

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

XIII. Subgenus *Hypostenus* of the Genus *Stenus* LATREILLE, Part 5¹⁾

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Abstract The *bosatsu*, *daimio* and *amida* groups of the subgenus *Hypostenus* of *Stenus* are dealt with. Five new species, *Stenus bosatsu*, *S. daimio*, *S. imasakai*, *S. amida* and *S. akome* are described and their male genitalia are figured.

6. Group of *S. bosatsu*

This group is composed of two species, *Stenus bosatsu* sp. nov. and *S. akojagai* HRMÁDKA and is distributed in Honshu (Chûbu and Chûgoku Districts).

The diagnosis of the *bosatsu* group is as follows: 1) head dark brown to black, 2) 6th and 7th sterna each evenly convex transversely in male, and 3) male genitalia with bulbous basal part of median lobe clearly separable from its slender apical part by a distinct constriction; parameres each with sparse or 4 short setae on apico-internal part.

Stenus bosatsu sp. nov.

(Fig. 1 A)

Male and female. Body length: 3.1-3.4 mm.

Body usually black and moderately shiny, pronotum and abdomen sometimes dark brown; labrum dark red; antennae reddish brown to dark brown; maxillary palpi and legs yellowish red to red.

Head broader than elytra (1.14:1), 1.63 times as broad as long, frontoclypeal area sparsely punctate, with microsculpture, interocular area shallowly concave, with a pair of depressions, the depressions longitudinal and broad, median part between the depressions moderately convex; punctures moderate in density, round and almost regular, interstices between punctures with distinct microsculpture. Antennae reaching posterior 5/6 of pronotum, 8th segment a little broader than 7th,

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9th to 10th each elongate oval, 11th pointed, with relative lengths of segments from base to apex as 10:10:19:11:10:8:7:4:6:7:10.

Pronotum a little longer than elytra (1.05:1), about as long as broad, broadest near the middle, weakly constricted at base, side margins much rounded in anterior 3/4; disk slightly uneven, with a median longitudinal depression, the depression about half times as long as pronotum and distinct, its bottom covered only with microsculpture near center; punctures very dense and subrugose.

Elytra broader than long (1.25:1), moderately constricted at base, side margins gently rounded, hind margins together forming a shallow and V-shaped emargination; disk almost even, with punctures large, elongate oval, very dense and rough. Hind wings reduced, 0.45 times as long as elytra.

Legs moderate in length, hind tarsi 0.60 times as long as hind tibiae.

Abdomen subparallel-sided; punctures fine to moderate in size and round, interstices between punctures narrower than or as long as diameters of punctures on 3rd tergum, punctures becoming gradually smaller posteriorly from 3rd to 8th terga.

Male. Eighth sternum with a moderate emargination at posterior margin; 9th sternum arcuately emarginate at posterior margin, apicolateral projections slender, acutely pointed. Genitalia (Fig. 1A) with median lobe much bulbous in basal part, distinctly constricted at apical 1/4, then narrowed to pointed apex, internal armatures very slender; parameres extending beyond apex of median lobe, thick, gently curved outside behind apical 1/3, each paramere with 4 short hairs on apico-internal part.

Female. Body broader than in male; 8th sternum entire.

Holotype, male (Type No. 2685, Kyushu Univ.), Kaminikkawa Pass, Mt. Daibosatsu, Yamanashi Pref., 15~18-VII-1982, S. NAOMI leg. Paratypes, 15 exs., same data as holotype; 9 exs., Sasagamine, Mt. Myôkô, Niigata Pref., 14~15-VI-1980, S. NAOMI leg.

Distribution. Japan (Honshu: Chûbu District).

Remarks. This new species is allied to *S. akojagai* HROMÁDKA, but the head is entirely black and the 8th sternum is more shallowly emarginate at the posterior margin. The median lobe of the male genitalia is similar to that of the latter in outline, but the apical part is not so narrow as in *S. akojagai*. The parameres further extend beyond the apex of the median lobe than in *S. akojagai* and are gently curved outside behind the apical 1/3.

Stenus akojagai HROMÁDKA

Stenus akojagai HROMÁDKA, 1982, *Fragm. Coleopt.*, (33/34): 132.

Specimens examined. 2 females, Mt. Daisen, Tottori Pref., 3~5-VI-1980, S. NAOMI leg.

Distribution. Japan (Honshu: Chûgoku District).

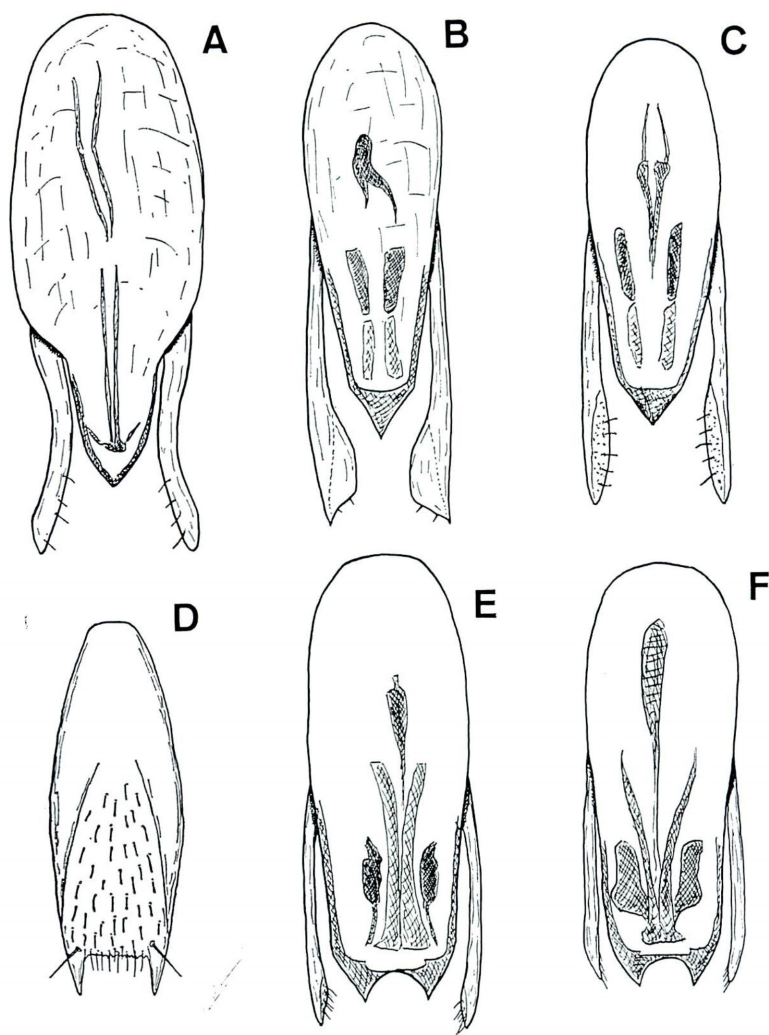


Fig. 1. A, *Stenus bosatsu* sp. nov.; B, *S. amida* sp. nov.; C, *S. akome* sp. nov.; D-E, *S. daimio* sp. nov.; F, *S. imasakai* sp. nov. A-C, E-F, Male genitalia in dorsal view; D, 9th sternum in male.

7. Group of *S. daimio*

This group is composed of two new species, *Stenus daimio* and *S. imasakai*, and is distributed in northern Kyushu so far as known.

The diagnosis of the *daimio* group is as follows: 1) head entirely black, 2) 3rd to 7th sterna each with a flat area or a depression or only 7th sternum with a flat area at posterior part in male, and 3) median lobe of male genitalia elongate oval,

with a large and arcuate emargination at the middle of apical margin; parameres straight, slender and sparsely haired on apico-internal parts.

Stenus daimio sp. nov.

(Fig. 1 D-E)

Male and female. Body length: 3.5–3.8 mm.

Body entirely black and moderately shiny; labrum blackish with anterior margin reddish; antennae with 1st to 2nd segments yellowish red, 3rd to 11th yellowish brown to dark brown.

Head broader than elytra (1.13:1), 1.62 times as broad as long, frontoclypeal area sparsely punctate, interocular area with a pair of depressions, the depressions longitudinal, shallow and subparallel, median part between the depressions broad and gently convex; punctures small and sparse, interstices between punctures almost smooth, a little longer than diameters of punctures on the median part; punctures moderate in size, interstices between punctures indistinctly sculptured, narrower than diameters of punctures near inner margins of eyes. Antennae very slender, reaching posterior margin of pronotum, 2nd segment elongate oval, much broader than 3rd, 3rd to 7th very thin, 8th a little broader than 7th, 9th to 11th forming a loose club, with relative lengths of segments from base to apex as 11:10:20:11:11:9:8:6:8:8:10.

Pronotum robust, about as long as elytra, as long as broad, broadest near the middle and moderately constricted at base, side margins rounded in anterior 2/3, gently arcuate in posterior 1/3; disk slightly uneven, with a median longitudinal depression, the depression about 2/3 times as long as pronotum, distinct and deepest near center, then becoming gradually shallower both anteriorly and posteriorly, its bottom covered only with minute sculpture near center; punctures very dense, subrugose and rather rough.

Elytra broader than long (1.15:1), weakly constricted at base, side margins rounded, hind margins together forming a very shallow and arcuate emargination; disk strongly uneven, with sutural area distinctly higher in level than central part of elytron; punctures very dense, round and larger than those on pronotum. Hind wings reduced, 0.43 times as long as elytra.

Legs elongate, hind tarsi 0.63 times as long as hind tibiae.

Abdomen robust and broad; punctures round to elongate oval, interstices between punctures minutely sculptured, narrower than to about as long as diameters of punctures on 3rd tergum, punctures becoming gradually smaller and sparser posteriorly from 3rd to 8th terga.

Male. Third to 4th sterna each flat at posteromedian part; 5th sternum shallowly depressed and almost smooth at posteromedian part, the depression becoming gradually broader toward posterior margin which is very weakly emarginate, sides of the depression weakly ridged; 6th sternum with a deep and broad depression at

posteromedian part, the depression covered with minute punctures and yellowish hairs on the surface, becoming deeper toward posterior margin which is arcuately emarginate, sides of the depression distinctly ridged; 7th sternum depressed at anteromedian part, the depression becoming deeper toward anterior margin, and also similarly modified at posteromedian part as in 6th sternum, but the depression is broader and the ridges deeper; 8th sternum with a small V-shaped emargination at the middle of posterior margin; 9th sternum (Fig. 1 D) straight and minutely serrate between apicolateral projections which are acutely pointed. Genitalia (Fig. 1 E) with median lobe elongate oval, with a large and arcuate emargination at the middle of apical margin, sides of the emargination bi-pointed; parameres slender, extending beyond apex of median lobe, with sparse hairs on apico-internal parts.

Female. Seventh sternum flat at posteromedian part; 8th sternum obtusely pointed at the middle of posterior margin.

Holotype, male (Type No. 2686, Kyushu Univ.), Nagasaki City, Nagasaki Pref., 6-XI-1977, H. OHISHI leg. Paratypes, 6 exs., same data as holotype.

Distribution. Japan (Kyushu).

Remarks. This new species is allied to *S. imasakai* sp. nov., but the body is broader, the eyes are more convex and the antennae reach the posterior margin of the pronotum. The abdomen is modified with depressions and ridges on the 3rd to 7th sterna in male and the parameres of the male genitalia extend beyond the apex of the median lobe.

Stenus imasakai sp. nov.

(Fig. 1 F)

Male and female. Body length: 3.1–3.4 mm.

Body black and moderately shiny; labrum red to dark red; antennae, maxillary palpi and legs yellow to yellowish brown.

Head broader than elytra (1.20:1), 1.71 times as broad as long, frontoclypeal area sparsely punctate and pubescent, interocular area with a pair of depressions, the depressions longitudinal, shallow and gently convergent anteriorly, median part between the depressions triangular and gently convex; punctures very small and sparse in the middle, moderate in size and round near inner margins of eyes, interstices between punctures almost smooth. Antennae reaching posterior 5/6 of pronotum, 2nd segment distinctly broader than 3rd, 3rd to 8th subequal in breadth to one another, 9th to 11th forming a loose club, with relative lengths of segments from base to apex as 11:10:19:13:10:9:9:6:7:8:10.

Pronotum as long as elytra, about as long as broad, broadest near the middle, subparallel-sided in anterior half, gently narrowed posteriorly in posterior half; disk almost even, with a median longitudinal depression, the depression about 2/3 times as long as pronotum and indistinct; punctures very dense and irregular, interstices between punctures smooth.

Elytra broader than long (1.14:1), weakly constricted at base, side margins much rounded, hind margins together forming a very shallow emargination; disk almost smooth, with punctures round, very dense and rough. Hind wings reduced, 0.51 times as long as elytra.

Legs elongate, hind tarsi 0.65 times as long as hind tibiae.

Abdomen slender, weakly narrowed posteriorly; punctures round, moderate in size and almost regular, interstices between punctures a little narrower than diameters of punctures on 3rd tergum, punctures becoming gradually smaller posteriorly from 3rd to 8th terga.

Male. Seventh sternum flat at posteromedian part; 8th sternum flat at posterior part, with a shallow emargination at posterior margin; 9th sternum acutely emarginate at posterior margin, apicolateral projections pointed. Genitalia (Fig. 1 F) with median lobe very similar in outline to those of *S. daimio* sp. nov.; parameres slender, extending to a little before apex of median lobe.

Female. Eighth sternum entire.

Holotype, male (Type No. 2687, Kyushu Univ.), Nishisonoki, Nagasaki Pref., 23-IV-1978, S. IMASAKA leg. Paratypes, 7 exs., same data as holotype.

Distribution. Japan (Kyushu).

Remarks. This new species is closely allied to *S. daimio* sp. nov., but the labrum is paler in color, the eyes are less strongly convex, and the pronotum is subparallel-sided in anterior half. Each of the 7th and 8th sterna is flat in the posteromedian part in male and the parameres of the male genitalia extend to a little before the apex of the median lobe.

This new species is named in honor of an amateur entomologist, Mr. S. IMASAKA (Shimabara City), in appreciation of his kind donation of the interesting stenine specimens.

8. Group of *S. amida*

This group is composed of two new species, *Stenus amida* and *S. akome*, and is distributed in northern Kyushu and Shikoku.

The diagnosis of the *amida* group is as follows: 1) head dark brown to black, sometimes with clypeofrontal area and anterior part of interocular area reddish brown to dark reddish black, 2) 6th sternum flat at posteromedian part and 7th sternum with a depression at least at posteromedian part in male, and 3) median lobe of male genitalia bulbous at base and pointed at apex; parameres far beyond apex of median lobe, more or less broad at apical parts.

Stenus amida sp. nov.

(Fig. 1 B)

Male and female. Body length: 2.9-3.2 mm.

Head dark reddish brown, interocular area black along inner margins of eyes; pronotum and elytra red to reddish brown; abdomen reddish brown to dark brown, weakly shiny; labrum reddish; antennae with 1st to 7th segments yellowish brown, 8th to 11th dark brown; maxillary palpi and legs reddish brown to brown.

Head broader than elytra (1.25: 1), 1.67 times as broad as long, frontoclypeal area sparsely punctate, sometimes with a definite median keel, interocular area with a pair of depressions, the depressions shallow, convergent anteriorly, median part between the depressions triangular and weakly convex; punctures moderate in density, round and almost regular, interstices between punctures distinctly sculptured. Antennae reaching posterior 3/4 of pronotum, 3rd to 8th segments subequal in length to one another, 9th to 11th forming a loose club, with relative lengths of segments from base to apex as 9:9:17:10:10:6:6:5:6:7:10.

Pronotum about as long as elytra, a little narrower than long (0.95:1), broadest at anterior 2/5 and moderately constricted at base, side margins much rounded; disk slightly uneven, with a median longitudinal depression, the depression about 3/4 times as long as pronotum; punctures dense, rough and irregular, interstices between punctures indistinctly sculptured.

Elytra broader than long (1.05:1), moderately constricted at base, side margins weakly rounded, hind margins together forming a wide and very shallow emargination; disk uneven, with punctures very dense, rough, irregular and a little larger than those on pronotum. Hind wings completely atrophied.

Legs moderate in length, femora thick, tibiae slightly broadened apically, hind tarsi 0.71 times as long as hind tibiae.

Abdomen cylindrical and stout; 3rd to 6th terga each broadly depressed at basal part; punctures very dense, distinct, round to elliptical, and a little larger at base than near posterior margin on 3rd tergum, punctures becoming gradually smaller from 3rd to 8th terga; pubescence red to reddish brown, regular and decumbent.

Male. Sixth sternum flat at posteromedian part; 7th sternum depressed along the midline, the depression narrow, becoming deeper toward posterior margin which is almost straight or very weakly emarginate, sides of the depression moderately ridged; 8th sternum with a small V-shaped emargination at posteromedian part; 9th sternum with an arcuate emargination at posterior margin, apicolateral projections acutely pointed. Genitalia (Fig. 1 B) bulbous at base, gradually narrowed apically, acutely pointed at apex, with obtuse apicolateral angles; parameres extending far beyond apex of median lobe, broad at apical parts, the broadened part shallowly concave on ventral side and pointed at outer posterior corner, with two small setae on its apical margin.

Female. Eighth sternum entire at posterior margin.

Holotype, male (Type No. 2688, Kyushu Univ.), Mt. Tsurugi, Tokushima Pref., 15~17-X-1980, S. NAOMI leg. Paratypes, 18 exs., same data as holotype; 4 exs., same locality, 19~20-VI-1981, S. NAOMI leg.

Distribution. Japan (Shikoku).

Remarks. This new species is allied to *S. akome* sp. nov., but the depression on the 7th sternum is narrower and longer in male, and the parameres of the male genitalia are broader at the apical parts and acutely pointed at the outer posterior corners.

Stenus akome sp. nov.

(Fig. 1 C)

Male and female. Body length: 3.2–3.7 mm.

Head black, sometimes with clypeofrontal area and anterior part of interocular area reddish brown to dark reddish brown; labrum reddish; pronotum and elytra reddish brown to brown; abdomen red to dark red; antennae, maxillary palpi and legs yellowish red to reddish brown.

Head broader than elytra (1.18:1), 1.68 times as broad as long, frontoclypeal area with sparse and minute punctures; interocular area with a pair of depressions, the depressions longitudinal and shallow, median part between the depressions triangular and moderately convex; punctures round, a little smaller and sparser on the middle than near inner margins of eyes, interstices between punctures minutely sculptured. Antennae slender, reaching posterior $4/5$ of pronotum, 3rd to 8th segments thin, 9th distinctly broader than 8th, 9th to 11th forming a loose club, with relative lengths of segments from base to apex as 10:9:20:11:11:8:7:5:6:7:10.

Pronotum about as long as elytra, as long as broad, broadest at anterior $2/5$ and weakly constricted at base, side margins rounded; disk slightly uneven, with a median longitudinal depression, the depression shallow, about $3/4$ times as long as pronotum; punctures very dense, large and round, interstices between punctures very narrow, indistinctly sculptured or almost smooth.

Elytra broader than long (1.19: 1), weakly constricted at base, side margins gently rounded, hind margins together forming a wide and V-shaped emargination; disk almost even, with punctures very dense, round and a little larger than those on pronotum. Hind wings reduced, 0.54 times as long as elytra.

Legs elongate, femora thick, hind tarsi 0.74 times as long as hind tibiae.

Abdomen cylindrical, with punctures round, a little smaller and sparser than those in *S. amida* sp. nov. on 3rd tergum, punctures very fine and sparse on 8th tergum; pubescence sparse and decumbent.

Male. Sixth sternum flat at posteromedian part, with an arcuate shallow emargination at posterior margin; 7th sternum with a depression at posteromedian part, the depressed part semicircular in shape, gradually deeper toward posterior margin which is arcuately emarginate; 8th sternum with a shallow and wide emargination at posterior margin; 9th sternum with an arcuate emargination at posterior margin, apicolateral projections strongly pointed. Genitalia (Fig. 1 C) with median lobe similar in shape to that of *S. amida* sp. nov., but a little broader in apical half; parameres extending far beyond apex of median lobe, almost straight, each with 5 to

7 short setae on apico-internal part which is weakly swollen.

Female. Eighth sternum minutely pointed at the middle of posterior margin.

Holotype, female (Type No. 2689, Kyushu Univ.), Mt. Hiko, Fukuoka Pref., 4-IX-1977, H. OHISHI leg. Paratypes, 8 exs., same data as holotype; 1 ex., Maki-noto Pass, Ôita Pref., 10-VIII-1979, S. NAOMI leg.; 2 exs., Shin-yabakei, Ôita Pref., 30-III-1985, S. NOMURA leg.; 1 ex., Kikuchi Valley, Kumamoto Pref., 11-IV-1981, S. NAOMI leg.; 1 ex., Mt. Hakuchô, Kumamoto Pref., 27-V-1978, T. OGATA leg.

Distribution. Japan (Kyushu).

Remarks. This new species is allied to *S. amida* sp. nov., but the depressed area on the posteromedian part of the 7th sternum is broader and semicircular in male, and the parameres of the male genitalia are narrower in apical parts.

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要 約

直海俊一郎：日本産メダカハネカクシ亜科の研究。XIII。メダカハネカクシ属 *Hypostenus* 亜属，5。——本論文で *S. rufescens* 複合群のうちの *bosatsu* 種群，*daimio* 種群，および *amida* 種群を論じた。

bosatsu 種群は *Stenus bosatsu* sp. nov. および *S. akoyagai* HROMÁDKA の2種から成り，本州（中部地方，中国地方）に分布する。本種群は，雄交尾器中央片において，球状の基部と細長い先端部の境界に明瞭なくびれがあり，側片は比較的短かいが，長い場合は外側へ湾曲するという形質などで特徴づけられる。

daimio 種群は *Stenus daimio* および *S. imasakai* の2新種から成り，九州北部に分布している。本種群は，雄交尾器中央片の先端部中央に大型の湾状の切れ込みがあり，側片は短かく直線状であるという形質などで特徴づけられる。

amida 種群は *Stenus amida* および *S. akome* の2新種から成り，四国と九州に分布している。本種群は，雄交尾器中央片の先端部が尖がり，側片は長くその先端部が多少とも広がるか脹れるという形質などで特徴づけられる。

Reference

- HROMÁDKA, L., 1982. Weitere neue *Stenus*-Arten von Japan (Coleoptera, Staphylinidae). *Fragm. Coleopt.*, (33/34): 131-138.