

Five New Staphylinids of the Group of *Lathrobium nomurai* (Coleoptera, Staphylinidae) from Western Honshu, Japan

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Abstract Five new staphylinid species of the group of *Lathrobium nomurai* are described under the names *L. kanmuriense*, *L. aioiense*, *L. kasumiense*, *L. kasagatanum* and *L. morii*. They are found in the upper hypogean zone of several localities in western Honshu, Japan.

Although similar in degenerated hind wings to those of the group of *L. pollens*, the members of the group of *Lathrobium nomurai* can be readily distinguished from the latter by large body with both the head and elytra not transverse, and reddish colour. They are usually found in the upper hypogean zone, and sixteen species have hitherto been reported from western Honshu, Shikoku and Kyushu. Through the courtesy of Mr. Masato MORI, I had an opportunity to examine a series of interesting species belonging to this species-group, all of which were obtained in western Honshu. After a careful examination, it has become clear that five species are new to science for the reason of disagreement in the configuration of the male genital organ from the previously known species. They will be described in the present paper. The type series of the five new species to be designated in this paper are preserved in the collection of the Laboratory of Insect Resources, Tokyo University of Agriculture.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UENO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to Mr. Masato MORI, Nishinomiya-shi, for his kindness in supplying me with the specimens used in this study and information of the collecting data, and Mr. Koji TOYODA, Ranzan-machi, Saitama, for his assistance in drawing the figures inserted in this paper.

Lathrobium (s. str.) *kanmuriense* Y. WATANABE, sp. nov.

[Japanese name: Kanmuri-ohkobane-nagahanekakushi]

(Figs. 1, 2, 7–9)

Body length: 12.1–12.2 mm (from front margin of head to anal end); 5.6–5.8 mm (from front margin of head to elytral apices).

Male and female. The present new species is similar in general appearance to *L. moritai* Y. WATANABE (1998, p. 94) described from Yamaguchi Prefecture, but differs from the latter in the following points:

Body somewhat smaller and narrower, head slightly longer than broad (length/width=1.03), more convex medially and more distinctly narrowed anteriorly in anterior three-fourths, surface somewhat more sparingly punctured than in *L. moritai*; eyes relatively large, their longitudinal diameter one-fourth as long as postocular part. Antennae elongate, extending to the middle of pronotum, and of similar articulation to those of *L. moritai*. Pronotum similar in configuration to that of *L. moritai*, distinctly longer than broad (length/width=1.33), apparently longer (pronotum/head=1.25) but slightly narrower (pronotum/head=0.97) than head, surface similarly punctured as in *L. moritai* except for a narrow smooth longitudinal space at the middle. Elytra subtrapezoidal, narrowed anteriorly, very slightly longer than broad (length/width=1.02), distinctly shorter (elytra/pronotum=0.83) but a little broader (elytra/pronotum=1.08) than

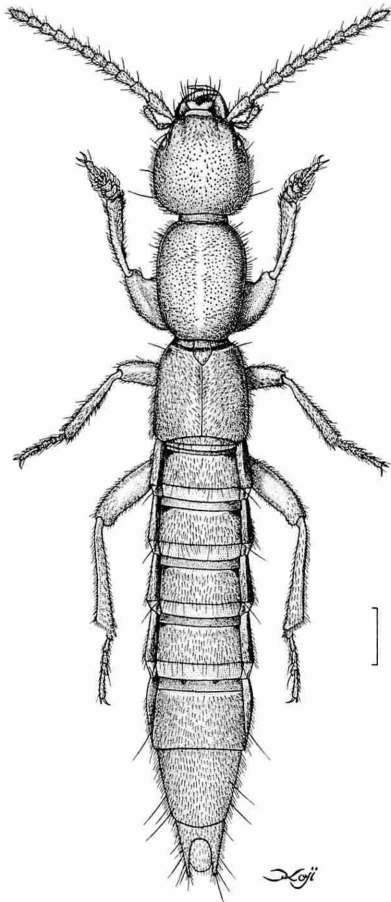
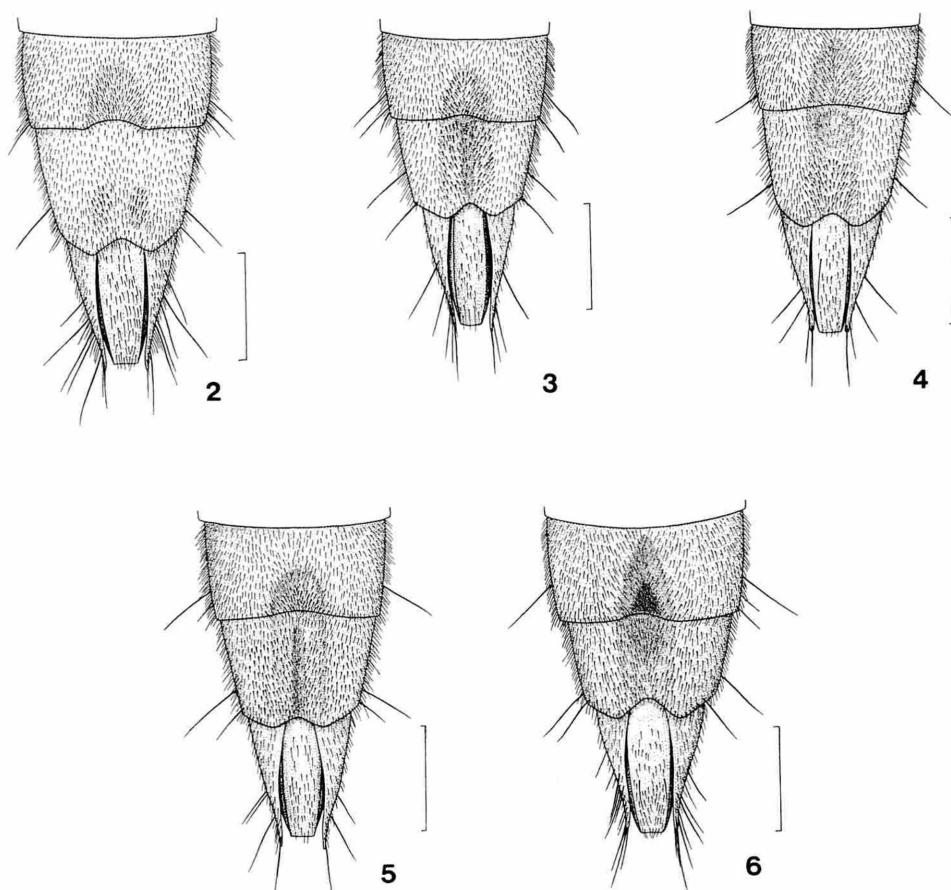


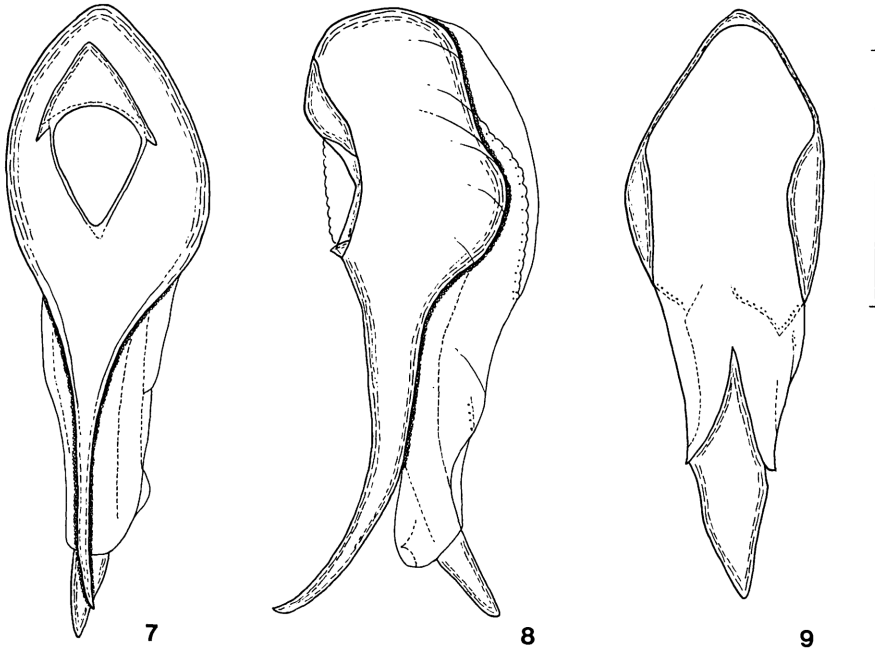
Fig. 1. *Lathrobium* (s. str.) *kanmuriense* Y. WATANABE, sp. nov., ♂, from the Nakatsutani-gawa of Hiroshima in western Honshu, Japan. Scale: 1.0 mm.

pronotum, posterior margin more shallowly emarginate at the middle; surface less closely and less coarsely punctured than in *L. moritai*. Legs similar in structure to those of *L. moritai*. Abdomen elongate, each tergite less closely and more finely punctured; in male, 8th sternite subtriangularly excised at the middle of posterior margin and shallowly depressed on each side of the middle before the excision, surface of the depression more closely clothed with fine blackish setae than in other parts, 7th sternite more broadly emarginate than in 8th sternite at the middle of posterior margin and provided with a long elliptical depression at the middle in front of the emargination, surface of the depression somewhat more closely setose than in other parts, 6th sternite with posterior margin not modified.

Male genital organ more similar in configuration of fused paramere to that of *L. moritai* than to those of the other members of this species-group, but different from it



Figs. 2-6. Last three abdominal sternites in the male of *Lathrobium* (s. str.) spp.; *L.* (s. str.) *kanmuriense* sp. nov. (2), *L.* (s. str.) *aioiense* sp. nov. (3), *L.* (s. str.) *kasumiense* sp. nov. (4), *L.* (s. str.) *kasagatanum* sp. nov. (5), and *L.* (s. str.) *morii* sp. nov. (6). Scale: 0.5 mm.



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

in the following details: median lobe a little longer than fused paramere, with ventral sclerite relatively broad and lingulate in posterior part, the apex narrowly rounded; fused paramere much more slender and more feebly curved to the left in apical half as seen from dorsal side.

Type series. Holotype: ♂, allotype: ♀, Nakatsutani-gawa, Kanmuri-yama, Yoshimura, Saeki-gun, Hiroshima Pref., Honshu, Japan, 21–VII–2001, M. MORI leg.

Distribution. Japan (western Honshu).

Bionomics. The type specimens were found from the upper hypogean zone along a small valley in a deciduous broadleaved forest at an altitude of 800 m between Nakatsutani-gawa and Mt. Kanmuri-yama.

Etymology. The specific epithet of the present new species is named after “Kanmuri-yama”, the type locality.

***Lathrobium* (s. str.) *aioiense* Y. WATANABE, sp. nov.**

[Japanese name: Aioi-ohkobane-nagahanekakushi]

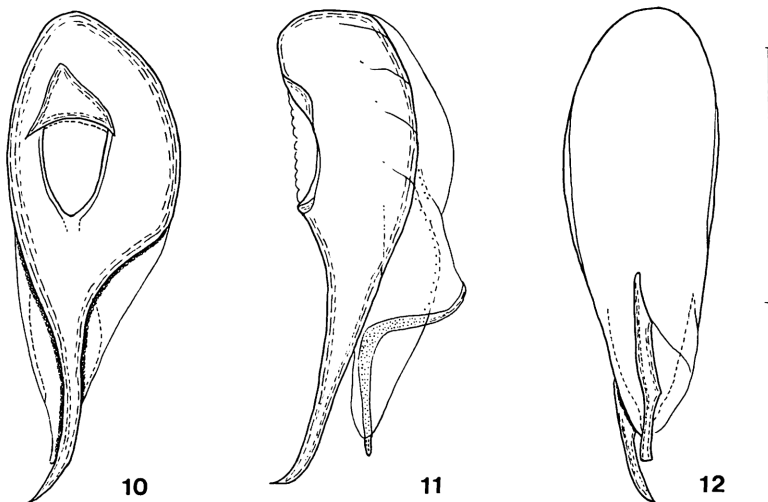
(Figs. 3, 10–12)

Body length: 10.2–11.2 mm (from front margin of head to anal end); 5.0–5.2 mm (from front margin of head to elytral apices).

Male and female. Similar in facies and colour to the preceding species, but different from it in the somewhat smaller and narrower body, and in the following points:

Head slightly longer than broad (length/width=1.03) as in the preceding species though somewhat more strongly narrowed anteriorly, lateral sides more distinctly arcuate, surface similarly punctured as in the preceding species, eyes small and flat though more than one-fourth as long as postocular part. Antennae elongate, extending a little beyond the middle of pronotum, and of similar articulation to those of the preceding species. Pronotum nearly oblong and similar in configuration to that of the preceding species, apparently longer than broad (length/width=1.40), distinctly longer (pronotum/head=1.23) but a little narrower (pronotum/head=0.91) than head; surface slightly less closely and somewhat less coarsely punctured except for a narrow smooth longitudinal space at the middle. Elytra similar in configuration to that of the preceding species though somewhat more closely and more shallowly punctured on the surface. Legs similar in structure to those of the preceding species. Abdomen elongate, slightly dilated towards 6th segment and then abruptly narrowed towards the anal end, each tergite slightly more closely and somewhat more coarsely punctured than in the preceding species; in male, 8th sternite subtriangularly excised at the middle of posterior margin and longitudinally depressed at the middle, each side of the middle of the depression clothed with fine blackish setae, 7th sternite more broadly and more shallowly emarginate at the middle of posterior margin than in 8th sternite and with a U-shaped depression before the emargination, surface of the depression provided with blackish setae similar to those of 8th sternite.

Male genital organ more closely similar in configuration of fused paramere to that



Figs. 10–12. Male genital organ of *Lathrobium* (s. str.) *aoiense* Y. WATANABE, sp. nov.; dorsal view (10), lateral view (11), and ventral view (12). Scale: 1.0 mm.

of *L. harimanum* Y. WATANABE (1986, p. 688) than to that of the preceding species. Median lobe distinctly shorter than fused paramere, with ventral sclerite narrow and club-shaped in posterior part, the apex nearly truncate; fused paramere abruptly constricted near the middle and then gradually narrowed towards the acutely pointed apex as seen from dorsal side. Also somewhat similar to that of *L. uenoi* Y. WATANABE (1980, p. 21), but different from it in having much broader fused paramere and relatively long median lobe.

Type series. Holotype: ♂, allotype: ♀, Mt. Minô-san, Aioi-shi, Hyôgo Pref., Honshu, Japan, 3–VII–1999, M. MORI leg.

Distribution. Japan (western Honshu).

Bionomics. The type specimens were obtained by excavation of a scree deposited in a plantation of *Cryptomeria japonica* on the southeastern slope of Mt. Minô-san at an altitude of 300 m.

Etymology. The present new species is named after “Aioi-shi” in which lies the type locality.

***Lathrobium* (s. str.) *kasumiense* Y. WATANABE, sp. nov.**

[Japanese name: Kasumi-ohkobane-nagahanekakushi]

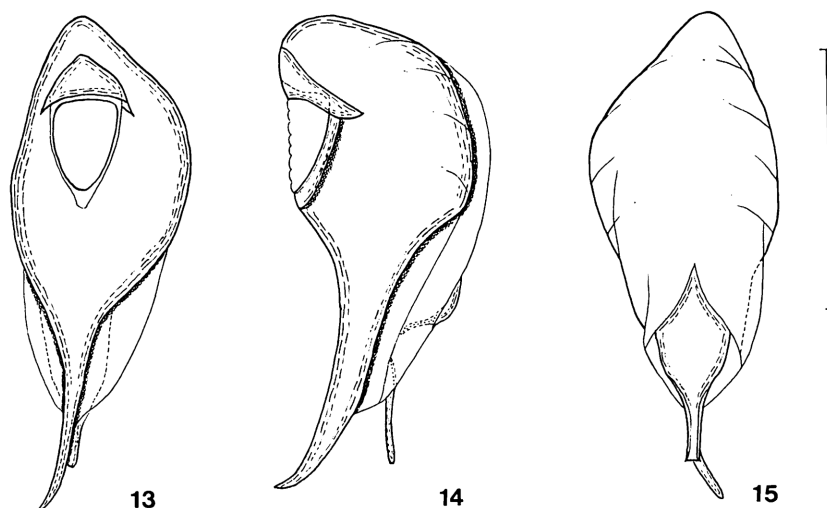
(Figs. 4, 13–15)

Body length: 10.9 mm (from front margin of head to anal end); 4.9 mm (from front margin of head to elytral apices).

Male. Similar in general appearance to the two preceding species, but different from them in the configuration of male genital organ.

Head suborbicular and convex medially, slightly longer than broad (length/width=1.03), lateral sides gently arcuate as in *L. aoiense*, surface less coarsely punctured than in *L. aoiense*. Antennae similar in configuration to those of the two preceding species. Pronotum similar in configuration to those of the two preceding species, a little longer than broad (length/width=1.33), apparently longer (pronotum/head=1.20) but somewhat narrower (pronotum/head=0.93) than head, surface more densely and somewhat more coarsely punctured than in *L. aoiense* except for a narrow smooth longitudinal space at the middle. Elytra less narrowed anteriorly than in *L. aoiense*, almost as long as broad, distinctly shorter (elytra/pronotum=0.78) but slightly broader (elytra/pronotum=1.04) than pronotum; surface more sparingly covered with more distinct punctures than those of *L. aoiense*. Abdomen elongate, each tergite slightly more distinctly punctured than in *L. aoiense*; in male, 8th sternite subtriangularly excised at the middle of posterior margin as in *L. aoiense* and more or less longitudinally flattened in front of the excision, surface of the flattened area more densely setose than in the other parts, 7th sternite more deeply emarginate at the middle of posterior margin than in *L. aoiense* though provided with a similar depression to that of 8th sternite before the emargination, surface clothed with fine blackish setae.

Genital organ similar in general appearance to that of *L. aoiense*, but different



Figs. 13–15. Male genital organ of *Lathrobium* (s. str.) *kasumiense* Y. WATANABE, sp. nov.; dorsal view (13), lateral view (14), and ventral view (15). Scale: 1.0 mm.

from it in the following points: fused paramere more slender and less curved to the right as seen from the dorsal side though much broader in profile than that of *L. aoiense*. Similar also to that of *L. uenoi*, but different from it in remarkably broader fused paramere as seen from lateral side.

Female. Unknown.

Type specimen. Holotype: ♂, Obara, Kasumi-chō, Kinosaki-gun, Hyōgo Pref., Honshu, Japan, 1–VIII–2000, M. MORI leg.

Distribution. Japan (western Honshu).

Bionomics. The type specimen was found in the upper hypogean zone at the side of a road extending westwards from Obara Village and lying in a young deciduous broadleaved forest at an altitude of 100 m.

Etymology. The scientific name of this new species is derived from “Kasumi-chō”, the type locality.

***Lathrobium* (s. str.) *kasagatanum* Y. WATANABE, sp. nov.**

[Japanese name: Kasagata-ohkobane-nagahanekakushi]

(Figs. 5, 16–18)

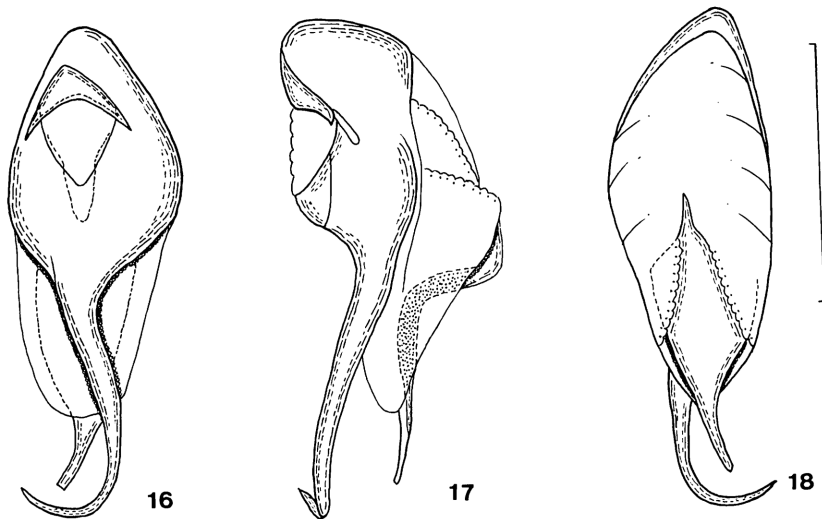
Body length: 10.5–10.6 mm (from front margin of head to anal end); 5.2–5.4 mm (from front margin of head to elytral apices).

Resembles the preceding species, *L. kasumiense*, in body size, but different from it in darker colour and the following points:

Head slightly longer than broad as in *L. aoiense*, less narrowed anteriorly than in

L. kasumiense, lateral sides more distinctly arcuate, surface somewhat less coarsely punctured. Pronotum oblong, apparently longer than broad (length/width=1.32), distinctly longer (pronotum/head=1.23) but slightly narrower (pronotum/head=0.97) than head, surface slightly less densely and somewhat less coarsely punctured except for a narrow smooth longitudinal space at the middle. Elytra subtrapezoidal and narrowed anteriorly, posterior margin more deeply emarginate at the middle than in *L. kasumiense*, somewhat longer than broad (length/width=1.05), a little shorter (elytra/pronotum=0.86) but somewhat broader (elytra/pronotum=1.09) than pronotum; surface more coarsely though slightly less densely punctured than in *L. kasumiense*. Abdomen elongate, gradually dilated towards 6th segment, and then abruptly narrowed apically, each tergite somewhat more sparingly and more finely punctured than in *L. kasumiense*; 8th sternite subtriangularly excised at the middle of posterior margin, feebly and longitudinally depressed before the excision, surface of the depression more closely clothed with fine blackish brown setae than in other parts, 7th sternite more broadly and more shallowly emarginate than in 8th sternite at the middle of posterior margin and depressed before the excision in a shape of horseshoe, surface of the depression somewhat more closely clothed with fine blackish setae than in other parts.

Male genital organ more closely similar in configuration of fused paramere to that of *L. daisenense* Y. WATANABE (1987, p. 8) than to those of the three preceding species. Median lobe shorter than fused paramere, with ventral sclerite curved to the right side and abruptly narrowed in apical third towards the apex which is truncate. Fused paramere much narrower in profile than that of *L. daisenense*, abruptly constricted near the middle, and then narrowed apically, remarkably curved to the right as



Figs. 16–18. Male genital organ of *Lathrobium* (s. str.) *kasagatanum* Y. WATANABE, sp. nov.; dorsal view (16), lateral view (17), and ventral view (18). Scale: 1.0 mm.

seen from the dorsal side.

Type series. Holotype: ♂, Mt. Kasagata-yama, Yachiyo-chô, Taka-gun, Hyôgo Pref., Honshu, Japan, 19-V-2001, M. MORI leg; allotype: ♀, same locality as for the holotype, 12-IV-1998, M. MORI leg.

Distribution. Japan (western Honshu).

Bionomics. The type specimens were obtained from the upper hypogean zone in a deciduous broadleaved forest on Mt. Kasagata-yama at an altitude of 600 m.

Etymology. The specific epithet of this new species is derived from “Mt. Kasagata-yama”, the type locality.

***Lathrobium* (s. str.) *morii* Y. WATANABE, sp. nov.**

[Japanese name: Mori-ohkobane-nagahanekakushi]

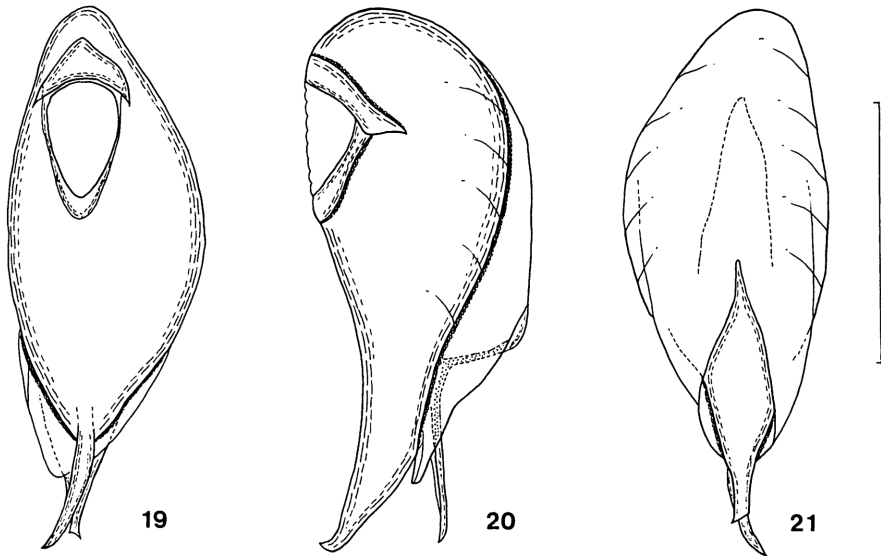
(Figs. 6, 19–21)

Body length: 12.6–12.7 mm (from front margin of head to anal end); 5.9–6.0 mm (from front margin of head to elytral apices).

Male. Similar in general appearance to the four preceding species, but markedly different from them in the configuration of male genital organ.

Head subquadrate, as long as broad, very slightly narrowed anteriorly and feebly convex medially, lateral sides slightly arcuate, surface sparingly covered with stronger punctures than in *L. kasagatanum*, eyes small and almost flat, the longitudinal diameter one-sixth as long as postocular part. Antennae elongate, similar in configuration to those of *L. kasagatanum*. Pronotum evidently longer than broad (length/width=1.33), distinctly longer (pronotum/head=1.26) but somewhat narrower (pronotum/head=0.94) than head, widest at anterior fourth, more strongly narrowed posteriorly than anteriorly, lateral sides feebly arcuate; surface somewhat more densely and more coarsely punctured than in *L. kasagatanum*. Elytra subtrapezoidal though less dilated posteriorly than in *L. kasagatanum*, a little longer than broad (length/width=1.06), apparently shorter (elytra/pronotum=0.80) than but as broad as pronotum, posterior margin more shallowly emarginate at the middle; surface closely covered with much shallower punctures than those of *L. kasagatanum*. Abdomen elongate, each tergite more closely and more coarsely punctured than in *L. kasagatanum*, 8th sternite subtriangularly excised at the middle of posterior margin, shallowly and longitudinally depressed before the excision, surface of the depression closely provided with fine blackish setae in apical half, 7th sternite much more shallowly and more broadly emarginate than in 8th sternite at the middle of posterior margin and depressed in a U-shape before the emargination, surface of the depression more closely setose than in other parts.

Genital organ spindle-shaped, widest near the middle, somewhat more strongly narrowed apically than basally, median lobe somewhat shorter than fused paramere, with ventral sclerite widest near the middle and narrowed basally, posterior half gradually narrowed before somewhat constricted part and parallel-sided towards the truncate apex. Fused paramere widest near the middle and gradually narrowed both basally and



Figs. 19–21. Male genital organ of *Lathrobium* (s. str.) *morii* Y. WATANABE, sp. nov.; dorsal view (19), lateral view (20), and ventral view (21). Scale: 1.0 mm.

apicad, abruptly constricted at apical fourth, and then strongly narrowed towards the acutely pointed apex which is evidently curved to the right as seen from dorsal side.

Female. Unknown.

Type series. Holotype: ♂, Minoo, Osaka Pref., Honshu, Japan, 25–IV–1998, M. MORI leg. Paratype: 1 ♂, same data as for the holotype.

Distribution. Japan (western Honshu).

Bionomics. The type specimens were obtained from the upper hypogean zone in a plantation of *Cryptomeria japonica* near the Minoo Reservoir at an altitude of 400 m.

Etymology. This new species is dedicated to Mr. Masato MORI, who collected this interesting species.

要 約

渡辺泰明：本州西部から発見されたオオコバネナガハネカクシ種群（甲虫目ハネカクシ科）の5新種。——オオコバネナガハネカクシ種群は、近縁のコバネナガハネカクシ種群からは体が大型で、体色が赤褐色を呈し、頭部と翅鞘がともに横位でないことで区別され、これまで本州西部、四国および九州各地の主として地下浅層から発見されてきた。最近、私は西宮市の森正人氏から多数のハネカクシをご恵与いただいたが、それらの中からオオコバネナガハネカクシ種群に含まれる5未記載種を見出したので、下記のとおり命名・記載した。

1. *Lathrobium* (s. str.) *kanmuriense* Y. WATANABE カンムリオオコバネナガハネカクシ

広島県の中津谷川と冠山との間の、標高800m地点の落葉広葉樹林の地下残層から採集された本種は、雄交尾器の形状から、山口県の寂地山から記載されたモリタオオコバネナガハネカ

クシに近縁の種だと思われる。しかし、体がより小型で細いこと、頭部の点刻がより粗く、翅鞘の点刻はより弱く、後縁の湾入がより浅いこと、また雄の腹部第二次性徴および交尾器の形状も異なることによって区別される。

2. *Lathrobium* (s. str.) *aioiense* Y. WATANABE アイオイオオコバナナガハネカクシ

この種は、兵庫県相生市の三濃山の標高300mほどの地点のスギ植林地内の沢から掘り出されたもので、色彩および外観は前種に類似している。しかし、体がいくぶん小型で細いこと、頭部が前方により強く狭まり、前胸背板の点刻がより疎でより弱く、翅鞘がより密に点刻されること、また雄の腹部第二次性徴と交尾器の形状が明らかに異なることで区別される。

3. *Lathrobium* (s. str.) *kasumiense* Y. WATANABE カスミオオコバナナガハネカクシ

兵庫県城崎郡香住町内の林道の、標高100m地点の若い落葉広葉樹林の地下浅層から得られた本種は、雄交尾器の形状を含めて形態が前記のアイオイオオコバナナガハネカクシに類似している。しかし、頭部の点刻はより弱く、前胸背板はより密に、より粗く点刻され、翅鞘は長さと同幅がほぼ等しく、点刻はより疎でより明瞭であること、また雄交尾器の側葉が側面から見てはるかに幅広であることによって区別される。

4. *Lathrobium* (s. str.) *kasagatanum* Y. WATANABE カサガタオオコバナナガハネカクシ

この種は、兵庫県多可郡八千代町の笠形山の、標高600mほどの落葉広葉樹林の地下浅層から採集されたもので、前記のカスミオオコバナナガハネカクシと体長、外観が類似しているが、色彩はより暗色で、頭部は前方への狭まりが弱く、点刻がより弱い、前胸背板の点刻もいくぶん疎で、翅鞘の点刻はより粗く、後縁の湾入がより深いこと、また雄の腹部第二次性徴および交尾器の形状が異なることで区別される。

5. *Lathrobium* (s. str.) *morii* Y. WATANABE モリオオコバナナガハネカクシ

大阪府箕面川ダムの奥の、標高400mの地点のスギの人工林の地下浅層から採集された本種は、外観は前記4種と類似しているが、雄交尾器の形状は著しく異なっている。とくに側葉は末端1/4で急激に収縮し、その部分から末端にかけて著しく細くなることによって前記の4種から容易に区別される。

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