

spot. Legs with tibiae subcylindrical and the posterior basi-tarsi distinctly longer than, but less than 1.5 times as long as the second, and shorter than the two following ones united.

Length : 24.6–26.1 mm.; width : 8.5–8.8 mm.

Habitat : Tinian Island, Mariannes.

Holotype (1 ♀) and **paratype** (1 ♀) : Tinian Island (D. Matsushita leg.) (The holotype is preserved in the Micronesian collection of the Entomological Laboratory of the Kyûshû University, and the paratype is also preserved in the Mr. Matsushita's collection).

This species is rather allied to *C. auripennis latro* Kerremans from the Rota Island of Mariannes, but may easily be separated from it in the sides of pronotum strongly and angulately projected laterally, the apex of the elytron swollen laterally, and also in the first ventral segment strongly elevated and projected posteriorly.

Notes on the species of the genus *Curtonotus* from Japan (Coleoptera, Carabidae)¹⁾

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Through the courtesy of Professor T. Esaki, Professor K. Yasumatsu, Mr. E. B. Britton and Dr. M. Fukaya I was able to study the species *Curtonotus* from Japan. In the present paper I give a key to the species, description of one new species, and some synonymic notes of this genus.

Before going further I wish to express my heartiest thanks to the above-mentioned entomologists for their kind aid.

Genus *Curtonotus*

Curtonotus STEPHENS, Illustr. Brit. Ent. Mandib., I, p. 138 (1828).

= *Leirus* ZIMMERMANN, in Gistel, Faunus I, p. 38 (1831).

= *Paracurtonotus* HABU, Konchûkai, X, 102, p. 494 (1942), syn. nov.

In 1942 I established a new subgenus, *Paracurtonotus* based on *Curtonotus giganteus* MOTSCHULSKY. According to the further study, however, its subgeneric characteristics seem to be unimportant and thus I regard it as a synonym of *Curtonotus* STEPHENS.

1) 文部省科学研究費の一部による。

In 1943 BALIANI¹⁾ proposed a new subgenus *Paracyrtonotus* for *Amara mixta* BALIANI from China. This subgenus apparently differs from *Paracurtonotus* m.

KEY TO THE JAPANESE SPECIES OF CURTONOTUS

- 1 (4). Head with only one supraorbital pore on each side.
- 2 (3). Head and elytra in ♂ ♀ with distinct isodiametric microsculpture. Smaller species, length 10.6 mm. or so. *C. shinanensis* nov. sp.
- 3 (2). Head without distinct microsculpture. Elytra in ♂ shining, without microsculpture, matt in ♀, with distinct isodiametric microsculpture. Larger species, length 18 mm. or so. *C. giganteus* MOTSCHULSKY
- 4 (1). Head with two supraorbital pores on each side.
- 5 (6). Front area of prothorax clearly punctate. *C. nitens* PUTZEYS
- 6 (5). Front area of prothorax almost smooth. *C. hiogoënsis* BATES

Curtonotus nitens PUTZEYS

ナガマルガタゴミムシ (松村)

- 1865: *Curtonotus nitens* PUTZEYS, Stett. Ent. Zeit., p. 337 (nom. nud.).
 1866: *Curtonotus nitens* PUTZEYS, Mém. Soc. Sc. Liège, (2), I, p. 234.
 1873: *Curtonotus nitens* BATES, Trans. Ent. Soc. Lond., p. 291.
 1875: *Cyrtonotus macronotus* SOISKY, Horae Soc. Ent. Ross., XI, p. 265.
 1876: *Curtonotus nitens* HAROLD, Abh. Brem., p. 118.
 1879: *Curtonotus nitens* LEWIS, Cat. Col. Jap., no. 189.
 1887: *Cyrtonotus nitens* SCHÖNFELDT, Cat. Col. Jap., p. 49.
 1888: *Cyrtonotus nitens* BATES, Proc. Zool. Soc. Lond., p. 370.
 1894: *Amara nitens* TSCHITSCHERINE, Horae Soc. Ent. Ross., XXVIII, p. 385 (nec LETZNER, 1852).
 1915: *Cyrtonotus nitens* MATSUMURA, Cat. Ins. Jap., II, p. 35.
 1929: *Amara macronota* MATSUMURA, Insecta Matsumurana, III, p. 194.
 1950: *Curtonotus macronotus* HABU, Iconog. Ins. Jap., ed. 2, p. 962, f. 2736.

Length: 12.5–13.5 mm. *Width*: 4.8–5.2 mm.

Head nearly smooth, with isodiametric microsculpture.

Prothorax smooth on disk, clearly punctate on front and basal area, and lateral channels, microsculpture clear, isodiametric, both apex and base rather clearly emarginate and bordered at sides, hind angles acute. Winged. Elytra about one-sixth wider than prothorax, striae clearly punctate, inner plica of epipleura long, marginal series of large pores on interval 9 widely interrupted at middle, 6+7, microsculpture distinct, isodiametric in ♂ and ♀. Underside sparsely punctate at lateral parts, metepisterna about one-half longer than wide, contracted behind, sulcate at sides, last ventral abdominal segment in ♂ with one marginal seta, in ♀ with two setae on each side. Tooth of mesothoracic tibiae large and distinct. Aedeagus gently curved; apical lamella of penis rather short, right lateral lobe not tapering towards apex.

1) Mem. Soc. Ent. Ital., XXII, p. 48 (1943).

Distribution. Japan (Honshu, Shikoku, Kyushu), Korea, Manchuria, E. Siberia, China.

Curtonotus giganteus MOTSCHULSKY

オオマルガタゴミムシ (松村)

- 1844: *Curtonotus giganteus* MOTSCHULSKY, Mém. Acad. Sc. St. Pétersb., V, p. 173, t. 8, f. 1; Ins. Siber., p. 173, t. 8, f. 1.
 1873: *Curtonotus giganteus* BATES, Trans. Ent. Soc. Lond., p. 290.
 1879: *Curtonotus giganteus* LEWIS, Cat. Col. Jap., no. 188.
 1887: *Cyrtonotus giganteus* SCHÖNFELDT, Cat. Col. Jap., p. 49.
 1915: *Cyrtonotus giganteus* MATSUMURA, Cat. Ins. Jap., II, p. 34.
 1928: *Amara gigantea* ANDREWES, Trans. Ent. Soc. Lond., LIIVI, p. 21 (index); *Cyrtonotus giganteus* ANDREWES, l. c., p. 22 (index).
 1929: *Amara giganteus* MATSUMURA, Insecta Matsumurana, III, p. 194.
 1942: *Curtonotus giganteus* HABU, Konchûkai, X, 102, p. 494, pl. & fig.

Length: 18.0–20.5 mm. *Width:* 6.5–8.0 mm.

♀ robuster than ♂. Head impunctate, microsculpture almost invisible, hind supraorbital pore absent on each side. Prothorax smooth on disk, clearly punctate on front and basal area, microsculpture forming transverse meshes in ♀, almost invisible in ♂, base almost straight, hind angles rectangula. Elytra with striae punctate, inner plica of epipleura long, marginal series of large pores on interval 9 widely interrupted at middle, 7+8-9, surface smooth in ♂, matt in ♀, microsculpture absent in ♂, distinct and isodiametric in ♀.

Underside more or less punctate at lateral parts. metepisterna about one-half longer than wide, ventral abdominal segment in ♂ with one seta, in ♀ with two setae on each side. Tooth of mesothoracic tibiae in ♂ large and sharp. Aedeagus moderately curved, apical lamella of penis rather long, widely rounded at apex, right lateral lobe fairly long, not becoming slender before middle, underside with two slight points before middle.

Distribution. Japan (Honshu, Shikoku, Kyushu), Manchuria, Mongolia, E. Siberia, China.

Curtonotus hiogoënsis BATES

ヒヨウゴマルガタゴミムシ (松村)

- 1873: *Curtonotus hiogoënsis* BATES, Trans. Ent. Soc. Lond., p. 291.
 1879: *Curtonotus hiogoënsis* LEWIS, Cat. Col. Jap., no. 190.
 1887: *Cyrtonotus hiogoënsis* SCHÖNFELDT, Cat. Col. Jap., p. 49.
 1898: *Amara hiogoënsis* TSCHITSCHERINE, L'Abeille, XXIX, 1896–1900, p. 76.
 1915: *Cyrtonotus hiogoënsis* MATSUMURA, Cat. Ins. Jap., II, p. 35.
 1929: *Amara hiogoënsis* MATSUMURA, Insecta Matsumurana, III, p. 194.

Length: 13.5–14.0 mm. *Width:* 5.8 mm.

Piceous, very shiny; palpi and antennae brown, tarsi reddish brown, labrum,

mandibles, sides of prothorax, rest of legs, and underside more or less ferruginous, elytra with a faint brassy tinge. Head fairly wide, frontal foveae small but distinct, clypeus unbordered, front margin lightly sinuate, tooth of mentum bifid, eyes prominent, with two supraorbital setae, antennae barely reaching shoulders, pubescent from segment 4, which is as long as segment 5 and one-fifth shorter than segment 3; surface smooth, but with a few very minute punctures and with faint striations; microsculpture invisible. Prothorax moderately convex, transverse, one and one-half

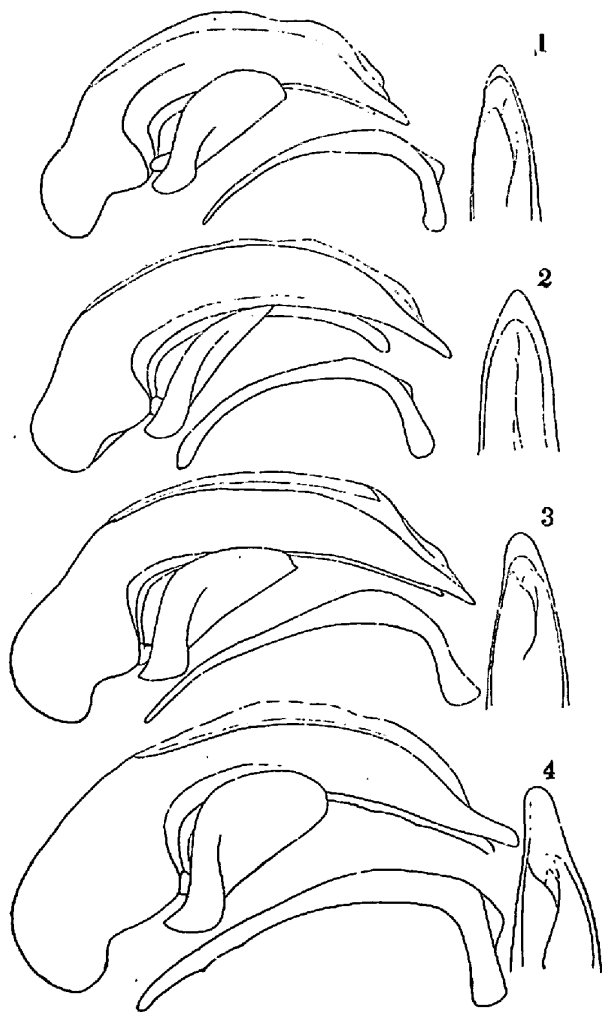


Fig. 1. Aedeagus

1. *Curtonotus shinanensis* sp. nov.
2. *Curtonotus nitens* PUTZEYS
3. *Curtonotus hiogoënsis* BATES
4. *Curtonotus giganteus* MOTSCHULSKY

times as wide as head, three-fifths wider than long, widest at about middle, ratio of the greatest width to the basal width 1.22, base about one-fifth wider than apex, apex and base slightly emarginate, front angles rounded, sides finely bordered, moderately rounded in front and behind, short and feebly sinuate before hind angles, which are almost rectangular but somewhat rounded at the extreme tip, base bordered save middle; median line fine, front transverse impression very faint, hind one shallow, basal inner fovea sublinear and very faint, outer one deep, basal carina rather short, basal area strongly punctate but somewhat faint on middle, lateral grooves with a few punctures, surface of disk almost smooth except for very minute and sparse punctures and faint wrinkles; microsculpture isodiametric though almost invisible. Winged. Elytra moderately convex, elliptic-ovate, one and one-fifth times as wide as prothorax, less than thrice as long as wide, basal border feebly sinuate, sides gently rounded, sinuate before apex, inner plica of epipleura long, shoulders feebly dentate; striae moderately impressed and

punctate, scutellar striole long, situated on interval 2, without basal umbilicate pore; intervals a little convex, smooth, marginal series of large pores on interval 9 widely interrupted at middle, 5-6+8-9; microsculpture nearly isodiametric, but very faint.

Sides of prosternum, mesoepisterna, metepisterna, sides of metasternum clearly punctured, ventral abdominal segments rugose-punctate at sides and rather faintly punctured at middle; prosternal process glabrous, without punctures, metepisterna three-fourths longer than wide, moderately contracted behind, apical ventral abdominal segment in ♂ with one, and the same in ♀ with two marginal setae on each side. Prothoracic tibiae with a simple spur, mesothoracic tibial tooth in ♂ small; tarsal segment 5 ciliate beneath. Aedeagus gently curved, apical lamella short, rounded at apex, right lateral lobe fairly tapering before middle.

Distribution. Japan (Honshu—Hyogo, Kyushu—Mt. Hiko, Fukuoka Prefecture), China.

Curtonotus shinanensis sp. nov.

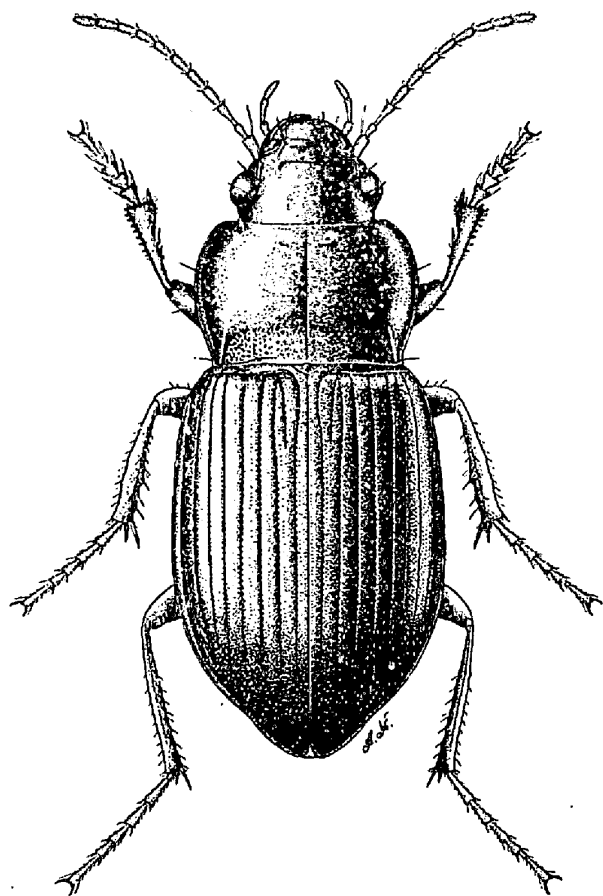
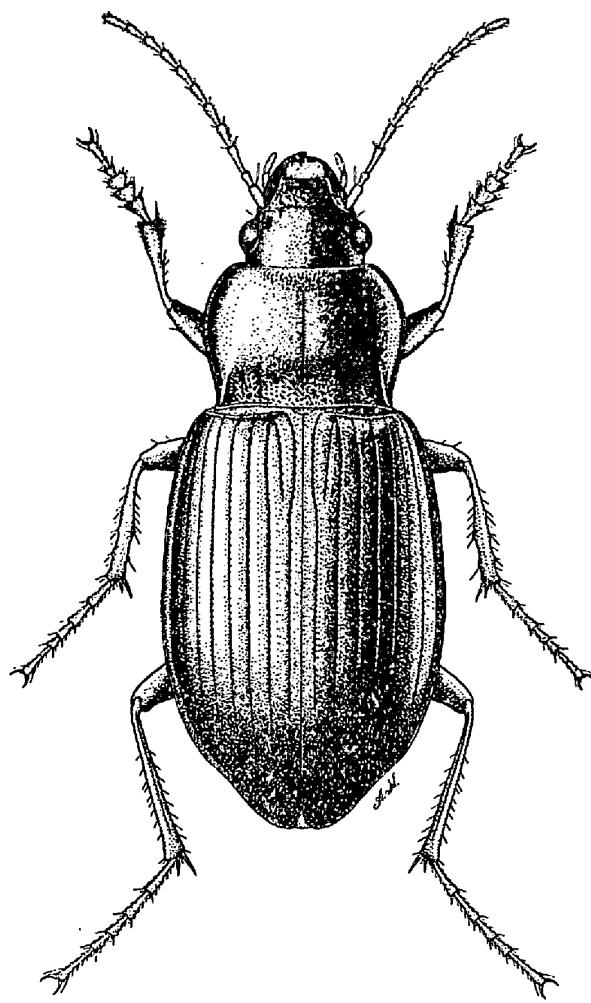
シンシウマルガタゴミムシ

Length: 10.6 mm. *Width:* 4.8 mm.

Black, shiny; antennae, palpi and legs ferruginous, lateral and basal borders of prothorax somewhat reddish.

Head wide, frontal foveae short but distinct, clypeus transversely depressed, front margin somewhat sinuate, tooth of mentum lightly bifid, eyes moderately prominent, hind supraorbital pore absent, antennae rather short, reaching shoulders, pubescent from segment 4, which is a little shorter than segment 3; surface with faint punctures and striations; microsculpture almost isodiametric. Prothorax fairly convex, widest at before middle, one and one-half times as wide as head, one and three-sevenths times as wide as long, ratio of the greatest width to the basal width 1.14, base a little wider than apex, both slightly emarginate, front angles not produced but rounded, sides rather finely bordered, gently rounded both in front and behind, short but distinctly sinuate before base, hind angles sharp and somewhat protrudent, base bordered save middle; median line fine, reaching neither apex nor base, front transverse impression very faint, hind one somewhat distinct, basal outer fovea fairly deep and rounded, inner one linear but almost adjoining outer one, basal carina distinct, both basal and front area rugose-punctate, sparsely and faintly punctate near sides, disk almost smooth; microsculpture isodiametric. Winged. Elytra fairly convex, ovate, one and three-sevenths times as wide as prothorax, thrice as long as the last, more than one and one-half times as long as wide, basal border a little sinuate, sides gently rounded, lightly sinuate before apex, internal plica of epipleura rather short, shoulders minutely dentate; striae moderately impressed, clearly punctate, punctures fainting towards apex, scutellar striole long, situated on interval 2, without basal umbilicate pore; intervals somewhat convex, marginal series of large pores on interval 9 widely interrupted at middle, 6+7—8; microsculpture distinct, isodiametric.

Mesoepisterna, metepisterna, sides of both metasternum and ventral abdominal

Fig. 2. *Curtonotus hiogoensis* BatesFig. 3. *Curtonotus sinanensis* sp. nov.

segments clearly punctate, prosternal process unborded, with a few faint punctures, metepisterna one-half longer than wide, distinctly contracted behind, apical ventral abdominal segment in ♂ with one seta and in ♀ with two on each side. Spur of prothoracic tibiae simple, tooth of mesothoracic tibiae in ♂ small, not distinct, underside of all tarsal segment 5 ciliate. Aedeagus relatively short, moderately curved, apical lamella short, right lateral lobe fairly tapering towards apex.

Habitat: Central Honshu, Japan.

Holotype: 1 ♂, Tenryu Riverbed, near Iijima-mura, Nagano Prefecture, X. 6, 1935, A. Habu leg., preserved in my collection.

Paratypes: 4 ex., same locality.