

Three New Brachypterous *Lathrobium* (Coleoptera, Staphylinidae) from Northern Kyushu, Japan

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Abstract Three new brachypterous *Lathrobium* belonging to the family Staphylinidae are described under the names *L. (L.) takakuwai*, *L. (L.) hoshinai* and *L. (L.) oitaense*. They are obtained under dead leaves accumulated in broadleaved forests at seven localities in northern Kyushu, Japan.

A fairly large number of staphylinid species of the group of *Lathrobium pollens* / *shingon* has been known from various localities in Japan by several entomologists. However, only two species belonging to this group have been reported from Kyushu, including Shimokoshiki-jima Island, in Japan by WATANABE (1996) and ASSING (2013). Through the courtesy of Dr. H. HOSHINA and Mr. S. ONODA, I had an opportunity to examine many interesting specimens of this species group obtained from several localities in northern Kyushu, Japan. After a close examination, it has become clear that they were classified into three new species on account of different external features, configuration of secondary sexual characters of abdominal sternites and genital organ in the males from the previously known species. I am therefore going to describe these new species in the present paper.

Before going further, I wish to express my hearty thanks to Dr. Hideto HOSHINA, Faculty of Education, Fukui University, and Mr. Shigeru ONODA, Kagoshima, for their kindness in providing me with the specimens used in the present study, and to Prof. Hiroaki KOJIMA and Mr. Naoki KANEKO, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photographs in this paper.

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

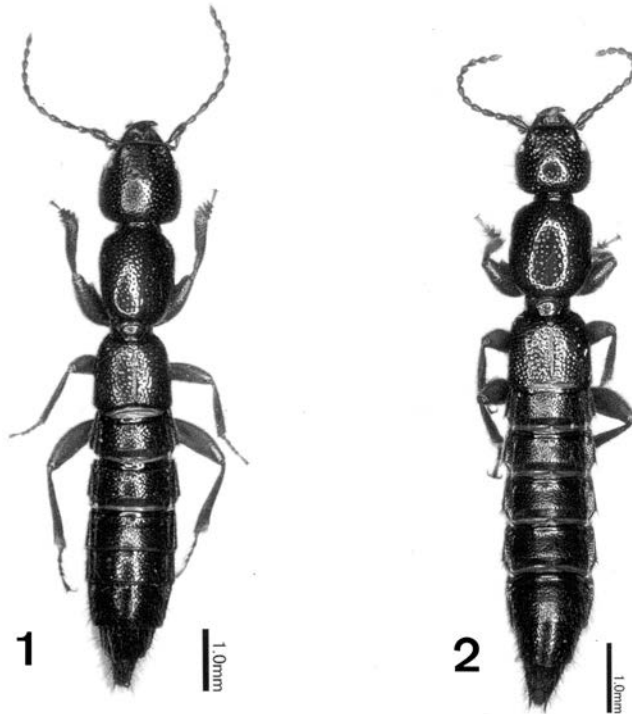
[Japanese name: Takakuwa-kobane-nagahanekakushi]

(Figs. 1, 3, 6–8)

Body length: 7.6–8.4 mm (from front margin of head to anal end); 3.1–3.7 mm (from front margin of head to elytral apices).

Body elongate, nearly parallel-sided and subdepressed above. Colour black to brownish-black and moderately shining, with palpi brownish yellow, labrum and mandibles brownish red, antennae, legs and two apical abdominal segments yellowish brown.

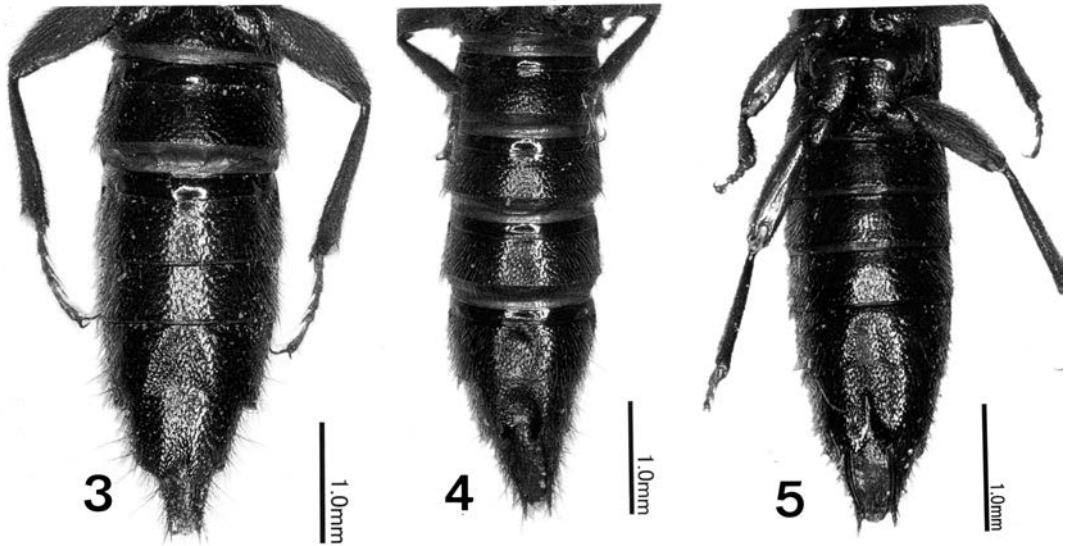
M a l e. Head subquadrate, slightly narrowed anteriorly, somewhat depressed above, almost as long as wide or slightly transverse (width / length = 1.04), lateral sides gently arcuate; surface sparsely and rather coarsely punctured, the punctures becoming somewhat closer and finer in latero-basal parts than in medio-frontal area, and covered with extremely microscopical coriaceous ground sculpture only visible under high magnification; eyes small and flat, their longitudinal diameter almost one-fourth as long as the length of postocular part. Antennae relatively slender, extending a little beyond the middle of pronotum and not thickened towards the extremity, two proximal segments polished and the remainings opaque, 6th to 10th more or less moniliform; 1st segment robust and dilated apically,



Figs. 1–2. *Lathrobium* (*Lathrobium*) spp. from northern Kyushu, Japan. — 1. *L. (L.) takakuwai* sp. nov., ♂, from Mt. Hiko-san, Fukuoka Pref., Kyushu, Japan; 2, *L. (L.) hoshinai* sp. nov., ♂, from Mt. Inunaki-yama, Hisayama-machi, Fukuoka Pref., Kyushu, Japan.

more than twice as long as wide, 2nd constricted at base, more than 1.5 times as long as wide, much shorter ($2\text{nd} / 1\text{st} = 0.57$) and narrower ($2\text{nd} / 1\text{st} = 0.67$) than 1st, 3rd remarkably longer than wide (length / width = 2.50) though almost as wide as 2nd, 4th to 8th equal in both length and width to one another, each apparently longer than wide (length / width = 1.75), distinctly shorter (each of 4th to 8th / 3rd = 0.70) than 3rd, 9th and 10th equal in both length and width to each other, each 1.5 times as long as width though a little shorter than 8th (each of 9th and 10th / 8th = 0.86), 11th fusiform, twice as long as wide, distinctly longer ($11\text{th} / 10\text{th} = 1.33$) than, though as wide as 10th, subacuminate at apex.

Pronotum gently convex medially and narrowed posteriad, distinctly longer than wide (length / width = 1.25), a little longer (pronotum / head = 1.19) and slightly narrower (pronotum / head = 0.95) than head; lateral sides almost straight except near anterior and posterior angles, anterior margin feebly arcuate except for almost straight median part, posterior margin truncate, anterior angles obtuse and invisible from dorsal side, posterior ones narrowly rounded; surface sparingly and setiferously punctured, the punctures are somewhat shallower than those of head, providing with a narrow longitudinal smooth space along the median line through the length of pronotum. Scutellum subtriangular; surface provided with a few minute setiferous punctures. Elytra subquadrate and gently dilated posteriad, slightly transverse (width / length = 1.11), distinctly shorter (elytra / pronotum = 0.72) than though as wide as pronotum, lateral sides nearly straight, posterior margin broadly emarginate at middle, posterior angles rounded; surface somewhat more densely and more shallowly punctured than in pronotum. Hind wings degenerated to minute lobes which are about one-fifth as long as elytra. Legs



Figs. 3–5. Secondary sexual characters in male. — 3, *Lathrobium (Lathrobium) takakuwai* sp. nov.; 4, *L. (L.) hoshinai* sp. nov.; 5, *L. (L.) oitaense* sp. nov.

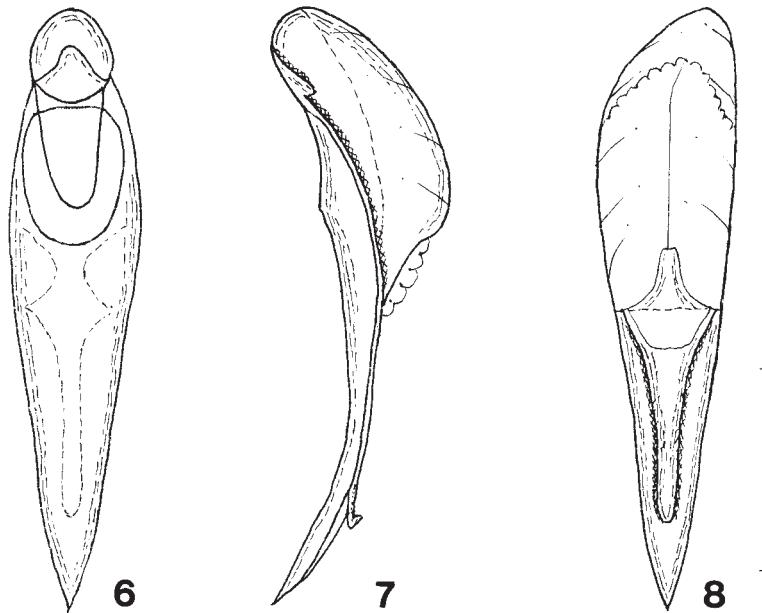
moderately long, profemur considerably thickened, but strongly constricted near the apex and excavated in apical half on the inner face, so that the anterior part of the excavation forms a subtriangular projection; protibia dilated apicad, hollowed in basal half on the inner face and armed with five or so transverse rows of comb-like yellowish fine setae in basal half within the hollow; meso- and metatibiae simple; 1st to 4th protarsal segments relatively widened, meso- and metatarsi thin.

Abdomen elongate, gradually dilated from 3rd to 6th segments, and then abruptly narrowed towards the anal end; surface of each tergite somewhat sparingly punctured and covered with fine brownish pubescence, 8th tergite more sparingly, more finely punctured and pubescent than in the preceding tergites; 8th sternite subtriangularly excised at the middle of posterior margin and longitudinally depressed in front of the excision; 7th sternite broadly, shallowly emarginate at the middle of posterior margin, and subtriangularly depressed in front of the emargination, surface of the depression densely covered with brownish rigid pubescence; 7th sternite simple.

Genital organ elongate, almost symmetrical, and moderately sclerotized. Median lobe obviously shorter and narrower than fused paramere, ventral plate widest at middle, almost parallel-sided in apical half and narrowly rounded at apex which is subtriangularly pointed ventrad in lateral view, though basal half take the form of a narrow longitudinal carina. Fused paramere symmetrical, gradually narrowed towards the pointed apex, apical half distinctly curved to ventral side in profile.

F e m a l e. Similar in general appearance to male, but differs from it in 8th abdominal sternite which is narrowed towards the broadly rounded apex, gradually in basal two-thirds and abruptly in apical third; 7th sternite simple.

Type series. Holotype: ♂, paratype (allotype): ♀, Mt. Hiko-san, Fukuoka Pref., Kyushu, Japan, 29.VI.1995, H. HOSHINA leg. Paratypes: 1 ♂, same locality as for the holotype, 29.VI.1995, H. HOSHINA leg.; 1 ♂, same locality as above, 8.X.1970, Y. WATANABE leg.; 1 ♀, same data as for the allotype; 4 ♀♀, same locality as for the holotype, 22.VII.1995, H. HOSHINA leg.; 1 ♀, same locality as above, 20.XI.1995, H. HOSHINA leg.



Figs. 6–8. Male genital organ of *Lathrobium (Lathrobium) takakuwai* sp. nov. — 6, Dorsal view; 7, lateral view; 8, ventral view. Scale. 0.5 mm.

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

Remarks. The present new species is similar to *L. (L.) yositanum* Y. WATANABE, 1999 from southern Shikoku in general appearance, but can be distinguished from it by smaller body size, different structures of secondary sexual characters of abdominal sternites and configuration of genital organ in the male.

Bionomics. All the type specimens obtained on Mt. Hiko-san were taken by sifting dead leaves accumulated in deciduous broadleaved forests.

Etymology. This new species is dedicated to the late Dr. Masatoshi TAKAKUWA, who was an excellent coleopterist in Japan and has made many contributions to the coleopterology in East Asia.

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

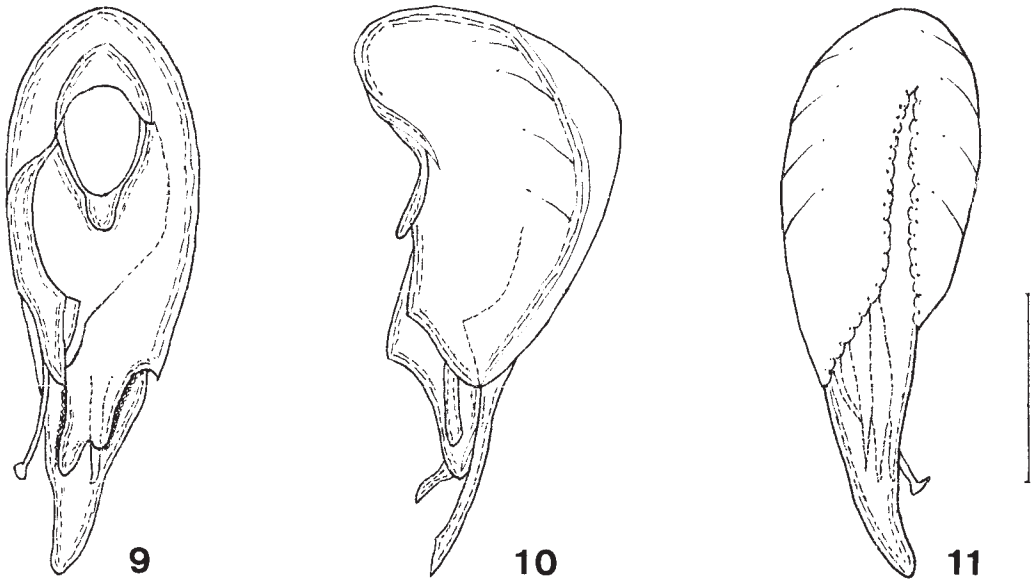
[Japanese name: Hoshina-kabane-nagahanekakushi]

(Figs. 2, 9–11)

Body length: 6.4–8.5 mm (from front margin of head to anal end), 3.3–3.6 mm (from front margin of head to elytral apices).

The present new species is similar in general appearance to the preceding species, but differs from it in structure of secondary sexual characters of abdominal sternites and configuration of genital organ in the male.

Male. Head subquadrate, somewhat narrowed anteriorly and slightly elevated medially, some-



Figs. 9–11. Male genital organ of *Lathrobium (Lathrobium) hoshinai* sp. nov. — 9, Dorsal view; 10, lateral view; 11, ventral view. Scale. 0.5 mm.

what transverse (width / length = 1.15), postocular part arcuate and about three times as long as the longitudinal diameter of each eye which is nearly flat; surface sparsely and coarsely punctured, the punctures becoming somewhat closer in the latero-basal areas than in the median frontal area, and covered with microscopic ground sculpture all over. Antennae moderately long, extending a little beyond the middle of pronotum and not thickened towards the extremity, 5th to 10th segments moniliform, first two segments polished and the remainings opaque, 1st segment robust, dilated apicad, more than twice as long as wide, 2nd more than 1.5 times as long as wide, half as long as and distinctly narrower than 1st (2nd / 1st = 0.67), 3rd twice as long as wide, a little longer (3rd / 2nd = 1.14) than though as wide as 2nd, 4th more than 1.5 times as long as width, somewhat shorter (3rd / 4th = 0.88) than though as wide as 3rd, 5th to 10th equal in both length and width, each 1.5 times as long as wide and a little shorter (each of 5th to 10th / 4th = 0.86) than though as wide as 4th, 11th fusiform, nearly twice as long as wide and distinctly wider than 10th (11th / 10th = 1.25), subacuminate at apex.

Pronotum elevated medially and distinctly narrowed posteriad, somewhat longer than wide (length / width = 1.17), distinctly longer (pronotum / head = 1.40) and slightly wider (pronotum / head = 1.09) than head; lateral sides almost straight except near anterior and posterior angles, anterior margin arcuate, posterior margin slightly emarginate at middle, anterior angles obtuse and not visible from above, posterior ones rounded; surface more numerous though less strongly punctured than in frontal area of head except for impunctate smooth median space throughout the length of pronotum. Scutellum subtriangular, provided with a few minute setiferous punctures on surface. Elytra subtrapezoidal, slightly dilated apicad and subdepressed above, somewhat transverse (width / length = 1.14), distinctly shorter (elytra / pronotum = 0.79) than though slightly wider than pronotum (elytra / pronotum = 1.04); lateral sides slightly arcuate, posterior margin broadly emarginate at middle, posterior angles broadly rounded; surface more closely and more roughly punctured than in pronotum and covered

with brownish pubescence. Hind wings degenerated to minute lobes which are about one-fourth as long as elytra. Legs moderately long; profemora, protibiae and protarsi are similar in structure to those of the preceding species.

Abdomen elongate, gradually delated from 3rd to 7th segments and then abruptly narrowed towards the anal end; 3rd to 7th tergites each somewhat closely and superficially punctured, 8th and 9th tergites each more sparingly and more finely punctured than in the preceding tergites, all the tergites distinctly covered with brownish pubescence; 8th sternite somewhat asymmetrically projected at each side of the middle of posterior margin, the right projection depressed and covered with short rigid blackish cilia, interspace between these projections horseshoe-shapedly depressed, surface of the depression glabrous; 7th sternite broadly and shallowly emarginate at the middle of posterior margin and U-shapedly depressed in front of the emargination, surface of the depression covered with similar punctures and pubescence to those of other parts; 6th sternite simple.

Genital organ elliptical. Median lobe asymmetrical, ventral sclerite widest near middle, and distinctly narrowed apicad, apical part somewhat curved to left side and rounded at apex as seen from ventral side. Fused paramere asymmetrical, much shorter than median lobe, narrowed towards the apex, surface divided into two parts by a small excision at apex, of which right part is somewhat longer than left part and strongly expanded dorsad near the median part in profile.

F e m a l e. Similar in general appearance to male, but different from it in the configuration of 8th abdominal sternite which is broadly produced posteriad at the median part of posterior margin and gently rounded at apex; 7th sternite not modified.

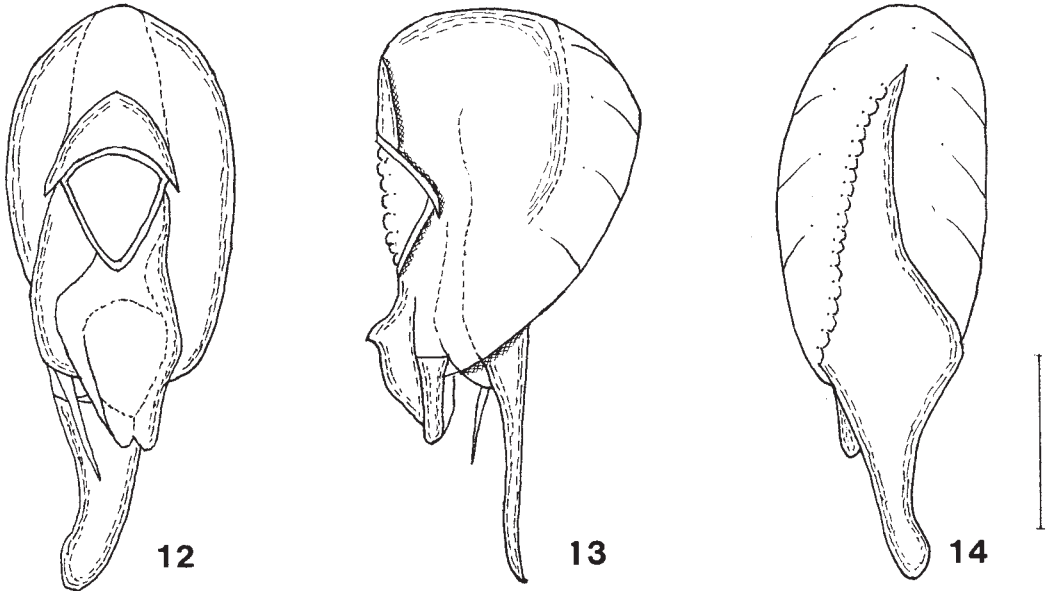
Type series. Holotype: ♂, paratype (allotype): ♀, Mt. Inunaki-yama, Hisayama-machi, Fukuoka Pref., Japan, 18.XII.1995, H. HOSHINA leg. Paratypes: 24 ♂♂, 24 ♀♀, same data as for the holotype; 22 ♂♂, 19 ♀♀, same locality and collector as above, 11.XII.1995; 1 ♂, 6 ♀♀, same locality and collector as above, 27.X.1997; 2 ♂♂, 2 ♀♀, Mt. Fukuchiyama, Kitakyushu-shi, Fukuoka Pref., Kyushu, Japan, 1.II.1995, H. HOSHINA leg.; 6 ♂♂, 3 ♀♀, same locality and collector as above, 2.V.1995; 3 ♂♂, 1 ♀, same locality and collector as above, 20.VI.1995; 2 ♀♀, same locality and collector as above, 30.VI.1995; 12 ♂♂, 4 ♀♀, same locality and collector as above, 23.X.1995; 4 ♂♂, 2 ♀♀, same locality and collector as above, 30.X.1995; 3 ♂♂, 5 ♀♀, same locality and collector as above, 6.XI.1995; 2 ♂♂, 3 ♀♀, same locality and collector as above, 13.XI.1995; 3 ♂♂, 5 ♀♀, same locality and collector as above, 27.XI.1995; 4 ♂♂, 2 ♀♀, same locality and collector as above, 4.XII.1995; 4 ♂♂, 42 ♀♀, same locality and collector as above, 8.IV.1997; 1 ♂, 1 ♀, same locality and collector as above, 30.V.1997; 7 ♂♂, 9 ♀♀, same locality and collector as above, 30.VII.1997; 6 ♂♂, 1 ♀, same locality and collector as above, 27.X.1997; 12 ♂♂, 8 ♀♀, same locality and collector as above, 3.XI.1997; 1 ♂, Mt. Yukawa-yama, Munakata-shi, Fukuoka Pref., Kyushu, Japan, 30.V.1997, H. HOSHINA leg.

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

Distribution. Japan (northern Kyushu).

Remarks. This new species is more similar to *L. okamotoi* Y. WATANABE, 2011 from Hiroshima Prefecture of western Honshu than the preceding species in external feature and basic configuration of male genital organ, but differs from the latter in the following points: ventral sclerite of median lobe narrower and the apical part somewhat more strongly curved to left side, and fused paramere acutely pointed at the middle as seen from lateral side. It is also similar to *L. duplebarbasum* ASSING, 2013 from Mt. Jôyama in Munakata City of Fukuoka Prefecture in body size and facies, but can be distinguished from it by the 7th abdominal sternite which is distinctly and U-shapedly depressed at the median part before the posterior margin, and different configuration of male genital organ.

Bionomics. All the specimens of type series were taken from three different mountains in Fukuoka



Figs. 12–14. Male genital organ of *Lathrobium (Lathrobium) oitaense* sp. nov. — 12, Dorsal view; 13, lateral view; 14, ventral view. Scale. 0.5 mm.

ka Prefecture. These specimens were obtained by sifting dead leaves accumulated in deciduous broad-leaved forests.

Etymology. The specific epithet of the present new species is given after Dr. Hideto HOSHINA, who collected all specimens of the type series.

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

[Japanese name: Ôita-kobane-nagahanekakushi]

(Figs. 3, 5, 12–14)

Body length: 7.1–8.4 mm (from front margin of head to anal end); 3.4–4.1 mm (from front margin of head to elytral apices).

Body elongate, nearly parallel-sided and subdepressed above. Colour black to blackish brown and moderately shining, with labrum, mandibles, antennae and two apical abdominal segments reddish brown, maxillary palpi and legs brownish yellow.

Male. Head trapezoidal, distinctly narrowed anteriorly and somewhat elevated medially, slightly transverse (width / length = 1.10), lateral sides gently arcuate, frontal area between antennal tubercles transversely flattened and glabrous; surface sparsely and strongly punctured except for impunctate vertexal area, the punctures becoming somewhat closer and finer in latero-basal area than in medio-frontal area, and covered with extremely microscopical coriaceous ground sculpture only visible under high magnification; eyes small and flat, their longitudinal diameter about one-third as long as the length of postocular part. Antennae relatively slender and moderately long, extending to the middle of pronotum and not thickened towards the extremity, all the segments longer than wide and simi-

lar in articulation to those of the preceding two species.

Pronotum gently convex medially and somewhat narrowed posteriad, distinctly longer than wide (length / width = 1.35), apparently longer (pronotum / head = 1.55) and slightly wider (pronotum / head = 1.05) than head; lateral sides almost straight in anterior two-thirds except near anterior angles and slightly arcuate in posterior third, anterior margin arcuate, posterior margin nearly truncate, anterior angles obtuse and invisible from dorsal side, posterior ones narrowly rounded; surface sparsely and setiferously punctured, the punctures being somewhat coarser than those on temporal area of head, provided with a narrow longitudinal smooth space along the median line through the length of pronotum. Scutellum subtriangular, provided with a few minute setiferous punctures on surface. Elytra subquadrate, slightly dilated posteriad and subdepressed above, slightly transverse (width / length = 1.09), distinctly shorter (elytra / pronotum = 0.71) than though slightly wider (elytra / pronotum = 1.04) than pronotum, with lateral sides feebly arcuate, posterior margin broadly emarginate at middle, posterior angles rounded; surface somewhat closely and roughly punctured and covered with fine brownish pubescence. Hind wings degenerated to minute lobes which are about one-fourth as long as elytra. Legs moderately long; profemora, protibiae and protarsi similar in structure to those of the preceding two species.

Abdomen elongate, somewhat dilated from 3rd to 7th segments, and then abruptly narrowed towards the anal end; 3rd to 7th tergites each transversely depressed along each basal margin and somewhat sparingly covered with rather coarse setiferous punctures; 8th tergite more sparsely punctured and pubescent than in the preceding tergites; 8th sternite deeply and subtriangularly excised at the middle of posterior margin and narrowly longitudinally depressed in front of the excision, surface of the depression glabrous, each side of the excision distinctly and asymmetrically projected posteriad, right projection somewhat wider than left one and more densely covered with short rigid blackish cilia on surface than that of left one; 7th sternite broadly emarginate at the middle of posterior margin, and linguiformly depressed before the emargination, surface of the depression glabrous at the median area, each side of the glabrous part provided with a number of short blackish rigid cilia at apical part; 6th sternite simple.

Genital organ elliptical. Median lobe asymmetrical, ventral sclerite widest near the middle and more strongly narrowed basad than apicad, apical part gently curved to left side and rounded at apex. Fused paramere relatively broad and obviously asymmetrical, much shorter than median lobe, apical part minutely excised at the middle, surface divide into two parts by a fine longitudinal line, median part strongly expanded dorsad and pointed at the middle as seen from lateral side.

F e m a l e. Similar in facies to male, but differs from it by 8th abdominal sternite which is gradually narrowed towards the gently rounded apex.

Type series. Holotype: ♂, paratype (allotype): ♀, Mt. Iwakuma-yama, Yufu, Ôita Pref., Kyushu, Japan, 10.XI.1996, S. ONODA leg. Paratypes: 2 ♂♂, 6 ♀♀, same data as for the holotype; 2 ♂♂, Mt. Kuro-dake, Ôita Pref., Kyushu, Japan, 9.XI.1996, S. ONODA leg.; 2 ♂♂, 2 ♀♀, Kirishima-jinja, Yufuin, Ôita Pref., Kyushu, Japan, 10.XI.1996, S. ONODA leg.

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

Distribution. Japan (northern Kyushu).

Remarks. The present new species is similar in size and general appearance to the preceding two species but differs from it in the following points: surface of body less coarsely punctured, and different configuration of secondary sexual characters of 7th and 8th abdominal sternites and genital organ in the male.

Bionomics. All the type specimens were obtained under dead leaves accumulated in deciduous

broadleaved forests of three localities.

Etymology. The specific epithet of the new species is derived from “Ôita Prefecture” in which the three known localities are contained.

要 約

渡辺泰明：九州北部からコバネナガハネカクシ種群（鞘翅目ハネカクシ科）に含まれる3新種の記載。——— これまで日本からはコバネナガハネカクシ種群に含まれる種として58種が報告されているが、九州（甌島を含む）からはわずか2種が知られているに過ぎなかった。最近、私は保科英人博士および小野田繁氏の兩人によって採集された多くのこのグループに含まれる個体を検する機会を得た。これらのなかから3種の未記載種を見出したので、タカクワコバネナガハネカクシ *Lathrobium (Lathrobium) takakuwai*, ホシナコバネナガハネカクシ *L. (L.) hoshinai* およびオオイタコバネナガハネカクシ *L. (L.) oitaense* として命名・記載した。

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