

## Notes on the Species of Staphylinidae (Coleoptera) from Japan

### XXII. The Descriptions of Three New Species of *Lobrathium* MULSANT et REY from Honshu

**Tateo Ito**

E12–102, Otokoyama Yutoku 7, Yawata, Kyoto, 614–8371 Japan

E-mail: itokyoto@gb3.so-net.ne.jp

**Abstract** Three new species closely allied to *Lobrathium yoshidai*, are described from Japan as *L. tateyamense* sp. nov., *L. hiroshimense* sp. nov. and *L. yasuii* sp. nov.

To date, twenty-five species and one subspecies of the genus *Lobrathium* have been known from Japan (LÖBL & LÖBL, 2015; ITO, 2015, 2017). Recently I found three new species closely related to *Lobrathium yoshidai* (ADACHI, 1955) in my cabinet. In this paper I am going to describe those new species as *Lobrathium tateyamense* sp. nov., *L. hiroshimense* sp. nov. and *L. yasuii* sp. nov. They are closely related to *L. yoshidai* (ADACHI), *L. niisatoi* T. ITO and *L. shikokense* T. ITO, in having some common characteristics. Therefore I propose the *L. yoshidai* species-group based on a combination of several characteristics discussed below.

All the holotypes designated in the present paper are deposited in the collection of the Osaka Museum of Natural History, Osaka.

Before going further I would like to express my cordial thanks to Messrs. Yasuhiko HAYASHI (Kawanishi City), Iwao OKAMOTO (Kure City), Katsuyuki TERADA (Hiroshima City) and Dr. Michihiro YASUI (Osaka City) for kindly offering me the valuable material used in the present study, especially to Mr. Y. HAYASHI for kindly reading the description in the draft and preparing the plates used in this paper.

#### The *Lobrathium yoshidai* Species-Group

Body depressed above; pronotum with an impunctate smooth median line; each elytron with a reddish, large brown macula in apical portion (ADACHI, 1955), 8th sternite widely emarginate on apical margin, with a lump of several tubercles just in the middle of the margin; aedeagus symmetrical (WATANABE & BABA, 1973), bearing an elongate, lanceolate projection on ventral surface. So far *Lobrathium yoshidai*, *L. niisatoi*, *L. shikokense* and three new species of the present paper are included in this species-group.

#### *Lobrathium tateyamense* sp. nov.

(Figs. 1a–d)

Body slender, moderately sized, subdepressed above, dark brown and moderately shiny; mouth parts, apical two-fifths of elytra, anal end and legs reddish brown, mandibles and antennae a little darkened; pubescence dark brownish black to black on body, yellowish brown to dark brown on appendices. Length: 6.5–7.0 mm.

Head subquadrate, slightly longer than wide, coarsely, closely and deeply punctate, the punctures sparse on frons, absent on clypeus, coarser and sparser on vertex than on postgenae and very dense on

basal third area as like as a honeycomb; eyes moderately sized, shorter than a half length of postgena in dorsal view; postgenae scarcely expanded laterally and roundly narrowed toward neck. Antennae somewhat slender, rather long and passing over the base of pronotum, and each segment distinctly longer than wide; 1st segment the longest, very robust but less than twice as long as 2nd, which is clearly shorter than 3rd; 4th to 6th sub-equal in length to each other; 7th to 10th each hardly shortened distally in length; 11th conical and distinctly longer than 10th.

Ventral surface of head coarsely, rather sparsely and uniformly punctate, with a perceptible microsculpture; mentum clearly depressed on both sides; submentum coarsened; gular plate smooth, gular sutures widely separated and subparallel to each other.

Pronotum suboblong (length/width = 1.33), longer (1.16 : 1.00) and narrower (0.90 : 1.00) than head, subparallel-sided, feebly narrowed behind; lateral margins invisible in dorsal view; both apical and basal margins thick; disc coarsely, closely and somewhat irregularly punctate in arrangement; punctures evidently coarser and sparser than those on head, with a clear median smooth line throughout. Scutellum scarcely rough and punctate. Prosternum rugose, mesosternum slightly uneven and metasternum finely and sparsely punctate.

Elytra longitudinally oblong, subparallel at sides, wider (1.24 : 1.00) and distinctly longer than pronotum, ratio of length at shoulders to width at the widest point about 1.23; punctures on surface much coarser than those on pronotum, arranged in somewhat irregular rows, especially distorted by rugosities near suture, and becoming a little finer laterad; pleural margins fairly thick, pleural keels moderately observable except basal extremity. Wings developed.

Abdomen (Fig. 1b) gently dilated toward 7th segment, then rather steeply convergent apicad; each tergite scarcely microsculptured, with extremely fine and obsolete punctures; 7th tergite provided with a white thin seam at apical margin; punctures on each sternite coarser than those on the opposite tergite. In male, 5th and 6th sternites each very weakly depressed medially; 7th weakly and widely depressed in U-shape, faintly emarginate in middle of apical margin, and the depression more finely punctate than on the circumference; 8th sternite widely and roundly excised on apical margin and widely depressed medially, the depression suboval and almost impunctate in basal part, and somewhat deep, widely triangular in apical part, with fine black granules except a narrow apico-marginal area. Profemora very robust and protarsi usually dilated in both sexes.

Aedeagus (Figs. 1c–d) elongate, symmetrical and bi-emarginate on sides in ventral view, moderately sclerotized except dorsal side, considerably sinuate as a whole in lateral view, with a remarkable elongate lanceolate projection on ventral side, the projection sinuate in lateral view, widest at basal third, thence gradually narrowed apicad while being emarginate on sides, and rounded at the tip (Figs. 1c–d).

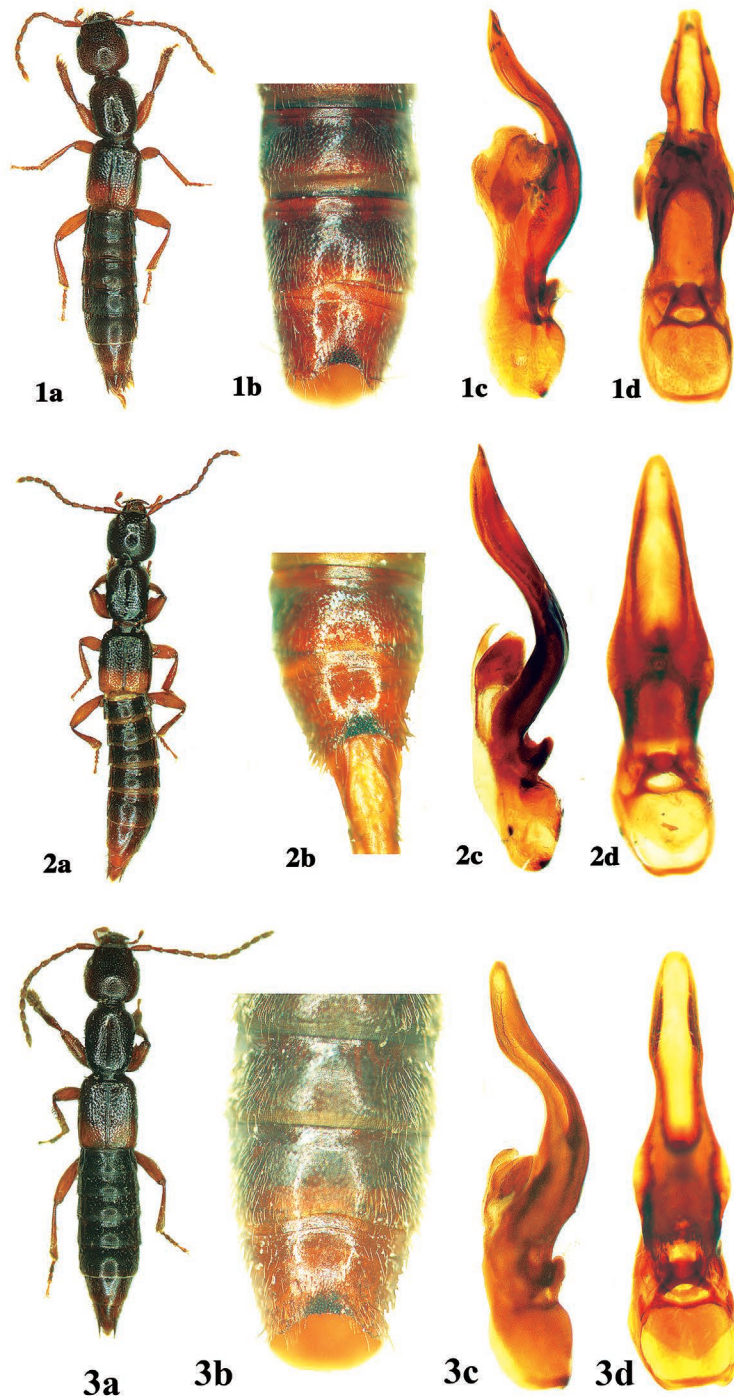
*Type series.* Holotype: ♂, Mt. Tateyama, Zigokudani, Toyama Pref., 31.VII.1961, Y. HAYASHI leg. Paratypes: 3 ♂♂, 1 ♀, same data as the holotype.

*Specimens examined.* 2 ♂♂, 2 ♀♀, Mt. Tateyama, Toyama Pref., 20.VII.1964, Y. HAYASHI leg.

*Distribution.* Japan (Honshu: Toyama Pref.).

*Notes.* Although this new species is closely allied to *Lobrathium niisatoi* T. ITO in having the similar appearance and secondary sexual features, it is distinguishable from the latter species by the male 8th sternite being with more or less weaker depression and its apical part being a little wider, the aedeagus is quite different in shape, the ventral projection being much more robust, more strongly curved ventrally and with a distinct constriction in lateral view. This new species is also similar to *L. yoshidai sadoensis* WATANABE et BABA, 1973 in the shape of aedeagus, but it differs from the body being smaller and darker in color, the aedeagus being with the apex wider etc.

*Etymology.* The specific name of the new species is derived from Mt. Tateyama, the type locality.



Figs. 1–3. Habitus and male genitalia of *Lobrathium* spp. — 1, *L. tateyamense* sp. nov.; 2, *L. hiroshimense*, sp. nov.; 3, *L. yasuii*, sp. nov. — a, Habitus; b, 7th and 8th sternites in male; c, aedeagus in lateral view; d, ditto in ventral view.

*Lobrathium hiroschimense* sp. nov.

(Figs. 2a–d)

Body slender, somewhat small and rather robust, subdepressed above and a little shiny; mouth parts, apical two-fifths of elytra, anal end and legs reddish brown, mandibles and antennae slightly darkened; pubescence dark brownish black to black on body, yellowish brown on appendices. Length: 6.2–6.8 mm.

Head subquadrate, scarcely longer than wide, coarsely, closely and deeply punctate; punctures apparently sparse on frons, absent on clypeus and wholly similar to the preceding species; eyes relatively large, the longitudinal diameter shorter than a half length of postgena (diameter of eye to postgena = 1.00 : 2.20). Antennae somewhat slender, rather long and passing over the base of pronotum, and each segment distinctly longer than wide; 1st segment the longest, very robust, less than twice as long as 2nd, which is clearly shorter than 3rd; 4th to 6th subequal in length to each other; 7th to 10th each hardly shortened distally in length; 11th conical and distinctly longer than 10th. Ventral surface of head coarsely, rather sparsely and uniformly punctate, with a perceptible microsculpture.

Pronotum subparallel-sided, clearly longer (1.16 : 1.00) and slightly narrower (0.90 : 1.00) than head; both apical and basal margins thick, and lateral margins invisible in dorsal view; disc coarsely, closely and somewhat irregularly punctate in arrangement; the punctures apparently coarser and a little sparser than on head, with a clear median smooth line from apex to base. Scutellum distinctly and rather finely punctate. Prosternum wholly coarsened, mesosternum also uneven and metasternum finely and sparsely punctate.

Elytra oblong, subparallel on sides, widest at apical third, wider (1.22 : 1.00) and longer (1.10 : 1.00) than pronotum, ratio of the length at shoulders to width at the widest point about 1.21; punctures much coarser than those on pronotum, arranged in somewhat irregular rows, especially disarranged by rugosities near suture and becoming a little finer laterad; pleural margins fairly thick, and pleural keels clearly observable except near base. Wings developed.

Abdomen gently dilated toward 7th segment, then rather steeply convergent apicad; all segments scarcely microsculptured; each tergite with extremely fine and obsolete punctures; 7th tergite provided with a white thin seam at apical margin. In male, 5th to 8th sternites depressed along the middle respectively as follows: 5th and 6th sternites depressed medially; 7th rather deeply, widely depressed in semicircle-shape, fairly and widely emarginate in middle of apical margin, and bottom of the depression with finer punctures than on circumference; 8th (Fig. 2b) widely and roundly excised in middle of apical margin, markedly depressed before the emargination, the depression divided into basal and apical parts, in which basal one is wide and almost impunctate, the apical one distinctly deep, nearly triangular in outline, with fine black granules except a narrow apico-marginal area. Profemora very robust and protarsi usually dilated in both sexes.

Aedeagus (Figs. 2c–d) moderately sclerotized except dorsal side, somewhat strongly bent ventrally behind the widest point, thence weakly curved dorsally toward apex, with a ventral projection heavily sclerotized, relatively short-spatulate in shape, widest in the middle, thence gradually and rather simply narrowed toward apex which is clearly rounded at tip.

*Type series.* Holotype: ♂, Sandan-kyô, Hiroshima Pref., 3.VI.1990, I. OKAMOTO leg. Paratypes: 1 ♀, same locality and collector as the holotype, 5.VIII.1990; 2 ♂♂, 2 ♀♀, Omokawa, Yoshiwa-mura, Hiroshima Pref., 20.IX.2009, K. TERADA leg.

*Distribution.* Japan (Honshu: Hiroshima Pref.).

*Notes.* Although the present species also has a closer relationship with *Lobrathium niisatoi* than the preceding species in the shape of aedeagus, it is distinguishable from *L. niisatoi* by the smaller

body, the aedeagus with a quite different ventral projection in shape (e. g., the ventral plate being much simply narrowed to the apex from the widest point and without a distinct constriction in ventral view).

*Etymology.* The specific name of the new species is derived from Hiroshima, the prefectural name of the type locality.

*Lobrathium yasuii* sp. nov.

(Figs. 3a–d)

Body slender, moderately sized, subdepressed above, dark brown, and moderately shiny; mouth part, apical two-fifths of elytra, anal end and legs reddish brown, mandibles and antennae a little darkened; pubescence dark brownish black to black on body, yellowish brown to dark brown on appendices. Length: 7.0–7.4 mm.

Head nearly quadrate, scarcely longer than wide, coarsely, closely and deeply punctate; punctures sparse on frons, absent on clypeus, apparently coarser and sparser on vertex than on postgenae and basal third area where those are more or less reticulate in arrangement; eyes moderately sized, shorter than a half length of postgena in dorsal view; postgenae scarcely expanded laterally and roundly narrowed toward neck. Antennae somewhat slender, rather long and passing over the base of pronotum; each segment distinctly longer than wide; 1st segment the longest, very robust but less than twice as long as 2nd, which is clearly shorter than 3rd; 4th to 6th sub-equal in length to each other; 7th to 10th each hardly shortened distally in length; 11th conical and distinctly longer than 10th. Ventral surface of head coarsely, rather sparsely and uniformly punctate, with a perceptible microsculpture.

Pronotum oblong (length/width = 1.36), longer (1.19 : 1.00) and narrower (0.88 : 1.00) than head, subparallel-sided, feebly narrowed behind; lateral margins invisible in dorsal view, thick throughout as well as both apical and basal margins; disc coarsely, closely and somewhat irregularly punctate in arrangement except impunctate smooth median line, the punctures evidently coarser and sparser than those on head. Prosternum wholly rugose, mesosternum also uneven and metasternum finely and sparsely punctate. Scutellum scarcely rough and punctate.

Elytra longitudinally oblong, subparallel at sides, wider (1.22 : 1.00) and distinctly longer than pronotum, ratio of the length at shoulders to width at the widest point near middle about 1.25; surface with punctures much coarser than on pronotum, arranged in somewhat irregular rows, especially disarranged by rugosities near suture and becoming a little finer in size laterad; pleural margins fairly thick, pleural keels moderately observable except basal portion. Wings developed.

Abdomen (Fig. 3b) slightly expanded laterad, gently dilated toward 7th segment, then rather steeply convergent apicad; each tergite scarcely microsculptured and with extremely fine and obsolete punctures; 7th tergite provided with a white thin seam at apical margin; punctures on each sternite coarser than those on the opposite tergite. In male, 5th to 6th sternites weakly depressed medially; 7th feebly emarginate in middle, widely depressed in U-shape and the depression with finer punctures in the bottom than on outsides; 8th widely and trapezoidally excised at apical margin, widely depressed before the excision, the depression triangular, impunctate in basal portion, somewhat deeper, with fine black granules almost on the apical margin. Legs with profemora very robust and protarsi usually dilated in both sexes.

Aedeagus (Figs. 3c–d) elongate, almost symmetrical, moderately sclerotized except dorsal side, complicatedly bent ventrally behind the widest point, then rather strongly curved dorsally, with a ventral projection heavily sclerotized, widest near middle, thence slightly constricted apically, apical part

behind the constriction forming a rather narrow-lanceolate lobe, with rounded tip.

*Type series.* Holotype: ♂, Riv. Yoshino, Kami-ichi, Nara Pref., 3.IX.1973, M. YASUI leg. Paratype: 1 ♀, Riv. Yoshino, Ootaki, Nara Pref., 3.XI.1973, M. YASUI leg.

*Distribution.* Japan (Honshu: Nara Pref.).

*Notes.* Although this new species is closely allied to *L. shikokense* T. ITO in the appearance and secondary sexual features, it is distinguishable from the latter by the male 8th sternal depression being with the granules almost on the edge of the apical margin, the aedeagus is quite different in shape, the ventral projection much more robust, being with a distinct constriction in lateral view and the apical area relatively wide and rather rounded at the tip.

*Etymology.* The specific name is dedicated to Dr. Michihiro YASUI who is the collector of the holotype.

## 要 約

伊藤建夫：日本産ハネカクシ科甲虫（鞘翅目）の覚え書き，22. ツツナガハネカクシ属の本州からの3新種の記載。———新たにヨシダツツナガハネカクシ種群を定義し，近似する本州産の3新種を *Lobrathium tateyamense* sp. nov., *L. hirosimense* sp. nov. および *L. yasuii* sp. nov. として命名・記載し，各新種の和名をタテヤマツツナガハネカクシ，ヒロシマツツナガハネカクシおよびヨシノツツナガハネカクシとした。

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