Bull. Natn. Sci. Mus., Tokyo, Ser. A, 17(3), pp. 145–156, September 22, 1991

Four New Species of the Group of *Lathrobium harimanum* (Coleoptera, Staphylinidae) from Japan

By

Yasuaki WATANABE

Laboratory of Entomology, Tokyo University of Agriculture, Tokyo

Abstract Four new staphylinid species of the group of *Lathrobium harimanum* are described from Japan. Two of them, *L. kishuense* and *L. iwamiense* were found in western Honshu, while the remaining two, *L. konpira* and *L. tsurugisanum* were obtained in Shikoku.

Up to the present, five species of the group of *Lathrobium harimanum* have been recorded from Japan, three of them were found in western Honshu, one in Shikoku and one in Kyushu. They are characterized by the large body, vestigial eyes and degenerated hind wings like the members of the group of *L. pollens*, though they can be distinguished from the latter by the lighter colour of body, not transverse head, and long elytra.

Examining the staphylinid collection at the National Science Museum (Nat. Hist.), Tokyo, I have found two new species belonging to this group. They will be described in the present paper, together with two other new species of the same group preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Before going further, I wish to express my hearty thanhs to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kindness in giving me the opportunity to study the interesting specimens and valuable advice on the present study. Thanks are also due to Messrs. H. MIYAMA, S. TANAKA and M. YOSHIDA for their kindness in providing me with specimens used in this study.

Lathrobium kishuense Y. WATANABE, sp. nov.

[Japanese name: Kii-kobane-naga-hanekakushi]

(Figs. 1–5)

Body length: 12.4–12.7 mm (from front margin of head to anal end).

Male. Body elongate, nearly parallel-sided and somewhat depressed above. Colour reddish brown and moderately shining, with apicalmost antennal segment and tarsi more or less paler.

Head suborbicular and feebly elevated in middle, slightly longer than broad (length/width=1.06); lateral sides weakly arcuate, frontal area between antennal

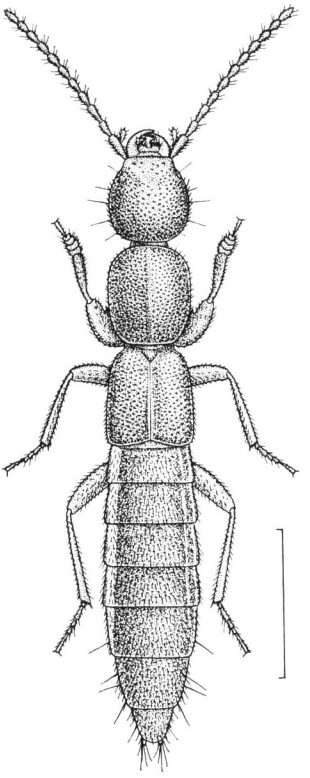


Fig. 1. *Lathrobium kishuense* Y. WATANABE, sp. nov. Scale: 3.0 mm.

tubercles transversely flattened and glabrous, bearing a remarkable setiferous puncture inside each antennal tubercle; disc sparingly with coarse setiferous punctures, which are closer and finer on latero-posterior areas than on fronto-vertexal area; eyes vestigial, the longitudinal diameter less than one-sixth as long as the postocular part. Antennae elongate, extending a little beyond basal two-thirds of pronotum, with two proximal segments polished, the remainings opaque, all the segments longer than broad, 1st segment robust and markedly dilated apicad, more than 1.5 times as long as broad, 2nd constricted at the base, distinctly longer than broad (length/width=1.75), but remarkably shorter (2nd/1st=0.58) and a little narrower (2nd/1st=0.89) than 1st, 3rd elongate, gently dilated apicad, more than twice as long as broad and somewhat longer than 2nd (3rd/2nd=1.29), 4th to 10th more or less moniliform and subequal in width to one another, 4th to 7th subequal in length to one another, each evidently longer than broad (length/width=1.75), 8th to 10th subequal in length to one another, each about 1.5 times as long as broad, but slightly shorter than 7th (8th/7th=0.86), apicalmost fusiform, about twice as long as broad and a little longer than 10th (apicalmost/10th=1.17), subacuminate towards the tip.

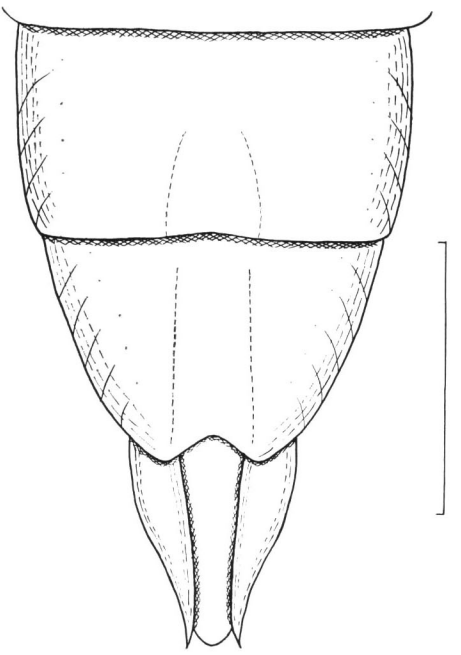
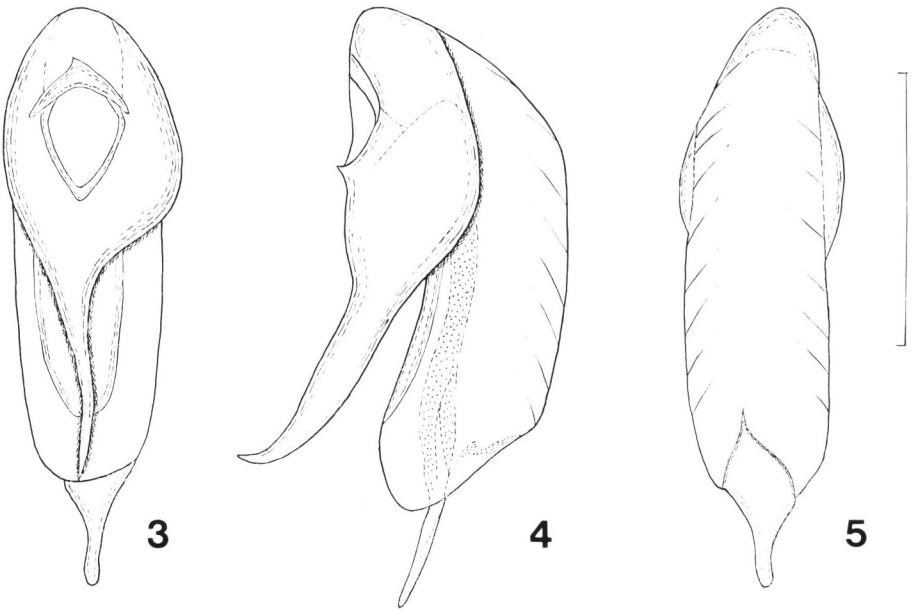


Fig. 2. Last three abdominal sternites of *Lathrobium kishuense* Y. WATANABE, sp. nov. Scale: 1.0 mm.

Pronotum oblong and moderately convex, slightly narrowed posteriad, evidently longer than broad (length/width=1.29) and as broad as head; lateral sides feebly arcuate in anterior third and nearly straight in posterior two-thirds as seen from above, anterior margin weakly rounded, posterior margin truncate, anterior angles obtuse and not visible from above, posterior ones narrowly rounded; surface moderately closely covered with coarse setiferous punctures except for a narrow longitudinal smooth band along the median line. Scutellum subtriangular, sparsely scattered with superficial setiferous punctures on the surface. Elytra subtrapezoidal, dilated posteriad, barely longer than broad (length/width=1.03), and slightly broader (elytra/pronotum=1.09) but somewhat shorter than pronotum (elytra/pronotum=0.86); lateral sides feebly arcuate, posterior margin distinctly emarginate and forming a re-entrant angle, posterior angles broadly rounded; surface moderately closely punctured, the punctures smaller and shallower than those on pronotum, provided with a shallow longitudinal depression on each side of suture. Each hind wing degenerated to a minute lobe. Legs somewhat stout; profemur remarkably thickened, provided with a subtriangular blunt tooth near apical third on the inner face; protibia hollowed in basal half of inner surface and armed with five comb-like transverse rows of yellowish setae within the hollow; meso- and metatibiae normal; 1st to 4th protarsal segments strongly dilated.

Abdomen elongate, slightly widened towards the 5th visible segment which is



Figs. 3–5. Male genital organ of *Lathrobium kishuense* Y. WATANABE, sp. nov.; ventral view (3), lateral view (4), and dorsal view (5). Scale: 1.0 mm.

the widest; 6th visible segment to anal end abruptly narrowed posteriad; basal five visible tergites each transversely depressed along the base; surface of each tergite covered closely with minute and superficial punctures; 6th visible sternite subtriangularly excised at the middle of posterior margin and longitudinally flattened in front of the excision, 5th visible sternite also emarginate at the middle of posterior margin and shallowly depressed in a horseshoe-shape before the emargination.

Genital organ well sclerotized and elongated elliptical. Median lobe relatively broad, gradually tapered towards the apex, which is broadly rounded. Parameres fused with each other to a narrow lobe and asymmetrical, almost as long as median lobe, apical part slightly curved to the right side as seen from the ventral side and strongly curved ventrad in profile; viewed dorsally, median orifice with a sclerotized plate, which is abruptly narrowed in apical half towards the narrowly rounded tip.

Female. In general appearance similar to male, though the apical two abdominal sternites are simple.

Type series. Holotype: ♂, Asarano-tani, Susami-chô, Wakayama Pref., Honshu, Japan, 24–X–1979, S. TANAKA leg.; allotype: ♀, same data as for the holotype. Paratypes: 2 ♂♂, same data as for the holotype. All the types are preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (Honshu).

Notes. In size and facies, this new species resembles *L. harimanum*, but can be

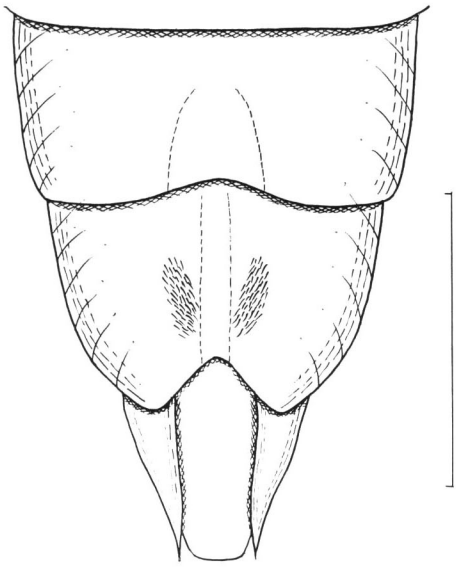


Fig. 6. Last three abdominal sternites of *Lathrobium konpira* Y. WATANABE, sp. nov. Scale: 1.0 mm.

distinguished from the latter by the following points: head suborbicular, pronotum as broad as head, elytra more distinctly punctate, preapical abdominal sternite more shallowly emarginate at the middle of posterior margin and more distinctly flattened before the emargination, and fused paramere as long as median lobe of male genital organ.

Lathrobium konpira Y. WATANABE, sp. nov.

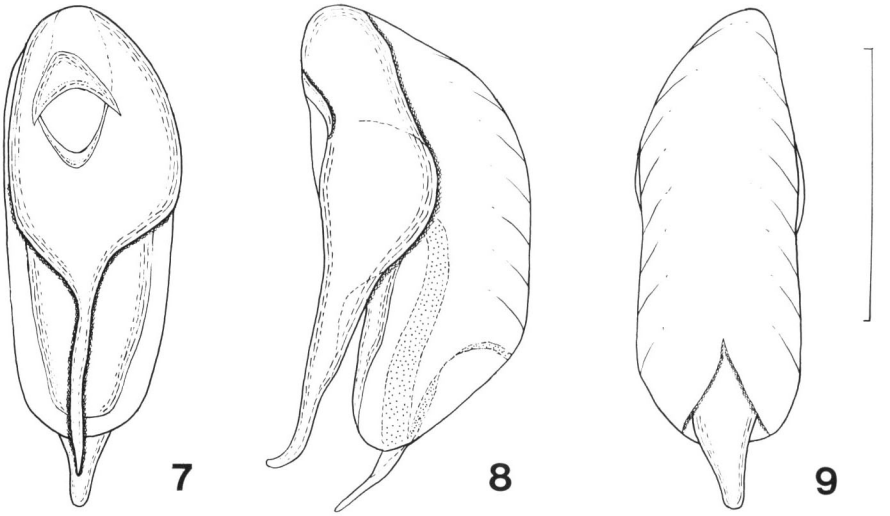
[Japanese name: Konpira-kobane-naga-hanekakushi]

(Figs. 6–9)

Body length: 10.8–12.4 mm (from front margin of head to anal end).

The present new species is similar to the preceding in general appearance and body size, but differs from it in the secondary sexual character of abdomen in the male, configuration of male genital organ and the following points:

Male. Head more elevated medially and subquadrate, slightly longer than broad (length/width=1.02); lateral sides less arcuate, surface more closely punctate than in the preceding species. Pronotum almost parallel-sided, more elongate (length/width=1.31) but slightly narrower than head (pronotum/head=0.95); surface punctured as in the preceding species. Elytra relatively narrow and less dilated posteriad, only slightly broader than pronotum (elytra/pronotum=1.03); surface more finely and more shallowly punctured. Abdominal tergites covered with slightly coarser punctures; in male, 6th visible sternite triangularly excised at the middle of posterior margin, provided with a narrow longitudinal depression along the median line in



Figs. 7–9. Male genital organ of *Lathrobium konpira* Y. WATANABE, sp. nov.; ventral view (7), lateral view (8), and dorsal view (9). Scale: 1.0 mm.

front of the excision and with a patch of short blackish bristles on each side of the depression; 5th visible sternite also shallowly emarginate at the middle of posterior margin and with a horseshoe-shaped depression before the emargination.

Genital organ similar to that of the preceding species, but differs from it in the following points: median lobe relatively broad; fused paramere evidently longer than median lobe, curved to the left side in apical third as seen from the ventral side and abruptly curved ventrad in apical part in profile; viewed dorsally, median orifice with a tongue-shaped lobe, which is shorter and broader than that of the preceding species and gradually narrowed towards the apex.

Female. Resembles the male in general appearance, though differing from it in the abdominal sternites which are not modified.

Type series. Holotype: ♂, Mt. Zôzusan, Kagawa Pref., Shikoku, Japan, 18–VI–1980, H. MIYAMA leg.; allotype: ♀ same locality and collector as for the holotype, 13–XII–1979. Paratypes: 2 ♂♂, 2 ♀♀, same data as for the allotype; 1 ♀, same locality and collector as for the holotype, 5–V–1978. The holo- and allotypes are preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo, and paratypes are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (Shikoku).

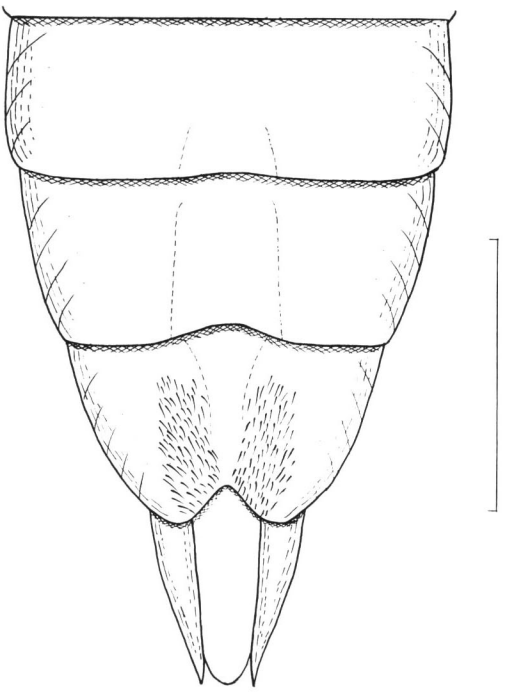


Fig. 10. Last four abdominal sternites of *Lathrobium iwamiense* Y. WATANABE, sp. nov. Scale: 1.0 mm.

Lathrobium iwamiense Y. WATANABE, sp. nov.

[Japanese name: Iwami-kobane-naga-hanekakushi]

(Figs. 10–13)

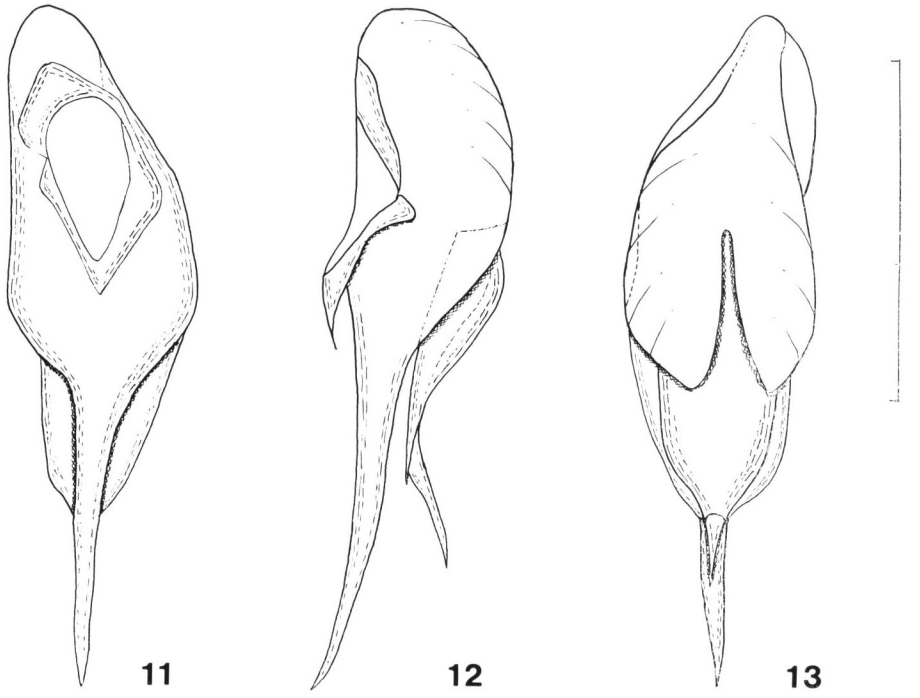
Body length: 9.7–11.9 mm (from front margin of head to anal end).

The present new species may be placed near the preceding species in view of the secondary sexual character of abdomen in the male, but differs from the latter in the colour, robust body and configuration of male genital organ.

Body robust, nearly parallel-sided and somewhat depressed above. Colour yellowish brown and moderately shining, with antennae, except for yellowish apicalmost segment, head and pronotum reddish brown.

Male. Head subquadrate and gently elevated medially, slightly narrowed anteriad, somewhat longer than broad (length/width=1.05); lateral sides feebly arcuate, frontal area transversely flattened and provided with a remarkable setiferous puncture inside each antennal tubercle as in the preceding species; surface covered with moderately close setiferous punctures, which become sparser in fronto-vertexal area; eyes vestigial as in the preceding species. Antennae elongate, similar in construction to those of the preceding species.

Pronotum nearly oblong and moderately elevated medially, almost parallel-sided



Figs. 11–13. Male genital organ of *Lathrobium iwamiense* Y. WATANABE, sp. nov.; ventral view (11), lateral view (12), and dorsal view (13). Scale: 1.0 mm.

in anterior half but slightly narrowed in posterior half, considerable longer than broad (length/width=1.41), and evidently longer (pronotum/head=1.23) but a little narrower (pronotum/head=0.92) than head; surface somewhat closely punctured, except for a smooth longitudinal median band, the punctures a little coarser than those on head; other features similar to those in the preceding species. Scutellum subtriangular and gently elevated, sparsely with superficial setiferous punctures on the surface. Elytra somewhat dilated posteriad, slightly longer than broad (length/width=1.05), a little broader (elytra/pronotum=1.12) but distinctly shorter (elytra/pronotum=0.83) than pronotum; surface more densely and much more roughly punctured than on pronotum; other features similar to those in the preceding species.

Abdomen more finely punctured on each tergite than in the preceding species; 6th visible sternite subtriangularly excised at the middle of posterior margin, longitudinally depressed along the median line before the excision, the depression being somewhat dilated towards the base, and provided extensively with dense short blackish bristles on each side of the depression; 5th visible sternite also shallowly emarginate at the middle of posterior margin, and broadly, longitudinally depressed before the emargination, surface of the deperssion setigerous; 4th visible sternite more shallowly

emarginate at the middle of posterior margin than in the preceding sternite, more shallowly depressed and less setigerous in front of the emargination than in the preceding sternite.

Genital organ well sclerotized and asymmetrical. Median lobe relatively short and narrowed towards the rounded apex; fused paramere elongate and considerably longer than median lobe, acuminate at the apex; viewed dorsally, median orifice with a broad sclerotized plate, which is abruptly narrowed in apical fourth and acutely pointed at the tip.

Female. Similar in general appearance to the male, except for simple abdominal sternites.

Type series. Holotype: ♂, Iwami-ginzan, Ryûgenji-mabu Adit, Ohda-shi, Shimane Pref., Honshu, Japan, 5–IX–1984, S. UÉNO leg.; allotype: ♀, same data as for the holotype. Preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Distribution. Japan (western Honshu).

Lathrobium tsurugisanum Y. WATANABE, sp. nov.

[Japanese name: Tsurugi-kobane-naga-hanekakushi]

(Figs. 14–17)

Body length: 11.1–11.5 mm (from front margin of head to anal end).

Similar in facies and colour to the other species of this group, but can be easily distinguished from them by the head and elytra which are almost as long as broad, respectively.

Male. Body elongate, nearly parallel-sided and subdepressed above. Colour reddish brown and moderately shining, with palpi, apicalmost antennal segments, legs and two terminal segments of abdomen paler.

Head suborbicular and gently convex medially, nearly as long as width; lateral sides arcuate, frontal area between antennal tubercles flattened and glabrous, bearing a distinct setiferous puncture inside each antennal tubercle; surface somewhat coarsely and setiferously punctured, the punctures closer and finer on latero-posterior parts than on disc, provided with a small impunctate spot on vertex; eyes vestigial, the longitudinal diameter about one-sixth as long as postocular part. Antennae elongate, extending a little beyond basal two-thirds of pronotum, and not thickened towards apicalmost segment, with two proximal segments polished, the remainings opaque, 1st segment robust, strongly dilated apicad, nearly twice as long as broad, 2nd cylindrical, but constricted at the base, about 1.5 times as long as broad, evidently shorter (2nd/1st=0.52) and somewhat narrower (2nd/1st=0.67) than 1st, 3rd elongate, a little dilated apicad, nearly twice as long as broad and somewhat longer than 2nd (3rd/2nd=1.27), 4th to 7th equal in length to one another, each a little longer than broad (length/width=1.35), 8th longer than broad (length/width=1.18) but slightly shorter (8th/7th=0.90) than 7th, 9th and 10th equal to each other both in length and

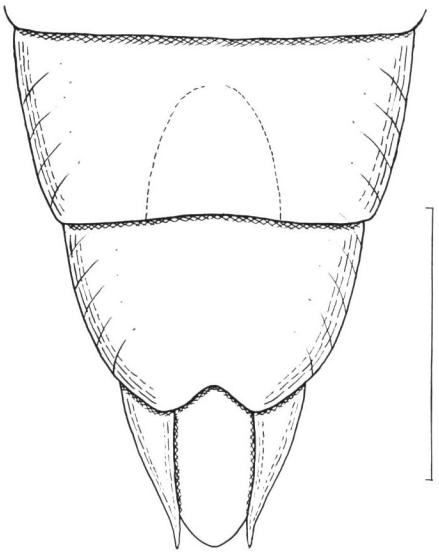
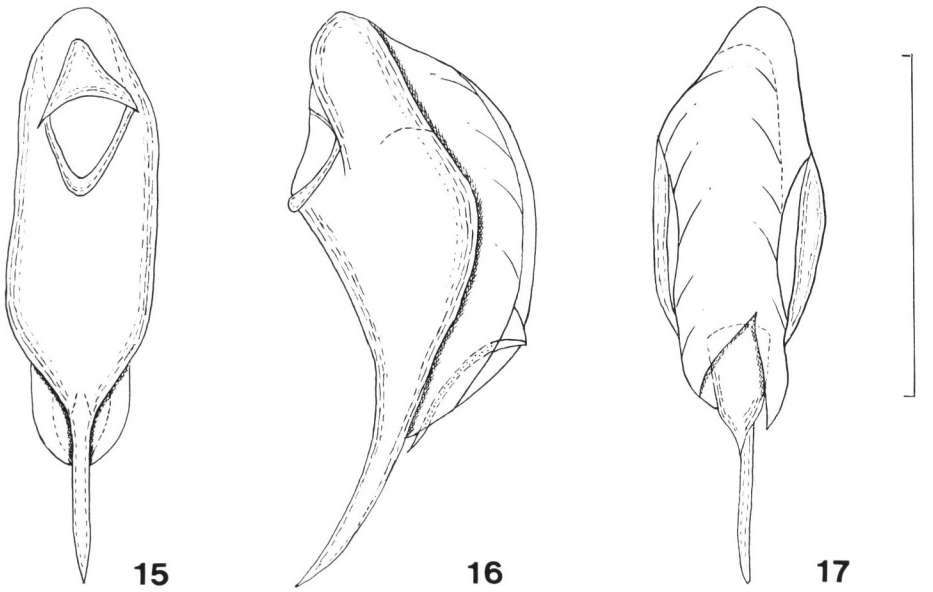


Fig. 14. Last three abdominal sternites of *Lathrobium tsurugisanum* Y. WATANABE, sp. nov. Scale: 1.0 mm.

width, each somewhat longer than broad (length/width=1.14), apicalmost fusiform, about twice as long as broad and evidently longer than 10th (apicalmost/10th=1.75).

Pronotum nearly oblong and moderately convex medially, barely narrowed posteriad, apparently longer than broad (length/width=1.29), and evidently longer (pronotum/head=1.29) but slightly narrower (pronotum/head=0.97) than head; lateral sides almost parallel in median two-fourths and arcuate both in anterior fourth and in posterior fourth as seen from the dorsal side, anterior margin slightly emarginate at the middle, posterior margin truncate, anterior angles obtuse and not visible from above, posterior ones narrowly rounded; surface somewhat closely and rather coarsely punctured, except for a narrow longitudinal smooth median band. Scutellum subtriangular, sparsely with superficial setiferous punctures on the surface. Elytra subtrapezoidal and feebly dilated posteriad, as long as broad, distinctly shorter (elytra/pronotum=0.80) but slightly broader (elytra/pronotum=1.03) than pronotum; lateral sides gently arcuate, posterior margin broadly emarginate at the middle; surface more closely covered with shallower setiferous punctures than on pronotum, bearing a shallow longitudinal depression in basal three-fourths along suture. Legs somewhat stout, profemur and protibia similar to those of the prededing species.

Abdomen elongate, gradually dilated towards the 5th visible segment, 6th visible segment to anal end abruptly narrowed, basal five visible tergites each shallowly and transversely depressed along the base; surface of each tergite moderately closely covered with fine, superficial setiferous punctures; 6th visible sternite subtriangularly excised at the middle of posterior margin; 5th visible sternite also shallowly emarginate at the middle of posterior margin and more or less depressed in a horseshoe-shape



Figs. 15–17. Male genital organ of *Lathrobium tsurugisanum* Y. WATANABE, sp. nov.; ventral view (15), lateral view (16), and dorsal view. Scale: 1.0 mm.

before the emargination.

Genital organ somewhat asymmetrical. Median lobe short and tongue-shaped, broadly rounded at the apex. Fused paramere considerably longer than median lobe, abruptly narrowed and forming a lanceolate part in apical third; viewed dorsally, median orifice with a sclerotized plate, which is abruptly narrowed in apical part towards the acutely pointed tip.

Female. Similar to the male in general appearance, except for simple abdominal sternites.

Type series. Holotype: ♂, near Meoto-ike on Mt. Tsurugi-san, Tokushima Pref., Shikoku, Japan, 27–X–1972, Y. WATANABE leg.; allotype: ♀, Mt. Kôtsu-zan, Tokushima Pref., Shikoku, Japan, 18–X–1961, M. YOSHIDA leg. Paratype: 1 ♂, Ryôtsurugi-dani on Mt. Tsurugi-san, Tokushima Pref., Shikoku, Japan, 25–V–1968, M. YOSHIDA leg. All the types are preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (Shikoku).

References

ADACHI, T., 1957. The staphylinid fauna of Japan. *J. Toyo Univ.*, (11): 166–250.

BERNHAUER, M., & K. SCHUBERT, 1910. Staphylinidae I. *In* JUNK, W., & S. SCHENKLING (eds.), *Coleopterorum Catalogus*, pars 19 (pp. 3–86). W. Junk, Berlin.

NAKANE, T., 1955. New or little-known Coleoptera from Japan and its adjacent Region, XII. *Sci. Rept. Saikyo Univ., (Nat. Sci. & Liv. Sci.)*, (A), **2**: 24–42, 3 pls.

SHIBATA, Y., 1974. A list of genera and species new to Japan and new data on distribution of the Staphylinidae discovered from Japan since 1945 (Insecta: Coleoptera). *Annual Bull. Nichidai Sanko*, (17): 1–43. (In Japanese.)

——— 1977. Provisional check list of the family Staphylinidae of Japan I (Insecta: Coleoptera). *Ibid.*, (20): 16–83. (In Japanese.)

SCHEERPELTZ, O., 1933. Staphylinidae VII (Supplement I). In JUNK, W., & S. SCHENKLING (eds.), *Coleopterorum Catalogus*, pars 129 (pp. 99–1500). W. Junk, Berlin.

WATANABE, Y., 1968. Miscellarneous notes on staphylinid beetles (2). Staphylinid beetles from caves. *Coleopterists' News, Tokyo*, (4): 4–5. (In Japanese.)

——— 1980. Two new *Lathrobium* (Coleoptera, Staphylinidae) found in limestone caves of Japan. *J. speleol. Soc. Japan*, **5**: 21–28.

——— 1985. Paederinae. *In* UÉNO, S.-I., *et al.* (eds.), *The Coleoptera of Japan in Color*, **2**: 281–289, (incl. pls. 49–50). Hoikusha, Osaka. (In Japanese.)

——— 1986. Three new brachypterous *Lathrobium* (Coleoptera, Staphylinidae) from Japan. *Kontyû, Tokyo*, **54**: 688–696.