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Occurrence of a New *Kurasawatrechus* (Coleoptera, Trechinae) at the Central Part of the Abukuma Hills, East Japan[1)]

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Abstract A new anophthalmic trechine beetle of the genus *Kurasawatrechus* is described from the upper hypogean zone at the central part of the Abukuma Hills, East Japan, under the name of *K. zenbai*. It is unique in the complete absence of pubescence on the body surface, but seems to belong to the group of *K. quadraticollis*. With this discovery, the distributional range of the species-group is considerably enlarged towards the north.

Dealing with the anophthalmic trechine beetles of the Yamizo Mountains, I noticed that the southern two-thirds of the mountain range bore a close faunal relationship with the southern part of the Abukumas (cf. UÉNO, 1990, p. 6). This conclusion was drawn from an analysis of the distributional pattern shown by the group of *Kurasawatrechus quadraticollis*, whose members were then unknown from the central part of the Abukuma Hills.

Late in the spring of this year, three specimens of a *Kurasawatrechus* were dug out by Mr. Souhachi ZENBA from a colluvium deposited at the side of a narrow stream on the central Abukumas, and were submitted to me for examination through Mr. Sumao KASAHARA. They seemed to belong to a new species of the *quadraticollis* group, but since all the three were females and since they were unique in the absence of pubescence on the body surface, I was unable to determine their systematic position with confidence. However, on the occasion of the annual meeting of the three major speleological groups of Japan held in August, Mr. Shinzaburo SONE and I had a chance to visit the collecting site of the trechine beetle, and obtained a short series of additional specimens containing five males in a good condition. This collection enabled me to ascertain that my conjecture was correct, and the known range of distribution of the species-group was considerably extended towards the north.

In this short paper, I will describe the new species under the name of *Kurasawatrechus zenbai* in dedicating it to its discoverer. The abbreviations used are the same as those explained in previous papers of mine.

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Kurasawatrechus zenbai S. UÉNO, sp. nov.

[Japanese name: Zenba-mekura-chibigomimushi]

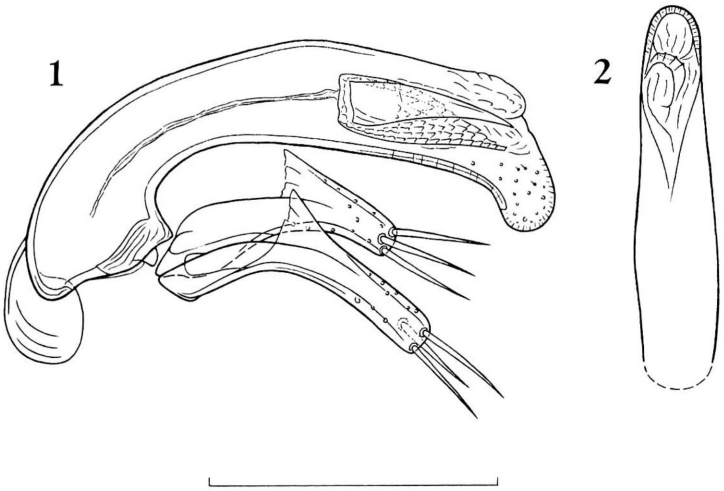
(Figs. 1–2)

Length: 2.65–3.25 mm (from apical margin of clypeus to apices of elytra).

Belonging to the group of *K. quadraticollis* and probably related to *K. intermedius* S. UÉNO (1989 a, p. 112, figs. 5–6; 1990, p. 4) of the Torinoko block of the Yamizo Mountains, but distinguished at first sight from that species by the glabrous body surface, especially elytral intervals, smaller prothorax with narrower base, oval elytra with narrower basal areas and more oblique bases, and different configuration of male genitalia.

Colour dark reddish brown, shiny; palpi, apical halves of antennae, ventral surface of hind body, and legs (at least tarsi) more or less lighter than dorsum. Head as in *K. intermedius*, with antennae usually reaching basal third of elytra. Pronotum a little smaller and more clearly contracted basad than in *K. intermedius*, widest at about five-sevenths from base, with the sides a little more shallowly sinuate at about basal third or a little behind that level; base widely though shallowly emarginate, about as wide as or slightly wider than apex; PW/HW 1.31–1.34 (M 1.32), PW/PL 1.11–1.18 (M 1.15), PW/PA 1.23–1.29 (M 1.26), PW/PB 1.18–1.23 (M 1.22), PB/PA 1.00–1.08 (M 1.04); surface devoid of pubescence, but provided with a longitudinal row of three or four short setae on each side of median line and often with one or two additional ones on each anterior lateral part; meshes of microsculpture coarser and obviously less transverse than in *K. intermedius*; other features as in the latter species. Elytra oval, widest at about three-sevenths from bases, and equally narrowed towards bases and towards apices, with the basal areas obviously narrower than in *K. intermedius*; EW/PW 1.52–1.58 (M 1.55), EL/EW 1.39–1.46 (M 1.42); basal margins more clearly oblique than in *K. intermedius*; shoulders effaced; sides regularly arcuate from humeral angles to slight preapical emargination, and almost conjointly rounded at apices; striae superficial and smooth, becoming finer at the side with the exception of stria 8 which is deeply impressed in apical half, scutellar striole vestigial; apical striole deeply impressed near apex, almost straight or very slightly curved outwards at the anterior part, and usually merging into stria 7 though sometimes joining stria 5; intervals flat, completely glabrous and smooth, apical carina short but prominent; stria 3 with two setiferous dorsal pores at 1/5–1/4 and 3/7–1/2 from base respectively. Ventral surface glabrous and smooth, devoid of pubescence even on prosternum; sternites with normal setae. Legs as in *K. intermedius* though somewhat slenderer.

Male genital organ very small and lightly sclerotized, not unlike that of *K. intermedius* but differing from the latter in many details including the configuration of aedeagal apical lobe and of copulatory pieces. Aedeagus only one-fifth as long as elytra, compressed, only very slightly arcuate at middle, but rather abruptly curved ventrad at both the basal and apical parts; basal orifice small, with the sides only very slightly emarginate; sagittal aileron large and protruding, though hyaline; apical lobe



Figs. 1–2. Male genitalia of *Kurasawatrechus zenbai* S. UÉNO, sp. nov., from Kumakura in Furudono-machi; left lateral view (1), and apical part of aedeagus, dorso-apical view (2).

short, abruptly bent ventrad and poorly sclerotized on the dorsal side, broad and widely rounded at the tip in lateral view, narrow but evenly rounded at the tip in dorsal view; ventral margin almost straight at middle in profile. Copulatory pieces large and elongate, about one-third as long as aedeagus, left piece only slightly shorter and narrower than the right and acuminate at the apex, right piece covered with teeth and scales except for a proximal portion. Styles strongly arcuate, left style much longer than the right and devoid of ventral projection, each bearing three stout setae, of which the median one is inserted on the internal face and the other two at the apex.

Type series. Holotype: ♂, allotype: ♀, 25–VIII–1990, S. UÉNO leg. Paratypes: 3 ♀♀, 27–V–1990, S. ZENBA leg.; 5 ♂♂ (incl. 1 teneral ex.), 25–VIII–1990, S. UÉNO & S. SONE leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Kumakura, 480 m in altitude, in Takabô of Furudono-machi, Fukushima Prefecture, East Japan.

Notes. This new species is unique in the glabrous body surface which is devoid of pubescence even on the elytral intervals and prosternum, but seems to be related to *K. intermedius* of the *quadraticollis* group. From *K. quadraticollis* S. UÉNO (1974, p. 112, figs. 7–9; 1985, p. 87, pl. 16, fig. 18), which occurs in the southern part of the Abukumas, it is more widely different in both the external and genitalic configuration. The type locality of the former species is about 57 km distant to the southwest beyond the deep valley of the Kuji-gawa River from that of *K. zenbai*, while that of the latter is about 60 km distant to the south by west but on the same hill range. Mt. Yamizo-san, the type locality of *K. yamizonis* S. UÉNO (1988 b, p. 108, figs. 2–4;

1990, p. 4, fig. 2), is nearer to Kumakura in Furudono-machi as it lies about 37 km west-southwest of the latter, but *K. yamizonis* belongs to the *eriophorus* group and is radically different from the present species. Further investigations are needed for clarifying the actual distribution of the *quadraticollis* group, especially in the vicinities of Hanazono-san and at the eastern side of the central part of the Abukuma Hills.

All the specimens of the type series of *K. zenbai* were dug out from the upper hypogean zone near the source of a shaded branch stream of the Iritôno-gawa River which flows southeast into the Pacific Ocean. Though the species looks endogean in general appearance, its habitat was, at least in the summer, typically upper hypogean, being 60–120 cm below the surface and just above the bed-rock. It was rather active when exposed and quickly ran about among rock debris coated with soft clay.

要　約

上野俊一：阿武隈山地の中央部におけるメクラチビゴミムシの発見.—— 阿武隈山地の中央部に位置する福島県古殿町高房熊倉から，クラサワメクラチビゴミムシ属の1新種を記載した．この種は地下浅層にすみ，体表のどの部分も細毛におおわれていない点で，これまでに記載されている邦産のどの種とも異なっているが，体形や雄交尾器の形状から判断して，アブクマメクラチビゴミムシ種群に含め，ゼンバメクラチビゴミムシ *Kurasawatrechus zenbai* S. UÉNO と命名した.

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