

A New Macrocephalic Pterostichine (Coleoptera, Carabidae)
from Central Japan

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Abstract A new macrocephalic pterostichine carabid is described from Mt. Ena-san, Central Japan, under the name of *Pterostichus todai*. It is related to *P. uedaorum* MORITA et HIRASAWA, but differs from it mainly in the shape of pronotum and aedeagus.

The first specimens of a new species to be described herein were discovered by the second author in 1983 on Mt. Ena-san, Central Japan. The pterostichine was then known from only two females and not determined satisfactorily, though it seemed possibly to belong to a new species. It was then much hoped that further collectings would yield male specimens indispensable for final determination. Quite recently, two males of the same species were obtained on the same mountain, and based on this rediscovery, we have now cleared up the long-pending problem, as will be described in this paper.

The abbreviations used herein are as follows: HW – greatest width of head; PW – greatest width of pronotum; PL – length of pronotum, measured along the mid-line; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra; FL – length of metafemur; ML – length of metatrochanter; TL – length of hind tarsus; M – arithmetic mean; H – holotype of *P. todai*; NSMT – National Science Museum (Nat. Hist.), Tokyo.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UENO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the original manuscript of this paper. My thanks are also due to Messrs. Youichi TODA for supplying me with important material, and to Mr. Michiaki HASEGAWA for his kind help.

Pterostichus todai MORITA et KANIE, sp. nov.

[Japanese name : Ena-ôzu-naga-gomimushi]

(Figs. 1-7)

Length: 14.2 mm in H, 15.1-16.9 mm in 3 ♀♀ (from apical margin of clypeus to apices of elytra). Colour dark brown; appendages more or less lighter than dorsum. Body flat and elongate.

Head very large, usually a little narrower than pronotum; PW/HW 1.08 in H, 1.14 in 1 ♂, 1.05, 1.06 in 2 ♀♀, rarely a little wider than pronotum, 0.98 in 1 ♀; frontal furrows short, shallow and almost parallel; eyes entirely flat and small; genae strongly convex; lateral grooves short, deep and straight; additional groove situated a little outside lateral groove and joining posterior end of lateral groove on each side; anterior supraorbital pores situated a little before the post-eye level in H; posterior ones situated a little inside posterior end of lateral groove in H, or at the end of lateral groove; mentum tooth bifid and with a pair of setae; mentum with an oblique groove and a small pit on each side; small rounded pit situated on each side at the meeting point of

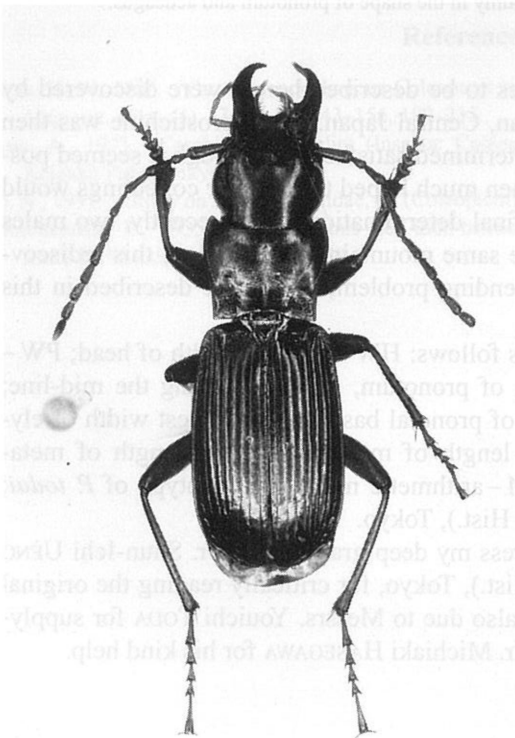


Fig. 1. *Pterostichus todai* MORITA et KANIE, sp. nov., ♂ from the Misaka-tôge.

gular suture and basal margin of submentum; submentum with two pair of setae on each side; mandibles very long and strongly hooked at apices; relative lengths of antennal segments as follows:— I : II : III : IV : V : VI : XI = 1 : 0.44 : 0.80 : 0.72 : 0.76 : 0.75 : 0.71 in H, 1 : 0.42 : 0.74 : 0.65 : 0.72 : 0.69 : 0.65 in 1 ♀; microsculpture composed of irregular meshes but partially disordered.

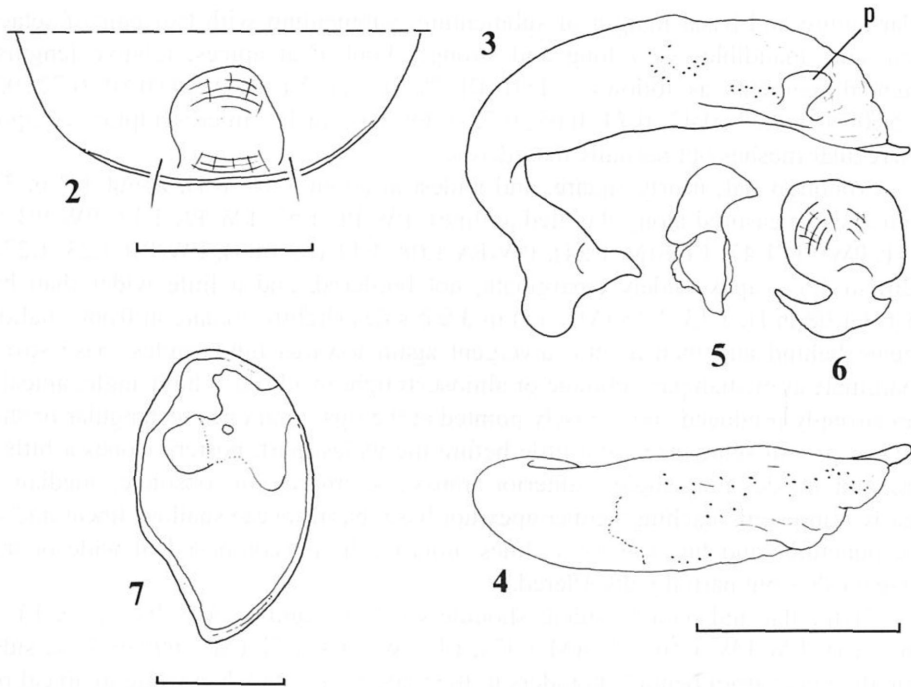
Pronotum flat, nearly square, and widest at about 1/10 in H, about 1/7 in 3 ♀♀ from apex (measured along the median line); PW/PL 1.52, PW/PA 1.13, PW/PB 1.22 in H; PW/PL 1.47–1.60 (M 1.54), PW/PA 1.08–1.11 (M 1.09), PW/PB 1.23–1.27 (M 1.26) in 3 ♀♀; apex widely emarginate, not bordered, and a little wider than base; PA/PB 1.08 in H, 1.13–1.18 (M 1.15) in 3 ♀♀; sides slightly arcuate in front, shallowly sinuate behind and then a little divergent again towards hind angles; base strongly emarginate at median part, oblique or almost straight inside each hind angle; apical angles strongly produced and obtusely pointed at the tips; hind ones rectangular or sharp; anterior pair of setae inserted a little before the widest part, posterior ones a little before and inside hind angles; anterior transverse impression obsolete; median line clearly impressed, reaching neither apex nor base; basal foveae shallow, linear and with fine punctures and fine transverse lines; microsculpture composed of wide or transverse meshes but partially disordered.

Elytra flat and parallel-sided; shoulders rather angulate; EW/PW 1.20, EL/EW 1.62 in H; EW/PW 1.16–1.18 (M 1.17), EL/EW 1.64–1.72 (M 1.69) in 3 ♀♀; sides a little divergent from behind shoulders to the widest part, widely arcuate in apical parts and with shallow preapical emargination; epipleuron gradually narrowed towards apex; inner plica visible; apices separated from each other; apex sharp in H, rarely dentate; basal border moderately arcuate; basal pore situated at the proximal end of stria 1; intervals slightly convex; striae smooth; scutellar striole very short in H, situated on interval 1, and usually joining stria 1, rarely free at the apical end; anterior dorsal pore situated at about middle on stria 2, and posterior one situated at about 4/5–17/20 from base on stria 2; additional pore situated at 1/5–1/3 from base on interval 3 and close to stria 2; marginal series composed of 6+5 pores on the right elytron and of 6+6 pores on the left elytron in H, 6+1+6 in 1 ♂ and 2 ♀♀; microsculpture composed of polygonal meshes, partially disordered or obliterated.

Genae smooth on ventral side; prepisternum, mesepisternum, sides of metasternum, metepisternum and sides of sternites 1 sparsely and finely punctate in ♂, rarely coarsely so in ♀; anal sternite in ♂ deeply and widely excavated between a pair of seta, in ♀ widely depressed between two pair of setae.

Legs slender; tarsi smooth on dorsal side; TL/HW 1.03 in H, 0.86–0.99 (M 0.94) in 3 ♀♀; in ♀, ventral sides of protarsi without adhesive hairs (cf. HABU, 1961, pp. 10–11); protibiae slightly bowed; metatrochanter short and with rounded apex; ML/FL 0.42 in H, 0.41–0.43 (M 0.42) in 1 ♂ and 3 ♀♀.

Aedeagus elongate and strongly bent at basal third; viewed laterally, apical part with a plate which is poorly sclerotized (cf. Fig. 3–p) and situated at the proximal end of apical orifice; apical lobe produced upwards in lateral view; viewed dorsally, apical



Figs. 2–7. *Pterostichus todai* MORITA et KANIE, sp. nov., ♂ from the Misaka-tôge. — 2, Anal sternite; 3, aedeagus, left lateral view; 4, aedeagus, dorsal view; 5, right paramere, left lateral view; 6, left paramere, left lateral view; 7, genital segment, dorsal view. — p, poorly sclerotized plate. (Scale: 2 mm.)

lobe inclined to the right; right paramere robust, strongly bent at apical third, and with pointed apex; left one wide.

Type series. Holotype: ♂, 19~26-VIII-1996, Misaka-tôge, Achi-mura, Y. TODA leg. (NSMT). Allotype: ♀, 1-IX-1983, Misaka-tôge, Nakatsugawa-shi, N. KANIE leg. Paratypes: 1 ♀, 1-IX-1983, Misaka-tôge, Nakatsugawa-shi, N. KANIE leg.; 1 ♀, 19~26-VIII-1996, Misaka-tôge, Achi-mura, Y. TODA leg.; 1 ♂, 4-X-1996, Misaka-tôge, Achi-mura, N. KANIE leg.

Type locality. Misaka-tôge, about 1,600 m alt., at the northeastern side of Mt. Ena-san, on the borders between Achi-mura, Nagano Prefecture, and Nakatsugawa-shi, Gifu Prefecture, Central Japan.

Notes. This new species is closely allied to *Pterostichus uedaorum* MORITA et HIRASAWA (1996, p. 27). It is, however, distinguished from the latter by the following points: 1) pronotum nearly square (PW/PB 1.22 in H); 2) elytral apices sharp or dentate; 3) in ♂, anal sternite with a deep and wide concavity; 4) aedeagus more elongate; 5) apical lobe of aedeagus produced upwards in lateral view, and 6) right paramere with pointed apex.

要 約

森田誠司・蟹江 昇：中部日本産のオオズナガゴミムシの1新種。—— 恵那山の北東に位置する神坂峠から発見された1新種，エナオオズナガゴミムシ *Pterostichus todai* を記載した。この新種はウエダオオズナガゴミムシ *P. uedaorum* に近縁であるが，前胸背板の外形が四角形に近いこと，翅端が尖ること，陰茎が細長く先端部が上を向くこと，および右側片先端が尖ることで容易に区別される。

種名 *P. todai* は，快く研究材料を提供して下さった，戸田羊一氏に捧げた。

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Occurrence of *Badister (Baudia) vittatus* BATES (Coleoptera, Carabidae) in Southwest Japan

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Examining the carabid collection made by Mr. KIMURA, a friend of mine, I have found a species unrecorded from Southwest Japan. It agrees with *Badister (Baudia) vittatus* BATES known from only five specimens collected in Central and North Japan. Its collecting data are as follows:

1 ♂, 3 ♀♀, Kin, Kin-chô, Is. Okinawa-hontô, 6–VII–1995, M. KIMURA leg.

I am thankful to Mr. Masaaki KIMURA for his kindness in giving me the opportunity of studying the specimens.