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On *Pterostichus ussuriensis* (Tschitschérine) (Coleoptera, Carabidae) from Northern Japan

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Abstract A small pterostichine carabid beetle, *Pterostichus* **(***Phonias***)** *ussuriensis* (Tschitschérine) is redescribed from Aomori Prefecture and Hokkaido, northern Japan, and newly added to the carabid fauna of Japan.

When the late Dr. Lafer visited Japan in 1998, I showed him some undetermined Japanese carabid species for identification. Unfortunately, we did not have enough time then to examine them carefully. Since then, aided by Dr. Lafer and friends of mine, I recorded *Agonum jankovskii* in 1999 and *Tricholicinus setosus* in 2004, and described *Pterostichus sasajii* in 2007 as a new species, among other accomplishments. In this paper, I will redescribe *Pterostichus* (*Phonias*) *ussuriensis* (Tschitschérine) (1897, p. 348) which was determined at that time by Lafer, for the first time from Japan. The late Dr. Lafer who passed away the year before last, affectionately watched my studies of carabid beetles for a long time. My deep thanks are due to him, and I would like to dedicate this paper to him.

The abbreviations used herein are as follows: — L – body length, measured from apical margin of clypeus to apices of elytra; 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; M – arithmetic mean.

Before going further, I wish to express my sincere thanks to the late Dr. German Sh. Lafer and Dr. Yurij N. Sundukov for their kind support of the present study. My thanks are due to the following friends, whose kind support enabled me to complete this study: Dr. Yûki Imura, Dr. Toshihiro Ozaki, Messrs. Azuma Abe, Shûji Kudoh, Takashi Satô, Tatsumi Miyata, and Satoshi Yamauchi. Without their cooperation, I could not have undertaken this study.

Pterostichus* (*Phonias*) *ussuriensis (Tschitschérine)

[Japanese name: Iwakigawa-naga-gomimushi]

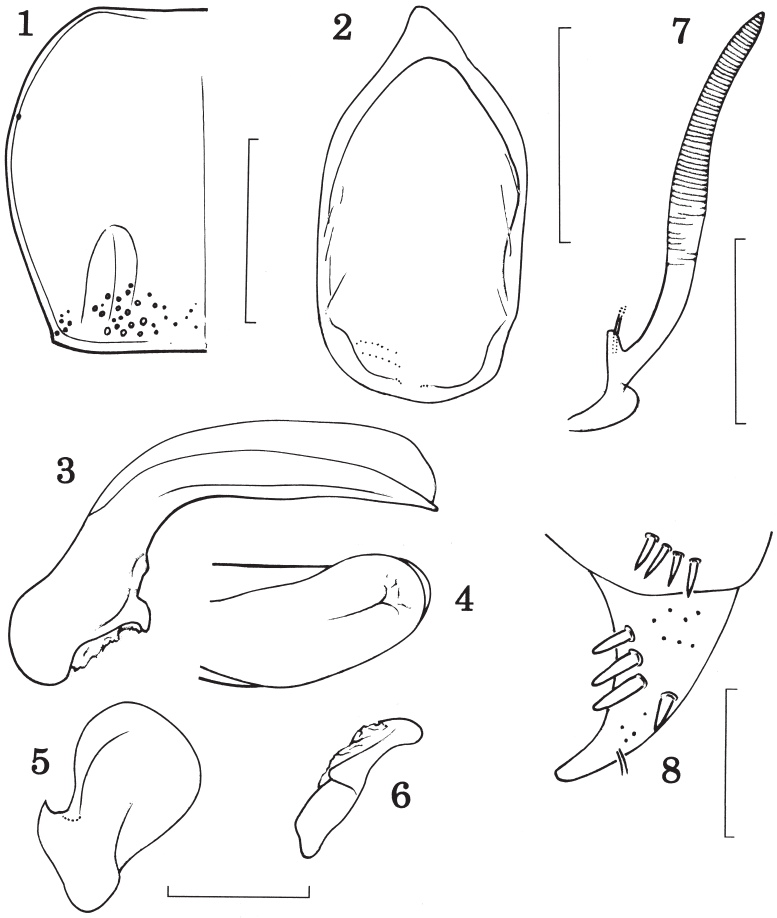
(Figs. 1–8)

Feronia (*Argutor*) *ussuriensis* Tschitschérine, 1897, 348 (Utjosnaja).
Pterostichus ussuriensis: Jedlička, 1962, 227.

Diagnosis. A *Pterostichus* species with elongate elytra; eyes convex; head densely and very finely to rather coarsely punctate; elytra with three dorsal pores on interval III; aedeagus elongate, moderately curved at about basal 2/5, and with wide apex in dorsal view; right paramere elongate.

Redescription. L: 6.56–7.36 mm. Body small with elongate elytra. Body black; elytral epipleuron and appendages dark brown to brown.

Head moderately convex; frontal furrows deep, linear, short and reaching a level of basal 2/3 of eyes on each side; eyes moderately convex; lateral grooves deep, straight and reaching a level of ante-



Figs. 1–8. *Pterostichus* (*Phonias*) *ussuriensis* (TSCHITSCHÉRINE) from Wakamiya. —— 1, Pronotum; 2, genital segment; 3, aedeagus, left lateral view; 4, apical part of aedeagus, dorsal view; 5, left paramere, left lateral view; 6, right paramere, left lateral view; 7, spermatheca; 8, apical styli in ♀. (Scales: 1 mm for 1–6; 0.5 mm for 7; 0.1 mm for 8.)

rior supraorbital pore; anterior supraorbital pore situated at basal 13/20 of eyes; posterior one a little apart from the post-eye level; surface moderately convex, and densely and very finely to rather coarsely punctate; PW/HW 1.44–1.51 (M 1.48) in ♂, 1.41–150 (M 1.46) in ♀; genae very short and weakly convex; microsculpture very weakly impressed and consisting of isodiametric to wide meshes; mentum tooth moderately produced and bifid at apex; neck wide with constriction; antennae rather short, reaching basal 1/5 of elytra; antennal segment I thick; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI ≒ 1 : 0.49 : 0.88 : 0.90 : 0.92 : 0.94 : 1.02 in ♂, 1 : 0.50 : 0.87 : 0.90 : 0.90 : 0.89 : 1.02 in ♀.

Pronotum narrow, convex and widest between basal 11/20–3/5 (measured along the mid-line); apex weakly emarginate or almost straight and weakly bordered at the sides; PW/PL 1.16–1.22 (M

1.18) in ♂, 1.08–1.22 (M 1.17) in ♀; sides strongly and widely arcuate throughout and very weakly produced laterally at the tips of hind angles; reflexed lateral areas very narrow throughout; base moderately arcuate or almost straight at median part, and bordered at the sides; PW/PA 1.51–1.63 (M 1.56) in ♂, 1.49–1.59 (M 1.54) in ♀; PW/PB 1.24–1.30 (M 1.26) in ♂, 1.21–1.28 (M 1.25) in ♀, PA/PB 0.72–0.84 (M 0.81) in ♂, 0.79–0.84 (M 0.81) in ♀; apical angles not produced and widely rounded at the tips; hind angles obtuse and very weakly produced laterad at the tips; anterior pair of marginal setae inserted between basal 13/20–7/10; posterior ones inserted at the tips of hind angles; anterior transverse impression obliterated; median line finely impressed, not reaching apex, and close to base; basal foveae deep, coarsely and rather sparsely punctate, and linear at the bottom; microsculpture weakly impressed and composed of fine transverse meshes; basal part weakly punctate at median part.

Elytra elongated ovate, moderately convex and widest at about middle; EW/PW 1.21–1.29 (M 1.25) in ♂, 1.30–1.33 (M 1.31) in ♀; EL/EW 1.66–1.69 (M 1.67) in ♂, 1.55–1.69 (M 1.63) in ♀; shoulders moderately arcuate; sides very weakly arcuate or almost straight towards the widest part, and then rather moderately so towards the apical parts, with wide and shallow preapical emargination on each side; apices usually very slightly separated from each other, sometimes conjointly rounded; scutellar striole long, situated on interval II, and adjoining stria 1 or close to the stria, with a basal pore at the base; striae deep throughout, impunctate, rarely very weakly crenulate; interval III with three dorsal pores on each side; the first pore situated between basal 1/5–1/4, adjoining stria 3; the remaining two pores adjoining stria 2 and situated at about the middle, and between 13/20–3/4 in ♂, 7/10–4/5 in ♀, respectively; intervals weakly convex and impunctate; microsculpture strongly impressed, composed of wide to transverse meshes; epipleuron gradually narrowed towards apex; marginal series composed of 12–14.

Mesosternum and mesepisterna sparsely and rather coarsely punctate; in ♀, anal sternite with two pair of setae which are on a shallow arc open anteriorly.

Legs rather slender; protarsi smooth on dorsal side; claw segment of metatarsi with several hairs.

Genital segment narrow and elongate with triangular handle.

Aedeagus elongate, moderately curved at about basal 2/5; ventral side of basal lobe with weak carina in ventral view; apical part very wide, occupied by membraneous part, weakly inclined to the right in dorsal view; apical lobe widely rounded in dorsal view, and thin in lateral view.

Right paramere elongate, with weakly curved apical part; left paramere rather elongate with short transverse apophysis (Bousquet, 1999, p. 276).

Apical styli in ♀ robust, with three short and robust spines on lateral margin and one spine on medial margin; spermathca very elongate, rather gradually narrowed towards apex; seminal canal wide with diverticlum.

Specimens examined. 2 ♂♂, 3 ♀♀, Riv. Iwaki-gawa, Nakasato-machi, Aomori Pref., 5.VII.1987, Y. Imura leg.; 2 ♂♂, Wakamiya, Nakasato-machi, Aomori Pref., 20.V.2000, S. Morita leg.; 6 ♂♂, 30 ♀♀, same locality, 9–10.VI.2000, S. Morita & S. Kudoh leg.; 1 ♀, Shiura-mura, Jûsanko, 7.IV.1984, A. Abe leg.; 2 ♀♀, Obuchi-numa, Rokkasho-mura, Aomori Pref., 28.VI.1985, S. Morita leg.; 1 ♂, 3 ♀♀, Kokeyachi, Shariki-mura, Aomori Pref., 26.IV.1992, A. Abe leg.; 1 ♂, Hamaatsuma, Atsuma-chô, Hokkaido, 15.VI.1996, T. Miyata leg.

Range. Russia and northern Japan (Hokkaido and Aomori Pref.).

Specimens dissected and measured. Standard rations of body parts shown in the descriptive part are those of five males and ten females. The genitalia of seven males were dissected.

Notes. It is easy to determine this species from the other members of the Japanese pterostichine carabids by the punctate head, unique shape of pronotum as shown in Fig. 1, and elongate elytra.

要　　約

森田誠司：北日本産ナガゴミムシ（鞘翅目オサムシ科），イワキガワナガゴミムシについて．――北日本（北海道および青森県）から採集された小型のナガゴミムシ，イワキガワナガゴミムシ *Pterostichus* (*Phonias*) *ussuriensis* (TSCHITSCHÉRINE) を，我が国より初めて記録し再記載した．この種は，頭部表面の点刻，前胸背板の形態，非常に細長い上翅などで容易に識別される．

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