

Three New Species of Brachypterous *Lathrobium* (Coleoptera, Staphylinidae) from Central China

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Abstract Three new brachypterous *Lathrobium* belonging to the family Staphylinidae are described under the names *L. (L.) miaoershanum*, *L. (L.) kishimotoi* and *L. (L.) hunanense*. They were obtained from under dead leaves accumulated in broadleaved forest in Central China.

Twenty three species have hitherto been known as the members of apterous/brachypterous *Lathrobium* belonging to the family Staphylinidae from continental China. One species was reported from [Nordwest, “Chinking”] in Northwest China by BERNHAUER (1938), two species from Jilin Province by LI and CHEN (1990), CHEN *et al.* (1990) and LI (1993), seven species from Zhejiang Province by WATANABE and LUO (1992), WATANABE (1999 a, 1999 b) and sixteen species from Yunnan Province by WATANABE and XIAO (1994, 1996, 1997, 2000). Of these, *L. chinense* described by BERNHAUER was replaced by HERMAN (2003) as *L. shinense* for reason of primary homonym of *Charichirus chinensis* (BOHEMAN, 1858), and distributional range of this species has been recorded from Yunnan, Southeast China. The distributional range of this species was later quoted by LI (2002). On the other hand, SMETANA (2004) has recorded Jiangsu (Kiangsu), central China, as the distributional range of this species.

Through the courtesy of Drs. S-I. UÉNO, Y. NISHIKAWA and T. KISHIMOTO, I have recently had an opportunity to examine a short series of interesting specimens of brachypterous *Lathrobium*, which were obtained by sifting dead leaves in Southeast China. As the result of careful examination, they were classified into three species, all of which are remarkably different from the previously known species in the structure of secondary sexual characters of abdominal sternites and genital organ in the male. I am therefore going to describe them as new species in the present paper.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at the Tokyo University of Agriculture, for his advice on the present study. Deep gratitude is also due to Dr. Toshio KISHIMOTO, Japan Wildlife Research Center, and Dr. Yoshiaki NISHIKAWA, Otomon Gakuin University, in giving me the specimens used in this study and Mr. Junnosuke KANTOH, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photographs inserted in this paper.

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

(Figs. 1, 2, 5–7)

Body length: 7.9–9.3 mm (from front margin of head to anal end); 4.2–4.6 mm (from front margin of head to elytral apices).

Body elongate, parallel-sided and somewhat depressed above. Colour reddish brown to blackish brown and moderately shining, with palpi yellowish brown, terminal segment of abdomen and legs dark yellowish brown except for brownish yellow tarsi.

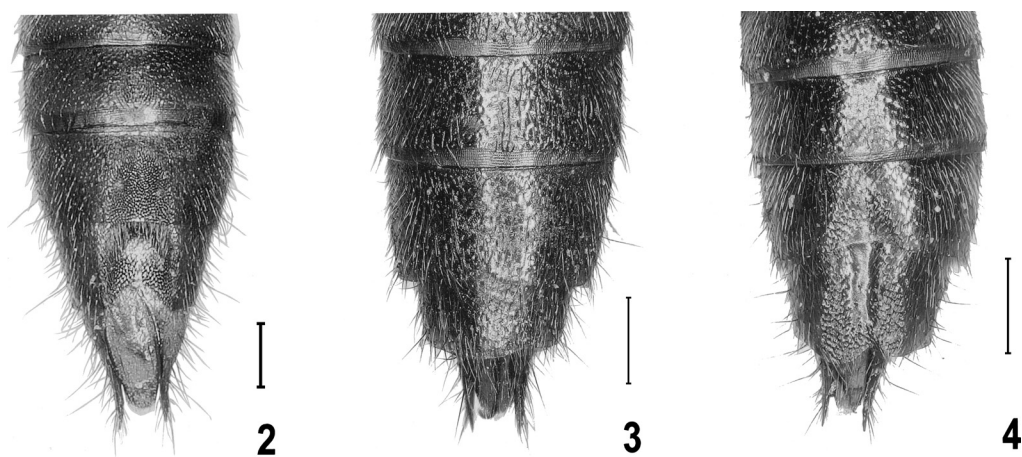
M a l e. Head subtrapezoidal, somewhat narrowed anteriorly and subdepressed above, almost as long as wide, widest at posterior fourth and more strongly narrowed anteriorly than posteriorly; lateral sides weakly arcuate; frontal area between antennal tubercles flattened and glabrous along frons; surface somewhat sparingly, coarsely and setiferously punctured, the punctures becoming closer and slightly finer in latero-basal areas, and covered with extremely microscopical coriaceous



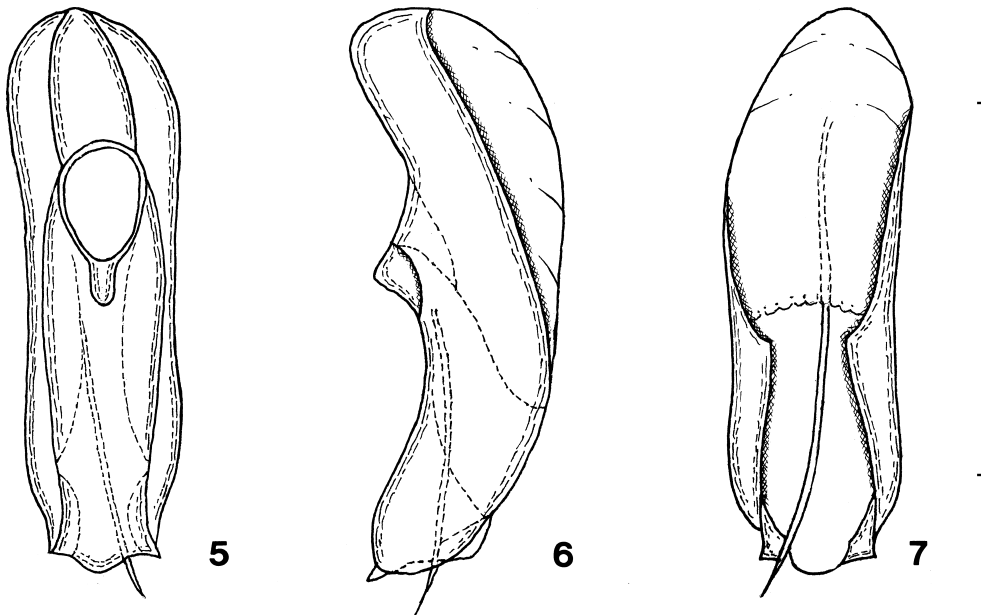
Fig. 1. *Lathrobium (Lathrobium) miaoershanum* sp. nov., from Mt. Miao'er Shan, Guangxi Prov., China.
Scale: 0.5 mm.

ground sculpture only visible under high magnification; eyes small and almost flat, their longitudinal diameter less than one-fourth as long as postocular parts. Antennae relatively slender and moderately long, extending a little beyond the middle of pronotum and not thickened towards the extremity, two proximal segments polished and the remainings opaque, 1st segment robust and dilated apicad, about three times as long as wide, 2nd constricted at the base, more than 1.5 times as long as wide, conspicuously shorter ($2\text{nd}/1\text{st}=0.44$) and distinctly narrower ($2\text{nd}/1\text{st}=0.71$) than 1st, 3rd somewhat dilated apicad, twice as long as wide, distinctly longer ($3\text{rd}/2\text{nd}=1.25$) than though as wide as 2nd, 4th to 7th equal in both length and width to one another, each apparently longer than wide ($\text{length}/\text{width}=1.60$), distinctly shorter (each of 4th to 7th/ $3\text{rd}=0.80$) than though as wide as 3rd, 8th to 10th equal in both length and width to one another, each clearly longer ($\text{length}/\text{width}=1.20$) than though as wide as 6th, 11th fusiform, twice as long as wide, clearly longer ($11\text{th}/10\text{th}=1.67$) than though as wide as 10th, subacuminate at the apex.

Pronotum subtrapezoidal and elevated medially, widest at anterior fourth and slightly more strongly narrowed posteriad than anterior, distinctly longer than wide ($\text{length}/\text{width}=1.26$), distinctly longer (pronotum/head=1.33) and slightly wider (pronotum/head=1.04) than head; lateral sides almost straight, anterior margin arcuate though slightly emarginate at the middle, posterior margin subtruncate, anterior angles obtuse and not visible from above, posterior ones gently rounded; surface more sparsely and much more coarsely punctured than in head except for a narrow smooth median space through the length of pronotum. Scutellum subtriangular, provided with a few minute setiferous punctures on the surface. Elytra subquadrate, slightly dilated posteriad and subdepressed above, slightly transverse ($\text{width}/\text{length}=1.09$), distinctly shorter (elytra/pronotum=0.75) but slightly wider (elytra/pronotum=1.04) than pronotum; lateral sides nearly straight, posterior margin broadly emarginate at the middle, posterior angles broadly rounded; surface closely, superficially punctured and provided with fine brownish pubescence; epipleura without longitudinal keel. Hind wings degenerated to minute lobes. Legs moderately long, profemora remarkably thickened, provided with a subtriangular blunt tooth near apical third on the inner face; protibia hollowed in basal half of the inner face and armed



Figs. 2-4. Secondary sexual characters of abdominal sternites in the male of *Lathrobium* (*Lathrobium*) spp.; *L. (L.) miaoershanum* sp. nov. (2), *L. (L.) kishimotoi* sp. nov. (3), *L. (L.) hunanense* sp. nov. (4). Scale: 0.5 mm.



Figs. 5-7. Male genital organ of *Lathrobium (Lathrobium) miaoershanum* sp. nov.; dorsal view (5), lateral view (6), and ventral view (7). Scale: 1.0 mm.

with five comb-like transverse rows of yellowish setae within the hollow; meso- and metatibiae normal; 1st to 4th protarsal segments dilated.

Abdomen elongate, almost parallel-sided from 3rd to 7th segments and then abruptly narrowed towards the anal end; 3rd to 7th tergites each somewhat sparingly, aciculate punctured, 8th and 9th tergites each more sparingly and more finely punctured than in the preceding tergites, all the tergites covered with fine brownish pubescence; 8th sternite deeply and semicircularly excised at the middle of posterior margin and strongly, broadly longitudinally depressed before the excision, surface of the depression provided with blackish short setae on each side in posterior half; 7th sternite much more shallowly excised at the middle of posterior margin than in 8th sternite and subtriangularly depressed in front of the excision, surface of the depression closely covered with similar setae to that of 8th sternite; 6th sternite slightly, subtriangularly depressed at the middle before posterior margin and surface of the depression more closely provided with fine pubescence than in other area; 5th sternite simple.

Genital organ elongate and almost parallel-sided. Median lobe membranous in dorsal side except for sclerotized lateral areas, each of the sclerites is abruptly narrowed in basal half. Fused paramere symmetrical, extending to the apex of fused paramere and narrower than median lobe, slightly narrowed apicad, with the apex gently arcuate and somewhat produced posteriad at the middle, and sharply pointed at each latero-posterior corner as seen from dorsal side.

F e m a l e. Similar in general appearance to male, but different from it in the following points: abdomen with 8th sternite narrowed towards the gently rounded apex, and the 7th and 6th sternites each simple.

Type series. Holotype: ♂, Mt. Miao'er Shan, above Linagshui, Xing'an Xian, Guangxi, China, 26-V-1996, S-I. UENO leg. Allotype: ♀, paratype: 1 ♂, same locality and date as for the

holotype, Y. NISHIKAWA leg.

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

Distribution. Southeast China (Guangxi Prov.).

Remarks. The present new species is similar in body size and facies to *L. (L.) cooteri* Y. WATANABE (1999) from Mt. Lin-long Shan, Zhejiang Prov., but can be distinguished from it in the following points: head almost as long as wide, surface much more closely and finely punctured; eyes smaller, the longitudinal diameter less than one-fourth as long as postocular part; pronotum more weakly narrowed posteriad, surface more closely covered with much coarser punctures except for a narrow smooth median space; elytra less coarsely punctured; abdomen more closely and much more finely punctured, and different configuration of secondary sexual characters of abdominal sternites and genital organ in the male.

Bionomics. The type specimens were obtained from under dead leaves accumulated in a broadleaved forest on Mt. Miao'er Shan at an altitude of 1,710 m.

Etymology. The specific epithet of this new species is derived from the type locality "Miao'er Shan".

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

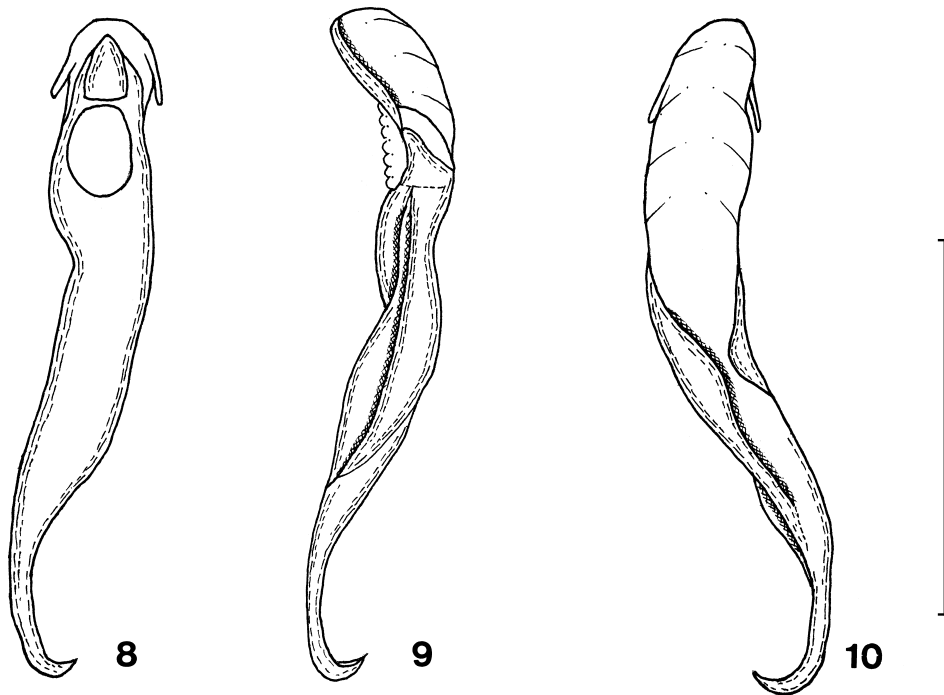
(Figs. 3, 8–10)

Body length: 8.0–8.4 mm (from front margin of head to anal end); 4.2–4.3 mm (from front margin of head to elytral apices).

Similar in body size and general appearance to the preceding species, but remarkably different in the structure of secondary sexual characters of abdominal sternites and configuration of genital organ in the male, and in the following points:

Male. Head suborbicular and slightly elevated medially, as long as wide as in the preceding species, widest at the middle and almost evenly narrowed both anteriorly and posteriorly; lateral sides gently arcuate; frontal area between antennal tubercles flattened and glabrous along frons as in the preceding species; surface more or less obliquely depressed at each side of the middle in anterior half, more closely, more coarsely punctured in latero-basal area than in medio-frontal area, and covered with coarser and more sparing punctures and finer coriaceous ground sculpture than those of the preceding species. Antennae moderately long and somewhat slender, extending to the middle of pronotum and not thickened towards the extremity, all the segments longer than wide and similar in articulation to those of the preceding species.

Pronotum gently elevated medially and clearly narrowed posteriorly, distinctly longer than wide (length/width=1.23), distinctly longer (pronotum/head=1.23) than though as wide as head; lateral sides slightly arcuate as in the preceding species; anterior and posterior margins, anterior and posterior angles each similar to those of the preceding species; surface slightly more sparingly and more coarsely punctured than in the preceding species except for a narrow smooth median space through the length of pronotum. Scutellum subtriangular, surface provided with a few minute setiferous punctures as in the preceding species. Elytra subtrapezoidal, somewhat dilated posteriorly and subdepressed above, somewhat transverse (width/length=1.12), distinctly shorter (elytra/pronotum=0.78) but slightly wider (elytra/pronotum=1.08) than pronotum; lateral sides slightly arcuate, posterior margin and posterior angles similar to those of the preceding species; surface more closely and more coarsely punctured than in the preceding



Figs. 8-10. Male genital organ of *Lathrobium (Lathrobium) kishimotoi* sp. nov.; dorsal view (8), lateral view (9), and ventral view (10). Scale: 1.0 mm.

species. Hind wings degenerated to minute lobes which are about one-fourth as long as elytra. Legs moderately long and similar in structure to those of the preceding species.

Abdomen elongate, nearly parallel-sided from 3rd to 7th segments and then abruptly narrowed towards the anal end; 3rd to 6th tergites each somewhat more sparingly, more superficially punctured than in the preceding species and covered with fine brownish pubescence as in the preceding species, 7th and 8th tergites each more sparsely and more finely punctured than in the preceding tergites; 8th sternite slightly produced posteriad at the middle of posterior margin; 7th sternite slightly emarginate at the middle of posterior margin and slightly depressed before the emargination, surface of the depression flattened and glabrous; 6th sternite simple.

Genital organ elongate and asymmetrical, well sclerotized except for membranous ventral side of median lobe. Fused paramere narrow, abruptly constricted near apical fourth and then apparently tapered apicad, apical part markedly curved to the left side and shaped like a fishhook as seen from dorsal side, and strongly curved ventrad in profile.

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

Type series. Holotype: ♂, allotype: ♀, China, Hunan, Longshan, Huoyan Xiang, Zhangjia-cao, 23-X-2000, T. KISHIMOTO leg. Paratypes: 2 ♂♂, 1 ♀, 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. Central China (Hunan Prov.).

Bionomics. The type specimens were obtained by sifting dead leaves accumulated in broad-leaved forests on Mt. Longshan at an altitude of 480 m and 580 m.

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

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

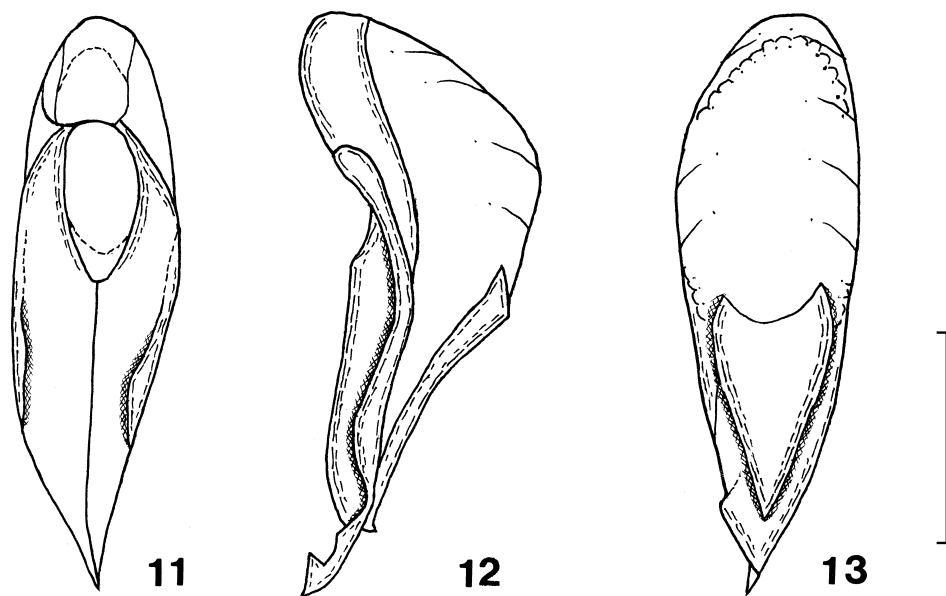
(Figs. 4, 11–13)

Body length: 6.5–6.9 mm (from front margin of head to anal end); 3.1–3.3 mm (from front margin of head to elytral apices).

The present new species is clearly distinguishable from the two preceding species by much smaller body and remarkably different configuration of secondary sexual characters of abdominal sternites and genital organ in the male.

Male. Head subquadrate and somewhat depressed above, a little transverse (width/length = 1.10), widest at posterior fourth and slightly more strongly narrowed anteriorly than posteriorly; lateral sides slightly arcuate; frontal area between antennal tubercles flattened and glabrous as in the preceding species, provided with a large setiferous puncture inside each antennal tubercle; surface sparingly, coarsely and setiferously punctured except for impunctate area in anterior two-thirds of the middle, the punctures becoming more or less closer in latero-basal areas, and covered with extremely microscopical coriaceous ground sculpture as in the preceding species; eyes small and nearly flat, longitudinal diameter of each eye as long as one-fourth of postocular area. Antennae moderately long and somewhat slender, extending to near the middle of pronotum and not thickened towards the extremity, two proximal segments polished and the remainings opaque, 5th to 10th more or less moniliform, 1st segment robust and dilated apically, about three times as long as wide, 2nd constricted at the base, apparently longer than wide (length/width = 1.33), much shorter (2nd/1st = 0.41) and slightly narrower (2nd/1st = 0.90) than 1st, 3rd clearly longer than wide (length/width = 1.75), somewhat longer (3rd/2nd = 1.17) but slightly narrower (3rd/2nd = 0.89) than 2nd, 4th 1.5 times as long as wide, somewhat shorter (4th/3rd = 0.86) than though as wide as 3rd, 5th to 10th equal in both length and width to one another, each distinctly longer than wide (length/width = 1.25), somewhat shorter (each of 5th to 10th/4th = 0.83) than though equal in width to 5th, 11th fusiform, twice as long as wide, apparently longer (11th/10th = 1.60) than though as wide as 10th, subacuminate at the apex.

Pronotum elevated medially and markedly narrowed posteriorly, distinctly longer than wide (length/width = 1.22), apparently longer (pronotum/head = 1.40) and slightly wider (pronotum/head = 1.05) than head; lateral sides nearly straight except near anterior and posterior angles, anterior margin arcuate, posterior margin subtruncate, anterior angles and posterior ones as in the preceding species; surface sparingly punctured, the punctures being much coarser than those on head, provided with a narrow longitudinal smooth space along the median line through the length of pronotum. Scutellum small and subtriangular, surface provided with a few minute setiferous punctures. Elytra somewhat trapezoidal, slightly dilated posteriorly, a little transverse (width/length = 1.20), distinctly shorter (elytra/pronotum = 0.71) but slightly wider (elytra/pronotum = 1.04) than pronotum; lateral sides nearly straight, posterior margin broadly emarginate at the middle, posterior angles broadly rounded; surface closely, coarsely punctured and covered with fine brownish pubescence. Hind wings degenerated to minute lobes as in the preceding species. Legs moderately long; profemora, protibiae and protarsi similar in structure to those of the



Figs. 11–13. Male genital organ of *Lathrobium (Lathrobium) hunanense* sp. nov.; dorsal view (11), lateral view (12), and ventral view (13). Scale: 0.5 mm.

preceding species.

Abdomen elongate, gradually dilated from 3rd to 6th segments and then abruptly narrowed towards the anal end; 3rd to 6th tergites each sparingly, superficially punctured and covered with fine brownish pubescence, 7th and 8th tergites each more sparingly, more finely punctured and pubescent than in the preceding tergites; 8th sternite shallowly emarginate at the middle of posterior margin and somewhat longitudinally depressed before the emargination, surface of the depression smooth except for the apical area which is closely setose, each side of the depression closely provided with brownish setae; 7th sternite more broadly and more shallowly emarginate at the middle of posterior margin than in 8th sternite, surface of the depression more sparingly setose than in 8th sternite with the exception of glabrous medio-apical area; 6th sternite simple.

Genital organ elliptical and somewhat asymmetrical. Median lobe not extending beyond the apex of fused paramere, with ventral sclerite relatively wide, widest near the base and strongly narrowed towards the apex which is pointed and slightly turned ventrad in profile. Fused paramere widest at basal fourth and somewhat more strongly narrowed apicad than basad, apical fourth somewhat curved to the left side and abruptly narrowed towards the pointed apex which forms a harpoon-shape as seen from lateral side; surface provided with a markedly longitudinal carina along the median line.

Female. Similar in general appearance to male, though the 8th abdominal sternite narrowed towards the broadly rounded apex; 7th sternite simple.

Type series. Holotype: ♂, allotype: ♀, China, Hunan, Longshan, Huoyan Xiang, Zhangjiia-cao, 22-X-2000, T. KISHIMOTO leg. Paratypes: 1 ♂, 4 ♀♀, same data as for the holotype; 2 ♀♀, same locality and collector as for the holotype, 23-X-2000.

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

Distribution. Central China (Hunan Prov.).

Remarks. Similar in body size and facies to *L. (L.) rougemonti* Y. WATANABE (1999) from Mt. Xi Tian-mu Shan, Zhejiang Prov., but differs from it in the following points: head nearly quadrate, less narrowed anteriorly, and more transverse, surface more closely punctured in latero-basal areas and covered with more strong ground sculpture; elytra much more coarsely punctured; abdomen more coarsely punctured, and configuration of secondary sexual characters of abdominal sternites and genital organ in the male.

Bionomics. The type specimens were obtained from under dead leaves accumulated in two broadleaved forests in Longshan at an altitude of 480 m and 580 m.

Etymology. The specific epithet of the present new species is given after “Hunan” Province in which lies the type locality.

要 約

渡辺泰明：中国中央部から採集されたコバネナガハネカクシ類（コウチュウ目ハネカクシ科）の3新種の記載。——これまで中国からはコバネナガハネカクシ類に含まれる種として23種が知られていた。最近、私は上野俊一・西川喜朗および岸本年郎の3博士によって中国中央部の湖南省および南西部の広西壮族自治区から採集されたこの類に含まれる一連の個体を検討する機会を得た。これらは3種に分類され、いずれも雄の腹部第二次性徴ならびに交尾器が特異な形状を呈し、既知種のものとは明らかに異なることによって未記載種と認め、*Lathrobium (L.) miaoershanum*, *L. (L.) kishimotoi* および *L. (L.) hunanense* と命名・記載した。

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Manuscript received 15 September 2011;
revised and accepted 27 October 2011.