



The Sericini (Coleoptera: Scarabaeidae: Sericinae) from the Nanling Mountains, China

WEI LI^{1,8#}, ZHI-YU YANG^{1,9#}, WAN-GANG LIU^{2,*}, DIRK AHRENS^{3,*}, YING-JUAN ZHENG⁴, MING BAI^{5,6} & YANG LIU^{1,7,*}

¹Key Laboratory of Resource Biology and Biotechnology in Western China (Northwest University), Shaanxi Key Laboratory for Animal Conservation, College of Life Science, Northwest University, Taibai North Road 229, Xi'an 710069, China

²SKLLQG, Institute of Earth and Environment, Chinese Academy of Sciences, Yanxiang Road 97, Yanta District, Xi'an 710061, China

✉ liuwangang@ieecas.cn; <https://orcid.org/0000-0003-4788-7967>

³Museum A. Koenig, Adenauerallee 127, 53113 Bonn, Germany

✉ ahrens.dirk_col@gmx.de; <https://orcid.org/0000-0003-3524-7153>

⁴Chinese Research Academy of Environmental Science, Beijing 100012, China

✉ zhengyj@craes.org.cn; <https://orcid.org/0009-0007-4445-429X>

⁵Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Box 92, No. 1, Beichen West Road, Chaoyang District, Beijing 100101, China.

✉ baim@ioz.ac.cn; <https://orcid.org/0000-0001-9197-5900>

⁶Northeast Asia Biodiversity Research Center, Northeast Forestry University, Harbin 150040, China

⁷Department of Entomology, University of Manitoba, Winnipeg, MB R3T 2N2, Canada

✉ liuyangent@nwu.edu.cn; <https://orcid.org/0000-0003-0301-0186>

⁸✉ liweiv@stumail.nwu.edu.cn; <https://orcid.org/0009-0001-0195-7889>

⁹✉ yangzhiyuy@stumail.nwu.edu.cn; <https://orcid.org/0009-0000-1551-0378>

*Corresponding author

#Co-first author

Abstract

In this paper we update the knowledge on the species of Sericini occurring in the Nanling Mountains, China. This includes new records of 19 known species. Furthermore, six new species are described: *Maladera paradaanensis* Liu, Ahrens, Li & Yang, **new species**, *M. tianqiae* Liu, Ahrens, Li & Yang, **new species**, *Neoserica* (s. str.) *parajingangshanica* Liu, Ahrens, Li & Yang, **new species**, *Tetraserica dabuensis* Liu, Ahrens, Li & Yang, **new species**, *Trioserica shimen* Liu, Ahrens, Li & Yang, **new species**, and *Lasioserica siyuanae* Liu, Ahrens, Li & Yang, **new species**. The habitus and male genitalia of the new species are illustrated, and a map shows the distribution of the new species.

Key words: Beetles, chafers, new species, Nanling Mountains

Introduction

The Nanling Mountains are located between latitude 24–26 degrees north and longitude 110–116 degrees east, on the south edge of subtropical China, which act as a barrier between the fauna of central China and southern China. The current landscape of Nanling Mountains basically formed at the end of the Cretaceous: It was subsequently a key refugium for animals and plants during dramatic climatic shifts of the Quaternary ice ages. Therefore, Nanling Mountains are often regarded as an “evolutionary museum” (Wang *et al.* 2024) in which biodiversity could survive unfavorable conditions.

In the process of the revision of the Sericini of China, a series of papers were published recently dealing mainly with the genera *Maladera* Mulsant & Rey, 1871, *Neoserica* Brenske, 1894, *Tetraserica* Ahrens, 2004, *Trioserica* Moser, 1922 and *Lasioserica* Brenske, 1896 (Ahrens 1996, 2005, 2006, 2007, 2020, 2023; Ahrens & Fabrizi 2011; Ahrens *et al.* 2014, 2015, 2021, 2023, 2024; Ahrens & Pham 2021; Ahrens & Fabrizi 2009; Bohacz & Ahrens 2019; Fabrizi *et al.* 2021; Liu *et al.* 2014, 2015, 2016, 2017, 2019). Except for the revision of *Lasioserica*

(Ahrens 1996), the rest genera were all revised rather recently including digital images rather than drawings (Ahrens *et al.* 2024; Fabrizi *et al.* 2021; Liu, Fabrizi, *et al.* 2014; Liu *et al.* 2019). Recent update of these revisions (Zhao & Ahrens 2023) has shown that many regions in China are yet very poorly studied, and many new species yet can be found. One of such poorly investigated is the area of the Nanling Mountains. Therefore, we examined materials from different institutional collections containing a number of new species which are described herein. Furthermore, the material included numerous new and interesting locality records that are also given.

Material and methods

The terminology and methods used for measurements, specimen dissection, and genital preparation follow Ahrens (2004). Data from examined specimens are cited in the text with original label contents given in quotation marks; multiple labels for a single specimen are separated by a “/”. Descriptions and illustrations of new taxa are based on the holotype specimen if not otherwise stated, while the variation of specimens is given separately under “variation”. Male genitalia were glued to a small, pointed card and photographed in both lateral and dorsal views using an Olympus SZ61-TR stereomicroscope with an Mshot MD 50 digital camera. All the parameter adjustment and images acquisition were done in MShot Image Analysis System v. 1.6.1. To obtain an entirely focused image, several partly focused images were also focus-stacked with this software. The resulting images were subsequently digitally edited with Adobe Photoshop v. 21.0.2. Distribution maps were generated using ArcGIS v. 10.3, based on the geographical coordinates from specimen labels.

Abbreviations used in the text for collection depositories are as follows:

IZAS Institute of Zoology, Chinese Academy of Sciences, Beijing, China;

ZFMK Museum A. Koenig, Bonn, Germany.

Taxonomy

Maladera (s. l.) *paradaanensis* Liu, Ahrens, Li & Yang, new species

Type material. HOLOTYPE: CHINA: ♂ “Dinghushan forest garden, Zhaoqing, Guangdong, 17.V.2019-18.V.2019, 40m, light trap, 113.33067(E), 23.095959(N), leg. Li Yan, Gao Yuetan, Gao Chuanbu” (IZAS).

Description. Length: 8.8 mm, length of elytra: 6.2 mm, width: 5.4 mm. Body oblong-oval, dark reddish brown, antenna yellowish brown, shiny, dorsal surface nearly glabrous.

Labroclypeus moderately wide and subtrapezoidal, widest at base, lateral margins strongly convex and convergent anteriorly, anterior angles strongly rounded, anterior margin distinctly emarginate medially, margins moderately reflexed; lateral margin and ocular canthus produce a blunt angle; surface distinctly elevated in the middle, coarsely, very densely punctate, with a few long setae anteriorly; frontoclypeal suture distinctly incised, moderately curved; smooth area anterior to eye convex, three times as wide as long; ocular canthus moderately long and wide (1/3 of ocular diameter), finely densely punctate, with two terminal setae. Frons shiny, with dense and coarse punctures, with a few single setae beside eyes. Eyes moderately large, ratio diameter/ interocular width: 0.69. Antenna with nine antennomeres; club with three antennomeres and strongly reflexed, twice as long as remaining antennomeres combined. Mentum convexly elevated and slightly flattened anteriorly.

Pronotum moderately transverse, widest at base, lateral margins in basal half straight and weakly convergent anteriorly, in anterior half convex and more strongly convergent, anterior angles distinctly produced and sharp, posterior angles blunt; anterior margin weakly convex, with robust marginal line, base without marginal line; surface densely and coarsely punctate, with minute setae in punctures being as long as puncture diameter, otherwise glabrous; anterior and lateral margin densely setose; hypomeron carinate, not produced ventrally. Scutellum wide, triangular, with fine, very dense punctures.

Elytra widest in posterior third, striae finely impressed, finely and densely punctate, intervals weakly convex, with fine, sparse punctures concentrated along striae, with minute setae in punctures, penultimate lateral interval with a few single setae; epipleural margin robust, ending at apical external angle of elytra, epipleura densely setose; apical border of elytra membranous, with a very fine rim of microtrichomes.

Ventral surface shiny, coarsely and densely punctate, metasternum including disc densely setose; metacoxa glabrous, with a few longer setae laterally. Abdominal sternites finely and densely punctate, punctures with minute setae, each sternite with a transverse row of punctures each bearing a fine seta. Mesosternum between mesocoxae as wide as mesofemur. Ratio of length of metepisternum/metacoxa: 1/1.58. Pygidium moderately convex, shiny, coarsely and densely punctate, without smooth midline, with numerous long, fine setae along apical margin.

Legs long and moderately wide, shiny; femora with two longitudinal rows of setae, coarsely and densely punctate in basal half, otherwise punctures sparse. Anterior margin of metafemur acute, with adjacent continuous serrated line, anterior row of setae complete; posterior ventral margin smooth, weakly widened at ventral apex, dorsal posterior margin smooth, neither serrate, glabrous. Metatibia moderately long and moderately wide, widest at apex, ratio of width/length: 1/4, sharply carinate dorsally, with two groups of spines, basal group at middle, apical group at three quarters of metatibial length, in basal half with a few short and robust single setae and a continuous serrated line beside basal half of dorsal margin; lateral face longitudinally convex, except a few punctures on base smooth and glabrous; ventral margin finely serrate, with four equidistant robust setae; medial face smooth and glabrous; apex finely serrate, distinctly concavely emarginate interiorly near tarsal articulation. Tarsomeres dorsally impunctate, glabrous, neither laterally nor dorsally carinate, moderately setose ventrally; metatarsomeres with a strongly serrated ridge ventrally and a smooth subventral longitudinal carina, glabrous; first metatarsomere distinctly longer than following tarsomere and longer than dorsal tibial spur. Protibia moderately long, bidentate; anterior claws symmetrical, basal tooth of both claws bluntly truncate at apex.

Aedeagus. Figure 2A–C. Habitus: Figure 2D.

Distribution. China: Guangdong (Figure 1).

Diagnosis. This new species differs from the similar *Maladera daanensis* Ahrens, Fabrizi & Liu, 2021 by the straighter apical branches of both parameres (dorsal view), the shorter basal lateral lobe of the right paramere including the shorter filiform process.

Etymology. The species name is derived from the combined Greek prefix “*para-*” (false) and the species name “*daanensis*”, with reference to the high similarity to *Maladera daanensis*.

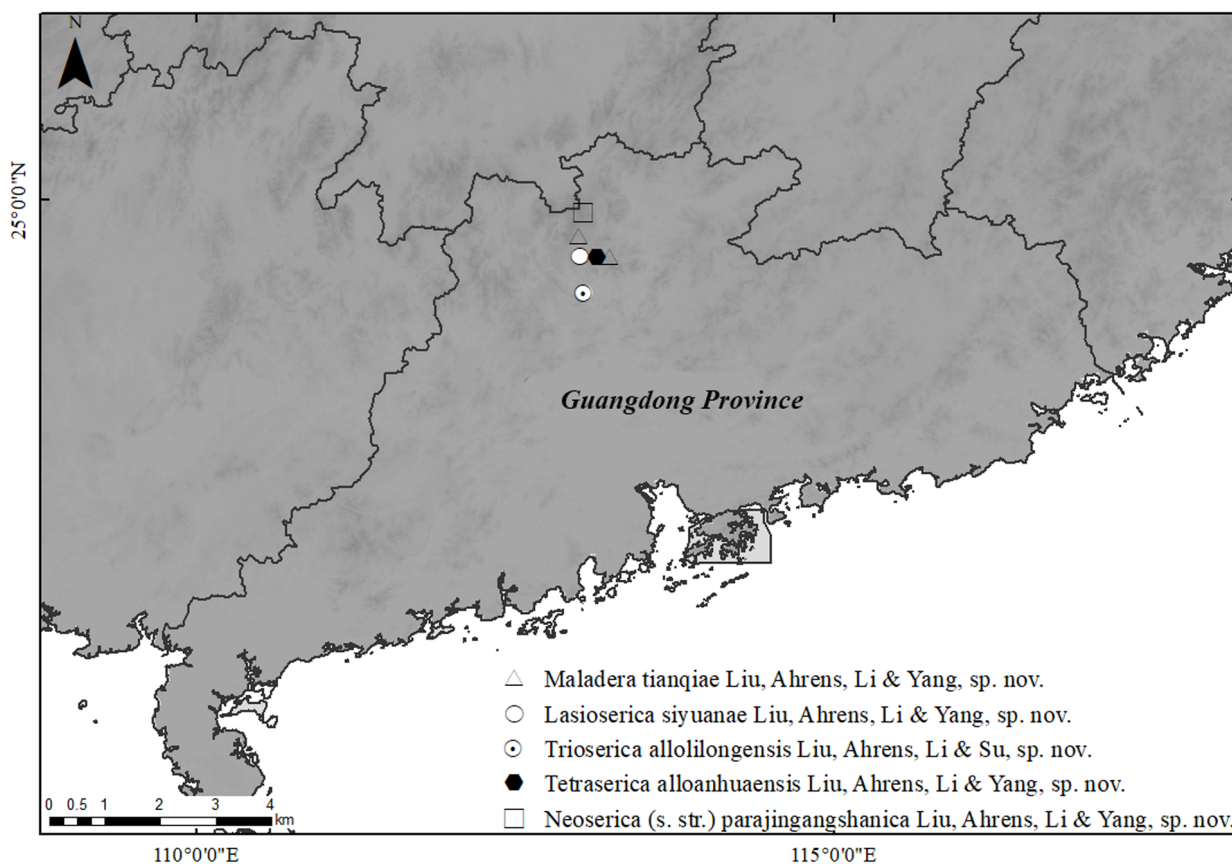


FIGURE 1. Distribution map of *Maladera paradaanensis* Liu, Ahrens, Li & Yang, **sp. nov.**, *M. tianqiae* Liu, Ahrens, Li & Yang, **sp. nov.**, *Neoserica* (s. str.) *parajingangshanica* Liu, Ahrens, Li & Yang, **sp. nov.**, *Tetraserica dabuensis* Liu, Ahrens, Li & Yang, **sp. nov.**, *Trioserica shimen* Liu, Ahrens, Li & Yang, **sp. nov.**, *Lasioserica siyuanae* Liu, Ahrens, Li & Yang, **sp. nov.**

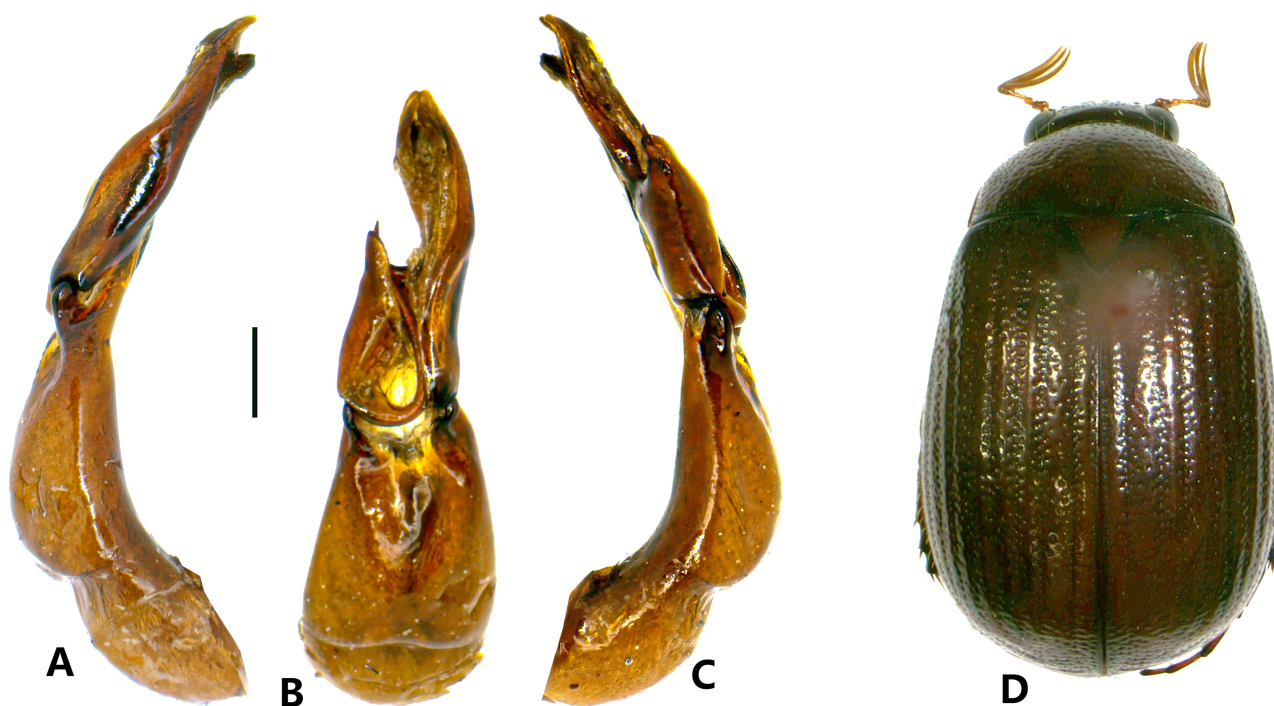


FIGURE 2. *Maladera paradaanensis* Liu, Ahrens, Li & Yang, *sp. nov.* A–C. Aedeagus. D. Habitus. A. Aedeagus, left side view. B. Aedeagus, dorsal view. C. Aedeagus, right side view. Scale bars: 0.5 mm (A–C).

Maladera (s. l.) *tianqiae* Liu, Ahrens, Li & Yang, new species

Type material. HOLOTYPE: CHINA: ♂ “Nanling Management Station Nature Reserve, Guangdong, China, light trap, 4.IX.2020, leg. Shi Tianqi” (IZAS). PARATYPES: CHINA: 1 ♂ “Nanling Management Station Nature Reserve, Guangdong, China, light trap, 4.IX.2020, leg. Shi Tianqi” (ZFMK), 1 ♂ “Nanling hydrophilic Valley, Shaoguan City, Guangdong Province, 6.IX.2020, 669m, 113.247(E), 24.5456(N), leg. Shi Tianqi” (IZAS), 2 ♀♀ “Nanling Management Station Nature Reserve, Guangdong, China, 4.IX.2020, light trap, leg. Shi Tianqi” (IZAS).

Description. Length: 11.9 mm, length of elytra: 9.2 mm, width: 7.3 mm. Body wide, oval, reddish brown, partly with some iridescent shine, antenna yellowish brown, dorsal surface dull, labroclypeus, tarsomeres, and tibiae shiny, glabrous.

Labroclypeus sub-trapezoidal, lateral margins weakly convex and moderately convergent, lateral margins produce with ocular canthus a slightly blunt angle, anterior angles convex, anterior margin shallowly emarginate medially, margins weakly reflexed; surface moderately shiny, at base narrowly dull, surface weakly convex, finely and densely punctate, distance between punctures smaller their diameter, with numerous long, erect setae; smooth area in front of eyes twice as wide as long; frontoclypeal suture finely incised, bluntly angled medially; ocular canthus moderately wide and narrow (1/3 of ocular diameter), finely and densely punctate, with two or three short terminal setae. Eyes moderately large, ratio diameter/ interocular width: 0.6. Frons with fine and moderately dense punctures, with a few single setae beside eyes and behind frontoclypeal suture. Antenna with ten antennomeres, club with three antennomeres and straight, slightly shorter than remaining antennomeres combined. Mentum convexly elevated and flattened anteriorly.

Pronotum widest shortly after base, lateral margins evenly convex and convergent anteriorly, and also posteriorly, anterior angles sharp and distinctly produced, posterior angles moderately rounded; anterior margin convex, with complete marginal line; basal margin without marginal line; surface finely and densely punctate, punctures with microscopic setae only, setae of lateral and anterior margin sparse; hypomeron weakly carinate. Scutellum wide, triangular, punctation as in pronotum, impunctate on basal midline.

Elytra convex, widest at posterior third, striae finely impressed, finely punctate, intervals weakly convex, finely and densely punctate, punctures concentrated along striae, with minute setae in punctures, odd intervals with a few

erect short setae; epipleura ending at strongly rounded external apical angle of elytra, sparsely setose; apex of elytra with a fine membranous rim of short microtrichomes.

Ventral surface coarsely and densely punctate, nearly glabrous, only metasternal plate and lateral metacoxa with a few robust setae. Distance between mesocoxae as wide as mesofemur. Ratio of length of metepisternum/metacoxa: 1/1.59. Abdominal sternites finely and moderately densely punctate, each with a row of coarse punctures bearing each a robust seta; penultimate sternite medially retracted. Pygidium moderately convex, coarsely and densely punctate, on apex with a few long setae.

Legs moderately long and wide; femora superficially and sparsely punctate, with two longitudinal rows of setae. Metafemur shiny, anterior margin acute, without adjacent serrated line, anterior longitudinal row of setae present; posterior ventral margin almost straight, not widened in apical half, posterior margin ventrally in apical half and dorsally completely serrated, glabrous. Metatibia moderately long and wide, dorsal and ventral margin subparallel, ratio width/length: 1/3.75, sharply carinate dorsally, with two groups of spines, basal one at basal third, apical one at three quarters of metatibial length, basally with a few robust and short setae; lateral face weakly longitudinally convex, with coarse and moderately dense punctures; ventral margin with two widely separated spines; medial face impunctate, apex shallowly and concavely emarginate interiorly near tarsal articulation. Tarsomeres sparsely finely punctate dorsally, with dense, fine setae ventrally; metatarsomeres ventrally glabrous, with a strongly serrated carina, subventrally with a second, smooth longitudinal carina; first metatarsomere slightly shorter than following two tarsomeres combined, little longer than dorsal tibial spur. Protibia short, bidentate. Anterior claws symmetrical.

Aedeagus. Figure 3A–C. Habitus: Figure 3D.

Distribution. China: Guangdong (Figure 1).

Variation. ♂ Length: 11.9–12.5 mm, length of elytra: 9.0–9.5 mm, width: 7.2–7.5 mm, ♀ Length: 11.9 mm, length of elytra: 10.1 mm, width: 8.7 mm.

Diagnosis. The new species differs clearly from other species of *Maladera liwenzhui* species group in the shorter and simple parameres (lacking any additional teeth or extensions) and the shape of the mesoapical emargination of phallobase.

Etymology. The new species is named after its collector, Ms. Shi Tianqi (noun in genitive singular case).

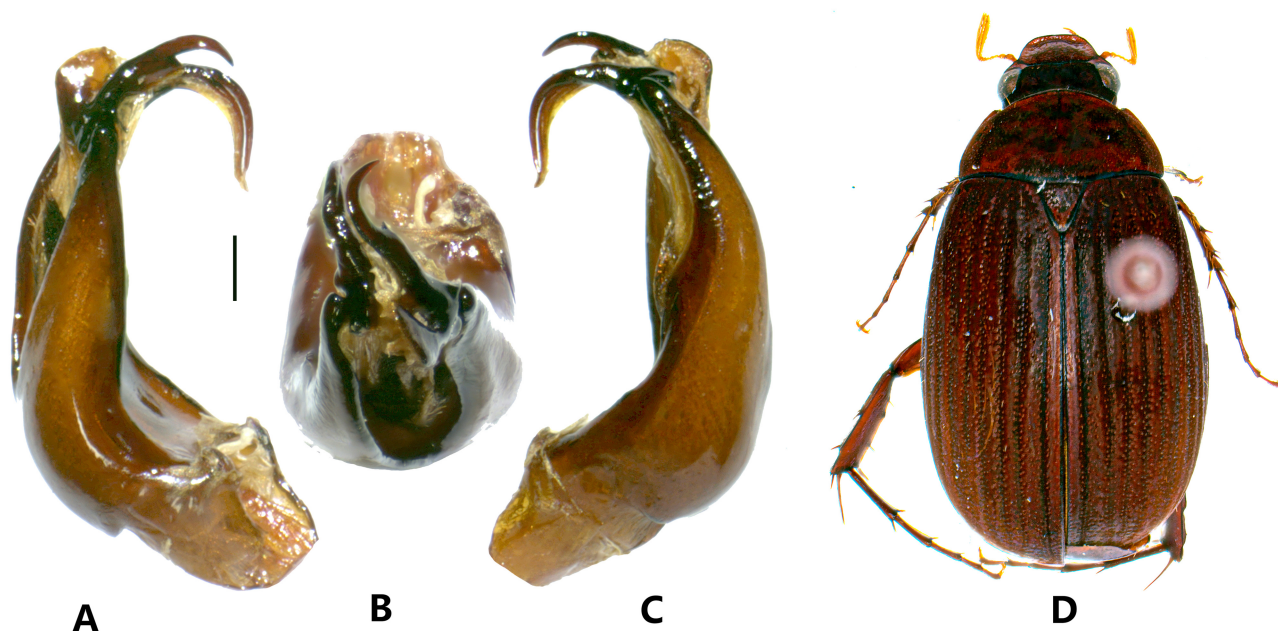


FIGURE 3. *Maladera tianqiae* Liu, Ahrens, Li & Yang, **sp. nov.** A–C. Aedeagus. D. Habitus. A. Aedeagus, left side view. B. Aedeagus, dorsal view. C. Aedeagus, right side view. Scale bars: 0.5 mm (A–C).

***Neoserica* (s. str.) *parajingangshanica* Liu, Ahrens, Li & Yang, new species**

Type material. HOLOTYPE: CHINA: ♂ “Jiuzhong Mountain, Nanling, Ruyuan County, Shaoguan City, Guangdong Province, 19.V.2021, 1035m, sweep, 113.038743(E), 24.897227(N), leg. Xu Siyuan” (IZAS).

PARATYPES: CHINA: 4 ♀♀ “Jiuzhong Mountain, Nanling, Ruyuan County, Shaoguan City, Guangdong Province, 19.V.2021, 1035m, sweep, 113.038743(E), 24.897227(N), leg. Xu Siyuan” (IZAS).

Description. Length: 7.5 mm, elytra length: 4.9 mm, width: 4.3 mm; body oval, convex, dark reddish brown, dorsal surface partly with extensive greenish shine, except for labroclypeus, tibiae and tarsi dull, dorsally finely, densely and shortly setose, in between these short setae with dense, long strong, dark setae, ventral surface densely setose.

Labroclypeus transverse, sub-rectangular, widest shortly before base, lateral margins weakly basally narrowed, anterior angle strongly convex, anterior margin slightly shallowly but widely emarginate medially; surface evenly, moderately densely, covered with small and larger punctures, fine superficial punctures with fine, short setae mixed with punctures bearing each a twice as large, robust, long, erect, yellow-brown seta. Frontoclypeal suture finely incised, moderately curved. Ocular canthus short and wide (1/4 of ocular diameter), finely and sparsely punctate, very shortly and sparsely hairy, with two to three longer setae. Eyes moderately large, ratio diameter/distance: 0.6. Antenna with ten antennomeres; club with four antennomeres, as long as remaining antennomeres combined, all lamellae of club equally long. Mentum distinctly elevated anteriorly and convex distally.

Pronotum moderately wide and subtrapezoidal, widest at the base, moderately narrowed towards middle, lateral margins strongly concave in basal half, strongly but straightly narrowed anteriorly in anterior third, anterior angles blunt, weakly rounded at apex, barely produced, posterior angles sharp; anterior margin almost straight, with fine marginal line in middle, anterior and lateral margin with single, long, robust setae, surface with moderately dense, fine, double punctation, fine punctures with short, fine, posteriorly bent, white setae mixed with punctures bearing almost twice as long, robust, erect blackish brown setae. Hypomerone carinate, basally not produced and without furrow, its basal margin forms a broadly rounded angle with that of the pronotum (lateral view), angle of surfaces of hypomerone and pronotum pointed in basal third. Scutellum wide, triangular, very densely and finely punctate, with fine setae in punctures.

Elytra widest just behind the middle, stripes finely impressed, finely and densely punctate, suture interval distinctly raised, remaining intervals weakly convex, very finely and loosely punctate, punctation concentrated along the stripes, finely contiguous in the dots, lightly pubescent, with individual strong, more or less longitudinally arranged, umbilical dots in between, bearing strong, protruding, blackish-brown bristles, immediately around the large dots the fine punctation is missing; Tip margin simply chitinous, without fringe of microtrichia, epipleural edge weak, ending at the broadly rounded outer tip angle, epipleura very strong and loosely hairy.

Ventral surface densely punctate and evenly, finely setose. Mesosternum between mesocoxae as wide as mesofemur, between mesocoxae with an anteriorly open semicircle of strong, slightly raised setae. Abdominal sternites each with a transverse row of robust setae between remaining dense, appressed pilosity, all sternites flat, 5th abdominal sternite not longer than 4th. Pygidium strongly, evenly convex, finely and strongly, densely punctate, with appressed, moderately long pilosity, mixed with numerous long, yellow, erect setae, without a smooth midline.

Femora densely setose. Anterior margin of metafemur acute, without a crenulate line next to the anterior margin, finely and densely punctate, with fine, dense setae, longitudinal row of setae not recognizable between dense pilosity, posterior margin weakly curved, without setae, dorsal posterior margin finely crenulate in apical half, ventral margin completely crenulate.

Metatibiae moderately narrow and long, slightly widened in posterior third, ratio width/length:1/3.6; dorsal margin sharply carinate dorsally, with a weakly indicated serrated line convergent at distal group of spines at about 3/4 of the metatibial length, serrated line narrowly interrupted before distal group of spines, basally next to crenulate line with three to four, further single, short, strong spines; external face weakly longitudinally convex, strongly and densely punctured, with fine setae in the punctures; ventral margin with five long, strong setae; apex distinctly concavely emarginate anteriorly near tarsal articulation. Tarsi dorsally impunctate, with a lateral and dorsal carina, approximately quadrangular in cross section, ventrally finely, short and sparsely setose; first metatarsomere distinctly longer than following tarsomere and longer than dorsal tibial spur. Protibia short, bidentate, outer teeth moderately large, claws of protarsi normally developed, symmetrical.

Aedeagus. Figure 4A–C. Habitus: Figure 4D.

Distribution. China: Guangdong (Figure 1).

Diagnosis. The new species is rather similar to *Neoserica* (s. str.) *jingangshanica* Ahrens, 2003, but the right paramere is slightly wider (in lateral view), and the left paramere is at base spherically enlarged and evenly but strongly bent at middle (lateral view).



FIGURE 4. *Neoserica* (s. str.) *parajingangshanica* Liu, Ahrens, Li & Yang, **sp. nov.** **A–C.** Aedeagus. **A.** Aedeagus, left side view. **B.** Aedeagus, dorsal view. **C.** Aedeagus, right side view. **D.** Habitus. Scale bars: 0.5 mm (A–C).

Variation. ♂ Length: 7.5 mm, elytra length: 4.9 mm, width: 4.3 mm, ♀ Length: 6.3–7.5 mm, elytra length: 4.9–5.5 mm, width: 3.7–4.4 mm.

Etymology. The species name is derived from the combined Greek prefix “*para-*” (false) and the species name “*jingangshanica*”, with reference to the similarity to *Neoserica* (s. str.) *jingangshanica*.

***Tetraserica dabuensis* Liu, Ahrens, Li & Yang, new species**

Type material. HOLOTYPE: CHINA: ♂ “Dabu Town, Yingde, Qingyuan City, Guangdong Province, 28.V.2021, 675m, light trap, 113.147587(E), 24.548601(N), leg. Xu Siyuan” (IZAS).

Description. Length: 7.3 mm, length of elytra: 5.2 mm, width: 4.2 mm. Body oval, dark reddish brown, labroclypeus shiny, dorsal surface dull, almost glabrous.

Labroclypeus subtrapezoidal, wider than long, widest at base, lateral margins moderately convex and convergent anteriorly, anterior angles very strongly rounded, lateral border and ocular canthus producing a distinct blunt angle; margins moderately reflexed, anteriorly shallowly emarginate medially; surface strongly convex medially, shiny, finely and densely punctate, with a few erect setae; frontoclypeal suture feebly impressed and angled medially; smooth area in front of eye approximately four times as wide as long; ocular canthus moderately long and triangular (1/2.5 of ocular diameter), impunctate, with one terminal seta. Frons dull, with sparse, fine punctures bearing each a minute, adpressed seta, with a few erect setae in the middle of frons and beside eyes. Eyes large, ratio of diameter/interocular width: 1. Antenna yellowish brown, with ten antennomeres, club with four antennomeres, longer than remaining antennomeres combined. Labrum short, transverse, without median emargination. Mentum anteriorly weakly elevated and flattened.

Pronotum moderately transverse, widest at base, lateral margins in basal half moderately convex and weakly convergent, in anterior half evenly convergent anteriorly, anterior angles distinctly produced, posterior angles blunt; anterior margin with a fine, mesally incomplete marginal line, convexly produced medially; basal margin without marginal line; surface densely and finely punctate, with minute setae in punctures; anterior and lateral borders sparsely setose; hypomeron not carinate. Scutellum triangular, slightly round and smooth at apex, with fine and dense punctures.

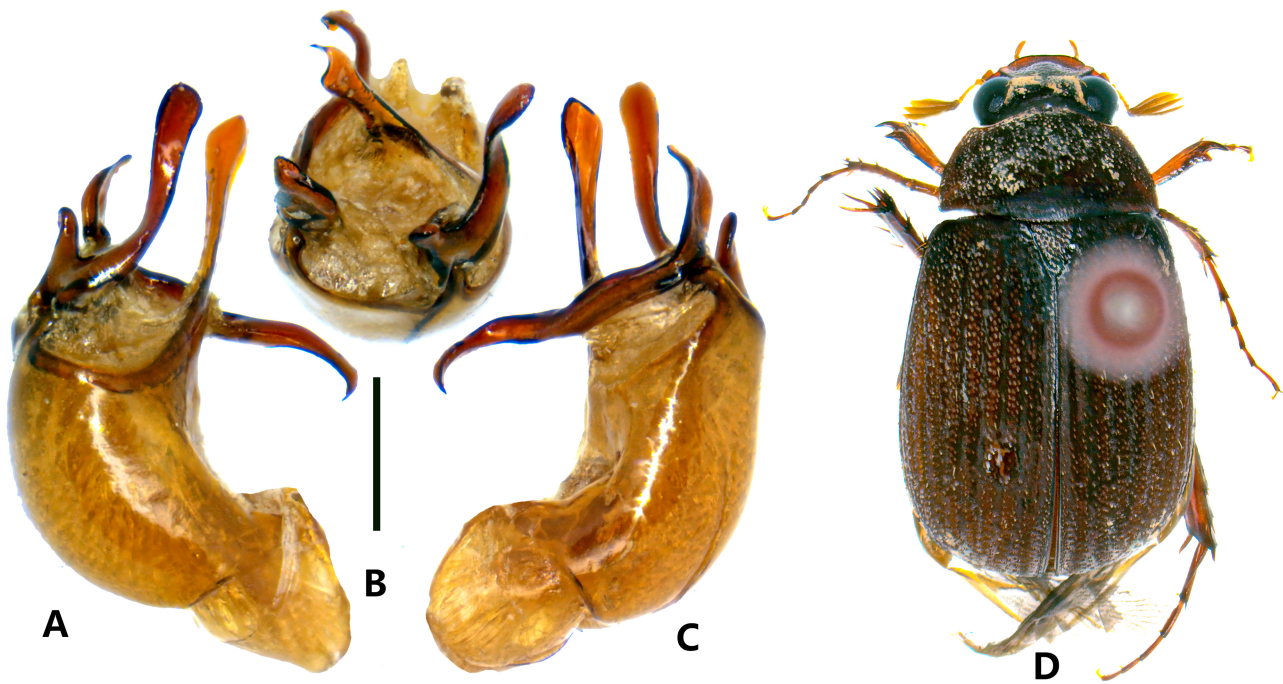


FIGURE 5. *Tetraserica dabuensis* Liu, Ahrens, Li & Yang, **sp. nov.** **A–C.** Aedeagus. **D.** Habitus. **A.** Aedeagus, left side view. **B.** Aedeagus, dorsal view. **C.** Aedeagus, right side view. Scale bars: 0.5 mm (A–C).

Elytra oblong, widest at middle, striae moderately impressed, finely and densely punctate, intervals moderately elevated, with fine, dense punctures, without erect, short setae, punctures with very minute setae only; epipleural edge robust, ending at the strongly rounded external apical angle of elytra, epipleura densely setose; apical border chitinous, with short microtrichomes.

Ventral surface dull, meso- and metacoxa with large and dense punctures, sparsely setose, metasternum sparsely covered with fine, short or very minute setae; metacoxa glabrous except for a several long setae laterally; abdominal sternites finely and densely punctate, with a transverse row of coarse punctures, each bearing a robust seta. Mesosternum between mesocoxae as wide as mesofemur. Ratio of length of metepisternum/ metacoxa: 1/1.58. Pygidium weakly convex and dull, coarsely densely punctate, without smooth midline, punctures with fine setae and a few long setae along apical margin.

Legs moderately wide; femora with two longitudinal rows of setae, finely and moderately densely punctate; metafemur moderate shiny, anterior margin acute, lacking an adjacent serrated line, posterior ventral margin smooth and moderately widened in apical half, posterior dorsal margin smooth, with moderately short setae basally. Metatibia moderately and long, widest at half of metatibial length, ratio width/length: 1/4, longitudinally convex dorsally, with two groups of spines, basal one at half of metatibial length, apical one at three quarters of metatibial length, basally with a few short single setae; lateral face coarsely and moderately densely punctate; ventral margin finely serrate, with three robust equidistant setae, medial face smooth; apex interiorly near tarsal articulation deeply concave. Tarsomeres ventrally in distal half with fine, very dense setae, laterally carinate, dorsally smooth; metatarsomeres with a strong serrated ridge and glabrous ventrally, first metatarsomere approximately as long as following two tarsomeres combined and little less than twice as long as dorsal tibial spur. Protibia short, bidentate; anterior claws symmetrical, basal tooth of both claws bluntly truncate at apex.

Aedeagus. Figure 5A–C. Habitus: Figure 5D.

Distribution. China: Guangdong (Figure 1).

Diagnosis. The new species differs from *Tetraserica anhuaensis* Liu, Fabrizi, Bai, Yang & Ahrens, 2014 by the longer, less strongly bent left paramere which has also a long and distinct basal lobe; the right paramere is bent ventrally/ externally, instead of dorsally/ internally (as in *anhuaensis*)

Etymology. The name of the new species is named after the type locality, Dabu Town.

Trioserica shimen Liu, Ahrens, Li & Yang, new species

Type material. HOLOTYPE: CHINA: ♂ “Shimen Terrace, Yingde City, Qingyuan City, Guangdong Province, 28.V.2021, 451m, sweep, 113.050338(E), 24.262005(N), leg. Xu Siyuan” (IZAS).

Description. Length: 7 mm, length of elytra: 5.1 mm, width: 4.9 mm. Body oblong, yellowish brown with numerous small dark spots, dorsal surface, frons dark brown, antenna yellow, dorsal surface dull and almost glabrous.

Labroclypeus subtrapezoidal and wide, widest at base, lateral margins convex and convergent to strongly rounded anterior angles; margins weakly reflexed, anterior margin slightly emarginate medially; lateral margin and ocular canthus producing a strong blunt angle; surface distinctly convex medially and shiny, finely and densely punctate, distance between punctures less than their diameter, with a few short, erect setae. Frontoclypeal suture feebly incised and medially curved; smooth area in front of eye short and approximately three times as wide as long. Ocular canthus short and triangular (1/4 of ocular diameter), laterally sparsely punctate, with a single, short terminal seta. Frons dull, with fine and evenly dense punctures, with a few short setae beside eyes. Eyes moderately large, ratio of diameter/ interocular width: 0.73. Antenna yellow, composed of 10 antennomeres; club with four lamellae, little longer than remaining antennomeres combined. Mentum convexly elevated anteriorly.

Pronotum moderately wide, widest at base, lateral margins weakly but evenly convex and moderately convergent anteriorly; anterior angles distinctly produced and sharp; posterior angles blunt; anterior margin convexly produced medially, with a distinct and complete marginal line; basal margin without marginal line; surface with even, dense and fine punctures, posterior midline normally punctate, punctures with microscopic setae; anterior and lateral margins sparsely setose. Hypomeron weakly carinate. Scutellum narrow and short, with fine and dense punctures, medially smooth, punctures with microscopic setae.

Elytra oblong, widest shortly behind middle; striae distinctly impressed, finely and densely punctate; intervals densely finely punctate, flat; epipleural margin robust, ending at strongly curved external apical angle of elytra; epipleura sparsely setose; apical border narrowly membranous, with a very fine rim of short microtrichomes.

Ventral surface dull, with large and dense punctures, sparsely and shortly setose, setae partly adpressed. Mesosternum between mesocoxae as wide as mesofemur, with irregularly scattered robust and long setae. Ratio of length of metepisternum/metacoxa: 1/1.5. Metacoxa glabrous, laterally with numerous robust setae. Each abdominal sternite with indistinct transversal row of coarse punctures bearing each a robust seta between fine and dense punctation. Pygidium weakly convex, finely and densely punctate, with a narrow smooth midline, glabrous.

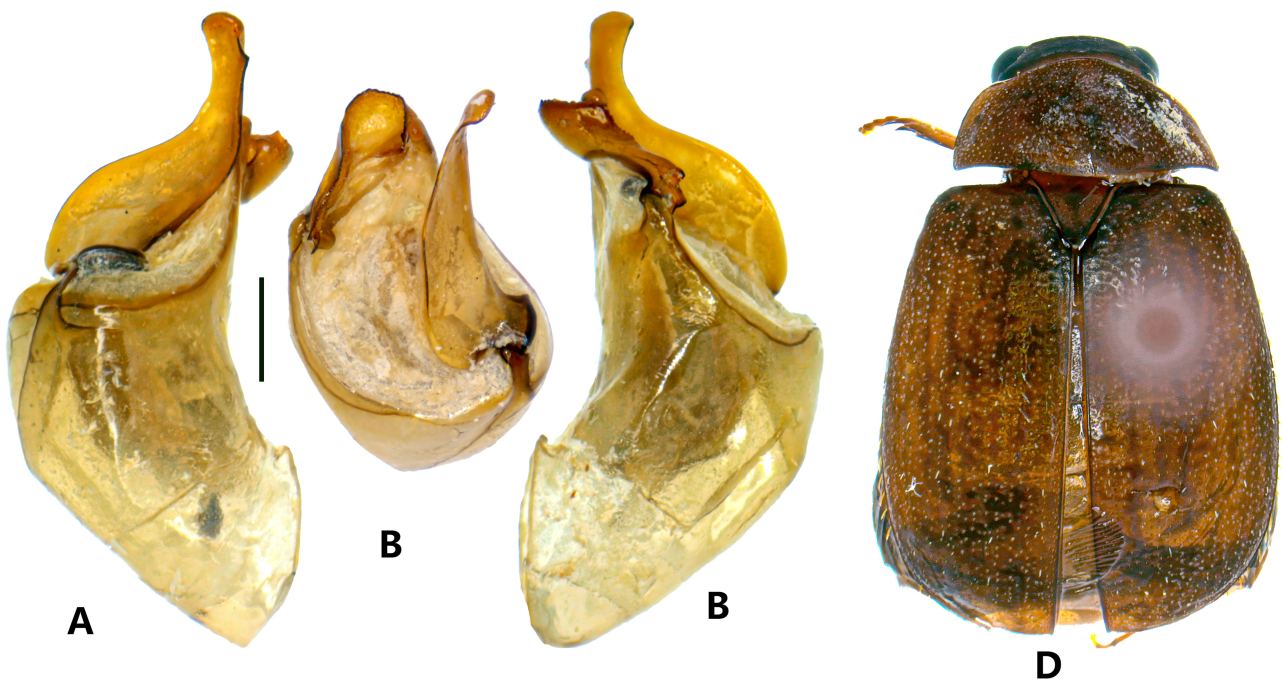


FIGURE 6. *Trioserica shimen* Liu, Ahrens, Li & Yang, sp. nov. A–C. Aedeagus. D. Habitus. A. Aedeagus, left side view. B. Aedeagus, dorsal view. C. Aedeagus, right side view. Scale bars: 0.5 mm (A–C).

Legs narrow and moderately long, shiny; femur with two longitudinal rows of setae, finely and moderately densely punctate. Metafemur ventrally dull, sharply carinate anteriorly, without a submarginal serrated line; posterior margin straight, ventral posterior margin in distal half only weakly widened and smooth; posterior dorsal margin smooth, with short setae. Metatibia short and wide, widest at middle; ratio width/ length: 1/ 3.3; dorsal margin completely sharply carinate, with two groups of spines; basal group of spines shortly before half of metatibial length, apical one at three quarters of metatibial length; lateral face longitudinally convex, with a few fine and very sparse punctures; ventral margin finely serrated, with three robust, equidistant spines; medial face impunctate, apex interiorly near tarsal articulation sharply truncate. Tarsomeres dorsally glabrous and sparsely finely punctate; pro- and mesotarsomeres ventrally with dense and short setae. Metatarsomeres ventrally glabrous, with a strongly serrated, longitudinal carina; metatarsomere 1 slightly shorter than following two tarsomeres combined, and little longer than dorsal tibial spur. Protibia moderately long, tridentate; protarsal claws symmetric.

Aedeagus. Figure 6A–C. Habitus: Figure 6D.

Distribution. China: Guangdong (Figure 1).

Diagnosis. The species can be distinguished from the similar *Trioserica lilongensis* Ahrens, Liu & Fabrizi, 2021 by the shorter, distally distinctly widened right paramere of which the dorsal margin is finely denticulate.

Etymology. The name of the new species is named after the type locality, Shimen Terrace.

Lasioserica siyuanae Liu, Ahrens, Li & Yang, new species

Type material. HOLOTYPE: CHINA: ♂ “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

PARATYPES: CHINA: 21 ♂♂ “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS), 1 ♂ “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (ZFMK), 1 ♀ “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 18.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Description. Length: 6.6 mm, length of elytra: 5 mm, width: 4.9 mm. Body oblong, dorsal surface dark brown, antenna yellowish brown, dorsal surface dull, densely setose, pronotum and head with greenish shine, with fine long and white, robust setae on elytra.

Labroclypeus subtrapezoidal, widest at base, lateral margins in basal half slightly convex and strongly convergent to moderately rounded anterior angles, lateral border and ocular canthus producing a distinct obtuse angle; anterior margin moderately concavely emarginate, margins moderately reflexed; surface flat and shiny, with an elevated ridge in middle, finely and densely punctate, with dense and long erect setae; frontoclypeal suture weakly impressed and moderately curved; smooth area anterior to eye three times as wide as long; ocular canthus moderately wide and long (1/3 of ocular diameter), finely and densely punctate, with a short terminal seta. Frons in posterior half dull, finely and densely punctate. Eyes large, ratio of diameter/interocular width: 0.8. Antenna with ten antennomeres, club in male with four antennomeres, little less than twice as long as remaining antennomeres combined. Mentum elevated and flattened anteriorly.

Pronotum widest at middle, lateral margins in basal half straight and subparallel, anteriorly moderately curved and convergent to weakly produced, right-angled anterior angles, posterior angles nearly right-angled; anterior margin weakly convex, with a fine marginal line; basal margin without marginal line; surface with dense and fine punctures each bearing either a short, adpressed or a longer, erect, white seta; anterior and lateral borders sparsely setose; hypomeron carinate, basal margin of hypomeron weakly produced ventrally. Scutellum subtriangular, apex moderately rounded, with fine and dense punctures and setae, smooth on basal midline.

Elytra oblong, widest shortly behind middle, striae moderately impressed, with fine and dense punctures; intervals moderately convex, with fine and irregularly dense punctures concentrated along striae, impunctate areas appear darker, intervals with dense, short setae, on odd intervals with a few fine white setae; epipleural edge moderately strong, ending at strongly rounded external apical angle of elytra, epipleura densely setose, apical border chitinous, without a visible rim of microtrichomes (100x magnification).

Ventral surface dull, with large and dense punctures, sparsely setose, metacoxa only laterally with a few fine, adpressed setae. Mesosternum between mesocoxae as wide as mesofemur. Abdominal sternites finely and densely punctate and minutely setose, each sternite with a distinct transverse row of coarse punctures each bearing a short, robust seta; penultimate abdominal sternite with two separated tubercles. Ratio of length of metepisternum/metacoxa: 1/1.75. Pygidium moderately convex and dull, with fine, dense punctures and fine, short setae, with a widely impunctate midline.

Legs moderately slender and long; femora dull on ventral face, finely and sparsely punctate, with two longitudinal rows of setae; anterior edge of metafemur acute, with an adjacent serrate line, posterior ventral margin weakly widened ventrally in apical half but not serrate, dorsal posterior margin serrate. Metatibia moderately slender and short, widest at apex, ratio width/length: 1/2.3; distinctly carinate dorsally, with one group of spines only at 7/8 of metatibial length, beside dorsal margin with a straight and continuously serrate line convergent with dorsal margin behind apical group of spines, between serrated line and dorsal margin finely punctate and with a few short setae; lateral face longitudinally convex, with dense and fine punctures, densely setose; ventral margin serrate, with four fine and long, equidistant spines; medial face finely and sparsely punctate, punctures with minute setae; apex interiorly near tarsal articulation weakly concavely truncate. Tarsomeres dorsally sparsely punctate and finely setose, ventrally with short, sparse setae; metatarsomeres ventrally with a strongly serrate ridge, laterally not carinate; first metatarsomere slightly shorter than following two tarsomeres combined and nearly twice as long as dorsal tibial spur. Protibia short, bidentate, protarsal claws asymmetrical, basal tooth of inner claw somewhat lobiform and truncate at apex.

Aedeagus. Figure 7A–C. Habitus: Figure 7D.

Distribution. China: Guangdong (Figure 1).

Variation. ♂ Length: 6.2–7.9 mm, length of elytra: 4.9–5.3 mm, width: 3.3–4.0 mm, ♀ Length: 6.4 mm, length of elytra: 5.1 mm, width: 3.7 mm.

Diagnosis. The new species differs clearly from other species of *Lasioserica brevipilosa* species group by the large, almost perpendicular ventral processes on each side of phallobase, by the long right paramere and the small left paramere having an acute, sharply pointed apex.

Etymology. The new species is named after its collector, Ms. Xu Siyuan. (noun in genitive singular case)

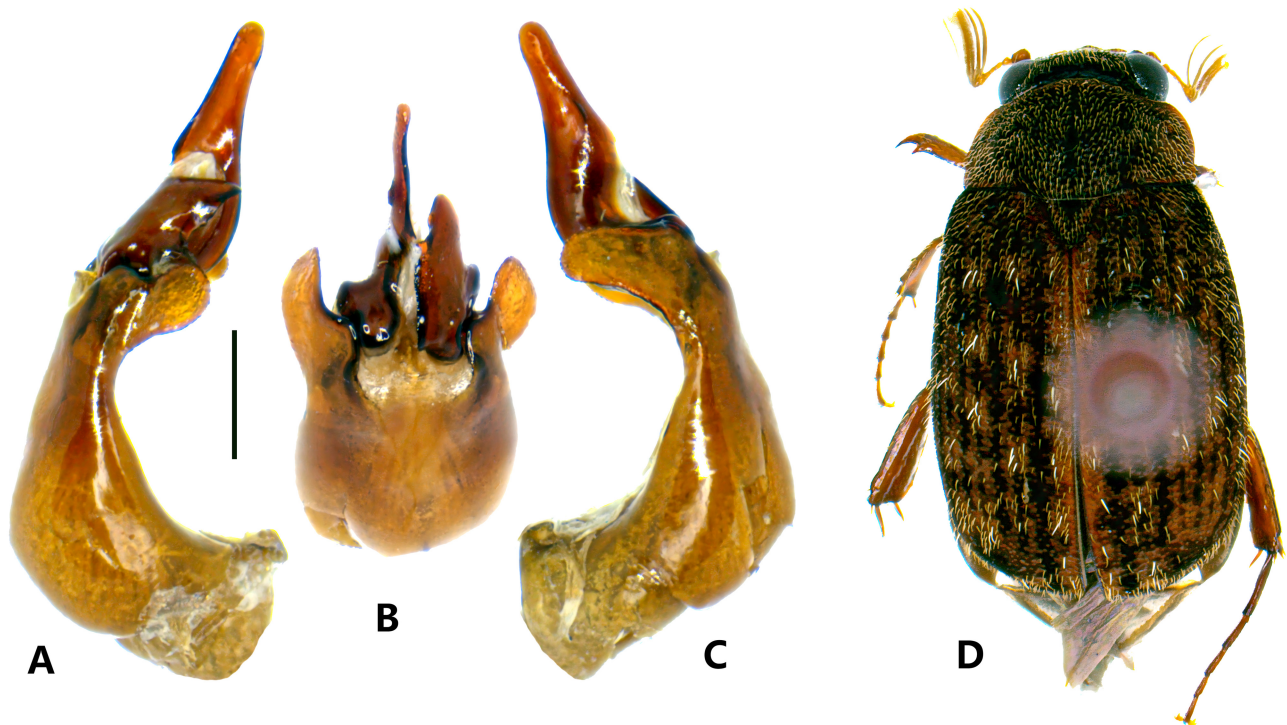


FIGURE 7. *Lasioserica siyuanae* Liu, Ahrens, Li & Yang, **sp. nov.** A–C. Aedeagus. D. Habitus. A. Aedeagus, left side view. B. Aedeagus, dorsal view. C. Aedeagus, right side view. Scale bars: 0.5 mm (A–C).

Faunistic records

Amiserica lucidiflava Ahrens, Fabrizi & Liu, 2021

Amiserica lucidiflava Ahrens, Fabrizi & Liu, 2021: 47.

Additional material examined. 1 ♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 18.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Guangdong; Vietnam.

Gastroserica (Helioserica) fukiensis Frey, 1972

Gastroserica fukiensis Frey, 1972: 174; Ahrens 2002: 59.

Microserica fukiensis: Ahrens 2002: 59; Ahrens 2006: 238; 2007: 25; Ahrens & Bezděk 2016: 298.

Additional material examined. 2 ♂♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 18.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Zhejiang, Fujian, Jiangxi, Hubei, Guangdong Guangxi, Hainan, Guizhou, Taiwan.

Maladera (s. l.) aureola (Murayama, 1938)

Aserica aureola Murayama, 1938: 19.

Maladera aureola: Kim & Lee 1997: 128; Kim & Kim 2003: 92.

Additional material examined. 1 ♂ [China] “Dinghushan forest garden, Zhaoqing, Guangdong, 17.V.2019-18.V.2019, 40m, light trap, 113.33067(E), 23.095959(N), leg. Li Yan, Gao Yuetan, Gao Chuanbu” (IZAS).

Distribution. China: Henan, Hunan, Guangdong, Sichuan, Taiwan; Korea; Japan.

Maladera (Eumaladera) fencli Ahrens, Fabrizi & Liu, 2021

Maladera fencli Ahrens, Fabrizi & Liu, 2021: 29.

Additional material examined. 1 ♂ [China] “Nanling Management Station Nature Reserve, Guangdong, China, 4.IX.2020, light trap, leg. Shi Tianqi” (IZAS), 1 ♂ [China] “Nanling Zhu Aotou in Shaoguan, Guangdong, 22.VIII.2020, 1420m, sweep, 113.018466(E), 24.563792(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Fujian, Hubei, Guangdong.

Maladera (Omaladera) fusca (Frey, 1972)

Autoserica fusca Frey, 1972: 170.

Maladera fusca: Nomura 1974: 113; Ahrens 2007: 19.

Additional material examined. 1 ♂ [China] “Dabu Town, Yingde, Qingyuan City, Guangdong Province, 28.V.2021, 675m, light trap, 113.147587(E), 24.548601(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “On the bridge of Che Baling Management Station, Shixing County, Shaoguan City, Guangdong Province, 30.V.2021, 350.6m, light trap, 114.256836(E), 24.724390(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “Shixing County, Shaoguan City, Guangdong Province, Cheba Ling • Zhixiang roof, 31.V.2021, 384m, light trap, 114.156859(E), 24.432223(N)” (IZAS).

Distribution. China: Fujian, Jiangxi, Henan, Guangdong, Guangxi, Taiwan.

***Maladera* (s. l.) *lianxianensis* Ahrens, Fabrizi & Liu, 2021**

Maladera lianxianensis Ahrens, Fabrizi & Liu, 2021: 288.

Additional materials examined. 1 ♂ [China] “Dinghushan forest garden, Zhaoqing, Guangdong, 17.V.2019-18.V.2019, 40m, light trap, 113.33067(E), 23.095959(N), leg. Li Yan, Gao Yuetan, Gao Chuanbu” (IZAS).

Distribution. China: Guangdong, Guizhou.

***Maladera* (*Omaladera*) *lignicolor* (Fairmaire, 1887)**

Serica lignicolor Fairmaire, 1887, 31: 110.

Maladera (*Omaladera*) *lignicolor*: Ahrens, 2007, 1504: 4.

Additional material examined. 1 ♂ [China] “Shixing County, Shaoguan City, Guangdong Province, Cheba Ling • Forest farm, 3.VI.2021, 551m, light trap, 114.172802(E), 24.7061336(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “On the bridge of Che Baling Management Station, Shixing County, Shaoguan City, Guangdong Province, 30.V.2021, 350.6m, light trap, 114.256836(E), 24.724390(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Zhejiang, Fujian, Hubei, Guangdong, Sichuan, Taiwan; Korea.

***Maladera* (s. l.) *nanlingensis* Ahrens, Fabrizi & Liu, 2021**

Maladera nanlingensis Ahrens, Fabrizi & Liu, 2021: 333.

Additional material examined. 1 ♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 18.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Guangdong.

***Maladera* (s. l.) *wupingensis* Ahrens, Fabrizi & Liu, 2021**

Maladera wupingensis Ahrens, Fabrizi & Liu, 2021: 233.

Additional material examined. 1 ♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Fujian, Hunan, Guangdong.

***Microserica paravicula* Ahrens, Lukic & Liu, 2023**

Microserica paravicula Ahrens, Lukic & Liu, 2023: 38.

Additional material examined. 1 ♂ [China] “Yanzi Village, Beitou Town, Lianping County, Heyuan City, Guangdong Province, 5.VI.2021, 756m, sweep, 114.254171(E), 24.279858(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “Shixing County, Shaoguan City, Guangdong Province, Cheba Ling • Forest farm, 31.V.2021, 551m, light trap, 114.172802(E), 24.7061336(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Guangdong.

Neoserica (s. str.) *lucidifrons* Ahrens, 2003

Neoserica lucidifrons Ahrens, 2003: 214.

Additional material examined. 1 ♂ [China] “Nanling Waterfall Tower, Ruyuan County, Shaoguan City, Guangdong Province, 18.V.2021, 670m, light trap, 113.0253(E), 24.5410(N), leg. Xu Siyuan” (IZAS), 72 ♂♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS), 2 ♂♂ [China] “Jiuzhong Mountain, Nanling, Ruyuan County, Shaoguan City, Guangdong Province, 19.V.2021, 1035m, sweep, 113.038743(E), 24.897227(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 18.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Fujian, Guangdong, Guangxi; Vietnam.

Neoserica (s. l.) *martinui* Ahrens, Fabrizi & Liu, 2019

Neoserica martinui Ahrens, Fabrizi & Liu, 2019: 44.

Additional material examined. 1 ♂ [China] “On the bridge of Che Baling Management Station, Shixing County, Shaoguan City, Guangdong Province, 30.V.2021, 350.6m, light trap, 114.256836(E), 24.724390(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Guangdong; Vietnam; Laos.

Neoserica (s. str.) *sangangana* Ahrens, 2003

Neoserica sangangana Ahrens, 2003: 206.

Additional material examined. 1 ♂ [China] “Yanzi Village, Beitou Town, Lianping County, Heyuan City, Guangdong Province, 5.VI.2021, 756m, sweep, 114.254171(E), 24.279858(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “On the bridge of Che Baling Management Station, Shixing County, Shaoguan City, Guangdong Province, 30.V.2021, 350.6m, light trap, 114.256836(E), 24.724390(N), leg. Xu Siyuan” (IZAS), 3 ♂♂ [China] “Shixing County, Shaoguan City, Guangdong Province, Cheba Ling Forest farm, 31.V.2021, 551m, light trap, 114.172802(E), 24.7061336(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Fujian, Jiangxi, Guangdong.

Serica (s. l.) *babaoshanensis* Zhao & Ahrens, 2023

Serica babaoshanensis Zhao & Ahrens, 2023: 192.

Additional material examined. 5 ♂♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Fujian Guangdong.

Serica (s. l.) *jindrai* Ahrens, 2007

Serica jindrai Ahrens, 2007: 14.

Additional material examined. 1 ♂ [China] “Shaoguan City, Guangdong Province, Ruyuan County Nanling Babaoshan protection station, 17.V.2021, 1016m, light trap, 113.013168(E), 24.555523(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Guangdong, Sichuan.

***Serica* (s. l.) *nigroguttata* Ahrens, 2007**

Serica nigroguttata Brenske, 1897, 42: 389.

Pachyserica nigroguttata: Nomura, 1974, 24: 97, 98. Synomized by Ahrens 2002: 62

Additional material examined. 4 ♂♂ [China] “Shixing County, Shaoguan City, Guangdong Province, Cheba Ling Forest farm, 3.VI.2021, 551m, light trap, 114.172802(E), 24.7061336(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “Dabu Town, Yingde, Qingyuan City, Guangdong Province, 27.V.2021, 675m, light trap, 113.147587(E), 24.548601(N), leg. Xu Siyuan” (IZAS), 4 ♂♂ [China] “Qianjin Protection Station, Shimen Terrace, Yingde, Qingyuan City, Guangdong Province, 25.V.2021, 557m, light trap, 113.114404(E), 24.488713(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “Qianjin Protection Station, Shimen Terrace, Yingde, Qingyuan City, Guangdong Province, 25.V.2021, 522.7m, light trap, 113.114404(E), 24.488713(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “On the bridge of Che Baling Management Station, Shixing County, Shaoguan City, Guangdong Province, 30.V.2021, 350.6m, light trap, 114.256836(E), 24.724390(N), leg. Xu Siyuan” (IZAS), 1 ♂ [China] “Shixing County, Shaoguan City, Guangdong Province, Cheba Ling Zhixiang roof, 31.V.2021, 384m, light trap, 114.156859(E), 24.432223(N)” (IZAS).

Distribution. China: Shanghai, Fujian, Jiangxi, Shandong, Guangdong, Guangxi, Sichuan, Taiwan, Hongkong.

***Tetraserica leishanica* Liu, Bai, Yang & Ahrens, 2014**

Tetraserica leishanica Liu, Bai, Yang & Ahrens, 2014: 116.

Additional material examined. 1 ♂ [China] “Dinghushan forest garden, Zhaoqing, Guangdong, 17.V.2019-18.V.2019, 40m, light trap, 113.33067(E), 23.095959(N), leg. Li Yan, Gao Yuetan, Gao Chuanbu” (IZAS).

Distribution. China: Guangdong, Guangxi, Guizhou.

***Tetraserica qifengshanensis* Ahrens, 2021**

Tetraserica qifengshanensis Ahrens, 2021: 132.

Additional material examined. 1 ♂ [China] “On the bridge of Che Baling Management Station, Shixing County, Shaoguan City, Guangdong Province, 30.V.2021, 350.6m, light trap, 114.256836(E), 24.724390(N), leg. Xu Siyuan” (IZAS).

Distribution. China: Guangdong.

***Trioserica dinghushanica* Ahrens, Liu & Fabrizi, 2021**

Trioserica dinghushanica Ahrens, Liu & Fabrizi, 2021: 346.

Additional material examined. 1 ♂ [China] “Dinghushan forest garden, Zhaoqing, Guangdong, 17.V.2019-18.V.2019, 40m, light trap, 113.33067(E), 23.095959(N), leg. Li Yan, Gao Yuetan, Gao Chuanbu” (IZAS).

Distribution. China: Guangdong.

Acknowledgements

This research was supported by Key Research and Development Project in Shaanxi Province (no. S2023-YF-YBSF-1112), National Key R&D Program of China (Grant No. 2022YFC2601200, 2023YFC2604904); the National Science & Technology Fundamental Resources Investigation Program of China (Nos. 2023FY100301, 2022FY100500); National Science Foundation of China (Nos. 32270468, 32261143728); the project of the Northeast Asia Biodiversity Research Center (NABRI202203).

We gratefully acknowledge Siyuan Xu, Shi Tianqi (Institute of Zoology, Chinese Academy of Sciences, China), Li Yan (Shenyang Agricultural University), Gao Chuanbu (Institute of Zoology, Guangdong Academy of Sciences), Gao Yuetian (China Agricultural University) for collecting the specimens. We would like to express our heartfelt thanks to Mr. Daniel Lukic (Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany), Dr. Bezděk Aleš (Institute of Entomology, Biology Centre of the Czech Academy of Sciences, České Budějovice, Czech), Dr. Zhengzhong Huang (Institute of Zoology, Chinese Academy of Sciences, China) and Dr. Zi-Wei Yin (Shanghai Normal University, Shanghai, China) for reviewing and improving the manuscript.

References

- Ahrens, D. (1996) Revision der Sericini des Himalaya und angrenzender Gebiete. Die Gattungen *Lasioserica* Brenske, 1896 und *Gynaecoserica* Brenske, 1896. *Coleoptera- Schwanfelder Coleopterologische Mitteilungen*, 16, 1–48
- Ahrens, D. (2005) Diversification of the endemic Himalayan monsoon-season beetle genus *Calloserica* inferred from a cladistic analysis (Coleoptera: Scarabaeidae: Sericini). *Invertebrate Systematics*, 19 (3), 217–230.
<https://doi.org/10.1071/is04030>
- Ahrens, D. (2006) Cladistic analysis of *Maladera* (*Omaladera*): Implications on taxonomy, evolution and biogeography of the Himalayan species (Coleoptera: Scarabaeidae: Sericini). *Organisms Diversity and Evolution*, 6 (1), 1–16.
<https://doi.org/10.1016/j.ode.2005.01.002>
- Ahrens, D. (2007) Beetle evolution in the Asian highlands: insight from a phylogeny of the scarabaeid subgenus *Serica* (Coleoptera, Scarabaeidae). *Systematic Entomology*, 32 (3), 450–476.
<https://doi.org/10.1111/j.1365-3113.2006.00373.x>
- Ahrens, D. (2020) Two new species of the *Neoserica* (sensu stricto) group from China (Coleoptera: Scarabaeidae: Melolonthinae: Sericini). *Journal of Natural History*, 54 (45–46), 2927–2936.
<https://doi.org/10.1080/00222933.2021.1884761>
- Ahrens, D. (2023) Updates on the *Neoserica vulpes* group (Coleoptera, Scarabaeidae, Melolonthinae, Sericini): new species and records. *European Journal of Taxonomy*, 888 (1), 97–110.
<https://doi.org/10.5852/ejt.2023.888.2231>
- Ahrens, D. & Fabrizi, S. (2011) New species of Sericini from the Himalaya and adjacent mountains (Coleoptera: Scarabaeidae). *Bonn zoological Bulletin*, 60 (2), 139–164.
- Ahrens, D., Liu, W.-G., Fabrizi, S. & Bai, M. (2021) Taxonomic review on the *Trioserica* Moser, 1922 species of China (Coleoptera: Scarabaeidae: Melolonthinae: Sericini). *Zootaxa*, 4999 (4), 343–355.
<https://doi.org/10.11646/zootaxa.4999.4.4>
- Ahrens, D., Liu, W.-G., Fabrizi, S., Bai, M. & Yang, X.-K. (2014) A taxonomic review of the *Neoserica* (sensu lato) *abnormis* group (Coleoptera, Scarabaeidae, Sericini). *ZooKeys*, 439, 27–82.
<https://doi.org/10.3897/zookeys.439.8055>
- Ahrens, D., Liu, W.-G., Fabrizi, S., Bai, M. & Yang, X.-K. (2015) A revision of the species of the *Neoserica* (sensu lato) *vulpes* group (Coleoptera: Scarabaeidae: Sericini). *Journal of Natural History*, 49 (17–18), 1073–1130.
<https://doi.org/10.1080/00222933.2014.974707>
- Ahrens, D., Lukic, D., Pham, P., Li, W. & Liu, W.-G. (2023) *Tetraserica* Ahrens, 2004 of continental Southeast Asia: new records, new species, and an updated key to species (Coleoptera: Scarabaeidae: Sericinae: Sericini). *Zootaxa*, 5374 (4), 451–486.
<https://doi.org/10.11646/zootaxa.5374.4.1>
- Ahrens, D., Lukic, D., Wipfler, B. & Pham, P. (2024) A revision of the *Trioserica* species from continental southeast Asia (Coleoptera: Scarabaeidae: Sericinae: Sericini). *Insect Systematics & Evolution*, 55, 227–339.
<https://doi.org/10.1163/1876312x-bja10057>
- Ahrens, D. & Pham, P. (2021) Additions to the *Neoserica calva* group from continental South East Asia (Coleoptera: Scarabaeidae: Melolonthinae: Sericini). *Zootaxa*, 5032 (3), 357–378.
<https://doi.org/10.11646/zootaxa.5032.3.3>
- Ahrens, D. & Fabrizi, S. (2009) New species of Sericini from the Eastern Himalaya and Tibet (Insecta: Coleoptera: Scarabaeidae). In: Hartmann, M. & Weipert, M. (Eds.), *Biodiversität und Naturlausstattung im Himalaya III*. Verein der Freunde und

Förderer des Naturkundemuseums Erfurt e.V., Erfurt, pp. 249–284.


- Bohacz, C. & Ahrens, D. (2019) A new species of the *Neoserica* (sensu lato) *vulpes* group from China, with a corrigendum on *Neoserica ailaoshanica* Liu, Fabrizi, Bai, Yang Ahrens, 2014 (Coleoptera: Scarabaeidae: Sericini). *Journal of Natural History*, 53 (47–48), 2991–2997.
<https://doi.org/10.1080/00222933.2020.1758819>
- Fabrizi, S., Liu, W.-G., Bai, M., Yang, X.-K. & Ahrens, D. (2021) A monograph of the genus *Maladera* Mulsant amp; Rey, 1871 of China (Coleoptera: Scarabaeidae: Melolonthinae: Sericini). *Zootaxa*, 4922 (1), 1–400.
<https://doi.org/10.11646/zootaxa.4922.1.1>
- Liu, W.-G., Bai, M., Yang, X.-K. & Ahrens, D. (2014) Towards an improved knowledge of Sericini of the Tibetan highland: new species and records (Coleoptera: Scarabaeidae). *Bonn zoological Bulletin*, 63 (2), 157–172.
- Liu, W.-G., Bai, M., Yang, X.-K. & Ahrens, D. (2015) New species and records of the *Neoserica* (sensu stricto) group (Coleoptera: Scarabaeidae: Sericini). *Journal of Natural History*, 49 (39–40), 2379–2395.
<https://doi.org/10.1080/00222933.2015.1034208>
- Liu, W.-G., Bai, M., Yang, X.-K. & Ahrens, D. (2017) New species and records of *Lasioserica* and *Gynaecoserica* from China (Coleoptera, Scarabaeidae, Sericini)(Article). *Bonn Zoological Bulletin*, 66 (1), 29–36.
- Liu, W.-G., Fabrizi, S., Bai, M. & Ahrens, D. (2016) A taxonomic revision of *Neoserica* (sensu lato): the species groups *N. lubrica*, *N. obscura*, and *N. silvestris* (Coleoptera, Scarabaeidae, Sericini). *ZooKeys*, 635, 123–160.
<https://doi.org/10.3897/zookeys.635.9915>
- Liu, W.-G., Fabrizi, S., Bai, M., Yang, X.-K. & Ahrens, D. (2014) A taxonomic review on the species of *Tetraserica* Ahrens, 2004, of China (Coleoptera, Scarabaeidae, Sericini). *ZooKeys*, 448 (448), 83–121.
<https://doi.org/10.3897/zookeys.448.8429>
- Liu, W.-G., Fabrizi, S., Bai, M., Yang, X.-K. & Ahrens, D. (2019) A taxonomic revision of Chinese *Neoserica* (sensu lato): final part (Coleoptera: Scarabaeidae: Sericini). *Bonn Zoological Bulletin Supplementum*, 64, 1–71.
<https://doi.org/10.20363/bzb-s-2019.64>
- Wang, Z., Zhang, M., Zhao, X., Xie, J., Peng, Y., Sheldon, F.H. & Zou, F. (2024) The Nanling Mountains of southern China played a variable role as a barrier and refuge for birds depending upon landscape structure and timing of events. *Journal of Natural History*, 2024 (5–6), 1–17.
<https://doi.org/10.1111/jav.03131>
- Zhao, M.-Z. & Ahrens, D. (2023) New species of the tribe Sericini Kirby, 1837 from China, with further updates on their taxonomy and distribution (Coleoptera: Scarabaeidae: Sericinae). *Zootaxa*, 5361 (2), 181–220.
<https://doi.org/10.11646/zootaxa.5361.2.3>

南岭山脉绢金龟族Sericini (鞘翅目: 金龟科: 绢金龟亚科)

李微^{1,8#}, 杨之宇^{1,9#}, 刘万岗^{2*}, Dirk Ahrens^{3*}, 郑颖娟⁴, 白明^{5,6}, 刘扬^{1,7*}

¹西部资源生物学与生物技术重点实验室, 陕西省动物保护重点实验室, 生命科学学院, 西北大学, 太白北路229号, 西安 710069, 陕西, 中国

²黄土与第四纪地质国家重点实验室, 中国科学院地球环境研究所, 雁塔区, 雁翔路97号, 西安 710061, 陕西, 中国

✉ liuwangang@ieccas.cn;  <https://orcid.org/0000-0003-4788-7967>


³亚历山大柯尼希博物馆, Adenauerallee 127, 波恩 53113, 德国

✉ ahrens.dirk_col@gmx.de;  <https://orcid.org/0000-0003-3524-7153>

⁴中国环境科学研究院, 北京100012


✉ zhengyj@craes.org.cn;  <https://orcid.org/0009-0007-4445-429X>

⁵动物系统与进化重点实验室, 中国科学院动物研究所, 朝阳区, 北辰西路1号92号楼, 北京100101, 中国

✉ baim@ioz.ac.cn;  <https://orcid.org/0000-0001-9197-5900>

⁶东北亚生物多样性研究中心, 东北林业大学, 哈尔滨 150040, 黑龙江, 中国

⁷马尼托巴大学昆虫学系, 温尼伯MB R3T 2N2, 加拿大

✉ liuyangent@nwu.edu.cn;  <https://orcid.org/0000-0003-0301-0186>

⁸✉ liweiv@stumail.nwu.edu.cn;  <https://orcid.org/0009-0001-0195-7889>

⁹✉ yangzhiyuy@stumail.nwu.edu.cn;  <https://orcid.org/0009-0000-1551-0378>

*通讯作者

#共同第一作者

摘要: 对南岭地区绢金龟族Sericini昆虫进行梳理, 含6新种19地区新纪录种; 新种即似大安码绢金龟 *Maladera (s. l.) paradaanensis new species*、天琪码绢金龟 *M. (s. l.) tianqiae new species*、思远毛绢金龟 *Lasioserica siyuanae new species*、似井冈山新绢金龟 *Neoserica (s. str.) parajingangshanica new species*、大布长角绢金龟 *Tetraserica dabuensis new species* 和石门三齿绢金龟 *Trioserica shimen new species*。提供了新种的成虫外部特征图、雄性外生殖器特征图和物种分布图。

关键词: 甲虫; 金龟子; 新种; 南岭山脉