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Descriptions of Two New Species of the Genus *Stenus* Latreille (Coleoptera: Staphylinidae: Steninae) from Chubu District, Central Japan*

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Abstract Two new species of the genus *Stenus* Latreille, *S. houou* and *S. yasuhikoiellus*, both of which are allied to *S. kasumi* Naomi, 1987, are described from Chubu District, Central Japan. *Stenus houou* sp. nov. is clearly separable from *S. kasumi* by the very large and elongate-ovoidal sperm sac, and the body of the endophalic basal tube expanded posteriorly with four pointed processes, central two of which are very thin and attenuate, etc. *Stenus yasuhikoiellus* sp. nov. is closely allied to S. houou sp. nov. in that they share the very large body of the endophallic basal tube, but the former is clearly separable from the latter by the elytra almost even, with more regular punctures; the shallower emargination on the posteromedian part of the eighth sternite of male; the median longitudinal band of the endophallus being longer and broader in the anterior part, etc.

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

Stenus (*Hypostenus*) *kasumi* was described based on a single male specimen by Naomi (1987) from Mt. Maeshirane, Nikko, Tochigi Prefecture. This species is very characteristic in that (1) the apical part of the endophallic basal tube is enlarged and diamond-shaped and (2) the apical part of median lobe of aedeagus is distinctly tri-cuspidate; thus it is clearly separable from all the other Japanese *Hypostenus* species. In the course of this study, two undescribed species, which are allied to *S. kasumi*, were discovered from Chubu District, central Japan, so I would like to describe them under the name of *S. houou* sp. nov. and *S. yasuhikoiellus* sp. nov. This study is based on 23 Stenus specimens (22 for *S. houou*; one for *S. yasuhikoiellus*). Holotypes of the new species are deposited in the Natural History Museum and Institute, Chiba (CBM).

Taxonomy

Stenus (*Hypostenus*) *houou* Naomi, sp. nov.
(Fig. 1A–F)

Description. Male and female. Brachypterous; body 3.7–4.0 mm in length. Head black, moderately shining; pronotum and abdomen dark reddish brown to reddish brown, moderately to weakly shining; elytra reddish brown but sometimes rather pale at central part of each elytron, moderately shining; antennae and legs reddish brown to yellowish brown.

Head transverse (1 : 0.58), interocular area with a pair of longitudinal depressions shallow, moderately broad, median part between the depressions moderately convex, spindle-shaped or elongate-elliptical; punctures distinct, round, shallow and somewhat umbilicate; interstices between punctures distinctly microsculptured, shining. Pronotum about as long as broad, with median longitudinal depression distinct, deep, with its central area moderately excavated, distinctly microsculptured, shining; surface rather uneven, covered very densely with strongly rugose and rough punctures throughout; interstices between punctures shining, indistinctly microsculptured. Elytra longer than broad (1 : 0.89); surface strongly uneven, very shallowly depressed along suture, with punctures rather rough, large, irregular, round to almost round, but sometimes partially indistinct in outline; interstices between punctures sometimes indistinct in outline, but strongly shining and vaguely microsculptured. Abdomen strongly cylindrical; 3rd segment with paratergites developed, about 2/3 the

* Studies on the subfamily Steninae from Japan 42.

length of segment, 4th to 6th segments with almost obsolete tergosternal sutures; 7th segment with distinct tergosternal sutures; 3rd tergite with punctures round, distinct, moderate in size, interstices between punctures minutely but distinctly miscrosculptured; punctures becoming smaller and sparser from 3rd to 7th segments; 7th segment with punctures very fine, interstices between punctures finely microscuptutred and moderately shining.

Male. Seventh sternite with posteromedian area almost flat; 8th sternite (Fig. 1F) moderately emarginate at posteromedian part; 9th tergite (Fig. 1A) elongate with paired anterior struts; 9th sternite (Fig. 1B) with apicolateral projections relatively short and pointed; 10th tergite (Fig. 1A) moderately rounded at posterior margin. Aedeagus (Fig. 1C) with median lobe rather small at base, broadened posteriorly in anterior half, robust in posterior half, obtusely angulate at apicolateral parts, with medium-sized cuspid at apicomedian part, sides of which are moderately narrowly emarginate; median longitudinal bands (Fig. 1C) strongly divergent anteriorly, each band short but rather broad at posterior part, strongly attenuate anteriorly; median hooks (Fig. 1D) distinctly divergent anteriorly, with posterior plate rounded apically, distinctly narrower and smaller than anterior plate, anterior plate hollow, acutely pointed at apical part; basal tube (Fig. 1E) very characteristic in structure and shape, sperm sac very large, almost elongate-ovoidal, about 1/3 the length of basal tube, basal constriction indistinct, body of basal tube rather large, expanded posteriorly with four pointed processes, central two of which are considered to form a distal tube; parameres extending posteriorly much beyond the apex of median lobe, each weakly sinuate on the way, apical part thin, attenuate, acutely pointed, with 11 to 12 short to moderately long setae at apico-medial area.

Female. Body a little broader and robuster than in male, moderately rounded at the posterior margin of 8th sternite. Ninth sternite (Fig. 2C) with apico-external projection acutely pointed, apico-internal tooth small. Spermatheca (Fig. 2B) with capsule very small, situated behind the most anterior part of spermathecal duct, RT-duct relatively slender, spermathecal duct slender, strongly coiled at anterior part; spermathecal gland (Fig. 2B) completely spherical, situated before the 5th bend of spermathecal duct when counted from the apex.

Type series. Holotype: ♂ (CBM-ZI 122132), Houou Lodge, Mt. Houou, Yamanashi Pref., 13.xi.1991, K. Hosoda leg.

Paratypes: 5♂1♀, same data as holotype; 1♂, same locality, 1.x.1992, K. Hosoda leg.; 1♂, same locality, 8.vi.1991, K. Hosoda leg.; 1♂, 1.vii.1989, K. Hosoda leg.; 1♀, same locality, 17.vii.1992, K. Hosoda leg.; 1♀, same locality, 8.viii.1992, K. Hosoda leg.; 1♀, same locality, 21.x.1988, K. Hosoda leg.; 1♀, same locality, 22.vii.1992, K. Hosoda leg.; 2♀, same locality, 3. vi. 1990, K. Hosoda leg.; 1♂, Maruno-cho, Yamanashi Pref., 25.xii.1992, K. Hosoda leg.

Distribution. Chubu District (Yamanashi Prefecture), Central Japan.

Remarks. *Stenus houou* sp. nov. resembles *S. kasumi* in the external structure of the head and pronotum and the apical part of median lobe of the aedeagus. However, this new species is clearly separable from the latter by the structure of the endophallic basal tube (Fig. 1E). Namely, in *S. houou* (Fig. 1E) the sperm sac is very large and elongate-ovoidal, about one-third of the length of the basal tube; the basal constriction is indistinct; and the body of the basal tube is rather large, expanded posteriorly with four pointed processes, central two of which are very thin and attenuate. On the other hand, in *S. kasumi* (Fig. 2A) the endophallic basal tube is more slender, the sperm sac is rather small, almost circular, and two-ninth of the length of the basal tube; the basal constriction is more or less distinct; and the body of tube is almost diamond-shaped but weakly asymmetrical, and acutely pointed at the apex.

Etymology. The specific epithet of this new species is derived from the name of an imaginary bird " Houou ".

Stenus (*Hypostenus*) *yasuhikoiellus* Naomi, sp. nov.
(Fig. 3A–F)

Description. Male. Brachypterous; body 4.0 mm in length. Head dark brown, moderately shining; pronotum dark brown to reddish brown, moderately shining; elytra brown to yellowish brown, dull to weakly shining; abdomen dark yellowish brown to yellowish brown, moderately shining; antennae and legs reddish brown to pale yellowish brown.

Head transverse (1 : 0.58), interocular area with a pair of longitudinal depressions moderately deep, broad and distinct, median part between the depressions moderately convex, nearly semi-cylindrical in shape; punctures round, distinct, somewhat irregular; interstices between punctures strongly shining, with distinct microsculptures. Pronotum about as long as broad, with median longitudinal depression shallow, indistinct in outline; surface uneven, with punctures very dense, rugose, rough, round to elliptical, various in size; interstices between punctures narrow,

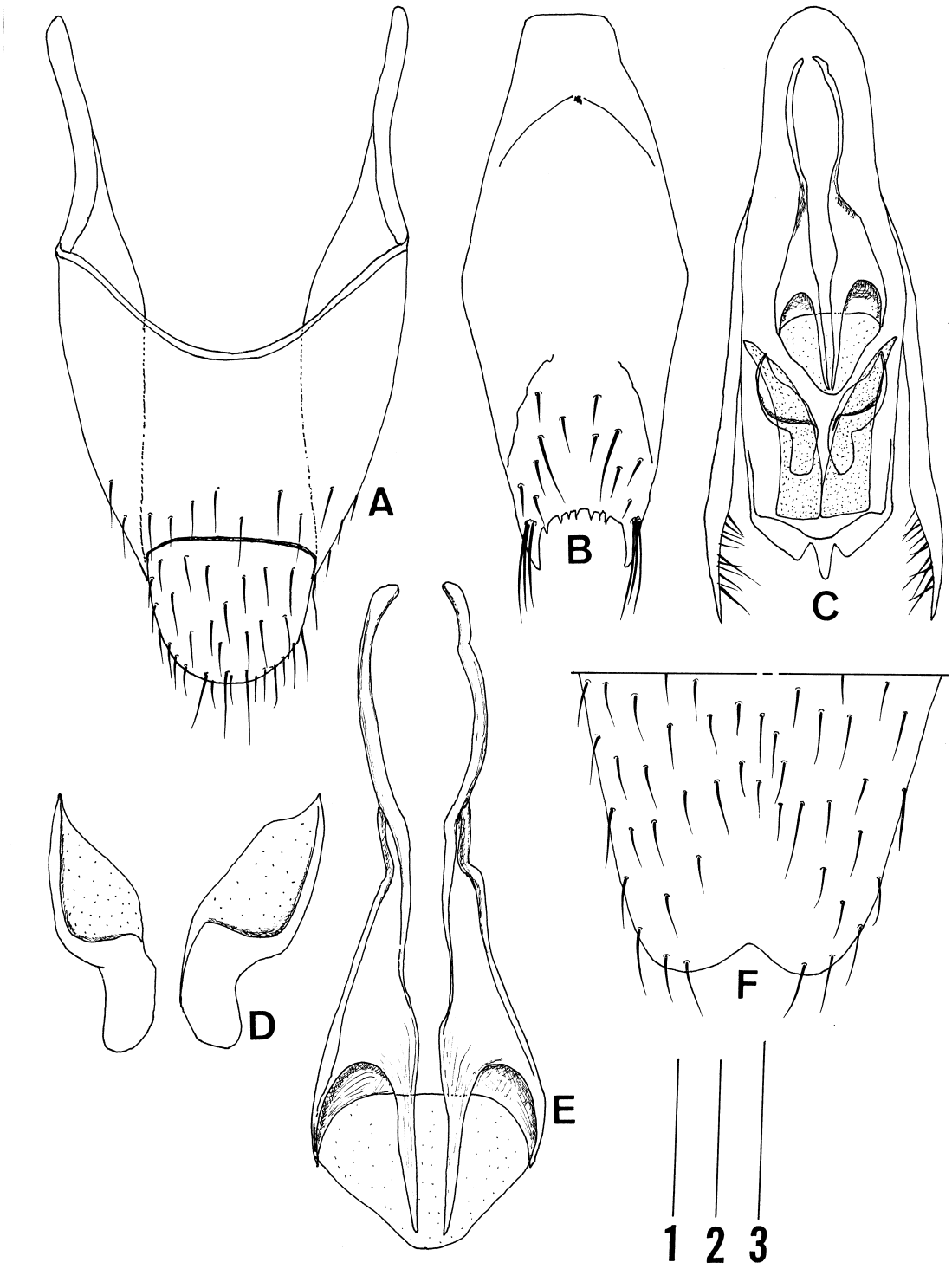

Fig. 1. *Stenus houou* Naomi, sp. nov., holotype, male. A, Ninth and 10th tergites (dorsal view); B, 9th sternite (ventral view); C, aedeagus (ventral view); D, median hooks of endophallus (ventral view); E, basal tube of endophallus (ventral view); F, 8th sternite (ventral view). Scale 1: 0.2 mm for A to C; scale 2: 0.1 mm for D and E; scale 3: 0.25 mm for F.

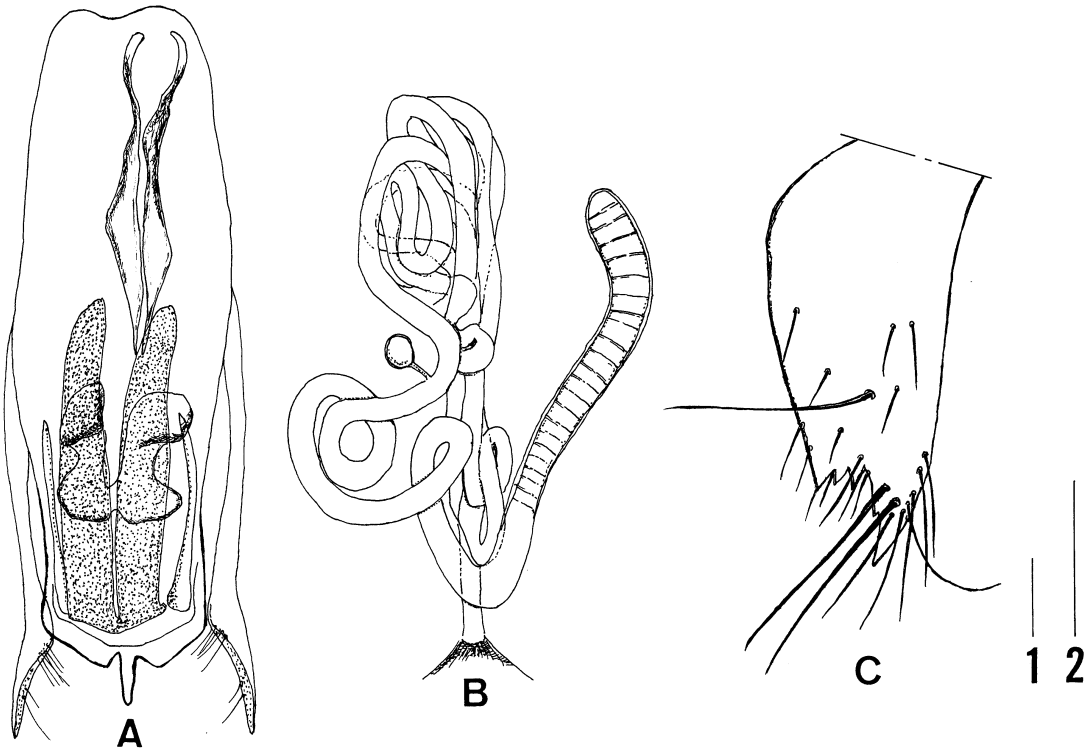

Fig. 2. A, *Stenus kasumi* Naomi, 1987, male, Nikko, Tochigi Prefecture; B, C, *S. houou* Naomi, sp. nov., paratype, female, Mt Houou, Yamanashi Prefecture. A, aedeagus (ventral view); B, spermatheca; C, 9th sternite (ventral view). Scale 1: 0.1 mm for A; Scale 2: 0.1 mm for B, C.

shining, indistinctly microsculptured. Elytra longer than broad (1: 0.89); surface almost even, almost flat near suture, with punctures very dense, round, large to very large, almost regular; interstices between punctures narrow, distinct, dull or weakly shining, indistinctly microsculptured. Abdomen strongly cylindrical; 3rd segment with paratergites almost atrophied into very narrow remnants, tergosternal sutures very fine in 3rd and 7th segments, almost absent in 4th to 6th segments; 3rd tergite with punctures round, distinct, various in size, interstices between punctures minutely, very shallowly miscrosculptured; 7th tergite with punctures very fine, distinct, round and almost regular, interstices between punctures moderately shining, with microsculptures which almost run transversely.

Male. Seventh sternite almost flat on posteromedian part, very shallowly emarginate at posteromedian margin; 8th sternite (Fig. 3D) shallowly arcuately emarginate at posteromerdian part; 9th tergite (Fig. 3A) elongate, with paired anterior struts; 9th sternite (Fig. 3B) with apicolateral projections short but acutely pointed; 10th tergite (Fig. 3A) bluntly pointed at posterior margin. Aedeagus (Fig. 3C) with median lobe robust, with moderately bulbous basal area, apicolateral part obtusely angulate, apicomedian part with a relatively small cuspid, sides of which are not emarginate; median longitudinal bands (Fig. 3C) very weakly divergent anteriorly, each band broad, medium in length, narrowly rounded at anterior tip; median hooks (Fig. 3F) distinctly divergent anteriorly, with posterior plate almost rounded apically, anterior plate hollow, acutely pointed at apical part; basal tube (Fig. 3E) with sperm sac very large, elongate-ovoidal or elliptical, about half the length of basal tube, basal constriction very indistinct, body of basal tube rather large, broad, with 2 acutely pointed processes, which are considered to form a distal tube; parameres reaching posteriorly just before the apex of median lobe, each paramere almost straight, but apical part curved laterally, attenuate, acutely pointed, with 12 to 13 short setae at apico-medial area.

Female. Unknown.

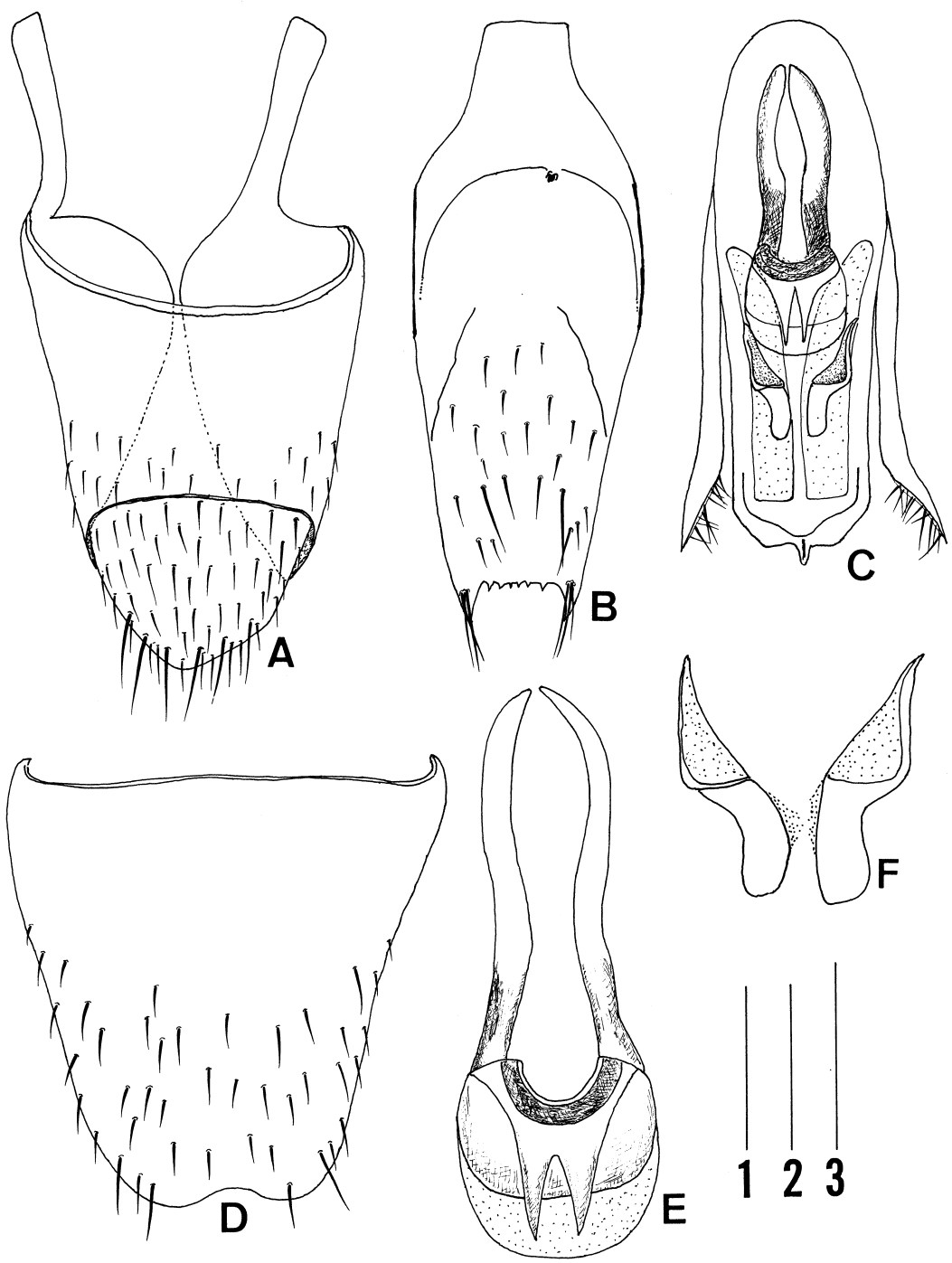

Fig. 3. *Stenus yasuhikoiellus* Naomi, sp. nov., holotype, male. A, Ninth and 10th tergites of male (dorsal view); B, 9th sternite of male (ventral view); C, aedeagus (ventral view); D, 8th sternite of male (ventral view); E, basal tube of endophallus (ventral view); F, median hooks of endophallus (ventral view). Scale 1: 0.2 mm for A to C; scale 2: 0.1 mm for E and F; scale 3: 0.25 mm for D.

Type series. Holotype: ♂ (CBM-ZI: 122995), Kiso-Komagadake, Nagano Prefecture, 24.viii.1962, Y. Hayashi leg.

Distribution. Chubu District (Nagano Prefecture), central Japan.

Remarks. *Stenus yasuhikoiellus* sp. nov. and *S. houou* sp. nov. share the following common states: (1) the very large body of the endophallic basal tube and (2) the median hooks distinctly divergent anteriorly, with its posterior plate rounded apically, and its anterior plate hollow, and pointed apically. These states are presumably apomorphic, suggesting that these two species are closely allied to each other. *Stenus yasuhikoiellus* is, however, clearly separable from *S. houou* by the almost even elytra, with more regular punctures; the shallower emargination on the posteromedian part of the eighth sternite of male (Fig. 3D); the median longitudinal band of the endophallus (Fig. 3C) being longer and broader in the anterior part; the endophallic basal tube (Fig. 3E) bicuspidate at the posterior end; and the paramere of the aedeagus (Fig. 3C) relatively shorter, reaching only just before the apex of the median lobe.

Etymology. The specific epithet of this new species is named after Mr. Yasuhiko Hayashi, the collector of the holotype specimen of this new interesting species.

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Reference

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中部地方から発見されたメダカハネカクシ属 (甲虫目：ハネカクシ科：メダカハネカクシ亜科) の２新種の記載

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Stenus kasumi Naomi, 1987 (カスミオチバメダカハネカクシ) に近縁なメダカハネカクシの２未記載種を本州中部地方から発見し，本論文において *S. houou* と *S. yasuhikoiellus* の名のもとで新種として記載した．*S. houou* sp. nov. (新称：ホウオウオチバメダカハネカクシ) は赤石山脈の鳳凰山 (山梨県) およびその近隣部から発見された種である．この新種は，頭部や前胸背や上翅の形態，雄交尾器中央片の形状などについて *S. kasumi* によく似るが，雄交尾器の内袋基部管の付け根部が非常に大きく，基部管全体の長さの概ね 1／3 に達し，基部狭窄部は不明瞭，基部管本体は後方に向かって幅広くなり，先端部には特徴的な形状の４突起をもつなどの点で，*S. kasumi* から容易に区別される．他方，*S. yasuhikoiellus* (新称：ハヤシオチバメダカハネカクシ) は，木曽山脈の木曽駒ヶ岳(長野県)から発見された種である．この新種は，上翅の表面が比較的滑らかであり，雄交尾器内袋の基部管の付け根部が非常に大きく，基部管全体の長さの概ね 1／2 に達し，基部管本体の後方先端部に２つの比較的短い突起をもつ点で，*S. kasumi* および *S. houou* から明瞭に区別される．