

Studies on the Subfamily Steninae (Coleoptera, Oxyporidae) from Japan

VI. Subgenus *Parastenus* of the Genus *Stenus*, Part 1*

Shun-Ichiro NAOMI

Entomological Laboratory, Faculty of Agriculture,
Kyushu University, Fukuoka, 812 Japan

Abstract Five new taxa, *Stenus cirriformis*, *S. punctifer*, *S. amamiensis*, *S. hagaromo* and *S. guttalis ishigakiensis* of the subgenus *Parastenus* HEYDON are described, and their male genitalia are figured.

The subgenus *Parastenus* HEYDON has been traditionally defined by the following three characters: 1) 4th tarsomeres bilobed, 2) hind tarsi more than 1/2 times as long as hind tibiae, and 3) abdomen with developed paratergites. In the 1st character, however, the 4th tarsomeres are strongly (or weakly) bilobed or simple in the Japanese species. In the 3rd character, three types are observed for the development of the paratergites. The paratergites are broad in the 1st type (*Stenus bicolon* SHARP, etc.), but are very narrow in the 2nd type (*Stenus gestroi takara* NAKANE, etc.). In the 3rd type, the paratergites are much reduced but are visible in the 3rd (and 4th) segment(s), while the terga and sterna are separated only by sutures (the paratergites are absent) in the 4th (5th) to 8th segments (*Stenus guttalis* FAUVEL, etc.). Therefore, the traditional definition mentioned above is insufficient for this heterogeneous subgenus. The subgenus is more sufficiently defined by taking the spermatheca into consideration. In this paper, it is defined on the basis not only of the traditional characters, but of the spermatheca "strongly sclerotized in the female" as shown by PUTHZ (1967). Five new taxa are described and their male genitalia are figured here. They all belong to the group with the 3rd type paratergites.

Subgenus *Parastenus* HEYDON

Parastenus HEYDON, 1905, Wien. ent. Ztg., 24: 262. Type species: *Stenus impressus* GERMAR, designated by TOTTENHAM, 1939.

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Stenus cirriformis sp. nov.

(Fig. 1 A-B)

Male and female. Body length: 4.2–4.5 mm.

Body black, very shiny; antennae except for dark brown 9th to 11th segments, maxillary palpi, anterior margin of labrum and legs yellow to yellowish brown.

Body slender, cylindrical.

Head a little broader than elytra (1.05: 1), 1.59 times as broad as long, fronto-clypeal area deflected, sparsely punctate, interocular area shallowly concave, with a pair of longitudinal depressions, median part between the depressions moderately elevated, almost smooth; punctures dense, round, interstices between punctures much narrower than diameters of punctures outside the depressions; pubescence short, sparse. Antennae reaching posterior 1/4 of pronotum, slender, 3rd to 8th segments subequal in breadth, 9th to 10th each globose, with relative lengths of segments from base to apex as 9: 8: 15: 11: 10: 9: 6: 5: 5: 6: 8.

Pronotum shorter than elytra (0.92: 1), a little longer than broad (1.05: 1), broadest at anterior 2/5, moderately constricted at base, side margins rounded; surface uneven, with dense and subrugose punctures.

Elytra a little broader than long (1.05: 1), side margins rounded, hind margin with a broad and arcuate emargination; punctures large, subrugose, a little larger than those on pronotum.

Abdomen elongate, narrowed toward apex; paratergites very narrow, punctate on 3rd to 4th segments, absent in 5th to 7th; 3rd to 5th terga each with a weak transverse depression at base and crenulate before the depression; punctures moderate on 3rd tergum, very fine and sparse on 4th to 8th; pubescence reddish brown, sparse and erect.

Legs slender, hind tarsi 0.81 times as long as hind tibiae, 4th tarsomeres simple.

Male. Eighth sternum with a small emargination at the middle of posterior margin; 9th sternum with a broad arcuate emargination at posterior margin. Genitalia (Fig. 1 A) with median lobe acutely pointed at apex; parameres reaching apex of median lobe, densely haired on apico-internal parts.

Female. Abdomen robuster than in male; 8th sternum entire; spermatheca sclerotized as in Fig. 1 B.

Holotype, male (Type No. 2617, Kyushu Univ.), Sandankyô, Hiroshima Pref., 13. viii. 1986, I. OKAMOTO leg. Paratopotypes: 1 female, 30. viii. 1986, I. OKAMOTO leg.; 1 female, 6. ix. 1986, I. OKAMOTO leg.

Distribution. Japan (Honshu).

Remarks. This new species is closely allied to *Stenus cirrus* BENICK, 1940, but is separable from the latter by the larger body (4.2–4.5 mm) and the robuster spermatheca (Fig. 1 B).

Stenus punctifer sp. nov.

(Fig. 1 C-D)

Male and female. Body length: 3.6–4.1 mm.

Body dark reddish black to black, very shiny; antennae and labrum reddish brown, legs yellow to yellowish brown.

Body slender, cylindrical.

Head broader than elytra (1.11: 1), 1.71 times as broad as long, frontoclypeal area sparsely punctate, interocular area shallowly concave, with a pair of shallow depressions converging anteriorly, median part between the depressions weakly elevated, with a very narrow smooth area; punctures uniform, dense and round; pubescence short, sparse. Antennae slender, almost reaching posterior margin of pronotum, 3rd segment very slender, a little narrower than 8th, 9th to 10th each elongate oval, with relative lengths of segments from base to apex as 6: 5: 12: 6: 5: 4: 4: 3: 3: 4: 5.

Pronotum about as long as elytra, as long as broad, broadest at about anterior 2/5, side margins rounded; surface moderately convex, with punctures uniform, round, a little larger and denser than those on head.

Elytra broader than long (1.16: 1), weakly constricted at base, broadened posteriorly, hind margin with a wide and arcuate emargination; punctures similar to those on pronotum.

Abdomen elongate, subparallel-sided; paratergites very narrow in 3rd segment, absent in 4th to 7th; punctures very fine, sparse; pubescence yellowish red, erect and very sparse.

Legs elongate, hind tarsi 0.77 times as long as hind tibiae, 4th tarsomeres strongly bilobed.

Male. Seventh sternum with a shallow emargination at posterior margin; 8th sternum with a V-shaped emargination at posterior margin; 9th sternum bi-emarginate at posterior margin. Genitalia (Fig. 1 C) robust, median lobe pointed, with a short median longitudinal keel at dorso-apical part; parameres extending beyond apex of median lobe, moderately haired on apico-internal parts.

Female. Seventh sternum very weakly depressed at posteromedian part; 8th sternum entire; spermatheca sclerotized as in Fig. 1 D.

Holotype, male (Type No. 2618, Kyushu Univ.), Yona, Okinawa-Hontô Is., Okinawa Pref., 15. iii. 1985, S. NOMURA leg. Paratypes: 1 ex., same data as the holotype; 1 ex., same locality as the holotype, 13. iii. 1985, S. NOMURA leg.; 1 ex., Mt. Nagodake, Okinawa-Hontô Is., Okinawa Pref., 11. iii. 1985, S. NOMURA leg.; 2 exs., Ie-Rindô, Okinawa-Hontô Is., Okinawa Pref., 22. iv. 1986, S. NOMURA leg.; 1 ex., same locality, 14. iii. 1985, S. NOMURA leg.

Distribution. Japan (Okinawa-Hontô Is.).

Remarks. This new species is similar to *Stenus echiniventris* PUTHZ, 1981, but

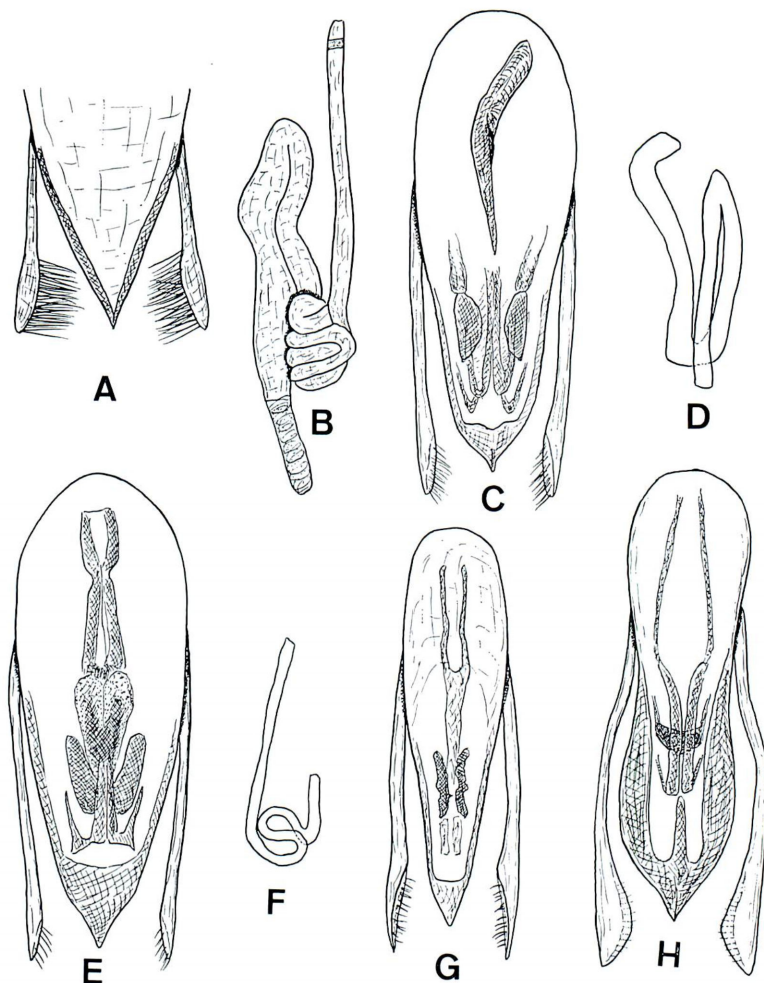


Fig. 1. A-B, *Stenus cirriformis* sp. nov.; C-D, *S. punctifer* sp. nov.; E-F, *S. amamiensis* sp. nov.; G, *S. hagoromo* sp. nov.; H, *S. guttalis ishigakiensis* subsp. nov. A, Apical part of male genitalia in dorsal view; B, D, F, spermatheca in female; C, E, G, H, male genitalia in dorsal view.

the elytra are broader than long and the male genitalia are differently shaped (Fig. 1 C).

Stenus amamiensis sp. nov.

(Fig. 1 E-F)

Male and female. Body length: 3.8-4.1 mm.

Body dark reddish black to black, very shiny; antennae, maxillary palpi, anterior

margin of labrum and legs yellow to yellowish brown.

Body slender, cylindrical.

Head broader than elytra (1.24: 1), 1.54 times as broad as long, frontoclypeal area almost glabrous, impunctate, interocular area shallowly concave, with a pair of longitudinal and obscure depressions, median part between the depressions weakly elevated, smooth; punctures moderate, almost regular near inner margins of eyes. Antennae reaching posterior margin of pronotum, 3rd to 8th segments thin, 9th to 11th forming a loose club, with relative lengths of segments from base to apex as 10: 8: 17: 12: 10: 9: 8: 5: 5: 6: 9.

Pronotum about as long as elytra, as long as broad, broadest at anterior 2/5, gently constricted at base, side margins rounded; surface almost even, with an ill-defined median longitudinal depression, punctures dense, round, interstices between punctures much narrower than diameters of punctures.

Elytra a little broader than long (1.07: 1), constricted at base, then broadened posteriorly, hind margin with a broad and arcuate emargination; punctures rough, irregular, sometimes continuous to neighboring ones, a little larger than those on pronotum; pubescence very sparse.

Abdomen slender, subparallel-sided; paratergites very narrow in 3rd segment, absent in 4th to 7th; punctures fine, very sparse; pubescence yellowish red, erect and very sparse.

Legs with femora thick, hind tarsi 0.71 times as long as hind tibiae, 4th tarsomeres strongly bilobed.

Male. Sixth sternum shallowly depressed at posteromedian part, with a shallow emargination at posterior margin; 7th sternum with a median longitudinal depression in full length, the depression weakly broadened posteriorly, sides of the depression weakly ridged, with an arcuate and shallow emargination at the middle of posterior margin; 8th sternum with a V-shaped emargination at posterior margin; 9th sternum minutely pointed at apex, without apicolateral projection. Genitalia (Fig. 1 E) elongate oval, median lobe pointed at apex; parameres extending a little beyond apex of median lobe, sparsely haired on apico-internal parts.

Female. Abdomen a little broader than in male; 7th sternum truncate at the middle of posterior margin, flat and almost smooth before the truncation; spermatheca strongly sclerotized (Fig. 1 F).

Holotype, male (Type No. 2619, Kyushu Univ.), Hatsuno, Amami-Ohshima Is., Kagoshima Pref., 27. iii. 1978, S. NAOMI leg. Paratypes: 5 exs., same data as the holotype.

Distribution. Japan (Amami-Ohshima Is.).

Remarks. This new species is allied to *Stenus punctifer* sp. nov., but the punctures on the elytra are rough and irregular, a median longitudinal depression is present on the 7th sternum in the male, and the spermatheca is different in shape in the female (Fig. 1 F).

Stenus hagoromo sp. nov.

(Fig. 1 G)

Male and female. Body length: 2.8–3.1 mm.

Body blackish, elytra dark reddish black, moderately shiny; labrum reddish brown to blackish, antennae, maxillary palpi and legs yellowish brown.

Body small, broad and thick.

Head a little broader than elytra (1.03: 1), 1.63 times as broad as long, fronto-clypeal area punctate, interocular area not concave, with a pair of broad, shallow and longitudinal depressions, median part between the depressions weakly elevated, with a narrow smooth area; punctures dense, round, umbilicate, denser near inner margins of eyes than those on the middle. Antennae reaching posterior 1/3 of pronotum, 8th segment smallest, 8th to 10th each globose, with relative lengths of segments from base to apex as 8: 7: 11: 8: 6: 5: 4: 3: 4: 5: 7.

Pronotum as long as elytra, about as long as broad, broadest at the middle, convex above; surface with a narrow median impunctate space, punctures rough, dense and round, sometimes continuous to neighboring ones, larger than those on head.

Elytra broader than long (1.23: 1), side margins rounded, hind margin with a broad emargination; surface similarly punctate as on pronotum.

Abdomen broadest at base, strongly narrowed posteriorly; 8th tergum about 0.4 times as broad as 3rd at posterior margin; paratergites very narrow and punctate on 3rd to 4th segments, absent in 5th to 7th; punctures fine, sparse; pubescence reddish, very short and sparse.

Legs short, hind tarsi 0.74 times as long as hind tibiae, 4th tarsomeres strongly bilobed.

Male. Fourth sternum weakly depressed at posteromedian part; 5th sternum with a crescent and deep depression at posteromedian part which is very densely covered with short whitish hairs, sides of the depression ridged, with a weak emargination at posterior margin; 6th sternum similarly modified as in 5th, but the depression is deeper, ridges at the sides higher and robuster, and posterior margin more deeply emarginate; 7th sternum depressed at base, with yellowish hairs along the median line, posterior margin straight; 8th sternum with a V-shaped emargination at posteromedian part; 9th sternum with a wide emargination at posterior margin, with a pair of acute apicolateral projections. Genitalia (Fig. 1 G) elongate, median lobe narrowed apically, pointed at apex; parameres extending beyond apex of median lobe, haired on apico-internal parts.

Female. Eighth sternum weakly angulate at posteromedian part.

Holotype, male (Type No. 2620, Kyushu Univ.), Mt. Omoto, Ishigaki Is., Okinawa Pref., 20. iii. 1978, S. NAOMI leg. Paratypes: 8 exs., same data as the holotype; 10 exs., same locality as the holotype, 21–22. iii. 1984, S. NOMURA leg.; 2 exs., same

locality, 9. iv. 1986, S. NOMURA leg.; 3 exs., Kanpira Fall, Iriomote Is., Okinawa Pref., 27. iii. 1984, S. NOMURA leg.; 3 exs., same locality, 14. iv. 1986, S. NOMURA leg.; 2 exs., Mt. Urabu, Yonaguni Is., Okinawa Pref., 6. vi. 1983, S. IMASAKA leg.

Distribution. Japan (Ishigaki Is., Iriomote Is., and Yonaguni Is.).

Remarks. In general appearance, this new species is similar to *Stenus* (*Stenus*) *riukiensis* PUTHZ, 1973(a), but the 4th tarsomeres are distinctly bilobed. *S. hagaromo* sp. nov. is allied to *S. dajac* PUTHZ, 1973(b), but is separable from the latter by the body smaller, the head a little broader than the elytra and the 9th sternum with a pair of acute apicolateral projections.

Stenus guttalis ishigakiensis subsp. nov.

(Fig. 1 H)

Male. Body length: 5.5 mm.

Body black, moderately shiny; elytra with a pair of ill-defined reddish markings; antennae, maxillary palpi, anterior margin of labrum and legs yellowish brown.

Body slender, cylindrical.

Head broader than elytra (1.05: 1), 1.60 times as broad as long, frontoclypeal area with punctures fine and dense, pubescence golden yellow, moderate in length and decumbent anteriorly; interocular area deeply concave, with a pair of shallow longitudinal depressions, median part between the depressions weakly elevated; punctures uniform, round and dense; pubescence very short. Eyes strongly convex. Antennae reaching posterior 1/3 of pronotum, 3rd to 7th segments subequal in breadth, 8th smallest, 9th to 10th each subglobose, with relative lengths of segments from base to apex as 14: 11: 23: 16: 15: 14: 9: 6: 7: 7: 11.

Pronotum shorter than elytra (0.88: 1), about as long as broad, broadest at about anterior 2/5, side margins rounded; surface uneven, with a small smooth space at center, punctures dense, strongly rugose, larger than those on head.

Elytra broader than long (1.15: 1), robust, side margins gently rounded, hind margin with a wide emargination; surface uneven, with punctures round, very dense.

Abdomen weakly narrowed posteriorly; paratergites very narrow in 3rd and 4th segments, almost invisible in 5th to 7th; 3rd to 6th terga each with a weak transverse depression at base; 8th sternum with a moderate V-shaped emargination at posterior margin; 9th sternum with a wide and shallow emargination; punctures on terga elliptical to round, dense, becoming gradually finer toward apex, interstices between punctures minutely sculptured, a little broader than those on pronotum; pubescence very short. Genitalia (Fig. 1 H) very similar to those of the nominotypical subspecies (ROUGEMONT, 1983, fig. 11 b), median lobe weakly constricted at the middle, pointed at apex; parameres extending beyond apex of median lobe, curved, broadened apically, obliquely truncate at apices, each with a line of hairs on its ventral side.

Legs slender, hind tarsi about 0.57 times as long as hind tibiae, 4th tarsomeres broad, strongly bilobed.

Female. Unknown.

Holotype, male (Type No. 2621, Kyushu Univ.), Yoshihara, Ishigaki Is., Okinawa Pref., 27. v. 1983, H. IRIE leg.

Distribution. Japan (Ishigaki Is.).

Remarks. *Stenus guttalis* FAUVEL, 1895 was recorded from Burma and Thailand. This species is recorded from Japan for the first time, and is represented by a new subspecies there. The subspecies is separable from the nominotypical one by the elytral markings ill-defined and the 7th sternum straight at the posterior margin.

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摘 要

直海俊一郎：日本産メダカハネカクシ亜科の研究。VI. メダカハネカクシ属 *Parastenus* 亜属，1. — 本論文で *Parastenus* 亜属に含まれる4新種1新亜種を記載し，これらの雄交尾器を図示した。*Stenus cirriformis* は *S. cirrus* BENICK に似ているが，体はより大きく(4.2-4.5 mm)，雌の受精嚢はより太い点で区別がつく。*S. punctifer* は *S. echiniventris* PUTHZ に似ているが，上翅はより幅が広く，雄交尾器(図1C)が異なる点で区別がつく。*S. amamiensis* は *S. punctifer* に似ているが，上翅の点刻は粗く不規則であり，雄の第7腹板中央に縦長の凹陷部がある。また，雌の受精嚢(図1F)は形態がまったく異なるなどの点で容易に区別がつく。*S. hagaromo* は *S. dajac* PUTHZ に似ているが，体はより小さく(2.8-3.1 mm)，頭部は上翅よりわずかに幅広く，雄の第9腹板後縁両側に1対の鋭く尖った突起がある点で区別がつく。*S. guttalis ishigakiensis* は，ビルマ，タイに分布する基亜種とは，上翅斑紋が不明瞭であり，雄の第7腹板後縁が直線状である点で区別がつく。

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