New material of the genus *Lasioserica* BRENSKE 1896 with the description of four new species (Coleoptera: Scarabaeidae: Sericini)

D. AHRENS


Key words: *Lasioserica*, new species, Myanmar, Thailand, Sikkim.

Introduction

The Oriental genus *Lasioserica* BRENSKE 1896 is one of the larger genera in the Sericini with 49 currently described species and subspecies. The species of *Lasioserica* from the Asiatic mainland have been recently object of a series of revisional studies (AHRENS 1996, 1999a, b, 2000, 2002, 2004). Since these contributions additional material has been examined resulting in the present study containing four species which resulted so far undescribed. These new species from northern Thailand, Myanmar and northern India (Sikkim) are described herein and a number of additional faunistic records are added.

The material studied for this analysis originated mainly from the author’s collection (CA) or it was borrowed from the following collections: Bernice P. Bishop Museum, Honolulu (BPBM); coll. T. Matsumoto (formerly Itoh), Osaka (CTIO); Museum national d’Histoire naturelle, Paris (MNHN); National Museum of Natural History, Washington (USNM); Staatliches Museum für Naturkunde, Stuttgart (SMNS); coll. A. Pütz, Eisenhüttenstadt (CAPE); coll. P. Pacholátko/Tammin Insect Collection, Brno (TICB); Zoologische Staatssammlung, München (ZSM).

Description of new taxa

*Lasioserica pudens* nov.spec. (Figs 1-3)

Description. Length: 9.5 mm, length of elytra: 6.8 mm, width: 5.6 mm. Body oblong, dark reddish brown, dorsal surface dull, labroclypeus shiny, in parts densely covered with white scales and in parts glabrous, scales adpressed, a few longer ones on elytra slightly erect.

Labroclypeus subtrapezoidal, widest at base, lateral margins straight and strongly convergent toward broadly rounded anterior angles, margins weakly reflexed, anterior margin deeply sinuate medially; surface moderately convex medially and shiny, finely and very densely punctate, distance between punctures smaller than their diameter, with a few long setae; frontoclypeal suture not elevate and weakly curved; smooth area in front of eye only little wider than long; ocular canthus short and slender, finely and sparsely punctate, with a few scales and a short single terminal seta. Frons completely dull, with fine and moderately dense punctures, beside the eyes sparsely setose. Eyes small, ratio of diameter/interocular width: 0.49. Antenna yellow, with ten antennomeres; club with three antennomeres equal in length, club little shorter than the remaining antennomeres combined. Mentum convexly elevated and flattened anteriorly.

Pronotum widest at base, lateral margins evenly weakly curved and convergent anteriorly, behind anterior angles convex, anterior angles distinctly produced and acute, posterior angles obtuse, anterior margin convexly produced medially, with a distinct and fine marginal line widely interrupted at middle; surface with moderately dense and fine punctures, with sparse white scales, which are adpressed; lateral borders sparsely setaceous; hypomeron carinate but not produced ventrally. Scutellum broad and moderately long, apex moderately rounded, with fine and dense punctures, with numerous white scales in the punctures, in the middle basally smooth.

Elytra oblong, widest in posterior third, striae distinctly impressed and finely punctate, intervals weakly convex, with fine and sparse punctures mainly concentrated along the striae, in anterior half and a band in posterior quarter with long white scales in the punctures, odd intervals with a few single erect scales; apical border with a fine rim of short microtrichomes.

Ventral surface dull, with fine and moderately dense punctures, with dense white setae or scales, metacoxa with minute adpressed setae, laterally with fine adpressed white scales; each abdominal sternite with indistinct transversal row of coarse punctures bearing short strong setae between fine and dense punctuation, all sternites with fine, white setae, abdominal sternites without any elevations. Mesosternum between mesocoxae less wide than mesofemur. Ratio of length of metepisternum/metacoxa: 1/1.34. Pygidium moderately convex, with fine and moderately dense punctures bearing fine erect setae and adpressed white scales, with a narrow smooth midline.

Legs moderately slender; femora finely densely punctate and sparsely setose, with two longitudinal rows of setae; anterior edge of metafemur acute, with an adjacent continuously serrated line, ventrally weakly widened in apical half but not serrate, dorsally finely serrate. Metatibia moderately slender and long, widest at apex, ratio width/length: 1/4.2, dorsally sharply carinate, with the basal group of spines almost reduced at half of metatibial length, apical group of spines at three quarter of metatibial length, basally with a few single spines in punctures, beside dorsal margin with a continuously serrated line convergent with dorsal margin behind basal group of spines, between serrated line and dorsal margin a few fine punctures bearing each fine setae; lateral face longitudinally convex, with moderately dense and coarse punctures, along the middle smooth;
ventral edge serrated, with three strong and long spines, medial face partly sparsely and coarsely punctate, glabrous, apex interiorly near tarsal articulation weakly concavely truncate. Tarsomeres dorsally glabrous and finely punctate, ventrally with sparse, short setae; metatarsomeres ventrally with a strongly serrated ridge, laterally not carinate, first metatarsomere little shorter than the following two tarsomeres combined and one third of its length longer than the dorsal tibial spur. Protibia short, tridentate, basal tooth blunt and small, protarsal claws symmetrical, basal tooth of inner claw simply pointed.

Aedeagus: Figs 1-3.

Variability. Paratype, length: 9.4 mm, length of elytra: 6.6 mm, width: 5.3 mm.

Diagnosis. L. pudens nov.spec. may be differentiated from the remaining species Lasioserica sharing the serrated line beside dorsal margin of metatibia convergent with the dorsal margin or interrupted behind the middle by their antennal club having also in male three antennomeres only, by the entirely dull frons, by the fine and dense minute scales of the body surface, and by the phallobase of aedeagus possessing no lateral apophysis.

Derivatio nominis. Name derived from the Latin word pudens - diffident, shy.

Lasioserica smithi nov.spec. (Figs 4-6)


Description. Length: 6.9 mm, length of elytra: 4.8 mm, width: 3.8 mm. Body oblong, dark brown, dorsal surface dull, labroclypeus and anterior frons shiny, densely covered with short setae and with moderately dense, long setae interspersed. Labroclypeus subrectangular, widest at base, lateral margins strongly curved and strongly convergent toward moderately rounded anterior angles, margins moderately reflexed, anterior margin moderately sinuate medially; surface flat medially and shiny, finely and moderately densely punctate, with numerous long, erect setae; frontoclypeal suture slightly elevate and weakly curved; smooth area in front of eye 1.5 times wider than long; ocular canthus moderately long and slender, finely and sparsely punctate, with a short single terminal seta. Frons shiny, posterior quarter dull, with fine and dense punctures, throughout densely setose. Eyes moderately large, ratio of diameter/ interocular width: 0.68. Antenna yellow, with ten antennomeres; club with four antennomeres subequal in length, club 1.2 times longer than the remaining antennomeres combined. Mentum elevated and flattened anteriorly. Pronotum widest at base, lateral margins in basal half subparallel, at middle strongly curved and convergent anteriorly, in anterior third almost straight, behind anterior angles concavely sinuate, anterior angles distinctly produced and strongly acute, posterior angles obtuse, anterior margin convexly produced medially, with a distinct and fine marginal line, basal margin without marginal line; surface with dense and fine punctures, with dense fine setae, which are bent backwards; anterior and lateral borders setaceous; hypomeron carinate but not produced ventrally. Scutellum narrow and long, apex weakly rounded, with fine and dense punctures, setose.

Elytra oblong, widest behind middle, striae indistinctly impressed and finely punctate, intervals almost flat, with fine and sparse punctures that are almost concentrated along
the striae, shortly setose in the punctures, odd intervals with single coarse punctures bearing longer setae; apical border with a fine rim of short microtrichomes.

Ventral surface dull, with fine and moderately dense punctures, with dense short setae, setae adpressed, metacoxa glabrous, laterally with fine adpressed setae; each abdominal sternite with indistinct transversal row of coarse punctures bearing short strong setae between fine and dense punctuation, all sternites with fine, short setae, abdominal sternites without any elevations. Mesosternum between mesocoxae almost as wide as metasemefur. Ratio of length of metepisternum/ metacoxa: 1/ 1.35. Pygidium moderately convex, with fine and dense punctures bearing fine setae, with a narrow smooth midline.

Legs moderately slender; femora finely densely punctate and setose, with two longitudinal rows of setae; anterior edge of metafemur acute, with an adjacent continuously serrated line, ventrally weakly widened in apical half but not serrate, dorsally finely serrate. Metatibia slender and short, widest at apex, ratio width/ length: 1/ 3.4, dorsally weakly indistinctly carinate, with one group of spines only at three quarter of metatibial length, basally with a few single spines in punctures, beside dorsal margin with a continuously serrated line convergent with dorsal margin behind apical group of spines, between serrated line and dorsal margin smooth and glabrous; lateral face longitudinally convex, with moderately dense and coarse punctures, along the middle smooth; ventral edge serrated, with four strong and long, equally spaced spines, medial face partly densely punctate with minute setae, apex interiorly near tarsal articulation weakly concavely truncate. Tarsomeres dorsally glabrous and impunctate, ventrally with sparse, short setae; metatarsomeres ventrally with a strongly serrated ridge, laterally not carinate, first metatarsomere slightly shorter than the following two tarsomeres combined and one third of its length longer than the dorsal tibial spur. Protibia short, bidentate, protarsal claws symmetrical, basal tooth of inner claw simply pointed.

Aedeagus: Figs 4-6.

Diagnosis. L. smithi nov.spec. is very similar to L. braeti BRENSKE 1896 in genital shape and habitus. It may be differentiated from L. braeti by the lacking right process of phallobase which is dorsoventrally strongly narrowed (lateral view) in apical third, the right paramere is basally less widened and shorter in relation to length of phallobase.

Derivatio nominis. The new species is dedicated in honour of my dear colleague Andrew Smith (Ottawa) thanking him for his helpful advice to numerous of my manuscripts.

Lasioserica latens nov.spec. (Figs 7-9)

Type material. Holotype: ♂ "Myanmar N (Burma) 50 km NE Putao, 950 m Wa Sa Dam vill. 17.05.1998 leg. S. Murzin & V. Sinaev" (CA). Paratype: 1 ♀ "Myanmar N (Burma) 65 km NE Putao, 1250 m Zi Yar Dam vill., 18-21.05.1998 leg. S. Murzin & V. Sinaev" (CA).

Description. Length: 7.4 mm, length of elytra: 5.2 mm, width: 3.8 mm. Body oblong, dark brown, dorsal surface dull, labroclypeus and anterior frons shiny, sparsely covered with moderately long setae.

Labroclypeus subrectangular, widest at base, lateral margins strongly curved and strongly convergent toward broadly rounded anterior angles, margins moderately reflexed, anterior margin weakly sinuate medially; surface weakly convex medially and shiny, finely and densely punctate, with a few long, erect setae; frontocyteal suture slightly elevate
and strongly curved; smooth area in front of eye 1.5 times wider than long; ocular canthus moderately long and slender, finely and sparsely punctate, with a short single terminal seta. Frons shiny, posterior quarter dull, with fine and dense punctures, densely setose posteriorly. Eyes moderately large, ratio of diameter/ interocular width: 0.7. Antenna yellow, with ten antennomeres; club with four antennomeres subequal in length, club 1.2 times longer than the remaining antennomeres combined. Mentum elevated and flattened anteriorly.

Pronotum widest at base, lateral margins in basal half subparallel, at middle strongly curved, in anterior third weakly convex and convergent anteriorly, anterior angles distinctly produced and moderately acute, posterior angles weakly rounded, anterior margin convexly produced medially, with a distinct and fine marginal line, basal margin without marginal line; surface with moderately dense and fine punctures, with numerous fine setae, which erect and in distal part bent backwards; anterior and lateral borders setaceous; hypomeron carinate but not produced ventrally. Scutellum narrow and long, apex weakly rounded, with fine and dense punctures, setose, at base medially smooth.

Elytra oblong, widest behind middle, striae indistinctly impressed and finely punctate, intervals flat, with fine and sparse punctures, a few spots impunctate and of darker colour, minutely setose in the punctures, odd intervals with single longer erect setae; apical border chitinous, without a rim of short microtrichomes.

Ventral surface dull, with fine and moderately dense punctures, with dense short setae, setae adpressed, metacoxa glabrous, laterally with fine adpressed setae; each abdominal sternite with indistinct transversal row of coarse punctures bearing short strong setae between fine and dense punctation, all sternites with fine, short setae, abdominal sternites without any elevations. Mesosternum between mesocoxae almost as wide as mesofemur. Ratio of length of metepistemum/ metacoxa: 1/ 1.29. Pygidium moderately convex, with fine and dense punctures bearing long erect setae, without a narrow smooth midline.

Legs moderately slender; femora finely densely punctate and setose, with two longitudinal rows of setae; anterior edge of metafemur acute, with an adjacent continuously serrated line, ventrally weakly widened in apical half but not serrate, dorsally finely serrate. Metatibia moderately slender and short, widest at apex, ratio width/ length: 1/ 3.15, dorsally distinctly carinate, with one group of spines only at three quarter of metatibial length, basally with a few single spines in punctures, beside dorsal margin with a continuously serrated line convergent with dorsal margin behind apical group of spines, between serrated line and dorsal margin smooth and glabrous; lateral face longitudinally convex, with moderately dense and coarse punctures, along the middle smooth; ventral edge serrated, with four strong and long, equally spaced spines, medial face partly densely punctate with minute setae, apex interiorly near tarsal articulation weakly concavely truncate. Tarsomeres dorsally glabrous and impunctate, ventrally with sparse, short setae; metatarsomeres ventrally with a strongly serrated ridge, laterally not carinate, first metatarsomere little shorter than the following two tarsomeres combined and one quarter of its length longer than the dorsal tibial spur. Protibia short, bidentate, laterally bluntly widened at middle, protarsal claws symmetrical, basal tooth of inner claw simply pointed.

Aedeagus: Figs 7-9.
Diagnosis. *L. latens* nov.spec. is dissimilar to all other *Lasioserica* species in shape of its parameres having a trifid right paramere, and a dorsoventrally flattened left paramere. The new species shares with the species of the *Lasioserica brevipilosa* group the chitinous apical border of elytra lacking a rim of microtrichomes, however, its abdominal sternites bear neither tubercles nor any transversal elevations and the fine setae of dorsal surface are reduced to a minute size.

Variability. Female: Length: 8.3 mm, length of elytra: 5.5 mm, width: 4.4 mm. Antennal club with three antennomeres, as long as the remaining antennomeres combined.

Derivatio nominis. Name derived from the Latin word *latens* - hidden.

*Lasioserica immatura* nov.spec. (Figs 10-12)

Type material. Holotype: ♂ "Myanmar N (Burma) 25 km E Putao, H= 800 m Nan Sa Bon vill. 06-09.05.1998 leg. S. Murzin & V. Sinaev" (DEI). Paratypes: 6 ♂, 1 ♀ same data as holotype (CTIO, CA), 1 ♀ "Myanmar N (Burma) 65 km NE Putao, 1250 m Zi Yar Dam vill., 18-21.05.1998 leg. S. Murzin & V. Sinaev" (CA), 1 ♂ "Myanmar (Burma) 21 km E Putao, H=550 m Nan Sa Bon vill., 1-5.5.98 leg. S. Murzin & V. Sinaev" (CA).

Description. Length: 7.7 mm, length of elytra: 5.8 mm, width: 5.1 mm. Body oval, dark brown, dorsal surface dull, labroclypeus shiny, in parts densely covered with minute white scales and some spots on elytra and pronotum glabrous, scales adpressed, a few longer scales on odd intervals of elytra.

Labroclypeus subtrapezoidal, widest at base, lateral margins straight and strongly convergent toward broadly rounded anterior angles, margins weakly reflexed, anterior margin deeply sinuate medially; surface flat and shiny, basal portion dull, finely and moderately densely punctate, with a few long setae anteriorly; frontoclypeal suture not elevate and weakly curved; smooth area in front of eye twice as wide as long; ocular canthus short and slender, impunctate, with a short single terminal seta. Frons completely dull, with fine and dense punctures, sparsely setose. Eyes small, ratio of diameter/ interocular width: 0.6. Antenna yellow, with ten antennomeres; club with four antennomeres equal in length, club little as long as the remaining antennomeres combined. Mentum convexly elevated and flattened anteriorly.

Pronotum widest at base, lateral margins evenly weakly curved and convergent anteriorly, anterior angles moderately produced and weakly rounded, posterior angles broadly rounded, anterior margin convexly produced medially, with a distinct and fine marginal line widely interrupted at middle; surface with moderately dense and fine punctures, with moderately dense, white scales, which are adpressed, along the midline and some lateral spots glabrous; lateral borders sparsely setaceous; hypomeron carinate but not produced ventrally. Scutellum broad and moderately long, apex moderately rounded, with fine and very dense punctures, with minute white scales in the punctures, along midline smooth.

Elytra oval, widest at middle, striae distinctly impressed and finely punctate, intervals weakly convex, with fine and dense punctures, with minute white scales in the punctures, odd intervals with single erect white scales which are adpressed and as broad as the minute one long, a few spots smooth and glabrous; apical border with a fine rim of short microtrichomes.

Ventral surface dull, with fine and moderately dense punctures, with dense white setae or
scales, metacoxa with minute setae, laterally with fine adpressed white scales; each abdominal sternite with indistinct transversal row of coarse punctures bearing short strong setae between fine and dense punctation, all sternites with fine, white setae, abdominal sternites without any elevations. Mesosternum between mesocoxae less wide than mesofemur. Ratio of length of metepistemum/ metacoxa: 1/1.4. Pygidium moderately convex, with fine and moderately dense punctures bearing fine erect setae and adpressed white scales, with a narrow smooth midline.

Legs moderately slender; femora finely densely punctate and sparsely setose, with two longitudinal rows of setae; anterior edge of metafemur acute, with an adjacent continuously serrated line, ventrally weakly widened in apical half but not serrate, dorsally finely serrate. Metatibia moderately slender and long, widest at apex, ratio width/length: 1/3.8, dorsally sharply carinate, with the basal group of spines almost reduced at half of metatibial length, apical group of spines at three quarter of metatibial length, basally with a few single spines in punctures, beside dorsal margin with a continuously serrated line convergent with dorsal margin behind basal group of spines, between serrated line and dorsal margin a few fine punctures bearing each fine setae; lateral face weakly longitudinally concave, with moderately dense and coarse punctures; ventral edge serrated, with two strong long spines which are widely separated, medial face partly sparsely and coarsely punctate, glabrous, apex interiorly near tarsal articulation weakly concavely truncate. Tarsomerers dorsally glabrous and densely punctate, ventrally with sparse, short setae; metatarsomerers ventrally with a strongly serrated ridge and glabrous, laterally not carinate, first metatarsomere little shorter than the following two tarsomerers combined and one third of its length longer than the dorsal tibial spur. Protibia short, bidentate, lateral margin bluntly widened at middle, protarsal claws symmetrical, basal tooth of inner claw simply pointed.

Aedeagus: Figs 10-12.

Variability. Length: 7.6-7.8 mm, length of elytra: 5.6-5.8- mm, width: 4.7-5.1 mm. Female: Labroclypeus completely shiny, antennal club with three antennomeres, club little shorter than the remaining antennomeres combined, serrated line beside dorsal margin may be additionally interrupted before the middle of metatibial length, anterior marginal line of pronotum complete.

Diagnosis. L. immatura nov.spec. may be differentiated from the remaining species Lasioserica sharing the serrated line beside dorsal margin of metatibia convergent with the dorsal margin or interrupted behind the middle and possessing an antennal club having in male with four antennomeres, by the dull base of labroclypeus, by the fine and dense minute scales of the body surface, and by the phallobase of aedeagus possessing on each side a long lateral apophysis.

Derivatio nominis. Name derived from the Latin word immatura- immature.

New material examined

Lasioserica meghalayana AHRENS 1999

Additional material examined: 2♂♂, 1♀♀ "Laos, 1-18.v.2001 Bolikhamsai prov., 18°21'N, 105°08'E, Ban Nape (8 km NE), ~600 m, Vit Kubán leg." (TICB), 141♂♂,
Lasioserica oblita AHRENS 1996


Lasioserica tuberculiventris MOSER 1915


Lasioserica brevipilosa MOSER 1919


Lasioserica dragon MIYAKE & YAMAYA 2001

Additional material examined: 1 ex. "China S Sichuan 15 km SW Pingchuan 3200 m, 26. Jun 1998 M. Bocak lgt. 27.33N 101.49E" (TICB).

Lasioserica tricuspis AHRENS 2000


Lasioserica bipilosa AHRENS 1999

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Zusammenfassung


References


Author’s address: Dirk AHRENS
Deutsches Entomologisches Institut im ZALF
Eberswalder Str. 84, D-15374 Müncheberg, Germany
E-Mail: ahrens.dirk_col@gmx.de
Figs 1-3: *Lasioserica pudens* nov.spec. (holotype): (1, 3) aedeagus lateral view, (2) parameres dorsal view. Scale bar: 1 mm.

Figs 4-6: *Lasioserica smithi* nov.spec. (holotype): (4, 6) aedeagus lateral view, (5) parameres dorsal view. Scale bar: 1 mm.
Figs 7-9: *Lasioserica latens* nov.spec. (holotype): (7, 9) aedeagus lateral view, (8) parameres dorsal view. Scale bar: 1 mm.

Figs 10-12: *Lasioserica immatura* nov.spec. (holotype): (10, 12) aedeagus lateral view, (11) parameres dorsal view. Scale bar: 1 mm.