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A New Species of the Genus *Sosylus* from Japan (Coleoptera, Bothrideridae)

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Abstract A new bothriderid species, *Sosylus crassus* sp. nov., is described from Kyushu, Tsushima and Amami-Ôshima, as the second representative of the genus from Japan. A key to the five *Sosylus* species having the strigose pronotal surface including the known Japanese species, *S. gracilis* (Sharp, 1894) is given. A new name, *Sosylus carteri* Aoki et Narukawa, nom. nov., is proposed for *S. strigicollis* (Carter et Zeck, 1937) which is a homonym of *S. strigicollis* Sharp, 1894.

The genus *Sosylus* Erichson, 1845 is a large genus in the family Bothrideridae, including sixty-one species from the world. In Japan, a single species, *Sosylus gracilis* (Sharp, 1885), has hitherto been known from Central and South Japan. Recently, however, the second species was found from South Japan, which is described below as a new species, *Sosylus crassus* sp. nov. The both species have the pronotum with scabrous (or strigose) surface structure, which is found also in the other three foreign species, *S. strigicollis* Sharp, 1894, *S. striolatus* (Grouvelle, 1914) and *S. carteri* Aoki et Narukawa, nom. nov. [=*S. strigicollis* (Carter et Zeck, 1937)]. A key to these five species is given in the present paper.

Genus ***Sosylus*** Erichson, 1845

Metopiestes Pascoe, 1863: 38.
Cylindromicrus Sharp, 1885: 73.

Sosylus gracilis (Sharp, 1885)

(Figs. 1A, 2A–G)

Cylindromicrus gracilis Sharp, 1885: 73, pl. 3, fig. 6; Dajoz, 1977: 187, fig. 176; Aoki, 2008: 1, figs. 1, 2 and 5; 2009 a: 2, fig. 1; 2009 b: 98, fig.; 2012 a: 20, fig. 8; 2012 b: 39.

M a l e. Body length 3.3–3.6 (av. 3.48) mm.

Body slender, castaneous; legs (especially tarsi) somewhat lighter in color; antennae castaneous except for yellowish brown clubs.

Frons of head shallowly concave, arched posterior margin of the concavity lying at the level a little anterior to mid-distance along length of eyes, leaving enough space in front of anterior margin of pronotum (Fig. 1A); anterior border of clypeus nearly straight; frons and vertex rather sparsely punctured; punctures elongate and spindle-shaped, each with minute seta. Eyes most strongly swollen in posterior part. Antennae 11-sgmented, bearing distinct club consisting of two segments; the last segment (XI) strongly arched on anterior margin and a little narrower and longer than penultimate one (X) (Fig. 2A).

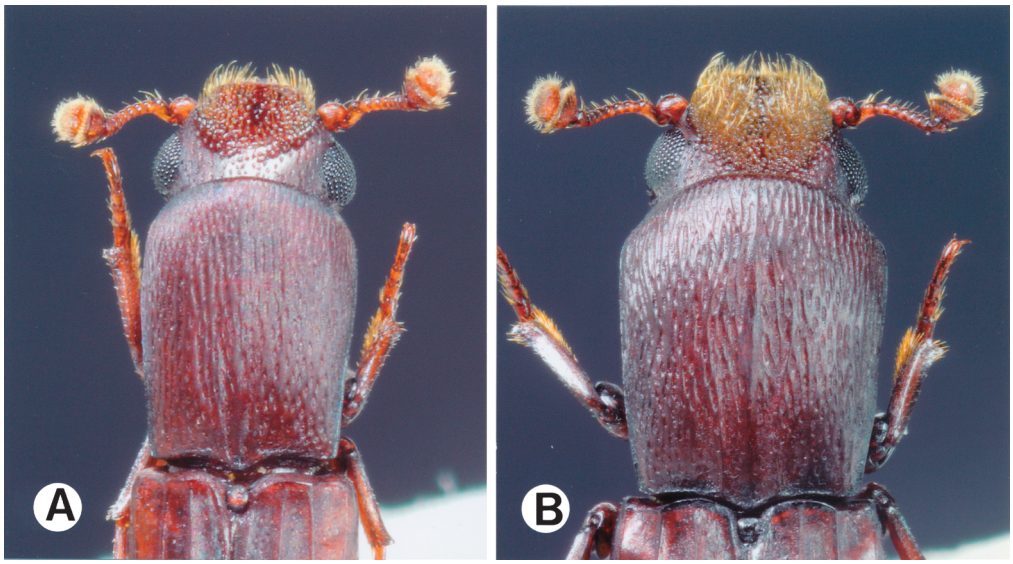

Fig. 1. Head and pronotum of two Japanese species of *Sosylus*. —— A, *Sosylus gracilis* (SHARP), ♀; B, *Sosylus crassus* sp. nov., ♀.

Pronotum 1.30–1.37 times as long as broad, smoothly arcuate anteriorly; anterior corners smoothly rounded (Fig. 1A); lateral margins nearly straight, weakly narrowed posteriorly; posterior angles nearly rectangular; disc scabrously strigose, with longitudinal striae dense, connected with each other, and forming network (Fig. 1A), leaving elongate interspaces, each bearing a minute seta; one long median carina and two short lateral carinae extending from mediobasal margin of disc.

Elytra long and narrow, 3.20–3.59 times as long as breadth, 2.59–2.77 times as long as pronotum, almost parallel-sided, only slightly narrowed in middle portion and suddenly narrowed in straight lines toward truncated apical end (Fig. 2E); apical declivity distinctly concave; sutural carina raised from base to apex; second carina strongly raised, ending abruptly between beginning of declivity and apex of elytron (Fig. 2E), the extremity distinctly truncate in lateral view; third carina combined with fourth carina before reaching elytral apex (Fig. 2E); even intervals with double rows of elongate punctures sparsely arranged in basal half and densely in apical half; without marked setae on raised carinae.

Prosternal process parallel-sided, with broadly rounded anterior margin (Fig. 2D).

Metasternum with elongate, spindle-shaped punctures which are coarser, closer and deeper anteriorly and laterally, sparser and more indistinct in medioposterior part; median longitudinal line 3/5 in length of metasternum. Ratio in length of fourth tarsal segment to first one (IV/I) 0.81–0.85 in foreleg, 1.43–1.52 in mid-leg (Fig. 2B), 1.34–1.36 in hind-leg; especially, first segment 1.5 times as long as fourth in mid-leg (Fig. 2B).

Male genital organ. Apical part of tegmen slender, with two pairs of rather thick setae distally (Fig. 2C); median lobe very slender; median strut also slender (Figs. 2F & G).

F e m a l e. Similar in morphology to male, except for the head with long and dense golden hairs (Fig. 1A). Body length 3.7 mm.

Material examined. 3 ♂♂, Gochi, Isobe-chô, Shima City, Mie Pref., Central Japan, 24–VII–2010, N. NARUKAWA & J. AOKI leg.; 1 ♀, the same place, 10–VII–2010, N. NARUKAWA leg.; 3 ♂♂,

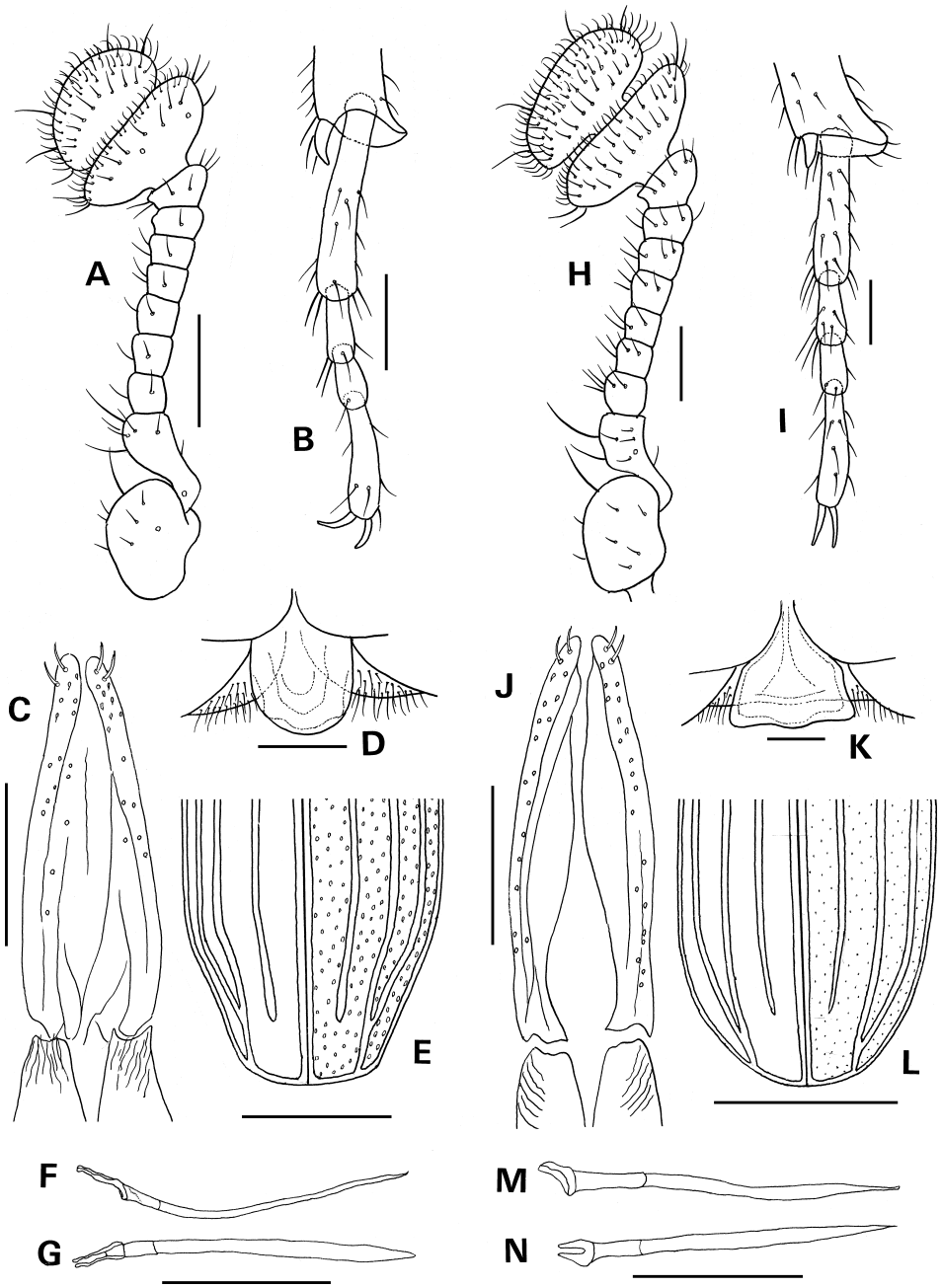

Fig. 2. Important parts of two Japanese species of *Sosylus*. —— A–G, *Sosylus gracilis* (SHARP); H–N, *Sosylus crassus* sp. nov.; A & H, antennae; B & I, tarsi of mid-legs; C & J, apical parts of tegmen of male genital organs, ventral view; D & K, prosternal processes; E & L, apical parts of elytra; F, G, M & N, median lobe of male genital organs, lateral view (F & M) and dorsal view (G & N). Scale bars: 0.1 mm for A–D & H–K; 0.5 mm for E–G and L–N.

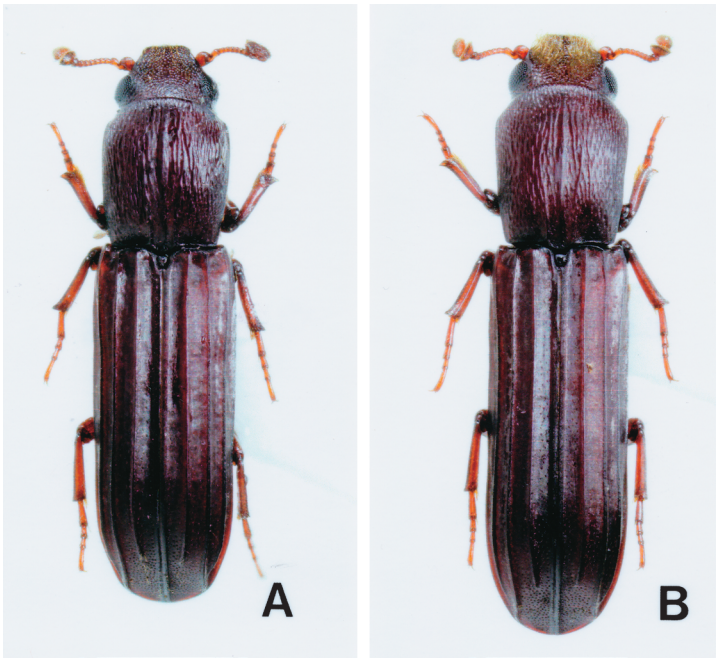

Fig. 3. *Sosylus crassus* sp. nov. —— A, Male; B, female.

Mt. Nyudogatake, Yamamoto-chô, Suzuka City, Mie Pref., Central Japan, 11–X–2012, N. NARUKAWA leg.

Sosylus carteri AOKI et NARUKAWA, nom. nov.

Metopiestes strigicollis CARTER et ZECK, 1937: 181–208, pls. 8–9.

Since the genus *Metopiestes* PASCOE, 1863 was regarded as a synonym of the genus *Sosylus* ERICHSON, 1845 by ŚLIPIŃSKI (2007), *Sosylus strigicollis* (CARTER et ZECK, 1937) becomes a junior secondary homonym of *Sosylus strigicollis* SHARP, 1894 and a new name *Sosylus carteri* is proposed here for the former species.

Sosylus crassus AOKI et NARUKAWA, sp. nov.

(Figs. 1B, 2H–N, 3A & B)

M a l e. Body length 4.3–4.7 (av. 4.52) mm.

Body elongate, but a little stouter than *S. gracilis*; body color carbonaceous, with antennae chestnut-brown.

Frons of head with shallow concavity extending toward base, slightly behind a line across hind margins of eyes; frons and vertex coarsely densely punctured, provided with short golden hairs sparsely (Fig. 3A). Antennae 11-segmented; last two segments forming a distinct club; last segment (XI) almost as wide as penultimate one (X) (Fig. 2H).

Pronotum 1.21–1.27 times as long as broad, strongly arched in anterior margin, weakly angulate at anterior corners (Figs. 1B, 3A & B); lateral margins almost straight, narrowing posteriorly; posteri-

or angles nearly rectangular; surface of disc scabrously strigose, with longitudinal striae connected with one another, forming dense reticulation (Figs. 1B, 3A & B), leaving spindle-shaped interspaces.

Elytra comparatively short and broad, 2.64–2.80 times as long as broad, 2.33–2.41 times as long as pronotum, with basal part heavily hollowed out, resulting in basal margin strongly warped (Fig. 1B), almost parallel-sided, broadly rounded apically (Fig. 2L), apical declivity not so strongly concave; sutural carina complete, but weakly raised from base to apex; second carina also not so strong, ending abruptly far before reaching elytral apex, gradually decreasing in height; third carina combined with fourth one before reaching elytral apex (Fig. 2L); even intervals with very small punctures sparsely.

Prosternal process expanded distally, with distal margin almost straight, weakly projecting medially (Fig. 2K). Metasternum with elongate, spindle-shaped punctures, fused one another in anterior and median parts; median longitudinal line less in length than metasternum. Ratio in length of fourth tarsal segment to first one (IV/I) 0.73–0.76 in fore-leg, 1.20–1.23 in mid-leg (Fig. 2I), 1.15–1.21 in hind leg.

Male genital organ. Apical part of tegmen (Fig. 2J) similar in shape to that of *S. gracilis*. Median lobe rather thick; median strut short and thick (Figs. 2M & N).

F e m a l e. Similar in morphology to male, except for the head bearing long and dense golden hairs (Figs. 1B & 3B). Body length 4.5 − 4.6 mm.

Type series. Holotype（NSMT-I-C 200228）: ♂, Yugakunomori, Kawaminami-chô, Koyu-gun, Miyazaki Pref., South Japan, 10–VI–2010, Y. Tsutsumiuchi leg. Paratypes: 1 ♂（NSMT-I-C 200229）(No. 1), the same data as the holotype; 1 ♀（NSMT-I-C 200230）(No. 2), Mt. Tatera, Tsushima Is., West Japan, 8 to 13–VIII–2012, W. Suzuki leg. (FIT); 1 ♀（NSMT-I-C 200231）(No. 3), Near the entrance of Mt. Tatera, Tsushima Is., West Japan, 24–V–2011., T. Hirose leg. (FIT); 1 ♂（NSMT-I-C 200232 on slide）(No. 4), Sumiyo-son, Amami-Ôshima Is., South Japan, 23–VI–2007, K. Takahashi leg.; 1 ♀（NSMT-I-C 200233 on slide）(No. 5), 1 ♂（NSMT-I-C 200234 on slide）(No. 6) and 1 ♀（NSMT-I-C 200235 on slide）(No. 7), the same data as the holotype; 1 ♂（NSMT-I-C 200236 on side）(No. 8), Near the entrance of Mt. Tatera, Tsushima Is., West Japan, 24–VII–2011, H. Hirose leg. (FIT).

Other specimens examined. 1 ♀, Mt. Ômoridake Forest Road, Aya-machi, Miyazaki Pref., South Japan, 5–V–2012, Y. Tsutsumiuchi leg.; 1 ♂, Yugakunomori, Kawaminami-chô, Koyu-gun, Miyazaki Pref., South Japan, 10–VI–2012, Y. Tsutsumiuchi leg.; 1 ♂, ditto, 30–VI–2012, Y. Tsutsumiuchi leg.

Among the sixty-one known species of *Sosylus* five species including the new species have strigose pronotal surface which is arranged in dense network-like structure by the longitudinal striae fused together instead of oval punctures as shown in the other species. These five species are distinguishable from one another by the following key.

Key to the Five Species of the Genus *Sosylus* with Strigose Pronotal Surface

1. Pronotum with anterior corners smoothly rounded. ····· 2
— Pronotum with anterior corners weakly angulate. ····· 4
2. Intervals of elytral carinae with dense fine sculpture consisting of numerous minute lines. Body length about 4.0 mm. Panama. ····· *S. strigicollis* Sharp,1894
— Intevals of elytral carinae with irregular rows of round or oval punctures. ····· 3
3. Pronotum narrow, L/W: 1.30–1.37; elytra narrow, L/W: 3.28–3.43; post-tarsi with 1st segment shorter than the rest combined. Body length 3.3–3.6 mm. Japan. ····· *S. gracilis* (Sharp, 1885)

— Pronotum broad, L/W: about 1.22; elytra broad, L/W: about 2.58; post-tarsi with 1st segment nearly as long as the rest combined. Body length about 4.5 mm. Australia. ····*S. carteri* nom. nov.

4. Third elytral carina complete, reaching freely elytral apex; fourth carina fused to fifth one before reaching elytral apex. Body length about 3.7 mm. Formosa.·····*S. striolatus* (GROUVELLE, 1914)

— Third elytral carina fused apically to fourth one and then fused again to fifth one before reaching elytral apex. Body length 4.3–4.7 mm. Japan. ····· *S. crassus* sp. nov.

In addition to the key shown above, a comparative figure (Fig. 1) is useful to discriminate two Japanese species, *S. gracilis* (SHARP) and *S. crassus* sp. nov.

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Mr. Yuji TSUTSUMIUCHI kindly offered us a good series of specimens of the new species collected in Miyazaki Prefecture. Mr. Wataru SUZUKI, Mr. Takahisa HIROSE and Mr. Keiichi TAKAHASHI also gave us specimens from Tsushima and Amami-Ôshima Islands. We express here heartfelt thanks to them who readily offered us these invaluable specimens. Thanks are also due to Mr. Takeshi MIYAKE of Ôita Prefecture for giving us an opportunity to examine the new species of *Sosylus*. The excellent photos in the present paper were taken for us by Dr. Masashi INAGAKI using special skill.

要　　約

青木淳一・生川展行：日本産ヒゴホソカタムシ属の新種について（コウチュウ目ムキヒゲホソカタムシ科）．—— ヒゴホソカタムシ属は，日本からヒゴホソカタムシ *Sosylus gracilis*（SHARP, 1885）1種のみが知られていたが，このたび宮崎県，対馬，奄美大島から新種ヒュウガホソカタムシ *Sosylus crassus* sp. nov. を発見し記載した．本種は既知のヒゴホソカタムシに比べて体が明らかに大きく，太く，上翅端がなだらかに丸くなっている点で容易に区別される．また，前胸背板に網状の細条を持つヒゴホソカタムシ属5種について検索表を付した．

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