex shallowly emarginate and a little narrower than base, apical angles more widely rounded than basal ones, base nearly straight but faintly sinuate laterally; punctures scattered as well as on head but a little coarser and shallower; microsculpture consisting of transverse, fine and weak striations, present only on narrow areas along apex and each apical half of lateral sides; median line narrow, smooth, faintly raised and long (nearly a half length of pronotum), running from base to the middle but very finely sulcate medianly.

Elytra subquadrate, a little longer than wide (38 : 35), weakly dilated behind and widest near apex, substraight on sides, very shallowly emarginate at apex and widely rounded on latero-apical angles; punctures much coarser and deeper than but nearly as dense as those on pronotum; microsculpture vestigial and almost imperceptible; humeral margins each with a few short spinules.

Abdomen gradually narrowed behind, punctures similar on pronotum but much deeper and a little coarser on sternites than on tergites; pubescence fine, recumbent, short but distinct, a lateral bristle only on each side of 7th segment; microsculpture (except on 8th segment) composed mostly of elongate meshes and fine striations radiating from punctures, rather weakened in middle of each tergite, becoming stronger behind, and slightly weaker on tergites than on sternites; 8th segment with distinct microsculpture subreticulate but without fine striations; 3rd to 6th tergites each with a pair of median elliptical tomentous flecks; 7th sternite (fig. 11) bilobed at apex, both the lobes widely distant from each other, deeply and arcuately incised between them,



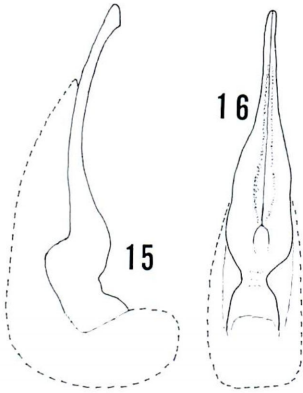
Figs. 12-14. 12, ♀ 7th and 8th sternites; 13, ♂ 8th tergite; 14, ♀ 8th tergite.

surface deeply and rather widely depressed before the incision and with a suboval, shallow hollow between the depression and basal margin, the depression sparsely, irregularly granulate in an arcuate row along basal and lateral sides, the remainder space smooth, neither punctured nor microsculptured, latero-apical angles of this sternite obtusely rounded, the lobe suboblong, not narrow, in ventral view, shallowly excavate and obliquely ridged at the base, with about 5 blunt spines at the subtruncate apex, 2 similar spines at the middle of the inner margin and several short and irregular-sized spines on the basal oblique ridge; 8th tergite (fig. 13) quadrilobed at apex, triangularly notched at the middle, the lobes short and narrowly rounded at each tip, the inner lobes each with a few fine short setae at tip, apices of the outer lobes on a level with extreme base of the median notch and each bearing a long bristle at tip, lateral margins of this tergite more or less sinuate, with a short seta at the middle instead of bristle; 8th sternite (fig. 11) quadrilobed at apex, wedgewise triemarginate among the lobes, the median emargination again narrowly and deeply incised, each lobe spine-like, rather short and straightened behind, the inner lobes strongly dilated basally and each with 2 long bristles at tip, the outer lobes bearing a long bristle at each tip, and surface of this sternite narrowly, obliquely and strongly impressed along the median incision.

Legs relatively short but not stout; protarsi with basal 3 segments weakly but distinctly dilated, and the 1st segment deeply cleft dorsally as usual; protibiae produced with several, irregular-sized stout spines; tarsi not pubescent dorsally.

Male genitalia (figs. 15, 16: my examined materials very immature, so that the penis very poorly chitinised, soft and strongly deformed in a dry condition), viewed ventrally, narrow and subfusiform; penis, viewed laterally, swelling and strongly bent at base of parameres; parameres well chitinised, weakly curved ventrally, fusiform, tumid in basal third,

subacute at tip, contiguous to each other, finely hooked near apex and shallowly depressed in fusiform on ventral side.



Figs. 15, 16. 15, ♂ genitalia, left lateral view; 16, ditto, ventral view.

♀: Antennae a little slenderer, 7th and 8th segments each almost as long as wide; 7th sternite (fig. 12) shallowly triemarginate at apical margin and equidistantly with 4 bristles near apical margin as in *T. masaohayashii*; 8th tergite (fig. 14) quadrilobed, rather narrowly, deeply and sharply incised among the lobes, the median incision a little shallower than the other ones, the inner lobes slightly beyond the outer ones and with a fine short seta at each tip, the outer lobes each with 2 bristles, one at tip and the other at weak tubercle of outer margin (the tubercle is level with extreme base

of the median incision); 8th sternite (fig. 12) quite similarly hexamerous-lobed as in *T. masaohayashii*.

Holotype: ♂, and allotype: ♀, Mt. Alishan, Chiai Hsien, 22. VI. 1971, Y. MAEDA leg. (in coll. T. SHIBATA). Paratypes: 1 ♂, 4 ♀♀, same data as the holotype.

The new species belongs certainly to *addendus*-group in having similar secondary sexual features of the male, and it is quite alike to *T. ornatus* CAMERON from India (Darjeeling) in the general appearance, the male secondary sexual features and the male genitalia, but in the new species the body is larger, the lateral vitta of the elytron is oblong and continuous to the apical fascia, 7th segment of the antennae is shorter than 6th and equal in length to each one of the succeeding 3 segments, the 11th segment distinctly longer than the preceding 2 segments together (9 : 7), while in *ornatus* the body is smaller (2-2.4 mm), the lateral vitta of the elytron is elongate-oval and located, 7th segment of the antennae is equal in length to 6th or 8th and a little longer than 9th, 11th is almost as long as the preceding 2 segments together.

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日本産マグソコガネ属について

益本 仁雄・GIOVANNI DELLACASA・木内 信

On the *Aphodius* Species of Japan

By KIMIO MASUMOTO¹⁾, GIOVANNI DELLACASA²⁾ & MAKOTO KIUCHI³⁾

日本のコガネムシ類の最初の目録は WATERHOUSE (1875) によるもので、29種のマグソコガネ属が取り上げられた。その後長い間、日本のマグソコガネ属を網羅した目録はなかったが、中根によるコガネムシ類の解説が、1951年から昆虫学評論誌上で始まり、この中で1959年から1961年にかけてマグソコガネ属が扱われた。また、1960年には野村が全コガネムシ類の目録を発表した。中根の体系は北隆館の大図鑑(中根, 1963)により一般に定着し、その後、多少の修正はあったものの、最近の保育社の図鑑(益本, 1985)、石田・藤岡の目録(1988)にも受け継がれている。

一方、ヨーロッパでは BALTHASAR (1964) が旧北区と東洋区のマグソコガネ亜科を整理した以後は、何人かの研究者により、比較的小きなグループあるいは地域を単位とした研究が進められてきた。G. DELLACASA (1983) はそれまでの研究を基に、イタリアを中心としたヨーロッパのマグソコガネ亜科を整理し、マグソコガネ属についても亜属の扱いを含めて大幅な改変を行った。

日本とヨーロッパは地理的には遠く離れているが、動物相の面では関係が深く、ヨーロッパでの分類体系の変更は、日本産の種・属等の分類にも少なからぬ影響を及ぼさざるを得ない。ここでは、これまでの知見を総合して、日本産マグソコガネ属の再整理を試みた。個々の場合については本文中でふれるが、すべての種について整理がすすんでいるわけではなく、今後、検討が進めば扱いが変わる種がでてくる可能性がある。

なお、シノニムリストには、日本とその周辺部に関係するものだけを挙げた。

Subgenus *Acanthobodilus*

Acanthobodilus DELLACASA, 1983, Mon. Mus. reg. Sci. nat. Torino, 1 : 105. Type species: *Aphodius immundus* CREUTZER, 1799.

1) Laboratory of Entomology, Tokyo University of Agriculture, 1-1, Sakuragaoka 1-chôme, Setagaya-ku, Tokyo, 156 Japan.

2) Casella Postale 921, 16121 Genova, Italia.

3) 523-302, Matsushiro 5-chôme 16, Tsukuba, 305 Japan.

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1. キバネマグソコガネ *Aphodius (Acanthobodilus) languidulus* SCHMIDT, 1916
Arch. Naturg., A, 82 (1) : 98.
=*obsoletus* WATERHOUSE, 1875, Trans. ent. Soc. London : 88.

この種はヨツボシマグソコガネとともに *Bodilus* 亜属に含められていたが, DELLACASA (1983) により新亜属 *Acanthobodilus* に移された。

Subgenus *Acrossus*

Acrossus MULSANT, 1842, Hist. nat. Col. France, Lamell. : 164. Type species :
Scarabaeus luridus FABRICIUS, 1775.

1. クロツヤマグソコガネ *Aphodius (Acrossus) atratus* WATERHOUSE, 1875
Trans. ent. Soc. London : 91.
2. イガクロツヤマグソコガネ *Aphodius (Acrossus) igai* NAKANE, 1956
Ins. Mats., 20 : 121 (*A. japonicus* ssp. *igai*).
=*japonicus* ssp. *miyakei* NAKANE, 1960, Ent. Rev. Japan, 12 : 3.
=*ssp. pseudoigai* NAKANE et MASUMOTO, 1967, Ent. Rev. Japan, 19 : 38.
=*ssp. sakuraii* NAKANE et MASUMOTO, 1967, Ent. Rev. Japan, 19 : 39.
=*ssp. tsurugianus* NAKANE et MASUMOTO, 1967, Ent. Rev. Japan, 19 : 39.
3. オオクロツヤマグソコガネ *Aphodius (Acrossus) japonicus* NOMURA et NAKANE, 1951
Kontyû, 19 : 37.
4. オオツヤマグソコガネ *Aphodius (Acrossus) rufipes* (LINNÉ, 1758)
Syst. Nat., ed. 10 : 353 (*Scarabaeus*).
=*matsuzawai* YAWATA, 1942, Trans. Kansai ent. Soc., 13 : 7.
5. トゲクロツヤマグソコガネ
Aphodius (Acrossus) superatratus NOMURA et NAKANE, 1951
Kontyû, 19 : 36.
6. クロオビマグソコガネ *Aphodius (Acrossus) unifasciatus* NOMURA et NAKANE, 1951
Kontyû, 19 : 35.
=*ssp. hayashii* NAKANE, 1955, Sci. Rep. Saikyo Univ., 2, A : 33.
=*ssp. kiiensis* NAKANE, 1960, Ent. Rev. Japan, 12 : 3.

Subgenus *Aganocrossus*

Aganocrossus REITTER, 1895, Wien. ent. Zeit., 14 : 208. Type species : *Aphodius*

urostigma HAROLD, 1862.

1. フチケマグソコガネ *Aphodius (Aganocrossus) urostigma* HAROLD, 1862
Berl. ent. Zeit., 6 : 170.
=*piceoniger* MOTSCHULSKY, 1863, Bull. Soc. nat. Moscou, 36 : 461.
=*postpilosus* REITTER, 1895, Wien. ent. Zeit., 14 : 209.

Subgenus *Agoliinus*

Agoliinus SCHMIDT, 1913, Arch. Naturg., A, 79 (11) : 162. Type species: *Aphodius congregatus* MANNERHEIM, 1853.

BALTHASAR (1964) は本亜属を *Agrilinus* のシノニムとしたが、雄の中脛節端棘が短く、Aedeagus の先端に袋状の突起物があるなどの特徴を持つよくまとまった1群であり、DELLACASA (1983) は独立の亜属とした。形態のみならず、生態的にも共通点が多く、日本産の5種はすべて山地～高山性であり、鹿、猿、カモシカなどの獣糞や人糞に集まる。

1. ダイセツマグソコガネ *Aphodius (Agoliinus) kiuchii* MASUMOTO, 1984
Ent. Rev. Japan, 39 : 170.
2. ニセマキバマグソコガネ *Aphodius (Agoliinus) morii* NAKANE, 1983
Fragm. Coleopt., 35/37 : 140.
3. キタミヤママグソコガネ *Aphodius (Agoliinus) setchan* MASUMOTO, 1984
Ent. Rev. Japan, 39 : 171.
4. タカネニセマキバマグソコガネ *Aphodius (Agoliinus) shibatai* NAKANE, 1983
Fragm. Coleopt., 35/37 : 141.
5. ニッコウマグソコガネ *Aphodius (Agoliinus) tanakai* MASUMOTO, 1981
Elytra, 9 : 73.

Subgenus *Agrilinus*

Agrilinus MULSANT & REY, 1869, Ann. Soc. Agric., Lyon, (4) 2 : 419. Type species: *Scarabaeus ater* DEGEER, 1774.

日本産の種は上記の *Agoliinus* 亜属ほど良くまとまっておらず、かなり異質な種が含まれている。今後の検討によっては別の亜属に移される種もあるであろう。

1. スバタマグソコガネ *Aphodius (Agrilinus) brevisculus* (MOTSCHULSKY, 1866)
Bull. Soc. nat. Moscou, 39 : 170 (*Calamosternus*).

- = *nigerrimus* WATERHOUSE, 1875, Trans. ent. Soc. London : 83.
 = *ovalis* WATERHOUSE, 1875, Trans. ent. Soc. London : 89.
 = *nitidulus* WATERHOUSE, 1875, Trans. ent. Soc. London : 93 (*Ammoecius*).
 = *trituberculatus* SCHMIDT, 1907, Deutsch. ent. Zeitschr., 51 : 201.

本種は *Agrilinus* 亜属のタイプ種である *A. ater* に非常に近い種である。

2. ヒメスジマグソコガネ *Aphodius (Agrilinus) hasegawai* NOMURA et NAKANE, 1951
 Kontyû, 19 : 41.
 = ssp. *aka* NAKANE, 1960, Ent. Rev. Japan, 12 : 4.
 = ssp. *akahane* NAKANE, 1960, Ent. Rev. Japan, 12 : 5.
3. ニセヌバタママグソコガネ *Aphodius (Agrilinus) ishidai* MASUMOTO et KIUCHI, 1987
 Elytra, 15 : 45.
4. マダラヒメスジマグソコガネ *Aphodius (Agrilinus) madara* NAKANE, 1960
 Ent. Rev. Japan, 12 : 4 (*A. hasegawai* ssp. *madara*).
5. ヨツボシマグソコガネ *Aphodius (Agrilinus) sordidus* (FABRICIUS, 1775)
 Syst. ent., 1 : 16 (*Scarabaeus*).

本種は従来 *Bodilus* 亜属として扱われてきたが, DELLACASA (1983) は *A. lugens* をタイプとする真の *Bodilus* 亜属とは異なるとし, *Agrilinus* 亜属に移した. 本種は, DELLACASA の整理した *Bodilus* 亜属及び *Acanthobodilus* 亜属の種とは明らかな違いがあり, これらの亜属に入れるのは無理があるので, ここではとりあえず本亜属に置いておくが, 今後の検討課題である.

6. エゾマグソコガネ *Aphodius (Agrilinus) uniformis* WATERHOUSE, 1875
 Trans. ent. Soc. London : 84.
 = *etorofuensis* KONO, 1937, Ins. Mats., 12 : 7.
 = *maritimus* NOMURA et NAKANE, 1951, Kontyû, 19 : 42.
7. ? ハヤチネマグソコガネ *Aphodius (Agrilinus) hayachinensis* NOMURA et NAKANE, 1951
 Kontyû, 19 : 42.

この種は戦前に採集された 1♀ により記載されたが, その後, この記載に当てはまる個体は採集されていない. タイプ標本が戦災により消失してしまったため比較検討することができないが, 前種のシノニムと思われる.

Subgenus *Ammoecius*

Ammoecius MULSANT, 1842, Hist. nat. Col. France, Lamell.: 302. Type species :

Scarabaeus elevatus OLIVIER, 1789.

1. クロツブマグソコガネ *Aphodius (Ammoecius) yamato* NAKANE, 1960

Ent. Rev. Japan, 12 : 3.

本種は従来 *Parammoecius* 亜属として扱われてきた。 *Ammoecius* 亜属と *Parammoecius* 亜属の間には下記の表のような特徴の差があるが、本種においては、前頭の横隆条がしわ状で不明瞭な点は *Parammoecius* 亜属に近いが、雄交尾器(Aedeagus)は単純で、epipharynxの前縁中央が突出することから、 *Ammoecius* 亜属に含めるのが適当である。

	<i>Ammoecius</i> 亜属	<i>Parammoecius</i> 亜属
前頭の横隆条	明瞭な横隆条あり。	横隆条なし。
雄の交尾器	単純。	下方に向かう袋状の突起あり。
epipharynx	前縁中央が著しく前方に突出する。	前縁中央は著しく突出しない。

Subgenus *Aphodaulacus*

Aphodaulacus KOSHANTSHIKOV, 1911, Rev. ent. Russ., 11 : 209. Type species :
Aphodius turkestanicus HEYDEN, 1881.

1. クロモンマグソコガネ *Aphodius (Aphodaulacus) variabilis* WATERHOUSE, 1875
Trans. ent. Soc. London : 90.
= *fundator* REITTER, 1892, Verh. Naturf. Ver. Brünn, 30 : 230.

Subgenus *Aphodiellus*

Aphodiellus SCHMIDT, 1913, Arch. Naturg., A, 79 (11): 140. Type species : *Aphodius impunctatus* WATERHOUSE, 1875.

1. ツヤマグソコガネ *Aphodius (Aphodiellus) impunctatus* WATERHOUSE, 1875
Trans. ent. Soc. London : 85.
= *laevigatus* HAROLD, 1886, Deutsch. ent. Zeitschr., 30 : 290.

Subgenus *Aphodius*

Aphodius ILLIGER, 1798, Verzeichn. Käfer Preuss.: 15. Type species : *Scarabaeus fmetarius* LINNÉ, 1758.

1. オオフタホシマグソコガネ *Aphodius (Aphodius) elegans* ALLIBERT, 1847

Rev. Zool., 10 : 18.

= *plasoni* KÄUFEL, 1914, Col. Rundsch. : 142.

DELLACASA (1978) は中国東北地区, 朝鮮半島および日本の個体群を *A. elegans* とは別種の *A. plasoni* であるとしたが, 益本・木内 (1987) は後者は *A. elegans* の地理的変異のうちにはいるとした. ここでは益本・木内の見解に従って *A. elegans* としておく.

Subgenus *Balthasarianus*

Balthasarianus PAULIAN, 1934, Bull. Soc. ent. France : 111. Type species: *Aphodius (Balthasarianus) pilifer* PAULIAN, 1934.

1. ケブカマグソコガネ *Aphodius (Balthasarianus) eccoptus* BATES, 1889

Ent. mon. Mag., 25 : 297.

= *koichianus* MATSUMURA, 1934, Ins. Mats., 9 : 65.

SCHMIDT (1910) は ARROW の示唆によって本種を *A. pilosus* のシノニムとし, 日本の研究者以外はこの扱いを踏襲している. しかしながら, HAROLD (1874) がインドから記載した *A. pilosus* は, 原記載によると, 体長 7 mm で第 1 後跗節は後脛節上端棘より長い, *eccoptus* は 7.5-9 mm と大きく, 第 1 後跗節は後脛節上端棘と等長であるなど本種とは明瞭な違いがあり, 独立種であることは明かである.

Subgenus *Calamosternus*

Calamosternus MOTSCHULSKY, 1859, Etud. ent., 8 : 156. Type species: *Scarabaeus granarius* LINNÉ, 1767.

1. オビマグソコガネ *Aphodius (Calamosternus) uniplagiatus* WATERHOUSE, 1875

Trans. ent. Soc. London : 84.

Subgenus *Chilothorax*

Chilothorax MOTSCHULSKY, 1859, Etud. ent., 8 : 156. Type species: *Scarabaeus conspurcatus* LINNÉ, 1758.

1. セマダラマグソコガネ *Aphodius (Chilothorax) nigrotessellatus* (MOTSCHULSKY, 1859)

Bull. Soc. nat. Moscou, 39 : 170 (*Melinopterus*).

= *obsoletoguttatus* WATERHOUSE, 1875, Trans. ent. Soc. London : 86.

= *punctatus* WATERHOUSE, 1875, Trans. ent. Soc. London : 87.

2. アマミセマダラマグソコガネ *Aphodius (Chilothorax) ohishii* MASUMOTO, 1975

Ent. Rev. Japan, 28 : 85.

3. オビモンマグソコガネ *Aphodius (Chilothorax) okadai* NAKANE, 1951
Ent. Rev. Japan, 5 : 71.

Subgenus *Colobopterus*

Colobopterus MULSANT, 1842, Hist. nat. Col. France, Lamell.: 165. Type species:
Scarabaeus erraticus LINNÉ, 1758.

1. オオマグソコガネ *Aphodius (Colobopterus) quadratus* REICHE, 1847
in FERRET and GALINIER, Entomologie, 3 : 343.
= *apicalis* HAROLD, 1861, Berl. ent. Zeitschr., 5 : 96.
= *haroldianus* BALTHASAR, 1932, Ent. Nachricht., 6 : 4.

A. haroldianus が使用されてきたが, DELLACASA (1986) により上記のように整理された. この名称は日本の個体群のみに適用されており, 中国, 朝鮮半島の個体群には *A. propraetor* BALTHASAR, シベリア東部の個体群には *A. notabilipennis* PETROVITZ という名前が当てられている. しかしながら, 3者の差は軽微であり, 同一種内の地理的変異と考えるべきかもしれない.

Subgenus *Esymus*

Esymus MULSANT & REY, 1869, Ann. Soc. Agric., Lyon, (4) 2 : 519. Type species:
Scarabaeus merdarius FABRICIUS, 1775.

1. コマグソコガネ *Aphodius (Esymus) pusillus* (HERBST, 1789)
Naturf. Ins. Käfer., 2 : 155 (*Scarabaeus*).

従来 *Orodalus* 亜属に入れられていたが, DELLACASA (1983) により本亜属に移された.

Subgenus *Labarrus*

Labarrus MULSANT & REY, 1869, Ann. Soc. Agric., Lyon, (4) 2 : 516. Type species:
Scarabaeus lividus OLIVIER, 1789.

広域分布種の *A. lividus* をタイプとする亜属である.

1. ウスイロマグソコガネ *Aphodius (Labarrus) sublimbatus* (MOTSCHULSKY, 1860)
in SCHRENCK's Reisen Amurl., 2 : 132 (*Calamosternus*).
= *pallidicinctus* WATERHOUSE, 1875, Trans. ent. Soc. London : 85.

本種は MOTSCHULSKY が *Calamosternus sublimbatus* として記載して以来, 前胸背後縁に微かな縁どりがあることを根拠に *Calamosternus* 亜属として扱われてきた. しかし, 本亜属のタイプ種である *A. lividus* とは一見しただけでは区別できないほど良く似ており, ごく近縁であることは明らかであるので, 本亜属に含めるのが適当である.

Subgenus *Nipponaphodius*

Nipponaphodius NAKANE, 1959, Ent. Rev. Japan, 10 : 32. Type species : *Aphodius* (*Tristaphodius*) *gotoi* NOMURA et NAKANE, 1951.

1. ツヤケシマグソコガネ *Aphodius* (*Nipponaphodius*) *gotoi* NOMURA et NAKANE, 1951
Kontyú, 19 : 41.

Subgenus *Otophorus*

Otophorus MULSANT, 1842, Hist. nat. Col. France, Lamell. : 172. Type species
Scarabaeus haemorrhoidalis LINNÉ, 1758.

1. ツマベニマグソコガネ *Aphodius* (*Otophorus*) *haemorrhoidalis* (LINNÉ, 1758)
Syst. Nat., ed. 10 : 348 (*Scarabaeus*).

Subgenus *Paremadus*

Paremadus NAKANE, 1967, Ent. Rev. Japan, 19 : 1. Type species : *Aphodius* (*Emadus*?)
isaburoi NAKANE, 1956.

この亜属は BALTHASAR (1964) 以来、日本以外の研究者には *Caelius* のシノニムと誤認されてきたが、最近、STEBNICKA (1988) により訂正された。

1. チャグロマグソコガネ *Aphodius* (*Paremadus*) *isaburoi* NAKANE, 1956
Ins. Mats., 20 : 119.
=*masumotoi* NAKANE, 1967, Ent. Rev. Japan, 19 : 3.
2. ミヅムネマグソコガネ *Aphodius* (*Paremadus*) *mizo* NAKANE, 1967
Ent. Rev. Japan, 19 : 2.
3. ネグロマグソコガネ *Aphodius* (*Paremadus*) *pallidiligonis* WATERHOUSE, 1875
Trans. ent. Soc. London : 87.
=*nipponensis* BALTHASAR, 1956, Ent. Blätt., 52 : 70 (*Caelius*).

Subgenus *Paulianellus*

Paulianellus BALTHASAR, 1938, Acta Soc. ent. Cechoslov., 35 : 6. Type species :
Aphodius (*Paulianellus*) *maderi* BALTHASAR, 1938.

1. コツヤマグソコガネ *Aphodius* (*Paulianellus*) *maderi* BALTHASAR, 1938
Acta Soc. ent. Cechoslov., 35 : 7.
=*asahinai* NAKANE, 1951, Ent. Rev. Japan, 5 : 70.

Subgenus *Phaeaphodius*

Phaeaphodius REITTER, 1892, Verh. Naturf. Ver. Brünn, 30 : 205. Type species :
Calamosternus rectus MOTSCHULSKY, 1866.

1. マグソコガネ *Aphodius (Phaeaphodius) rectus* (MOTSCHULSKY, 1866)
Bull. Soc. nat. Moscou, 39 : 169 (*Calamosternus*).
= *vitta* MOTSCHULSKY, 1866, Bull. Soc. nat. Moscou, 39 : 170 (*Chilothorax*).
= *solskyi* HAROLD, 1871, Berl. ent. Zeitschr., 15 : 251.
= *castaneipennis* WATERHOUSE, 1875, Trans. ent. Soc. London : 83.
= *diversus* WATERHOUSE, 1875, Trans. ent. Soc. London : 82.
= *edai* BALTHASAR, 1956, Ent. Blätt., 52 : 68.
= *lividipennis* WATERHOUSE, 1875, Trans. ent. Soc. London : 81.

Subgenus *Phalacrothous*

Phalacrothous MOTSCHULSKY, 1859, Etud. ent., 8 : 156. Type species: *Scarabaeus quadrimaculatus* LINNÉ, 1761.

1. ヒメコマグソコガネ *Aphodius (Phalacrothous) botulus* BALTHASAR, 1945
Acta Soc. ent. Cechoslov., 42 : 43.
= *naraensis* NAKANE, 1956, Ins. Mats., 20 : 120.
= *manshuriensis* PETROVITZ, 1958, Ent. Arb. Mus. Frey, 9 : 138.
従来, *A. (Orodalus) naraensis* の名称が用いられてきたが, STEBNICKA (1982) により, シベリアから記載された *A. (Phalacrothous) botulus* のシノニムであることが示された。

Subgenus *Pharaphodius*

Pharaphodius REITTER, 1892, Verh. Naturf. Ver. Brünn, 30 : 172. Type species :
Scarabaeus marginellus FABRICIUS, 1781.

1. ウスチャマグソコガネ *Aphodius (Pharaphodius) marginellus* (FABRICIUS, 1781)
Spec. Ins., 1 : 21 (*Scarabaeus*).
2. スジマグソコガネ *Aphodius (Pharaphodius) rugosostriatus* WATERHOUSE, 1875
Trans. ent. Soc. London : 92.
= *rugosostriatus* REITTER, 1892, Verh. Naturf. Ver. Brünn, 30 : 247.

Subgenus *Planolinus*

Planolinus MULSANT & REY, 1869, Ann. Soc. Agric., Lyon, (4) 2 : 426. Type species :
Aphodius putridus HERBST, 1789.

Agrilinus 亜属のシノニムとして扱われてきた亜属であるが, DELLACASA (1983) により独立の亜属とされた。

1. マキバマグソコガネ *Aphodius (Planolinus) pratensis* NOMURA et NAKANE, 1951
Kontyû, 19 : 43.

本種は本亜属のタイプ種であり, ヨーロッパからシベリアまで広く分布している *A. putridus* とおそらく同種である. 両者の主な違いは, 上翅の色が本種では黒褐色なのに対し *putridus* は赤褐色な点である.

なお, STEBNICKA (1980) は *A. putridus* ab. *transitus* として本種を北朝鮮から記録している.

Subgenus *Pleuraphodius*

Pleuraphodius SCHMIDT, 1913, Arch. Naturg., A, 79 (11) : 121. Type species : *Aphodius mutilus* SCHMIDT, 1911.

1. コスジマグソコガネ *Aphodius (Pleuraphodius) lewisii* WATERHOUSE, 1875
Trans. ent. Soc. London : 92.

Subgenus *Sinodipterna*

Sinodipterna DELLACASA, 1986, Frustula ent., (NS) 7/8 : 265. Type species : *Aphodius troitzkyi* JACOBSON, 1897.

1. マルツヤマグソコガネ *Aphodius (Sinodipterna) troitzkyi* JACOBSON, 1897
Horae Soc. ent. ross., 31 : 87.
= *donghariensis* STEBNICKA, 1973, Bull. Acad. Pol. Sci., 21 : 119.

Subgenus *Stenothorax*

Stenothorax SCHMIDT, 1913, Arch. Naturg., A, 79 (11) : 122. Type species : *Aphodius oblongus* SAY, 1823.

従来 *Stenobronchus* SCHMIDT, 1916 は SCHMIDT 自身が, 自己の命名による *Stenothorax* を *Stenothorax* と誤認した (?) ことによる不必要な新名である.

1. クチキマグソコガネ
Aphodius (Stenothorax) hibernalis (NAKANE et TSUKAMOTO, 1956)

Sci. Rep. Saikyo Univ., 3, A : 176 (*Stenobronchus*).

Subgenus *Subrinus*

Subrinus MULSANT & REY, 1869, Ann. Soc. Agric., Lyon, (4) 2 : 511. Type species :
Aphodius sturmi HAROLD, 1870.

1. ヒメキイロマグソコガネ *Aphodius (Subrinus) sturmi* HAROLD, 1870
Col. Hefte, 7 : 106.
=*inouei* NOMURA, 1942, Mushi, 14 : 116.

Subgenus *Teuchestes*

Teuchestes MULSANT, 1842, Hist. nat. Col. France, Lamell. : 176. Type species :
Scarabaeus fossor LINNÉ, 1758.

1. セマルオオマグソコガネ *Aphodius (Teuchestes) brachysomus* SOLSKY, 1874
Col. Hefte, 12 : 13.
=*major* WATERHOUSE, 1875, Trans. ent. Soc. London : 80.

Subgenus *Trichaphodius*

Trichaphodius SCHMIDT, 1913, Arch. Naturg., A, 79 (11) : 135. Type species : *Aphodius humilis* ROTH, 1851.

1. アマミヒメケブカマグソコガネ *Aphodius (Trichaphodius) atsushii* OCHI, 1986
Ent. Rev. Japan, 41 : 55.
2. ヒメケブカマグソコガネ (ウスグロマグソコガネ)
Aphodius (Trichaphodius) comatus SCHMIDT, 1920
Arch. Naturg., A, 86 (9) : 140.
=*chokaiensis* NOMURA et NAKANE, 1951, Kontyû, 19 : 40.

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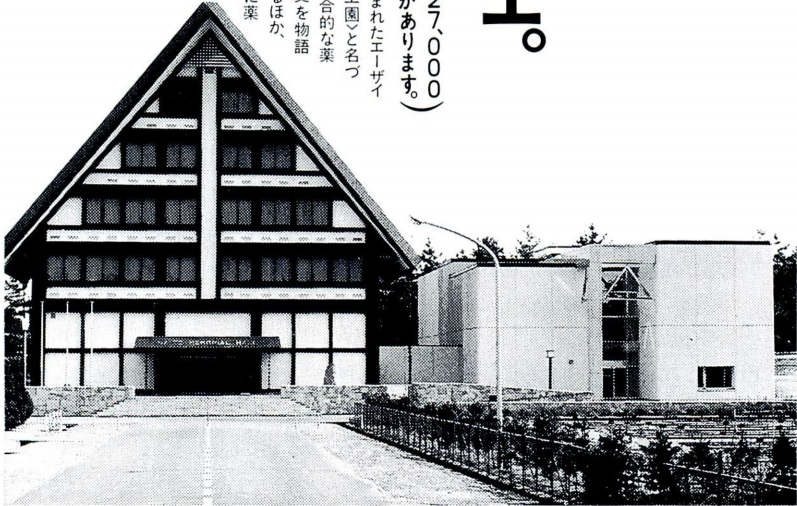
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