

## Two New Carabid Beetles from Nagano Prefecture, Central Honshu, Japan

Sumao KASAHARA

Nishifuna 4–9–13, Funabashi City, Chiba, 273 Japan

**Abstract** Two new carabid beetles, *Pterostichus (Nialoe) ishizukai* sp. nov. and *Trichotichnus (Trichotichnus) kisonis* sp. nov., are described from Nagano Prefecture, central Honshu, Japan.

Two unnamed carabid beetles occur in Nagano Prefecture, central Honshu, Japan. One of them belongs to the subgenus *Nialoe* of the genus *Pterostichus*, and seems related to *P. (N.) rhanis rhanis* TSCHITSCHÉRINE. It was found in recent years on the low mountain in Akashina-chô. The other one belongs to the *leptopus* group of the genus *Trichotichnus*. It was recently collected along the upper course of a branch stream of the River Kiso-gawa in Nagiso-machi. Both the unnamed beetles are, however, clearly discriminated from their relatives by their characteristic facies and configuration of aedeagi, and must be new to science. In this article, I will describe the former species under the name *Pterostichus (Nialoe) ishizukai* sp. nov., and the latter under the name *Trichotichnus (Trichotichnus) kisonis* sp. nov. The abbreviations used herein were already explained in previous papers of mine.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO, head of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo, for his advice and for reading the manuscript of this paper. Thanks are also due to Professor Kiyohiko IKEDA of Yamanashi University, Messrs. Katsumi ISHIZUKA of Saitama Prefecture and Kôichi MATSUI of Nagano Prefecture for their kind support in field researches.

### *Pterostichus (Nialoe) ishizukai* sp. nov.

[Japanese name: Akashina-nagagomimushi]

(Figs. 1–3)

**Description.** Length (measured from apex of labrum to apices of elytra) 14.7–15.7 mm; width 5.3–5.7 mm. Stout. Black and shiny, though the elytra are opaque in the female; labrum, mandibles, antennae and tibiae dark reddish brown; palpi and tarsi reddish brown.

Head moderately convex; eyes convex; post-genae strongly contracted behind, gently swollen; labrum and clypeus gently emarginate at each apex; clypeal suture

distinct; frontal furrows distinct, linearly impressed at bottoms, divergent posteriad in posterior parts; supraorbital areas convex; lateral grooves deep, extending to a little behind the post-eye level; surface minutely punctate on frons; microsculpture slightly and partially visible, formed by fine isodiametric meshes; antennae longer in male than in female, reaching the basal third of elytra in male.

Pronotum cordate, convex, though the basal part is depressed, widest at apical third, ca. 1.4 times as wide as head (PW/HW 1.35–1.42, mean 1.40), as wide as base

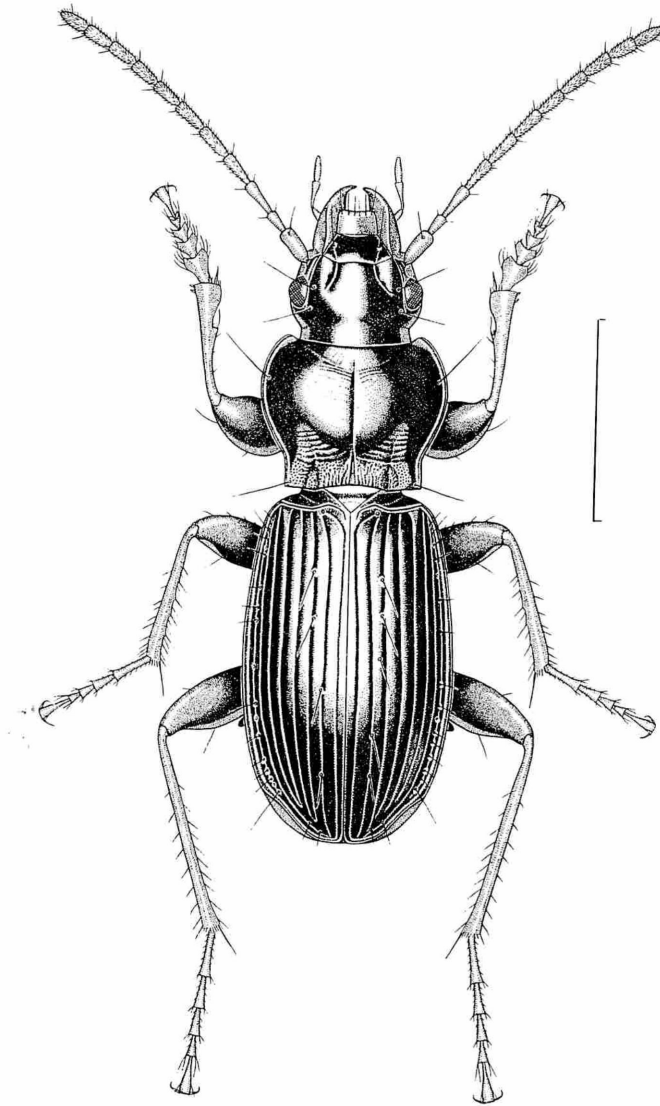


Fig. 1. *Pterostichus (Nialoe) ishizukai* sp. nov., ♂, from Akashina-chô in Nagano Pref. Scale 5 mm.

in almost the same proportion (PW/PBW 1.36–1.48, mean 1.43), ca. 1.34 times as wide as long (PW/PL 1.30–1.39, mean 1.34); lateral margins well arcuate, then strongly convergent posteriad and sinuate before base, basal parts almost parallel, or a little divergent posteriad, often with small notches; apical margin gently emarginate, apical angles somewhat produced, rounded at the tips; basal margin almost as wide as the apical in male, sometimes a little narrower in female, gently emarginate at the median part, basal angles rectangular; median line deeply impressed, widening at basal part and reaching the basal margin; basal foveae wide and shallow, though sometimes distinctly depressed at basal parts, strongly and ruggedly punctate, apical parts distinctly ruffled; basal part between the foveae ruggedly rugose; both apical and basal transverse impressions weak, though the latter is sometimes rather distinct; surface with irregularly transverse wrinkles; microsculpture partially and slightly visible, formed by fine transverse meshes.

Apterous. Elytra subovate, convex, widest at about middle, ca. 1.2 times as wide as pronotum (EW/PW 1.17–1.23, mean 1.20), ca. 2.5 times as long as pronotum (EL/PL 2.43–2.58, mean 2.47), ca. 1.6 times as wide as base (EW/EBW 1.53–1.61, mean 1.57), ca. 1.53 times as long as wide (EL/EW 1.48–1.58, mean 1.53); basal border gently curved, extending to shoulder, and meeting with lateral border at an obtuse but defined angle; shoulders rounded; lateral margins gently arcuate from behind shoulders to preapical emargination, which is distinct; apices rounded, sutural angles rounded, though sometimes obtusely angulate in male; scutellar striole short, lying on interval 1 and connected with basal border; striae deep, smooth; intervals convex in male, rather flat in female; interval 3 with four to five dorsal pores, anterior one or two adjoining stria 3 at basal fifth to third, the remainings adjoining stria 2 irregularly arranged at about middle to apical fifth; marginal series of pores 19–22 in number, widely spaced at middle; microsculpture well visible, formed by nearly isodiametric meshes in male, strongly impressed isodiametric meshes in female.

Basal three segments of meso- and metatarsi externally sulcate. Venter almost smooth, though the inner side of prepisterna, mesosternum and mesepisterna, and sternite 3 are punctate; prosternal process furrowed at the middle, unbordered at the apex; in male, terminal sternite triangularly and deeply excavated at middle, apical margin with an asymmetrical wide projection, whose apex is obliquely truncate, each

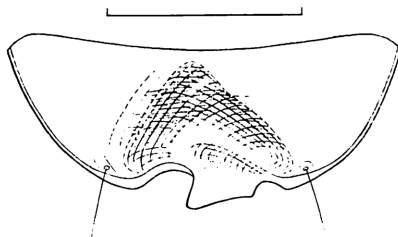


Fig. 2. Terminal sternite in the male of *Pterostichus (Nialoe) ishizukai* sp. nov., from Akashina-chō in Nagano Pref. Scale 2 mm.

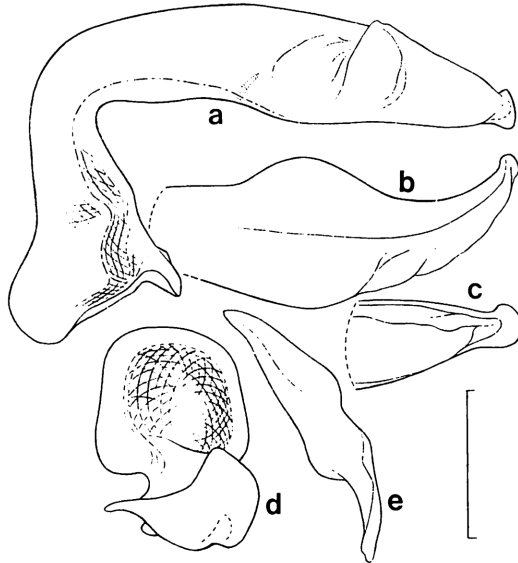


Fig. 3. Male genitalia of *Pterostichus (Nialoe) ishizukai* sp. nov., from Akashina-chô in Nagano Pref. — a-c, Aedeagus: a, left lateral view; b, dorsal view, basal part omitted; c, apical part in left lateral view; d, left paramere; e, right paramere. Scale 1 mm.

side of the projection distinctly emarginate, left emargination being larger and deeper than the right one in ventral view.

Aedeagus strongly bent at basal third at about 90 degrees, then almost straightly extending to apex in lateral view, widely and distinctly tumid at apical third of the right side, with the apical part curved rightwards in dorsal view; apical lobe widely rounded at apex, with the upper margin generally somewhat produced in left lateral view; left paramere square, arcuate at apex; right paramere rather variable in length in apical half, usually tapered towards apex, which is pointed.

*Type series.* Holotype: ♂, Kemi, Akashina-chô, Nagano Pref., 7~8-VI-1994, S. KASAHARA leg.; allotype: ♀, same data as for the holotype. Paratypes: 3 ♀♀, same data as for the holotype; 5 ♂♂, 13 ♀♀, same locality as for the holotype, 9~18-VI-1994, S. KASAHARA & K. ISHIZUKA leg.; 1 ♀, same locality, 12-VIII-1992, K. ISHIZUKA leg.

The holo- and allotypes are preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo. The paratypes are deposited in my collection.

*Notes.* The present new species is closely related to *P. (N.) rhanis rhanis* TSCHITSCHÉRINE from the Mikuni and the Taishaku Mountain Ranges in northern Kwantô, but is easily distinguished from the latter by stouter body with wider pronotum and different configuration of male genitalia with roundly enlarged apical lobe. It was found in coexistence with a large number of a local form of *P. (N.) asymmetricus* BATES by baited pit-fall traps set in a broadleaved secondary forest on a low altitude

mountain.

The species was named after Mr. Katsumi ISHIZUKA, who is a specialist of moths and a friend of mine.

*Trichotichnus (Trichotichnus) kisonis* sp. nov.

[Japanese name: Kiso-tsuayagomokumushi]

(Figs. 4-5)

*Description.* Male. Length (measured as in the preceding species) 9.55–9.80 mm; width 3.60–3.65 mm. Black, shiny, weakly iridescent on elytra; labrum, mandibles and lateral margins of pronotum reddish brown; appendages and apical margins of elytra brownish yellow; venter dark reddish brown.

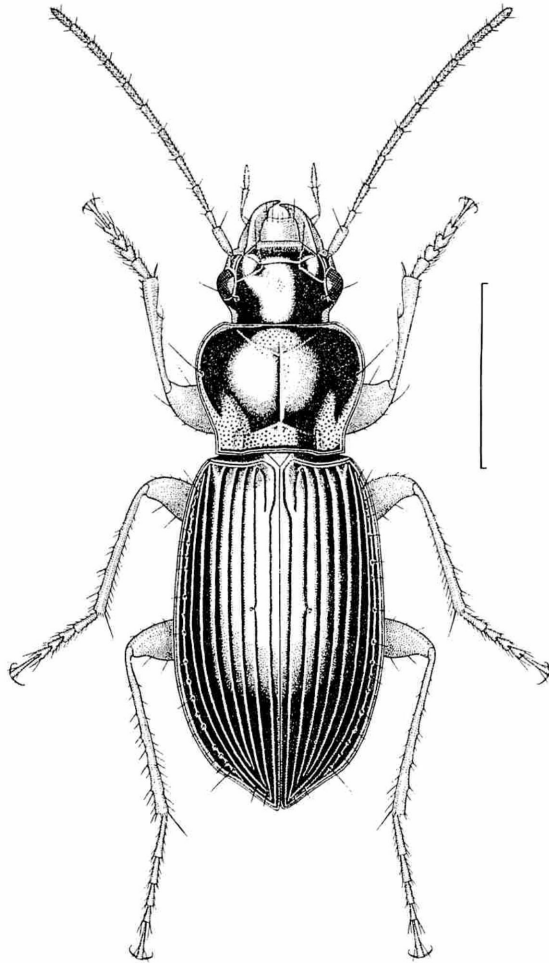


Fig. 4. *Trichotichnus (Trichotichnus) kisonis* sp. nov., ♂, from Nagiso-machi in Nagano Pref.  
Scale 3 mm.

Head gently convex; eyes convex; post-genae strongly contracted behind; labrum subtrapezoidal, gently raised at the middle of apex; clypeal suture fine; frontal oblique grooves distinct, roundly depressed around the grooves in front; supraorbital setae inserted at the post-eye level; surface smooth, though weakly and irregularly punctate on frons; microsculpture partially and barely visible, formed by almost isodiametric meshes; antennae moderately long, reaching the basal third of elytra.

Pronotum cordate, convex, widest at apical third, ca. 1.4 times as wide as head (PW/HW 1.38–1.40, mean 1.39), ca. 1.35 times as wide as base (PW/PBW 1.33–1.36, mean 1.35), and as wide as long in almost the same proportion (PW/PL 1.32–1.40, mean 1.35); lateral margins evenly well arcuate, then strongly convergent posteriad and gently sinuate before base; lateral reflexed borders fine; marginal setae inserted at apical two-fifths; apical margin almost straight, finely bordered, though obsolete at the middle, apical angles hardly produced, rounded at the tips; basal margin wider than the apical, almost straight, though slightly sinuate on each side, finely but clearly bordered throughout, basal angles rectangular, more or less produced laterad, acute at the tips; basal foveae wide, strongly and ruggedly punctate; outer sides and basal part between the foveae strongly punctate; median line fine but distinct; apical and basal transverse impressions rather distinct, strongly punctate; surface punctate in apical, lateral and basal areas, median part smooth, though weakly wrinkled; microsculpture almost invisible.

Wings reduced, two-thirds as long as, and a half as wide as each elytron; Elytra subovate, convex, widest at about middle, ca. 1.3 times as wide as pronotum (EW/PW 1.26–1.29, mean 1.28), ca. 2.8 times as long as pronotum (EL/PL 2.68–2.85, mean

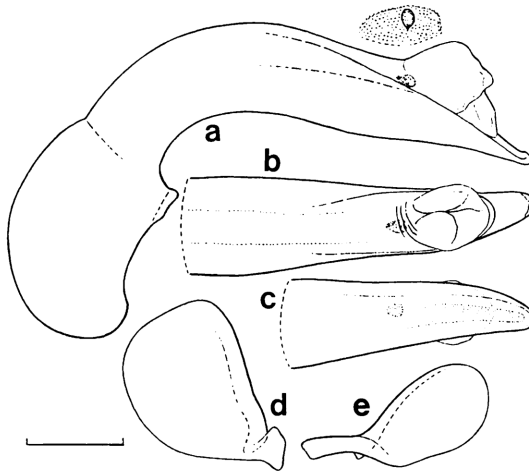


Fig. 5. Male genitalia of *Trichotichnus (Trichotichnus) kisonis* sp. nov., from Nagiso-machi in Nagano Pref. — a–c, Aedeagus: a, left lateral view, and copulatory piece with membranous part in dorsal view; b, dorsal view, basal part omitted; c, apical half in ventral view; d, left paramere; e, right paramere. Scale 0.5mm.

2.76), ca. 1.5 times as wide as base (EW/EBW 1.46–1.50, mean 1.48), ca. 1.6 times as long as wide (EL/EW 1.58–1.62, mean 1.61); basal border gently curved, very minutely dentate at shoulder; shoulders very obtusely but mal-definedly angulate; lateral margins gently divergent from behind shoulders to the widest level, then roundly convergent posteriad, apices rather pointed, though the apex of each elytron is rounded; scutellar stria long, lying on interval 2, and arising from basal pore together with stria 2; stria 1 connecting with basal border; striae fine but clearly impressed throughout; intervals convex; interval 3 with a dorsal pore, adjoining stria 2 a little before the middle; microsculpture barely visible, formed by very fine transverse meshes. Protibiae not sulcate on each inner side. Venter shiny; prosternum and median parts of sternites 4–5 punctate and minutely pubescent; mesosternum, and pro-, meso- and metepisterna punctate; prosternal process punctate and pulvrisetose at the apex.

Aedeagus thick in basal part, arcuate and tapered towards apex in lateral view; apical half relatively slender, gently curved rightwards at the apical part in dorsal view; apical lobe longer than wide, rounded at apex, apical margin bordered above, the border interrupted at middle; apical part of ventral side shallowly depressed at middle; inner sac containing a small sclerotized piece, which is ovate, not peg-like; left paramere wide, truncate at apex; right paramere relatively wide, rounded at apex.

*Type series.* Holotype: ♂, Ohdaira-tôge, Nagiso-machi, Nagano Pref., 23-IX-1994, S. KASAHARA leg. Paratypes: 2♂♂, same data as for the holotype. The holotype is preserved in the same collection as for the preceding species. The paratypes are deposited in my cabinet.

*Notes.* The present new species somewhat resembles *T. (T.) yukihiroi* HABU known from the southwestern part of the Kwantô Mountains and Mt. Fuji in general appearance, but is easily distinguished from the latter by having longer elytra with impunctate intervals and different configuration of aedeagus, whose copulatory piece is not peg-shaped as in the latter.

## 要 約

笠原須磨生：長野県産ゴミムシ類の2新種。——長野県で採集されたオサムシ科甲虫Carabidaeの、ナガゴミムシ属*Pterostichus*とツヤゴモクムシ属*Trichotichnus*に属する各1新種を記載した。

1) アカシナナガゴミムシ*P. (Nialoe) ishizukai*は、明科町の山林でみつかった。ミヤマナガゴミムシ*P. (N.) rhanis* TSCHITSCHÉRINEの近縁種と考えられるが、体が幅広く、陰茎の先端片がまるく広がっている点も特異で、後者との識別はよいである。なお、本種は、トラップにより、きわめて多数のベーツナガゴミムシ*P. (N.) asymmetricus* BATESの地方型とともに採集された。

2) キソツヤゴモクムシ*T. (Trichotichnus) kisonis*は、ツヤゴモクムシ種群*Leptopus* groupに含まれる種で、南木曾町の木曾川に注ぐ支流の源流部で発見された。外観は一見、ハコネツヤゴモクムシ*T. (T.) yukihiroi* HABUに似ているが、より長い上翅の間室に点刻がなく、陰茎の前半部が、より細長く、内袋の骨片も扁平な卵形で、後者のように、とがったクサビ形ではない。

### References

- HABU, A., 1961. Revisional study of the species of the Trichotichni, the subtribe of the tribe Harpalini, from Japan (Coleoptera, Carabidae). *Bull. natn. Inst. agric. Sci., Tokyo*, (C), (13): 127–169.
- 1973. Carabidae: Harpalini (Insecta: Coleoptera). *Fauna Japonica*. xiii + 430 pp., 24 pls. Keigaku Publ., Tokyo.
- KASAHARA, S., 1983. On *Trichotichnus yukihikoi* HABU. *Kanagawa-chûhō, Yokohama*, (69): 45–57. (In Japanese.)
- TANAKA, K., 1958a. Studies on the genus *Pterostichus* from Japan (II) (Carabidae, Coleoptera). Subgenus *Nialoë* from central Honshu (Part 1). *Akitu, Kyoto*, 7: 61–64.
- 1985b. Ditto (III). Ditto (Part 2). *Ibid.*, 7: 93–96.

*Elytra, Tokyo*, 23 (1): 102, May 15, 1995

## *Morionidius insularis* (Coleoptera, Carabidae) Found on the Tokara Islands, Southwest Japan

Sumao KASAHARA

Nishifuna 4–9–13, Funabashi City, Chiba, 273 Japan

The morionine carabid beetle, *Morionidius insularis* KASAHARA et OHTANI, 1992, was originally described from Is. Yaku-shima, off southern Kyushu, Japan. It has hitherto been known only from the type locality. Through the courtesy of Mr. Motohiko TANIKADO, I have recently examined two male specimens of the same species collected by Mr. Masakazu TABANA on Is. Naka-no-shima of the Tokara Islands. I record it herewith as a new locality of this interesting saproxylophilous beetle.

*Specimens examined.* 2 ♂♂, Kusuki, Is. Naka-no-shima, Tokara, Kagoshima Pref., 27–III–1994, M. TABANA leg. Both dug out from the core of a large rotten log inhabited by termites.

The Naka-no-shima individuals are almost identical with the Yaku-shima ones in their characteristic facies and genitalia, though the elytra of the former are somewhat shorter (EL/EW 1.64–1.67) than those of the latter (EL/EW 1.67–1.71). Length 15.8–19.4 mm; width 5.5–6.7 mm.

I am grateful to Messrs. Masakazu TABANA and Motohiko TANIKADO for their kind supplying with valuable specimens.

### Reference

- KASAHARA, S., & N. OHTANI, 1992. Occurrence of *Morionidius* (Coleoptera, Carabidae) in Japan. *Elytra, Tokyo*, 20: 161–166.