

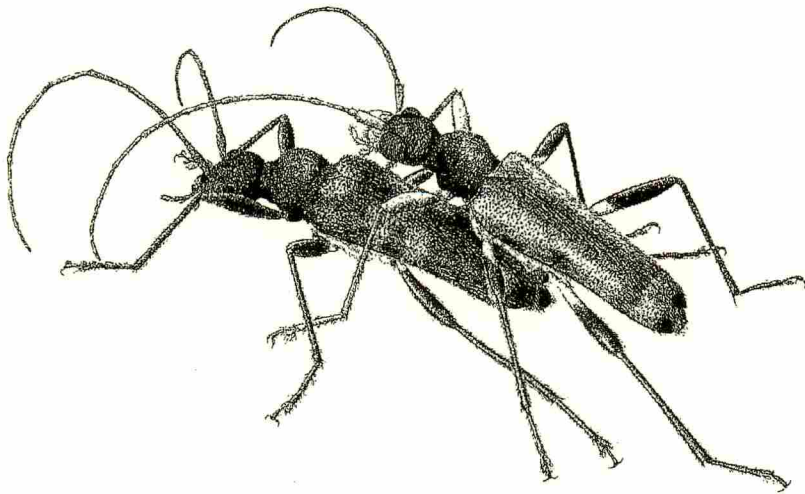
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**A First Record of the Species of the Genus *Oxycentrus*
from the Philippines with Descriptions of Four New Species
(Coleoptera, Carabidae, Harpalini)**

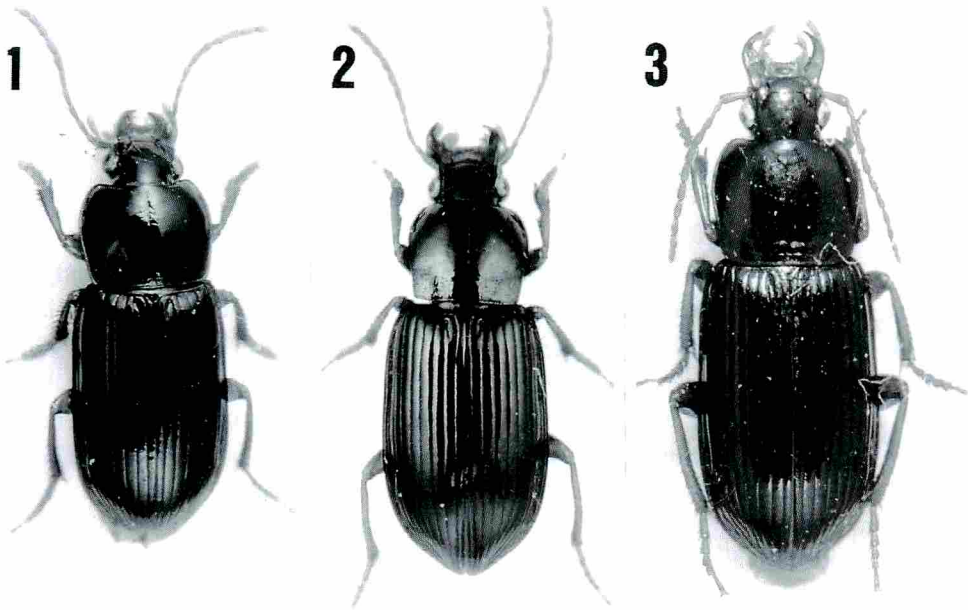
NOBORU ITO

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Abstract Four new species of the genus *Oxycentrus* are described from the Philippines with the notes about additional undescribed species from the same locality. The species of gen. *Oxycentrus* from the Philippines are firstly recorded.

Introduction

Many species of the genus *Oxycentrus* CHAUDOIR are distributed in the near regions of the Philippines, but no species has hitherto been known from there. Recently I obtained the opportunity to examine some specimens of the tribe Harpalini collected in the Philippines through the courtesy of Dr. MASAHIRO SAKAI and Mr. TAKESHI ITO, with my collection together and found several species of the genus *Oxycentrus*.



Figs. 1-3. Habitus of the genus *Oxycentrus* spp. 1, *O. (Oxycentropsis) sakaii* N. Ito, sp. nov.; 2, *O. (O.) planibasis* N. Ito, sp. nov.; 3, *O. (O.) minutopunctatus* N. Ito, sp. nov.

In this paper I am going to describe four new species of the genus under the names of *Oxycentrus (Oxycentropsis) sakaii*, *O. (O.) planibasis*, *O. (O.) negrosensis*, and *O. (O.) minutopunctatus*, respectively from Palawan Is., Mindanao Is., Negros Is. and Mindanao Is., and provide a key to the species described. Also I note down the records of five species which are not able to be described due to the insufficiency in number of the materials. The Philippine species of the genus are unique in the absence of the dorsal pores on the 3rd elytral interval.

I wish to express my deep gratitude to Dr. MASAHIRO SAKAI of the Ehime University (College of Agriculture, Entomological Laboratory), Matsuyama, and Mr. TAKESHI ITO, Nishinomiya, for their kind offer of the interesting materials. The specific name of *O. (O.) sakaii* is dedicated to Dr. M. SAKAI. Also I should thank Mr. TAICHI SHIBATA, Nishinomiya, for his kind guidance on my taxonomic study.

Abbreviation NSMc: the collection of the National Science Museum (Nat. Hist.), Tokyo.
 EUc: the collection of the Ehime University, College of Agriculture, Entomological Laboratory.
 NIC: the collection of NOBORU ITO.

Key to Species of the Genus *Oxycentrus* of the Philippines

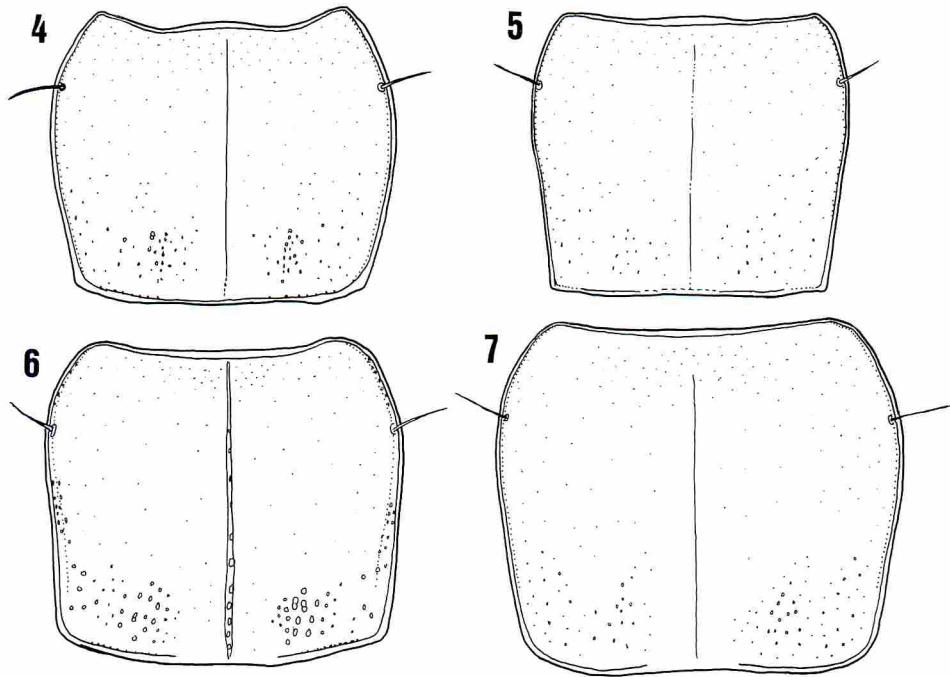
1. Pronotum very deep and punctate in median line; elytral sides angulate before apical sinus.
 *Oxycentrus (Oxycentropsis) negrosensis* N. ITO, sp. nov.
- 1'. Pronotum fine, shallow, and not punctate in median line; elytral sides rounded before the sinus 2
2. Pronotum almost rectangular at basal angles *O. (Oxycentropsis) planibasis* N. ITO, sp. nov.
- 2' Pronotum larger in basal angles than rectangular 3
3. Elytra weakly iridescent; pronotum widely rounded at basal angles; legs short and robust
 *O. (Oxycentropsis) minutopunctatus* N. ITO, sp. nov.
- 3' Elytra not iridescent; pronotum subangulate or very narrowly rounded; legs moderate in robustness
 *O. (Oxycentropsis) sakaii* N. ITO, sp. nov.

Oxycentrus (Oxycentropsis) sakaii N. ITO, sp. nov.

(Figs. 1, 4, 8 & 9)

Body comparatively wide, parallel-sided, slightly brownish black, shiny, slightly iridescent on elytra; palpi light brown, antennae and legs somewhat darker than palpi, legs dark reddish brown, mandibles blackish brown.

Head gently convex, very sparsely punctulate, small, about three-fifths of the pronotal width (0.60 - 0.63 in ratio), rather narrow at interocular space which is two-thirds of the width of head including eyes; labrum transverse, rounded at apical corners, a fovea very shallow and crescent; clypeus gently elevated, almost truncate at apex, at each side with a deep rugosity extending the end of clypeal suture, which is not deep and shallowed in middle; spaces before deep frontal impressions strongly elevated; frons almost flat; eyes relatively large, subhemispherical; genuine ventral margin of eye very narrowly separated from buccal fissure; mandibles shorter than in usual species of the genus, and gently curved inwards, terebral teeth of both left and right mandibles weakly produced and blunt at tips; antennae, slender, rather long, reach-

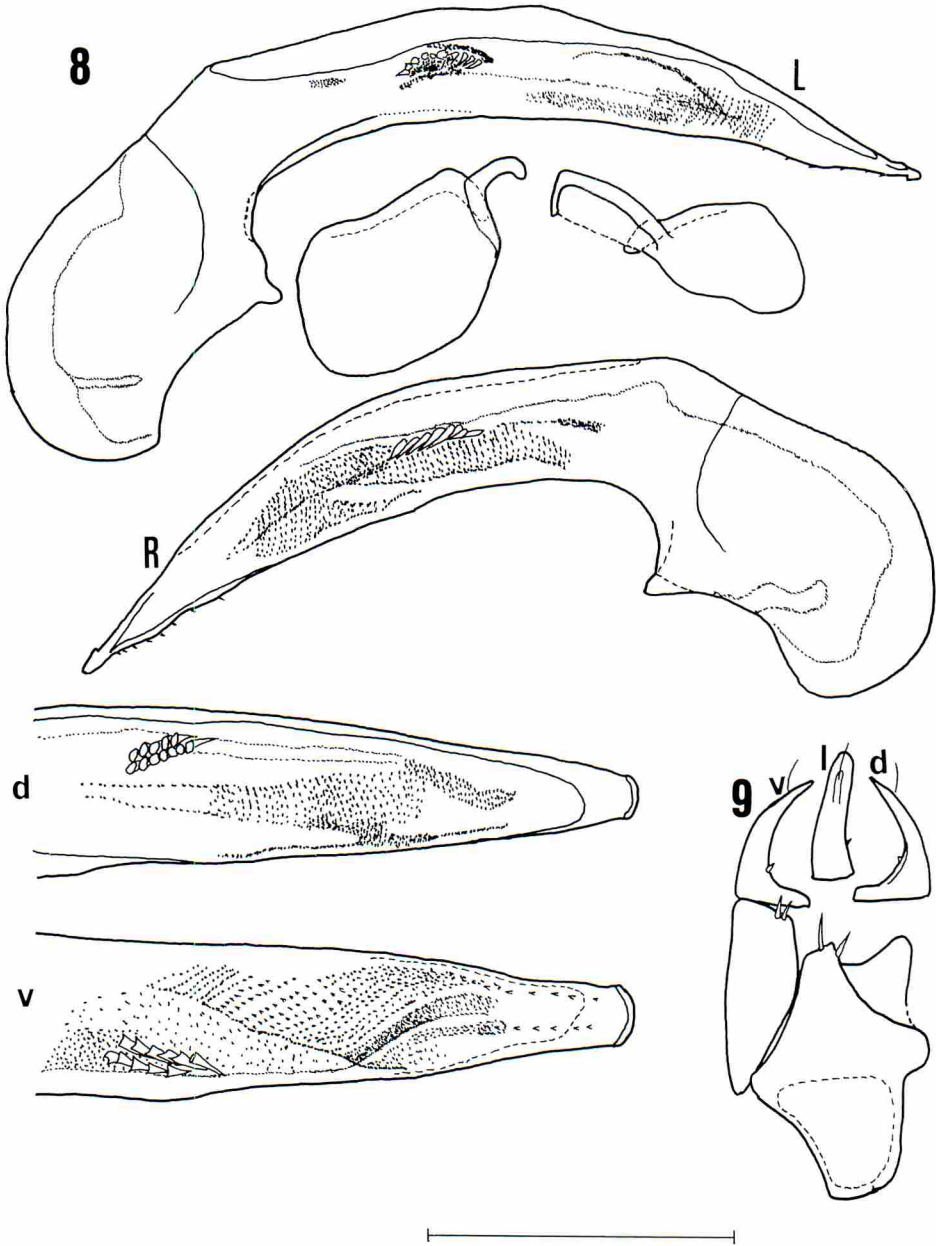


Figs. 4-7. Pronota of the genus *Oxycentrus* spp. 4, *O. (Oxycentropsis) sakaii* N. Ito, sp. nov.; 5, *O. (O.) planibasis* N. Ito, sp. nov.; 6, *O. (O.) negrosensis* N. Ito, sp. nov.; 7, *O. (O.) minutopunctatus* N. Ito, sp. nov.

ing basal fourth of elytra, 3rd segment as long as the 4th and two-thirds longer than the 2nd; 3rd segment of labial palpus gently tumid, one-fourth longer than the 2nd; ligula fused with paraglossae up to just before truncate apex and convergent apicad from there; paraglossae narrow and prolonged forwards beyond ligula; mentum relatively transverse, with a median tooth large and regular-triangular, epilobe strongly widened forwards; microsculpture invisible under $80\times$ magnification.

Pronotum (Fig. 4) subsquare, widest at apical two-fifths, three-tenths wider than long, uniformly and rather strongly convex, the convexity very large and approaching near sides, so the lateral furrows are engraved in a line; sides gently arcuate in front and linearly and weakly convergent behind from the widest point; apex rather deeply emarginate, straight in middle and entirely bordered; base one-fourth wider than the apex, hardly arcuate, with border entire or broken in part; apical angles widely rounded; basal angles a little larger than rectangle, subangulate at tips; basal foveae only flattened, ill-defined, with a small groove in each; front and hind transverse impressions obsolete; median line fine and clear, extending both apex and base; surface very minutely and sparsely punctate on disc, and somewhat coarsely so in basal foveae, with vague transverse rugosities near the median line; microsculpture mostly invisible, detectable as vague transverse meshes near the rugosities and basal punctures.

Elytra oblong, a little more than one and a half as long as wide (1.53-1.61 in ratio), steeply sloping laterad and apicad, without punctures; sides weakly arcuate at humeri, parallel in middle, abruptly convergent behind from apical fourth, hardly sinuate before apices, which are widely rounded at tips and blunt at sutural angles; bases shallowly emarginate; humeral angles



Figs. 8-9. Genitalia of *Oxycentrus (Oxycentropsis) sakaii* N. Ito, sp. nov. 8, male genitalia; 9, female genitalia; d, dorsal aspect; l, lateral aspect; v, ventral aspect; L, left side; R, right side. (Scale: 1 mm)

obtuse and angulate, minutely toothed at tips; striae wide, deep, and finely crenulate, scutellar striole short; intervals weakly convex on disc, a little more convex basally and latero-apically, dorsal pore on 3rd interval lacking; marginal series widely interrupted in middle, composed of 8 + (9-10) umbilicate pores; microsculpture observed as fine and obscure transverse lines. Hind wings entirely developed.

Ventral surface mostly impunctate, finely and very sparsely punctate only on mesepisterna; metepisternum strongly contracted behind, a half longer than wide; 6th abdominal sternite bisetose at each side in both sexes, truncate in ♂ and widely arcuate in ♀ at apex.

Legs comparatively short; femora well tumid, bearing only few setae, hind femur bisetose along hind margin; fore tibia relatively dilated apicad, weakly arcuate inwards, gently and subobliquely emarginate in external half of apex, armed with three short and robust spines along apico-external margin; mid tarsus in ♂ not squamous ventrally on 1st segment, hind tarsus in both sexes one-seventh to one-eighth shorter than the width of head, 1st segment slightly longer than the 2nd and 3rd combined (1.04-1.09 in ratio), 3rd segment one-sixth shorter than the 2nd and one-fourth longer than the 4th, claw segment bisetose along each ventral margin.

Aedeagus (Fig. 8) slender, weakly arcuate, and gradually tapered distad; apex slightly thickened; apical lobe gently convergent forwards, widely rounded at tip; apical orifice widely opened, inner sac armed with a cluster of several small spinose sclerites behind middle. Stylus (Fig. 9) small, clearly curved, with a tiny spine basally at each external margin; basal segment bearing two short setae apico-externally; valvifer bisetose.

Length: 6.4-6.7 mm. Width: 2.3-2.6 mm.

Holotype: ♂, 0 m, Olanguan, 76 km N. from Puerto Princesa, Palawan Is., 26. VII. 1985, M. SAKAI leg. (preserved in NSMc). Paratypes: 1 ♂, same data as the holotype; 1 ♀, 0-50 m, Olanguan, between Puerto Princesa and Roxas, Palawan Is., 1. IX. 1985, M. SAKAI leg.; 1 ♀, 10 m, Olanguan, Palawan Is., 16. VII. 1996 (preserved in EUc, NSMc and NiC).

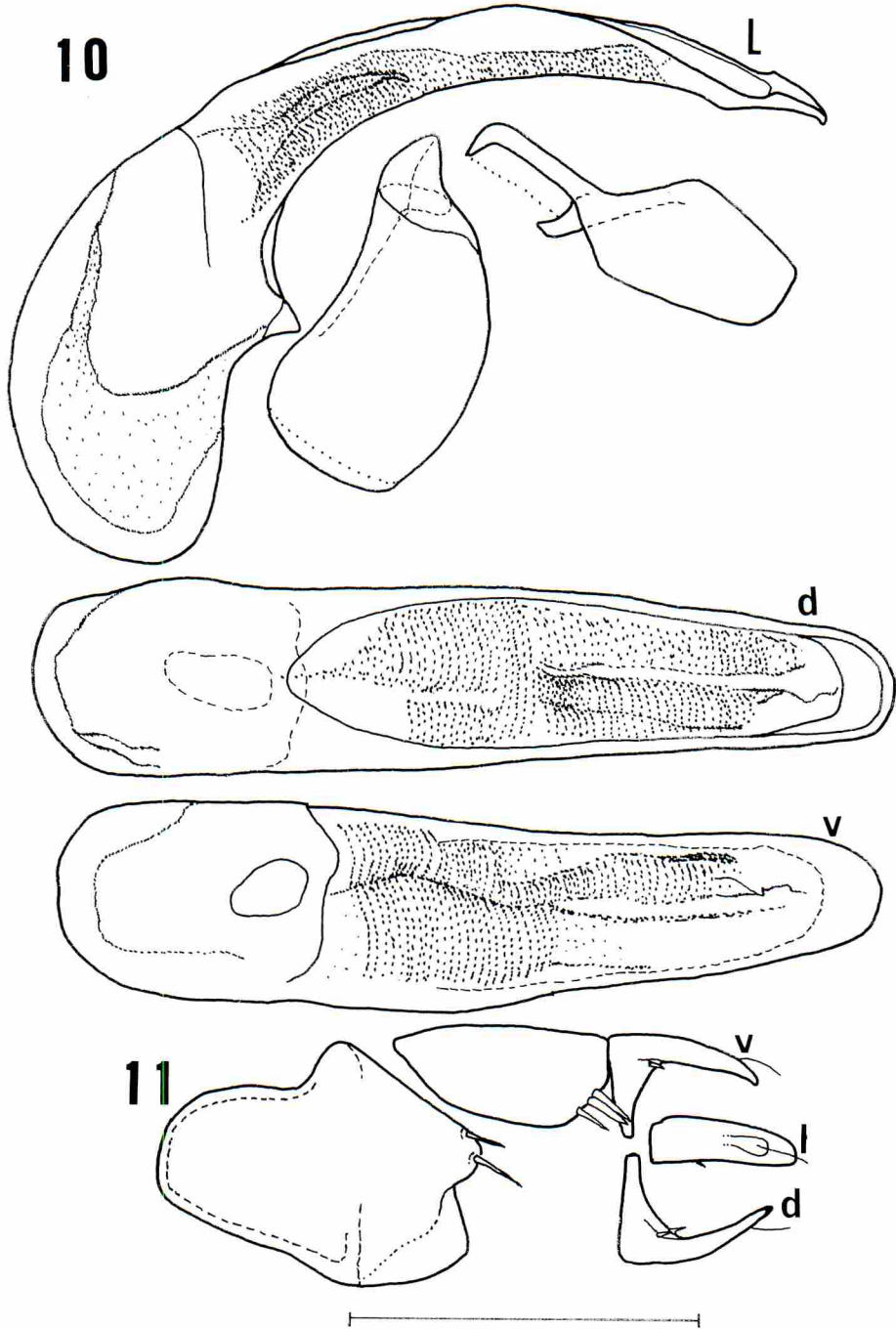
This new species is easily distinguished from all known species of the subgenus by the 3rd elytral interval not possessing any dorsal pores. The species is more or less similar in general appearance to *Oxycentrus (Oxycentropsis) iridicolor* N. ITO (1996) from Malayan Peninsula, but the body is smaller in size and the pronotum and elytra more convex and much more weakly iridescent.

Oxycentrus (Oxycentropsis) planibasis N. ITO, sp. nov.

(Figs. 2, 5, 10 & 11)

Body oblong, black, shiny, hardly iridescent on elytra; palpi yellowish brown, antennae and legs light reddish brown.

Head large, about seven-tenths of the pronotal width (0.67-0.70 in ratio), gently raised, sparsely and finely punctate, with narrow interocular space a little more than five-eighths of the width of head (0.625-0.65 in ratio); labrum widely and triangularly emarginate at apex, transversely and elliptically depressed; clypeus gently swollen, widely and shallowly furrowed to each end of clypeal suture which is not deep throughout; frontal impressions arcuately divergent behind, almost wholly deep, shallowed just before supraorbital grooves; eyes not large and well prominent in a hemisphere; temple short, steeply convergent to neck constriction; genuine ventral margin of eye adjoining buccal fissure; mandibles elongate, strongly curved inwards, and sharpened apicad; terebral tooth of left mandible weakly produced and widely triangular, that of the left one small and sharply prominent; antennae submoniliform, reaching basal tenth of elytra, 3rd segment pubescent in apical two-thirds, two-ninths longer than the 4th and about one and three-fifths of the 2nd; 3rd segment of labial palpus well tumid, one-fifth longer than the



Figs. 10-11. Genitalia of *Oxycentrus (Oxycentropsis) planibasis* N. Ito, sp. nov. 10, male genitalia; 11, female genitalia; d, dorsal aspect; l, lateral aspect; v, ventral aspect; L, left side. (Scale: 1 mm)

2nd; ligula wide, weakly expanded forwards, widely triangularly protruding at apex, fused lengthwise with paraglossae, which are narrow and produced ahead beyond ligula; each epilobe

of mentum parallel at sides; microsculpture observable only near sides of clypeus and frontal impressions as vague transverse meshes.

Pronotum (Fig. 5) gently elevated, flat on disc, subquadriform, widest at apical two-fifths, approximately one-fourth wider than long (1.22-1.25 in ratio), very minutely and sparsely punctate on most areas and somewhat coarsely so in basal foveae; sides finely bordered, gently arcuate in front and weakly and straightly or hardly sinuately convergent behind from the widest point; apex truncate or feebly emarginate, entirely bordered; base about one-tenth wider than apex (1.06 - 1.17 in ratio), almost truncate, slightly oblique laterally, very finely and brokenly bordered; apical angles not protrudent, rather widely rounded; basal angles subrectangular and not rounded at tips; lateral furrows very narrow, weakly widened behind; basal foveae only flattened throughout or very shallow and ill-defined, concavity near middle in each; front and hind transverse impressions obliterated; median line fine and shallow, disappearing near apex and base; microsculpture unobservable centrally, detectable as fine isodiametric meshes medially near apex and as transverse meshes in basal foveae.

Elytra uniformly well convex, widely elliptical, almost a half longer than wide (1.51-1.54 in ratio), with microscopical punctures here and there; sides similar in curvature to the preceding new species; apices separately and narrowly rounded at tips; bases shallowly emarginate, very obtusely and angularly meeting with lateral borders; striae wide, deep even on disc, scutellar striae very short; intervals gently raised, 3rd interval not bearing setiferous pores; marginal series medially spaced far apart, consisting of 8 + (7- 9) umbilicate pores; microsculpture consisting of fine transverse lines. Hind wings entire.

Ventral surface impunctate or very sparsely and vaguely punctate on pro- and mesepisterna and laterally on metasternum; metepisternum approximately a half longer than wide; apical margin of 6th abdominal sternite bisetose in both sexes at each side, truncate in ♂ and widely arcuate in ♀ at apex.

Hind femur bisetose along hind margin; fore tibia well dilated distad, not incised in external half of apex, trispinous apico-externally, clearly sulcate on dorsal surface; mid tarsus of ♂ biseriately squamous ventrally in 2nd to 4th segments; hind tarsus one-eleventh shorter than the width of head in both sexes, 1st segment equal in length to the 2nd and 3rd together, 2nd segment three-fourths longer than the 3rd and twice the 4th, claw segment bisetose ventrally along each margin.

Aedeagus (Fig. 10) thin, gently arcuate, very shallowly sinuate before apex, which is not thickened, with large basal bulb; apical lobe transverse, bordered and rounded at tip; apical orifice wide, extending near basal bulb, inner sac without any sclerites. Stylus (Fig. 11) weakly curved, bearing somewhat long spine basally along each external margin; basal segment bi- or trisetose apico-externally; valvifer bisetose at apex.

Length: 6.2-6.9 mm Width: 2.3-2.6 mm

Holotype: ♂, 700 m, Gasy, Maitum, South Cotabato Prov., Mindanao Is., 13. VIII. 1985, M. SAKAI leg. (preserved in NSMc). Paratypes: 2 ♀ ♀, 450 m, Motoklot, Maitum, South Cotabato Prov., Mindanao Is., 11. VIII. 1985, M. SAKAI (preserved in NSMc and Nlc).

This new species is also discriminated from the known species of the subgenus by the absence of the dorsal pore on 3rd elytral interval. The species is different from the previous new species in having the mandibles more elongate and more abruptly curved and the pronotum narrower and not rounded at basal angles. The species also resembles *Oxycentrus* (*Oxycentrop-*

sis punctatus N. ITO (1996) from Borneo, but the labial palpi are more tumid, the pronotum is narrower and much more scarcely punctate and the spines along apico-external margins of fore tibiae are larger in number.

Oxycentrus (Oxycentropsis) negrosensis N. ITO, sp. nov.

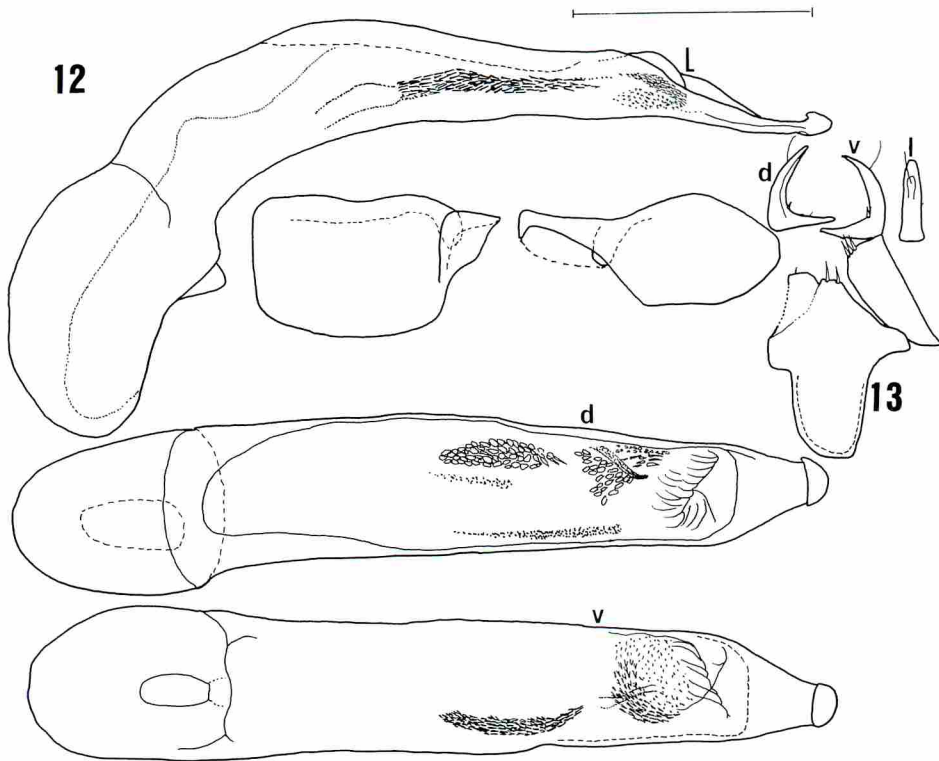
(Figs. 3, 6, 12 & 13)

Body relatively elongate, gently convex, slightly brownish pitchy black, shiny, without iridescent lustre; palpi and legs light brown and antennae somewhat darker, labrum, median parts of mandibles and lateral borders of pronotum dark reddish brown.

Head gently convex, moderate-sized, about two-thirds of the pronotal width, very sparsely punctulate; labrum arcuately and weakly bilobed, with a depression shallow and transversely elliptical; clypeus thick, subtruncate at apex, deeply grooved near each lateral pore, steeply slant at inner margin of the groove; clypeal suture deep throughout; frontal impressions also deeply engraved lengthwise and arcuately divergent behind; eyes somewhat small, hemispherically prominent; temple steeply oblique behind, sharply meeting with neck constriction; genuine ventral margin of eye adjoining buccal fissure; antennae slender, reaching pronotal base, 3rd one-eighth longer than the 4th and twice the 2nd; labial palpus suboval, one-eighth longer than the 2nd; mandibles not elongate and somewhat weak in curvature, terebral tooth of left mandible triangular and the tooth of right one arcuately produced; ligula parallel at sides, free from paraglossae only near apex, trapezoidal in the free part; paraglossae narrow, prolonged beyond ligular apex; mentum sharply toothed at apex, epilobe widened distad; microsculpture invisible under 80× magnification.

Pronotum (Fig. 6) subquadrate, widest at apical two-fifths, one-fifth wider than long, gently and uniformly convex, very sparsely and microscopically punctate on disc, coarsely and moderately so in lateral furrows, basal foveae and median line; sides somewhat strongly and arcuately constricted apicad and weakly sinuately convergent behind from the widest point, thickly bordered; apex shallowly emarginate, straight in the middle, clearly bordered throughout; base three-tenths wider than the apex, weakly arcuate, finely and obscurely bordered only in each lateral third; apical angles weakly protrudent, not widely rounded; basal angles a little larger than rectangle, narrowly rounded; lateral furrows narrowly engraved lengthwise; basal foveae small, shallow and elongate; front and hind transverse impressions invisible; median line deeply carved, obliterated just behind apex and reaching base; microsculpture consisting of vague transverse lines on most areas, and of fine and clear isodiametric meshes in lateral furrows.

Elytra subovally oblong, three-fifths longer than wide, impunctate, gently declivous laterad and steeply sloping apicad; sides clearly short-arcuate at humeri, deeply sinuate before apices, angulate at front tips of the sinus; apices widely rounded at outer margins, closed from each other and acute at sutural angles; bases shallowly emarginate, obtusely and angularly meeting with lateral margins; striae wide, deep and finely and clearly crenulate, scutelar striole rudimentary; intervals almost flat, rather well convex near both apices and bases, dorsal pores of 3rd interval lacking; marginal series composed of two groups, fore group consisting of 8 umbilicate pores and hind one of 7-10 pores. Hind wings fully developed.



Figs. 12-13. Genitalia of *Oxycentrus (Oxycentropsis) negrosensis* N. ITO, sp. nov. 12, male genitalia; 13, female genitalia; d, dorsal aspect; l, lateral aspect; v, ventral aspect; L, left side. (Scale: 1 mm).

Ventral surface coarsely punctate on mesepisterna and laterally on metasternum, finely and sparsely so on prepisterna; metepisternum strongly contracted behind, seven-tenths longer than wide; apical margin of 6th abdominal segment quadrisetose and widely arcuate in both sexes.

Hind femur tumid, bisetose along hind margin; tibiae short, fore tibia more or less expanded apicad, sulcate on dorsal side, very shallowly emarginate in external half of apex, with three long spines along apico-external margin; mid tarsus in ♂ biserially squamous ventrally in 2nd to 4th segments, hind tarsus in ♂ almost as long as and in ♀ one-seventh shorter than the width of head, 1st segment a half longer than the 2nd and one-fifth shorter than the 2nd and 3rd together, 3rd a half longer than the 4th, claw segment bisetose along each ventral margin.

Aedeagus (Fig. 12) slender and almost straightly produced, with apex knob-shaped and feebly hooked at ventral side; apical lobe triangulate, rounded at tip; apical orifice opened fully on dorsal side and extending near basal bulb, inner sac bearing two clusters consisting of microtrichia, one transversely occupying at apical third and another longitudinally along right side. Stylus (Fig. 13) small, slim, and well curved outwards, a seta situated a little apart from tip; basal segment trisetose apico-externally; valvifer bisetose at apex.

Length: 6.7-7.2 mm Width; 2.7-2.9 mm

Holotype: ♂, 750 m, Mt. Pagba, Negros Is., 18. IX. 1996, D. MOHAGAN leg. (preserved in SHIBATA'S coll.). Paratype: ♀, 300-350 m, Mambucal, Negros Is., 6-7. IX. 1996, D. MOHAGAN leg. (preserved in NIC).

The new species is similar to *Oxycentrus* (s. str.) *horni* SCHAUBERGER (1938), but is distinguished from the latter by the elytra more deeply sinuate before apices, sharp at the tips of the sinus and not separated at apices, and without dorsal pores on the 3rd intervals and scutellar striae, in addition to the subgeneric characteristics.

Oxycentrus (*Oxycentropsis*) *minutopunctatus* N. ITO, sp. nov.

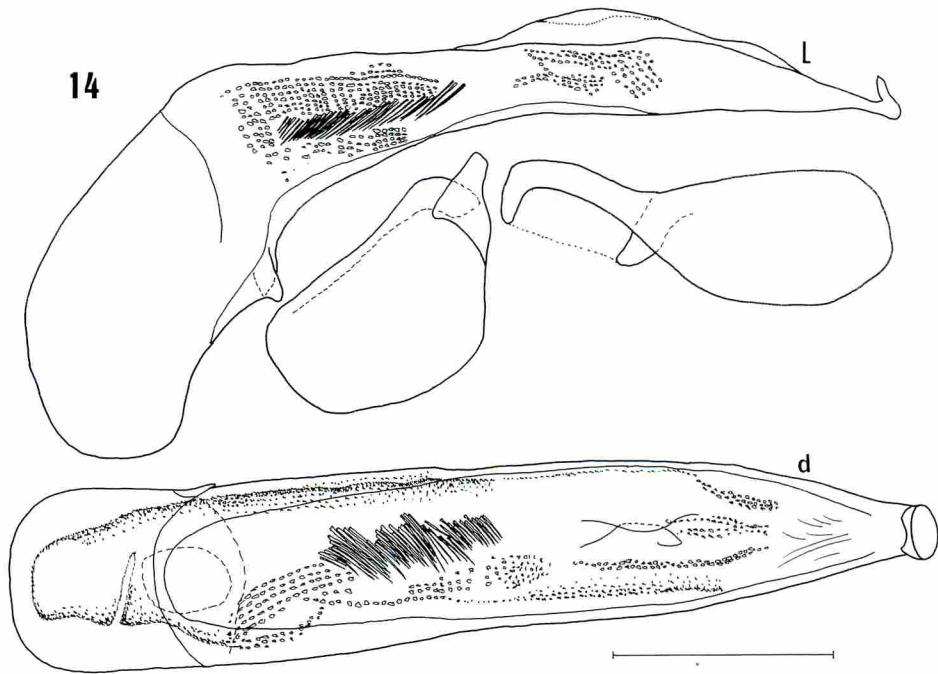
(Figs. 7 & 14)

Body oblong, parallel-sided, black, shiny, weakly iridescent on elytra; antennae and legs reddish brown, palpi light reddish brown, mandibles dark brown basally, labrum slightly brownish black.

Head narrow, a little more than three-fifths of the pronotal width, moderately convex, sparsely punctulate; labrum transverse, widely and weakly emarginate at apex and shallowly concave; clypeus weakly elevated, truncate apically, widely rugose at sides; clypeal suture fine and comparatively shallow throughout; frontal impressions arcuately running behind, deep near apices, a little shallowed near supraorbital grooves; eyes small and not strong in prominence; temple short, one-fifth of the eye length, abruptly oblique; genuine ventral margin of eye adjoining buccal fissure; antennae slender, a little surpassing pronotal base, 3rd segment one-eighth longer than the 4th and twice the 2nd; mandibles elongate, abruptly curved distad, terebral teeth similar to the former new species, *O. negrosensis*; 3rd segment of labial palpus massive, one-seventh longer than the 2nd; ligula free from paraglossae forwards from just before truncate apex, convergent in the free portion, where paraglossae are narrow; epilobes of mentum relatively widened apicad; microsculpture mostly unobserved, partly detected as vague transverse meshes.

Pronotum (Fig. 7) subsquare, widest at apical two-fifths, one-fifth wider than long, widely and gently convex as in the previous new species, *O. sakaii*, with short and vague transverse rugosities on disc; sides gently arcuate from apex to the widest point, thence feebly sinuately convergent basad, with fine borders; apex shallowly emarginate, and bordered throughout; base about one-fourth wider than apex, hardly bisinuate, weakly arcuate at sides, and brokenly bordered; apical angles rather widely rounded; basal angles similar to those of *O. sakaii*, but are a little more widely rounded; lateral furrows engraved in a line; basal foveae not concave, only obliquely flattened; front and hind transverse impressions vague; median line fine, shallow and laying between both the impressions; dorsal punctures very sparse and microscopical on large part and coarser only in basal foveae; microsculpture partly visible, consisting of obscure transverse meshes near the rugosities and the basal punctures and of fine isodiametric meshes in the furrows.

Elytra oblong, parallel at sides, three-fifths longer than wide, very sparsely and minutely punctate, gently convex; sides strongly arcuate at humeri, with shallow subapical sinus; apices not protrudent, widely rounded at outer margins, narrowly separated from each other, blunt at sutural angles; bases shallowly emarginate, very obtusely angulate at humeral angles; striae



Figs. 14. Male genitalia of *Oxycentrus (Oxycentrus) minutopunctatus* N. ITO, sp. nov. d, dorsal aspect; L, left side. (Scale: 1mm)

wide, deep and clearly crenulate, scutellar striole short; intervals more or less swollen on disc, becoming stronger in the swells apicad, dorsal pores of 3rd interval lacking; marginal series widely interrupted in middle, composed of 8 + (9-10) umbilicate pores; microsculpture sparsely visible as transverse lines. Hind wings fully developed.

Ventral surface mostly smooth, sparsely and rather coarsely punctate on mesepisterna; metepisternum strongly narrowed behind, three-fifths longer than wide; 6th segment in ♂ quadrisetose at each side, with hardly arcuate apex.

Legs short; femora tumid, hind femur bisetose along hind margin; tibiae comparatively massive, fore tibia strongly dilated distad, subtruncate at apex, clearly sulcate on dorsal surface, with three long spines along apico-external margin; hind tarsus of ♂ as long as the width of head, 1st segment equal in length to the 2nd and 3rd combined, 2nd one-third longer than the 3rd and twice the 4th, claw segment bearing two setae along each ventral margin.

Aedeagus (Fig. 14) thin, straightly prolonged distad, sharply reflected dorsad at apex; apical orifice wide, long and extending basal bulb, inner sac bearing a cluster composed of fine and long sclerites behind middle.

Female unknown.

Holotype: ♂, 1,500 m, Mt. Kaatoan, Sungko Vill., Mindanao Is., 5-7. V. 1996. (preserved in SHIBATA'S coll.).

This new species is allied to *Oxycentrus* (s. str.) *quadricollis* N. ITO (1994), but is different from the latter in having the eyes less prominent, the pronotum much more sparsely and minutely punctate and with the shallower and finer median line, and the elytra not bearing dorsal pores

on the 3rd intervals and not closed from each other at apices, in addition to the subgeneric characteristics.

Oxycentrus (Oxycentropsis) sp. 1.

Specimen examined: 1 ♀, 650 m, Motoklot, Maintum, South Catabato, Mindanao Is., 11. VIII. 1985, M. SAKAI leg.

Oxycentrus (Oxycentropsis) sp. 2.

Specimen examined: 1 ♀, 800 m, Mapula Vill., Upper Riv. Pulangi, Mindanao Is., 18-21. V. 1996.

Oxycentrus (s. str.) sp. 3.

Specimen examined: 1 ♀, Negros Is., 1987.

Oxycentrus (Oxycentropsis) sp. 4.

Specimen examined: 1 ♀, 0 m, Olanguan, 76 Km N. of Puerto Princesa, Palawan Is., 10. VI. 1989, M. SAKAI leg.

Oxycentrus (subgen. ?) sp. 5.

Specimen examined: 1 ♂, 500 m, Trident Mine, foot of Victoria Peak, near Narra, Palawan Is., 5. IX. 1985.

References

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**Four New Species of the Genus *Callistethus* BLANCHARD
(Coleoptera: Scarabaeidae: Rutelinae) from Sulawesi and a
Redescription of *Callistethus riedeli* LANSBERGE.**

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Abstract Four new species of the genus *Callistethus* are described from Sulawesi under the names of *C. magnificus*, *C. parvus*, *C. fuscus* and *C. similis*. A redescription of *C. riedeli* LANSBERGE, 1880 and a key to the species of the *riedeli* group are given.

Key words: *Callistethus*; Scarabaeidae; Rutelinae; new species; Sulawesi

The genus *Callistethus* BLANCHARD, 1850 comprises about 80 species from the eastern Palearctic Region and the Oriental Region, and three species have been recorded from Sulawesi up to the present, *C. riedeli* LANSBERGE, 1880, *C. ohausi* HELLER, 1898 and *C. fusciventris* OHAUS, 1926. They are divided into two groups. One group, the *ohausi* group, contains *C. fusciventris* and *C. ohausi*, and the other, the *riedeli* group, contains *C. riedeli*. These two groups are easily distinguished from each other by the shapes of their mesosternal processes, those of the formers are short and round at the apices, but those of the latter are long and acute.

In this paper, I am going to redescribe *C. riedeli* LANSBERGE, 1880 and describe four new species belonging to the *riedeli* group, *C. magnificus*, *C. parvus*, *C. fuscus* and *C. similis*, all from Sulawesi.

Before going further, I wish to express my sincere gratitude to Dr. TAKEHIKO NAKANE, Chiba, for his kindness in critical reading the manuscript of this paper. My thanks are also due to Dr. MANFRED UHLIG of the Museum für Naturkunde der Humboldt-Universität zu Berlin, Dr. ROGER-PAUL DECHAMBRE of the Muséum d'Histoire Naturelle, Paris (MNHN), Dr. J. KRIKKEN of the Nationaal Natuurhistorisch Museum, Leiden, Dr. MARTIN BAEHR of the Zoologische Staatssammlung, München, Dr. LOTHER ZERCHE of the Deutsches Entomologisches Institut, Eberswalde, and Dr. OTTÓ MERKL of the Magyar Természettudományi Múzeum, Budapest, for the loan of materials under their care. Mr. MALCOLM D. KERLEY of the Natural History Museum, London, and Dr. C. O'TOOL of the Hope Entomological Collections of the University Museum, Oxford, for giving me the opportunity to examine specimens of the genus *Callistethus* in their collections. My deep indebtedness is due to Messrs. YOSHIKAZU MIYAKE and HIDEHITO MATSUDA for their kind help on the materials. The holotypes of new species will be preserved in the collection of the Kanagawa Prefectural Museum of Natural History, Odawara, Japan.

Key to the Species of the Genus *Callistethus* from Sulawesi

1. Mesosternal process short, rounded at apex and hardly surpassing the level of mesocoxae

- *ohausi* group
- Mesosternal process long, acute at apex and extending to the level of procoxae (*riedeli* group) 2
2. Dorsal surface yellowish deep green to deep green 3
- Dorsal surface yellowish brown to reddish brown 4
3. Body small, 17.2 mm - 21.0 mm in length, 9.5 mm - 10.5 mm in width, ventral surface dark reddish brown *C. riedeli* LANSBERGE
- Body large, 20.9 mm - 25.7 mm in length, 12.2 mm - 13.5 mm in width, ventral surface shining green, pro-notum with a pair of yellowish deep green patches *C. magnificus* sp. nov.
4. Body small, 17.4 mm - 18.1 mm in length *C. parvus* sp. nov.
- Body large, 22.7 mm - 24.4 mm in length 5
5. Clypeus widely truncate; dorsal surface with coppery lustre; elytral intervals scattered with large and small punctures *C. fuscus* sp. nov.
- Clypeus rectangular, dorsal surface with greenish lustre; elytral intervals almost smooth between second and third rows of punctures *C. similis* sp. nov.

Callistethus riedeli LANSBERGE, 1880

(Fig. 1,6)

Body length: 17.2-21.0 mm, width: 9.5-10.5 mm.

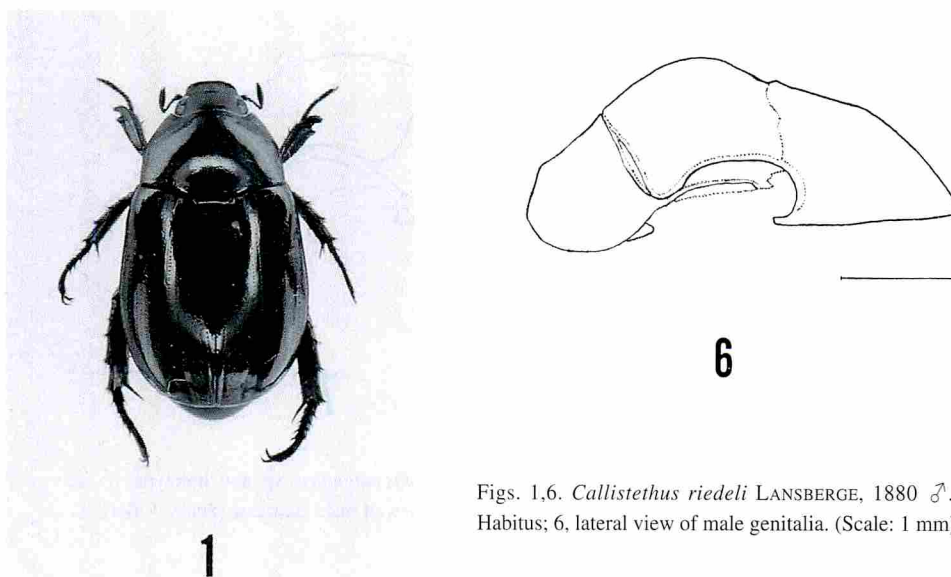
Frons, pronotum except for lateral portions and elytra deep green, head except for frons, lateral portions of pronotum, scutellum, propygidium, pygidium, ventral surface and legs reddish brown to dark reddish brown, dorsal surface with greenish metallic lustre, ventral surface with coppery lustre.

Head finely microsculptured, with sparse and suberect reddish brown setae (ca. 0.5 mm in length) along eyes; clypeus widely rounded, 2.14-2.17 times as wide as long, reticulately rugulose, reflexed along margins; frons closely punctate, the punctures round and deep in middle, becoming smaller and sparser towards vertex.

Pronotum 1.62-1.65 times as wide as long, strongly narrowed forwards in apical 1/3, almost parallel-sided in basal 2/3, with sparse suberect reddish brown setae (0.40-0.83 mm in length) along lateral margins; front angles acute, hind angles obtuse with slightly rounded apices; disc scattered with round punctures, which become smaller towards baso-median portion; lateral margins with rims extending to hind angles. Scutellum triangular, punctate along sides.

Elytron with 11 rows of fine and round punctures; intervals scattered with small punctures, which are intermixed with much smaller punctures (visible under 40×); side arcuate laterad, slightly sinuous in basal half, divergent in median portions and then convergent apicad; lateral margin with rim thickened in basal half, becoming thinner in apical half and obsolete before hind angles; distal margins weakly rounded; marginal membrane thin, starting at basal half, and extending to elytral apices.

Pygidium nearly straight laterally, rounded at apex and concentrically punctate; the punctures in middle sparse, elliptical, about 2-3 times as long as wide and intermixed with extremely minute punctures (visible under 60×), those in lateral portions round and partly coalescent, and feebly reticulo-rugulose along lateral and apical margins; outer margins rimmed, with long reddish yellow setae (0.9-1.0 mm in length) in lateral and apical portions.



Figs. 1,6. *Callistethus riedeli* LANSBERGE, 1880 ♂. 1, Habitus; 6, lateral view of male genitalia. (Scale: 1 mm)

Metasternum with punctures sparse in middle, small and round in baso-lateral portions, becoming denser and larger laterad, and with decumbent reddish yellow setae (0.57-0.78 mm in length); mesosternal process long, protruding to the level of procoxae, slightly bent dorsad and with rounded apex in lateral view.

Punctures of abdominal sternites crescent, becoming denser and larger laterad, with a transverse row of short setae (0.5-0.62 mm in length) at the middle.

Fore tibia with two teeth; apico-external tooth obtuse in male, widely rounded and rice scoop-shaped in female; lateral tooth situated at apical 2/7, weakly acute in male and blunt in female; outer claw of fore leg, inner claw of middle and hind legs simple and acuminate; inner claw of fore leg and outer claw of middle leg apically incised and forming two branches, the lower branch wider than the upper one.

Male genitalia as shown in fig. 6.

Specimens examined: ♀ (holotype), Celebes, S. Gorontalo, RIEDEL, (MNHN); 9 ♂♂, 4 ♀♀ Tondano, North Sulawesi, XI-1988, N. NISHIKAWA leg.; 1 ♂, 4 ♀♀, Tondano, North Sulawesi, 9- IV-1989, Y. MIYAKE leg.

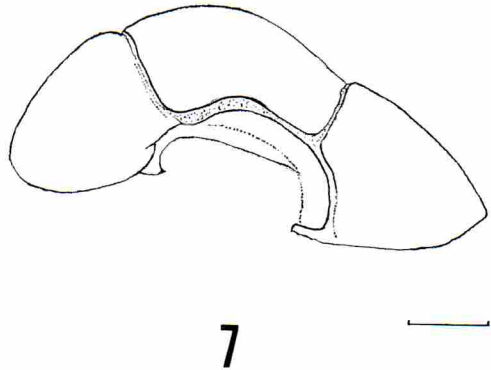
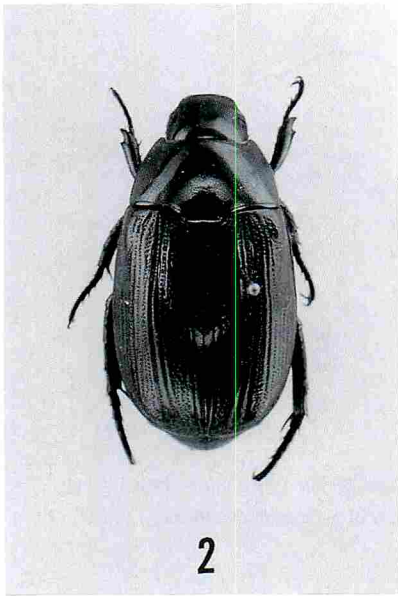
Callistethus magnificus sp. nov.

(Fig. 2, 7)

Body length: 20.9-25.7 mm, width: 12.2-13.5 mm.

Head, pronotum, scutellum, apex of mesosternal process and legs reddish brown, elytra, abdominal sternites and metasternum deep yellowish green; vertex with a pair of deep yellowish green patches, though they are often connected to each other and form a wide band; pronotum with a pair of deep yellowish green patches which are connected to each other in the median portion; dorsal surface and ventral surface with greenish metallic lustre, tibiae and tarsi with coppery lustre.

Clypeus widely truncate, 2.1-2.4 times as wide as long, reflexed along margins, slightly



Figs. 2, 7. *Callistethus magnificus* sp. nov. holotype, ♂. 2, Habitus; 7, lateral view of male genitalia. (Scale: 1 mm)

emarginate at apex, weakly rounded laterad and almost straight before eye-canthus, with punctures becoming denser laterad, partly coalescent and reticulo-rugulose in marginal portions; frons with sparse, erect yellowish white setae (0.45-0.55 mm in length) along eyes, scattered with round punctures, which consist of large and minute ones, the former becoming larger anteriorly and laterad, smaller and sparser towards vertex, coalescent partly in the anterior portion and reticulate along eyes.

Pronotum 1.88-1.94 times as wide as long, almost parallel-sided, slightly rounded in basal 3/5, slightly narrowed anteriorly; front angles obtuse, hind angles obtuse and slightly rounded at each tip; disc scattered with round punctures, which are intermixed with large and small ones, the former becoming more larger laterad, partly coalescent in lateral portions and also becoming smaller towards medio-basal portion; lateral margins sparsely furnished with suberect yellowish white setae (0.62-0.75 mm in length), thickly rimmed, the rims extending close to opposite of scutellum. Scutellum punctate except for median portion.

Elytra each with 11 rows of distinct punctures, which are large and deep, sometimes elongate, partly coalescent and become finer and reticulo-rugulose towards marginal portions; intervals irregularly scattered with round punctures of various size and intermixed with minute punctures (visible in 40×); sides slightly arcuate laterad, slightly sinuous in basal 1/3, divergent in the middle and convergent apically; distal margins slightly rounded; rims of lateral margins thickened in basal 2/5, becoming thinner in apical 3/5, and disappearing at hind corners; marginal membrane starting at basal 1/5, and extending to elytral apices.

Pygidium coarsely punctate, the punctures large, deep and partly coalescent in median portion, becoming denser laterad and rugose in lateral portions, with sparse, yellowish brown setae (0.87-1.0 mm in length) along margins; outer margins rimmed, nearly straight laterally, widely rounded at apex.

Metasternum scattered with punctures sparse and extremely minute in middle, becoming denser and larger baso-laterad, denser and distinctly larger laterad, those partly reticulate in lateral portions (except for baso-lateral portions), each puncture with an appressed yellow seta (0.57-0.8 mm in length); mesosternal process long, protruding to the level of procoxae, feebly

bent dorsad, with slightly rounded apex in lateral view.

Abdominal sternites microsculptured, sparsely punctate in middle, more densely and coarsely so laterad, the punctures on lateral portions partly coalescent and with sparse suberect yellow setae (0.37-0.65 mm in length).

Fore tibia with two teeth; apico-external tooth acute, lateral tooth situated at apical 1/4; inner claw of fore leg and outer claw of middle leg incised and forming two short branches, the lower branch wider than the upper one, the rest claws simple and acuminate.

Male genitalia as shown in fig. 7.

Holotype: ♂, Puncak Palolo, Central Sulawesi, IV-1989. Allotype: ♀, same data as the holotype. Paratype: 1 ♀, Malili, Sulawesi, XII-1988.

Callistethus parvus sp. nov.

(Fig. 3, 8)

Body length: 17.4-18.1 mm, width: 9.8-10.1 mm.

Dorsal surface except for propygidium, 6th abdominal sternite and apex of mesosternal process yellowish brown; frons with a pair of vague patches in middle; ventral surface except for 6th abdominal sternite and apex of mesosternal process dark reddish brown, legs yellowish brown to reddish brown; dorsal surface with coppery lustre, ventral surface alutaceous.

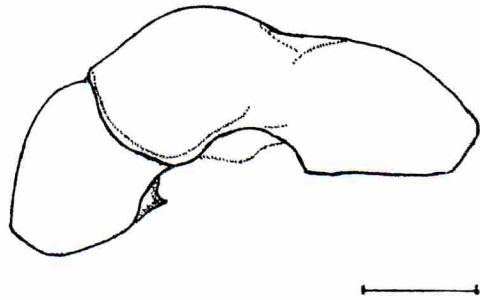
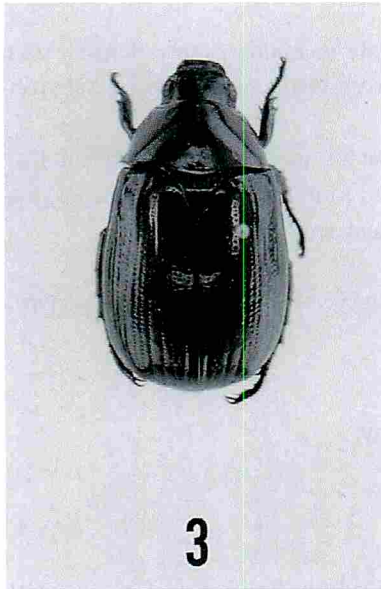
Clypeus rectangular, rounded at apical corners, 2.5 times as wide as long, distinctly reflexed along margins, closely punctate, the punctures becoming shallower laterad and partly coalescent in marginal portions; frons moderately coarsely punctate, the punctures becoming smaller and sparser towards vertex, with sparse, decumbent yellowish brown setae (0.37-0.63 mm in length) along eyes.

Pronotum 1.72-1.79 times as wide as long, arcuate at sides, rather noticeably narrowed in apical half, roundly narrowed in basal half; front angles slightly projected and acute at the tips, hind angles rounded; disc finely microsculptured, with a vague long depression in median portion, scattered with small punctures, which become denser laterad and sparse and small in baso-median portion; lateral margins with some decumbent yellowish brown setae (0.63-0.98 mm in length).

Elytra with 11 rows of punctures in each; intervals scattered with round punctures, which become smaller and sparser anteriorly, and sparse in posterior portion; sides feebly sinuous in basal 1/3, slightly divergent in middle 1/3, widest at the middle, roundly narrowed in apical 1/3; distal margins nearly straight; elytral apices obtuse; rims of lateral margins thickened in basal 1/4, becoming thinner apically, disappearing at hind corners; marginal membrane starting at basal 1/4 and extending to elytral apices.

Pygidium coarsely punctate, the punctures large and partly coalescent in median portion, becoming larger laterad, those in apical portion partly rugulose, with long yellowish brown setae (0.67-1.0 mm in length) along margins, with a pair of depressions at antero-lateral portions; outer margins rimmed, slightly sinuous laterally; apex feebly truncate, with slightly rounded corners in male but rounded one in female.

Metasternum moderately coarsely punctate, the punctures sparse and extremely minute in middle, becoming denser laterad and reticulate in lateral portions, with long appressed yellow



8

Figs. 3, 8. *Callistethus parvus* sp. nov. holotype, ♂. 3, Habitus; 8, lateral view of male genitalia. (Scale: 1 mm)

setae (0.62-1.37 mm in length); mesosternal process long, protruding to the level of procoxae, bent dorsad and blunt at apex in lateral view.

Abdominal sternites moderately coarsely punctate, the punctures elliptical in middle, becoming denser and more transverse laterad, with sparse, suberect yellowish brown setae (ca. 0.5 mm in length); 2nd and 3rd abdominal sternites with several longitudinal short depressions in median portions.

Protibia with two teeth, apico-external tooth acute, lateral one situated at apical 1/4, short and slightly blunt.

Male genitalia as shown in fig. 8.

Holotype: ♂, Puncak Dingin, Sulawesi, 16-X-1985. Allotype: ♀, same data as the holotype. Paratypes: 9 ♂♂, 1 ♀, same data as the holotype.; 1 ♂, Sunplaga, Sulawesi, 14-I-1986.

Callistethus fuscus sp. nov.

(Fig. 4, 9)

Body length: 22.7-24.4 mm, width: 12.5-13.3 mm.

Dorsal surface except for margins of pygidium, 6th abdominal sternite and mesosternal process yellowish brown, ventral surface except for 6th abdominal sternite and mesosternal process, margins of pygidium blackish brown, legs yellowish brown to reddish brown; dorsal surface with coppery lustre, and ventral surface alutaceous.

Clypeus broadly truncate, 2.57-2.61 times as wide as long, reflexed along margins, nearly straight at apex, nearly straight in lateral margins and weakly rounded in front of eye-canthus; clypeus and frons moderately punctate, the punctures becoming denser anteriad, sparser and smaller laterad and posteriad, and partly coalescent in marginal portions, furnished with sparse suberect yellowish brown setae (0.62-0.8 mm in length) along eyes; vertex sparsely and minutely punctate.

Pronotum 1.75-1.9 times as wide as long, slightly arcuate-sided, rather noticeably narrowed in apical half, slightly divergent in basal half; front angles projecting and acute the tips, hind ones obtuse and slightly rounded at the tips; disc scattered with round and coarse punctures, which are intermixed with minute ones, the former become denser laterad, with sparse suberect yellowish brown setae (0.45-0.68 mm. in length) along marginal portions. Scutellum minutely punctate, sparsely scattered with large punctures in anterior portion.

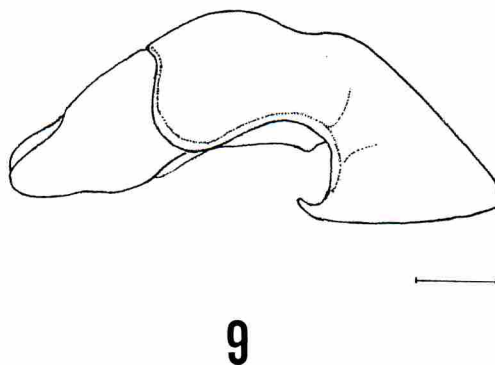
Elytra each with 11 rows of punctures; intervals in median portion irregularly scattered with round punctures, which are various in size and intermixed with minute punctures (visible in 40 \times); sides subparallel, feebly sinuous in basal portions, slightly divergent in median portions and widest at basal 3/5, and roundly convergent apicad; distal margins nearly straight and slightly sinuous; elytral apices rounded; lateral margins with rims thickened in basal 2/5, becoming thinner in apical 3/5, disappearing at hind corners; marginal membrane starting at basal 1/5, and extending to elytral apices.

Pygidium very closely punctate, the punctures large and partly coalescent in median portion, becoming denser laterad, and reticulo-rugulose along apical margin, furnished with long yellow setae (0.92-1.18 mm in length) along margins; disc depressed near base on each side, lateral margins more strongly depressed at the middle in female than in male; outer margins thickly rimmed, nearly straight laterally, rounded at apex.

Metasternum moderately coarsely punctate, the punctures sparse in middle, becoming denser and larger laterad and partly coalescent in lateral portions, with long, suberect yellow setae (0.95-1.2 mm in length); mesosternal process long, protruding to the level of procoxae, bent dorsad, with acute apex in lateral view.

Abdominal sternites rather coarsely and elliptically punctate, with a transverse row of suberect yellow setae (0.67-1.1 mm in length) at the middle, the punctures sparse and fine in middle, becoming denser and more transverse laterad.

Fore tibia with two teeth, the apico-external tooth acute in male, slightly rounded in female, and the lateral one situated at apical third, short and acuminate; outer claw of fore leg, inner claw of middle and hind legs simple, acuminate; inner claw of fore leg and outer claw of



Figs. 4, 9. *Callistethus fuscus* sp. nov. holotype, ♂. 4, Habitus; 9, lateral view of male genitalia. (Scale: 1 mm)

middle leg apically incised, forming two branches, the lower branch wider than the upper one.

Male genitalia as shown in fig. 9.

Holotype: ♂, Puncak Dingin, Sulawesi, 16-X-1985. Allotype: ♀, same data as the holotype. Paratypes: 14 ♂♂, 1 ♀, same locality as the holotype, 14-X-1985; 3 ♂♂, 1 ♀, same locality as the holotype, 15-X-1985; 38 ♂♂, 2 ♀♀, same data as the holotype; 1 ♀, Sunplaga, Sulawesi, 14-I-1986.

Callistethus similis sp. nov.

(Fig. 5, 10)

Body length: 22.7-23.6 mm, width: 12.1-12.9 mm.

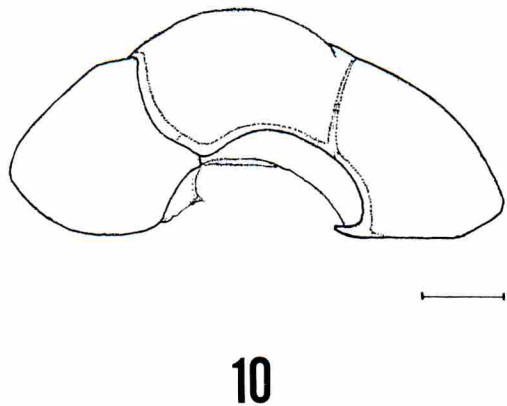
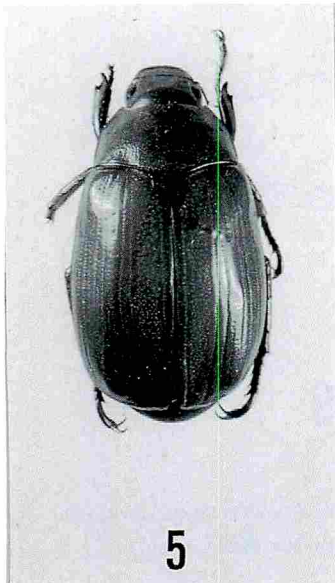
Dorsal surface except for propygidium and pygidium, 6th abdominal sternite and mesosternal process yellowish brown, ventral surface except for 6th abdominal sternite and median portion of metasternum dark brown to black, legs and median portion of metasternum reddish brown; head, pronotum, scutellum, pygidium and ventral surface with greenish lustre, legs with coppery lustre, elytra alutaceous.

Clypeus rectangular, 2.38-2.47 times as wide as long, with punctures dense, large and coalescent; vertex moderately punctate, the punctures fine in middle and becoming closer laterad.

Pronotum 1.67-1.79 times as wide as long; disc closely scattered with round and coarse punctures, which are intermixed with minute ones, the former become denser laterad and partly coalescent in lateral portions, with sparse erect yellow setae (0.87-1.08 mm. in length) along lateral portions. Scutellum closely and minutely punctate, scattered with large punctures in anterior and lateral portions.

Elytra with 11 rows of punctures in each, intervals in median portion irregularly scattered with large and round punctures, which are intermixed with minute punctures, though the intervals between 2nd and 3rd rows almost smooth.

Pygidium reticulately rugulose, with long reddish brown setae (1.00-1.25 mm in length)



Figs. 5, 10. *Callistethus similis* sp. nov. holotype. ♂; 5, Habitus; 10, lateral view of male genitalia. (Scale: 1 mm)

along margins; lateral portions in male slightly depressed at the middle.

Metasternum almost smooth in middle, sparsely punctate in medio-lateral portions, the punctures becoming denser laterad, closely punctate in lateral portions, the punctures becoming elongate and reticulately rugulose along margins, with long suberect white setae (0.7-1.0 mm. in length); apex of mesosternal process more acute in lateral view.

Fore tibia with two teeth; apico-external tooth acute in male, spatulate in female.

Male genitalia as shown in fig. 10.

Holotype: ♂, Puncak Palolo, Central Sulawesi, IV-1989. Allotype: ♀, same locality as the holotype, XII-1995. Paratype: 1 ♂, same data as the allotype; 1 ♂ 1 ♀, Pulu Pulu, Tanah Toraja, Central Sulawesi, III-IV-1997.

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(Received July 7, 1997: Accepted Dec. 12, 1997)

**Notes on the *Eucibdelus* Group
of the Staphylinidae (Col.) from Asia, 1.
A Review for Subgenera of the Genus *Eucibdelus* KRAATZ**

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Abstract In relation to the subdivision of the genus *Eucibdelus* into the subgenera, my recent examination of the type-species of the genus necessitates the following alternations to my previous work in 1997: Subgenus *Nudeucibdelus* HAYASHI is a synonym of *Eucibdelus* KRAATZ s. str., and a new replaced name, *Neocibdelus* is given for the subgenus *Eucibdelus* sensu HAYASHI, 1997 (nec KRAATZ). A key to the subgenera and description of a new species *Eucibdelus* (*Neocibdelus*) *orientalis* are given for this genus.

Introduction

Soon after the establishment of three subgenera for the genus *Eucibdelus* KRAATZ in 1997, I received important information and specimens of the *E. gracilis* KRAATZ, the type-species of the genus, from Dr. H. SCHILLHAMER, Naturhistorisches Museum Wien, 2. Zoologische Abteilung. After close examination of *E. gracilis*, I found that the main characteristics of the subgenus *Nudeucibdelus* accord well with those of that species. Therefore, the subgenus *Nudeucibdelus* is newly treated as a synonym of *Eucibdelus* s. str., and a new replaced name, *Neocibdelus* is given for the subgenus *Eucibdelus* sensu HAYASHI, 1997 (nec KRAATZ, 1859), and an emended key to the subgenera is provided.

Before going further details, I wish to express my cordial thanks to Dr. H. SCHILLHAMMER for his sincere comments and kindly offering of the specimens. I cordially thank to Mr. TAICHI SHIBATA for his constant encouragement and guidance of my study, and to Dr. KATSURA MORIMOTO, the Emelitus Professor of Kyûshû University (Department of Agriculture), Fukuoka, for his kindness of critically reading of this manuscript.

Genus Eucibdelus KRAATZ

See HAYASHI, 1997 for synonymy.

About 25 species have been known from SE Asia and Eastern area of the Palearctic region, but their assignment to the subgenera are not yet clear on most species owing to deficit of specimens.

Subgenus *Eucibdelus* KRAATZ

Eucibdelus KRAATZ, 1859. Arch. Naturg., 25: 70.

Nudeucibdelus HAYASHI, 1997. Ent. Rev. Japan, 52(1): 30. **Syn. nov.**

Notes In *E. gracilis* the female 10th abdominal tergite is distinctly separated into two parts as in *E. ishigakiensis* HAYASHI, but the infraorbital macroseta is absent as in *E. (Pareucibdelus) japonicus* SHARP.

Subgenus *Neocibdelus* nom. nov.

Eucibdelus sensu HAYASHI, 1997. Ent. Rev. Japan, 52(1): 28-29. (Misidentified, and junior homonym of *Eucibdelus* KRAATZ, 1859)

Type species: *Eucibdelus (Neocibdelus) orientalis* sp. nov.

Pronotum with 4 pairs of fully developed macrosetae; parameres of the male genitalia more or less asymmetrical; male 8th tergite nearly truncate at apex and feebly emarginate in the middle; male 9th sternite wide, suboblong.

Etymology: The generic name is derived from Greece. "Neo" means "new" and "cibdel" means "disguised".

Emended Key to the Subgenera of the Genus *Eucibdelus*

1. Pronotum with 4 pairs of macrosetae; 1st segment of metatarsus distinctly shorter than the following 2 segments combined; parameres of male genitalia unilobed; protibiae feebly dilated apicad as usual and slightly narrower at apex than protarsi; male 8th tergite nearly truncate at apex and feebly emarginate in the middle; female 10th tergite almost triangular *Neocibdelus* sbug. nov.
- Pronotum with 3 pairs of macrosetae 2
2. Metatarsi with 1st segment distinctly shorter than the following 2 segments combined; parameres of male genitalia sometimes bilobate at apex; protibiae rather slender, weakly thickened apicad and apparently narrower at apex than protarsi; male 8th tergite roundly protuberant behind; female 10th tergite distinctly separated into 2 pieces, viz. basal long band and apical piece *Eucibdelus* s. str.
- Metatarsi with 1st segment as long as or slightly longer than the following 2 segments combined; parameres of male genitalia unilobed, at most faintly emarginate at apex; protibiae strongly thickened apicad and apparently wider at the apex than protarsi; 8th tergite feebly arcuate at apex and nearly truncate in the; female 10th tergite nearly triangular as usual *Pareucibdelus* HAYASHI

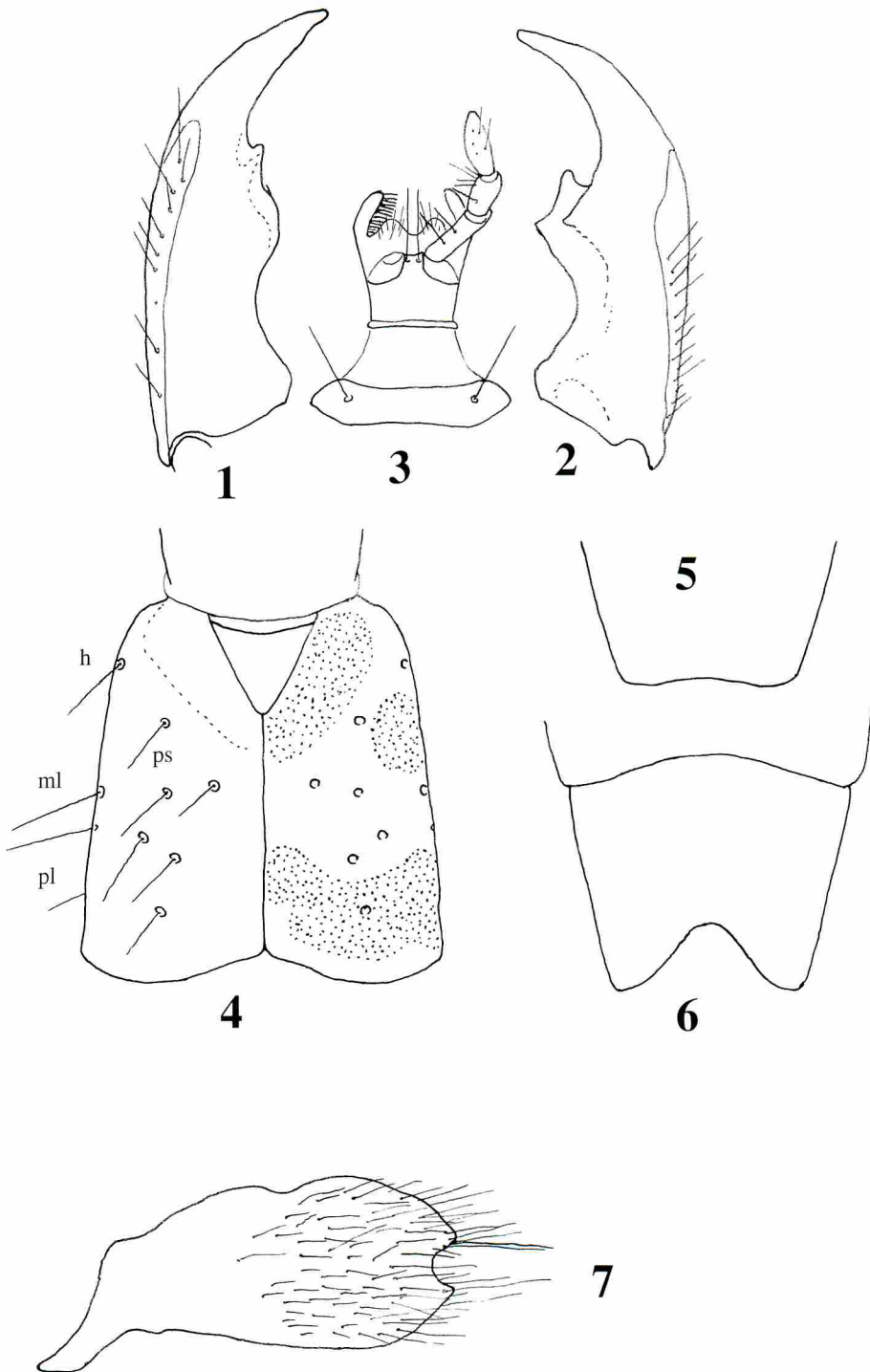
Eucibdelus (Neocibdelus) orientalis sp. nov.

(Fig. 1-11)

Eucibdelus (s. str.) *faeae*: HAYASHI, 1997 (nec FAUVEL, 1895). Ent. Rev. Japan, 52(1): 26 (Fig. 1), 28 (Figs. 8-10)-29.

Eucibdelus sp. Ibid.: 28 (Fig. 11).

Body elongate, robust, weakly shiny, clothed with tomentous hair streamings which are inconspicuous on head and pronotum; head, pronotum, scutellum, maculae of elytra and most of



Figs. 1-7. *Eucibdelus orientalis* sp. nov., ♂; 1, left mandible; 2, right mandible; 3, labium; 4, elytra (left elytron showing macro- and large setae, and right one showing dark patches: h=humeral macroseta, ml=mid-lateral, pl=post-lateral and ps=parascutellar); 5, 8th tergite; 6, 7th and 8th sternites; 7, 9th sternite.

abdomen leaden black, elytra and its epipleuron dim coppery red with dark maculae on disc; labrum and basal 6 segments of antennae reddish brown, with the latter distal 5 ones blackish; mandibles brownish in basal half and reddish pitchy in apical half; hairs on head and pronotum short and stiff, coppery yellow, sparsely mingled with silvery hairs, apparently sparse but mainly silvery and rather dense in postgenae; elytron with a wide parascutellar macula, a small semi-oval one behind shoulder, a sutural one in hind third of sutural area, and a large subtriangular one in postero-lateral corner not reaching lateral and posterior margins; hairs on elytra rather long, soft in appearance, forming distinct hair streamings, apparently dense and silvery white in coppery red ground colour but dark brown and mingled sparsely with whitish hairs in dark maculae; abdomen with paratergites, middle parts and hind margins of basal 3 sternites coppery red, posterior margins of 6th and 7th sternites and whole of 8th segment dark coppery red; abdomen with segments almost un haired along hind margins, basal 4 tergites clothed with rather short golden yellow tomentum mingled with very sparse silvery hairs in middle areas and with rather long silvery hairs at sides; 7th and 8th tergites clothed with long silvery tomentum except for their apices furnishing with short coppery yellow hairs; coxae and femora nearly blackish to blackish brown, apices of femora pale, tibiae and protarsi brownish, protibiae and protarsi a little paler, meso- and metatarsi a little darkened. Length: 14.0-18.0 cm.

Head subquadrate, a little wider than long (47.0 : 40.0), very weakly narrowed posteriad, widely rounded at posterior angles, weakly emarginate at base, gently convex above, much wider and slightly shorter than pronotum (47.0 : 35.0 and 40.0 : 42.0); upper surface faintly depressed in frontal and supra ophthalmic areas, densely and rather coarsely punctured, with a narrow, smooth, impunctate median line in the mid-third which is a little widened at the anterior end, without microsculpture, the punctures umbilicate and in postgenae shallow and somewhat ill-defined, interspace very marrow and somewhat rugulose in front area. Chaetotaxy composed of 5 macrosetae, genal and front marginal macrosetae reduced, imperceptible; occipital macrosetae situated a little before postgenal ones. Eye large, strongly convex and nearly two-fifths as long as postgenae. Antennae moderately long, slender, not serrate, extending a little beyond the middle of pronotum, weakly thickened distally, 10th the widest; basal 4 segments polished but 4th weakly so; basal 7 segments and 11th segment distinctly longer than wide, 8th not transverse and nearly as long as wide, 9th and 10th a little wider than long; 11th subfusiform, conical in apical half and a little shorter than the 2 preceding combined together (11.0 : 14.0); 8th to 10th segments subtrapezoidal and somewhat asymmetrical, and each segment with the following relative length: 24.0 : 10.0 : 15.0 : 9.0 : 9.0 : 9.0 : 7.5 : 7.5 : 7.0 : 7.0 11.0.

Subgenae weakly convex, sparsely and rather coarsely punctured, the punctures irregular in size; interspace much wider than diameter of puncture and with very fine and linear microsculpture; posterior border of mental fossa thinly carinate except inner third; subgenal macrosetae reduced, imperceptible.

Labrum short, nearly one-eighth as long as head, deeply excised medially, shiny, rather sparsely and coarsely punctured, with scanty pubescence, without microsculpture, and each half bearing about 7 long setae along anterior margin.

Mandibles (Figs. 1-2) thick, rather long, more than three-fourths as long as head, gently arcuate; left mandible (Fig. 1) nearly straight in lateral view, bearing a large subtriangular tooth before the middle, and a small, thick and blunt additional tooth at base of apical side of large tooth; right mandible weakly curved at the middle in lateral view, with a large subquadrate tooth

at about the middle, the tooth shallowly emarginate at apex and shallowly sulcate dorsally in apical half of the base.

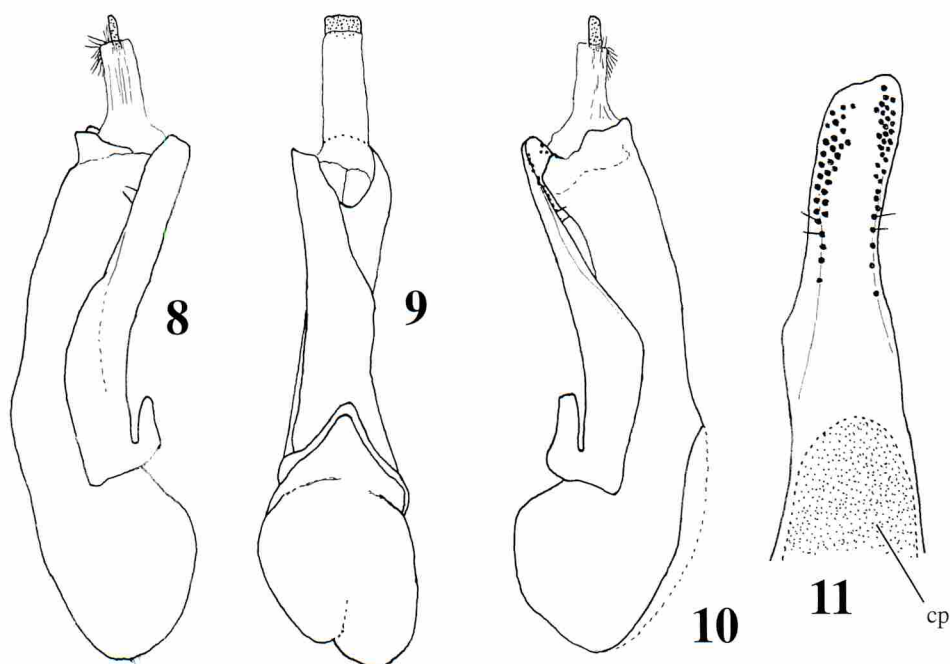
Maxillary palpi elongate; 1st segment short but longer than wide, weakly curved and with a thin short hair near apex; 2nd nearly as long as each of the following segments, gently curved, thickened apically, much longer than wide and bearing very scanty thin hairs of various length near apex; 3rd nearly straight, subclavate, nearly as thick as 2nd, with scanty thin hairs of various length in apical half; 4th elongate, a little slenderer than 3rd, subfusiform, straight, glabrous but with scanty punctures. Lacinia wide, widened inward, densely pubescent in inner half and with numerous suberect stiff hairs at base. Galea very thick, subtrapezoidal, very densely pubescent apico-dorsally, without terminal seta at apex of proximal sclerite.

Labial palpi (fig. 3) elongate, all segments much longer than wide; 1st segment subclavate, straight, obliquely truncate at apex, with a thin hairs of various length at inner side; 2nd nearly as long as 1st, subclavate, straight, obliquely truncate at apex, with a few thin short hairs at base and long ones at apex; 3rd elongate, subfusiform, a little longer but slenderer than 2nd, very sparsely and minutely punctured with thin pubescence, and the tip blunt. Ligula (Fig. 3) rather long, deeply and widely emarginate medially and sparsely ciliate. Paraglossa (Fig. 3) moderately wide and long, reaching apex of 1st segment of labial palpi, combed with dense stiff hairs at inner margin. Prementum subpentagonal, transverse, nearly twice as wide as long and impressed medially. Mentum (Fig. 3) short, very transverse, shallowly emarginate at anterior margin, with a fine hairs at each lateral corner. Submentum bearing several long erect setae of various length in addition to the usual paired large setae. Gular plate narrow, feebly emarginate at sides, depressed, with roughly reticulate microsculpture.

Pronotum narrow, nearly barrel-shaped, strongly convex, widest at anterior two-sevenths, gently narrowed in front and behind, a little longer than wide (6 : 5), much narrower and slightly longer than head (35.0 : 47.0 and 42.0 : 40.0); front margin feebly emarginate, and hind one gently and uniformly arcuate; front angles rounded with front corner weakly swelling, and hind angles simply rounded; sides feebly sinuate, slightly emarginate in hind half; disc shallowly depressed inside the front ampullae, very densely and coarsely punctured, the punctures shallow, clearly defined and umbilicate, inter spaces very narrow, somewhat rugulose in parts, without microsculpture; median line very narrow, smooth, running from front margin to near base, the hind end widened; chaetotaxy consisting of 4 pairs of fully developed macrosetae, namely, front marginal, anterolateral, mid-lateral and latero-basal macrosetae, and these widely distant from margins except latero-basal ones; superior lateral line invisible from above in the full length, confluent with inferior lateral line far behind front corner, then the united line extending forwards to front margin beyond front angle.

Scutellum triangular, shallowly depressed, minutely and moderately coarsely asperate-punctate except impunctate marginal areas; prescutum well developed, shallowly depressed, somewhat uneven, with linear microsculpture.

Elytra (Fig. 4) suboblong, slightly dilated posteriad, longer than wide (in the maximum length, 63.0 : 52.0), much longer and wider than pronotum (63.0 : 42.0 and 58.0 : 35.0), and slightly arcuate at sides, shallowly emarginate at apices, latero-apical angles rounded; surface very minutely asperate-punctate, the punctures ill-definite, rather dense in middle area and sparser anteriorly and posteriorly. Chaetotaxy of macrosetae and large seta as in the followings: parascutellar macroseta under-developed, barely perceptible, placed far distant from the mid-



Figs. 8-11, *Eucibdelus orientalis* sp. nov., ♂; 8, male genitalia, left lateral view; 9, ditto, ventral view; 10, ditto, right lateral view; 11, distribution of peg-setae on inner face of parameres (cp=part which is coadunate with penis).

level of scutellum; humeral macroseta fully developed and accompanied with a small additional seta; mid-lateral one and postero-lateral one each with 1 or 2 additional large setae; inner-mid seta-group composed of about 4 large setae.

Prosternum not long, very transverse, without paired large setae, rather strongly convex in middle, deeply depressed in both sides and obtusely carinate only just before protuberance of prosternal process which is short and blunt. Furcasternum long, strongly convex medially like a ridge but not carinate and deeply depressed in both sides.

Mesosternum weakly and transversely convex, subrugosely asperate, minutely and sparsely punctured with recumbent pubescence; mesosternal process not long, reaching near the middle of mesocoxae and subacute at the tip; mesocoxae contiguous to each other. Intersternal piece deeply sunken. Metasternal process short and gently rounded at apex.

Abdomen elongate, parallel-sided, shallowly depressed at each base of 3rd to 6th tergites, minutely and rather densely asperate-punctate, with faint and extremely minute reticulate microsculpture here and there; each tergite with a transverse row of 4 large setae, and each sternite bearing a few suberect setae in latero-apical corners. In ♂ 8th tergite (Fig. 5) nearly straight at apex; 8th sternite (Fig. 6) widely, deeply and roundly emarginate at apex; 9th sternite (Fig. 7) wide, subquadrate, without large setae, subtriangularly and rather widely excised at apex and subacute at the tips; 10th tergite subtriangular as usual, rounded at the tip and without large setae. In ♀ 8th tergite weakly arcuate at apex but nearly straight in middle; 8th sternite with apex slightly produced posteriad and very feebly arcuate at the margin; 10th tergite subtriangular as usual; genital segment without accessory sclerite, 2nd gonocoxite not setaceous, minute

stylus short, bearing a pair of long setae at apex, one seta long and thick, and the other short and thin.

Legs long and slender, tibiae not spinous except terminal spines, tarsi densely pubescent below, claws simple, outer claw slightly smaller than inner one, and empodial seta paired, thin, not longer than half length of claws; protibiae elongate, straight, subclavate, not spatulate, with some thin long setae on the under side and narrower at apex than protarsi; protarsi strongly dilated and patellate in basal 4 segments, each of which is very short, transverse, minutely sparsely asperate-punctate dorsally, with recumbent long pubescence, thickly clothed with modified pubescence on planter and at sides; 5th segment moderately long, extending much beyond 4th, sparsely pubescent dorsally and ventrally; anterior and middle coxae and trochanters bearing a long seta at each apex. Mesotibiae elongate, weakly curved ventrad, with a few thin and long setae on the under side. Metatibiae elongate, weakly curved ventrad, with about 5 setae on the under side along the outer margin; each tarsal segment simply dilated apically, not lobate; 1st segment distinctly shorter than both the following 2 segments combined (16 : 22) and 5th segment.

Male genitalia (Figs. 8-11) elongate, weakly curved ventrad and apparently asymmetrical; penis slightly asymmetrical in apical portion, nearly truncate at apex, feebly emarginate at sides in ventral view and weakly tumid in basal portion; parameres unilobed, distinctly asymmetrical in apical half which is a little inclined to the left and obliquely truncate at the right side, completely unficated with penis in basal half, extending a little beyond penis, and inner face of apical fifth (Fig. 11) bearing numerous peg-setae in each side, not setaceous medially and with a pair of 2 thin setae at base of the setaceous portions.

Holotype: ♂, West Garo Hills (alt. 1100 ± 150 m: GPS. N 25°29.6', E 90°19.5': WGS 84), Nokrek Nat. Park, Meghalaya St., NE India, 9-17. V. 1996, E. JENDEK & O. SAUSA leg. (In coll. T. SHIBATA). Allotype: ♀, paratypes: 32 ♂♂, 2 ♀♀, same date as the holotype.

Further specimens examined: 2 ♂♂, 1 ♀, 70 km NE Vientiane (N 18° 16.1' E 103° 10.9', alt. 150 m), Banphabat env., Laos, 27. IV-1. V. 1997, E. JENDEK & O. SAUSA leg.; 2 ♂♂, Doi Sang, Chiang Mai, Thai, 10-15. V. 1990, M. ITO leg.

The present new species is well similar in general appearance to *E. nepalensis* SCHEERPELTZ from Nepal, but is easily distinguishable from the latter by proportion of antennal segments, namely, in the latter species all the segments are distinctly longer than wide and the elytra are much less densely pubescent. The present species also resembles to *E. feae* FAUVEL from India and Myanmar in general appearance, but in the latter species the body is much smaller, at most 12 mm in the length and the pubescence on the elytra are rather sparse and mainly yellowish in the colour. The present species is well similar in shape of the male genitalia to *E. bhutanicus* COIFFAIT from Bhutan but easily distinguishable from the latter in having the different proportion of the head and different colour of pubescence on the elytra as follows: in *E. bhutanicus* the head is not transverse, the main pubescence on the elytra are yellowish gold, and peg-setae on parameres of the male genitalia are scattered wholly in the apical portion.

Specimens collected in Laos and Thai are a little different from the typical specimens in the general appearance, colour, shape of the male genitalia, however, distribution of the peg-setae on the parameres of the male genitalia is almost equal to each other. The present species is perhaps very widely distributed in SE Asia and considerably variable among respective localities.

Etymology: Specific name is derived from distributing area of the new species.

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Errata and Corrigenda

YASUHIKO HAYASHI

I would like to emend the following points:

In the Entomological Review of Japan 52 (1);

p. 26: line 2 in explanation of figures, for 3, *Phytolinus* read 4, *Phytolinus*.....; line 3, for 4, *Eucibdelus* read 3, *Eucibdelus*

Notes on the Coprophagous Scarab-Beetles (Coleoptera Scarabaeidae) from South-East Asia (1)

A New Genus and Species of the Tribe Canthonini from Sumatra*

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Abstract A new genus and species of the tribe Canthonini is described from Sumatra under the name *Macropanelus sumatrensis* gen. et sp. nov. This genus is closely related to the genus *Panelus*, but can be distinguished from the latter in the several external characters. A key to the genera of the tribe Canthonini from the Sunda Islands is also provided.

Introduction

When we examined a large number of specimens of Scarabaeidae from Southeast Asia, we found a specimen of an undescribed species belonging to the tribe Canthonini from Sumatra. This species appears to be related to the members of *Panelus*, but is highly differentiated from the latter in several external characters. Thus, we propose a new genus on this species.

Tribe Canthonini

Macropanelus gen. nov.

The name of new genus is masculine in gender.

Type species: *Macropanelus sumatrensis* sp. nov.

Body moderate in size among the Oriental genera of the tribe Canthonini, distinctly larger than all the species of the genus *Panelus*, oblong-oval, well convex dorsally.

Head distinctly transverse, very flat, armed with two teeth at the middle of clypeal margin; clypeo-genal sutures not distinctly defined, clypeo-frontal one completely effaced; genae relatively large, well produced laterally; eyes not very small. Antennae with nine segments; antennal clubs composed of three segments.

Pronotum simple, moderately convex, parallel-sided in posterior three-fourths, and then obtusely angulate, forming a distinct lateral angle and rapidly narrowing anteriorly; apical mar-

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gin emarginate, not distinctly bordered; basal margin gently rounded, without a marginal border.

Elytra strongly and uniformly convex, as wide as the prothoracic width at base, rounded laterally, with seven striae and one lateral costa near epipleural margin; the lateral costa well separated from epipleural margin at base, then gradually approaching mutually towards apex, and joined near the middle; epipleura very wide. Pronotum and elytra with lateral margins smoothly continuous.

Prothorax with anterior angles very deeply excavated on the ventral side. Mesosternum conspicuously longer than those in the related genera, and distinctly separated from metasternum by a fine carina which is not strongly curved forwards. Metasternum large and very long, about 2 times as long as the length of abdomen. Abdomen very short. Mesocoxae slightly oblique. Protibiae each with three distinct external teeth near apex, these teeth without any denticulations between them; the rest external margin very smooth, without any denticulations; apical margin deeply notched and forked as in the genus *Panelus*. Metatibiae relatively long and slender, strongly incurved, with inner margin obviously denticulate, inner distal portion strongly produced as a sharp tooth. Meso- and metatarsi strongly flattened, with the 1st to 4th segments equal in size as in the genus *Panelus*, and the 2nd to 5th segments almost parallel-sided.

Distribution: Sumatra.

Notes. The present new genus is closely allied to the genus *Panelus* LEWIS, but is easily distinguished from the latter by the following characteristics; 1) protibia without any denticulations between the three external teeth and on the rest external margin, while in *Panelus*, it is distinctly denticulate between the three external teeth and on the rest external margin; 2) metatibia long and slender, strongly incurved, with inner margin rather roughly denticulate, while in *Panelus*, it is relatively short and not strongly incurved, with inner margin not denticulate; 3) inner distal end of metatibia strongly produced as a sharp tooth, while in *Panelus*, it is entirely simple; 4) mesosternum relatively long, with the suture between meso- and metasterna not strongly curved forwards; 5) abdomen very short, about a half times as long as the length of the metasternum; 6) body conspicuously larger, about 5.5 mm, while in *Panelus*, all the species are at most only 3 mm in length.

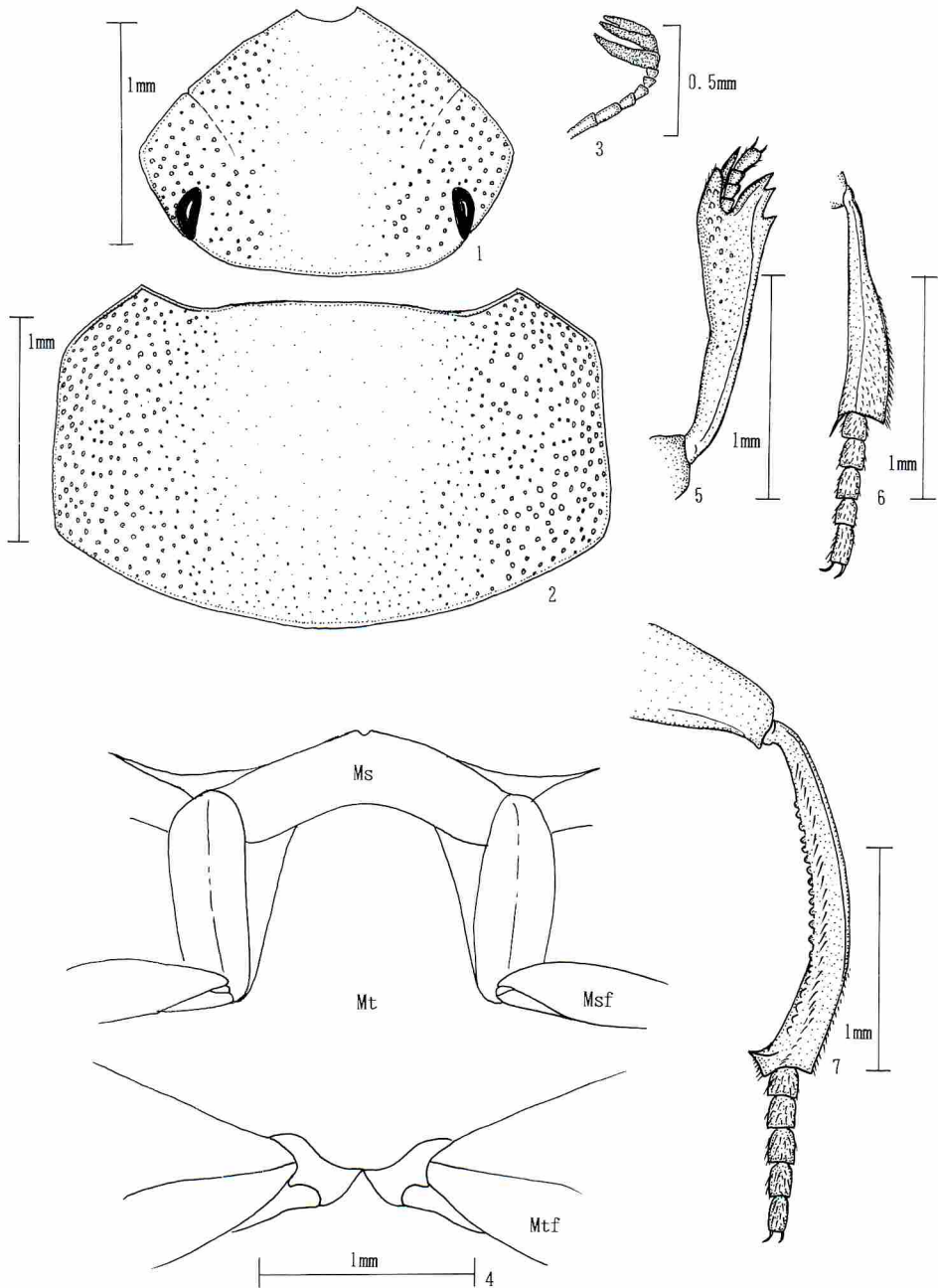
Macropanelus sumatrensis sp. nov.

(Figs. 1- 7)

Length: 5.5 mm; width: 3.0 mm.

Female. Body oblong-oval, strongly convex; dorsal side very smooth and shining, sparsely clothed with fine recumbent inconspicuous hairs; ventral side also very shining, partly and sparsely clothed with similar hairs as those on dorsum. Colour almost black, with ventral side of head, abdomen, epipleurae and legs somewhat reddish; mouth parts, palpi and antennae brown to reddish-brown.

Head subhexagonal, very gently sloping forwards in apical half, about 1.42 times as wide as long; clypeus weakly produced forwards, shallowly and relatively narrowly incised at the middle, with a reflexed small tooth on each side of the incision; clypeo-genal sutures indefinitely defined, clypeo-frontal one entirely effaced; genae roundly produced laterally; eyes not very small, the interspace between them about 7.5 times as wide as the width of one eye; surface very



Figs. 1-7: *Macropanelus sumatrensis* gen. et sp. nov., holotype. 1: head, dorsal view; 2: pronotum, dorsal view; 3: antenna, dorsal view; 4: thoraces, ventral view; 5: right protibia, dorsal view; 6: right mesotibia, dorsal view; 7: right metatibia, dorsal view.

shining, sparsely and very finely punctuated in the middle, densely and strongly so at sides.

Pronotum moderately convex, about 1.66 times as wide as long; anterior margin emarginate, with marginal border fine but distinct at sides, completely effaced in the middle; lateral margins finely bordered towards the lateral angle, then not clearly bordered towards posterior angle; anterior angles well produced forwards, subquadrate; posterior angles obtuse; basal margin evenly and gently rounded, not marginated; surface very shining, sparsely and very finely punctuated at the antero-median portion, the punctures becoming denser, coarser and somewhat ocellate towards sides and base.

Elytra about 1.10 times as wide as long; disc strongly convex, with seven striae and one lateral costa, the 1st, 2nd, 3rd and 7th isolated, of which the former three are arising from base and extending to near apex, and of which the latter is defined in basal two-thirds, the 4th and 5th almost joined near apex; all striae very shallowly and finely impressed, with strial punctures rather coarse and very shallow, the punctures distinctly crenulating interstriae; interstriae almost flat at inner ones, a little convex at outer ones, very shining and smooth, sparsely and very finely punctuated, the punctures gradually becoming coarser towards lateral margins.

Pygidium very transverse, marginated at base, somewhat convex a little before the middle, moderately densely and ocellately punctuated, Mesosternum broad, very smooth and impunctate. Metasternum very long, with median longitudinal portion very smooth and shining, very sparsely punctuated, lateral portions very densely covered with fairly coarse and ocellate punctures, the punctures partly confluent. Profemora with anterior edge simple. Meso- and metafemora with posterior edge also simple. Protibiae elongate, weakly incurved at the middle, armed with three external small teeth apically, simple and smooth on the rest external margin. Mesotibiae short and rather broad, weakly incurved; mesotarsi relatively short, about 0.70 times as long as the length of mesotibia. Metatibiae very slender and strongly incurved near each apex, with inner margin distinctly denticulate, inner distal portion produced as an acute tooth internally; metatarsi also short, about 0.47 times as long as the length of metatibia.

Holotype: ♀, Padang, West Sumatra, Indonesia, 26. III. 1997.

The holotype will be deposited in the collection of the Graduate School of Human and Environmental Studies, Kyoto University.

Key to the Genera of the Tribe Canthonini from the Sunda Islands

- 1 (2) Meso- and metatibiae very strongly widened and each forming a thin plate. Meso- and metatarsi short, often with basal segment strongly produced at inner side. Protibia with two external teeth. Head short and broad, with genae well produced laterally, often distinctly angulate. Antennae with 8 segments. Body very compact, mostly about 2-3 mm in length *Haroldius* BOUCOMONT
- 2 (1) Meso- and especially, metatibiae elongate and slender, often well arcuately incurved. Antennae with 9 segments. Protibia usually with three external teeth.
- 3 (6) Meso- and metatarsi stout, with the basal four segments short, almost equal in size. Protibia mostly with apical margin deeply notched and forked.
- 4 (5) Protibia without any denticulations between the three external teeth and on the rest external margin. Metatibia strongly incurved, with inner margin roughly denticulate, inner distal end strongly produced as a sharp tooth *Macropanelus* gen. nov.
- 5 (4) Protibia distinctly denticulate between the three external teeth and on the rest external margin. Meta-

- tibia not strongly incurved, with inner margin mostly simple, not roughly denticulate, inner distal end simple. Body very small, mostly l. 5- 3 mm in length *Panelus* LEWIS
- 6 (3) Meso- and metatarsi with basal segment slender, distinctly longer than the 2nd. Protibia with apical margin usually simple, neither deeply notched nor forked.
- 7 (8) Pronotum with lateral margin distinctly angulate before the middle; disc with a short longitudinal carina near each posterior angle along lateral margin, and often with a fine groove along the carina. Elytra with epipleural margin well pronounced and strongly costate, and with another lateral costa contiguous to the epipleural margin in basal half; the 7th striae almost contiguous to epipleura and often changing into a deep and rather broad longitudinal groove. Body usually depressed *Phacosoma* BOUCOMONT
- 8 (7) Pronotum with lateral margin not distinctly angulate before the middle; disc always simple, without a short longitudinal carina near each posterior angle along lateral margin. Elytra with epipleural margin neither well pronounced nor strongly costate, and without another lateral costa near epipleural margin in basal half; the 7th striae distinctly separated from epipleura. Body strongly convex *Cassolus* SHARP

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原稿作成の要領

A. 欧文原稿

1. 用紙にはA4版を用い、左右に3 cm以上の余白をあげ、タイプライター、ワードプロセッサあるいはコンピューターで打ち出したものとする。行間はダブルスペースとし、人名を除いて、表題や見出しを含めていかなる場合も大文字だけでは打たない。人名のみ大文字で打つ。
タイプ原稿やフロッピーの作れない原稿の場合は、スキャナーで読み取るためイタリックやボールドなどの指定のない文字を使用し、下線や訂正の書き込みのない原稿（コピーでもよい）を一部付ける。
2. 報文原稿は、表題、著者名、所属機関とその所在地、または住所、刷り上がり10行程度までの（約150語）の英文の著者抄録（Abstract）、本文、和文要約、文献の順に配列する。
提出原稿の一部は無処置で、他の一部は動、植物の属およびそれ以下の学名に下線を引き、また人名には二重の下線引く（第一字を除いて）。引用文献は著者名のアルファベット順に並べ下記の形式で記す。
BLACKWELDER, R. E., 1936. Morphology of the coleopterous family Staphylinidae. *Smiths. misc. Coll.*, 94 (13): 1-102
—1952. The generic names of the beetle family Staphylinidae with an essay on genotypy. *Bull. U.S. natn. Mus.*, 200: i-iv+1-483.
MÜLLER, J., 1925. Terzo contributo alla conoscenza del genere Staphylinus L. *Boll. Soc.ent.ital.*, 50: 40-48.
3. 報文中の採集または検視データは以下のように表記する。
(例) 3♂♂, 2♀♀, Amaishi, Hyōgo, 28. V. 1995, Y. HAYASHI leg.
4. 原稿には原稿用紙と同質の表紙をつけ、これに表題、ランニング・タイトル（簡略化した論文表題、— 欧文40字内外）、著者名、連絡先を明記し、赤字で原稿及び図表の枚数、別刷りの必要部数、その他連絡事項など記入。
5. 図は耐水性黒色インクで鮮明に描き、そのまま印刷出来るようにする。図の拡大（縮小）率を示したい場合は図中にスケールを入れる。原図には薄紙のカバーをかけ、これに著者名、図の番号、上の方向を示し、図の裏にその種名を入れる。もし原図版上に取り扱い指定文字を入れるときにはかならず青鉛筆を用いる。原図の大きさは、台紙を含めてA4 (210 x 295) 以内とされたい。また原図の返送が必要な場合はカバーにその旨を記入する。
6. 図の説明及び表はそれぞれ別紙に書き、原稿末につける。

編集委員からのお願い

投稿される原稿については、投稿規定並びに原稿作製の要領をよく参照されて作製してください。本文の入ったフロッピーディスクはマッキントッシュまたはMS-DOSのフォーマットされたものに、必ずテキストファイルで入力してください。ワードプロセッサ専用機は専用OSの為、そのままでは取り込みは出来ません。DOS変換したものをお送り下さい。

原稿をプリントアウトする際には特に段落がはっきり判るように作製してください。また段落内の文節や単語の間が開きすぎないようにしてください。スキャナーで取り込むときに文章がバラけて取り込まれ、文章が壊れることがあります。

引用文献については、編集でチェック出来ないものもありますので、本紙の書式をよく確かめてください。また文献名の省略の仕方も充分確認してください。

人名（欧文）は全て大文字で打ち込んで下さい。中国、朝鮮、タイなど、日本と同じ順序による姓名表記の場合も欧米式の姓名表記とします（つまり名、姓の順）。

53巻から和文要約を入れるようお願いいたします。

日本甲虫学会の新しい会則

1997年度総会において新しい会則の承認を頂きましたので、ここに掲載発表いたします。会則がいくら立派でも、会の運営がうまくいかなければ何にもなりません。学会運営の基本として運営委員一同、学会の発展に努めてまいります。

日本甲虫学会会則（新）

1. 名称：本学会は日本甲虫学会と称する。英文では The Japan Coleopterological Society と表示する。
2. 学会本部：林 匡夫 方〒558-0011 大阪市住吉区苅田2-16-5 レジデンス寿202
Tel 06-698-2964 に置く。
(1) 支部：本学会は運営委員会の承認を得て必要な地に支部を置くことができる。
3. 目的：本学会は甲虫学に関する学理及び分類学の研究発表，知識の交換，発展，普及に寄与し，合わせて会員相互の親睦を計ることを目的とする。
4. 事業：本学会は，前条の目的を達成するために次の事業を行う。
a. 機関誌「昆虫学評論」及び会報「ねじればね」を年2回発行
b. 甲虫学に関する臨時出版物の刊行
c. 年一回の総会の他に、例会、談話会、採集会などの開催
d. その他当会にとって必要と認められる事業
5. 会員：本学会の会員は次のとおりとする。
a. 正会員：本学会の目的に賛同して入会した者
b. 賛助会員：本学会の目的に賛同し一定額以上の寄付金を継続的に納付される者
c. 名誉会員：本学会又は甲虫学に関し特に功労のあった者で，運営委員会が推薦して総会の承認を得た者
(1) 入会等：会員になろうとする者は，所定事項を記入した入会申込書に，その年度分の会費を添えて，学会本部に提出する。
(2) 変更等：所定の事項につき変更を生じたときは，速やかにその旨を学会本部に通知すること。
6. 会費：会員は，12月31日までに，別に定める会費の次年度分を納めること。
(会費は全て前納とする)。
(1) 名誉会員は会費を納めることを要しない。
(2) 既納の会費は，いかなる事由にかかわらず返還しない。
(3) 会費は振替口座 00990-8-39672 日本甲虫学会に振り込むこと。
7. 資格の喪失：会員は次の事由によってその資格を喪失する。
(1) 退会：退会しようとするときは，理由を付して退会届けを学会本部に提出すること。
(2) 死亡。
(3) 除名：本学会の名誉を傷つけ，目的に反する行為のあったとき。
8. 資格の一時的停止：会員は次の事由によってその資格を休止又は停止される。
(1) 休会：会員が休会しようとするときは，期間及び理由を付して休会承認願いを学会本部に提出し，承認を得ること。運営委員会は休会を承認し，かつ会費を免除することが出来る。
(2) 認定退会：会費を事由無く引き続き2年間滞納したとき（未納会費を全納することにより資格が復活される）

9. 運営体制と役員：本学会は学会の運営、活動、事業が円滑に進められるよう以下の役員をおく。役員は全て名誉職とする。
- a. 会長：学会の諸活動を統括する。
 - b. 運営委員：学会運営の実務に当たる。庶務，渉外，会計，編集事務，例会などを分担担当し，運営委員会を適宜ひらき出席しなければならない。また年一回拡大運営委員会を主催する。
 - c. 編集委員：投稿原稿の校閲，点検，調整，誌面編集などに当たり著者に適切な助言を行なう。
 - d. 評議員：本学会の発展，充実に向けて運営委員会の要請する事業に助力，助言をする。
10. 役員の選任：役員は，会員の中から，運営委員会の推薦を経て総会の承認を得る。
- (1) 役員の任期は当分の間定めない。
11. 会計：本会の会計年度は歴年とする。また会計監査を受ける。
- (1) 監査委員：会員の中から，運営委員会の推薦を経て会長が委嘱する。
12. 会議：定例運営委員会は，年3回，会長が招集する。また，役員から，付議すべき事項を提示して運営委員会の招集を請求されたときは，臨時に運営委員会を招集できる。運営委員会において決定された事項のうち決算等，学会運営上の重要事項について総会で承認を得なければならない。
- (1) 拡大運営委員会は年一回，全役員を，会長が招集する。
13. 総会：通常総会は年一回会長が招集する。又，会長は必要と認めた時は臨時総会を招集することが出来る。総会の議事の要領及び議決した事項は，全会員に通知する。
14. 議事録：全ての会議には議事録を作成し，保存する。又，必要に応じて内容について役員に通知する。
15. 会則の変更：運営委員会の提案により総会の承認を得ること。
16. 書類及び帳簿の備付：本学会は次の書類及び帳簿等を備え付けること。但，これらに代る書類及び帳簿を備えたときは，この限りではない。
- 1. 会則，2. 会員名簿，3. 役員の名簿及び所属，4. 財産目録，5. 収入支出に関する帳簿，6. 諸会議に関する議事録，7. その他必要な書類及び帳簿。

付帯事項

年会費：正会員は5000円，賛助会員は30000円以上とする。

入会手続き：本部宛てに入会申込書を送付し，その年度の会費を納入する。以下の事項を記述のうえ送付する：名前，同ローマ字つづり，生年月日，自宅住所，電話番号，所属先，会誌送付先（自宅または所属先）。

会誌の発行：機関誌は年1巻とし，当面2号に分けて6月と12月に発行する。会報は通巻とし，当面機関誌と同時に発行する。印刷費を著者が負担できる大きな論文は増補号の形での発行も可能とする。

会 報

日本甲虫学会 1998年度行事予定

1998年度の例会などの予定について総会の折に発表しましたが、今年は日本昆虫学会が滋賀県立大学で開催されますので、少し日程の修正が必要となりました。カレンダーにご記入のうえ備忘としてください。内容等については事前にご案内いたします。

- 例 会： 3月28日PM1.00～4.30 於：大阪市立自然史博物館
 採集会： 6月27～28日 於：和佐又山（日本鞘翅学会と合同で）
 例 会： 9月27日（日）PM1.00～4.30 於：大阪市立自然史博物館
 総 会： 12月13日（日）AM10.00～16.30 於：大阪市立自然史博物館
 特別例会： 10月3日（土）時間、会場未定（県立滋賀大に於て。判明次第連絡します）
 日本昆虫学会の分野別小集会として開催されます。

バックナンバーの販売

昆虫学評論のバックナンバーは阪神大震災後林（靖）が保管しているがまだ残部数、絶版巻号などのチェックが十分ではありません。しかしバックナンバーの注文も少しずつありますので注文に応じていくことにしました。値段は49巻2号に掲載してある価格を踏襲します。以下に在庫状況を示します。売り上げ代金は学会の印刷費などになりますのでぜひご注文ください（送料はご負担ください）。

第 1巻～ 6巻：絶版	
第 7巻～10巻：1巻あたり	500円
第11巻～20巻：〃	750円
第21巻～25巻：〃	1000円
第26巻～30巻：〃	1250円
第31巻～35巻：〃	1500円
第36巻～38巻：〃	2000円
第39巻～40巻：〃	2500円
第41巻～45巻：〃	3000円
第42巻補遺：〃	1500円
第46巻以降：〃	5000円

“ねじればね”のバックナンバーについての問い合わせや購入希望があるのですが、ごくわずかの号が残っているみのようですので、現在コピー版作るか検討しています。

絶版の巻号は以下のとおりです：1～6， 13， 23～25， 38（1）（その他若干の絶版があります）。また49巻2号が行方不明となっていて（阪神大震災のためと思われる）在庫が殆どありません。

総目次は16巻以降の分（5巻単位）のみあります。無料でお分けしますが、送料はご負担下さい。

会 報

会費納入のお願い

本学会の会費は前納制です。1998年度会費5,000円を早急にお納め下さい。自身の会費納入状況は封筒の宛名の下に記入してあります。宛名ラベル作製の時期の具合によって、納入されているにもかかわらず未納扱されている場合があるようですので、お気付きの方は会計（野村英世：〒590 堺市赤坂台1-18-5 Tel 0722-98-4066）までご連絡下さい。

会誌の発行について

“昆虫学評論”及び“ねじればね”の発行日は6月15日と12月15日に設定していますが、投稿原稿の審査制などの採用により原稿の事前処理に時間がかかり、最終校を終えるのが遅れることがあります。それで原稿は一応の締切を3月15日（6月発行に対して）、9月15日（12月発行に対して）とします。事前処理の進行によっては、掲載が遅れることもありますし、また早まることもありますのでご了承下さい。

“ねじればね”は'97年度3回発行することが出来ました。今年度も3回以上発行出来る見込みです。評論52巻2号の2をようやくお届け出来ます。“昆虫学評論”は原稿が不足しています。多くの投稿を期待しています。

編集委員からのお願い

投稿される原稿については、投稿規定並びに原稿作製の要領をよく参照されて作製して下さい。本文の入ったフロッピーディスクはマッキントッシュまたはMS-DOSのフォーマットされたものに、必ずテキストファイルで入力して下さい。ワードプロセッサ専用機は専用OSの為、そのままでは取り込みは出来ません。DOS変換したものをお送り下さい。

原稿をプリントアウトする際には特に段落がはっきり判るように作製して下さい。また段落内の文節や単語の間が開きすぎないようにして下さい。スキャナーで取り込むときに文章がバラけて取り込まれ、文章が壊れることがあります。

引用文献については、編集でチェック出来ないものもありますので、本紙の書式をよく確かめてください。また文献名の省略の仕方も充分確認して下さい。

人名（欧文）は全て大文字で打ち込んで下さい。中国、朝鮮、タイなど、日本と同じ順序による姓名表記の場合も欧米式の姓名表記とします（つまり名、姓の順）。

和文要約について

51巻以降“評論”には和文を掲載していませんでしたが、和文の要約を付けてほしいという要望が投稿者からもありますので、問題（特殊な学術用語が打ち出せるかどうか）はあるのですが、53巻から投稿原稿には和文要約を付けていただきたいと思います。

著 作 権

昆虫学評論及び“ねじればね”に掲載された著作は原則として本会に属する。

1. 執筆者自身が自分の著作の一部を複製・翻訳などの形で利用する場合、これに対して当会では原則的に意義申し立てしたり妨げることとはしない。ただし、執筆者自身でも全文を複製の形で他の著作物に利用する場合に限り、事前に本会へ文書で申出を行い、許諾を求めなければならない。
2. 第三者から論文の複製あるいは転載に関する許諾の要請があり、当会において必要と認めた場合は、執筆者に代わって許諾することがある。

投 稿 規 程

1. 投稿は原則として当学会員に限る。登載は原則的には受領順によるが、全額実費負担の原稿は優先的に取り扱うことが可能である。但しアドバイザー制の導入により掲載の順位の変更がありうる（原稿は適当な方の校閲を受けたものであることが望ましい）。
2. 昆虫学評論には、当分の間、欧文原稿のみを掲載し、和文原稿は当面“ねじればね”に掲載されるものとする。またプレートは当分の間廃止し、図版はすべて本文内に収めるtext figure 扱いとする。但し著者負担によるカラー・プレートは認める。原稿の長さは刷り上がり10ページ以内とし、超過ページの印刷経費は著者負担とする。
3. 原稿（本文、図、表および表紙）は別記の要領で作成し、2部（一部はコピーで）を編集幹事に書留で郵送する。本文をワードプロセッサで作成した場合はDOSフォーマット化されたフロッピーに、またコンピューターで作成した場合はマッキントッシュまたはDOS-フォーマット化されたフロッピー（1.44MB）に、ストリップテキスト化した後それぞれ書き込んで、プリントアウトした原稿とともに同時に提出することが望ましい。フロッピーが提出されることによって校正や編集上の負担が著しく軽減される（当学会においてはマッキントッシュLC630にワードパーフェクトを乗せて編集しています）。その他の詳しい原稿作成の要領については別ページを参照してください。
4. 原稿の掲載上の体裁については編集委員に一任されたい。編集委員はアドバイザーの意見に基づいて原稿の内容について著者に再検討や訂正を求めることがある。
5. 著者校正は原則として初校のみとする。校正での大幅な変更や追加は認めない。
6. 別刷は50部単位で作成し、50部を学会負担とする。
7. 原稿の送付、問い合わせ先は当分下記とする。

昆虫学評論

〒558 大阪市住吉区菟田2-16-5 レジデンス寿202 林 匡夫

〒666-01 川西市水明台3-1-73 林 靖彦 Tel 0727-93-3712 FAX 0771-86-0863

ねじればね

〒611 宇治市木幡熊小路19-35 水野弘造 Tel 0774-32-4929

〒614 八幡市男山雄徳8 E7-303 伊藤建夫 Tel 075-983-3491

和文原稿について

和文原稿は当分の間“ねじればね”紙上にのみ掲載の予定であるので、新しい分類学的処理を含む内容の論文の掲載は出来ません。“ねじればね”は当分2回の発行として、1号4-8頁建てとする。分布、生態などの短報、分類学的な解説やノート、同定の手引き、その他役にたつ論説、情報など幅広い内容で紙面を作っていきたいと考えています。

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