

A New *Pterostichus* (Coleoptera, Carabidae) of the
Subgenus *Melanius* from Northeastern
Kwantô, Central Japan

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Abstract A new pterostichine carabid beetle, *Pterostichus (Melanius) tsukubasanus* sp. nov., is described from Ibaraki Prefecture, Central Japan. It is closely related to *P. (M.) ambigenus* BATES and its allies, and seems to be restricted to the Yamizo and Abukuma Mountains.

In this paper, I will describe a new pterostichine carabid beetle, belonging to the subgenus *Melanius* of the genus *Pterostichus*, based on the materials obtained on Mt. Tsukuba-san and its neighbouring mountains in Ibaraki Prefecture, Central Japan. The abbreviations used herein are the same as those explained in the foregoing papers of mine.

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Pterostichus (Melanius) tsukubasanus KASAHARA, sp. nov.

[Japanese name: Tsukuba-hoso-nagagomimushi]

(Figs. 1–2, 4)

Pterostichus (Melanius) sp.: KASAHARA, 1986, p. 8.

Description. Length (measured from apex of labrum to apices of elytra) 10.2–11.3 mm. Width 3.6–4.1 mm. Black, shiny, elytra faintly iridescent; labrum, mandibles, antennae and femora dark reddish brown to blackish brown; palpi, tibiae and tarsi reddish brown.

Head gently convex; eyes large, well convex; tempora short, oblique; apices of labrum and clypeus gently emarginate; frontal furrows linearly impressed, though relatively shallow, divergent in posterior halves, extending to before the level of anterior supraorbital setae, sometimes vaguely punctate; surface almost smooth, though rather clearly punctate on latero-dorsal areas behind eyes in the Tsukuba-san and Hanazono-san examples, while almost impunctate in the Yamizo-san ones; antennae extending beyond shoulders of elytra, relative length of scape and segments 2–6 as follows:—

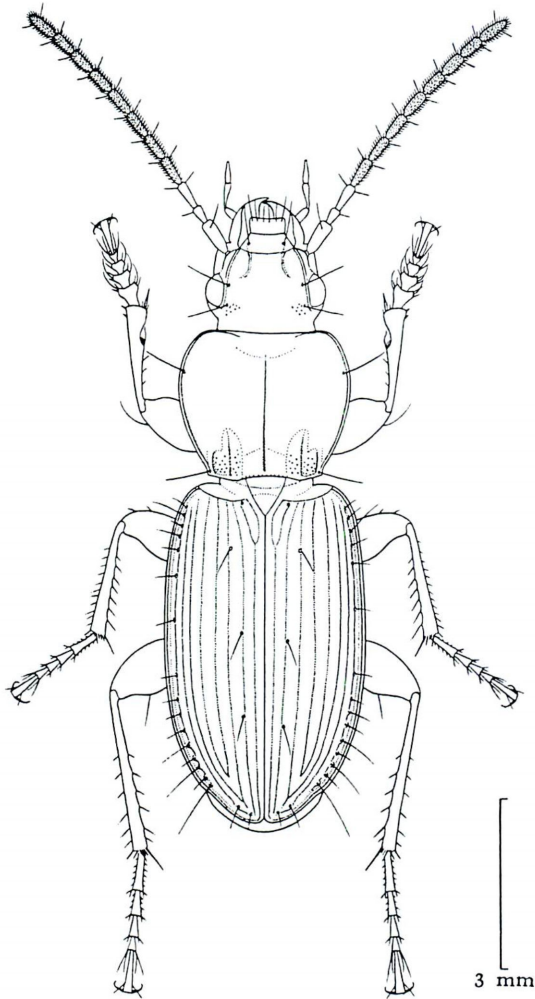
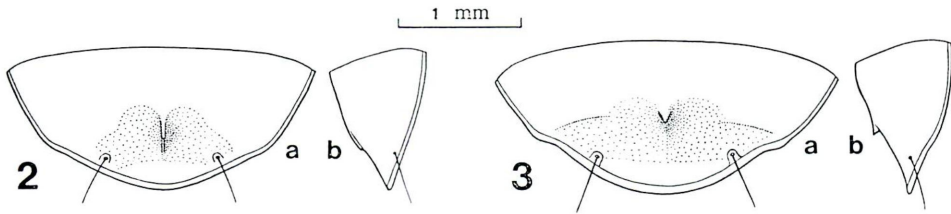


Fig. 1. *Pterostichus (Melanius) tsukubasanus* KASAHARA, sp. nov., ♂, from Mt. Tsukuba-san, Ibaraki Prefecture.

1 : 0.5 : 0.9 : 0.9 : 0.9 : 0.9; segment 2 usually unisetose at apex.

Pronotum moderately convex, widest a little before the middle, ca. 1.4 times as wide as head (PW/HW 1.36–1.47, mean 1.40), as wide as base in almost the same proportion (PW/PBW 1.38–1.50, mean 1.43), ca. 1.3 times as wide as long (PW/PL 1.21–1.36, mean 1.28); lateral margins evenly well arcuate, a little more strongly convergent posteriad than anterior, and hardly or minutely sinuate just before the basal angles, which are obtuse though distinct; lateral reflexed borders narrow, becoming more or less narrower towards apices; anterior marginal setae inserted at apical fourth; apical



Figs. 2-3. Terminal sternites in the males of *Pterostichus (Melanius)* spp. — 2, *P. (M.) tsukubasanus* KASAHARA, sp. nov., from Mt. Tsukuba-san, Ibaraki Prefecture; 3, *P. (M.) ambigenus* BATES from Yunotani, Niigata Prefecture; a, ventral view; b, lateral view.

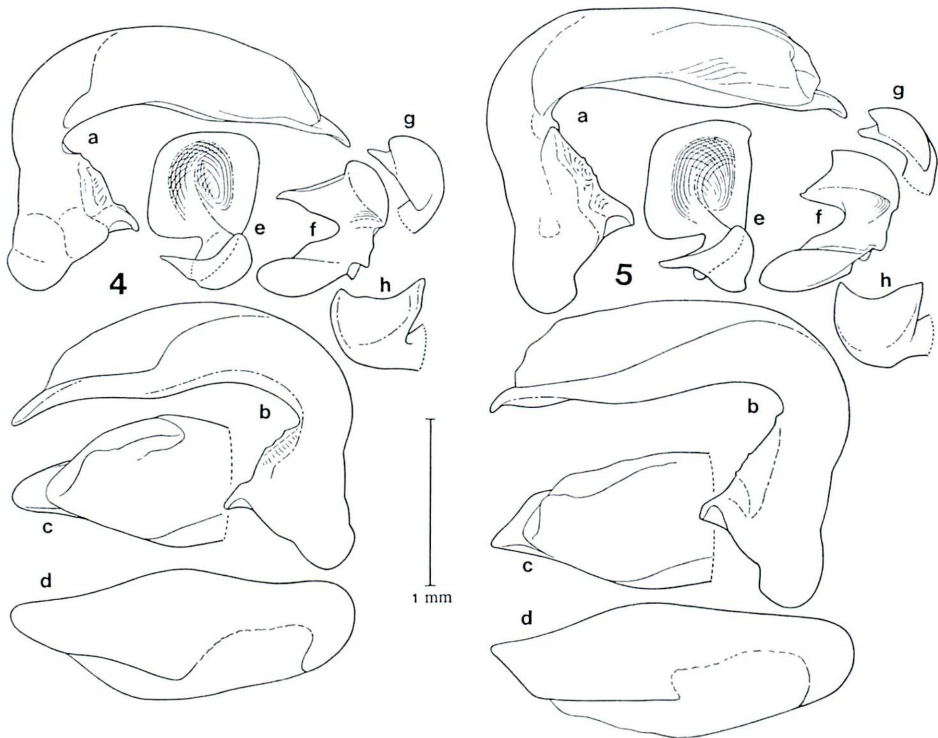
margin gently emarginate, very narrowly bordered on each lateral third, the borders becoming wider towards the middle; basal margin gently emarginate and punctate at the median part, rather oblique on each side; basal foveae deep, strongly punctate, each fovea indistinctly separated into inner large and outer small portions, the former with linear impression at the bottom; median line relatively fine and shallow, though deepening at basal part; apical crescent and basal transverse depressions obsolete. Wings reduced, about three-fifths length of elytra, and narrowing.

Elytra elongated elliptical, more or less convex, widest at about middle, ca. 1.2 times as wide as pronotum (EW/PW 1.14–1.27, mean 1.22), ca. 2.4 times as long as pronotum (EL/PL 2.30–2.66, mean 2.43), about a half as long again as wide (EL/EW 1.51–1.60, mean 1.55); basal margin gently curved, obliquely extending to shoulder, and meeting with lateral margin at an obtuse but distinct angle; shoulders rounded; lateral margins weakly arcuate from behind shoulders, and gently convergent to pre-apical emarginations, which are rather distinct, apices rounded; inner plica visible in dorsal view; scutellar striole arising from basal pores, lying on interval 2, with the extremities often adjoining stria 1; striae almost smooth; intervals rather flat on disc, interval 3 with three dorsal pores, anterior one at about basal fifth and adjoining stria 3, posterior two adjoining stria 2 and situated at about middle and apical fourth, respectively; marginal series of pores 15–16 in number.

Basal three segments of meso- and metatarsi externally sulcate. Ventral side more or less shiny; pro-, meso- and metepisterna, and lateral sides of pro- and mesosterna distinctly punctate; sternites 3–4 ruggedly punctate, sternites 5–7 minutely or vaguely rugose and punctate on each side; prosternum furrowed at middle, the process unbordered; in the male, terminal sternite weakly depressed at the apical part, and with short longitudinal carina at the middle, the carina being longer in the Yamizosan example than in the Tsukuba-san ones.

Aedeagus strongly bent at basal third, basal part stout, and with distinct longitudinal ridge at the middle of inner face, apical lobe as long as wide, rounded at apex; left paramere wide, square; right one stout, strongly bent at apical two-fifths, apical part widely securiform, asymmetrically emarginate at apex.

Type series. Holotype: ♂, Yubukuro, northeastern foot of Mt. Tsukuba-san,



Figs. 4–5. Male genitalia of *Pterostichus (Melanius)* spp. — 4, *P. (M.) tsukubasanus* KASAHARA, sp. nov., from Mt. Tsukuba-san, Ibaraki Prefecture; 5, *P. (M.) ambigenus* BATES, from Yunotani, Niigata Prefecture; a–d, aedeagus (a, left lateral view; b, right lateral view; c, apical half in dorsal view; d, ventral view); e, left paramere; f–h, right paramere (f, right lateral view; g, apical part in right lateral view; h, apical part in dorsal view).

Ibaraki Pref., 18–V–1986, S. KASAHARA leg.; paratypes: 3 ♂♂, same data as for the holotype.

Other specimens examined. 1 ♀, Kameyachi, Mt. Hanazono-san, Ibaraki Pref., 16–IX–1984, S. KASAHARA leg.; 1 ♀, Sadanami, Kita-ibaraki-shi, Ibaraki Pref., 23–VIII–1987, S. TANI leg.; 1 ♂, 2 ♀♀, Manaita-zawa, Mt. Yamizo-san, Ibaraki Pref., 28–V–1988, S. KASAHARA leg.

The holotype is preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo. The paratypes and the other specimens examined are deposited in my collection.

Notes. Five species of pterostichine carabids belonging to the subgenus *Melanius* have hitherto been known from Japan. Four of these, *nigrita* (FABRICIUS), *ambigenus* BATES, *basipunctatus* STRANEO and *chujoiellus* JEDLIČKA, are mutually related to one another in having common characteristics in male genitalia, especially the peculiar right paramere.

The present new species is doubtless a close relative of them. It closely resembles *basipunctatus* in general appearance, especially in the punctate head, but is clearly distinguished from the latter by larger body and differently shaped male genitalia. It is also allied to *ambigenus*, but can easily be discriminated from that species by the differences in the form of elytral apices, as well as in the configuration of the terminal sternite and of the aedeagus, the apical lobe of which is rather pointed in the latter, but distinctly rounded in the former. Judging from the conformation of male genitalia, *chujoiellus* seems to be the closest relative of the present new species. However, it has so peculiarly formed elytral apices, that it can be readily distinguished not only from the present new species but also from the other relatives.

All the examples of the present new species were obtained in marshy places and at the sides of mountain streams, like the other hygrophilous pterostichines of the subgenus *Melanius*. It seems to localize on the Yamizo and Abukuma Mountains.

摘 要

笠原須磨生：関東地方北東部産ホソナガゴミムシの1新種。——関東地方北東部の茨城県筑波山から、ナガゴミムシ属 *Pterostichus* のホソナガゴミムシ亜属 *Melanius* に属する1新種、ツクバホソナガゴミムシ *P. (M.) tsukubasanus* を記載した。本種は、日本産ホソナガゴミムシ亜属のうち、北海道に産するエゾホソナガゴミムシ *P. (M.) nigrita* や、本州の山地に生息するクロホソナガゴミムシ *P. (M.) ambigenus* などの4種に近縁で、それらとは、翅端や雄の腹板末節、および交尾器の形態的特徴により明らかに区別される。茨城県北端部の八溝山と花園山で得られた個体には、軽微な地域変異が認められるが、これらも同種とみなした。本種の分布域は、これまでのところ、八溝、阿武隈の両山地に限られるようである。生態的にみたホソナガゴミムシ亜属の種は、好湿性が強く、本種も湿地や溪畔のきわめて湿潤なところで得られている。

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