

A Synopsis of the Genus *Kusumia*
(Coleoptera, Harpalidae)¹⁾

By

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In 1955, the writer has noticed preliminarily that *Kusumia*, which was originally described as a subgenus of *Ryugadous*, should be regarded as an independent genus. This arrangement was drawn mainly from a comparative study of their aedeagal characters. *Kusumia* was then considered to be strictly troglobiontic and to be distributed in two small areas situated on the different sides of the Ohminé mountain range. In the summer of 1957, however, an endogean trechid was found at a higher altitude of the Ohdaigahara mountains and was proved to belong to the same genus. Unfortunately, a single known specimen of this endogean species is a teneral individual, whose cuticle is but imperfectly sclerotized, and the writer has long hesitated in giving it a new scientific name on the basis of such a poor example. Extensive searches for the beetle have been conducted since that time, but all the attempts have been unsuccessful. On the other hand, it seems to be required, both from the taxonomic interest and from the evolutionary view-point of the Japanese cave fauna, to introduce the endogean species into science. The writer has now resolved to describe it as a new species, the description of which will be found in the present paper, together with the descriptions of the cave species.

On the Kii massif, there are several limestone caves which have not been investigated by any biologist up to the present day. Those caves were known among natives in old times, but now the accurate location of them has thoroughly passed from their memories. It seems to be probable that more species or subspecies of *Kusumia* will be found in future, when these 'lost' caves will be relocated and investigated.

Before going further, the writer wishes to express his sincere thanks to Prof. Kenji NAKAMURA for his encouragement. Deep gratitude is also due to Prof. Riozo YOSHII, Mr. Gentaro IMADATÉ and Mr. Naomasa KOBAYASHI for their kind aid rendered at the field works, as well as to Prof. Matsunae TSUDA and Mr. Masahiko YOSHIKAWA for their kindness in placing their valuable specimens at the writer's disposal for study.

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Genus **Kusumia** S. UÉNO.

Ryugadous subgen. *Kusumia* S. UÉNO, 1952, Mushi, Fukuoka, 24, p. 16; type-species: *Ryugadous takahasii* S. UÉNO, 1952. ——— JEANNEL, 1953, Notes Biospéol., 8, pp. 128, 129. *Kusumia*, S. UÉNO, 1955, Mem. Coll. Sci. Univ. Kyoto, (B), 22, p. 44.

Body anophthalmoid; apterous and depigmented; surface wholly pubescent; colour reddish brown.

Head either elongate or wide; frontal furrows not angulate, deep throughout or becoming shallower behind middle; eyes absent, the trace of them visible in the endogean species; vertex and genae always pubescent; mentum free, not fused with submentum, which is sexsetose; mentum tooth more or less bifid at the tip in the cavernicolous species, but simply triangular in *K. yoshikawai*; ligula rounded at apex and octosetose, two median setae long; paraglossae narrow, extending well beyond ligula; antennae filiform.

Pronotum cordate or elongate-cordate, convex; lateral sides narrowly but entirely bordered and distinctly sinuate behind, with both lateral and postangular setae, the latter of which is always inserted some distance before hind angle; hind angles sharp, without carina; median line distinct, widening near base and not reaching apex; basal transverse impression continuous and close to basal border, provided with a longitudinal fovea on each side of median line and merging on each side into basal fovea.

Elytra oblong-ovate and convex, with a transverse furrow on basal peduncle; basal area more or less depressed; no basal carina; shoulders either tuberculate or effaced; prehumeral borders oblique and complete to the base of stria 5; lateral sides rather widely explanate and reflexed; striae superficial, scutellar striole present though short; apical striole relatively short, joining or nearly joining stria 5 (rarely joining stria 7 on one elytron); apical carina obtuse; stria 3 with a single setiferous dorsal pore near base in the group of *K. takahasii* and without dorsal pore in *K. yoshikawai*; stria 5 with two setiferous dorsal pores in *K. yoshikawai*, usually with three dorsal pores in the group of *K. takahasii* (refer also to the paragraph of *K. takahasii tsudai*); pre-apical pore situated at the meeting point of striae 2 and 3; humeral group of umbilicate pores not aggregated, first three pores ranged nearly equidistantly and adjoining marginal gutter, but pore 4 widely distant from the other three, the distance between pores 2 and 3 often smaller than that between pores 1 and 2.

Ventral surface pubescent; anal sternite with two setae on each side in ♂, usually with three setae on each side in ♀. Legs more or less slender; protibiae entirely pubescent and not externally grooved; tarsal segment 4 with a long ventral apophysis in pro- and mesotarsi; in ♂ protarsal segments 1 and 2 widely dilated, inwardly produced at apices and furnished beneath with sexual adhesive appendages.

Male genital organ well chitinized. Aedeagus robust, arcuate and attenuated

towards apex, which is pointed in profile and rounded in dorsal view; sagittal aileron either present or absent; lateral sides of basal orifice not deeply emarginate. Inner sac scaly, with neither copulatory piece nor well chitinized teeth. Each style usually with four setae at apex, though the number of them is variable according to individuals.

Range: Central part of the Kii Peninsula in Honshu.

The genus *Kusumia* resembles *Nipponotrechus* in many respects, but is different from the latter primarily in the pubescent protibiae and the absence of the ventral hook of aedeagal apex. The elytral chaetotaxy of the former also makes a wide contrast with that of the latter (*cf.* UÉNO, 1957, Mem. Coll. Sci. Univ. Kyoto, (B), 24, p. 193). *Kusumia* may be related, though rather distantly, to *Ryugadous*. These two genera are, however, discriminated from each other by two important features: 1) the inner sac is armed with a large copulatory piece in *Ryugadous* but is inerm in *Kusumia*, 2) the fifth elytral stria has only one setiferous dorsal pore in *Ryugadous*, while it has two or three dorsal pores in *Kusumia*. Besides, the appearance is markedly different between the two. They may be the derivatives of a common ancestral form, which may have passed a long endogean life after isolated on either side of the Kii Channel. That the colonization in caves by their ancestors may have been performed through endogean life seems to be suggested by the discovery of an endogean form (*K. yoshikawai*) at an altitude of about 1,500 m. At lower elevations (150–250 m for *Ryugadous* and 350–900 m for *Kusumia*), the members of both the genera are strictly confined in caves.

Key to the species and the subspecies

- 1 (4) Elytral stria 3 with one, stria 5 usually with three dorsal pores; mentum tooth more or less bifid; head elongate, pronotum longer than wide; (group of *K. takahashii*; cavernicolous).
- 2 (3) Elytra smaller (less than twice as wide as pronotum), with shoulders nearly effaced and not forming humeral tubercles; aedeagus slenderer in basal half, with the apical part not bent ventrally; sagittal aileron present; smaller species (4.6–5.5 mm).....*K. takahashii* (S. UÉNO).
- 2a (2b) Prehumeral borders less oblique; in profile, aedeagus regularly arcuate and gradually attenuated towards apex, which is narrowly produced; (Fudô-no-iwaya Cave and Suishô-no-iwaya Cave)
..... *K. takahashii takahashii* s. str.
- 2b (2a) Prehumeral borders more oblique; in profile, aedeagus rather suddenly bent at middle, nearly parallel-sided apically and rather suddenly attenuated towards apex, which is short and forms a larger angle; (Menfudô-no-iwaya Cave and Kômorino-iwaya Cave)
.....*K. takahashii tsudai* subsp. nov.

- 3 (2) Elytra larger (much more than twice as wide as pronotum), with shoulders prominent and forming on each side a humeral tubercle; aedeagus thicker in basal half, with the apical part bent ventrally; no sagittal aileron; larger species (5.7 mm); (Tennin-no-iwaya Cave).....
 *K. yosiana* sp. nov.
- 4 (1) Elytral stria 5 with two dorsal pores, no dorsal pore on stria 3; mentum tooth simple; head wide, pronotum as wide as long; (group of *K. yoshikawai*; endogean)..... *K. yoshikawai* sp. nov.

***Kusumia takahasii* (S. UÉNO).**

Ryugadous (Kusumia) takahasii S. UÉNO, 1952, Mushi, Fukuoka, 24, p. 16, pl. 2, fig. 2; type-locality: Fudô-no-iwaya Cave at Kashiwagi in Nara Pref.

Kusumia takahasii, S. UÉNO, 1953, Shin Konchû, Tokyo, 6 (11), p. 45, fig. 2.

Length: 4.9–5.5 mm (from front margin of clypeus to anal end).

Body elongate, with large hind body. Colour reddish brown, shiny, translucent when alive; palpi pale; scape and apical segments of antennae, epipleura, apical sternites and legs pale reddish brown or yellowish brown.

Head elongate, with frontal furrows deeply impressed in front but becoming shallower behind; supraorbital areas and front convex; microsculpture distinct, formed mostly by wide meshes; eyes degenerated; genae slightly convex; neck constriction shallow; mandibles slender and slightly hooked at apices; mentum tooth porrect, slightly bifid or at least emarginate at the tip; palpi slender; antennae long and slender, extending slightly beyond the middle of elytra and somewhat longer in ♂ than in ♀; antennal segment 2 about four-sevenths as long as segment 3, which is a little longer than segment 4.

Pronotum elongate-cordate and convex, 1.36–1.41 times wider than head (mean 1.39), 1.03–1.08 times longer than wide (mean 1.07), widest at about five-sevenths from base; the ratio of the greatest width to the width of apex 1.39–1.41 (mean 1.40), that to the width of base 1.44–1.51 (mean 1.48); lateral sides moderately rounded in front, widely sinuate at about one-fifth from base, with marginal gutters narrow throughout; apex nearly straight or slightly emarginate on each side, 1.02–1.08 times wider than base (mean 1.06), which is widely emarginate; front angles slightly advanced and narrowly rounded; hind angles sharp, moderately projecting both outwards and backwards and sometimes forming a denticle at the tip; apical transverse impression vague, more or less wrinkled; basal transverse impression fairly deep; basal foveae relatively small but deep, more or less extending anteriorly along the side border; basal area longitudinally strigose; microsculpture formed mostly by fine transverse lines and partly by wide meshes.

Elytra oblong-ovate and well convex, with the basal area evidently depressed, 1.90–1.97 times wider than pronotum (mean 1.94), 1.42–1.47 times longer than wide (mean 1.45), widest at a little behind middle; shoulders widely

rounded or nearly effaced; prehumeral borders long and oblique, nearly straight or very slightly emarginate; lateral sides nearly straight or slightly emarginate behind shoulders, well rounded at middle and hardly emarginate before apices, which are rounded or subangulate according to individuals; striae superficial but entire, inner striae deeper than the outer, striae 1-5 somewhat deepening near base, stria 8 becoming deeper behind the middle group of marginal umbilicate series; apical striole relatively short, fairly deep and curved; intervals flat; stria 3 with a single dorsal pore at about one-eighth from base; stria 5 with three dorsal pores at about one-seventh, two-sevenths to three-eighths and five-ninths to two-thirds from base respectively; microsculpture composed of fine transverse lines.

Legs long and slender; protibiae slightly bowed; tarsi thin.

Male genital organ fairly large. Aedeagus regularly arcuate and gradually attenuated towards apex, with the dorsal side semicircularly rounded in profile; basal part not very large, with a small sagittal aileron; viewed laterally, apical part narrowly produced and pointed at the extremity; ventral side widely concave at middle. Each style usually with four apical setae; in one of the specimens examined, right style has only three apical setae.

Type-specimen: Allotopotype: ♂ (Fudô-no-iwaya Cave, 28-IV-1952, collected by S. UÉNO).

Further specimens examined: 4 ♂♂, 1 ♀ (Fudô-no-iwaya Cave, 28, 30-IV-1952, by S. UÉNO and R. YOSII); 3 ♂♂, 2 ♀♀ (Suishô-no-iwaya Cave, 29-IV-1952, by S. UÉNO).

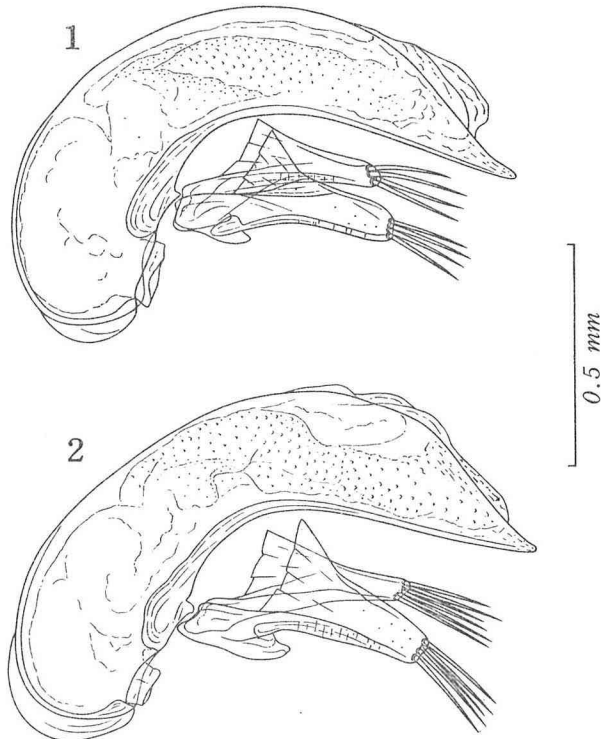
All the specimens examined, including the allotype, are deposited in the writer's collection.

Localities: A limestone cave called "Fudô-no-iwaya", at Kashiwagi, and a limestone cave called "Suishô-no-iwaya", at Kitawada, both in Kawakami-mura, Nara Prefecture, on the central massif of the Kii Peninsula.

The specimens of the Suishô-no-iwaya population are somewhat different from the topotypical examples. They are relatively small (4.6-5.2 mm in body length), having the pronotum equally contracted both in front and behind and the elytral striae a little deeper. In view of the great similarity of aedeagal structure between the two populations, however, it seems best to regard them as the same geographical race. For the convenience of future studies, the indices of the various body parts in the Suishô-no-iwaya population will be given below.

Pronotum 1.40-1.45 times wider than head (mean 1.42), 1.05-1.12 times longer than wide (mean 1.07), widest at about five-sevenths from base; the ratio of the greatest width to the width of apex 1.37-1.48 (mean 1.43), that to the width of base 1.37-1.49 (mean 1.44); the ratio of the width of apex to the width of base 0.96-1.04 (mean 1.01). Elytra 1.86-1.95 times wider than pronotum (mean 1.90), 1.45-1.48 times longer than wide (mean 1.47), widest at a little behind middle.

Fudō-no-iwaya Cave is commercialized, lying at about 500 m south of the village of Kashiwagi on the left side of the Yoshino-gawa River. Its first gallery is rather dry and poor in organic matters. A crawl opening on the right side of this gallery leads into a more spacious room, through which runs an underground torrent. According to the note of Mr. Kusumi SİMIZU, the writer reported previously (1952, *loc. cit.*) that the cave was oligotrophic and poor in the fauna. Really, however, the inner parts of this cave are rich in



Figs. 1-2. Male genital organ; left lateral view.—1. *Kusumia takahasii takahasii* (S. UÉNO), of Fudō-no-iwaya Cave.—2. *K. takahasii tsudai* subsp. nov., of Menfudō-no-iwaya Cave.

wet rotten logs, among which are found many cave animals including *Kusumia takahasii*.

Suishō-no-iwaya Cave is situated at the northeastern outskirts of the village of Kitawada, at about 1.6 km north of Fudō-no-iwaya Cave and on the right side of the Yoshino-gawa River. It is developed almost horizontally and is damp throughout. The beetle was found under stones and rotten logs from near the entrance to the innermost.

***Kusumia takahashii tsudai* S. UÉNO, subsp. nov.**

Length: 4.6-5.5 mm (from front margin of clypeus to anal end).

Very closely allied to the nominate subspecies and rather difficult to distinguish from the latter on the basis of external morphology. The genital differentiation between them, however, seems to verify the subspecific value of the combination of minor external differences.

Antennae a little shorter than those in the nominate subspecies, reaching the middle of elytra in ♂ and basal four-ninths of elytra in ♀, with segment 2 about a half as long as segment 3. Pronotum 1.36-1.44 times wider than head (mean 1.40), 1.04-1.09 times longer than wide (mean 1.07), widest at about five-sevenths from base; the ratio of the greatest width to the width of apex 1.33-1.41 (mean 1.38), that to the width of base 1.41-1.50 (mean 1.46); lateral sides more widely sinuate at one-fifth to one-fourth from base; the ratio of the width of apex to the width of base 1.05-1.07 (mean 1.06).

Elytra a little more strongly convex than those in the nominate subspecies, with lateral sides more regularly rounded behind middle; 1.87-1.96 times wider than pronotum (mean 1.92), 1.42-1.48 times longer than wide (mean 1.45), widest at a little behind middle; shoulders usually less obvious; prehumeral borders more oblique; striae somewhat deeper than those in the Fudô-no-iwaya population of the nominate subspecies, but similar to those in the Suishô-no-iwaya population of the same; stria 3 with a single dorsal pore at one-eighth to one-seventh from base (usually at about one-seventh from base), stria 5 usually with three dorsal pores located at one-seventh to one-sixth, two-sevenths to three-sevenths and four-sevenths to two-thirds from base respectively; the number of the setiferous dorsal pores on stria 5 variable from two to four on one elytron.

Viewed laterally, aedeagus less regularly arcuate than that of the nominate subspecies, nearly straight at the basal part, rather wide behind middle and rather suddenly attenuated towards apex, which forms a larger angle; sagittal aileron well developed. Each style provided usually with four apical setae; the number of these setae varies as many as to six according to individuals.

Type-specimens: Holotype: ♂, allotype: ♀ (Menfudô-no-iwaya Cave, 28-VII-1955, collected by S. UÉNO and N. KOBAYASHI). Paratypes: 1♂ (Menfudô-no-iwaya Cave, 2-VIII-1950, by M. TSUDA); 1♂, 5♀♀ (Menfudô-no-iwaya Cave, 14-X-1953, by S. UÉNO and G. IMADATÉ); 1♂, 1♀ (Menfudô-no-iwaya Cave, 28-VII-1955, by S. UÉNO and N. KOBAYASHI); 1♂ (Kômorino-iwaya Cave, 29-VII-1955, by S. UÉNO).

All the type-specimens are deposited in the writer's collection.

Type-localities: Two limestone caves called "Menfudô-no-iwaya" and "Kômorino-iwaya", at Dorogawa in Tenkawa-mura, Nara Prefecture, on the central massif of the Kii Peninsula.

The present new subspecies is isolated at the western foot of the Ohminé mountain range, whereas the nominate subspecies is localized at the eastern foot of the range. The distance between the caves Fudô-no-iwaya and Menfudô-no-iwaya measures about 12 km in a bee-line. Menfudô-no-iwaya Cave, which is commercialized and illuminated with electric lamps, lies in the western suburbs of the village of Dorogawa and on the right side of the Ten-no-kawa River. It opens on a shrubby hillside and consists of double loop passages. The beetle was found under stones in wet places

Kômorino-iwaya Cave is situated at about 1.5 km east of Menfudô-no-iwaya Cave and on the right side of the Ten-no-kawa River. The entrance is open on a large outcrop of limestone just above the water of the river. It is a damp oligotrophic cave and is scarce of cave animals. The unique known specimen of the beetle was found beneath a stone on wet silt near the innermost.

***Kusumia yosiana* S. UÉNO, sp. nov.**

Kusumia yosiana S. UÉNO, 1953 (in litt.), Shin Konchû, Tokyo, 6 (11), p. 45.

Closely allied to *K. takahashii*, but readily discriminated from the latter by its larger size, larger hind body, tuberculate shoulders of elytra and the peculiar form of aedeagus.

Length: 5.7 mm (from front margin of clypeus to anal end).

Head similar to that of *K. takahashii*, but the meshes of microsculpture more transverse than in the latter; mentum tooth elongate, narrowly truncated and slightly emarginate at the tip; antennae relatively shorter, reaching basal four-ninths of elytra in ♂ and basal two-fifths of elytra in ♀, with segment 2 about a half as long as segment 3.

Pronotum a little narrower and less contracted both in front and behind than that in *K. takahashii*; 1.36 times wider than head and 1.13 times longer than wide in the holotype, 1.31 times wider than head and 1.12 times longer than wide in the allotype, widest at about five-sevenths from base; the ratio of the greatest width to the width of apex 1.34 in the holotype and 1.36 in the allotype, that to the width of base 1.34 in the holotype and 1.39 in the allotype; lateral sides gently rounded in front, distinctly sinuate at about one-fourth from base; apex slightly but widely emarginate, nearly as wide as base (the ratio of the width of apex to the width of base 1.00 in the holotype and 1.02 in the allotype); front angles moderately advanced and subangulate, though narrowly rounded at the tips; the trace of postangular carina detectable in the holotype.

Elytra obviously larger than those in *K. takahashii*, well convex though evidently depressed on basal area; 2.18 times wider than pronotum and 1.44 times longer than wide in the holotype, 2.09 times wider than pronotum and 1.42 times longer than wide in the allotype, widest at a little behind middle; shoulders prominent and forming on each side a remarkable humeral tubercle; prehumeral borders much less oblique than those in *K. takahashii takahashii*,

nearly straight or very slightly emarginate; lateral sides well rounded as in *K. takahashii tsudai*, with marginal gutters somewhat narrower; apex rounded; striae similar to those in *K. takahashii tsudai*; scutellar striole very short; apical striole short, deep and arcuate; stria 3 with one dorsal pore at about one-ninth from base (or a little behind that level), stria 5 with three dorsal pores at one-eighth to one-seventh, one-fourth to three-eighths and three-fifths to two-thirds from base respectively.

Aedeagus robust, arcuate, wide at middle and rather suddenly tapering towards apex, with the basal part remarkably large; viewed laterally, apical beak narrowly prolonged and bent towards the ventral side; viewed obliquely, apical part flattened and rounded at apex; sagittal aileron absent; ventral side widely concave. Inner sac scaly but without chitinized teeth. Styles relatively narrow, each provided with four setae at apex.

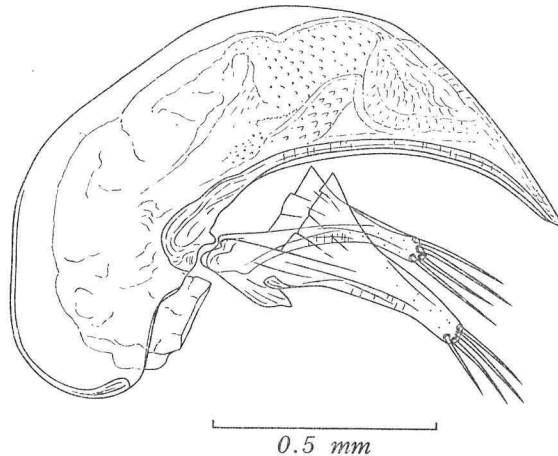


Fig. 3. Male genital organ of *Kusumia yosiihana* sp. nov., of Tennin-no-iwaya Cave; left lateral view.

Type-specimens: Holotype: ♂, allotype: ♀ (30-IV-1952, collected by S. UENO and preserved in his collection).

Type-locality: A limestone cave called "Tennin-no-iwaya", at Shirakawado in Kawakami-mura, Nara Prefecture, on the central massif of the Kii Peninsula.

Tennin-no-iwaya Cave lies in the village of Shirakawado on the left side of the Yoshino-gawa River. Its position is about 1.1 km NW of Suishō-no-iwaya Cave and about 2.3 km NNW of Fudō-no-iwaya Cave. Small as it is, the cave contains an interesting fauna, which, however, may be seen only in the wet seasons. During the dry months, most of the inhabitants disappear into some inaccessible parts and cannot be obtained. The present new trechid was taken

only once on the writer's first visit. It was found running about on the muddy floor near a small pool at the innermost.

***Kusumia yoshikawai* S. UÉNO, sp. nov.**

Length: 4.8 mm (from front margin of clypeus to anal end).

Body elongate; surface covered with long suberect pubescence. Mature colour unknown; in the holotype (callow), colour pale yellowish brown, with mandibles reddish brown.

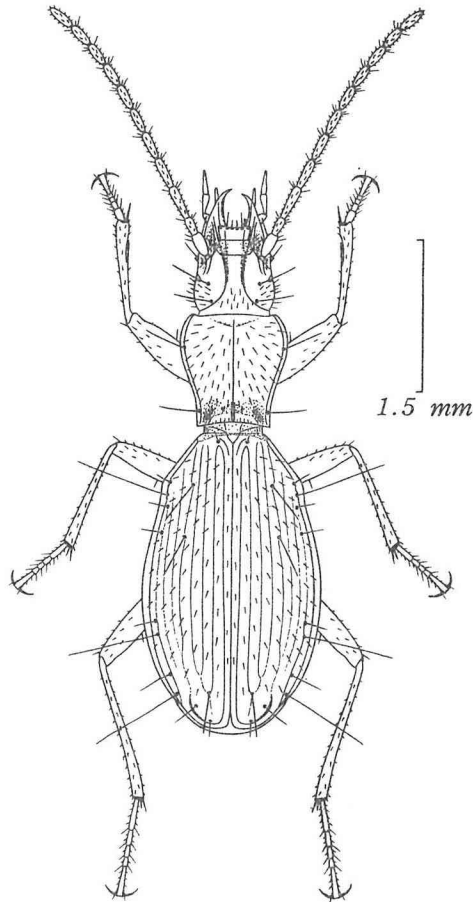


Fig. 4. *Kusumia yoshikawai* sp. nov., ♀, of Sanzukôchi on Mt. Ohdaigahara; restored from a teneral specimen.

Head wide, with wide neck and gently convex genae; frontal furrows deep, entire and moderately curved; supraorbital areas and front convex; microsculpture distinct, composed mostly of fine transverse lines and partly of reticulation; trace of eyes visible on each side as a small patch situated at a little behind the insertion of each antenna; neck constriction deeper than in the cavernicolous species; mandibles relatively stout, sharply hooked at apices; mentum tooth porrect and simply triangular; palpi slender; antennae fairly stout, reaching basal four-ninths of elytra, with segment 2 about five-ninths as long as segment 3, which is a little longer than segment 4.

Pronotum cordate and convex, 1.34 times wider than head and as wide as long (the ratio of the width to the length 1.00), widest at about three-fourths from base; the ratio of the greatest width to the width of apex 1.36, that to the width of base 1.48; lateral sides gently rounded in front, rather weakly sinuate at about one-sixth from base, with marginal gutters narrow throughout; apex slightly emarginate on each side, 1.09 times wider than base, which is widely emarginate; front angles a little advanced and rounded at the tips; hind angles sharp, projecting hardly outwards but moderately backwards; apical transverse impression nearly obsolete, vaguely wrinkled; basal transverse impression and basal foveae fairly deep; microsculpture composed of fine transverse lines.

Elytra²⁾ oblong-ovate and convex, about 1.65 times wider than pronotum, longer than wide in a same proportion, widest at a little behind middle; shoulders distinct though rounded; prehumeral borders very oblique; lateral sides slightly emarginate behind shoulders, gently rounded at middle and slightly emarginate again before apices which are rounded; striae superficial and probably similar to those in *K. takahasii*; scutellar striole short; apical striole relatively short, fairly deep and moderately curved; stria 3 without dorsal pore, stria 5 with two setiferous dorsal pores located at about one-sixth and one-third from base respectively; microsculpture formed by fine transverse lines.

Legs relatively short and stout (in comparison with those of the cave species).

Male unknown.

Type-specimen: Holotype: ♀ (29-VII-1957, collected by M. YOSHIKAWA and preserved in UENO's collection).

Type-locality: Sanzukōchi on Mt. Ohdaigahara, in Nara Prefecture, on the central massif of the Kii Peninsula.

As mentioned before, the writer was forced to describe this new species

2) Owing to the extreme immaturity of the holotype, it was impossible to prepare a detailed description of the elytra, even though the specimen was examined in a rehydrated condition.

on the basis of one teneral female. It was rehydrated with the aid of heated 50% acetic acid, then was mounted in lactic acid and was examined by using a binocular microscope. The specimen is, however, so teneral that the writer could not ascertain the accurate state of some features, especially of the striation on elytra. It is highly desirable to revise the description given above when fully sclerotized individuals will be obtained.

The type-specimen of this beetle was found under a stone on the dried bed of a mountain stream, which flowed through a deciduous forest. The place is situated at about 13 km southeast of Fudô-no-iwaya Cave in a bee-line and at an elevation of about 1,500 m. Despite the collecting data of the example, this new species is doubtlessly an endogean inhabitant, whose appearance onto the surface of the earth may be quite exceptional. Its slender body form and relatively short appendages make a decided contrast with those of the cave inhabitants, in which the fore-body is much narrower than the hind body and the appendages are long and slender.