

## Descriptions of Two New Species of the Genus *Stenus* Latreille (Coleoptera: Staphylinidae) from Japan<sup>1)</sup>

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**Abstract** Two new species of the *humilis* group of the genus *Stenus* Latreille are described as follows: *Stenus kokie* from Shiga Prefecture, central Honshu and *Stenus takashii* from Shizuoka Prefecture, central Honshu.

**Key words:** Coleoptera, Staphylinidae, Steninae, *Stenus*, new species, Japan.

The *humilis* group of the subgenus *Stenus* s. str. of the genus *Stenus* Latreille, 1797 is characterized by the unique punctation (dense and/or coarse and/or rugose) of the upper surface of body, the special structure of the expulsion clasp of internal sac of aedeagus, etc., and 17 species and 2 subspecies are known from Japan (Hromádka, 1979; Naomi, 1988, 1990, 1997; Naomi and Puthz, 1994; Puthz, 1968, 2001; Puthz and Naomi, 2003). Recently I received from Mr. Takashi Watanabe of Kanagawa Prefecture the two interesting specimens of *S. humilis*-group. I examined them carefully and came to a conclusion that each of these two specimens, both collected from Central Honshu, belongs to new species. A new species, that was discovered from Shiga Prefecture and is related closely to *S. ochiba* and *S. yasutoshii*, is described herein under the name of *Stenus kokie*. On the other hand, the other species, that was collected from Shizuoka Prefecture and is easily distinguished from all the Japanese members of *S. humilis* group by the special structure of aedeagus described below, is named *Stenus takashii* for his contribution to the clarification of the Japanese fauna of Steninae. The aedeagi and the 7th, 8th and 9th sternites of male abdomen are also illustrated for comparison.

### Materials and Methods

All the holotypes of the species I described

here are deposited in the Natural History Museum and Institute, Chiba. The aedeagus and the apical segments of abdomen were mounted in the Euparal on the celluloid pasteboard, and the pasteboard was pinned under each specimen. The aedeagi and the 9th sternites of male were illustrated by the use of microscope with the power up to  $\times 400$ , while the 7th and 8th sternites of male were illustrated by the use of binocular with the power up to  $\times 128$ . Concerning the abbreviations such as HL, HW, etc. in the “relative measurements” see Naomi (1995).

### *Stenus (Stenus) kokie* Naomi, sp. nov.

(Fig. 1A-C)

**Description.** Male. Body 3.6 mm in length. Head and abdomen entirely black; thorax and elytra black with dark reddish tinge; maxillary palpi with 1st segment yellow to yellowish brown, 2nd segment brown except for yellowish basal part, 3rd segment entirely brown; labrum black with anterior margin clear reddish brown; antennae dark red in basal segments, becoming paler in color toward apices; legs brown to dark red except for infusate apices of femora and bases of tibiae.

Relative measurements: HL: 22; HW: 36; PL: 31; PW 30; EL 30; EW 36; SL: 25.

Head with labrum sparsely pubescent, with microsculptured surface; clypeofrontal area uniformly declivous anteriorly, with small round punctures, basiantennal tubercles minute but distinct; interocular area with a pair of distinct longitudinal depres-

1) Studies on the subfamily Steninae from Japan, 33.

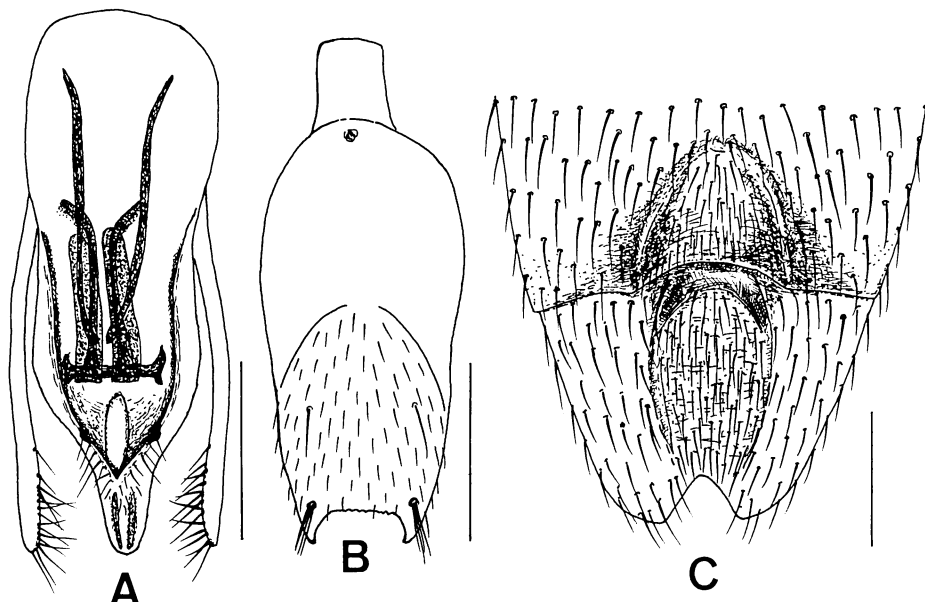


Fig. 1. *Stenus kokie* Naomi sp. nov. A, aedeagus in ventral view; B, 9th sternite of male; C, 7th and 8th sternites of male. Scale: 0.2 mm.

sions, median part between depressions relatively narrow, moderately convex; punctures very dense, round to almost round, diameter of a large puncture about as long as apical cross-section of 3rd antennal segment, interstices between punctures narrow and strongly lustrous at median part between longitudinal depressions, while very narrow and indistinctly microsculptured near inner margins of eyes. Antennae short, when reflexed extending about middle of pronotum, 8th segment smallest, much narrower than 9th, 9th to 11th forming loose club, with relative lengths of antennal segments from base to apex as 10:9:13:10:8:7:6:5:6:7:9.

Pronotum moderately convex above, broadest near middle, then narrowed both anteriorly and posteriorly; surface very weakly uneven, punctures almost round to round, distinct and very dense, diameter of large puncture about as long as apical cross-section of 2nd antennal segment, interstices between punctures lustrous and indistinctly microsculptured.

Elytra narrowed at base, weakly rounded laterally, hind margins together to form a shallow arc; surface very weakly uneven, punctures very dense, almost round to round, distinct, little larger than those on pronotum,

interstices between punctures very narrow, lustrous, and very indistinctly microsculptured.

Legs moderately long; hind leg with 1st tarsomere little shorter than 2nd and 3rd tarsomeres combined, 4th tarsomere little broader than 3rd, weakly broadened apically, with dorsal incision, 5th tarsomere about as long as 1st.

Abdomen very weakly narrowed posteriorly; paratergites narrow but distinct, almost horizontal in position, each punctate in a line; 3rd to 6th tergites each with 3 elevated and pointed prolongations near basal area, median prolongation larger than lateral ones, those prolongations becoming smaller posteriorly from 3rd to 6th tergites; punctures on 3rd tergite almost round to round, small and almost regular, punctures becoming smaller posteriorly from 3rd to 8th tergites, interstices between punctures minutely but distinctly microsculptured; 7th sternite (Fig. 1C) with moderately deep depression at posteromedian part, the depression becoming broader and deeper toward posterior margin which is moderately and arcuately emarginate, sides of depression obtusely but distinctly ridged; 8th sternite (Fig. 1C) with median flat area being almost ellip-

tical and moderately broad, basilateral portions of flat area each with low but distinct ridge, posterior margin of 8th sternite with moderate-sized and V-shaped emargination; 9th sternite (Fig. 1B) with a pair of pointed and incurved posterolateral projections, posterior margin between projections almost straight and very minutely serrate.

Aedeagus (Fig. 1A) with median lobe weakly constricted near anterior 2/5, broadened posteriorly to form the rounded posterolateral portions, then narrowed apically toward obtuse apex, posterior part of median lobe provided laterally with the well-sclerotized walls on which a pair of teeth being obtusely pointed and dark-pigmented, areas just behind the teeth furnished with sparse pubescence of different length, sub-transparent area between teeth elongate-elliptical in shape, a pair of obscurely pigmented areas running almost parallel at apical narrow portion of median lobe, each area being longitudinal; internal sac with expulsion clasp robust and broad, its sides protruded both anteriorly and posteriorly, both protrusions weakly curved and pointed, but anterior protrusion larger than posterior one; basal tube composed of 1 pair of curved rod-like structures, symmetrical and rather broadened anteriorly; median longitudinal bands with their ventral portions relatively broad and running parallel anteriorly, their dorsally bent portions narrower, each distinctly curved externally at apical (anterior) part; parameres extending posteriorly near the apex of median lobe, relatively thin and feebly sinuate, furnished with setae of different length at apico-internal parts.

Female. Unknown.

*Type-series.* Holotype: male (Type No., CBM-ZI: 94864), Mt. Bunagadake, Hira, Shiga Prefecture, 22. vii. 1984, T. Watanabe leg.

*Distribution.* Japan (Honshu: northeastern part of Kinki District).

*Remarks.* *Stenus kokie* sp. nov. is classified in the *humilis*-group of the subgenus *Stenus* s. str., judging from the general structure of the body and also the aedeagal organ. Among the Japanese members of this species group, this new species is similar in the structure of aedeagus to *Stenus ochiba* Naomi, 1994, but is separable from the latter by the

following characters: the median lobe weakly constricted near the anterior 2/5, the broader and robuster expulsion clasp of the internal sac, and the much larger and paired teeth located on the inner edges of the posterolateral walls of median lobe. *Stenus kokie* sp. nov. is also similar in the features of the aedeagus to *Stenus yasutoshii* Naomi, 1997, but is also distinguished from the latter by the following points: the punctures on the elytra being more round and distinct, the apical portion of the median lobe with fewer pubescence, the expulsion clasp of the internal sac provided posteriorly with the pointed protrusion at each side.

*Etymology.* The specific epithet of this new species is derived from a Chinese name of a star.

***Stenus (Stenus) takashii* Naomi sp. nov.**  
(Fig. 2A-C)

*Description.* Male. Body 3.3 mm in length. Body black and moderately shiny, with very feeble dark-red tinge on pronotum and elytra; maxillary palpi with 1st segment clear yellow, 2nd segment with basal part clear yellow, and apical part reddish brown to brown, 3rd segment brown and infuscate; labrum pitchy black; antennae with 1st segment dark red to black, 2nd to 11th segments reddish brown; legs reddish brown but their apical part of femora and bases of tibiae infuscate.

Relative measurements: HL: 29; HW: 47; PL: 37; PW: 37; EL: 36; EW: 49; SL: 28.

Head with labrum sparsely pubescent, clypeofrontal area strongly declivous anteriorly, basiantennal tubercles ovoidal, strongly glossy; interocular area with a pair of longitudinal depressions which are weakly narrowed anteriorly, median part between depressions moderately convex; punctures very dense and round, diameter of large puncture about as long as the basal cross-section of 9th antennal segment, interstices between punctures narrow and shiny, but sometimes with indistinct microsculptures. Antennae short, when reflexed extending about the middle of pronotum, 8th segment smallest, almost elliptical, 9th broadened apically, 10th a little broader than 11th, 11th longer than broad and pointed, with relative

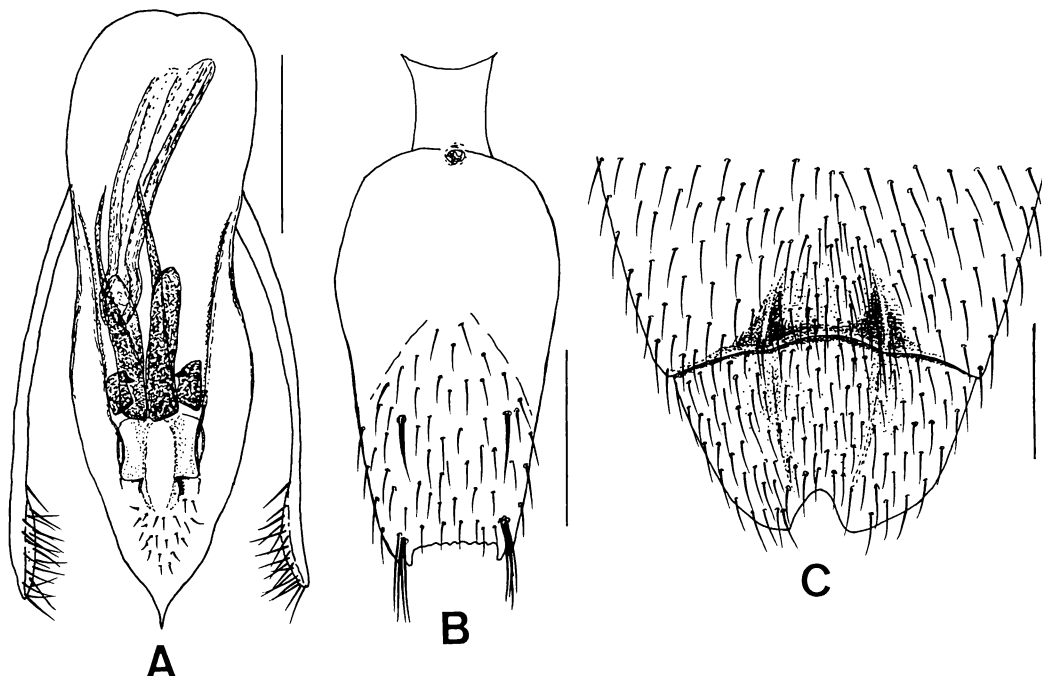


Fig. 2. *Stenus takashii* Naomi sp. nov. A, Aedeagus in ventral view; B, 9th sternite of male; C, 7th and 8th sternites of male. Scale: 0.2 mm.

lengths of antennal segments from base to apex as 10:10:12:8:8:7:6:5:6:8:12.

Pronotum moderately convex above, broadest near the middle, rounded laterally, weakly constricted at base; surface very weakly uneven, vaguely and shallowly depressed along posterior margin; punctures round to almost round, very dense, diameter of large puncture about as long as the median cross-section of 9th antennal segment, interstices between punctures moderately shiny and indistinctly microsculptured.

Elytra weakly narrowed at base, rounded laterally, hind margins together to form very shallow arc; surface uneven, each elytron with obscure longitudinal sulcus near humeral area; surface uneven, punctures large, round to almost round, very dense, little larger than those on pronotum, interstices between punctures very narrow, indistinctly microsculptured.

Legs moderately long; hind legs with 1st tarsomere distinctly shorter than the 2 followings combined, 2nd and 3rd tarsomeres each relatively broad, 4th tarsomere a little broader than 3rd, hardly becoming broader apically, incised dorsally, 5th tarsomere

longer than 1st.

Abdomen well-developed and robust, 3rd segment as broad as 4th, 5th to 8th segments becoming gradually narrower posteriorly; paratergites each narrow, almost horizontal in position, punctate in line; 3rd tergite with three elevated and pointed prolongations located near basal part, well-developed and rather large, prolongations of similar structure found on 3rd to 6th tergites, but becoming smaller posteriorly from 3rd to 6th tergites; punctures on 3rd tergite round, moderate in density, almost regular, interstices between punctures moderately shiny and indistinctly microsculptured; punctures becoming smaller and little sparser posteriorly from 3rd to 8th tergites; 6th sternite furnished with the sparse but little longer pubescence at posteromedian area; 7th sternite (Fig. 2C) with shallow depression at posteromedian part, depression becoming broader and little deeper toward posterior margin which is weakly arcuately emarginate; 8th sternite (Fig. 2C) with median flat area, distinctly incised at middle of posterior margin; 9th sternite (Fig. 2B) with a pair of bi-pointed and short posterolateral projections, posterior

margin between the projections weakly serrate.

Aedeagus (Fig. 2A) with median lobe weakly constricted at about anterior 3/8, posterior part behind constriction moderately broadened, then gradually narrowed posteriorly toward acutely pointed apex, to form round but little sinuate lateral margins, with sclerotized portion of posterolateral and posterior parts of median lobe relatively flat, concavity behind median longitudinal bands rather deep, each side provided with low sclerotized flap, and also with large pointed tooth behind the flap, subtransparent area found at bottom of the concavity, elongate-elliptical in shape, apical sclerotized area of median lobe centrally with sparse and small setae; internal sac without distinct expulsion clasp but a pair of large sclerites being found at sides of median longitudinal bands, each sclerite with sclerotized tooth at antero-internal part; median longitudinal bands with ventral portions weakly divergent apically and each broad, dorsally bent portions weakly convergent apically and each narrowed anteriorly; basal tube large and asymmetrical; parameres slender, extending little before the apex of median lobe, very weakly incurved, densely pubescent at apico-internal parts.

Female. Unknown.

*Type-series.* Holotype: male (Type No., CBM-ZI: 94865), Yoshizawa, Sakuma, Shizuoka Pref., 30. iv. 1994, T. Watanabe leg.

*Distribution.* Japan (Honshu: southern part of Chubu District).

*Remarks.* *Stenus takashii* sp. nov. is grouped in the *humilis*-group of the subgenus *Stenus* s. str., and is characterized by the possession of an obscure longitudinal sulcus on each elytral humerus, and the relatively thick hind tarsomeres, each with the 5th tarsomere being longer than 1st. The new species is clearly distinguished from the Japanese members of this species group by the paired sclerites placed at the sides of the median longitudinal bands instead of distinct expulsion clasp, and the posterolateral and posterior parts of the median lobe, which are almost a leaf-shaped, well-developed and relatively flat.

*Etymology.* The specific epithet is named in

honour of Mr. Takashi Watanabe (Kanagawa) who collected the holotype of this new species.

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## 日本産メダカハネカクシ属ハネカクシ (甲虫目, ハネカクシ科) の 2 新種の記載

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本論文は日本産メダカハネカクシ亜科に関する研究の第 33 報である。本稿において、メダカハネカクシ属の *Stenus* 亜属の *humilis* 種群に属するメダカハネカクシの 2 新種を本州から記載した。*Stenus kokie* Naomi は滋賀県比良山地の武奈ヶ岳から見出された新種で、*Stenus ochiba* Naomi に似る。しかし、この新種は後者からは、雄交尾器の中央片が前方 2/5 でくびれ、雄交尾器の内袋の駆動停止片がよく発達し幅広

いこと、中央片の後側壁の内縁部にある歯状突起はより大きいこと、などによって区別される。この新種はまた *Stenus yasutoshii* Naomi に似るが、上翅の点刻はより円く明瞭であり、雄交尾器の中央片の先端部に生える剛毛はより疎で数が少なく、内袋の駆動停止片の両側においては前後方向に先端が尖った突起を備える点で区別がつく。*Stenus takashii* Naomi は静岡県佐久間から発見された新種である。この新種は雄交尾器の中央片の後半部が木の葉状に左右に広がり、硬化した縁部がよく発達し比較的平たい点、および中央片の内袋において明瞭な駆動停止片を欠くかわりに、中央縦帯の両側に一對の硬化節片を備える点で、*humilis* 種群に属する既知の日本産種から容易に区別がつく。