

Pterostichus (Phonias) diligens (STURM) (Coleoptera, Carabidae)
Found in Japan

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Abstract A small pterostichine carabid beetle, *Pterostichus (Phonias) diligens* (STURM) is recorded for the first time from Japan. It is mainly characterized by the peculiar shape of the aedeagus.

So far as I am aware, more than 1,300 species of carabid beetles have been known from the Japanese territory. Of these, about 35 species are widely distributed in the Eurasian Continent, their distributional ranges reaching Japan, for example: *Notiophilus aquaticus* (LINNÉ), *Miscodera arctica* (PAYKULL), *Bembidion articulatum* (PANZER), *Platynus assimilis* (PAYKULL), *Amara plebeja* (GYLLENHAL), *Anisodactylus signatus* (PANZER), and so on.

The purpose of the present paper is to add a species showing the same pattern of distribution to the Japanese fauna. It is a small pterostichine carabid, *Pterostichus (Phonias) diligens* (STURM), determined by G. Sh. LAFER, the Russian carabid specialist.

The abbreviations used herein are as follows: HW – greatest width of head; PW – greatest width of pronotum; PL – length of pronotum, measured along the midline; 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.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the original manuscript of this paper. Thanks are also due to Dr. German Sh. LAFER of Vladivostok for determining this species. But for his help, I could never add this species to the carabid fauna of Japan.

I was able to obtain a Xerox copy of the original description of this pterostichine carabid through the courtesy of Dr. Gred MÜLLER-MOTZFELD and Dr. Mathias JASCHHOF to whom I am also deeply indebted. My thanks are also due to Dr. Masahiro ÔHARA, Messrs. Azuma ABE, Hideaki MATSUMOTO, Masahiko SATÔ, and Satoshi YAMAUCHI for their help.

Pterostichus (Phonias) diligens (STURM)

Platysma diligens STURM, 1824, Dtl. Fn. Ins., 5 (5): 81.

Other references are omitted.

Length: 5.2–6.0 mm (from apical margin of clypeus to apices of elytra).

Colour black; appendages brown to dark brown. Body small and convex.

Head moderately convex; PW/HW 1.42–1.53 (M 1.47) in 5♂♂, 1.42–1.50 (M 1.47) in 8♀♀; frontal furrows linear, rather deep, slightly divergent posteriad, and reaching the anterior supraorbital pores; genae very short and slightly convex; eyes rather flat; lateral grooves linear and straight; posterior supraorbital pores situated at the post-eye level; mentum tooth wide and bifid; labrum convex above, and with straight apex; mandibles strongly hooked at apices; relative lengths of antennal segments as follows:— I:II:III:IV:V:VI:XI=1:0.56:0.92:0.90:0.90:0.87:1.07 in 6♂♂ and 7♀♀; antennal segment II with one seta on ventral side; dorsal surface microscopically punctate; microsculpture composed of isodiametric meshes.

Pronotum convex and widest at about apical 1/3 (measured along the median line); PW/PL 1.17–1.26 (M 1.22) in 5♂♂, 1.19–1.27 (M 1.23) in 8♀♀; PW/PA 1.44–1.47 (M 1.45) in 5♂♂, 1.37–1.49 (M 1.42) in 8♀♀, PW/PB 1.28–1.33 (M 1.30) in 5♂♂, 1.27–1.34 (M 1.31) in 8♀♀; apex moderately emarginate; PA/PB 0.89–0.92 (M

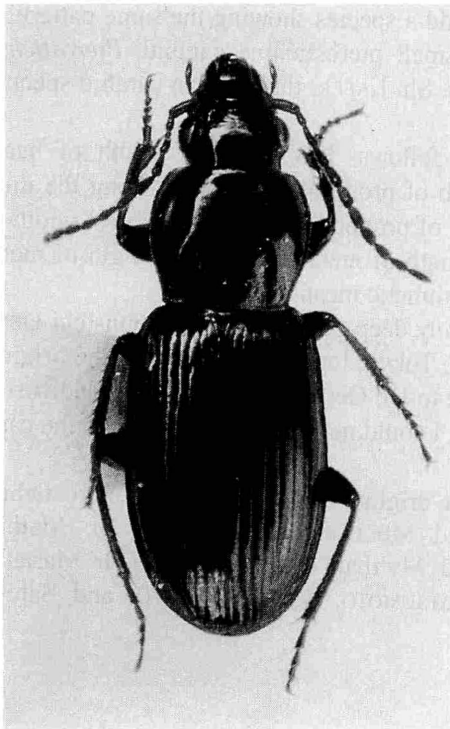


Fig. 1. *Pterostichus (Phonias) diligens* (STURM) from Rishiri Is.

0.90) in 5♂♂, 0.89–0.96 (M 0.92) in 8♀♀; sides arcuate in front, and then very shallowly sinuate just before hind angles; base weakly arcuate and vaguely bordered at the sides; apical angles a little produced and widely rounded; hind ones obtusely angulate; anterior pair of setae inserted at apical 1/4 or a little before the widest part, posterior ones inserted at the hind angles; anterior transverse impression obsolete near the median line and obliterated at the sides; median line finely impressed, reaching neither apex nor base; basal foveae rather deep, linear, and with coarse punctures; the area between bottom of basal fovea and hind angle slightly depressed, and with coarse punctures; microsculpture composed of wide to transverse meshes.

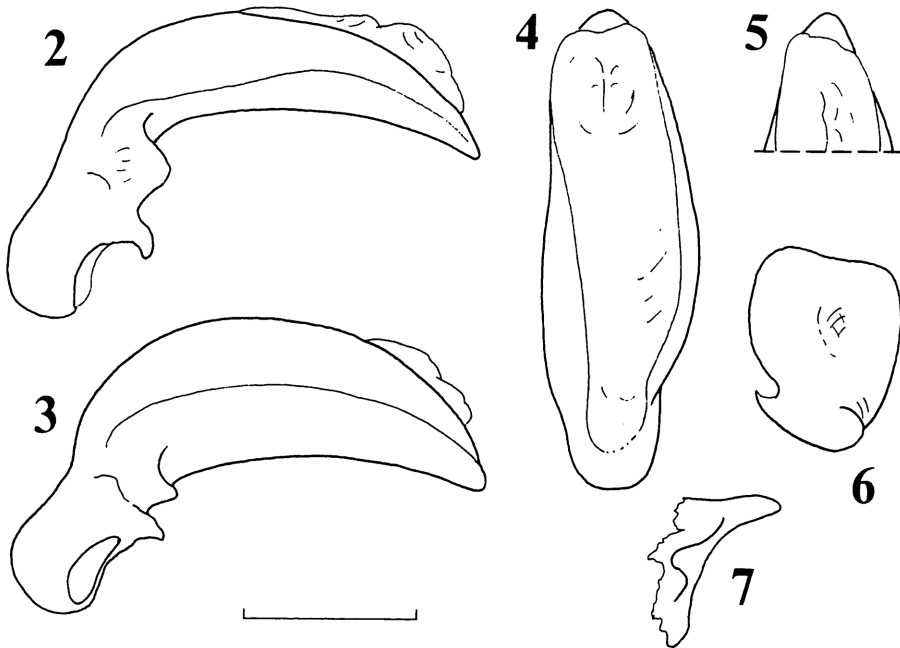
Elytra elongate, convex at the apical halves in lateral view and widest at a little behind the middle; basal border arcuate and continuing to stria 1 on each side; EB/EW 0.67–0.69 (M 0.68) in 5♂♂, 0.67–0.70 (M 0.69) in 8♀♀; shoulders widely rounded and not denticulate; EW/PW 1.21–1.28 (M 1.25) in 5♂♂, 1.22–1.27 (M 1.25) in 8♀♀; EL/EW 1.57–1.64 (M 1.60) in 5♂♂, 1.49–1.59 (M 1.55) in 8♀♀; sides gradually dilated or very weakly arcuate towards the widest part, and moderately arcuate and then rather narrowly so towards apices, and with very shallow preapical emargination; inner plica distinct; apices separately and widely rounded, forming a small re-entrant angle at suture; basal pore lacking; intervals slightly convex; striae smooth to very weakly crenulate, but becoming indistinct at apices; scutellar striole long, situated on interval II and usually free at the posterior end, rarely joining stria 1 on each side; dorsal pores situated on interval III, and usually 3 in number, rarely 4; the first pore on stria 3, the second one usually adjoining stria 2 or close to stria 2, rarely on interval III, the third one adjoining stria 2 or close to stria 2; in 1♂ from Mt. Oo-dake, right elytron with 4 dorsal pores, basal two pores adjoining stria 3 and the remaining two pores adjoining stria 2; marginal series composed of 13 pores; microsculpture clearly impressed, consisting of wide or transverse meshes.

Basal part of mesepisternum and mesosternum coarsely and sparsely punctate; in ♂, anal sternite normal and with a pair of setae; in ♀, anal sternite slightly depressed and wrinkled between outer setae along apical margin, and with two pairs of setae.

Legs slender; claw segment with some short setae on ventro-lateral side; protarsi smooth on dorsal side; 2 or 3 basal segments of metatarsi bisulcate on dorsal side, but the inner sulci are sometimes rudimentary or disappearing; TL/HW 0.93–1.04 (M 1.00) in 6♂♂, 0.82–1.00 (M 0.89) in 6♀♀; metatrochanter short, and with a seta and rounded apex; ML/FL 0.49–0.52 (M 0.50) in 5♂♂, 0.49–0.54 (M 0.51) in 6♀♀; meta-femur with two setae; metacoxa with two setae.

Aedeagus elongate, weakly bent at basal 1/3; basal part with a triangular projection on ventral side; apical lobe short and simply rounded in dorsal view. Right paramere small and elongate, and with narrowly rounded apex; left one wide.

Specimens examined. [Hokkaido] 1♂, 3♀♀, Shoro, near Kushiro-shi, 30–V–1975, S. MORITA leg.; 4♂♂, 2♀♀, Kushiro-shi, 24–VI–1981, S. MORITA leg.; 1♂, Wakkanai-shi, 28–VI–1982, S. MORITA leg.; 2♀♀, Mt. Rebun-dake, Rebun Is., 2–VII–1982, S. MORITA leg.; 2♀♀, Memanbetsu, near Abashiri-shi, 19–IX–1982, H.



Figs. 2–7. *Pterostichus (Phonias) diligens* (STURM) from Rishiri Is. — 2, Aedeagus, left lateral view; 3, aedeagus, left ventro-lateral view; 4, aedeagus, dorsal view; 5, apical part of aedeagus, apico-dorsal view; 6, left paramere, left lateral view; 7, right paramere, left lateral view. (Scale: 0.5 mm.)

MATSUMOTO leg.; 1 ♀, Touroko, near Kushiro-shi, 17–VII–1991, S. MORITA leg.; 1 ♀, Onnenai, near Kushiro, 9–VI–1992, M. ÔHARA leg.; 2 ♂♂, 5 ♀♀, Menushoro-numa, Rishiri Is., 10–VII–1993, S. MORITA leg. [Aomori Prefecture] 1 ♀, Mt. Oo-dake, Hakkôda Mts., 16–VII–1988, A. ABE leg.; 2 ♂♂, Mt. Oo-dake, Hakkôda Mts., 6–VIII–1988, S. MORITA leg.

Distribution. Europe, including Iceland, North Spain, Central Italy and Bosnia; Russia, including Sakhalin and Kuril Islands; Japan (Hokkaido, Rishiri Is., Rebun Is., Aomori Prefecture).

Notes. The diagnosis, the mode of life and the distribution of this species can be obtained from recent publications.

Judging from the peculiar shape of the aedeagus, it is easy to discriminate this pterostichine carabid from all the other species known from Japan.

要 約

森田誠司：日本初記録のキタヒメナガゴミムシ（新称）。——北海道各地，利尻・礼文両島および青森県八甲田山から採集された小型のナガゴミムシが，キタヒメナガゴミムシ *Pterostichus (Phonias) diligens* (STURM)に同定されたので，日本初記録として報告した。本種は雄の交

尾器の陰基基部下面に三角形の突起を有することで、容易にはかの小型のナガゴミムシ類と識別される。

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Elytra, Tokyo, **28** (1): 43–44, May 15, 2000

Additional Records of *Coeliodes amamianus* YOSHITAKE (Coleoptera, Curculionidae, Ceutorhynchinae)

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The ceutorhynchine weevil *Coeliodes amamianus* YOSHITAKE, 1999 has been known to occur on the Islands of Amami-Oshima and Tokunoshima, southwestern Japan. Recently, I had an opportunity to examine additional specimens of the species, which were collected in other localities of Japan. Their collecting data will be shown below.

I wish to express my sincere gratitude to Dr. Hiroaki KOJIMA, Dr. Masahiro SAKAI, and Messrs. Kenichi EMOTO, Yûichi OKUSHIMA, Keiichi MATSUMOTO and H. SATÔ for their kind offer of invaluable specimens.

Coeliodes (Coeliodes) amamianus YOSHITAKE

Coeliodes (Coeliodes) amamianus YOSHITAKE, 1999, *Elytra, Tokyo*, **27**: 87–94.