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Three New Cetoniid Beetles (Coleoptera, Scarabaeidae, Cetoniinae) from Southeast Asia

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Abstract Two new species and a new subspecies of cetoniid beetles are described under the names of Rhomborhina (Rhomborhina) castanea sp. nov. from northern Vietnam, Theodosia (Theodosia) miyashitai sp. nov. from Borneo and Heterorrhina (Heterorrhina) borneensis sumatrana subsp. nov. from W. Sumatra.

In this paper, the author is going to describe two new species and a new subspecies of the cetoniid beetles from Southeast Asia.

Before going further, I wish to express my sincere gratitude to Mr. K. IWASE, Tokyo for his kind and continuous support in many ways. My thanks are also due to Messrs. M. FUJIOKA, N. KATSURA, K. KUME, T. MIYASHITA for their kind offer of the materials to this study.

Rhomborhina (Rhomborhina) castanea sp. nov. (Figs. 1-3)

Somewhat narrow; shining, dark reddish brown, femora and tibiae bright reddish brown, antennae, tarsi blakish brown; hairs of inner faces of middle and hind tibiae and margins of py-
gidium blackish brown.

Head relatively small; clypeus densely punctate, quadrate, about 1.1 times as wide as long, weakly arcuate at sides, straight and reflexed at anterior margin, rounded at anterior angles.

Pronotum transversely trapezoidal, about 1.55 times as wide as long, gently convex, sparsely and minutely punctate, lateral borders slightly angulate behind the middle, each groove along the borders ending before posterior angle.

Scutellum triangular, nearly 1.3 times as long as wide and almost impunctate.

Elytra about 1.45 times as long as wide, widest behind shoulders, marginate along lateral borders, finely serrate along posterior borders, sutural intervals sharply carinate in posterior half of inner margins, slightly but sharply prominent at apices; surface almost polished, transversely rugose near apices, with some rows of minute punctures near bases.

Pygidium transversely triangular, about 2.3 times as wide as long, slightly convex; surface finely rugose, with long setae along borders.

Front tibia slender, with two outer teeth including apical one, second tooth obtuse in male, and wider second tooth sharp in female. Outer face of middle tibia simple in male, frequently unispinous at the middle in female. Inner face of hind tibia clothed with long setae in basal 2/3.

Sternal process longer than wide, parallel-sided in basal half, semielliptical in apical half; suture of meso- and metasternum almost disappeared at the process. Third to fifth abdominal sternites slightly depressed in male, not depressed in female.

Male genitalia resembles those of other species in the genus (Fig. 3).

Body length: 31.2~34.4 mm; width: 14.6~16.8 mm.


This new species resembles Rhomborhina (Rhomborhina) jeanneli RUTER from Yunnan, China and Thailand in the body shape and the structure of surface, but is easily distinguished from the latter by the different coloration (almost black in the latter), the narrower body and the hind tibia more sparsely setose.

*Heterorrhina (Heterorrhina) borneensis sumatran* subsp. nov. (Figs. 4-5)

Different from the nominotypical subspecies from Borneo in the following points: body narrower, glossy blackish brown, with sides of pronotum, scutellum, the medial marking of elytra, mesosternal process, metasternum and ventral...
face of femora pale reddish purple, whereas in the nominotypical one, body glossy black, with brilliant green markings on pronotum and elytra; scutellum larger; elytra more strongly and more sharply pointed at the sutural apices.

Body length: 19.0~21.1 mm; width: 9.6~10.2 mm.

Type series. Holotype: ♂, Padang, W. Sumatra, Indonesia, V. 1991, preserved in the Kanagawa Prefectural Museum, Odawara. Paratypes: 1 ♀, same date as the holotype; 1 ♂, 1 ♀, same locality as the holotype, VII. 1991; 1 ♂, Harau Valley, W. Sumatra, Indonesia, III. 1995; 1 ♂, W. Sumatra, Indonesia, IV. 1981.

Distribution. W. Sumatra

*Theodosia (Theodosia) miyashitai* sp. nov. (Figs. 6, 8 & 10)

Male. Elongate-oval; head and pronotum yellowish cupreous green, apices and ventral faces of cephalic and thoracic horns deep red, elytra yellow brown and with greenish luster, ventral surface and pygidium bright cupreous brown to cupreous green, with yellowish tint and closely clothed with pale gray hairs.

Clypeus strongly transverse, about 3 times as wide as long, densely and finely punctate, angulate but not sharply toothed at anterior angles; cephalic horn stout, arcuately curved in lateral view, sharp at apex, sometimes with a tubercle before the middle of dorsal face.

Pronotum semi-global, about as long as wide except for the horn, narrowly thickened in posterior half along lateral borders; surface impunctate on disc, shagreened at sides and the horn; thoracic horn slender, somewhat shorter than cephalic one, horizontally produced anteriad, bifurcate at apex, taller than wide in cross section, with a large tubercle at the middle of ventral face.

Elytra transverse, about 1.2-1.3 times as long as wide, widest behind shoulders and gradually narrowed posteriad, marginate at sides, truncate at apical part, but slightly pointed at the

Figs. 6, 8 & 10. *Theodosia (Theodosia) miyashitai* sp. nov. ♂; 6. habitus (holotype); 8. head and thorax in lateral view; 10. male genitalia in dorsal view (scale: 2 mm). Figs. 7, 9. *T. (T.) chewi* OCHI ♂; 7. habitus; 9. head and thorax in lateral view.
middle; surface almost wholly coriaceous, sparsely punctate near only base.

Front tibia very slender, glabrous, with an outer tooth behind apical one; middle and hind tibiae densely clothed with long hairs on inner faces.

Male genitalia as shown in Fig. 10.

Female. Unknown;

Body length: 30.2~39.5 mm (incl. horn), 24.0~30.9 mm (excl. horn); width: 14.2~15.8 mm.


Distribution. Borneo.

This new species is closely allied to Theodosia (Theodosia) chewi OCHI (Figs. 7, 9) which was recently described from Borneo, but is easily distinguished from the latter by the clypeus not toothed at anterior angles and thoracic horn not much shorter than the cephalic one whereas in the latter, the clypeus is sharply pointed at anterior angles and the thoracic horn is distinctly shorter than the cephalic horn.

References


(Received July 15, 1997: Accepted July 29, 1997)
Revision of the Genus *Sepedophilus* GISTEL (Coleoptera: Staphylinidae: Tachyporinae) from Japan: Species Groups of *S. glabratu s* and *S. exiguu s*

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Abstract  The Japanese species of *glabratu s* - and *exiguu s*-groups of the genus *Sepedophilus* GISTEL are revised. The three new species and a new subspecies are described as follows: *Sepedophilus glabratu s*, *S. glabratu s okinawa nis*, *S. exiguu s*, and *S. elegantissimu s*. Keys to the members of each species group are provided. The aedeagi and the apical abdominal segments of male and female are illustrated in detail for comparison.

During the course of the study on the Japanese Tachyporinae we found a series of small-sized *Sepedophilus*-species, whose elytra have paired markings. These species remarkably resemble *S. armatus* (SHARP, 1888), but they are readily distinguishable from the latter by the absence of bristles along the marginal areas of elytra, etc. Up to the present such *Sepedophilus*-species have not been known from Japan at all. By the close examination we came to a conclusion that they are classified into 3 species and a subspecies (*S. glabratu s*, *S. glabratu s okinawa nis*, *S. exiguu s* and *S. elegantissimu s*). Although they have such common characters as the small body, the elytral markings in pair, the hind tibiae without setae, the chaetotaxy on 3rd to 6th tergites 0-1-1-1, the male 9th tergite continuous, and the internal structure of median lobe with a H-shaped or rectangular sclerite, *S. glabratu s* is definitely separable from the other two species by the structures of the mid and hind tarsomeres and the female 8th tergite mentioned in the diagnosis. Thus, *S. glabratu s* and the other two species should be classified into the different species-groups.

In this paper the species group of *S. glabratu s* is established for *S. glabratu s* and *S. g. okinawa nis*, and also the species group of *S. exiguu s* is for *S. exiguu s* and *S. elegantissimu s*. Three new species and a new subspecies are described and illustrated in detail; the keys to the Japanese species and subspecies are also provided. For the parts of body measured and the abbreviations used in the text and also for the taxonomic characters including chaetotaxy, see NAOMI

1) Taxonomic study on the subfamily Tachyporinae from Japan, 3.
and MARUYAMA (1997). In the figures the sensory setae are shown by the arrows; the long and short bristles are illustrated, but the pubescence is omitted.

Species Group of *S. glabratu*

*Diagnosis:* Body small; antennae brown with basal segments paler; elytra maculated, without bristles; elytral epipleura subacute; mid and hind legs each with 3rd tarsomere bearing a ventral flap which extends to the apex of 4th tarsomere; chaetotaxy in 3rd to 6th tergites 0-1-1-1; male 8th tergite with 4 long bristles; male 8th sternite with 3 long bristles; male 9th tergite continuous, with 5 long and 1 short bristles; female 8th tergite with inner lobe longer than outer lobe.

One species and one subspecies, *S. glabratu*, and *S. glabratu okinawanis*, belong to this species-group in Japan.

**Key to Species and Subspecies of *S. glabratu*-group**

1(2) Aedeagus with median lobe larger, more strongly bulbous at base, with narrower apex; internal structure with a distinct rectangular sclerite, the setous area broader; parameres less strongly attenuate at apices .......................... *S. glabratu glabratu* sp. and subsp. nov.

2(1) Aedeagus with median lobe smaller, less strongly bulbous at base, with broader apex; internal structure with rectangular sclerite incomplete and partially amalgamated with the narrower setous area; parameres more strongly attenuate at apices .......................... *S. glabratu okinawanis* subsp. nov.

*Sepedophilus glabratu* NAOMI et MARUYAMA sp. nov.

(Figs. 1; 2. A-E, G; 5. A, D)

Male and female. Fore part: 1.52-1.62 mm in length (Fig. 1), weakly shining, with relative proportions: HL: 7; HW: 13; PL: 15; PW: 24; SL: 21; EW: 24. Head brown, with reddish brown clypeofrontal area; pronotum brown, with broad marginal area yellowish brown; elytra brown to reddish brown or yellowish brown, with sutural area sometimes infuscate, and also with a pair of medio-lateral markings, the markings distinct, often indistinct or almost vanishing; abdomen brown to reddish brown; antennae brown, with basal segments pale yellowish brown; mouth parts and legs yellowish brown to reddish brown.

Head transverse, with distinct frontoclypeal and midcranial sutures; eyes a little shorter than the 2nd and 3rd antennal segments combined, weakly convex; pubescence sparse, occurring almost concentrically, distinctly longer and much sparser than that on pronotum; surface with faint, fingerprint-like microsculpture; antennae relatively slender, 3rd to 11th segments becoming gradually broader apically, 10th a little broader than long, 11th slightly asymmetrical, obtusely pointed at apex, with ALP: 8 : 5 : 4 : 4 : 4 : 4.5 : 5 : 7.

Pronotum moderately to strongly convex dorsally, broad, basal margin very weakly arcuately emarginate at sides, posterolateral corners almost rounded, not protruding posteriorly; pubescence short, very dense, almost turning posteriorly; microsculpture extremely fine, run-
ning transversely. Mesosternum with a median keel low, running almost in full length, mesosternal process acutely pointed; mesocoxal cavities narrowly separated; metasternum at median part about 2/5 the length of lateral part.

Fore legs with tibiae bearing 3 thin setae, internally with a line of thin setae along apical margin, ventrally with an oblique (or transverse) line of setae near apex, externally with a yellow long ctenidium which occupies the full length of tibia and becomes gradually larger apically; 1st to 3rd tarsomeres each moderately dilated, 4th much smaller than and about half as broad as 3rd. Mid legs with femora bearing 1 long and 2 or 3 short apicoventral setae; tibiae with 2 setae, 1 long apical spur, and fimbriate setae at apical margin; 3rd tarsomere with a ventral flap extending to the apex of 4th tarsomere. Hind legs with femora bearing 1 long apicoventral seta; tibiae without setae, 1 long apical spur, and fimbriate setae at apical margin; 3rd tarsomere with a ventral flap similar to that of mid leg in structure, with TLP: 10 : 5 : 4 : 2 : 6.

Elytra well convex above, weakly narrowed posteriorly, posterolateral corners rounded, conjoint hind margins shallowly emarginate; epipleuron subacute, with outer margin a little higher than inner margin only in posterior part; pubescence similar to that on pronotum; microsculpture very fine and minute, reticulate.

Abdomen strongly narrowed posteriorly; pubescence very dense, distinctly longer than that on elytra; chaetotaxy on 3rd to 6th tergites: 0-1-1-1; 7th tergite without bristles.

Male. Eighth tergite (Fig. 2 A) entire, with 4 long bristles; 8th sternite (Fig. 2 B) with a large V-shaped emargination, 3 long bristles; 9th tergite (Fig. 5 A) narrow, completely continuous, apical lobes moderately separated, with 5 long and 1 short bristles; 9th sternite (Fig. 2D) symmetrical, narrowed apically, with 2 short bristles; 10th tergite (Fig. 5 A) narrow, with 1 short thin bristle. Aedeagus (Fig. 2 E) with median lobe moderately bulbous at base, gradually narrowing to pointed apex; internal structure with a basal tube short, almost straight and broadened posteriorly, with a sclerite behind basal orifice, a rectangular sclerite just behind the basal tube, and the area densely clothed with moderately long setae in addition to paired longitudinal bands; parameres slender, extending posteriorly far beyond the apex of median lobe, each very thin and extremely attenuate at apical part.

Female. Eighth tergite (Fig. 2 C) with inner lobe short but a little longer than outer lobe, median emargination deep, not extending anteriorly beyond the base of narrow lateral emargination, with 8 long bristles in addition to 2 sensory setae; 8th sternite (Fig. 2 G) entire, with 3 long and 1 short bristles in addition to 6 sensory setae; 9th tergite (Fig. 5 D) widely separated; 9th sternite (Fig. 5 D) with hemisternites small, coxites and styli elongate; 10th tergite (Fig. 5 D) almost triangular, ciliate apically.
Fig. 2. *Sopedophilus* spp. A-E, *Sopedophilus glabrus glabrus* sp. et subsp. nov.; F, *S. glabrus okinawensis* subsp. nov. A, Eighth tergite of male; B, 8th sternite of male; C, 8th tergite of female; D, 9th sternite of male; E-F, aedeagus; G, 8th sternite of female. Scale: 0.1 mm.

Distribution. Japan (Honshu; Kyushu).

Remarks. Sepedophilus glabratus sp. nov. is similar in outline to S. armatus (SHARP, 1888), but is easily separable from the latter by the absence of bristles on the elytra. This new species is allied to S. exiguus sp. nov., but the male 9th sternite is more elongate, the inner lobe of female 8th tergite is a little longer than its outer lobe, and the parameres are straight and extremely attenuate at apices.

Specimen measured is a paratype (Uono, Niigata).

Etymology. The specific name is derived from the absent condition of bristles on the elytra.

**Sepedophilus glabratus okinawanis** NAOMI et MARUYAMA subsp. nov.

(Fig. 2F)

Similar in external structure and coloration to those in he nominotypical subspecies, but this new subspecies is distinctly separable from the latter by the following aedeagal characters: median lobe (Fig. 2 F) smaller, with basal part less strongly bulbous, and apical part a little broader and less acutely pointed; internal structure with basal tube shorter, the rectangular sclerite incomplete and partially amalgamated to the setose area which is narrower and covered with shorter setae; parameres much more strongly attenuate apically.


Distribution. Japan (Nansei Isls.: Amami Is., Okinawa Is.).

Remarks. As there are no variations concerning the above-mentioned characters of aedeagus, I here treated the local populations of Amami Is. and Okinawa Is. as a distinct subspecies.

Etymology. The subspecific name is derived from a type locality of this subspecies, Okinawa Island.

**Species Group of S. exiguus**

Diagnosis: Body small; antennae yellow to yellowish brown, with median segments infuscate; mid and hind legs with 3rd tarsomeres without ventral flaps; elytra maculated, without
bristles, elytral epipleura acute to subacute; chaetotaxy on 3rd to 6th tergites 0-1-1-1; male 8th tergite with 4 or 5 long bristles; male 8th sternite with 3 or 5 long bristles; male 9th tergite continuous, with 5 or 10 long bristles; female 8th tergite with inner lobe as long as outer lobe.

Two species, *S. exigus* and *S. elegantissimus*, belong to this species-group in Japan.

**Key to Species of *S. exigus*-group**

1(2) Body weakly shining; head with midcranial suture absent or very indistinct; pronotum broader, less strongly narrowing anteriorly, without markings; apical lobes of male 9th tergite broadly separated; apical sclerite of median lobe curved, hook-shaped ———— *S. exigus* sp. nov.

2(1) Body moderately shining; head with midcranial suture long and thin; pronotum narrower, more strongly narrowing anteriorly, with two pairs of markings; apical lobes of male 9th tergite narrowly separated; apical sclerite of median lobe straight, stalky ———— *S. elegantissimus* sp. nov.

**Sepedophilus exigus** NAOMI et MARUYAMA sp. nov.

(Figs. 3; 5. B)

Male and female. Fore part 1.13-1.19 mm in length, well convex above, weakly shining, with relative proportions: HL: 6; HW: 11; PL: 13; PW: 20; SL: 17; EW: 20. Head and pronotum dark brown to reddish brown; elytra reddish brown, with a pair of rectangular markings which are indistinct in outline, broadened laterally, and lying between the anterior 2/5 and posterior 1/5 of elytra; abdomen reddish brown, 6th segment infuscate; antennae yellow to yellowish brown, 4th (or 5th) to 9th segments more or less infuscate; mouth parts and legs yellow to reddish brown.

Head with clypeofrontal suture distinct, midcranial suture absent or indistinct; eyes about as long as 2nd and 3rd antennal segments combined, moderately convex; pubescence very sparse and thin; antennae relatively short and thick, 3rd segment strongly narrowed at base, 4th to 10th becoming gradually broader apically, 10th distinctly broader than long, with ALP: 5 : 4 : 4 : 3 : 3 : 3 : 3 : 2.5 : 3 : 3 : 5.

Pronotum quite convex above and broad, basal margin weakly bisinuate, posterolateral corners weakly projecting posteriorly but rounded; pubescence dense, short; microsculpture very faint, fingerprint-like but often interrupted.

Fore leg with tibia ventrally bearing a transverse line of 4 or 5 setae near apex, externally with a yellow ctenidium in apical 5/8; 1st tarsomere strongly dilated, 1st to 4th becoming gradually narrower apically. Mid leg with femur bearing 1 very long and 2 or 3 short apicoventral setae; tibia with 3 setae, 1 long and 1 short apical spurs, and fimbriate setae at apical margin. Hind leg with femur bearing 1 long apicoventral seta; tibia without setae, with 1 apical spur, and fimbriate setae at apical margin; tarsus with TLP: 28 : 15 : 13 : 8 : 20.

Elytra weakly narrowed posteriorly, hind margin very weakly rounded; epipleuron acute, with outer margin a little lower than inner margin even in posterior part; surface similarly pubescent as on pronotum.

Abdomen with pubescence a little longer than that on elytra; chaetotaxy on 3rd to 6th tergites: 0-1-1-1; 7th tergite without bristles.
Male. Eighth tergite (Fig. 3 A) obtusely angulate at posterolateral corners, with 4 long bristles; 8th sternite (Fig. 3 B) with a large and broad V-shaped emargination, 3 long and 1 short bristles; 9th tergite (Fig. 5 B) completely continuous, apical lobes widely separated, with 5 long and 2 short bristles; 9th sternite (Fig. 3 F) weakly asymmetrical, with 2 bristles; 10th tergite (Fig. 5 B) broad, with 1 thin bristle. Aedeagus (Fig. 3 C) with median lobe moderately bulbous
at base; internal structure with a H-shaped sclerite, and a large hook-shaped sclerite between two lines of setous areas at apical part; parameres slender, strongly curved inward at apices, with inner margins of apical parts parallel.

Female. Eighth tergite (Fig. 3 D) with inner lobe short, broad, and as long as outer lobe, median emargination narrow, not extending anteriorly to the base of lateral emargination, with 8 long bristles in addition to 2 sensory setae; 8th sternite (Fig. 3 E) entire, with 3 long and 2 short bristles, and 5 long sensory setae.


Distribution. Japan (Nansei Isls.: Ishigaki Is.); Taiwan.

Remarks. *Sopedophilus exiguis* sp. nov. is very similar in outline to *S. glabratu*s sp. nov., but the body is smaller, the ventral flaps are absent in the 3rd tarsomeres of the mid and hind legs; the elytral markings are situated more posteriorly, the apical lobes of male 9th tergite are more broadly separated, and the inner lobes of female 8th tergite are as long as the outer lobes.

Specimen measured is a paratype (Omoto, Ishigaki).

*Etymology*. The specific name means "small".

*Sopedophilus elegantissimus* NAOMI et MARUYAMA sp. nov. (Figs. 4; 5.C)

Male and female. Fore part 1.38-1.51 mm in length, well convex dorsally, moderately shining, with relative proportions: HL: 7; HW: 13; PL: 19; PW: 24; SL: 24; EW: 20. Head reddish brown; pronotum reddish brown, with two pairs of markings, a pair of round midlateral markings dark brown, indistinct in outline and sometimes absent, the other pair transverse, narrow, and situated at median part near posterior margin; elytra reddish brown, but pale reddish brown and somewhat transparent along posterior margin, with a pair of dark brown, large and almost rectangular markings which are situated behind the middle; abdomen reddish brown to dark brown; antennae yellow to yellowish brown, the 4th (or 5th) to 8th segments somewhat infuscate; mouth parts and legs yellowish brown to reddish brown.

Head transverse, rounded in dorsal view, with frontoclypeal and midcranial sutures thin and distinct; eyes a little shorter than 2nd and 3rd antennal segments combined; pubescence very sparse; microsculptures very faint, fingerprint-like; antennae relatively short, 5th segment distinctly broadened apically, 6th to 10th relatively broad, 10th broader than long, with ALP: 7 : 6.5 : 4.5 : 4 : 4 : 3.5 : 4 : 4 : 7.

Pronotum quite convex above, narrowed anteriorly; basal margin weakly arcuate laterally; posterolateral corners weakly protruding posteriorly, obtusely angulate; pubescence moderately dense, short, yellowish; surface simply shining or with very fine transverse microsculptures.

Fore leg with coxa bearing about 10 apical setae; tibia with 2 apico-internal setae, 1 apical
Fig. 4. *Sepedophilus elegantissimus* sp. nov. A, Eighth tergite of male; B, 8th tergite of female; C, 9th sternite of male; D, 8th sternite of male; E, 8th sternite of female; F, aedeagus. Scale: 0.1 mm.

thick spur and 2 apical setae situated at external side of the spur, ventrally with a transverse row of 4 setae near apex, externally with a yellow ctenidium in apical 7/9; 1st tarsomere moderately dilated, 1st to 4th tarsomeres becoming narrower apically. Mid leg with coxa bearing about 5 apical setae; femur with 1 long and 2 short apicoventral setae; tibia with 4 setae, 1 short apical spur, fimbriate setae at apical margin. Hind leg with femur bearing 1 long apicoventral seta; tibia without setae, with 1 long apical spur, and fimbriate setae at apical margin; tarsus slender, with TLP: 21 : 11 : 9 : 5 : 12.

Elytra weakly narrowing posteriorly; epipleuron subacute; surface similarly pubescent as on pronotum; microsculptures weakly minutely imbricate.
Fig. 5, Sopedophilus spp. A, D, Sopedophilus glabratu sp. nov.; B, S. exigus sp. nov.; C, S. elegantismus sp. nov. A-C, Ninth and 10th tergites of male; D, abdominal terminalia of female. Scale: 0.1 mm.
Abdomen with pubescence moderately dense, thin; microsculptures faintly incompletely imbricate; chaetotaxy on 3rd to 6th tergites 0-1-1-1; 7th tergite without bristle.

Male. Eighth tergite (Fig. 4 A) rounded at posterior margin, with 5 long bristles; 8th sternite (Fig. 4 D) with a moderately large and deeply arcuate emargination, 5 long bristles; 9th tergite (Fig. 5 C) continuous, apical lobes narrowly separated, with 10 long and 1 short bristles; 9th sternite (Fig. 4 C) with 2 bristles; 10th tergite (Fig. 4 C) with 1 bristle. Aedeagus (Fig. 4 F) with median lobed elongate-ovoidal basally, internal structure with a straight and thin basal tube, a rectangular sclerite and an apical stalky and straight sclerite in addition to the area set with dense setae; parameres each with apical part very broad and almost rounded.

Female. Eighth tergite (Fig. 4 B) with inner lobe as long as outer lobe, median emargination narrow, not extending anteriorly to the base of lateral emargination, 10 long and 1 short bristles in addition to 2 sensory setae; 8th sternite (Fig. 4 E) entire, with 5 long and 2 short bristles in addition to 5 sensory setae.


Distribution. Japan (Nansei Isls.: Okinawa Is.).

Remarks. Sepeedophilus elegantissimus sp. nov. is allied to S. exiguis sp. nov., but is easily separable from the latter by the characters mentioned in the key.
Specimen measured is the paratype (Hiji, Okinawa).

Etymology. The specific name means "the most beautiful".

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References


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Redescriptions of Two Interesting Species of the Genus

*Sepedophilus* GISTEL (Coleoptera: Staphylinidae) from Japan

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Abstract *Sepedophilus simulans* NAKANE et SAWADA (1960) and *S. tristiculus* (WEISE, 1877) are redescribed, and the aedeagus and the apical segments of abdomen are illustrated.

*Sepedophilus simulans* was first described by NAKANE and SAWADA (1960) based on 1 male and 1 female from Yaku Island, Kagoshima Pref. After that, WATANABE (1974) reported this species from Tsushima Island. On the other hand, *Sepedophilus tristiculus* was originally described by WEISE (1877) under the name of *Conosoma tristiculum*; it was described based on 6 males and 1 female from "Hagi", Yamaguchi Pref.? (WEISE, 1877; see also SCHÜLKE, 1995). After that this species was reported from various localities of Japan according to SHIBATA (1985); SCHÜLKE (1995) reported this species also from East Siberia (Primorie).

Although there are several reports for these two species as mentioned above, their morphologies have been little illustrated except for the aedeagus of *S. tristiculus* in SCHÜLKE (1995). Thus we revised these two species in this paper, with the detailed redescriptions and the illustrations concerning the aedeagus and the apical segments of abdomen. For the parts of body measured and the abbreviations used in the text, see NAOMI and MARUYAMA (1997). In the figures the arrow indicates the sensory seta.

*Sepedophilus simulans* NAKANE et SAWADA
(Figs. 1; 2. E, F)


Male and female. Fore part 1.82-1.90 mm in length, weakly shining, with relative pro-

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1) Taxonomic study on the subfamily Tachyporinae from Japan, 4.
Fig. 1. *Sepedophilus simulans* Nakane et Sawada. A, Eighth tergite of male; B, 8th sternite of male; C, 8th tergite of female; D, 8th sternite of female; E, 9th sternite of male. Scale: 0.2 mm.

Head dark brown, with clypeal area reddish brown; pronotum dark reddish brown, with marginal area reddish brown and somewhat transparent; elytra reddish brown, with a pair of dark brown markings which are situated almost behind the middle, large and somewhat indistinct in outline; abdomen reddish brown, 6th segment dark brown; antennae with 1st to 3rd segments pale yellowish brown, shining, 4th to 11th segments dark brown, weakly shining; mouth parts and legs yellowish brown to reddish brown.

Head with frontoclypeal suture complete and relatively thick, midcranial suture very short; eyes weakly convex, shorter than 2nd and 3rd antennal segments combined (6 : 8); pubescence...
very sparse; surface without microsculpture; antennae moderate in length, 3rd to 11th segments becoming gradually broader apically, 5th almost triangular, 10th almost ovoidal, about as long as broad, 11th rather large, asymmetrical, and pointed, with ALP: 9 : 6 : 6.5 : 5 : 5 : 5 : 5 : 5 : 5 : 5 : 5 : 12.

Pronotum well convex above, moderately broadened posteriorly, basal margin regularly rounded, posterolateral corners almost rectangular, narrowly rounded; pubescence dense, short; surface without microsculpture.

Fore legs with coxae bearing several apical setae; tibiae ventrally with a transverse row of 5 setae near apex, 1 thick spur occurring at the internal side of those setae, ventrally with a yellow ctenidium in almost full length of tibia; 1st to 3rd tarsomeres dilated. Mid legs with coxae bearing a row of about 5 setae; femora with 1 long and 2 short apicoventral setae; tibiae with 4 setae, 1 long apical spur, and fimbriate setae at apical margin. Hind legs with femora bearing 1 long apicoventral seta; tibiae with 2 short setae, 1 moderately long apical spur, and fimbriate setae at apical margin; tarsi slender, with TLP: 13 : 6 : 6 : 4 : 9.

Elytra broadest in anterior 1/4, then narrowed posteriorly, conjoint hind margins very weakly broadly emarginate; epipleura subacute, with outer margin a little higher than inner margin only in posterior part; pubescence as on pronotum; microsculpture regularly imbric articulated.

Abdomen with pubescence very thin, short, dense; microsculpture densely check-striped, distinct and regular; 3rd tergite with a short bristle; chaetotaxy on 3rd to 6th tergites 0-1-1-1; 7th tergite without bristles.

Male. Eighth tergite (Fig. 1 A) with 6 long and 1 short bristles; 8th sternite (Fig. 1 B) with a deeply arcuate emargination, 5 long and 1 short bristles; 9th tergite (Fig. 2 E) continuous, apical lobes moderately separated, with 8 long and 5 short bristles; 9th sternite (Fig. 1 E) with two bristles; 10th tergite (Fig. 2 E) with 1 bristle. Aedeagus (Fig. 2 F) with median lobe elongate-ovoidal in basal part, tuberculate near the middle of ventral part; internal structure with a thin basal tube, a rectangular sclerite, and an apico-median straight and stalky sclerite with its setiferous base in addition to the paired setose areas; parameures extending posteriorly beyond apex of median lobe, each more or less compressed dorso-ventrally at apex.

Female. Eighth tergite (Fig. 1 C) with inner lobe moderate in length, about as long as outer lobe, median emargination narrow and very deep, but a little shallower than lateral emargination, with 10 long and 4 short bristles in addition to 2 sensory setae; 8th sternite (Fig. 1 D) entire, with 5 long and 4 short bristles in addition to 7 sensory setae.

Type material examined. The 2 type specimens deposited in the National Science Museum, Tokyo are labelled as follows: Holotype, male, '54 APR 20/ HOLOTYPE/ Sepedophilus simulans Nak. et Saw. Det. T. Nakane 1960; allotype, female, '54 APR 20/ ALLOTYPE/ Sepedophilus simulans Nak. et Saw., Det. T. Nakane 1960 (see NAKANE and SAWADA, 1960 for type-locality).

Further specimens examined. 1 ♂, Mt. Hiko, Fukuoka Pref., 27. viii. 1988, S. NOMURA leg.

Distribution. Japan (Kyushu, Tsushima Is., Yaku Is.).

Remarks. Specimen measured is the holotype.
Fig. 2. *Sopedophilus* spp. A-D, G, *Sopedophilus tristiculus* (Weise); E-F, *S. simulans* Nakane et Sawada.
A, Eighth tergite of male; B, 8th sternite of male; C, 9th sternite of male; D-E, 9th and 10th tergites of male; F-G, aedeagus. Scale: 0.2 mm.
Studies on Japanese Tachyporinae, 4

S. tristicul cus (WEISE)
(Figs. 2. A-D,G)


Male. Fore part 1.88-2.08 mm in length, moderately shining, with relative length: HL: 10; HW: 16; PL: 23; PW: 29; SL: 24; EW: 30. Head dark brown, with reddish brown clypeal area; pronotum dark brown, with posterior marginal area reddish brown, somewhat transparent; elytra dark brown (basal part reddish brown in teneral specimen); abdomen dark brown, with posterior marginal area of each segment pale yellowish brown and somewhat transparent; antennae with 3 or 4 basal segments yellowish brown, apical segments dark brown, the 11th somewhat paler; mouth parts yellowish brown; legs reddish brown to brown.

Head with complete frontoclypeal suture and a long and thin midcranial suture, eyes weakly convex, a little longer than 2nd and 3rd antennal segments combined (14 : 13); pubescence sparse, suberect, a little sparser than that on pronotum; microsculpture very vague or absent; antennae slender, becoming weakly broader apically, 10th segment a little broader than long, with ALP: 8 : 7 : 7 : 6.5 : 6 : 6 : 5.5 : 5 : 5.5 : 9.

Pronotum well convex above, broadened posteriorly, basal margin weakly and almost regularly rounded, posterolateral corners hardly protruding posteriorly, narrowly rounded (or obtusely angulate); pubescence dense, short; surface without microsculpture.

Fore legs with coxae covered internally with thick and sparse setae; femora with small apicoventral setae; tibiae internally with 3 setae, ventrally with an oblique row of 4 setae near apex, and a thick and short spur occurring at the internal side of its row, externally with yellow long ctenidium which occupies the almost full length of tibia; 1st tarsomere moderately dilated, a little broader than 2nd, 2nd narrowed basally, 3rd about 4/5 the breadth of 2nd. Mid legs with coxae bearing a row of 3 or 4 setae of various lengths; femora with 1 very long and 2 short apicoventral setae; tibiae with 8 setae, 1 long and 1 short apical spurs, and fimbriate setae at apical margin. Hind leg with femur bearing 1 very long apicoventral seta; tibia with about 5 minute setae, 1 long apical spur, fimbriate setae at apical margin; tarsi with TLP: 27 : 14 : 12 : 8 : 17.

Elytra weakly narrowed posteriorly, very weakly rounded laterally, conjoint posterior margins very shallowly V-shaped; epipleura almost horizontal, but outer margin a little higher than inner margin only in posterior part; pubescence similar to that on pronotum; microsculpture faintly imbricate.

Abdomen strongly narrowing posteriorly; pubescence a little shorter than that on elytra; chaetotaxy on 3rd to 6th tergites 0-1-1-1-1; 7th tergite without bristles; 8th tergite (Fig. 2 A) obtusely angulate posterolaterally, very weakly rounded at posterior margin, with 6 long and 1 short bristles; 8th sternite (Fig. 2 B) with a large, moderately deep and arcuate emargination, 5 long and 1 or 0 short bristles; 9th tergite (Fig. 2 D) narrow, continuous, apical lobes moderately separated, with 12 long and 1 short bristles; 9th sternite (Fig. 2 C) regularly narrowed apically, narrowly rounded at apical margin, with 2 bristles; 10th tergite (Fig. 2 D) with 1 bristle. Aedeagus (Fig. 2 G) with median lobe weakly bulbous at base, with a short and almost straight basal tube, a basal broad-triangular sclerite with rounded corners, a rectangular sclerite, paired
median longitudinal bands, and an apical triangular sclerite in addition to the setous area between the longitudinal bands; parameres extending posteriorly beyond apex of median lobe, with apical parts contiguous, broad and horizontally flat.

Female. According to SCHÜLKE (1995), one female is deposited in the Museum für Naturkunde der Humboldt, Berlin, but was not examined in the course of this study.


Remarks. Specimens measured are the lectotype (for the antennae) and a paralectotype (for the other parts).

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References

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