

Some New Species of Carabidae (Coleoptera) Sent to the Author by Mr. K. Shirahata

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Some New Species of Carabidae (Coleoptera) Sent
to the Author by Mr. K. Shirahata

By AKINOBU HABU

Mr. Kôtarô Shirahata, an earnest nonprofessional entomologist in Yamagata Prefecture of Northern Japan, has offered many facilities to the author for giving or loaning his specimens since several years. In the present paper the author has described five new species sent hitherto to the author by him.

Mr. S. Kato and Mr. H. Hasegawa kindly offered many assistance and constant encouragement and Professor T. Shiraki gave obliging counsel to the present study. Before going further the author wishes to tender his cordial thanks to the above gentlemen. In this occasion the author ought to express his appreciation to the other members of the Laboratory, Miss I. Hattori, Mr. N. Fukuhara and Miss K. Sadanaga for their various friendly help to his study.

***Trichotichnus sachalinensis* sp. nov.**

Length : 9.3 mm. Width : 3.8 mm.

Black, shiny; head and prothorax slightly ferruginous, elytra with rather strong silky gloss, labrum and mandibles (apex blackish) reddish brown, palpi brown or yellowish brown, antennae, apical sides of elytra, tibiae and tarsi brown, femora yellowish brown, sides of prothorax and underside dark reddish brown.

Head fairly convex; surface sparsely punctate; microsculpture almost isodiametric, but very obsolete; temporae fairly short; a pair of supraorbital pores situated somewhat remote from eyes and before level of hind margin of eyes; eyes moderately large and convex; frontal foveae small, rather deep, hinder oblique line not reaching eyes; clypeal suture fine but clear, not depressed; clypeus slightly convex, front of clypeus obsoletely emarginate; front of labrum slightly sinuate at middle, front angles widely rounded, 6-setose; antennae fully reaching shoulders, segments 1 and 2, and base of segment 3 glabrous, segment 3 slightly longer than segment 4; apical segment of palpi somewhat pointed, but extreme tip slightly truncate; apical segment of maxillary palpi a little longer than penultimate segment; penultimate segment of labial palpi with about five setae on inner surface; tooth of mentum rather small, simple; epilobes projecting on each side at apex of lateral lobes as a small sharp tooth; ligula long, widened at apex, apex straight, bisetose, front angles sharp; paraglossae membranous, nearly as long as ligula, glabrous.

Prothorax convex, transversely subcordate, widest at one-third distance from apex; surface clearly punctate, somewhat sparsely on disk, rather densely on basal area; microsculpture forming transverse meshes, but faint; one and two-

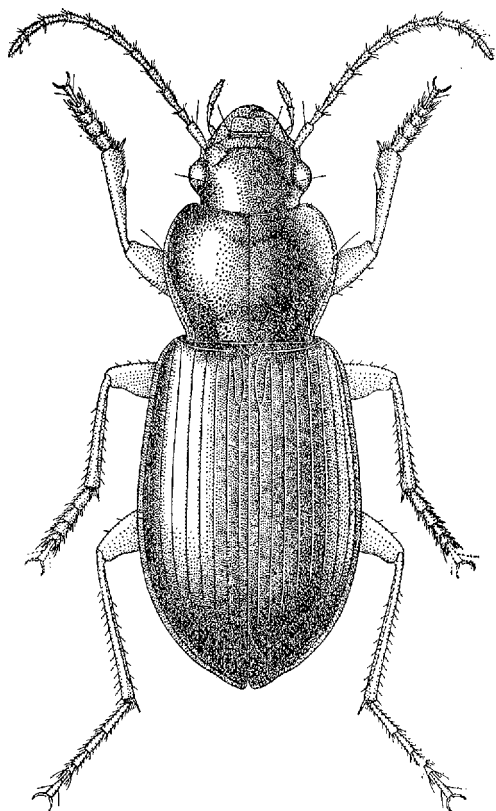


Fig. 1. *Trichotichnus sachalinensis* sp. nov.

fifths times as wide as head, one and three-eighths times as wide as long, ratio of greatest width to basal width 1.37; apex clearly emarginate, finely but completely bordered; front angles protrudent and rounded, fully depressed; base almost straight, bordered, one and one-eighth times as wide as apex; hind angles slightly depressed, obtuse or somewhat rectangular, extreme tip slightly rounded; lateral sides obscurely bordered, narrowly explanate, moderately rounded from apex to base, weakly sinuate before hind angles; lateral seta located at widest point; median line fine, rather faint; front transverse impression distinct, hind impression very faint; basal foveae not deep, rather linear, situated between median line and lateral sides.

Winged.

Elytra gently convex, elliptic-ovate, widest at middle; surface with a few minute punctures here and there, especially distinct on intervals 8 and 9; microsculpture consisting of very fine transverse lines, which form very obscure wide meshes; one and two-sevenths times as wide as and two-thirds times as long as prothorax, one and one-half times as long as wide; basal border almost horizontal, but gently curved towards shoulder; shoulder somewhat distinct; lateral side moderately explanate, nearly straightly and weakly widened towards middle, then moderately rounded to apex, apical situation very faint; apex somewhat pointed though extreme tip rather rounded; striae fine but clear, similar throughout, without punctures; scutellar striole moderately long, apex connecting stria 1; intervals flat, interval 3 with one small dorsal pore somewhat behind middle, adjoining stria 2; basal umbilicate pore remote from basal border, adjoining base of scutellar striole; marginal

series of large punctures on interval 9 practically uninterrupted at middle, about twenty-one in number.

Prosternum, pro-, meso- and metepisterna, sides of mesosternum, and sides of basal ventral abdominal segments more or less punctate; prosternum sparsely haired; prosternal process unbordered, with a few short hairs; metepisterna a little longer than wide, contracted behind, shallowly sulcate at sides; suture between ventral abdominal segments 2 and 3 distinct though fine; middle of ventral abdominal segment 2 with a transverse line and somewhat depressed, and with a few minute hairs between metathoracic coxae; segment 3 sparsely setulose in middle; apical segment with one marginal setae on each side.

Prothoracic tarsi of ♂ with four segments dilated, segments 1 to 4 equal in width, segment 1 slightly longer than wide, segment 2 as long as wide, segment 3 a little wider than long, and segment 4 fairly emarginate; mesothoracic tarsi of ♂ with four basal segments dilated, segment 1 somewhat narrower than segment 2 or 3, three-fourths longer than wide, segment 2 a little longer than wide, segment 3 nearly as wide as long, segment 4 fairly emarginate; segment 4 of metathoracic tarsi emarginate; segments 1 to 4 of all tarsi with dense brush-like hairs beneath; underside of segment 5 of all tarsi with about three setae on each side; metathoracic femora with two setae on inner side.

Habitat: Southern Saghalien.

Holotype: 1 ♂, Konuma, S. Saghalien, VII, 1938, T. Takahashi leg.

This species is easily distinguished from *Trichotichnus congruus* Motschulsky by the elytra with rather strong silky gloss.

***Agonum shirahatai* sp. nov.**

“Shirahata-hirata-gomimushi”

Length: 12.0 mm. Width: 4.6 mm.

Black, shiny; elytra with faintest aeneous gloss, clypeus, labrum, mandibles, palpi, antennae, sides of prothorax and elytra, and legs reddish brown, underside somewhat reddish.

Head convex; surface nearly smooth, but with a few microscopic punctures sparingly; microsculpture isodiametric; neck moderately constricted at lateral and upper sides; temporae not tumid, shorter than eyes; hind supraorbital pores somewhat remote from eyes, located nearly on level of hind margin of eyes; eyes large and prominent; frontal foveae shallow, wide, faintly reaching front supraorbital pores; clypeal suture faint, not depressed; clypeus gently convex at basal middle; apex of labrum weakly emarginate; antennae reaching fully shoulders, basal three segments glabrous, segment 3 slightly longer than segment 4; apical segment of maxillary palpi weakly tumid at middle, truncate at extreme tip, a little longer

than penultimate segment; tooth of mentum simple, slightly shorter than lateral lobes; epilobes projecting on each side beyond lateral lobes as a small tooth.

Prothorax gently convex, widest before middle; surface impunctate, but with a few faint transverse striations on disk, basal foveae rather faintly punctate; microsculpture forming transverse meshes; one and one-half times as wide as head, one and one-fourth times as wide as long; apex rather weakly emarginate, finely bordered; front angles

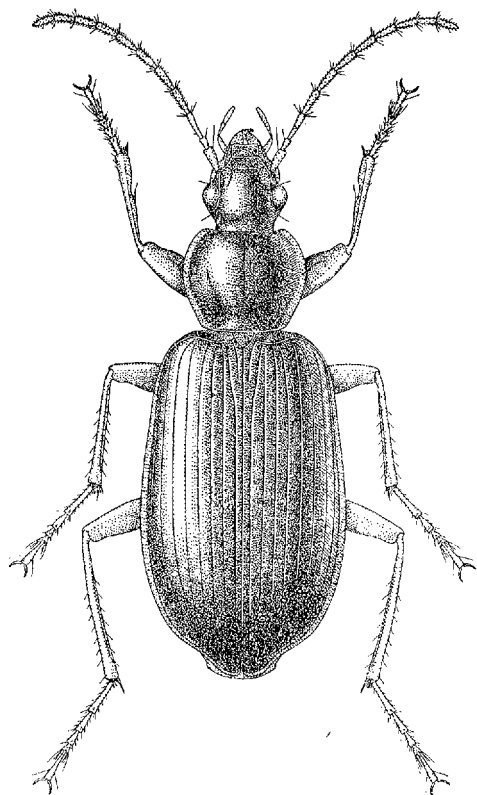


Fig. 2. *Agomum shirahatai* sp. nov.

somewhat protrudent but rounded, depressed; base almost straight, gently oblique at lateral parts, finely bordered save lateral parts, one and one-seventh times as wide as apex; hind angles obtuse and somewhat rounded, slightly reflexed; lateral sides unbordered, moderately widely explanate and reflexed, gently rounded but rather strongly contracted in front, almost straightly contracted behind, without sinuation before hind angles; front lateral seta at widest point, basal seta absent; median line fine but clear, somewhat depressed at about middle; front transverse impression shallow, hind one rather faint; basal foveae moderately deep and large, continued forward parallel with sides to rather beyond middle.

Winged.

Elytra gently convex, rather elliptic, widest somewhat behind middle; sur-

face smooth; microsculpture forming fairly wide meshes; one and two-thirds times as wide as and three and two-fifths times as long as prothorax, one and three-fifths times as long as wide; basal border gently oblique, semibisinate; shoulder rounded but somewhat distinct; lateral side moderately widely explanate, nearly straightly and gently widened towards middle, then moderately rounded to apex, apical sinuation distinct; apex rounded; striae fine but clear, similar throughout, very faintly crenulate; scutellar striole long; intervals nearly flat, interval 3 with three pores at one-sixth, behind middle and at four-fifths distance from base respectively, the front one adjoining stria 3, the hind two adjoining stria 2; basal umbilicate pore situated somewhat remote from basal border, adjoining stria 1;

marginal series of large pores on interval 9 spaced at middle, 6+1+10 on left elytron, 5+3+10 on right elytron in number.

Underside nearly smooth save mesoepisterna sparsely punctured; prosternal process unbordered, rather obtusely carinate behind; metepisterna just twice as long as wide, contracted behind, sulcate at outer, inner and front sides; apical ventral abdominal segment of ♀ with four marginal setae on each side.

Prothoracic tibiae sulcate; basal two segments of prothoracic tarsi in ♀ very obsoletely bisulcate; basal two segments of mesothoracic tarsi and basal three segments of metathoracic tarsi rather clearly bisulcate, the space between sulci not carinate; segment 4 of pro- and mesothoracic tarsi moderately bilobed, outer lobe almost equal to inner lobe in length; segment 4 of metathoracic tarsi moderately emarginate; segment 5 of all tarsi glabrous beneath.

Habitat: Northern Honshu, Japan.

Holotype: 1 ♀, Mt. Gassan, Yamagata Prefecture, Honshu, VII. 31, 1950, K. Shirahata leg.

This species rather resembles "*Colpodes*" *aequatus* Jedlička, but the hind seta of the prothorax is absent on each side and the basal foveae of the prothorax are rather clearly punctate.

Synuchus sakataensis sp. nov.

"Futo-kuchihige-naga-gomimushi"

Length: 12.4 mm. Width: 4.8 mm.

Pitchy black, shiny; labrum, mandibles and femora dark reddish brown, palpi, antennae, tibiae and tarsi reddish brown.

Head fairly convex; surface smooth, with a few striations between eyes; microsculpture forming obscurely isodiametric meshes; neck-constriction slight at only lateral parts; hind supraorbital pores situated moderately remote from eyes, nearly on level of hind margin of eyes; eyes moderately large and prominent; lateral buccal fissures deep; frontal foveae fairly small, deep; clypeal suture fine, not depressed; clypeus slightly convex; front of labrum weakly emarginate; antennae reaching shoulders, segments 1 to 3, and basal one-fourth portion of segment 4 glabrous, segment 3 slightly longer than segment 4; apical segment of maxillary palpi somewhat tumid at middle, truncate at extreme tip, somewhat longer than penultimate segment; apical segment of labial palpi elongately spherical, less than twice as long as wide, obliquely truncate at apex, sparsely pubescent; tooth of mentum fairly stout, bifid; epilobes projecting on each side somewhat beyond lateral lobes as a small obtuse tooth; ligula longitudinally carinate at middle.

Prothorax fairly convex, widest before middle; surface impunctate, with a few faint striations, front area rugose, basal area with some punctures; microsculpture

very faint, forming obscure wide meshes; one and one-third times as wide as head, one and one-tenth times as wide as long; apex weakly emarginate, clearly bordered; front angles obtuse, somewhat rounded, depressed; base slightly wider than apex, almost straight or very slightly rounded at middle, fairly obliquely rounded at lateral parts, distinctly and rather widely bordered; hind angles rounded, somewhat depressed; lateral sides clearly bordered, evenly but rather strongly contracted in front and

behind, with weak sinuation before hind angles; front marginal seta situated at widest point, hind seta somewhat before hind angle; median line distinct, somewhat depressed at middle; lateral channels fairly narrow; front and hind transverse impressions clear but not deep; basal foveae small, narrow, fairly remote from hind angles, faintly continued forward parallel with lateral sides to middle.

Winged.

Elytra convex, elongately ovate, widest at middle; surface smooth; microsculpture absent; more than one and one-half times as wide as and two and three-fifths times as long as prothorax, less than one and four-sevenths times as long as wide; basal border very slightly oblique, clearly semibisinate; shoulder rounded; lateral channel narrow but rather deep; lateral side finely but distinctly bordered, evenly rounded (with slight sinuation) and gently widened until middle, thence moderately rounded to apex, rather straight near apex,

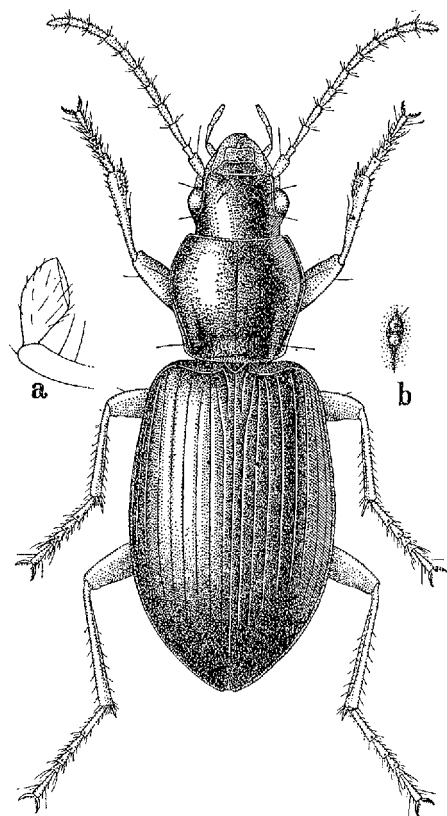


Fig. 3. *Synuchus sakataensis* sp. nov.

a. labial palpus

b. basal umbilicate pore on elytra

apical sinuation absent, without inner plica of epipleura; apex somewhat rounded; striae clearly impressed, similar throughout, without crenulation; scutellar striole moderately long, situated on interval 1; intervals weakly convex, interval 3 with two dorsal pores at three-tenths and two-thirds distance from base, both pores adjoining stria 2; basal umbilicate pore adjoining scutellar striole, divided in two pores; marginal series of large pores on interval 9 interrupted at middle, 6+2+9 on left, 5+1+8 on right elytron in number in holotype, (5~6)+1+(7~8) in paratype.

Underside smooth; prosternal process unbordered, not carinate behind; metepisterna one and one-half times as long as wide, fairly contracted behind, cari-

nate at sides; apical ventral abdominal segment in ♀ with one marginal pore on each side.

Prothoracic tibiae ungrooved, with a few short bristles distally on inner side; tarsal segment 4 cordate, segment 5 ciliate beneath; mesothoracic and metathoracic tarsal segments ungrooved; metathoracic femora two and one-half times as long as metathoracic trochanters; claws usually with four small teeth on inner side.

Habitat: Northern Honshu, Japan.

Holotype: 1 ♀, Sakata City, Yamagata Prefecture, Honshu, VIII. 12, 1952, K. Shirahata leg.

Paratype: 1 ♀, same locality.

This species should be easily distinguished from *Synuchus crassipalpis* Bates by the following points:

The surface of the head is smooth, instead of being "fronte lateribus grosse punctato"; the form of the prothorax is rather diagonaliter-hexagonum and the base slightly wider than the apex, instead of being "quadrato-cordato"; the hind angles of the prothorax indistinct and rounded, instead of being "...distinct although obtuse"; the basal foveae of the prothorax is not "broad", but narrow.

***Crepidactyla shirahatai* sp. nov.**

"Shirahata-kurotsuya-hirata-gomimushi"

Length: 11.8 mm. Width: 4.7 mm.

Black, shiny; prothorax slightly reddish, labrum and mandibles dark reddish brown, palpi and antennae brown, sides of prothorax, middle of both apical and basal margins, apical sides of elytra, legs and underside ferruginous.

Head moderately convex; surface with irregular striations (especially between eyes) and scattered microscopic minute punctures; microsculpture distinct and forming isodiametric meshes; without neck-constriction; hind supraorbital pores*) a little remote from eyes, situated nearly on level of hind margin of eyes; eyes somewhat prominent, twice as long as temporae; frontal foveae faint, front with a small fovea between lateral frontal foveae and with a pair of foveae between eyes; clypeal suture clear but not depressed; front margin of clypeus slightly emarginate; antennae reaching fully beyond base of elytra, segment 4 slightly longer than segment 5, segment 3 shorter than segment 4; maxillary palpi elongate, apical segment cylindrical, clearly truncate at extreme tip; penultimate segment somewhat shorter than apical one; apical segment of labial palpi weakly tumid towards apex, apex gently obliquely truncate and its outer angle moderately sharp; mentum widely emarginate, tooth stout and slightly bifid at extreme tip.

*) The hind supraorbital pore on the right side is abnormal, being composed of two pores.

Prothorax large, gently convex, rounded-quadrate, widest slightly before middle; surface with some microscopic punctures and transverse striations; microsculpture forming rather transverse meshes on disk, but isodiametric on basal area; about one and one-half times as wide as head, one and one-fifth times as wide as long; apex weakly emarginate, bordered; apical angles slightly protrudent and

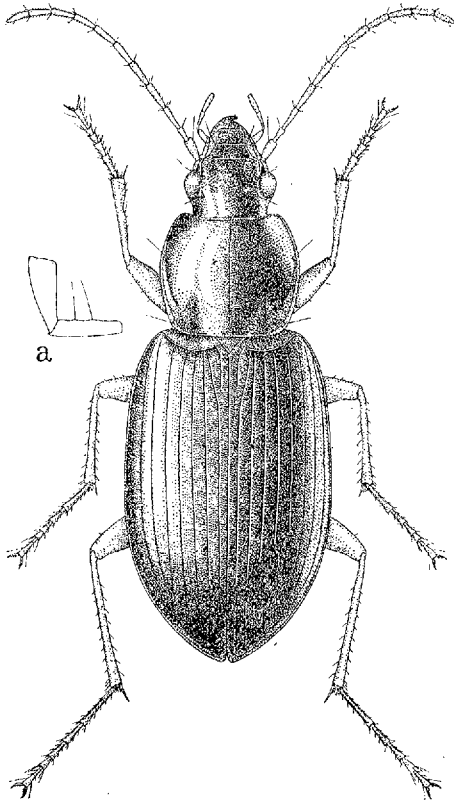


Fig. 4. *Crepidactyla shirahatai* sp. nov.
a. labial palpus

rounded; base almost straight, wider than apex, lateral parts rounded towards hind angles, bordered near basal foveae; hind angles entirely rounded; lateral sides rather narrowly explanate and reflexed behind, moderately rounded from apex to base; front seta at one-third distance from apex, hind one on angle; median line fine and clear; front transverse impression short and shallow, hind one faint; basal foveae moderately deep.

Winged.

Elytra somewhat convex, elliptic-ovate, widest at about middle; surface impunctate; microsculpture distinct, forming isodiametric meshes; less than one and one-half times as wide as and more than two and three-fifths times as long as prothorax, one and one-half times as long as wide; basal border clearly sinuate; shoulder rather distinct though rounded; lateral side gently rounded to middle, then moderately rounded to apex, apical sinuation invisible; apex weakly rounded; striae deep, with no visible crenulation, similar throughout, stria 1 arising from basal umbilicate pore, which is distinctly remote from both basal border and scutellar striole; scutellar striole rather elongate; intervals slightly convex, but almost flat near apex, interval 3 with two dorsal pores adjoining stria 2, the front one at about one-third and the other at two-thirds from base on left elytron; large pores forming the marginal series widely spaced at middle, 6+1+10 on left, 7+1+9 on right elytron in number.

Underside impunctate; prosternal process glabrous, unbordered; metepisterna about one and one-half times as long as wide, contracted behind, sulcate at sides;

last ventral abdominal segment with one marginal seta on each side.

Metathoracic tarsi with basal four segments bisulcate, the space between sulci weakly carinate; segments of mesothoracic tarsi not sulcate; segment 5 of all tarsi ciliate beneath.

Habitat: Northern Honshu, Japan.

Holotype: 1 ♀, Sakata City, Yamagata Prefecture, VII. 23, 1948, K. Shirahata leg.

Though the present new species is closely allied to *Crepidactyla melantho* Bates, the prothorax is somewhat wider and the microsculpture on the elytra are forming clearly isodiametric reticulate meshes, while those of *C. melantho* are forming wide transverse meshes. Miss C. M. F. von Hayek kindly examined the Bates's type specimen and informed me the above characteristic.

***Stomis zaonus* sp. nov.**

“Ô-kibanaga-gomimushi”

Length: 12.0 mm. Width: 3.8 mm.

Black, somewhat rufous, shiny; labrum, mandibles and segment 1 of antennae reddish brown, palpi, remaining segments of antennae, legs and lateral sides of elytra brown, underside dark reddish brown.

Head moderately convex; surface smooth, with a few transverse striations between eyes; microsculpture isodiametric, but rather faint; neck-constriction distinct at lateral and upper sides; temporae slightly shorter than eyes; hind supraorbital pores somewhat remote from eyes, situated on level of hind margin of eyes; eyes moderately large and prominent; frontal foveae distinct, linear, oblique, the space between foveae somewhat depressed; lateral frontal fissures deep; clypeal suture clear; clypeus slightly convex, front margin gently emarginate, indentation of left basal-lateral side deep, fairly larger than the right one; front

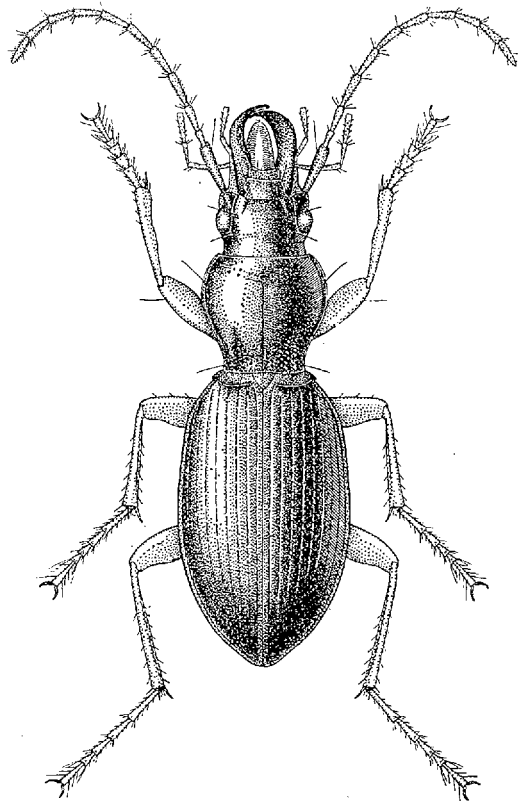


Fig. 5. *Stomis zaonus* sp. nov.

of labrum moderately emarginate; antennae long, extending to one-third distance from base of elytra, basal three segments glabrous, segment 1 nearly twice as long as segment 3, segment 4 longer than segment 3 or segment 5, segment 3 slightly shorter than segment 6 or 7; mandibles fairly long, fully longer than length of head, left mandible narrower than right mandible, somewhat twisted near apex, inner side with an obtuse indistinct tooth behind middle; right mandible somewhat widened at middle, inner side without tooth, with slight sinuation behind middle; palpi slender, apical segment slightly widened towards apex, sparingly pubescent, apex truncate; penultimate segment of maxillary palpi nearly one-fourth shorter than apical segment, more than one-half times as long as segment 2; penultimate segment of labial palpi one and one-fourth times as long as apical segment; mentum rather shallowly emarginate, tooth simple, fairly stout, nearly as long as lateral lobes; ligula bisetose, slightly pointed though rounded.

Prothorax moderately convex, cordate, widest at one-third distance from apex; surface of disk impunctate, with some faint transverse striations, front area faintly and sparsely punctate, basal area clearly but sparsely punctate; microsculpture forming transverse meshes; one and one-fourth times as wide as head, one and one-tenth times as wide as long, ratio of greatest width to basal width 1.57; apex nearly straight, bordered at lateral parts, one and one-seventh times as wide as base; front angles very slightly protrudent, rounded; base almost straight, slightly sinuate at middle, unbordered; hind angles nearly rectangular; lateral sides faintly bordered, moderately rounded in front and behind; front lateral seta situated at one-fourth distance from apex, basal seta before hind angle; median line distinct, slightly depressed; front transverse impression shallow, composed of two lines, basal transverse impression indistinct; basal foveae moderately deep, linear, somewhat remote from hind angles; lateral channels narrow.

Elytra convex, elongately elliptic-ovate, widest at middle; surface smooth; microsculpture consisting of fine transverse lines which form very wide meshes; one and two-fifths times as wide as and two and one-half times as long as prothorax, one and three-fifths times as long as wide; basal border slightly oblique, sinuate and depressed at middle, adjoining lateral side forming rather distinct tooth at shoulder; lateral side clearly bordered, slightly rounded, widening gradually until middle, then moderately-gently rounded towards apex, apical sinuation very slight though with short inner plica; striae clear, similar throughout, punctate; short and faint scutellar striole present between striae 1 and 2, arising from basal umbilicate pore; intervals slightly convex, interval 3 without dorsal pores; basal umbilicate pore remote from basal border, near stria 2; marginal series of large pores on interval 9 interrupted at middle, 7+1+9 on left, 8+10 on right elytron in number.

Prosternum save prosternal process, proepisterna, mesosternum, mesoepisterna,

lateral parts of metasternum, and metepisterna distinctly punctate, lateral parts of basal four ventral abdominal segments more or less clearly rugose-punctate; prosternal process unborded, ciliate, faintly longitudinally impressed, not carinate behind; metepisterna one and one-half times as long as wide, contracted behind, sulcate at front and inner sides; ventral abdominal segments 3 to 6 with small fovea at lateral parts, apical segment in ♂ with one marginal seta on each side.

Segments 1 to 4 of prothoracic tarsi cordate, basal three segments in ♂ dilated; basal two segments of metathoracic tarsi with outer sulcus, segment 1 of metathoracic tarsi with very vestigial inner sulcus; surface of segment 5 with three or four setae on each side, underside of segment 5 with four setae on each side; metathoracic femora two and two-thirds times as long as metathoracic trochanters.

Habitat: Northern Honshu, Japan.

Holotype: 1 ♂, Mt. Zaô, Yamagata Prefecture, VII, 1953, Shigeru Kitani leg.

This species is near *Stomis miyamotoi* Habu, but the mandibles are fairly longer.