Jpn. J. Ent., **65**(4): 745–759. December 25, 1997

Four New Species of the Genus *Stenus* (Coleoptera, Staphylinidae), with Redescriptions of Two Interesting Species from Japan[1)]

Shun-Ichiro NAOMI

Natural History Museum and Institute, Chiba
955–2 Aoba-cho, Chuo-ku, Chiba, 260 Japan

Abstract Four new species of the subgenus *Hypostenus* REY of the genus *Stenus* LATREILLE are described: *S. aquilonalis* from Hokkaido, Tochigi Pref. and Sakhalin, *S. vernalis* from Shizuoka and Okayama Prefs., *S. brendelli* from Fukuoka Pref., and *S. yoshidai* from Tokushima Pref.; the three latter species are brachypterous. *Stenus piliferus* MOTSCHULSKY and *S. cephalotes* SHARP are redescribed and illustrated; the former is first discovered from Japan. The aedeagus and its related structures, the female 8th sternite, and spermatheca are illustrated for comparison.

Key words: Coleoptera; Staphylinidae; *Stenus*; new species; redescription; Japan; Sakhalin.

In this paper, four new species of the subgenus *Hypostenus* REY of the genus *Stenus* LATREILLE are described from Japan and Sakhalin. All the holotypes are deposited in the Natural History Museum and Institute, Chiba (CBM). The aedeagus and its related structures, the female 8th sternite, and spermatheca are illustrated for comparison.

Concerning the *S. piliferus* group, only the three species, *S. hirtellus* SHARP, 1874, *S. oblitus* SHARP, 1874 and *S. concinnus* SHARP, 1889, have been known from Japan up to the present. During the course of this study, *S. piliferus* MOTSCHULSKY, 1857, the representative of this species-group, was first discovered from Japan (Iriomote Is.); it will be redescribed and its male 8th sternite and aedeagus are illustrated.

In addition, I also found a rare brachypterous species, *S. cephalotes* SHARP, 1889, from Nagasaki, the type locality of this species. Although the aedeagus and related structures were illustrated by HROMÁDKA (1980), it is still difficult to identify this species even by referring to his illustrations. Thus I redescribe it, with detailed illustrations of the male 9th sternite and aedeagus.

[1)] Studies on the subfamily Steninae, 30.

Stenus (Hypostenus) piliferus MOTSCHULSKY

(Fig. 2A, D)

Stenus piliferus MOTSCHULSKY, 1857, Bull. Soc. imp. Natural. Mosc., 30: 514; PUTHZ, 1966, Mem. Estud. Mus. zool. Univ. Coimbra, (297): 10; PUTHZ, 1972, Pacif. Ins., 14: 476, 485, 486.

Male and female. Body 3.6–3.9 mm in length (fore part: 1.7–1.9 mm).

Coloration. Body black, strongly shining; maxillary palpi yellow to clear yellow; labrum dark red to black; antennae with basal segments yellow to yellowish brown, apical segments reddish brown to brown; legs with femora reddish brown except for dark brown apical parts, tibiae with basal halves yellow, apical halves brown to dark brown, tarsi infuscate.

Relative measurements: HL: 30; HW: 43; PL: 36; PW: 39; EL: 56; EW: 63; SL: 49.

Head with clypeo-frontal area broad, declivous and expanding laterally beyond eyes, weakly rounded at anterior margin, with sparse setiferous punctures, setae silvery, turning anteriorly, basiantennal tubercles longitudinal, strongly shining, about as long as 1st and 2nd antennal segments together, interocular area not concave except for a pair of narrow longitudinal depressions, the depressions converging anteriorly, densely punctate, with silvery setae, the median area between the depressions a little higher than the level of eyes, punctate in anterior 1/2, with a large strongly shining convex area in posterior 1/2; also a convex and strongly shining area at each postero-lateral part of head, but setiferous punctures occur along inner margin of eye, diameter of a puncture on anterior part about as long as apical cross-section of 2nd antennal segment; neck covered with silvery setae except for median glabrous area. Antennae slender, 2nd segment broader than 3rd, 3rd to 6th equal in breadth to one another, 7th to 10th becoming gradually broader apically, 10th longer than broad, 11th pointed; ALP: 7 : 7 : 12 : 10 : 8 : 6 : 5 : 4 : 5 : 7 : 8.

Pronotum well convex above, broadest near the middle, weakly rounded laterally; surface with a median longitudinal smooth area which is strongly shining and weakly convex, several smooth areas also found at mid-lateral parts; punctures very dense, round, irregular, distinct, various in size, each with a fine silvery seta which turns inside, diameter of a puncture about as long as median cross-section of 2nd antennal segment, interstices strongly shining, without microsculptures.

Elytra very large, well convex above, broadest at posterior 1/3, rounded laterally, with angulate humeri, hind margins together widely arcuate; punctures very dense, distinct, almost round, each with a fine seta, diameter of a

puncture about as long as the median cross-section of 9th antennal segment, interstices strongly shining, smooth.

Legs relatively long; hind leg with 1st tarsomere shorter than the 2 followings combined (17 : 20), 4th completely bilobed, 4/7 times as long as the 5th.

Abdomen cylindrical, distinctly narrowed posteriorly; 3rd tergite with punctures very dense, large, elliptical, distinct at basal part, becoming gradually smaller and sparser toward posterior margin, punctures near posterior margin round and 1/2 to 1/3 times as large as those at its basal part, interstices strongly shining and smooth; similar punctation also found on 4th to 6th tergites, but punctures become smaller and sparser posteriorly from 3rd to 6th; punctures on 7th tergite more uniform than those on the preceding tergites, but basal punctures are a little denser than those on posterior part, interstices micro-sculptured only at basal part.

Male. Sixth and 7th sternites each with a shallow arcuate emargination at the middle of posterior margin; emargination in the 6th distinctly shallower than that in the 7th; 8th sternite (Fig. 2A) with a very deep, narrow V-shaped emargination at the middle of posterior margin; 9th sternite with a pair of well-sclerotized postero-lateral projections, posterior margin almost straight. Aedeagus (Fig. 2D) bulbous at base, gradually narrowed apically, strongly constricted at apical 3/14, then continued to a subulate apex, with a ventral keel behind the constriction, longitudinal bands very short; parameres very slender, extending a little before the apex of median lobe, each weakly incurved and obtusely pointed at apical part, setae short, occurring behind the constriction of median lobe, 25 to 26 in number.

Female. Eighth sternite narrowed posteriorly, with rounded posterior margin.

Specimens examined. 6 exs., Sonai, Iriomote Is., Nansei Isls., 5. viii. 1985, K. SUGIYAMA leg.

Distribution. Japan (Iriomote Is.); Southeast Asia.

Remarks. *Stenus piliferus* MOTSCHULSKY is widely distributed in the Oriental Region, New Guinea and Australia (PUTHZ, 1966, 1972). This species is classified into 7 subspecies on the basis of such characters as aedeagus, punctation of elytra, coloration of legs, microsculptures of abdomen, etc. According to his key (PUTHZ, 1966), the specimens from Iriomote Is., Japan belong to the nominotypical subspecies, because the interstices of punctures on the elytra are distinctly narrower than the diameter of punctures and the microsculpture is absent from the abdomen. As the nominotypical subspecies has been known from the eastern part of India, east to Vietnam or down south to Java, this is the first record from Japan. Within the Japanese members of the genus *Stenus, S. piliferusis* similar in outline to *S. oblitus* SHARP, 1874, but the

body is distinctly larger (3.6–3.9 mm), the 9th sternite of male is more deeply emarginate, and the median lobe is strongly subulate at the apex.

A specimen from Sonai is measured.

Stenus (*Hypostenus*) *aquilonalis* NAOMI et PUTHZ, sp. nov.

(Figs. 1 A, E; 2 B, E)

Male and female. Body 4.5–4.9 mm in length (fore part: 2.5–2.7 mm), covered with silvery fine setae.

Coloration. Body entirely pitchy black; maxillary palpi yellowish brown to reddish brown; labrum black, with reddish anterior margin; antennae with 1st

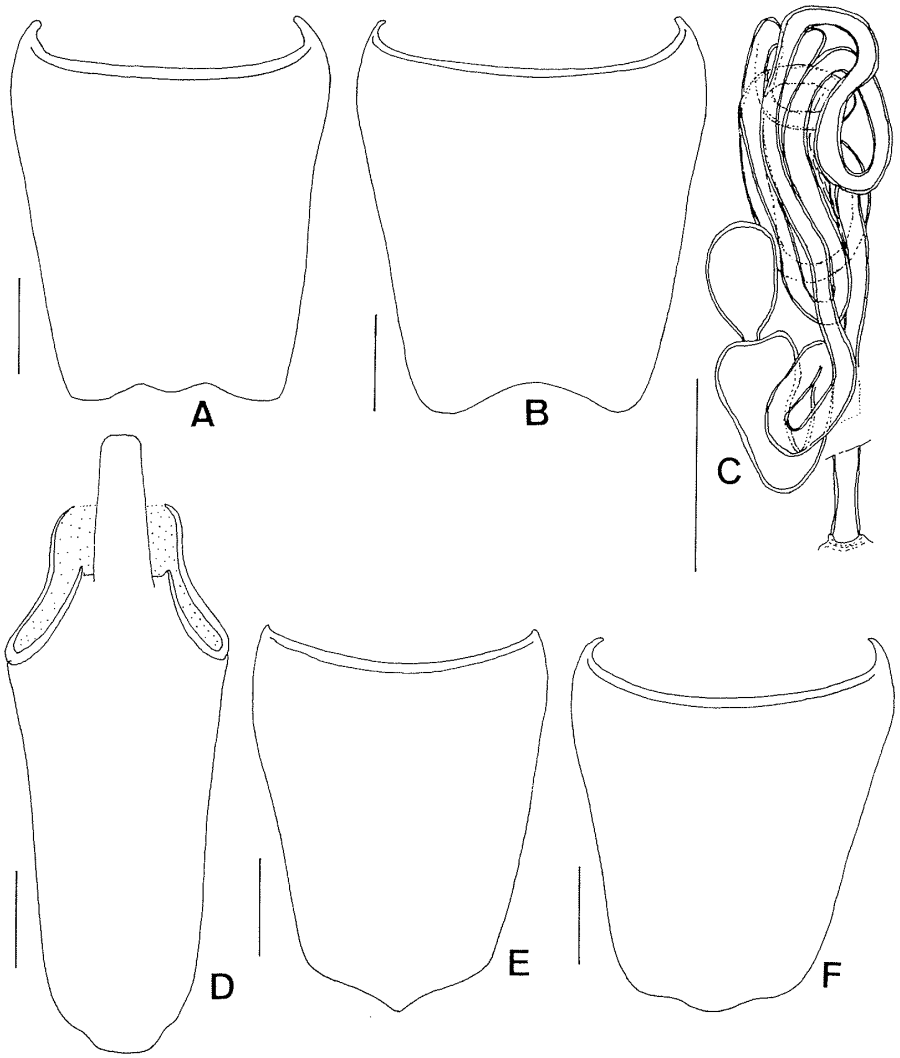

Fig. 1. A, E, *Stenus aquilonalis* sp. nov.; B, D, F, *S. bohemicus* MACHULKA; C, *S. vernalis* sp. nov. A–B, Eighth sternite of male; C, spermatheca; D, 9th sternite of male; E–F, 8th sternite of female. Scale: 0.2 mm.

segment dark brown, 2nd to 8th yellowish brown to reddish brown, 9th to 11th reddish brown to dark reddish brown; legs black, with reddish tarsi.

Relative measurements: HL: 30; HW: 44; PL: 40; PW: 39; EL: 60; EW: 57; SL: 52.

Head with clypeo-frontal area declivous, smoothly continuous to interocular area, punctures very dense, round, small and regular, interstices shininig, basiantennal tubercles small, shorter than 1st antennal segment; interocular area almost flat at sides, with a median longitudinal area which is weakly convex and a little higher than the level of eyes; punctures very dense, round, distinct, almost regular, diameter of a puncture about as long as apical cross-section of 3rd antennal segment, interstices smooth or faintly microsculptured. Antennae slender, extending to near the middle of pronotum, 3rd to 6th segments equal in breadth, 8th shorter but broader than 7th, 9th to 11th forming a loose but large club; ALP: 10 : 10 : 16 : 12 : 10 : 7 : 6 : 5 : 6 : 7 : 10.

Pronotum moderately convex above, broadest near the middle, rounded laterally; surface with a pair of shallow depressions which run obliquely from the mid line of posterior 1/3 to each middle of lateral margin, also with a convex area just behind the depression; punctures dense, round, distinct and regular, diameter of a puncture about as long as apical cross-section of 2nd antennal segment, interstices faintly microsculptured.

Elytra large, well-angulate at humeri, weakly rounded laterally, hind margins together widely V-shaped; surface uneven, shallowly concave around suture before the middle, similarly punctate as on pronotum, interstices faintly microsculptured, moderately shining.

Legs moderate in length; tarsi relatively broad; hind leg with 1st tarsomere about 1.5 times as long as 2nd, 3rd broader than 2nd, bilobed behind the middle, 4th a little broader than 3rd, bilobed, each lobe rather thick.

Abdomen cylindrical, narrowed posteriorly; 3rd segment distinctly margined; paratergites horizontal in position, very narrow; 3rd tergite with punctures dense, distinct, elongate-elliptical at base, round near posterior margin, interstices smooth, strongly shining; 8th tergite with punctures moderate in density, a little smaller than those on 3rd, interstices faintly microsculptured.

Male. Eighth sternite with a shallow W-shaped emargination at posterior margin (Fig. 1A); 9th sternite (Fig. 2B) parallel-sided, very shallowly arcuate at posterior margin, with a pair of tufts composed of very long yellowish setae near postero-lateral corners which are obtusely angulate. Aedeagus (Fig. 2E) with median lobe weakly constricted near basal 2/5, pointed at apex, ventrally with a median longitudinal keel in apical 1/5; parameres large, extending posteriorly beyond apex of median lobe, each well stalked, moderately thick and subcylindrical at the middle, with a large apical hatchet-shaped flap which is densely covered with minute chitinized humps internally, the apico-external

part of the flap shallowly emarginate, parameral setae very sparse, occurring before and at inner margin of the flap, and also a tuft of long to very long setae occurring from apico-extenal part of the flap, turning posteriorly.

Female. Eighth sternite obtusely pointed at the middle of posterior margin (Fig. 1 E).

Type series. Holotype, male (Type No., CBM-ZI 34431), Daisetsu Lake, Kamikawa, Hokkaido, Japan, 11. vi. 1993, N. YASUDA leg. Paratypes, JAPAN: 1 ex., same data as holotype; 1 ex., same locality, 8. ix. 1994, N. YASUDA leg.; 1 ex., Hoshino, Tochigi-shi, Tochigi Pref., 25. ii. 1990, H. YOSHITOMI leg. SAKHALIN: 7 males and 2 females, Aniva valley, Vysokoye vill., valley of Lyntoga river, 22–23. vii. 1993, PÜTZ & WRASE leg. (Coll. SCHÜLKE, Coll. PUTHZ, and Coll. NAOMI); 1 female, Novoalexandrovsk juchn., 7. ix. 1973, Kerschner leg. (Museum Leningrad).

Distribution. Japan (Hokkaido, Honshu); Sakhalin.

Remarks. In the Japanese *Stenus* fauna, *Stenus aquilonalis* sp. nov. and *S. bohemicus* MACHULKA, 1947 belong to the *S. tarsalis* group. This new species is very similar in outline and coloration to *S. bohemicus*, but the former is separable externally from the latter by the relative proportions as follows: pronotal width/ pronotal length 0.93–0.98 in *S. aquilonalis*, 0.98–1.04 in *S. bohemicus*; pronotal width/elytral width 0.65–0.68 in *S. aquilonalis*, 0.66, 0.69–0.71 in *S. bohemicus*. This new species is also separable from *S. bohemicus* by the male 8th sternite with the median shallow W-shaped emargination (only arcuately emarginate in *S. bohemicus*; Fig. 1B), the male 9th sternite parallel-sided (narrowed apically in *S. bohemicus*; Fig. 1D); and the female 8th sternite more strongly pointed apico-medially (less strongly produced apico-medially in *S. bohemicus*; Fig. 1F). This new species is also allied to *S. alexanderi* PUTHZ, 1971 from East Asia and Newfoundland, but the body is much broader and more largely punctured, the median lobe is broader, and the paramere is provided with much larger hatchet-shaped flap at the apex.

Specimen measured is a paratype (Daisetsu Lake).

Etymology. The specific epithet means "northern".

Stenus (*Hypostenus*) *vernalis* NAOMI, sp. nov.

(Figs. 1 C; 2 C, F)

Male and female. Body 4.5–4.9 mm in length (fore part: 2.0–2.3 mm).

Coloration. Body entirely black, moderately shining; maxillary palpi pale reddish brown; labrum black, with reddish brown marginal area; antennae with basal segments yellowish brown, apical segments dark brown; legs yellowish brown to reddish brown.

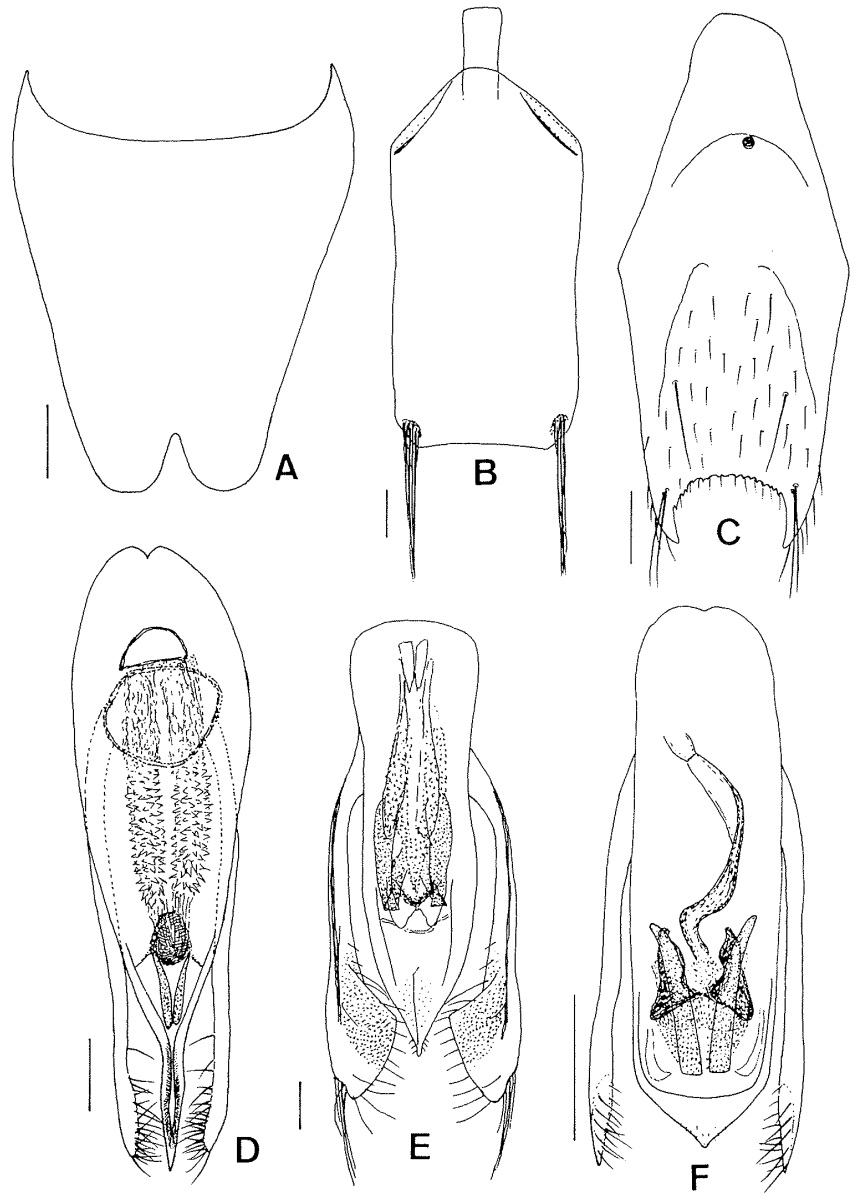

Fig. 2. A, D, *Stenus piliferus* MOTSCHULSKY; B, E, *S. aquilonalis* sp. nov.; C, F, *S. vernalis* sp. nov. A, Eighth sternite of male; B–C, 9th sternite of male; D–F, aedeagus in ventral view. Scale: 0.1 mm.

Relative measurements: HL: 40; HW: 60; PL: 47; PW: 46; EL: 49; EW: 52; SL: 33.

Head with clypeo-frontal area dull, punctures moderately dense, round, interstices distinctly microsculptured, basiantennal tubercles small, shining, shorter than 1st antennal segment, interocular area relatively narrow, about 1.4 times as broad as eye at the middle, with a pair of longitudinal depressions which converge anteriorly, the median area between the depressions moderately convex; punctures dense, distinct, various in size, somewhat umbilicate, diame-

ter of a puncture about as long as median cross-section of 2nd antennal segment, interstices indistinctly microsculptured. Antennae very slender, extending to posterior margin of pronotum, 3rd to 8th segments very thin, 9th to 10th each longer than broad, narrowed at base; ALP: 11 : 12 : 24 : 16 : 13 : 10 : 9 : 7 : 8 : 8 : 11.

Pronotum moderately convex laterally near the middle, without median longitudinal depression; surface slightly uneven laterally, with punctures very dense, coarse, round, diameter of a puncture about as long as apical cross-section of 10th antennal segment, interstices very narrow, almost shining.

Elytra narrowed anteriorly, rounded laterally, elevated along suture, hind margins together moderately widely V-shaped; punctures large, very dense, subrugose, a little larger than those on pronotum, interstices indistinctly microsculptured.

Legs slender; posterior tarsus with 1st tarsomere a little shorter than the 3 following combined, 3rd simple, 4th about 2/3 times as long as 5th, distinctly bilobed.

Abdomen subparallel-sided; 3rd segment immarginate; punctures on 3rd tergite dense, round, becoming smaller posteriorly toward its posterior margin, interstices very faintly microsculptured, shining; punctures becoming smaller posteriorly from 3rd to 8th tergites, punctures on 7th tergite moderately dense, interstices a little narrower than diameter of punctures.

Male. Eighth sternite with a shallow emargination at the middle of posterior margin; 9th sternite (Fig. 2C) with a pair of large postero-lateral projections which are pointed and weakly incurved, posterior margin weakly arcuate, minutely serrate. Aedeagus (Fig. 2F) elongate, parallel-sided, broad-triangular and obtusely pointed at apical part, of which the median narrowest portion is subtransparent; internal structure with basal tube strongly twisted, median hooks contiguous only at apico-internal parts; parameres extending posteriorly a little beyond apex of median lobe, slender, setae sparse, short, 12 to 14 in number.

Female. Eighth sternite entire or obtusely angulate at posterior margin. Spermatheca (Fig. 1C) with cornu almost globose, collum pear-shaped, duct moderately coiled and gathering.

Type series. Holotype, male (Type No., CBM-ZI 34432), Shimogamo, Minamiizu-cho, Shizuoka Pref., 15. iii. 1996, S. NAOMI leg. Paratypes, 6 exs., same data as holotype; 1 female, Okayama, Japan, SAUTER/*indubius* SHARP det. BERNHAUER (Chicago NHMus., M. BERNHAUER collection).

Distribution. Japan (Honshu).

Remarks. Stenus vernalis sp. nov. is closely allied to *S. kiyosumiensis* NAOMI, 1991 and *S. ohishii* NAOMI, 1987, but the pronotum and elytra are more coarsely and densely punctured, the 9th sternite of male is more shallowly

broadly emarginate at the posterior margin, the median lobe is more strongly angulate at the apico-lateral corner, and is pointed at the apex.

Specimen measured is a paratype (Shimogamo).

Etymology. The specific epithet means "spring"; this new species was collected in the spring.

Stenus (Hypostenus) cephalotes SHARP

(Fig. 3A, D)

Stenus cephalotes SHARP, 1889, Ann. Mag. nat. Hist., (6), 3: 331.

Stenus (Hypostenus) cephalotes: BERNHAUER & SCHUBERT, 1991, Coleopt. Cat., (29): 173; ADACHI, 1957, J. Toyo Univ., (11): 191.

Stenus (Parastenus) cephalotes: PUTHZ, 1967, D. ent. Z., 14: 143; SHIBATA, 1976, Annual Bull. Nichidai Sanko, (19): 205; HROMÁDKA, 1980, Z. Arbeits. Österr. Entomol., 31: 115.

Male and female. Body 3.3–3.6 mm in length (fore part: 1.8–1.9 mm).

Coloration. Body black and moderately shining, but elytra with brownish tint; maxillary palpi yellowish brown; labrum dark red; antennae with basal segments pale yellowish brown to yellowish brown, apical segments reddish brown to dark brown; legs yellowish brown to reddish brown.

Relative measurements: HL: 30; HW: 48; PL: 35; PW: 35; EL: 37; EW: 42; SL: 28.

Head with clypeo-frontal area transversely depressed along its anterior margin, minutely punctate, antennal tubercles low, about as long as 1st antennal segment, interocular area with a pair of depressions which are weakly convergent anteriorly, the median part between the depressions moderately convex; punctures round and distinct, dense on lateral parts, moderately dense on median part, diameter of a puncture about as long as the median cross-section of 3rd antennal segment, interstices indistinctly microsculptured on median area, distinctly so on lateral parts. Antennae very slender, extending to posterior 2/3 of pronotum, 3rd to 7th segments thin, 8th much narrower than 9th, 9th and 10th each longer than broad; ALP: 10 : 8 : 16 : 10 : 10 : 6 : 5 : 4 : 5 : 6 : 9.

Pronotum well convex laterally in anterior 2/3, constricted at base; surface with a median longitudinal depression which is vague in outline, punctures very dense, subrugose, diameter of a puncture about as long as median cross-section of 2nd antennal segment, interstices and bottom of the depression distinctly microsculptured.

Elytra narrowed at base, moderately rounded laterally, somewhat flat on median area, hind margins together widely arcuate; punctures very dense, coarse, diameter of a puncture about as long as median cross-section of 11th

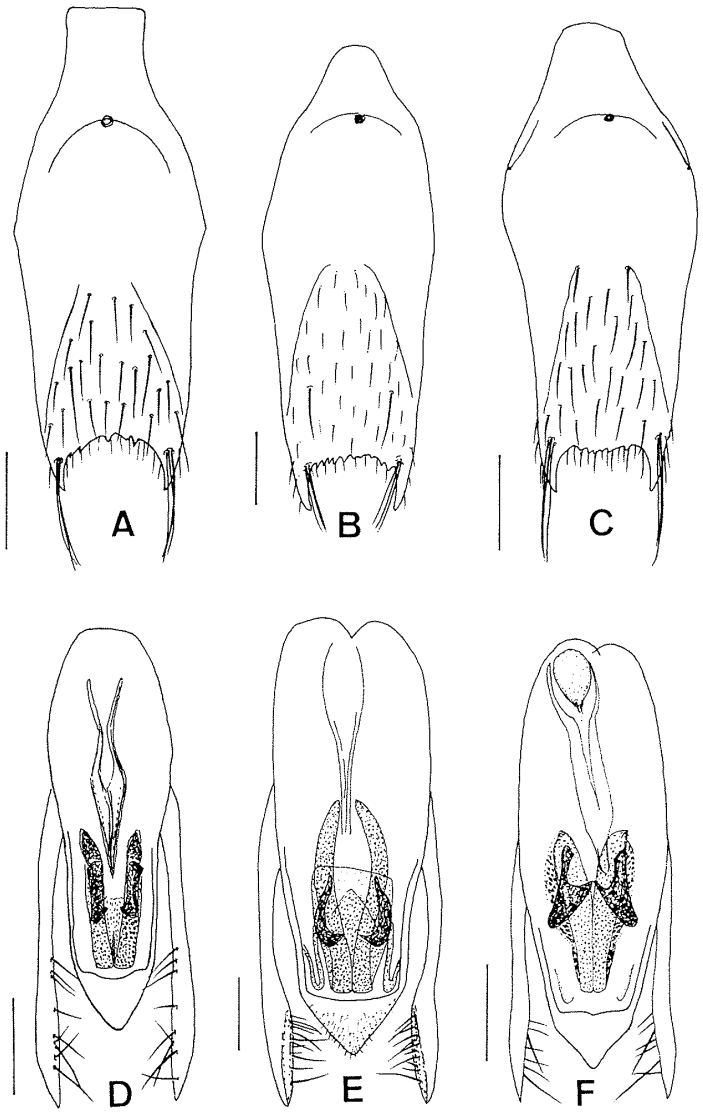

Fig. 3. A, D, *Stenus cephalotes* SHARP; B, E, *S. brendelli* sp. nov.; C, F, *S. yoshidai* sp. nov. A–C, Ninth sternite of male; D–F, aedeagus in ventral view. Scale: 0.1 mm.

antennal segment, interstices faintly microsculptured.

Legs moderately long; hind tarsus with 1st tarsomere about as long as the 3 followings combined; 3rd simple, 4th distinctly bilobed, each lobe very thin.

Abdomen with punctures on 3rd tergite becoming smaller posteriorly toward posterior margin, ovoidal, distinct, very dense, interstices distinctly microsculptured; punctures on 7th tergite moderately dense, small, interstices narrower than diameter of punctures.

Male. Abdomen weakly narrowed posteriorly; 8th sternite with or without a very shallow emargination at the middle of posterior margin; 9th sternite (Fig. 3A) with a pair of posterolateral projections which are acutely pointed, posterior margin arcuate, irregularly serrate. Aedeagus (Fig. 3D) with median lobe

weakly bulbous at base, parallel-sided before apical triangular area, obtusely pointed at apex, apical triangular area large, broader than long; parameres slender and straight, extending much beyond apex of median lobe, pointed at apex, setae short to moderately long, sporadically occurring behind the middle, 9 to 10 in number.

Female. Abdomen thicker than in male; 8th sternite almost rounded or very obtusely pointed at the middle of posterior margin.

Specimens examined. 1 male, Japan. G. LEWIS. 1910–320/Syntype (round label with blue margin)/Nagasaki. 13. ii.–21. iv. 81 (Coll. Puthz); 3 exs., Nomozaki, Nagasaki Pref., 18. xii. 1977, S. IMASAKA leg.; 2 exs., same locality, 6. iii. 1978, S. IMASAKA leg.; 3 exs., Mt. Yasuman, Hirado Is., Nagasaki Pref., 15. xi. 1986, S. NOMURA leg.

Distribution. Japan (Kyushu).

Remarks. Stenus cephalotes SHARP is allied to *S. micuba* HROMÁDKA, 1982, but is clearly separable from the latter by the 8th sternite more shallowly emarginate at the middle of posterior margin, and the aedeagus parallel-sided before the larger apical triangular area.

A specimen from Hirado is measured.

Stenus (*Hypostenus*) *brendelli* NAOMI, sp. nov.

(Fig. 3B, E)

Male and female. Body 4.0–4.5 mm in length (fore part: 1.9–2.2 mm).

Coloration. Head black; pronotum reddish brown to dark brown; elytra reddish brown, somewhat lighter in color on disc than near suture; abdomen dark brown; maxillary palpi yellow; labrum brown, with yellowish brown anterior margin; antenna with basal segments yellowish brown, apical segments reddish brown to dark brown; legs yellow to reddish brown.

Relative measurements: HL: 30; HW: 47; PL: 38; PW: 36; EL: 40; EW: 44; SL: 30.

Head with clypeo-frontal area transversely depressed, moderately punctate and pubescent, interstices faintly microsculptured, basiantennal tubercles punctate behind the middle, a little shorter than 1st antennal segment; interocular area with a pair of longitudinal depressions which are convergent anteriorly and broad behind the middle, median part between the depressions moderately convex; punctures dense, round, relatively small, almost regular, somewhat umbilicate, diameter of a puncture about as long as median cross-section of 3rd antennal segment, interstices shining. Antennae very slender, extending to posterior 3/4 of pronotum, 9th segment distinctly broader than 8th, but narrower than 10th, 10th ovoidal; ALP: 11 : 9 : 18 : 12 : 10 : 8 : 8 : 5 : 6 : 7 : 10.

Pronotum convex dorsally and laterally, weakly constricted at base; surface feebly uneven, with a shallow median longitudial depression, punctures very dense, coarse, diameter of a puncture about as long as apical cross-section of 2nd antennal segment, interstices distinctly microsculptured.

Elytra narrowed at base, weakly rounded laterally, posterior margins together widely arcuate; surface somewhat flat in the median area along suture which is low elevated, punctures very dense, coarse, diameter of a puncture about as long as median cross-section of 10th antennal segment, interstices sometimes squashed, indistinctly microsculptured.

Legs moderately long; hind tarsus with 1st tarsomere shorter than the 3 followings combined (11 : 13), 3rd simple but broadened apically, 4th distinctly bilobed.

Abdomen narrowed posteriorly; lateral marginations distinct in 3rd segment, week in 4th and obsolete in 5th; punctures on 3rd tergite dense, round to elliptical, distinct, interstices weakly miscrosculptured; punctures on 7th tergite fine, moderate in density, interstices a little broader than diameter of punctures, microsculptured.

Male. Sixth sternite with a longitudinal flat area at median part; 7th sternite with a U-shaped shallow depression at postero-median part, posterior margin of the depression shallowly arcuately emarginate; 8th sternite with an arcuate emargination at the middle of posterior margin; 9th sternite (Fig. 3B) with a pair of postero-lateral projections which are pointed at apices, posterior margin minutely serrate. Aedeagus (Fig. 3E) with median lobe broad, with a large apical triangular area, apical portion densely set with short setae; internal structures with lateral ligaments distinct, longitudinal bands broad at apical part, median hooks each C-shaped; parameres extending posteriorly beyond apex of median lobe, thick at apical part, setae very short to short, 11 to 12 in number.

Female. Eighth sternite obtusely pointed at the middle of posterior margin.

Type series. Holotype, male (Type No., CBM-ZI 34434), Mt. Shiroyama, Munakata, Fukuoka Pref., 8. iii. 1986, S. NOMURA leg. Paratype, 1 female, same data as holotype.

Distribution. Japan (Kyushu).

Remarks. Stenus brendelli sp. nov. is allied to *S. hirashimai* NAOMI, 1989, but the U-shaped shallow depression is found on the postero-median part of the 7th sternite, the median lobe is broader, and much more weakly constricted behind the middle, the median hook is C-shaped, and the parameres are thicker and shorter.

Specimen measured is the holotype.

Etymology. This species is named in honour of Mr. M. J. D. BRENDELL of

the Natural History Museum, London.

Stenus (*Hypostenus*) *yoshidai* NAOMI, sp. nov.

(Fig. 3C, F)

Male and female. Body 2.5–3.5 mm in length (fore part: 1.7–2.0 mm).

Coloration. Head black; pronotum dark brown; elytra dark reddish brown; adbomen dark reddish brown to black (entirely reddish brown in teneral specimen); maxillary palpi yellow; labrum reddish brown to brown; antennae yellowish brown, but apical segments more or less infuscate; legs pale yellowish brown to reddish brown.

Relative measurements: HL: 30; HW: 48; PL: 37; PW: 35; EL: 36; EW: 41; SL: 26.

Head with clypeo-frontal area strongly declivous, very sparsely punctate and setous, interstices distinctly microsculptured, basiantennal tubercles distinct, a little shorter than 1st antennal segment; interocular area narrow, 1.7 times as broad as eye at the middle, sometimes with a narrow impunctate area behind antennal tubercle; a pair of longitudinal depressions which are broad at basal halves, convergent anteriorly, and are then very narrow and distinct at sides of basiantennal tubercles; median part between the depressions weakly convex; punctures dense to moderately dense, round, distinct, small, somewhat umbilicate, diameter of a puncture about as long as the apical cross-section of 3rd antennal segment, interstices distinctly microsculptured. Antennae very slender, 3rd to 6th segments very thin, 7th a little broader than 6th, 7th to 10th becoming gradually broader apically, 9th elongate-ovoidal, 10th longer than broad; ALP: 10 : 8 : 15 : 11 : 9 : 8 : 7 : 5 : 6 : 7 : 10.

Pronotum well convex laterally in anterior 2/3, broadest a little before the middle, weakly constricted at base; surface with a vague shallow median longitudinal depression; punctures very dense, coarse, diameter of a puncture about as long as apical cross-section of 2nd antennal segment, interstices mat, distinctly microsculptured.

Elytra short, moderately convex above, rounded laterally, hind margins together widely arcuate; punctures very dense, almost regular, round, diameter of a puncture about as long as median cross-section of 10th antennal segment, interstices indistinctly microsculptured.

Legs relatively long; hind leg with 1st tarsomere a little shorter than the 3 following combined (9 : 11), 3rd simple, 4th distinctly bilobed, about 2/3 times as long as 5th.

Abdomen subparallel-sided in basal segments; punctures on 3rd tergite moderate in density, distinct, round to elliptical, interstices usually narrower

than diameter of punctures; punctures on 7th tergite fine, sparse, interstices weakly microsculptured.

Male. Seventh sternite with a flat or very shallowly depressed area at postero-median part, the posterior margin very shallowly arcuate; 8th sternite with a moderately arcuate emargination at the middle of posterior margin; 9th sternite (Fig. 3C) with a pair of postero-lateral projections which are acutely pointed, posterior margin minutely serrate. Aedeagus (Fig. 3F) with median lobe broadest near the middle, narrowed toward a large apical triangular area, pointed at apex, internal structures with longitudinal bands broadened anteriorly, median hooks each hatchet-shaped; parameres extending posteriorly a little beyond apex of median lobe, acutely pointed, setae sparse, short to moderately long, 7 in number.

Female. Eighth sternite very slightly obtuse at the middle of posterior margin.

Type series. Holotype, male (Type No., CBM-ZI 34435), Nakatani, Shishikui, Kaifu, Tokushima Pref., 24. ix. 1973, M. YOSHIDA leg. Paratypes, 3 exs., same data as holotype.

Distribution. Japan (Shikoku).

Remarks. Stenus yoshidai sp. nov. is allied to *S. himiko* NAOMI, 1989a and *S. sygen* NAOMI, 1989a, but the punctures on the abdomen are much finer and sparser, the median lobe is gradually narrowed apically in the apical half, and the median hook is larger and hatchet-shaped.

Specimen measured is a paratype (Nakatani).

Etymology. This species is named in honour of Mr. M. YOSHIDA of Tokushima City who collected this new species.

Acknowledgements

My hearty thanks go to Dr. V. PUTHZ (Limnologische Flußstation des MPI für Limnologie, Schlitz) for his critical and constructive comments on an earlier version of the manuscript. I thank Dr. V. PUTHZ, Mr. M. YOSHIDA (Tokushima City) and Y. SHIBATA (Machida, Tokyo) for their kind loan or gift of the *Stenus*-specimens deposited in their collections. I thank all my colleagues who skillfully collected the new or interesting species treated in this paper. I also thank an anonymous referee for his time and his valuable comments on my manuscript.

References

ADACHI, T., 1957. The staphylinid fauna of Japan. *J. Toyo Univ.*, (11): 166–200.

BERNHAUER, M. & K. SCHUBERT, 1911. Staphylinidae II. In JUNK, W. & S. SCHENKLING (eds.),

Coleopterorum Catalogus, (29): 87–190. W. JUNK, Berlin.

HROMÁDKA, L., 1980. Zwei neue *Stenus*-Arten aus Japan (Coleoptera, Staphylinidae). *Z. Arbeits. Österr. Entomol.*, **31**: 113–116.

———— 1982. Weitere neue *Stenus*-Arten von Japan (Coleoptera, Staphylinidae). *Fragm. coleopt.*, (33/34): 131–138.

MACHULKA, V., 1947. Novy *Stenus* z Pribuzenstva *st.* (*Hypostenus*) *tarsalis* LJ. *Acta ent. Mus. natn. Pragae*, **25**: 87–89.

MOTSCHULSKY, V. de, 1857. Enumeration des nouvelles espèces de Coléoptères rapportées de ses voyages, IV. Staphylinides. *Bull. Soc. imp. Natural. Mosc.*, **30**: 490–515. (Not seen.)

NAOMI, S., 1987. Studies on the subfamily Steninae (Coleoptera, Oxyporidae) from Japan, VII. Subgenus *Parastenus* of the genus *Stenus* LATREILLE (Part 2). *Akitu, Kyoto*, (N. S.), (87): 1–9.

———— 1989. Studies on the subfamily Steninae (Coleoptera, Oxyporidae) from Japan XII. Subgenus *Hypostenus* of the genus *Stenus* LATREILLE, Part 4. *Elytra, Tokyo*, **17**: 45–52.

———— 1989a. Studies on the subfamily Steninae (Coleoptera: Oxyporidae) from Japan, X. Subgenus *Hypostenus* of the genus *Stenus* LATREILLE (Part 2). *Akitu, Kyoto*, (N. S.), (105): 1–11.

———— 1991. Studies on the subfamily Steninae (Coleoptera, Staphylinidae) from Japan XVIII. Stenid fauna of Chiba Pref., Central Japan. *J. nat. Hist. Mus. Inst. Chiba*, **1**: 9–13.

PUTHZ, V., 1966. Dois anos de colheitas em Timor portugues por Raul do Nascimento Ferreira. 2. Coleoptera, Polyphaga: Staphylinidae: Steninae. *Mem. Estud. Mus. zool. Univ. Coimbra*, (297): 1–24.

———— 1967. Zur Synonymie und Stellung einiger *Stenus*-Arten (Coleoptera, Staphylinidae). *D. ent. Z.*, **14**: 139–146.

———— 1971. Two new *Stenus* from eastern Canada (Coleoptera: Staphylinidae). *Can. Entomol.*, **103**: 1749–1752.

———— 1972. Revision of the *Stenus*-species of New Guinea. Part II (Coleoptera: Staphylinidae). *Pacif. Ins.*, **14**: 475–527.

SHARP, D., 1874. The Staphylinidae of Japan. *Trans. ent. Soc. London*, **1874**: 1–103.

———— 1889. The Staphylinidae of Japan. *Ann. Mag. nat. Hist.*, (6), **3**: 28–44, 108–121, 249–267, 319–334, 406–419, 463–476.

SHIBATA, Y., 1976. Provisional check list of the family Staphylinidae of Japan. I (Insecta: Coleoptera). *Annual Bull. Nichidai Sanko*, (19): 71–212.

(Received March 29, 1997; Accepted July 1, 1997)