

Ishikawatrechus kusamai (Coleoptera, Trechinae), a New Anophthalmic Cave Trechine from Western Shikoku, Japan

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Abstract A new anophthalmic species of the trechine genus *Ishikawatrechus* is described from a limestone cave in western Shikoku, Southwest Japan, under the name of *I. kusamai*. It belongs to the *ishiharai* group, and is characterized mainly by the pubescent genae, relatively narrow fore body, anteriorly abbreviated prehumeral borders of elytra, and almost straight apical half of aedeagus with rather long apical lobe.

In the past five years, I dedicated three trechine species of the genus *Ishikawatrechus* to three deceased friends of mine, to Tamotsu ISHIHARA (UÉNO, 1994), to Ken-ichirô OCHI (UÉNO, 1996) and to Yoshiteru MURAKAMI (UÉNO, 1997). It is with deep regret that I have to dedicate another new species of the same genus to the late Dr. Kei-ichi KUSAMA (1924–1998), who passed away from cancer on October 6, 1998 at the age of 74.

Keiichi KUSAMA was the founder of the Japanese Society of Coleopterology and had served as the president for fifteen years till 1989, when the society was reorganized by amalgamation with the Coleopterists' Association of Japan. We all owe to his effort of developing the young society to the present prosperity. As a successor of his presidency, I would like to name a new species of *Ishikawatrechus* in his honour.

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

Before going further, I wish to thank the following friends of mine, who endeavoured to collect the rare trechine beetle to be described in rather an uncomfortable cave and placed all their findings at my disposal for taxonomic study: Messrs. Hiroshi MIYAMA, Toshiki MOHRI, Shinji NAGAI, Yutaka NOTSU and Masazi UOZUMI.

Ishikawatrechus kusamai S. UÉNO, sp. nov.

[Japanese name: Ryûgû-mekura-chibigomimushi]

(Figs. 1–3)

Length: 4.45–5.20 mm (from apical margin of clypeus to apices of elytra).

Closely allied to *I. ishiharai* S. UÉNO (1994, p. 339, figs. 1–3) and agrees with it in many respects, but discriminated at first sight by the pubescent genae, relatively nar-

row fore body, obsolete basal portion of each prehumeral border of elytra, and almost straight apical half of aedeagus with longer apical lobe.

Body glabrous on both dorsum and venter. Colour and microsculpture as in *I. ishiharai*. Head similar in configuration to that of *I. ishiharai*, but the genae are obviously pubescent; antennae reaching about basal three-fifths of elytra in ♂. Pronotum a little narrower on an average than in *I. ishiharai*, usually a little longer than wide, widest at about four-fifths from base, and less contracted at base, with sides a little less strongly rounded in front, more gradually convergent posteriad, rather widely sinuate at about basal sixth, and then gently divergent towards hind angles; apex always wider than base, the latter widely emarginate though nearly straight at middle; PW/HW 1.36–1.44 (M 1.39), PW/PL 0.91–1.00 (M 0.97), PW/PA 1.35–1.40 (M 1.37), PW/PB 1.39–1.48 (M 1.44), PB/PA 0.92–0.97 (M 0.95) [PA/PB 1.03–1.09 (M 1.05)]. Elytra as in *I. ishiharai*, but the humeral angles are more prominent and the prehumeral borders become obsolete well before reaching basal carinae; EW/PW 1.69–1.80 (M 1.76), EL/PL 2.59–2.79 (M 2.67), EL/EW 1.54–1.58 (M 1.56); striae somewhat shallower than in *I. ishiharai* though similar as a whole to the latter; chaetotaxy as in *I. ishiharai*.

Ventral surface and legs as in *I. ishiharai*.

Male genital organ basically similar to that of *I. ishiharai*, but obviously different in the less arcuate aedeagus with longer apical lobe. Aedeagus three-eighths as long as elytra, hardly arcuate behind middle and not much narrowed to apical orifice in profile; basal part elongate, moderately curved ventrad, widely emarginate at the sides of basal orifice, and provided with a narrow sagittal aileron; viewed dorsally, apical lobe gently inclined to the left, gradually tapered towards the extremity, which is blunt; viewed laterally, apical part abruptly narrowed at the sides of apical orifice, and then moderately tapered towards the blunt extremity, which bears a small triangular hook on the ventral side; ventral margin very slightly emarginate in profile. Inner armature as in *I. ishiharai*, though the sigmoidally curved teeth-patch is more elongate. Styles slender, left style much longer than the right, each bearing four slender setae at the apex.

Female unknown.

Type series. Holotype: ♂, 15–I–1977, H. MIYAMA leg. Paratypes: 1 ♂ (teneral), 21–IX–1975, M. UOZUMI leg.; 1 ♂, 29–IV–1977, S. NAGAI leg.; 1 ♂, 11–XI–1977, Y. NOTSU leg.; 1 ♂ (teneral), 13–XI–1977, H. MIYAMA leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Limestone cave called Ryûgû-dô, at Mimido of Mikawa-mura in Ehimé Prefecture, Shikoku, Southwest Japan.

Notes. This is an interesting new species doubtless very close to *I. ishiharai*, but different from it in several noticeable points like the pubescent genae, abbreviated prehumeral borders of elytra before more prominent elytral shoulders, and hardly arcuate apical half of aedeagus. The two species must have become differentiated from a common ancestor in rather a recent time, the former survives in a cave at a low altitude, and the latter has become confined to higher places of the Ishizuchi Mountains, primarily in the upper hypogean zone and also in an abandoned mine adit.

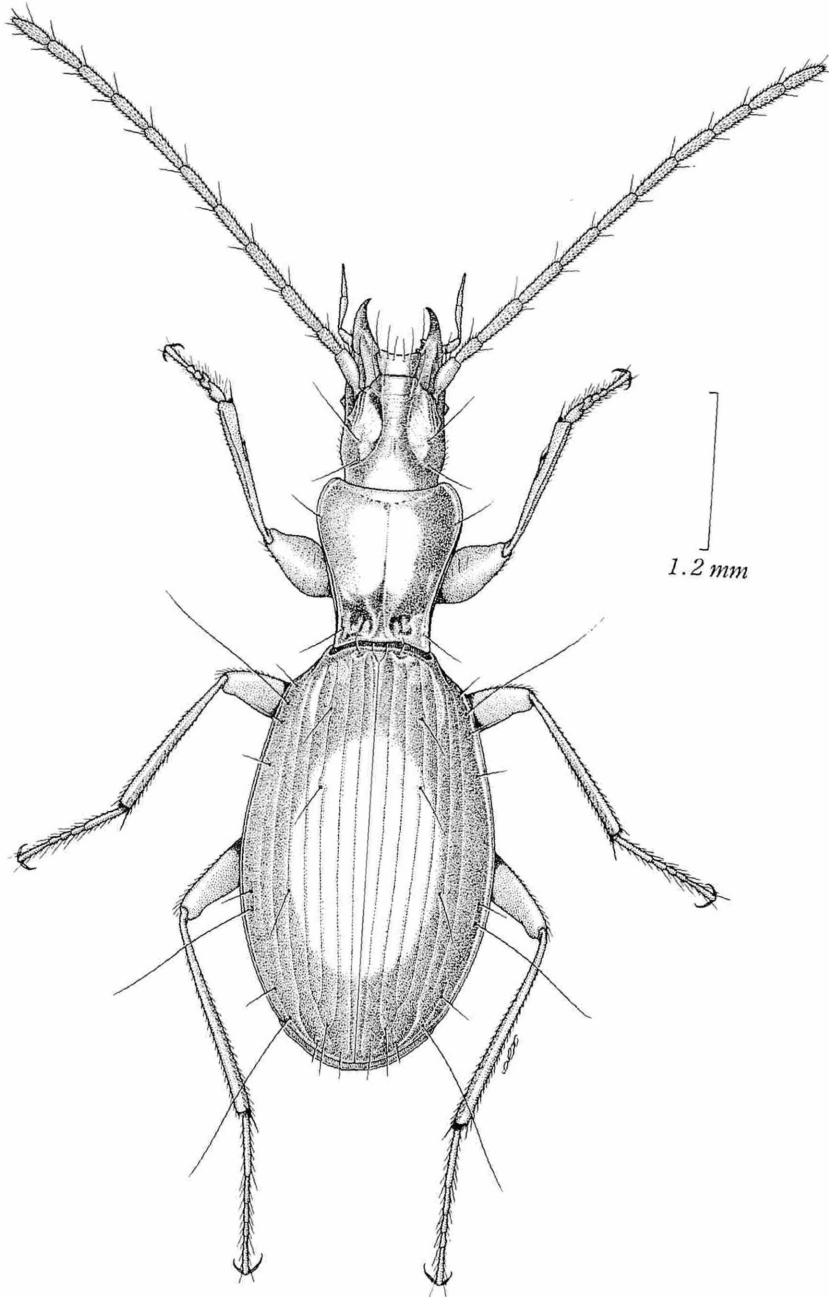
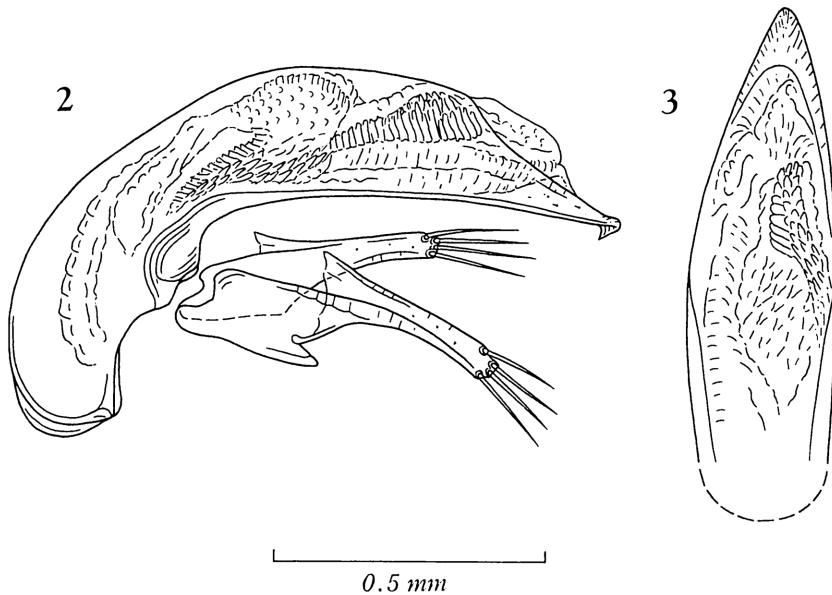


Fig. 1. *Ishikawatrechus kusamai* S. UÉNO, sp. nov., ♂, from Ryûgû-dô Cave at Mimido.



Figs. 2-3. Male genitalia of *Ishikawatrechus kusamai* S. UÉNO, sp. nov., from Ryûgû-dô Cave at Mimi-do; left lateral view (2), and apical part of aedeagus, dorso-apical view (3).

Ryûgû-dô Cave is a small limestone cave opening at the roadside on the right side of the Omogo-gawa, a tributary of the Niyodo-gawa River, at an altitude of 390 m. It is about 22 km distant to the southwest from Marutaki-yama, the southwestern known locality of *I. ishiharai*, while the cave is much nearer to the type localities of *I. subtilis* S. UÉNO (1957, pp. 195, 208, figs. 17, 19, 24) and *Yamautidius pubicollis* (S. UÉNO) (1957, p. 189, figs. 5, 7). From the former, Ryûgû-dô Cave is about 2.3 km distant to the west beyond the Omogo-gawa River, and from the latter, it is only 800 m distant to the east by north beyond the Kuma-gawa River, another tributary of the Niyodo-gawa River.

The entrance section of Ryûgû-dô Cave was scraped away by the enlargement of the road, and the branch passage extending under the road was buried with soil and rock debris. What remains now is a narrow winding crevice passage partly squeezed to unbearable tightness, which eventually leads down to a narrow underground stream with gravelly banks. The total length of the cave is about 90 m. All the type specimens of *I. kusamai* were met with at this innermost part, one at a time, from beneath stones lying on the muddy floor. One of them was found dead though still in a fair condition. Because of exceptional unpleasantness of long crawling, this cave has seldom been visited by biospeologists except in 1977, and was examined by myself only once on March 19, 1976.

要 約

上野俊一：四国西部の石灰洞にすむツヤメクラチビゴミムシ属の1新種。——石鎚山系の南西端に位置する小さい石灰洞からツヤメクラチビゴミムシ属の1新種を記載し、これを故草間慶一博士に捧げて *Ishikawatrechus kusamai* S. UÉNO と命名した。この種はイシハラメクラチビゴミムシ群に属し、外部形態も雄交尾器の基本的な構造もイシハラメクラチビゴミムシ *I. ishiharai* S. UÉNO によく似ているが、頬部が細毛に覆われていることや、上翅の肩前縁が基方で消失すること、雄交尾器の中央片が端方でほとんど湾曲せず先端部が細長いことなどの点で、容易に識別できる。なお和名には、一部の人たちによって使われてきた通称を採用し、基準産地の洞窟名をとってリュウグウメクラチビゴミムシと名づけた。

References

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