

A New Upper Hypogean *Trechiana* (Coleoptera, Trechinae)
from near the Southwestern Corner of
Hyôgo Prefecture, West Japan

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Abstract A new anophthalmic species of the trechine genus *Trechiana* is described from the upper hypogean zone of the Seiban Hills near the southwestern corner of Hyôgo Prefecture, West Japan. It belongs to the *fujitai* complex of the group of *Trechiana oni* and seems closest to *T. crassilobatus* S. UÉNO, but is readily recognized on the longitudinally carinate venter of the aedeagus. For this reason, a new name, *Trechiana carinatus* is given to it.

In the present paper, we are going to describe a new anophthalmic trechine beetle of the genus *Trechiana* recently discovered by one of us (MORI) at two localities on the Seiban Hills near the southwestern corner of Hyôgo Prefecture, West Japan. Both the localities were visited by UÉNO nearly twenty years ago, on 19 April 1981, with four friends, NISHIKAWA, NOTO, K. MORI and WAKANO, for searching for additional specimens of a *Stygiotrechus*, which had theretofore been known from only a female collected by H. ISHIDA on 20 May 1973 on Mt. Minô-san, one of the two localities of the *Trechiana* to be dealt with in this article.

Since there were several abandoned mine adits of manganese mines in the area concerned, their investigations were targeted both to those mine adits and to gullies in which plausible habitats of endogean or upper hypogean trechine beetles could be found. Unfortunately, neither additional specimens of the *Stygiotrechus* nor any other anophthalmic trechines were obtained by them, probably because they were unable to locate favourable collecting sites. It was therefore most unexpected that an anophthalmic species of *Trechiana* did occur in the upper hypogean zone of a gully only 1–2 km distant from the mine adits previously investigated.

After a close examination, it has become apparent that the specimens newly discovered belongs to the *fujitai* complex of the group of *Trechiana oni* and seems to be a relative of *T. crassilobatus* S. UENO (1977, p. 157, figs. 1–3, 1985 a, p. 73, pl. 14, fig. 8, 1985 b, pp. 168, 175), which occurs in the upper hypogean zone and mine adits on the southeastern hills of the Bantan Highlands more than 20 km distant to the northeast beyond the Ibo-gawa Valley from the eastern known locality of the present trechine. Though the Seiban Hills are nearer, both geographically and topographically, to Funakoshi-yama, the type locality of *T. fujitai* S. UENO (1969, p. 779, fig. 1, 1985 b, pp. 167, 170), there is a wider gap in genitalic configuration between the Seiban insect and the Funakoshi-yama one. Anyway, the former differs from all the other known species of the *fujitai* complex in the possession of a well developed ventral carina on the median part of the aedeagus. It will be named *Trechiana carinatus*, a description of which will be given in the following lines. The abbreviations used herein are the same as those explained in previous papers of UENO's.

We wish to express our thanks to Dr. Yoshiaki NISHIKAWA, Messrs. Akira NOTO, Kazuo MORI and Shigeru WAKANO for their collaboration in searching for eyeless trechine beetles on the Seiban Hills.

Trechiana (s. str.) *carinatus* S. UENO et M. MORI, sp. nov.

(Figs. 1–3)

Length: 4.75–5.65 mm (from apical margin of clypeus to apices of elytra).

Related to *T. crassilobatus* S. UENO, but smaller on an average and usually lighter in colour, usually with relatively broad and less convex elytra more clearly striate at the sides. Strikingly different from the latter and all the other species belonging to the *fujitai* complex in the carinate venter of the median part of aedeagus, the apical end of the carina being protrudent and subangulate.

Colour more or less lighter than in *T. crassilobatus*, with paler legs. Head as in *T. crassilobatus*, but the genae are a little less convex at the posterior parts; antennae usually reaching basal three-fifths of elytra. Pronotum also similar to that of *T. crassilobatus*, but a little more transverse on an average, less convex on dorsum, and a little less contracted at the apex, widest at about five-sevenths from base, with the sides more regularly arcuate to front angles before the middle; PW/HW 1.40–1.47 (M 1.43), PW/PL 1.10–1.18 (M 1.13), PW/PA 1.40–1.44 (M 1.42), PW/PB 1.39–1.48 (M 1.44), PB/PA 0.97–1.04 (M 0.99). Elytra a little broader and shorter on an average and less convex on dorsum than in *T. crassilobatus*, widest at about middle and equally narrowed in front and behind, with the apices a little more widely rounded and bearing a small obtuse re-entrant angle at suture; EW/PW 1.67–1.84 (M 1.77), EL/PL 2.84–3.07 (M 2.93), EL/EW 1.45–1.49 (M 1.47); striae entire, more distinctly impressed at the side than in *T. crassilobatus*, scutellar and apical striae as in the latter species; no setiferous dorsal pore on stria 3; two setiferous dorsal pores present on stria 5 at 1/7–1/6 and about 5/9 from base, respectively; preapical pore as in *T. crassilobatus*.

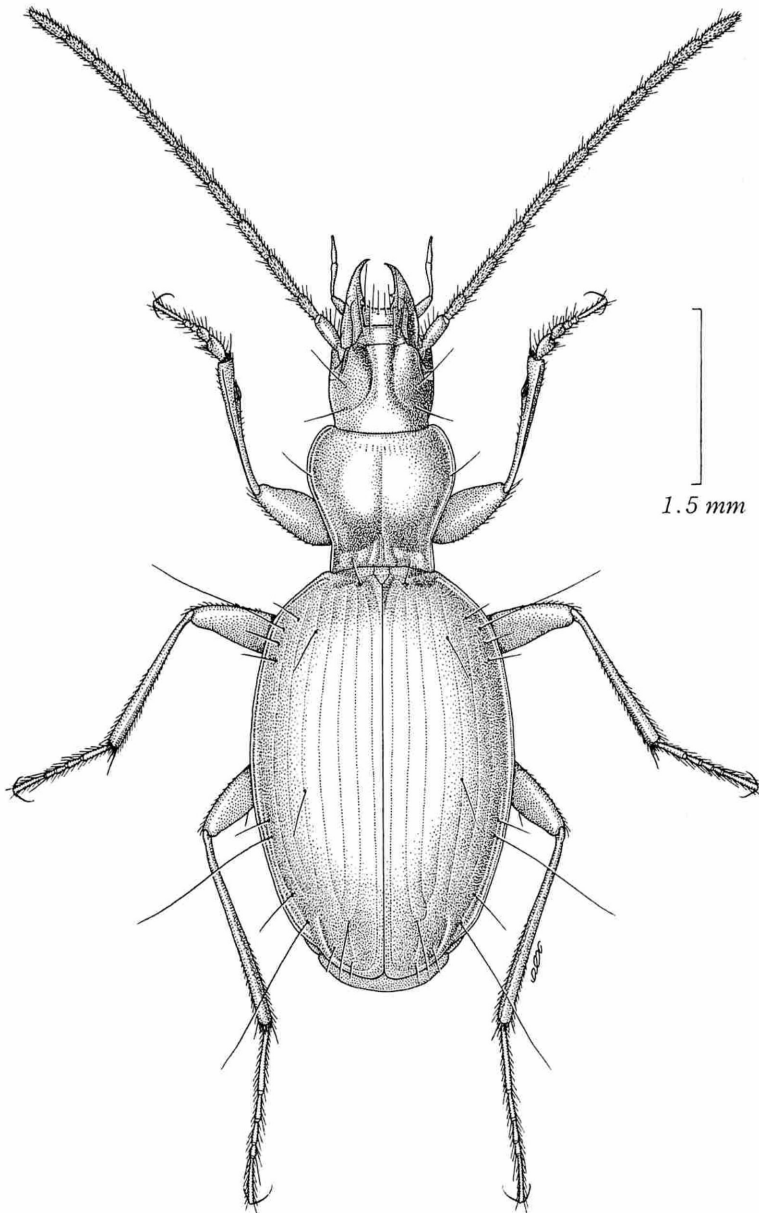
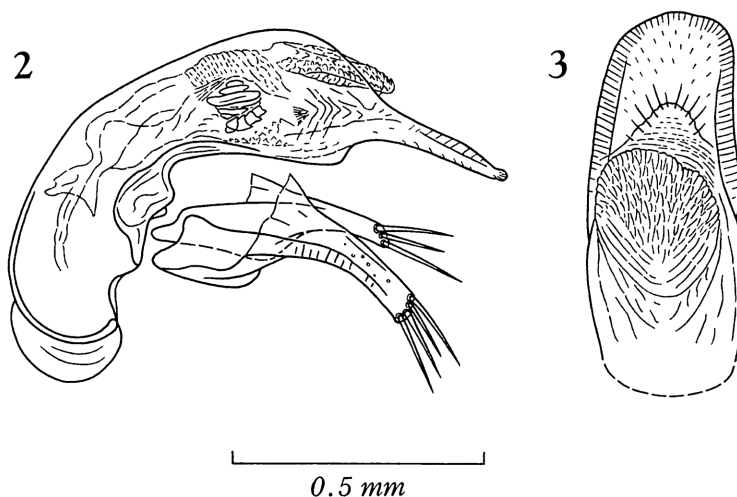


Fig. 1. *Trechiana* (s. str.) *carinatus* S. UENO et M. MORI, sp. nov., ♂, from Kamiakisato in Kōzuki-chō.

Ventral surface and legs as in *T. crassilobatus*, though the legs are somewhat less stout.

Male genital organ somewhat smaller and less heavily sclerotized than in *T. crassilobatus*, basically similar, inclusive of the endophallic structure, to that of the latter



Figs. 2–3. Male genitalia of *Trechiana* (s. str.) *carinatus* S. UENO et M. MORI, sp. nov., from Kamiakisato in Kôzuki-chô; left lateral view (2), and apical part of aedeagus, dorso-apical view (3).

species, but the aedeagal apical lobe is more flattened and more widely rounded at the sides of apical truncature, and the aedeagal venter bears a median carina behind the middle, which is protrudent and subangulate at the apical end. Aedeagus two-sevenths as long as elytra, with elongate basal part, short wide median part and long, wide and flattened apical lobe, the second one of which is high and laterally bulged, exposing the membranous inner sac on whole dorsum; basal part strongly bent ventrad, with small basal orifice deeply emarginate at the sides and large hyaline sagittal aileron; median part longitudinally carinate on the ventral side, the carina becoming higher apicad and subangulate at the end in lateral view; viewed dorsally, apical lobe very broad and nearly parallel-sided though very slightly narrowed towards apex, very slightly inclined to the left, and widely subtruncate at the extremity, whose central portion is indistinctly tuberculate, with lateral angles of the apical truncature rounded, more widely at the right side than at the left; viewed laterally, apical lobe thin and straight, indistinctly tuberculate at the extremity; median part dilated towards apical orifice in profile. Inner armature as in *T. crassilobatus*, but the dorso-apical teeth-patch is more compact and the left apical patch of spinules is much smaller. Styles slenderer than in *T. crassilobatus*, left style being larger and longer than the right, each bearing three or four apical setae, which are relatively short though of different length.

Type series. Holotype: ♂, 16-V-1999, M. MORI leg. Allotype: ♀, 4-VII-1999, M. MORI leg. Paratypes: 1♂, 1♀, 16-V-1999, M. MORI leg.; 1♂, 19-IX-1999, M. MORI leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Kamiakisato, 150 m in altitude, in Kôzuki-chô of Hyôgo Prefecture, western Honshu, West Japan.

Additional specimens examined. 1♂, Mt. Minô-san, 300 m alt., Aioi-shi, Hyôgo Pref., 3–VII–1999, M. MORI leg.; 1♂, same locality, 23–X–1999, M. MORI leg. (NSMT).

Notes. Judging from the basic similarity of male genitalia, the present new species is doubtless closest to *T. crassilobatus*, though there is a decisive discrepancy between the two trechines as was pointed out in the description given above. A remarkable ventral carina of the aedeagus has been known in *T. cuspidatus* S. UENO (1985 b, pp. 168, 173, figs. 5–6), which was found in an abandoned mine adit in Yabu-chô, more than 50 km distant to the north-northeast from Mt. Minô-san, the eastern known locality of the present species, but the mode of the carina and the configuration of the aedeagal apical lobe are markedly different in that species.

The two specimens of a *Trechiana* from Mt. Minô-san recorded above seem conspecific with the type series from Kamiakisato, though slight differences are observed between them. In the former, 5.20–5.80 mm in the length of body, the elytra are somewhat longer and the ventral carina of the aedeagus is lower and less prominent. Besides, the aedeagal apical lobe is slightly arcuate ventrad in one of the two specimens examined. However, they are identical with the type specimens in all the other respects, and cannot be discriminated from the latter even as a subspecies. The standard ratios of body parts in the Minô-san specimens are as follows: PW/HW 1.43–1.48, PW/PL 1.09–1.11, PW/PA 1.44–1.48, PW/PB 1.45–1.48, PB/PA 0.99–1.01, EW/PW 1.63–1.74, EL/PL 2.77–2.93, EL/EW 1.51–1.57.

The type population of *T. carinatus* is found in a gully at the right side of the Aki-sato-gawa, a tributary of the Chikusa-gawa River. Only a small number of specimens have been dug out from colluvia deposited at the right side of the gully. As was delineated in the introduction of this paper, no other habitats of the beetle have been located in the nearby places, even in abandoned mine adits. The Minô-san specimens were dug out from a colluvium in a gully on the southeastern slope of the mountain, 14.7 km distant to the east-southeast in a bee-line from the type locality at Kamiakisato. The trechine beetle seems rarer here, since only two males have so far been collected on two different occasions.

要 約

上野俊一・森 正人：兵庫県南西部で見つかった地下浅層性メクラチビゴミムシの1新種。—— 兵庫県南西部からは、これまでメクラチビゴミムシ類の正式に記録されたことがなかった。しかし1999年になって、西播山地の2カ所、上月町上秋里と相生市の三濃山で盲目のナガチビゴミムシの一種が発見され、精査の結果トノミネメクラチビゴミムシ *Trechiana crassilobatus* S. UENOに近縁の新種であることがわかったので、コウヅキメクラチビゴミムシ *Trechiana* (s. str.) *carinatus* S. UENO et M. MORIという新名を与えて、この論文に記載した。雄交尾器中央片の腹面にいちじるしい隆起をもつことが、この新種のもっとも顕著な特徴である。なお、上記の2個体群のあいだには多少の差異が認められるが、亜種を区分するほどのものではなく、検視標本も多くはないので、ここでは同一種内のわずかな地理的変異とみなした。

References

- UÉNO, S.-I., 1969. A new endogean *Trechiana* (Coleoptera, Trechinae) from western Honshu, Japan. *Bull. natn. Sci. Mus., Tokyo*, **12**: 779–782.
- 1977. A new anophthalmic *Trechiana* (Coleoptera, Trechinae) from copper mines in western Honshu, Japan. *Ibid.*, (A), **3**: 157–161.
- 1985 a. Carabidae (Nebriinae, Elaphrinae, Loricarinae, Scaritinae, Broscinae, Trechinae). In UÉNO, S.-I., Y. KUROSAWA & M. SATÔ (eds.), *The Coleoptera of Japan in Color*, **2**: 54–88 [incl. pls. 11–16]. Hoikusha, Osaka. (In Japanese, with English book title.)
- 1985 b. The group of *Trechiana oni* (Coleoptera, Trechinae) — its distribution and differentiation —. *Mem. natn. Sci. Mus., Tokyo*, (18): 163–198.
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A New Record of *Elodes inornata* (Coleoptera, Scirtidae) from Korea

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Elodes inornata LEWIS is a common species which has hitherto been considered endemic to Japan, having been recorded from Hokkaido, Honshu, Shikoku and Kyushu (YOSHITOMI, 1997). Recently I examined one female specimen of this species collected from Korea. I am going to record it for the first time from Korea as below.

Specimen examined. 1♀ (preserved in Ehime University), Mt. Sudosan, 700 m, Kyongsangbuk-do, 1–VI–1970, K. YAMAGISHI leg.

Reference

- YOSHITOMI, H., 1997. A revision of the Japanese species of the genera *Elodes* and *Sacodes* (Coleoptera, Scirtidae). *Elytra, Tokyo*, **25**: 349–417.