

*Pterostichus ohkurai* (Coleoptera, Carabidae), a New Relative of  
*Pterostichus latistylis* from the Subalpine Zone  
of the Japanese Alps

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**Abstract** A new pterostichine carabid beetle is described from Kumonotaira of the Japanese Alps, Central Japan, under the name of *Pterostichus (Nialoe) ohkurai*. Based upon the specimens collected in the subalpine zone, *P. (N.) latistylis* TANAKA is re-described.

Describing a new pterostichine carabid beetle under the name of *Pterostichus napaea*, KASAHARA (1988) made a comment that its habitats (1,450–2,000 m alt.) on Mt. Kiso-koma-ga-take seemed to be the highest of those of the members of the group of *P. latistylis*. More than ten years before his paper appeared, however, several specimens of *P. latistylis* had already been discovered by my own investigation at the high altitude of Mt. Chausu-dake and Mt. Nitta-dake of the so-called Southern Japanese Alps, both of which attain to the height of more than 2,500 m. Besides, a new species belonging to the same group was obtained from the subalpine zone of the Northern Japanese Alps. Though only two specimens of the new species are now at my hands, I have decided to describe it in this paper.

The abbreviations used herein are the same as those explained in other papers of mine.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO for reading the manuscript of this paper. Hearty thanks are also due to Dr. Kazuo TANAKA, Messrs. Shin-ichirô FURIHATA, Hanmei HIRASAWA and Toshihiko YOSHIMURA for their kind help for this study.

The late Mr. Masafumi OHKURA of the Japan Coleopterological Society who passed away in the last year affectionately watched my study of carabid beetles for a long time. My deep thanks are also due to him, and the new species of *Pterostichus* described herein is named to his memory.

*Pterostichus (Nialoe) ohkurai* MORITA, sp. nov.

[Japanese name: Ohkura-naga-gomimushi]

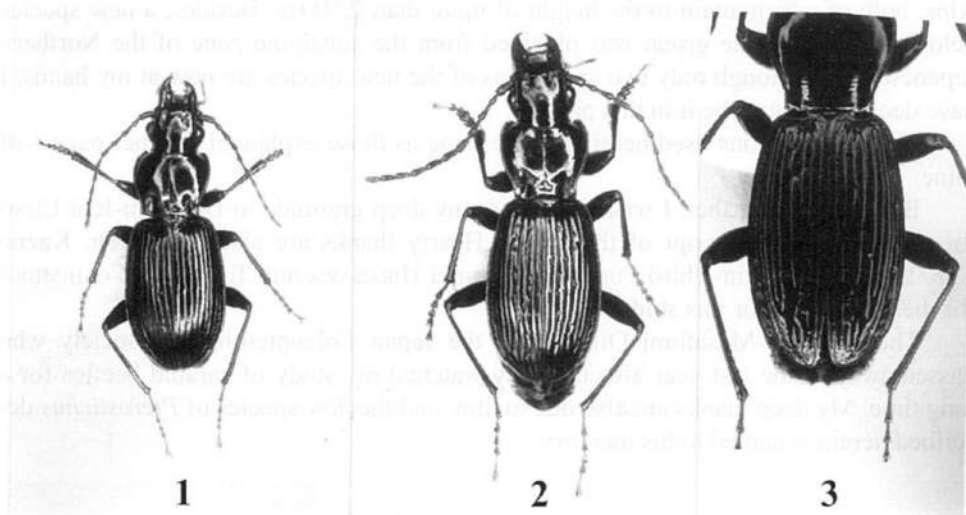
(Figs. 1, 4, 8)

Length: 9.5–9.7 mm (from apical margin of clypeus to apices of elytra).

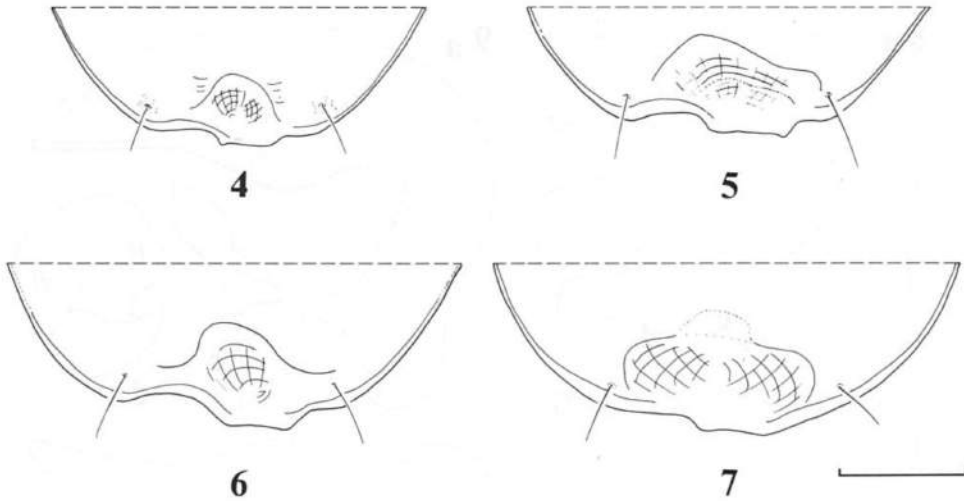
Body small and moderately convex. Colour black; labrum, clypeus, mandibles and antennae brown; femora almost black, but slightly pale at apices; tibiae almost black to dark brown, but becoming lighter towards apices; tarsi brown.

Head convex; PW/HW 1.28–1.30; frontal furrows short, rather deep and a little divergent posteriorly; eyes prominent; genae short, oblique and less convex; lateral grooves deep, narrow and straight; anterior supraorbital pore situated a little before the mid-eye level, posterior one at the post-eye level; mentum tooth bifid; submentum with two pair of setae; microsculpture consisting of wide or isodiametric meshes; surface almost smooth; antennal segment 2 with 4 setae; relative lengths of antennal segments as follows: I : II : III : IV : V : VI : XI = 1 : 0.61 : 0.93 : 0.91 : 0.89 : 0.89 : 0.98.

Pronotum cordate and convex; PW/PL 1.33–1.36; PW/PA 1.32–1.36; PW/PB 1.30–1.35; apex moderately emarginate, PA/PB 0.96–1.03; sides moderately arcuate in front, slightly sinuate at about basal 1/7, and then a little divergent before hind angles; base emarginate at median part, and straight or slightly oblique at the sides; surface almost smooth in the holotype, or with several transverse wrinkles on the disc in the paratype; apical angles a little produced and narrowly rounded, hind ones acute; anterior marginal setae situated just before the widest part; posterior ones a little before



Figs. 1–3. *Pterostichus (Nialoe)* spp. — 1, *Pterostichus (Nialoe) ohkurai* MORITA, sp. nov., from Kumonotaira; 2, *P. (N.) latistylis* TANAKA from Mt. Nitta-dake; 3, same species from Mt. Nitta-dake, showing disordered striae and dorsal pores on elytra.



Figs. 4-7. Anal sternite in *Pterostichus (Nialoe)* spp. — 4, *Pterostichus (Nialoe) ohkurai* MORITA, sp. nov., from Kumonotaira; 5, *P. (N.) napaea* KASAHARA from Mt. Surikogi-yama; 6, *P. (N.) latistylis* TANAKA from Sarukura; 7, same species from Mt. Nitta-dake. (Scale : 1 mm.)

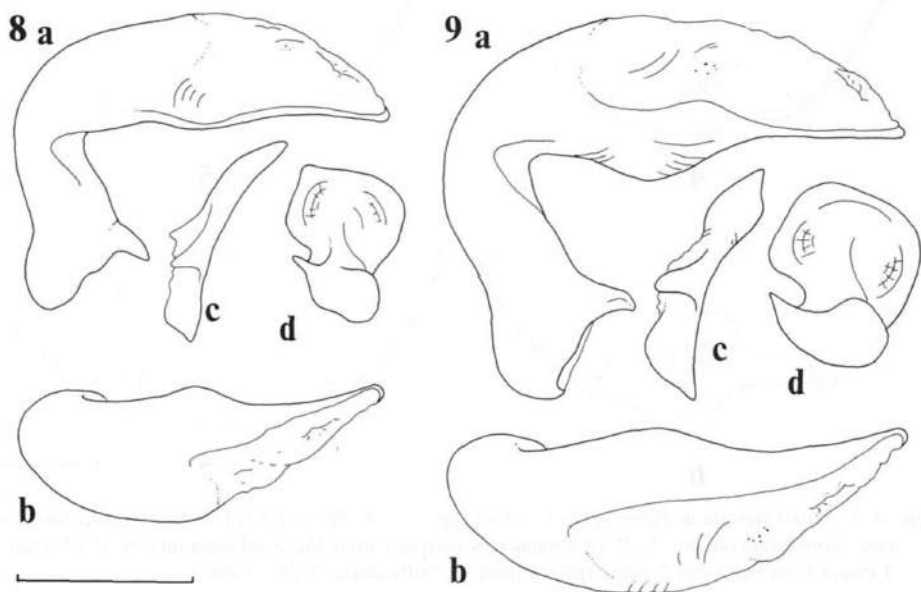
and inside hind angles; anterior transverse impression almost obsolete; median line clearly impressed between 1/6-1/4 from base; basal foveae very deep and oval; basal part smooth; microsculpture consisting of wide or transverse meshes.

Elytra elongated ovate; shoulders widely rounded; EW/PW 1.29; EL/EW 1.49-1.52; sides relatively close in basal parts, weakly and arcuately divergent towards the middle, which is the widest and moderately arcuate in apical halves; epipleuron gradually narrowed towards apex; apices slightly separated from each other, sutural angle obtuse; basal border moderately arcuate; basal pore situated at the base of stria 1; intervals slightly convex; striae smooth or slightly crenulate; three dorsal pores on interval 3, anterior one adjoining stria 3 and the others adjoining stria 2; marginal series composed of 16-17 pores; microsculpture consisting of transverse meshes, but partially disordered.

Ventral side smooth though the genae and sides of the sternites are rugose; in ♂, anal sternite deeply and narrowly excavated at about middle, and with a very short projection; the left corner of the projection a little produced in ventral view.

Legs slender; metatibiae slightly bowed; basal two segments of meso- and metatarsi externally sulcate; TL/HW 1.03-1.05; TI/TV 0.82-0.85.

Aedeagus short, strongly bent at basal third; each ventral edge with a large tumor and a very shallow concavity at about apical third, the former lying at the right and the latter at the left; viewed dorsally, apical part slightly inclined to the right; surface of apical part with fine wrinkles on ventral side; apical lobe very short and rounded; right paramere slightly arcuate and simply rounded at apex; left one square.



Figs. 8–9. Male genital organ in *Pterostichus* (*Nialoe*) spp. — 8, *Pterostichus* (*Nialoe*) *ohkurai* MORITA, sp. nov., from Kumonotaira; 9, *P. (N.) latistylis* TANAKA from Mt. Nitta-dake. — a, Aedeagus, left lateral view; b, aedeagus, dorsal view; c, right paramere, left lateral view; d, left paramere, left lateral view. (Scale: 1 mm.)

*Type series.* Holotype: ♂ (NSMT), paratype: 1 ♂, 11–VIII–1981, S. MORITA leg.

*Type locality.* Near Kumonotaira, 2,300 m alt., NW of Mt. Jii-dake, Toyama Prefecture, Central Japan.

*Notes.* This new species is closely allied to *P. napaea* KASAHARA (1988, p. 26). It is, however, distinguished from the latter by the following points: 1) body smaller on an average; 2) appendages somewhat slenderer; 3) tarsi brown; 4) PW/PL 1.33–1.36; 5) pronotal sides less arcuate; 6) anterior marginal setae situated just before the widest part; 7) elytra narrow and less ample at the apical parts; 8) left corner of anal projection a little produced in ventral view, and 9) aedeagus with a large tumor. The following material of *P. napaea* are examined for comparison: 6 ♂♂, 15–V–1993, Mt. Surikogi-yama, Iida-shi, Nagano Pref., T. YOSHIMURA leg.

So far as I am aware, the nearest known collecting site of *P. latistylis* is Sarukura, which is about 40 km distant to the northeast in a bee-line from Kumonotaira, the type locality of the present new species. Their collecting data, body length and standard ratios of body parts are as follows: 2 ♂♂, Sarukura, foot of Mt. Shirouma-dake, Nagano Pref., 5–VI–1994, S. MORITA leg.; length 11.47–12.03 mm; PW/HW 1.33, 1.37; PW/PL 1.32, 1.38; PW/PA 1.37, 1.38; PW/PB 1.44, 1.50; PA/PB 1.05, 1.08; EW/PW 1.21, 1.23; EL/EW 1.51, 1.53. The present new species can be easily distinguished

from *P. latistylis* of Sarukura by the following points: 1) much smaller body; 2) less contracted pronotum, and 3) different shape of aedeagus.

It should be noted that the Sarukura specimens could be determined as *P. shibatai* (ISHIDA, 1961, p.7) hitherto known from Kinki District, if the shape of the apex of the right paramere is regarded as a reliable character separating it from *P. latistylis*. Judging from the meagre collecting data now available, their distributional ranges seem continuous. It is possible that *P. shibatai* merely represents an extreme of the cline of *P. latistylis*. At all events, the true systematic position of *P. shibatai* should be carefully determined in the future. I have studied the holotype of *P. shibatai* through the courtesy of the late Mr. OHKURA, and found that this was a very difficult problem.

***Pterostichus (Nialoe) latistylis* TANAKA**

[Japanese name: Tanaka-naga-gomimushi]

(Figs. 2-3, 6-7, 9)

*Pterostichus (Nialoe) latistylis* TANAKA, 1958, Akitu, Kyoto, 7, p. 95, fig. 10; type locality: Mt. Gozen. Other references are omitted.

A brief account of the Chausu-dake and Nitta-dake specimens of this widespread species will be given below for facilitating comparison with *P. ohkurai*.

Length: 11.2-12.3 mm (from apical margin of clypeus to apices of elytra).

Body elongate and moderately convex; frontal furrows shallower than in the specimen from the type locality; genae usually strongly convex. Pronotum narrow; anterior marginal setae situated a little before the widest part, and usually with an additional seta on each side; sides usually serrated near hind angles; basal part narrow, especially in ♀ (PW/PB 1.42, 1.47 in 2 ♀♀ of the Nitta-dake specimens, 1.45 in 1 ♀ of the Chausu-dake specimen); basal foveae with several wrinkles; in Nitta-dake specimens (2 ♂♂), PW/HW 1.26, 1.27, PW/PL 1.28, 1.32, PW/PA 1.29, 1.30, PW/PB 1.39, 1.42, PA/PB 1.07, 1.10, EW/PW 1.28, 1.29, EL/EW 1.56, 1.58; in Chausu-dake specimens (2 ♂♂), PW/HW 1.27, 1.29, PW/PL 1.26, 1.31, PW/PA 1.29, 1.32, PW/PB 1.34, 1.39, PA/PB 1.02, 1.08. Elytra elongate and with 17-32 dorsal pores; striae slightly crenulate and disordered; EW/PW 1.25, 1.29, EL/EW 1.60, 1.61. Anal sternite in ♂ as in Fig. 7; male genital organ as in Fig. 9; right paramere oblique at apex.

*Specimens examined.* 2 ♂♂, 1 ♀, Mt. Chausu-dake, 2,500 m alt., Shizuoka-shi, 21-23-VII-1978, S. MORITA leg.; 2 ♂♂, 2 ♀♀, Mt. Nitta-dake, 2,500 m alt., Shizuoka-shi, 22-VII-1978, S. MORITA leg.

*Localities.* Mt. Chausu-dake and Mt. Nitta-dake, on the borders between Shizuoka-shi, Shizuoka Prefecture, and Minamishinano-mura, Nagano Prefecture, Central Japan.

*Notes.* Most pronounced of the features described above is a large number of dorsal pores on the elytra. One of the most prominent examples is a specimen (♂) from Mt. Nitta-dake: 18 pores on the left elytron (1 on stria I, 2 on interval II, 8 on interval III, 1 on interval IV and 6 on interval V), and 14 pores on the right elytron (2 on

stria 1, 6 on interval III, 6 on interval V).

It is well known that this species always lives by running waters, usually under stones lying at the edges of narrow streams and waterfalls on mountains.

### 要 約

森田誠司：亜高山帯のタナカナガゴミムシ *Pterostichus (Nialoe) latistylis* TANAKA と近縁の1新種。—— キソコマナガゴミムシ *P. (N.) napaee* KASAHARA の記載の中に、近縁種群のなかではもっとも高所に生息している種とのコメントがつけられている。しかしすでに筆者は、日本アルプスの亜高山帯において *P. (N.) latistylis* を採集しているので、簡単な記載をつけて報告した。あわせて近縁の1新種、オオクラナガゴミムシ *P. (N.) ohkurai* を記載した。種名はゴミムシ研究者のひとりとして筆者の研究を暖かく見守ってくださった故大倉正文氏に捧げるものである。

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