

## A New *Kurasawatrechus* (Coleoptera, Trechinae) Found in a Tuff Mine at Ôiso, Central Japan<sup>1)</sup>

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Four anophthalmic species of trechine beetles have already been known in the Shônan area and its immediate vicinities, Central Japan. They are: *Trechiamma varians* S. UÉNO (1981, p. 122, figs. 2, 7–8, 11) from the eastern part of the Tanzawa Mountains, *T. pallidior* S. UÉNO (1981, p. 127, figs. 3, 9–10) from the eastern side of the Hakoné Volcanoes, *T. ohruii* S. UÉNO (1972, p. 111, figs. 1–4) from the northeastern part of the Izu Peninsula, and *Kurasawatrechus fujisanus* S. UÉNO (1971, p. 339, figs. 1–8) from the Hakoné Volcanoes (cf. UÉNO, 1978, p. 34). In the present paper, I am going to describe a fifth species, which was discovered in an abandoned adit of a tuff mine on the small isolated hill called Koma-yama of Ôiso at the heart of the Shônan area.

This new species belongs to the genus *Kurasawatrechus* and is related to *K. eriophorus* A. YOSHIDA et S. NOMURA (1952, p. 6, fig. 1; UÉNO, 1952, p. 14, fig. 3), the type-species of the genus, which is widely distributed on the Kwantô Mountains, although Koma-yama is geographically nearer to the easternmost known locality of *K. fujisanus* than to the southernmost one of *K. eriophorus*. The former is the tuff breccia mine called Shiraishijizô-no-ana at the eastern foot of the Hakoné Volcanoes, which is about 22 km distant to the west-southwest from Koma-yama; the latter is an endogean habitat at the Kogé-sawa of Uratakao, which is about 36 km distant to the north by west from the same hill. The former is separated from Koma-yama and its adjacent hills by the lower courses of the Sakawa-gawa River and its alluvium, while the latter is isolated not only by the deep valley of the Sagami-gawa River but also by the Tanzawa Mountains.

As was pointed out in a previous paper of mine (cf. UÉNO, 1981, pp. 130–131), certain anophthalmic trechines occurring in the Shônan area have their close relatives only on the Kwantô Mountains, while others are either closely related to or even identical with the species found in the Fuji area. Of the four species previously described, *Trechiamma varians* and *T. pallidior* belong to the former category, while *T. ohruii* and *Kurasawatrechus fujisanus* fall under the latter. The present new species apparently comes under the former, since its closest relative is known only from the Kwantô Mountains. It is suggested by the present discovery that the Tanzawa Moun-

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tains, which lie between Koma-yama and the Kwantô, probably harbour certain *Kurasawatrechus* of the *eriphorus* complex, though *Trechiana varians* is the only anophthalmic trechine hitherto found there.

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

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*Kurasawatrechus notsui* S. UÉNO, sp. nov.

[Japanese name: Komayama-mekura-chibigomimushi]

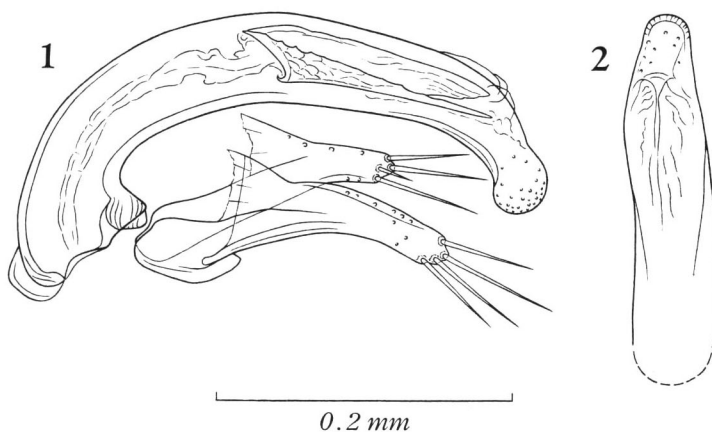
(Figs. 1-2)

Length: 2.35-2.75 mm (from apical margin of clypeus to apices of elytra).

Not unlike *K. fujisanus* in general appearance, but doubtless closer to *K. eriphorus*. From the former, the present species is readily distinguished by the darker coloration, obviously less cordate prothorax with ampler basal area, unshortened 4th elytral stria, and short, broad and strongly curved apical lobe of aedeagus. From the latter, it can be discriminated by the narrower hind body with much less strongly arcuate sides, and shorter and more strongly arcuate aedeagus with ventrally curved apical lobe.

Colour as in *K. eriphorus* or somewhat darker, reddish brown, shiny, with appendages and the ventral surface of hind body yellowish brown. Head as in *K. eriphorus* though the genae are a little more convex; antennae short but a little less stout than in *K. eriphorus*, reaching basal two-sevenths of elytra, with median segments ovate having narrower proximal portions than in *K. eriphorus*. Pronotum less cordate than in *K. eriphorus*, widest at about five-sevenths from base, with the sides more feebly arcuate in front, more shallowly sinuate at about two-sevenths from base and usually less divergent towards hind angles, which are sharp though usually less sharp than in *K. eriphorus*; PW/HW 1.24-1.28 (M 1.26), PW/PL 1.10-1.17 (M 1.15), PW/PA 1.21-1.25 (M 1.22), PW/PB 1.21-1.27 (M 1.24); apex about as wide as or slightly wider than base, PB/PA 0.96-1.01 (M 0.99), with front angles narrower and more acute than in *K. eriphorus*.

Elytra evidently narrower and less convex than in *K. eriphorus*, with the sides much more feebly arcuate from behind shoulders to the level of the apicalmost pore of the marginal umbilicate series and then, rather abruptly narrowed towards separately rounded apices; shoulders more apparent than in *K. eriphorus*; EW/PW 1.48-1.50 (M 1.49), EL/EW 1.44-1.50 (M 1.47); striae more or less shallower than in *K. eriphorus*, usually obsolete at the side except for the apical portion of stria 8, stria 4 complete to its apical end, which forms an anastomosis with that of stria 3; apical striole long, almost straight anteriorly, and directed to the site of stria 7; stria 3 with two setiferous dorsal pores at about basal fourth and about middle; micro-



Figs. 1-2. Male genitalia of *Kurasawatrechus notsui* S. UÉNO, sp. nov., from Tatsuborizawa-no-ana Mine on Koma-yama; left lateral view (1), and apical part of aedeagus, dorso-apical view (2).

sculpture much more irregular than in *K. eriophorus*.

Ventral pubescence and legs as in *K. eriophorus*, though the latter is somewhat shorter.

Male genital organ small and rather lightly sclerotized. Aedeagus only one-fourth as long as elytra, shorter and more strongly arcuate especially at the apical part than in *K. eriophorus*, with the basal part small and strongly curved ventrad; basal orifice small, with the sides moderately emarginate; sagittal aileron small though moderately sclerotized; apical lobe short and broad, rather abruptly curved ventrad, widely rounded at the extremity in dorsal view, roundly dilated in lateral view; ventral margin widely emarginate in profile. Copulatory piece large, nearly a half as long as aedeagus, spatulate in proximal half and sharply bilobed at the apical part. Styles broad, left style obviously larger than the right, each bearing four stout setae at apex; in the holotype, one of the apical setae is much shorter than the remainings on the right style.

*Type-series.* Holotype: ♂, 3-IV-1981, Y. NOTSU leg. (found in a baited trap set by Y. NOTSU on 15-I-1981). Allotype: ♀, 15-I-1981, Y. NOTSU & H. MIYAMA leg. (in a baited trap set by S. UÉNO & H. MIYAMA on 13-XII-1980). Paratypes: 1 ♂ (somewhat teneral), 15-I-1981, Y. NOTSU & H. MIYAMA leg. (in a baited trap set by S. UÉNO & H. MIYAMA on 13-XII-1980); 1 ♂ (teneral), 3-IV-1981, Y. NOTSU leg.; 1 ♂, 29-XI-1981, Y. NOTSU leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

*Type-locality.* Abandoned adit of the tuff mine called Tatsuborizawa-no-ana, on Koma-yama in Ôiso-chô, Kanagawa Prefecture, on the Pacific coast of Central Japan.

*Notes.* The allotype, which is the only female specimen hitherto known, had the prothorax cracked by some natural cause and was healed of the wound before it

was caught by a baited trap. For this reason, its prothorax is somewhat deformed by anomalous enlargement of the anterior part and its right front leg was lost. Its measurements are, therefore, excluded from the calculation of the ratios given in the above description.

Koma-yama, on which lies the type adit of the present species, is a small head only 600 m wide and 170 m high standing at the eastern end of an isolated hill roughly 1.5 km wide and 4 km long. The hill lies at the back of the Town of Ôiso on the Bay of Sagami-wan, and is adjacent to the low southward continuation of the Tanzawa Mountains. Though small, Koma-yama is well known for its beautiful vegetation and is protected as a natural reserve.

In the autumn of 1980, Mr. NOTSU hearing of the existence of an abandoned adit on Koma-yama, went to search for it. Though almost forgotten even by local people, it still remained uncrushed on the northwestern slope at a height of about 120 m. Being small and dug into basic tuff, it did not appear particularly good for a habitat of subterranean beetles, but a pair of the elytra of a trechine beetle, though in a miserable condition, were found sticking to a rubble under the innermost wall. After that, repeated searches for perfect specimens were made, chiefly by Mr. NOTSU and also by other biospeologists including myself, but all obtained were the five specimens listed above. Three of them were caught in baited traps set at the spot where the remains had been found, while the other two were taken one by one from under rubble at the same part of the adit.

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