On some Apterous Lathrobium (Coleoptera, Staphylinidae) from Mt. Hakusan in Central Honshu, Japan

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On some Apterous *Lathrobium* (Coleoptera, Staphylinidae) from Mt. Hakusan in Central Honshu, Japan

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Abstract Two new species of the staphylinid genus *Lathrobium* are described under the names *L. hakusanum* and *L. kagaense.* The former belongs to the group of *Lathrobium pollens* and the latter to the group of *L. brachypterum. L. sasajii* Y. Watanabe is newly reported from Mt. Hakusan. They are obtained by using Berlese's apparatus from leaf litter accumulated deciduous broadleaved forests on Mt. Hakusan in central Honshu, Japan.

The second author of the present paper, H. Hoshina, obtained a short series of interesting staphylinids in the course of investigation of the soil-fauna of Mt. Hakusan in central Honshu, Japan, made in the summer and autumn of 2002. These specimens were classified into three species belonging to the genus *Lathrobium*. One of them seems to be a member of the group of *L. pollens* Sharp (1889, p.254) for reason of relatively large body and having remarkable sexual characters of the abdominal sternites in the male, and appears to be new to science. The remaining two species belong to the group of *L. brachypterum* Sharp (1889, p.255) in view of much smaller and narrower body than in the members of the preceding group. Of these, one species appears to be new to science on account of disagreement in the configuration of secondary sexual characters of the abdominal sternites and genital organ in the male, and the other undoubtedly agrees with *L. sasajii* Y. Watanabe (2001, p.223) in external features as well as secondary sexual characters of the abdorminal sternites and genital organ in the male. They will be described or reported in this paper. The type specimens of the two 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, we would like to express our 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. Koji Arai, Ranzan-machi, Saitama, for his assistance in drawing the text-figures inserted in this paper.

Key Words : Coleoptera, Staphylinidae, *Lathrobium*, new species, Japan

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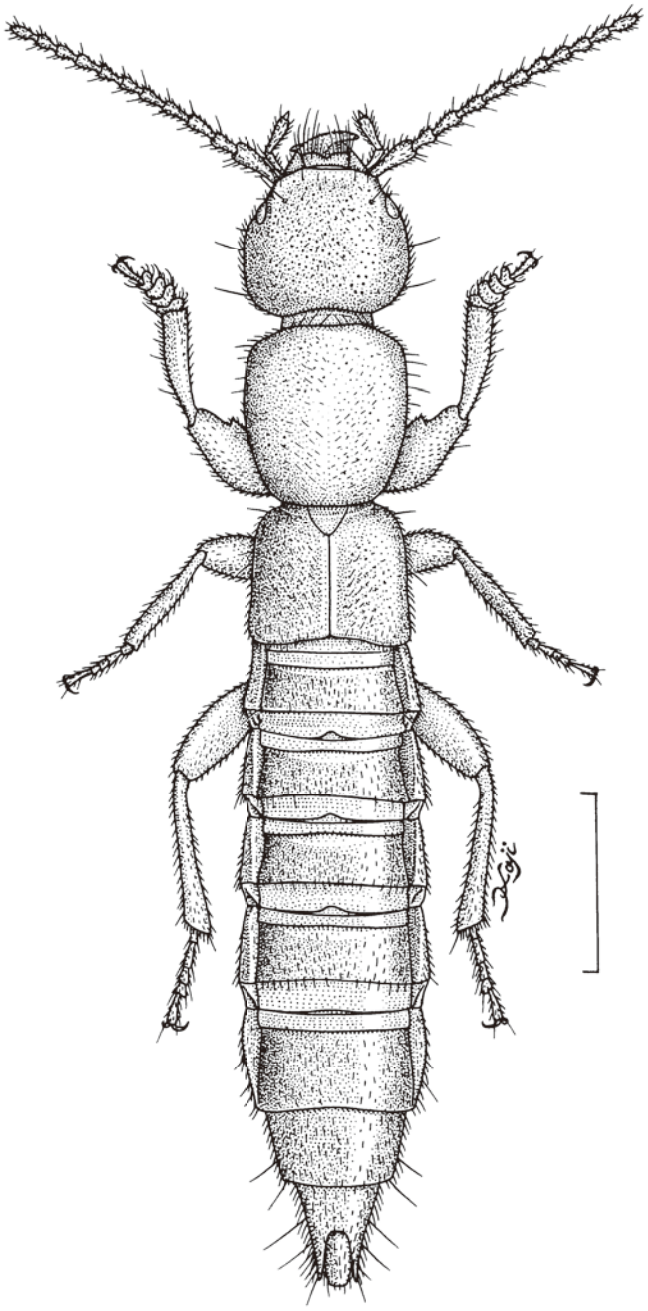


Fig.1. *Lathrobium* (s. str.) *hakusanum* sp. nov., ♂, from Mt. Hakusan of Ishikawa Pref., in central Honshu, Japan. Scale : 1.0mm.

Lathrobium (s. str.) *hakusanum* sp. nov.

[Japanese name : Hakusan-kobane-nagahanekakushi]

(Figs.1-5)

Body length : 12.0-12.8mm (from front margin of head to anal end) ; 5.1-5.4mm (from front margin of head to elytral apices).

Body elongate, parallel-sided and somewhat depressed above. Colour black and shining, with mandibles and

antennae except for yellowish apical half of apical segment reddish brown, palpi, legs and apical segment of abdomen brownish yellow.

Similar in body size and facies to *L. nishikawai* Y. Watanabe (1986, p.692), but distinguishable from it by the narrower body and different configuration of head, secondary sexual characters of abdominal sternites and genital organ in the male.

Male. Head a little transverse (width/length=1.13), more orbicular and more elevated medially than in *L. nishikawai,* widest at posterior fourth and more apparently narrowed anteriad than posteriad, lateral sides gently arcuate through the whole length, posterior angles much more braodly rounded than in *L. nishikawai*; surface similarly punctured as in *L. nishikawai* though the ground sculpture is much finer than that of *L. nishikawai*; eyes small and almost flat, their longitudinal diameter one-fourth as long as postocular parts. Antennae elongate, extending to the middle of pronotum and not thickened towards the apical segment, and of similar articulation to those of *L. nishikawai*. Pronotum subtrapezoidal and distinctly narrowed posteriad, a little longer than broad (length/width=1.14), much longer (pronotum/head=1.25) but as long as or slightly narrower (pronotum/head= 0.99) than head; surface much more sparsely punctured than in *L. nishikawai* except for a narrow smooth longitudinal space at the middle. Scutellum subtriangular, somewhat elevated at the middle. Elytra similar in configuration to those of *L. nishikawai* though more transverse (width/length=1.13), surface more coarsely though less closely punctured than in *L. nishikawai*. Legs similar in structure to those of *L. nishikawai*.

Abdomen elongate, nearly parallel-sided from 3rd to 7th segment and then abruptly narrowed towards the anal end, each tergite covered with similar punctures and pubescence to those in *L. nishikawai*; 8th sternite subtriangularly excised at the middle of posterior margin and longitudinally depressed at the middle in front of the excision, surface 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 clothed with blackish setae similar to those of 8th sternite except for medio-apical area which is glabrous, 6th sternite not modified.

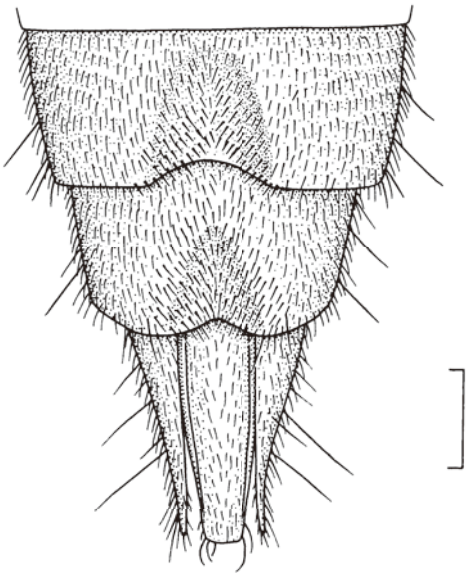
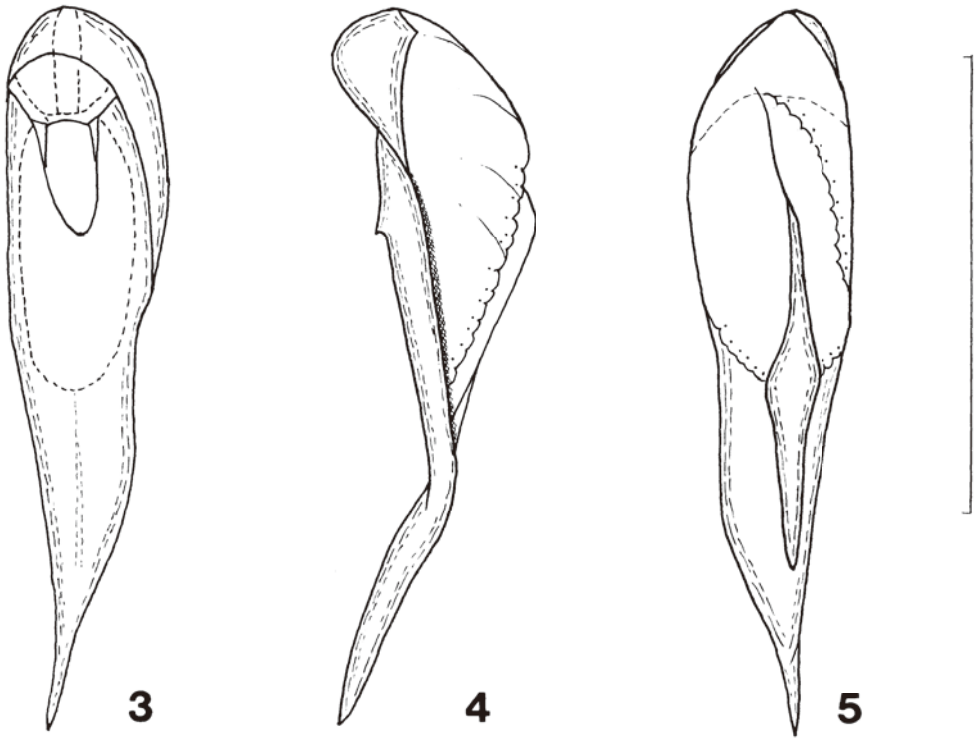


Fig.2. Last three abdominal sternites in the male of *Lathrobium* (s. str.) *hakusanum* sp. nov. Scale : 0.5mm.



Figs. 3-5. Male genital organ of *Lathrobium* (s. str.) *hakusanum* sp. nov. ; dorsal view (3), lateral view (4), and ventral view (5). Scale : 1.0mm.

Genital organ more similar to that of *L. mayasanense* Y. Watanabe (1992, p.189) in configuration than that of *L. nishikawai*, but different from it in the following points : fused paramere narrower and gently curved to the right side in apical fifth which part is abruptly narrowed towards the acutely pointed apex.

Female. Similar in general appearance to male, but differs from it in the following points: 8th abdominal sternite abruptly narrowed in posterior third towards the apex which is feebly arcuate, 7th sternite simple.

Type series. Holotype : ♂, forest near Sarukabe-entei, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 29. VI. 2002, H. Hoshina leg. ; allotype : ♀, Kankô-shindô, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 3.VIII. 2002, H. Hoshina leg. Paratypes : 3♂♂, same data as for the holotype ; 1♂, same data as for the allotype ; 1♂, Shaka-shindô, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 12.VII. 2002, H. Hoshina leg. ; 1♀, Ichinose, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 26. VI. 2002, H. Hoshina leg. ; 1♀, same locality and collector as above, 4-14. IX. 2002.

Distribution. Japan (central Honshu).

Bionomics. The type specimens were found in the leaf litter accumulated in a deciduous broadleaved forest on Mt. Hakusan except for a specimen which was obtained by a urea trap.

Etymology. The specific epithet of this new species is derived from "Mt. Hakusan", the type locality.

Lathrobium (s. str.) *kagaense* sp. nov.

[Japanese name : Kaga-himekobane-nagahanekakushi]

(Figs. 6-9)

Body length : 6.9-7.5mm (from front margin of head to anal end) ; 2.8-3.0mm (from front margin of head to elytral apices).

Body elongate, subparallel-sided and somewhat depressed above. Colour brownish black to black and moderately shining with mandibles and antennae brownish red, palpi, labrum, legs and two apical segments of abdomen yellowish brown.

The present new species is closely similar in body size and general appearance to *L. sugiei* Y. Watanabe (1997, p.136) from Tatsunokuchi-machi of Ishikawa Prefecture, but can be distinguished from it by the more or less narrower body and different configuration of the secondary sexual characters of abdominal sternites and genital organ in the male.

Male. Head subtrapezoidal, narrowed anteriad and feebly elevated medially as in *L. sugiei* though less transverse (width/length=1.08) than in *L. sugiei* , surface more sparingly and much more finely punctured than in *L. sugiei*, and covered with finer coriaceous ground sculpture than those of *L. sugiei*. Antennae extending to the middle of pronotum and not thickened towards apical segment, all the segments longer than broad 4th to 10th segments moniliform and of similar articulation to those of *L. sugiei*. Pronotum medially convex and subtrapezoidal, strongly narrowed posteriad than in *L. sugiei*, distinctly longer than broad (length/width=1.18) ; surface more closely and more coarsely punctured than in *L. sugiei*, except for a narrow longitudinal smooth space at the middle through the whole length of pronotum. Elytra oblong and less dilated posteriad than in *L. sugiei*, slightly transverse (width/length=1.05), a little shorter (elytra/pronotum=0.83) though slightly broader (elytra/pronotum=1.03) than pronotum, posterior margin shallowly emarginate at the middle than in *L. sugiei*, surface more sparingly and less coarsely punctured. Legs similar in structure to those of *L. sugiei.*

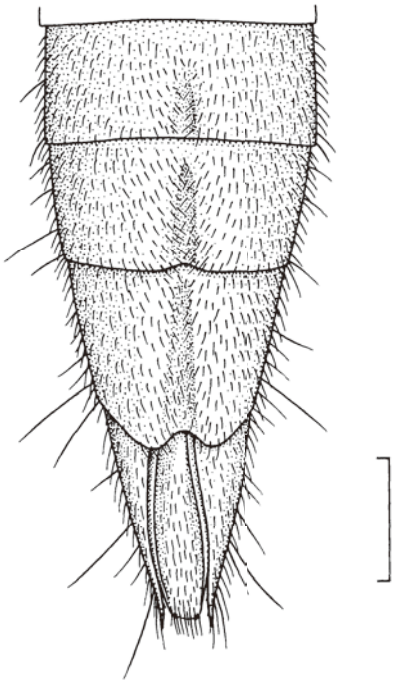
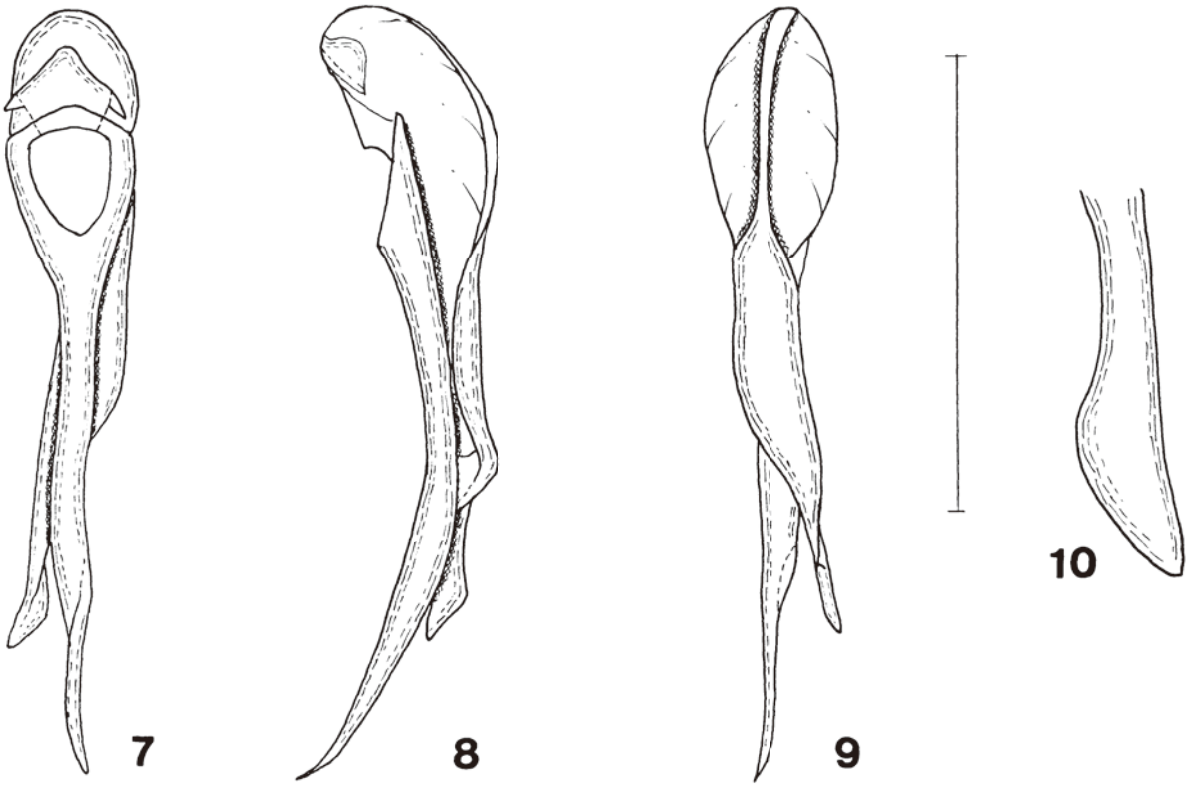


Fig.6. Last four abdominal sternites in the male of *Lathrobium* (s. str.) *kagaense* sp. nov. Scale : 0.5mm.

Abdomen elongate, somewhat dilated from 3rd to 7th segment and then abruptly narrowed towards the apical end ; each tergite more sparingly and less coarsely punctured than in *L. sugiei* ; 8th sternite semicircularly excised at the middle of posterior margin and longitudinally depressed along the median line before the excision, the depression narrower and longer than that of *L. sugiei*, and nearly smooth on the surface ; 7th sternite subtruncate at the middle of posterior margin and similarly depressed as in *L. sugiei* ; 6th sternite obscurely depressed at the middle in front of posterior margin.

Genital organ closely similar in configuration to that of *L. sugiei,* but differs from it in the following points relatively shorter in the whole length, fused paramere almost parallel-sided in about median third and abruptly narrowed apicad in apical third as seen from dorsal side ; median lobe with a ventral sclerite abruptly narrowed in apical third which is hatchet-sharped as seen from the right lateral side.



Figs. 7-10. Male genital organ of *Lathrobium* (s. str.) *kagaense* sp. nov. ; dorsal view (7), lateral view (8), and ventral view (9), and apical part of median lobe from the right side. Scale : 1.0mm (7-9), 0.5mm (10).

Female. Closely resembles male in facies, but the 8th abdominal sternite is narrowed posteriad and rounded at the apex, and each of the 7th and 6th sternites is simple.

Type series. Holotype : ♂, allotype : ♀, forest near Sarukabe-entei, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 29.VI. 2002, H. Hoshina leg. Paratypes : 1♀, Ichinose, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 3. VI. 2002, H. Hoshina leg. ; 1♀, same locality and collector as above, 4-14. IX. 2002 ; 1♂, 1♀, Shaka-shindô, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 12. VII. 2002, H. Hoshina leg. ; 2♀♀, Bettô-deai, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 12.VII. 2002, H. Hoshina leg. ; 1♂, Chiburi-one, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 1.VIII. 2002, H. Hoshina leg. ; 1♀, Kankô-shindô, Mt. Hakusan, Ishikawa Pref., Honshu, Japan,

3.VIII. 2002, H. Hoshina leg. ; 1♂,1♀, Hakusan-zenjôdô, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 14-25. IX. 2002, H. Hoshina leg. ; 1♀, same locality and collector as for the holotype, 18-31. IX. 2002.

Distribution. Japan (central Honshu).

Remarks. This new species is also similar in body size and facies to *L. sasajii* Y. Watanabe, but can be distinguished from it by the much sparser and much coarser punctures of the abdominal tergites and different configuration of second sexual characters of the abdominal sternites and genital organ in the male.

Bionomics. A large number of the type specimens were obtained from leaf litter in deciduous broadleaved forest. Four specimens were found in urea traps set in three different localities, Sarukabe-entei, Ichinose and Hakusan-zenjôdô.

Etymology. The specific epithet of this new species is derived from "Kaga" in which province is located the type locality.

Lathrobium (s. str.) *sasajii* Y. Watanabe

[Japanese name : Sasaji-himekobane-nagahanekakushi]

Lathrobium (s. str.) *sasajii* Y. Watanabe, 2001, Spec. Publ. Japan coleopterol. Soc., Osaka, (1) : 223.

This species was described by Watanabe (2001, p.223) based on two male specimens obtained from Iwaya-kan'non of Katsuyama-shi and Une of Kanazu-machi in Fukui Prefecture. After that this species has not been reported up to now from other localities of Japan. It is new to the fauna of Mt. Hakusan as recorded below.

Specimens examined. 2♂♂, 5♀♀, Ichinose, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 3.VI. 2002, H. Hoshina leg. ; 1♂, same locality and collector as above, 26.VI. 2002 ; 1♂, 2♀♀, same locality and collector as above, 4-14. IX. 2002 ; 2♂♂, 1♀, forest near Sarukabe-entei, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 29.VI. 2002, H. Hoshina leg. ; 1♂, 4♀♀, Chiburi-one, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 1.VIII. 2002, H. Hoshina leg. ; 5♂♂, 5♀♀, Shaka-shindô, Mt. Hakusan, Ishikawa Pref., Honshu, Japan, 2.VII. 2002, H. Hoshina leg.

Distribution. Japan (central Honshu).

Bionomics. A large number of specimens of this species were obtained from leaf litter acumulated in deciduous broadleaved forests of several localities on Mt. Hakusan, with the exception of three specimens obtained by urea traps set at Ichinose.

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————1997. Four new species of the *Lathrobium brachypterum* group (Coleoptera, Staphylinidae) from the Hokuriku District, Japan. *Elytra, Tokyo* , **25** : 135-146.

————2001. A new paederine beetle of the group of *Lathrobium brachypterum* (Coleoptera : Staphylinidae) from Fukui Prefecture, Central Japan. *Spec. Publ. Japan coleopterol. Soc., Osaka*, (1) : 223-226.

摘　要

筆者の一人、保科は2002年の夏から秋にかけて、白山の土壌性甲虫相の調査を実施した。そして、この調査を通して白山の石川県側の異なった地域の落葉広葉樹林内に堆積した腐植を採取し、これからツルグレンファンネルを用いて、土壌性甲虫類の抽出を行った。これにより、多数の土壌性甲虫類が得られたが、それらの中から後翅が退化したナガハネカクシ属に含まれる個体と、林内に設置した尿素トラップから得られた個体も含め検討した結果、それらは３種類に識別された。その内の２種は未記載種で、他の１種は福井県からのみ記録されているササジヒメコバネナガハネカクシで、白山からは未記録の種であった。そこで、２未記載種を下記の通り命名・記載すると共にササジヒメコバネナガハネカクシを白山から記録した。

１．*Lathrobium* (s. str.) *hakusanum* Y. Watanabe et Hoshina ハクサンコバネナガハネカクシ

本種は体長、色彩および外部形態が *L. nishikawai* に類似しているが、体はより細く、頭部はより円形を呈し、また雄の腹部第７、第８腹板にあらわれる第二次性徴および交尾器の形状の違いによって *L. nishikawai* と区別される。

２．*Lathrobium* (s. str.) *kagaense* Y. Watanabe et Hoshina カガヒメコバネナガハネカクシ

この種は、体長および概観が石川県辰口町から記載された *L. sugiei* に類似しているが、体が幾分細く、雄の腹部第７、第８腹板の第二次性徴および交尾器の形状に差異が認められることによって *L. sugiei* から区別される。