

Two New Species of *Lathrobium* (Coleoptera: Staphylinidae) from Mt. Maya-san of Hyôgo Prefecture in Western Honshu, Japan

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Abstract Two new species of the staphylinid genus *Lathrobium* from Mt. Maya-san of Hyôgo Prefecture in western Honshu, Japan, are dealt with. Of these, one species belongs to the group of *L. shingon* and the other is a remarkable species in view of having peculiar sexual characters of abdominal sternites and genital organ in the male. They are described under the names *L. (L.) taichii* and *L. (L.) tadaorum*.

The members of the group of *Lathrobium (Lathrobium) shingon* are characterized by the complicated genital organ in the male. Six species belonging to this group have hitherto been reported only from the Kii Peninsula of Honshu, Japan. Examining the staphylinids deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, I have found two interesting apterous *Lathrobium* obtained on Mt. Maya-san of Hyôgo Prefecture in western Honshu, Japan. Of these, one species seems to be placed in the group of *Lathrobium (L.) shingon* Y. WATANABE (1992, p. 193) in view of having complicated genital organ in the male. The other is a remarkable species for the reason of having peculiar structures of secondary sexual characters of abdominal sternites and genital organ in the male.

After a close examination, it has become clear that these two species are new to science on account of disagreement with the previously known species in external feature, sexual characters of abdominal sternites and genital organ in the male. They will be described in this paper.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to Mr. Junnosuke KANTOH, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photograph inserted in this paper.

Lathrobium (Lathrobium) taichii Y. WATANABE, sp. nov.

[Japanese name: Taichi-kobane-nagahanekakushi]

(Figs. 1–5)

Body length: 8.0–8.6 mm (from front margin of head to anal end); 3.2–3.5 mm (from front margin of head to elytral apices).

Body elongate, nearly parallel-sided and subdepressed above. Colour reddish brown to blackish brown and moderately shining, with mouth parts, apical parts of elytra and legs brownish yellow, antennae brownish red and abdomen brown.

Head subtrapezoidal and somewhat narrowed anteriorly, slightly elevated medially and transverse (length/width = 1.11); lateral sides slightly arcuate; frontal area between antennal tubercles transversely flattened and glabrous along frons; a large setiferous puncture present inside each antennal tubercle; surface only slightly and coarsely setiferous-punctured, the punctures becoming much sparser and larger than those in the medio-frontal area, and covered with extremely fine coriaceous ground sculpture only visible under high magnification; eyes small and nearly flat, their longitudinal diameter nearly one-fourth as long as postocular parts. Antennae elongate, extending to the middle of pronotum and not thickened towards the extremity, two proximal segments polished, 3rd subopaque and the remainings opaque, 1st segment robust and dilated apically, twice as long as wide, 2nd and 3rd equal in both length and width, each obviously longer than wide (length/width = 1.78) but distinctly shorter (each of 2nd and 3rd/1st = 0.67) and narrower (each of 2nd and 3rd/1st = 0.75) than 1st, 4th somewhat longer than wide (length/width = 1.25), but is apparently shorter (4th/3rd = 0.63) and slightly narrower (4th/3rd = 0.89) than 3rd, 5th equal in both length and width to 4th, 6th to 8th equal in both length and width to one another, each slightly longer than wide (length/width = 1.11), equal in length to though somewhat wider than 5th (each of 6th to 8th/5th = 1.13), 9th and 10th equal in both length and width to each other, each equal in length to though slightly wider (each of 9th and 10th/8th = 1.11) than 8th, 11th fusiform, distinctly longer than wide (length/width = 1.60), longer (11th/10th = 1.60) than though as wide as 10th, subacuminate at the apex.

Pronotum elevated medially and trapezoidal, distinctly narrowed posteriorly, a little longer than wide (length/width = 1.14), apparently longer (pronotum/head = 1.39) and somewhat wider (pronotum/head = 1.10) than head; lateral sides almost straight except near anterior and posterior angles, anterior margin gently rounded though subtruncate at the middle, posterior margin straight though slightly emarginate at the middle, anterior angles obtuse and not visible from dorsal side, posterior ones narrowly rounded; surface more coarsely and more closely punctured than in vertexal area of head except for a narrow smooth median space through the length of pronotum. Scutellum small and subtriangular, provided with a few minute setiferous punctures and obscure ground sculpture.

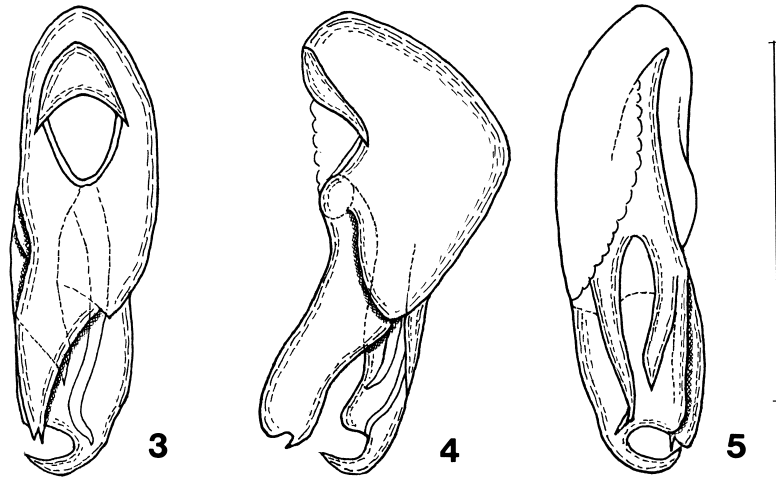
Elytra subtrapezoidal, slightly dilated posteriorly and subdepressed above, a little transverse (width/length = 1.10), distinctly shorter (elytra/pronotum = 0.80) than though almost



Figs. 1–2. *Lathrobium (Lathrobium) taichii* sp. nov., ♂; 1, habitus; 2, last four abdominal sternites.
Scale = 2.0 mm (1), 1.0 mm (2).

as wide as pronotum; lateral sides feebly arcuate, posterior margin emarginate at the middle, posterior angles rounded; surface more closely and more coarsely punctured than in pronotum, and covered with fine brownish pubescence. Legs moderately long, profemora, protibiae and protarsi similar in structure to those of other members of the group of *L. shingon*.

Abdomen elongate and nearly parallel-sided from 3rd to 7th segments, and then abruptly narrowed towards the anal end; 3rd to 7th tergites each closely aciculate and finely punctured, and closely covered with fine brownish pubescence, 8th and 9th tergites each more sparingly and more finely punctured and pubescent than in the preceding tergites; 8th sternite shallowly excised at the middle of posterior margin, both sides of the excision slightly produced posteriad and forming asymmetrical parts, left part slightly longer and wider than right part and provided with much more numerous short rigid setae than those of right part, anterior part of the excision longitudinally depressed, surface of the depression smooth and glabrous; 7th sternite more broadly and more shallowly emarginate



Figs. 3–5. Male genital organ of *Lathrobium (Lathrobium) taichii* sp. nov.; 3, dorsal view; 4, lateral view; 5, ventral view. Scale = 1.0 mm.

at the middle of posterior margin than in 8th sternite and U-shapedly depressed before the emargination, surface of the depression covered with fine punctures and fine brownish pubescence as in other parts except for the smooth median part just before posterior margin; 6th sternite simple.

Genital organ spindle-shaped and well sclerotized except for membranous ventral side of median lobe. Median lobe slightly narrowed towards constriction before apical part which is strongly curved to the left side and shaped like a sickle as seen from dorsal side. Fused paramere relatively broad and asymmetrical, distinctly shorter than median lobe, broadly rounded at the apex which is provided with a minute excision as seen from lateral side.

Female. Similar in facies to male, but different from it in the 8th sternite produced at the median part of posterior margin and broadly rounded at the apex; 7th sternite simple.

Type series. Holotype: ♂, allotype: ♀, Mt. Maya-san, Hyôgo Pref., Honshu, Japan, 30. III. 1991, Y. WATANABE leg. Paratypes: 4 ♂♂, 10 ♀♀, same data as for the holotype.

Type depository. All the type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (western Honshu).

Remarks. The present new species seems to be placed near *L. (L.) toyodai* Y. WATANABE (2005, p. 321) from the Kii Peninsula of central Honshu in view of having similar facies and structure of male genital organ, but differs from it in the following points:

head gently elevated medially, surface less coarsely punctured and with more finely coriaceous ground sculpture, elytra somewhat less coarsely punctured on the surface, and secondary sexual characters of abdominal sternites and genital organ in the male are distinctly different in the configuration.

Bionomics. All the type specimens were obtained by sifting dead leaves accumulated in a broadleaved forest on Mt. Maya-san at an altitude of about 620 m.

Etymology. This new species is dedicated to the late Mr. Taichi SHIBATA, who contributed to the coleopterology as a foster-father of amateur coleopterists in the Kansai District of Japan.

***Lathrobium (Lathrobium) tadaorum* Y. WATANABE, sp. nov.**

[Japanese name: Tada-kobane-nagahanekakushi]

(Figs. 6–9)

Body length: 5.7–6.4 mm (from front margin of head to anal end); 2.9–3.1 mm (from front margin of head to elytral apices).

Body elongate, somewhat depressed above and subparallel-sided. Colour brownish red to dark reddish brown and moderately shining, with palpi, legs and two apical abdominal segments brownish yellow.

The present new species differs from all the known species of apterous *Lathrobium* in



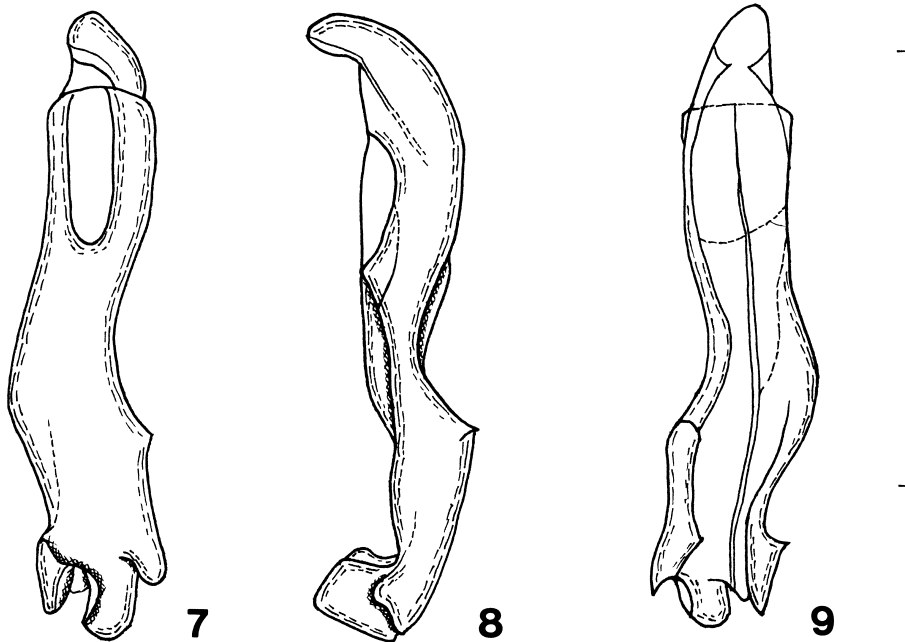
Fig. 6a–b. *Lathrobium (Lathrobium) tadaorum* sp. nov. ♂: 6a, habitus; 6b, last three abdominal sternites in the male. Scale = 0.5 mm.

square head, peculiar configuration of secondary sexual characters of abdominal sternites and genital organ in the male.

Male. Head square and almost as long as wide, gently elevated medially and only slightly narrowed anteriorly; lateral sides feebly arcuate, frontal area between antennal tubercles narrowly flattened and glabrous along front margin, provided with a remarkable setiferous puncture inside each antennal tubercle; surface scattered with somewhat coarse punctures and extremely fine coriaceous ground sculpture, the punctures becoming more or less sparser in the vertexal area; eyes small and almost flat, their longitudinal diameter one-fourth as long as postocular parts. Antennae elongate, extending a little beyond the middle of pronotum and not thickened towards the apical segment, two proximal segments polished, the remainings opaque, 1st segment robust and strongly widened apically, about 1.5 times as long as broad, 2nd constricted at the base, apparently longer than wide (length/width = 1.38), much shorter (2nd/1st = 0.73) and somewhat narrower (2nd/1st = 0.80) than 1st, 3rd somewhat dilated apically, somewhat longer than wide (length/width = 1.25), slightly longer (3rd/2nd = 1.09) and somewhat broader (3rd/2nd = 1.25) than 2nd, 4th to 10th more or less moniliform and almost equal in both length and wide, each somewhat longer than wide (length/width = 1.25), 11th fusiform, more than 1.5 times as long as wide, distinctly longer (11th/10th = 1.40) than though as wide as 10th, subacuminate at the apex.

Pronotum subtrapezoidal, evenly elevated medially, distinctly narrowed posteriorly, somewhat longer than wide (length/width = 1.19), a little longer (pronotum/head = 1.16) but slightly narrower (pronotum/head = 0.97) than head; lateral sides nearly straight except near anterior and posterior angles, anterior margin gently rounded, posterior margin almost straight, anterior angles obtuse and not visible from above, posterior ones narrowly rounded; surface much more coarsely and more closely punctured than in vertexal area of head except for a narrow smooth median space through the length of pronotum. Scutellum small and subtriangular, surface provided with a few minute setiferous punctures. Elytra trapezoidal and a little dilated apically, somewhat transverse (width/length = 1.12), distinctly shorter (elytra/pronotum = 0.77) but only slightly broader (elytra/pronotum = 1.03) than pronotum; lateral sides nearly straight, posterior margin broadly emarginate at the middle, posterior angles rounded; surface covered with much coarser and rougher setiferous punctures than those of pronotum. Legs moderately long; profemora, protibiae and protarsi similar in structure to those of the preceding species.

Abdomen elongate, almost parallel-sided from 3rd to 7th segments, and then abruptly narrowed towards the anal end; 3rd to 7th tergites each not so closely and somewhat coarsely punctured and covered with fine brownish pubescence, 8th and 9th tergites each more sparingly and more finely punctured than in the preceding tergites; 8th sternite only slightly produced posteriorly at the middle of posterior margin and densely clothed with short rigid blackish setae on each side of the projection; 7th sternite slightly U-shapedly depressed at the middle of posterior margin, surface of the depression somewhat sparingly



Figs. 7–9. Male genital organ of *Lathrobium (Lathrobium) tadaorum* sp. nov.; 7, dorsal view; 8, lateral view; 9, ventral view. Scale = 1.0 mm.

covered with finer punctures and finer brownish pubescence than those on other parts; 6th sternite not modified.

Genital organ elongate and asymmetrical. Median lobe slightly shorter than fused paramere and membranous in the ventral side, with ventral sclerite very slender and extending from basal fifth to the apex. Fused paramere somewhat curved to left side as seen from dorsal side and a little broader in apical half than basal half, strongly hollowed dorsad near the median part and forming a hatchet in the apical part in profile.

Female. Similar in facies to male, though the 8th sternite is narrowed towards the rounded apex, gradually in basal two-thirds and abruptly in apical third; 7th sternite simple.

Type series. Holotype: ♂, allotype: ♀, Mt. Maya-san Hyōgo Pref., Honshu, Japan, 16. X. 1988, Y. WATANABE leg. Paratypes: 1♂, 3♀, same data as for the holotype.

Type depository. All the type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (western Honshu).

Bionomics. All the type specimens were found in the similar environment on Mt. Maya-san to the one in which was obtained the preceding species.

Etymology. The specific epithet of this new species is named after Mr. and Mrs. TADA, Kawanishi-shi, in honor of their kind help extending to me in various ways.

要 約

渡辺 泰明：兵庫県摩耶山で採集されたコバネナガハネカクシ類（甲虫目ハネカクシ科）の2新種。——— 東京農業大学に収蔵されているコバネナガハネカクシ類を検討している過程で、このグループに含まれる2新種を見出したので、*Lathrobium* (*Lathrobium*) *taichii*（タイチコバネナガハネカクシ）および *L. (L.) tadaorum*（タダコバネナガハネカクシ）と命名・記載した。これらの2種は雄の腹部第二次性徴および交尾器がきわめて特異な形状を呈し、既知のコバネナガハネカクシ類から容易に区別される。なお、前者の種小名は、日本の甲虫分類学の発展に寄与するとともに、関西地方においてアマチュア甲虫研究者の育成に尽力された故芝田太一氏に、また後者の種小名は摩耶山での再三にわたる採集の際に種々の便宜をはかっていただいた、川西市在住の多田富弥・千恵子ご夫妻にそれぞれ献名したものである。

References

- WATANABE, Y., 1992. New species of the group of *Lathrobium pollens* (Coleoptera, Staphylinidae) from western Honshu, Japan. *Elytra, Tokyo*, **20**: 189–196.
- 2005. Apterous *Lathrobium* (Coleoptera, Staphylinidae) from the Kii Peninsula in Japan 1. Group of *Lathrobium shingon*. *Elytra, Tokyo*, **33**: 313–325.