

New Blind Trechine Beetles Belonging to the *Kurasawatrechus*-Complex (Coleoptera, Trechinae) from Northeast Japan

II. Species from the Ôwu Mountains

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Abstract A new species with a new subspecies of blind trechine beetles of the genus *Dracotrechus* is described from the Ôwu Mountain Range in northeastern Honshu, Northeast Japan, under the names *Dracotrechus meridianus* and *D. m. thermarum*. The nominotypical subspecies of the new species is primarily endogean and rather widely distributed in the Mahiru Mountains at the central part of the Ôwu Mountain Range, while the new subspecies is restricted to the northeastern corner of the mountain range.

Key words: Coleoptera, Trechinae, new species, new subspecies, Ôwu Mountains, Northeast Japan.

Introduction

In the second part of this paper, the blind trechine beetles of the genus *Dracotrechus* occurring in the Ôwu Mountain Range will be enumerated. It is the watershed of northeastern Honshû and is separated from the Kitakami Hills by the lowland along the Kitakami-gawa River. Unlike the Kitakami species of *Dracotrechus*, none of the Ôwu populations of the genus have been known from caves. Of the five known populations, three are located on the Mahiru Mountains at the central part of the watershed range, one at the eastern part of the Taihei Mountains to the north-northwest of the Mahirus, and the remaining one occurs near the northeastern end of the mountain range under consideration. The trechines are usually endogean in nature, living under large stones embedded in the ground, though sometimes occur in the upper hypogean domain.

Before going into further details, I wish to express my hearty thanks to Dr. Yoshiaki NISHIKAWA, Dr. Shinzaburo SONE, and many other friends of mine for their invaluable help extended to me in difficult searches for uncommon blind beetles.

Dracotrechus meridianus S. UÉNO, sp. nov.

(Figs. 1–2)

Length: 3.05–4.03 mm (from apical margin of clypeus to apices of elytra). Generally similar to *D. fontanus* S. UÉNO from the Kitakami Hills, but the head is relatively short, the pronotum is ampler and less contracted at the base, and the aedeagus is shorter, broader, abruptly attenuated at the apical part and with more briefly reflexed apical lobe. Colour as in *D. fontanus*. Microsculpture also as in *D. fontanus*, though a little more clearly impressed.

Head a little shorter than in *D. fontanus*, HW/HL 1.10–1.35 (M 1.24), similar in other details to those of *D. fontanus*; antennae reaching basal three-tenths of elytra. Pronotum more or less ampler than in *D. fontanus*, widest at about two-thirds from base, and less contracted at base

than in the latter; PW/HW 1.17–1.41 (M 1.39), PW/PL 0.83–1.18 (M 1.05), PW/PA 1.20–1.41 (M 1.34), PW/PB 0.99–1.36 (M 1.28); sides widely arcuate in front, distinctly but not so deeply sinuate at a level between basal seventh and fifth, and then gently divergent towards hind angles, which are sharp but not much protrudent laterad; apex usually as wide as or slightly narrower than base, though sometimes a little wider than the latter, PA/PB 0.93–1.04 (M 0.97); front angles advanced though obtuse; base nearly straight; dorsum gently convex as in *D. fontanus*, wholly glabrous, median line deeply impressed, transverse impressions not sharply marked, basal area longitudinally strigose.

Elytra oval, evidently wider than prothorax, widest at about two-fifths from bases, and more gradually narrowed towards apices than towards bases; EW/PW 1.60–1.64 (M 1.62), EL/PL 2.32–2.82 (M 2.61), EL/EW 1.40–1.56 (M 1.47); shoulders effaced, with prehumeral margins slightly arcuate; sides moderately reflexed, microscopically ciliated at the humeral parts, gently arcuate to before apices, which are almost conjointly and rather narrowly rounded at the apices; dorsal convexity as in *D. fontanus*; striae moderately impressed on the disc but becoming shallower at the sides, hardly punctate, stria 7 evanescent, stria 8 impressed only behind middle; scutellar and apical striae as in *D. fontanus*; chaetotaxy identical with that in *D. fontanus*.

Venter and legs as in *D. fontanus*, though the hind legs are somewhat slenderer than in the latter.

Male genital organ small, basically similar to that of *D. fontanus*. Aedeagus small, only one-fourth as long as elytra, shorter and broader than in *D. fontanus*, and abruptly attenuated in profile from the base of apical part; viewed laterally, apical lobe short, feebly reflexed, and pointed at the tip; basal part abruptly bent ventrad, with fairly large basal orifice, whose sides are emarginate; sagittal aileron small and very narrow. Inner sac armed with a fairly large spatulate copulatory piece, whose surface is covered with poorly sclerotized scales. Styles fairly large, unequal, each bearing four apical setae.

Type series. Holotype: ♂, Allotype: ♀, Paratypes: 2 ♂♂, 3 ♀♀ (incl. teneral 1 ♂, 2 ♀♀), 15–VIII–1988, K. KUSANO & K. ONDA leg. All deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

Type locality. Getô-onsen, 750 m in altitude, Waga-chô of Iwaté Prefecture in northeastern Honshû, Northeast Japan.

Further specimens examined.

1) 1 ♀, Arisu-yama, 870 m in altitude on the west-northwestern slope, in Yuda-chô, northeastern Honshû, NE Japan, 25–VIII–1985, S. UÉNO leg. (NSMT).

2) 1 ♂, 1 ♀, Ondô-daké of the Mahiru Mts., on the borders of Iwaté (Sawauchi-mura) and Akita (Senhata-mura) Prefectures, 920 m in altitude at the Sawauchi side and 970 m in altitude at the Senhata side, 30–VII–1985, S. UÉNO leg. (NSMT).

3) 1 ♂, Daibutsu-daké, Ohmizubata-zawa, 630 m in altitude, Nishiki-mura of Akita Prefecture, 28–VII–1991, N. HIKIDA leg. (NSMT).

Notes. *Dracotrechus meridianus* is a relatively variable species, particularly in the standard ratios of body parts. Since the standard ratios given in the above description are solely based on the measurements of the type specimens from Getô-onsen, standard ratios in the non-topotypical specimens will be given in the following notes.

Getô-onsen, the type locality of *D. meridianus* is a well known hot spring lying near the southern end of the Mahiru Mountains. It is located in the drainage area of the Getô-gawa, a tributary of the Kitakami-gawa River, and is about 44 km distant to the northwest in a beeline from Fusa-kutsu Cave, the southernmost known locality of *Dracotrechus fontanus* (cf. UÉNO,

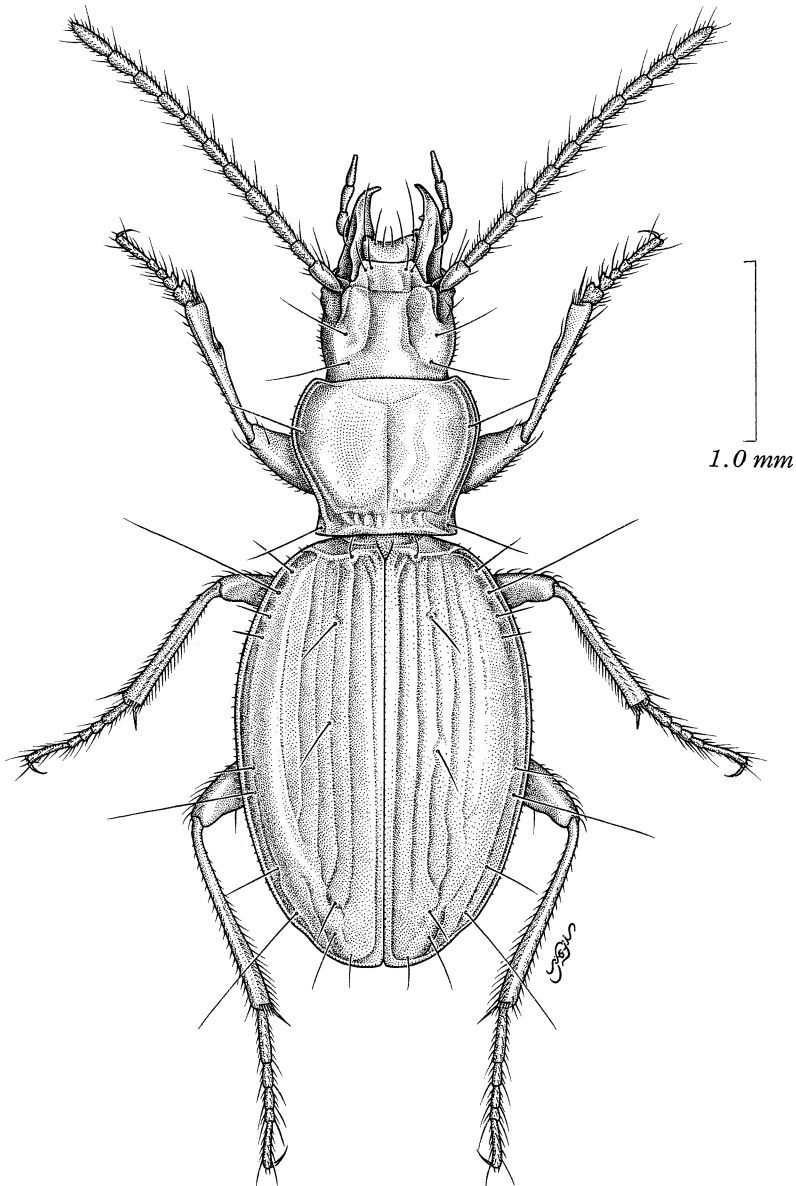


Fig. 1. *Dracotrechus meridianus* S. UÉNO, sp. nov., ♂, from Getô-onsen.

2010, pp. 7, 9).

Arisu-yama, the second known locality of *D. meridianus*, is about 10 km distant to the west by south from Getô-onsen. The single specimen known from this locality, 3.78 mm in the length of body, was found from beneath a stone embedded in the wet bed of a shaded gully, together with two subalpine species of the genus *Trechiamia* (UÉNO, 1994, pp. 31–32). The standard ratios in this specimen are as follows: HW/HL 1.15, PW/HW 1.41, PW/PL 1.18, PW/PA 1.37, PW/PB 1.38, PA/PB 1.00, EW/PW 1.60, EL/PL 2.71, EL/EW 1.44.

From Arisu-yama, the ancestor of *D. meridianus* seems to have spread northwards along the watershed ridge of the Mahiru Mountains, at least to Ondô-daké, which is about 30 km distant to the north by west in a beeline. The two specimens of *D. meridianus* recorded from this locality were found from beneath stones deeply embedded in the wet ground near the heads of two gullies on different sides of the ridge, together with *Trechiana meridianus* S. UÉNO (1994, pp. 28–32). They measure 3.80, 3.85 mm (♂, ♀), in the length of body (excl. mandibles) and have the following standard ratios: HW/HL 1.17, 1.17, PW/HW 1.36, 1.39, PW/PL 1.12, 1.15. PW/PA 1.31, 1.36, PW/PB 1.31, 1.36, PA/PB 1.00, 1.00, EW/PW 1.58, 1.59, EL/PL 2.76, 2.76, EL/EW 1.57, 1.51.

About 40.5 km distant to the north-northwest from Ondô-daké beyond the Yokoté Basin, there is another habitat of *Dracotrechus meridianus* at the eastern part of the Taihei Mountains. It is Daibutsu-daké, whose geographical situation was already explained in some detail in the notes following the description of *Trechiana pacatus* S. UÉNO (1994, pp. 33–36). It lies about 12 km to the northwest from the northwestern edge of Lake Tazawa-ko, and is rather isolated as compared with other localities lying on the Mahiru Mountains. The single specimen known from this locality measures 3.75 mm in the length of body, and has the following standard ratios of body parts: HW/HL 1.07, PW/HW 1.43, PW/PL 1.17, PW/PA 1.41, PW/PB 1.34, PA/PB 0.95, EW/PW 1.56, EL/PL 2.71, EL/EW 1.48.

Etymology. The specific name of this new species is derived from the locality name, Mahiru Mountains, meaning the midday mountains in Japanese, on which lie three of the four known localities of the new species.

Dracotrechus meridianus

thermarum S. UÉNO, subsp. nov.

(Fig. 3)

Length: 3.65–3.80 mm (from apical margin of clypeus to apices of elytra).

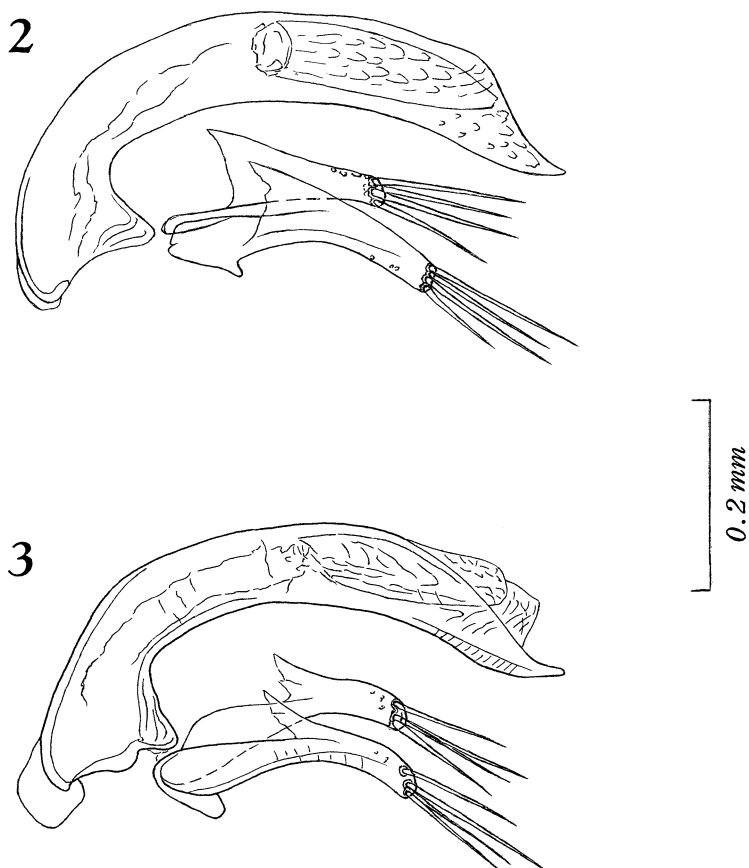
Closely similar to the nominotypical subspecies, particularly to its topotypical specimens, but the prothorax is a little wider on an average and widest at a little anterior level (widest at about three-fourths from base); HW/HL 1.32–1.37 (M 1.35), PW/HW 1.15–1.35 (M 1.24), PW/PL 1.14–1.28 (M 1.19), PW/PA 1.34–1.37 (M 1.35), PW/PB 1.36–1.41 (M 1.40), PA/PB 1.03–1.05 (M 1.04). Elytra slightly more elongate on an average than in the nominotypical subspecies, with the sides a little more feebly arcuate; EW/PW 1.51–1.57 (M 1.53), EL/PL 2.71–2.90 (M 2.76), EL/EW 1.49–1.51 (M 1.50).

Male genital organ similar to that of the nominotypical subspecies, but the aedeagus is somewhat narrower and a little more strongly arcuate, with the apical part more gradually attenuated and ending in a narrower apical lobe; sagittal aileron moderately developed.

Type series. Holotype: ♂, 9-X-2005, S. SONE leg. Allotype: ♀, 8-X-2005, S. SONE leg. Paratypes: 1 ♂, 8-X-2005, S. SONE leg.; 1 ♀, 9-X-2005, S. SONE leg. All deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

Type locality. Tsunagi, 240 m in altitude, in Morioka-shi of Iwaté Prefecture, northeastern Honshû, Northeast Japan.

Notes. This subspecies is isolated to a small low hill at the back of the Tsunagi Hot Spring lying on the right side of the Shizukuishi-gawa River, which flows into the Kitakami-gawa River at the centre of Morioka City. It is about 41.5 km distant to the east-southeast from Daibutsu-



Figs. 2-3. Male genitalia of *Dracotrechus meridianus* S. UÉNO, sp. nov. — 2. *Dracotrechus meridianus meridianus* S. UÉNO, from Getô-onsen. — 3. *Dracotrechus meridianus thermarum* S. UÉNO, subsp. nov., from Tsunagi.

daké, about 37 km distant to the northeast from Ondô-daké, and about 69.5 km distant to the west-southwest from Ryûsen-dô Cave (type locality of *Dracotrechus fontanus* S. UÉNO).

Unlike the nominotypical subspecies of *Dracotrechus meridianus*, *D. m. thermarum* was dug out from screes deposited at the sides of narrow gullies.

Etymology. The new subspecific name *thermarum* is derived from the well known hot spring at Tsunagi, in whose close proximity, the blind trechine beetle lives.

要 約

上野俊一：東北地方に産するクラサワメクラチビゴミムシ群のチビゴミムシ類 II. 奥羽山脈に分布する種。——北上山地に比べると、奥羽山脈には複眼の退化したチビゴミムシ類が少なく、これまでには単一の種がわずかに5ヵ所から知られているにすぎない。非火山で石灰岩が卓越する北上山地に比べると、火山が多くて自然洞窟のきわめて少ない奥羽山脈は、盲目のチビゴミムシ類が分化できる条件に合わないと思われる。メクラチビゴミムシ類の既知の産地5ヵ所のうちの3ヵ所は、奥羽山脈の中央部を占める真昼山地にあり、残りの2ヵ所のうちのひとつは、田沢湖の北西に位置する太平山地の東部にある。これらの産地

から得られたチビゴミムシ類には、かなりの変異が認められるが、いずれも種内変異の範疇に入るものと判定して、マヒルメクラチビゴミムシ *Dracotrechus meridianus* S. UÉNO という新名を与えた。ただし、雫石川南岸の丘陵に生息する地下浅層性のものであれば、亜種が異なると判定して、ツナギメクラチビゴミムシ *D. m. thermarum* S. UÉNO と命名した。

References

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Errata

Length of the scale for Figs. 2–4 in Part I of this paper (on p. 5) should be corrected to 0.2 mm from 2.0 mm.

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