ASIAN MYRMECOLOGY — Volume 19, e019002, 2026
ISSN 1985-1944 | eISSN: 2462-2362 DOI: 10.20362/am.019002

Three New Species of the Genus *Leptogenys* Roger, 1861 (Hymenoptera: Formicidae) from China, with an Updated Key to the Known Chinese Species

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ABSTRACT. *Leptogenys* Roger, 1861 is the most diverse genus of the ant subfamily Ponerinae and primarily distributed in tropical and subtropical regions, especially in the Oriental realm. Taxonomic study of *Leptogenys* has been advancing with new species frequently discovered. In this paper three new *Leptogenys* species from South China are described based on morphological examination of workers: *L. qini* **sp. nov.** (Guangxi), *L. scabra* **sp. nov.** (Guangxi), and *L. sunyatseni* **sp. nov.** (Yunnan). Biogeographic information of these three new species and an updated key to currently known Chinese species are also provided.

Keywords Ponerinae, Taxonomy, New species, Morphology, Asia
Zoobank https://zoobank.org/References/2638aabb-60a4-46d4-913d-b2a4fece5e4b
Citation Jianyi Chen, Tianqi Wu, Xinchuang Zhang & Shuojie Wang (2026). Three New Species of the Genus *Leptogenys* Roger, 1861 (Hymenoptera: Formicidae) from China, with an Updated Key to the Known Chinese Species. Asian Myrmecology 19: e019002

Communicating Editor Wendy Wang

INTRODUCTION

The genus *Leptogenys* Roger, 1861 is a large Ponerinae genus currently comprising 334 described species, including subspecies (Bolton, 2025). Species of this genus are primarily distributed in tropical and subtropical regions, although a few species extend into temperate zones. They typically nest in soil, leaf litter, rotten wood, or beneath stones (Lattke 2011), predating upon various arthropods, with some species exhibiting marked prey specificity, including isopods, earwigs, termites, and millipedes (Bolton 1975; Steghaus-Kovac & Maschwitz 1993; Schmidt &

Shattuck 2014; Arimoto & Yamane 2018). Colony size varies significantly. New World and many Asian species typically form small colonies of fewer than 50 workers (Ito & Ohkawara 2000). In Southeast Asia, however, some species exhibit army ant behaviour (Maschwitz et al. 1989). Their colonies contain thousands to tens of thousands of workers, engaging in collective raids capable of subduing relatively large prey (Witte & Maschwitz 2002).

Globally, taxonomic understanding of *Leptogenys* has been advanced through regional revisions, notably Lattke (2011) for New World and Xu & He (2015) for Oriental region; this is complemented by a foundational revision of Afrotropical region (Bolton, 1975a) and a more recent, specific revision of Malagasy fauna (Rakotonirina & Fisher, 2014). In parallel, studies focus on specific Asian species groups (e.g., Arimoto 2017: *L. modiglianii* group; Wachkoo et al. 2018: *L. chinensis* group; Arimoto & Yamane 2018: *L. chalybaea* group). Nevertheless, species discovery and revision for different regions remain ongoing priorities, with numerous new species yet to be described.

A total of twenty-seven species of *Leptogenys* are currently recorded from China. Wheeler (1930) first recorded five of these species. Subsequent studies conducted during the latter half of the 20th century and early 2000s expanded this record, documenting additional species from various regions (Tang et al. 1995; Wu & Wang 1995; Xu 1996, 2000, 2002; Terayama 1990, 2009; Zhou 2001; Wang et al. 2009). A significant advancement occurred with Xu & He's revision of the Oriental fauna (2015), which recognized 24 species for China. Most recently, Hamer et al. (2024) described a new species from Hong Kong and provided a key for the Hong Kong SAR, while Chen et al. (2024) described two new species from Hainan. Crucially, they also provided the first comprehensive key to workers of all known *Leptogenys* species in China, establishing 27 species.

This paper describes three new species of *Leptogenys* from South China: *L. qini* **sp. nov.** (Guangxi), *L. scabra* **sp. nov.** (Guangxi), and *L. sunyatseni* **sp. nov.** (Yunnan).

MATERIALS AND METHODS

This paper describes three new species of the genus *Leptogenys* Roger. The type specimens of *L. qini* **sp. nov.** and *L. scabra* **sp. nov.** were collected from Laibin City and Hechi City in Guangxi Zhuang Autonomous Region, respectively, and type specimens of *L. sunyatseni* **sp. nov.** were collected from Jinghong City in Yunnan Province. All specimens were obtained through manual collection and stored in 95% ethanol. Worker specimens of the three new species were mounted on white, rigid triangular paper cards, with holotype specimens labeled with red tags and paratype specimens with yellow tags. Type specimens of the three new species are deposited in the The Museum of Biology, Sun Yat-sen University (SYSBM).

Specimen imaging was performed using a Nikon Z 7II full-frame mirrorless camera equipped with a Tamron SPAF 90mm F2.8 macro lens. Lighting was provided by a Kuangren K909 dual-head macro flash. Images were captured using multi-focal depth of field stacking technology and processed by stacking with Helicon Focus 8 software. Post-processing adjustments were performed using Adobe Photoshop 2020 software.

Measurements were conducted using a HY-800B industrial camera mounted on an SZM-7045 stereo zoom microscope with the HAYEAR software. Calibration and measurement were performed at a fixed magnification.

Morphological measurements follow Bolton (1975) with the following key indices retained, and we add Weber's length (WL) and Gaster Length (GL).

TL Total Length: total outstretched length of the individual, from the mandibular apex to the gastral apex, which is equal to ML+HL+WL+PL+GL.

ML Mandible length: straight-line length of mandible measured from apex to the lateral base.

HL Head Length: straight-line length of head in perfect full-face view, measured from the mid-point of the anterior clypeal margin to the midpoint of the posterior margin. In species where one or both of these margins are concave, the measurement is taken from the mid-point of a transverse line that spans the apices of the projecting portions.

HW Head Width: maximum width of head in full-face view, excluding the eyes.
CI Cephalic Index: HW × 100 / HL.
SL Scape Length: straight-line length of the antennal scape, excluding the basal constriction or neck.
SI Scape Index: SL × 100 / HW.
WL Weber's Length: mesosomal diagonal length from pronotal anteriormost point (excluding neck) to propodeal lobe posteriormost point laterally.
PW Pronotal Width: maximum width of pronotum measured in dorsal view.
PH Petiole Height: height of petiole measured in lateral view from the apex of the ventral (subpetiolar) process vertically to a line intersecting the dorsalmost point of the node.
PL Petiole Length: length of petiole measured in lateral view from the anterior point to the posteriormost point of the tergite, where it surrounds the gastral articulation.
GL Gaster Length: in lateral view of dry specimens, the maximum linear length measured along the dorsal margin of the gaster.
LPI Lateral Petiole: PH × 100 / PL.
DPW Dorsal Petiole Width: maximum width of petiole in dorsal view.
DPI Dorsal Petiole Index: DPW × 100 / PL.

TAXONOMY

***Leptogenys qini* Chen et al., sp. nov.**
https://zoobank.org/NomenclaturalActs/bd6febe4-580d-4691-b621-14759e131d8a

Fig. 1A-C

Type material. Holotype: worker, China, Guangxi Zhuang Autonomous Region, Laibin, Jinxiu Yao Autonomous County. 24.092483°N 110.220080°E, 1137 m, 5.vii.2025, Changlin Qin leg., En-427663 (SYSBM); **Paratypes:** 3 workers, with the same data as holotype, En-427664, En-427665, En-427666 (SYSBM).

Measurements: Holotype: TL 13.37, HL 2.30, HW 1.59, CI 68, SL 2.67, SI 168, ML 1.14, WL 3.96, PW 1.42, PH 1.30, PL 1.30, GL 4.67, LPI 100, DPW 0.78, DPI 58.

Paratype (n = 3)**:** TL 13.17-13.64, HL 2.25-2.37, HW 1.57-1.61, CI 67-69, SL 2.59-2.62, SI 160-164, ML 1.12-1.19, WL 3.93-4.11, PW 1.41-1.47, PH 1.27-1.30, PL 1.28-1.30, GL 4.59-4.67, LPI 96-101, DPW 0.66-0.81, DPI 57-67.

Description: Head in full-face view roughly trapezoidal, longer than wide, slightly widening anteriorly; posterior margin slightly convex; posterior corners bluntly angulate. Compound eyes large, slightly extending beyond lateral head margins; maximum diameter exceeding one-third of the lateral head length. Frons narrow; frontal carinae indistinct, frontal furrow present. Scape long, surpassing occipital margin by two-fifths of its length; diameter of scape in thickest part smaller than diameter of eye. Antennae 12-segmented; all flagellar segments longer than wide, cylindrical; flagellar segment III longest (distinctly longer than IV), segments V-XII subequal in length; antennal sockets exposed. Clypeus with a distinct central carina, anterior margin truncate. Mandible triangular, with a single sharp apical tooth; masticatory margin edentate.

In lateral view outline of pronotal and mesonotal dorsum convex, together forming a weakly convex dorsal profile; promesonotal suture distinct; metanotal groove deeply impressed. Propodeum lower than promesonotum, dorsum long and convex, much longer than short, declivity nearly straight; propodeal junction bluntly angulate. Prora nearly right-angulate. In dorsal view pronotum widest in mesosoma, sides slightly convex; mesonotum narrowest in mesosoma, as long as wide. Propodeum longer than broad, sides weakly convex.

In lateral view petiolar node trapezoidal, posterior margin of petiole higher than anterior margin; anterior margin convex, posterior margin straight. In dorsal view petiolar node thick, longitudinally elongate and nearly trapezoidal, longer than broad, lateral margins straight and slightly broadening posteriorly, posterior margin truncate. Anterior lobe of subpetiolar process small and trapezoidal, located anteriorly on the petiolar ventral surface.

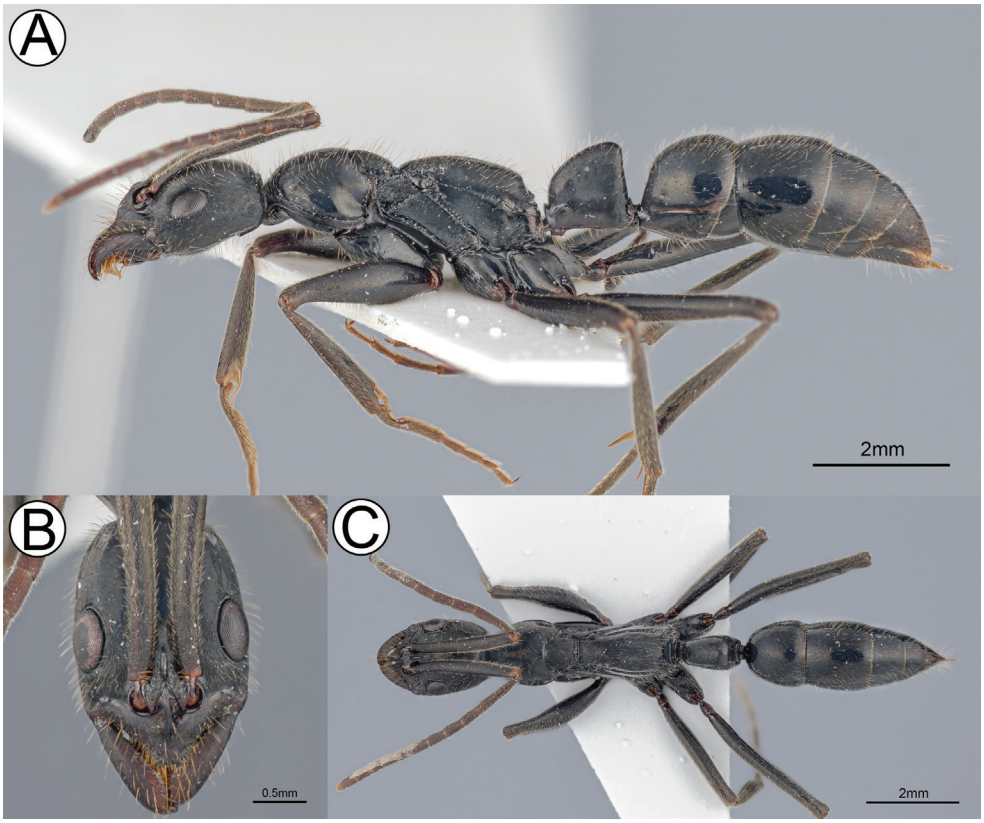

Fig. 1. Worker of *Leptogenys qini* **sp. nov.** (holotype). A. body in lateral view; B. head in full-face view; C. body in dorsal view.

Head largely smooth and shiny, with dense and fine punctures surrounding eyes and antennal insertions. Mandible and clypeus with longitudinal striae, lateral margins smooth. Mesosoma largely smooth, lower quarter of mesopleuron and metapleuron with longitudinal striae. Propodeum, petiole and gaster smooth and shiny.

Body surface with moderately dense erect to suberect hairs. Scapes and tibiae with abundant subdecumbent hairs and dense decumbent pubescence. Body color black; tarsi and posterior tip of gaster yellowish brown.

Comparative Notes:

L. qini **sp. nov.** is close to *L. kraepelini* Forel, 1905, but can be distinguished based on the following characters: (1) In *L. qini* **sp. nov.,** in lateral view propodeal junction bluntly angulate (*vs.* broadly rounded in *L. kraepelini*; Fig. 2A, B); (2) Petiolar node of *L. qini* **sp. nov.** relatively higher, about 1.1 times as high as long (*vs*. relatively lower, about 0.9 times as high as long in *L. kraepelini*; Fig. 2A, B); anterodorsal corner broadly rounded (*vs*. indistinct in *L. kraepelini*; Fig. 2A, B); posterodorsal corner close to acute angle (*vs.* close to right angle in *L. kraepelini*; Fig. 2A, B); (3) Body size of *L. qini* **sp. nov.** is distinctly larger than that of *L. kraepelini* (see morphometric comparisons in Table 1).

L. qini **sp. nov.** is also close to *L. chinensis* (Mayr, 1870), but can be distinguished based on the following characters: (1) In full-face view, head of *L. qini* **sp. nov.** weakly narrowing posteriorly (*vs.* strongly narrowing posteriorly in *L. chinensis*; Fig. 3A, C); (2) In lateral view, propodeal dorsum of *L. qini* **sp. nov.** moderately convex (*vs.* slightly convex in *L. chinensis*; Fig. 3B, D), propodeal junction bluntly angulate (*vs.* broadly rounded in *L. chinensis*; Fig. 3B, D); (3) Petiolar node of *L. qini* **sp. nov.** relatively higher, about 1.1 times as high as long (*vs.* relatively lower, about 0.9 times as high as long in *L. chinensis*; Fig. 3B, D), posterodorsal corner more protruding (*vs.* less protruding in *L. chinensis*; Fig. 3B, D).

Table 1. Morphometric comparison of five key characters (Hamer et al., 2024) between paratype specimens of *L. qini* **sp. nov.** (*n* = 3) and topotype specimens of *L. kraepelini* Forel, 1905 (*n* = 15, Hamer et al., 2024).

Species	HW	HL	SL	ML	WL
L. kraepelini	1.09–1.23	1.68–1.86	1.70–2.04	0.78–0.87	2.91–3.26
L. qini **sp. nov.**	1.57–1.61	2.25–2.37	2.59–2.62	1.12–1.19	3.93–4.11

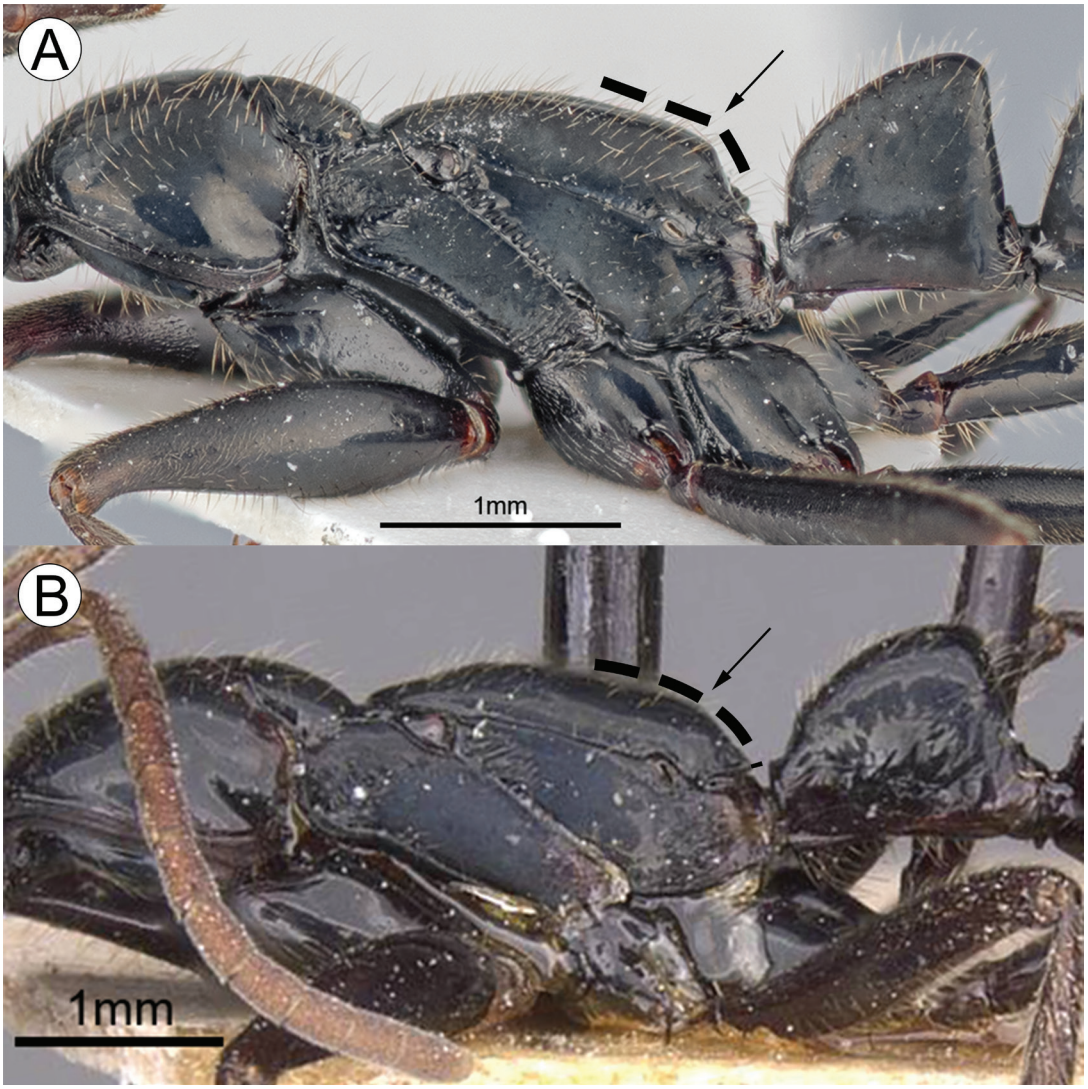

Fig. 2. *L. qini* **sp. nov.** and *L. kraepelini* Forel, 1905 workers. A, B. Lateral view of the mesosoma and petiole. A. *L. qini* **sp. nov.**; B. *L. kraepelini* (Images from AntWeb 2025, CASENT0915235).

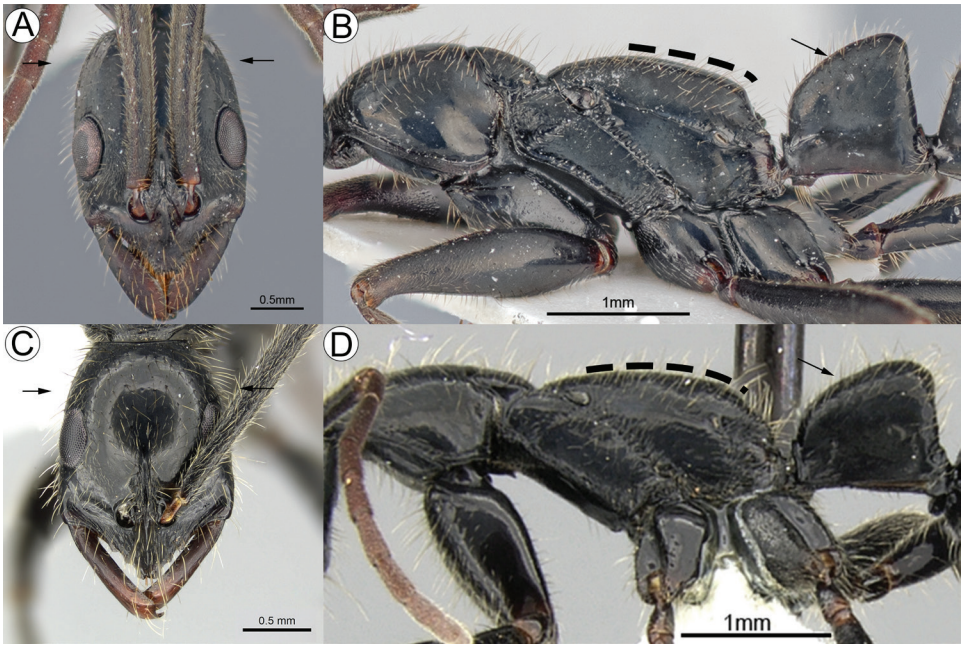

Fig. 3. *L. qini* **sp. nov.** and *L. chinensis* Mayr, 1870 workers. A, C. Head in full-face view; B, D. Lateral view of mesosoma and petiole. A, B. *L. qini* **sp. nov.**; C, D. *L. chinensis* (Images from AntWeb 2025, CASENT0270544).

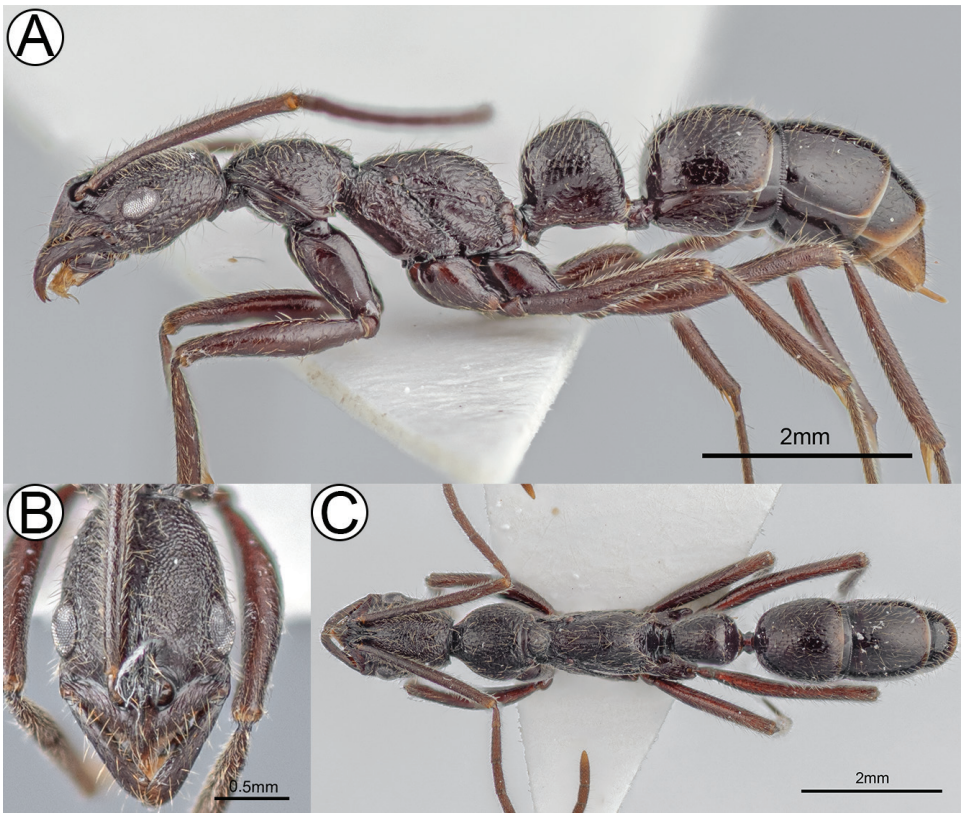

Fig. 4. Worker of *Leptogenys scabra* **sp. nov.** (holotype). A. body in lateral view; B. head in full-face view; C. body in dorsal view.

Biology. This species inhabits flat terrain within moderately dense forests, characterized by sparse ground vegetation and a leaf litter-covered substrate. Nests were located in decaying wood partially buried in soil, with colonies relatively small, comprising no more than 50 workers. Notably, unlike most species within this genus which have relatively small colony sizes, this species exhibits a notable preference for preying on earwigs, and its nests frequently contain earwig remains and shell fragments. *L. sunyatseni* **sp. nov.** discussed in this paper shares this dietary preference for earwigs.

Etymology:
The specific epithet is dedicated to Changlin Qin for collecting type specimens.

***Leptogenys scabra* Chen et al., sp. nov.**
https://zoobank.org/NomenclaturalActs/10c0bfd8-a961-4741-800c-15c8ae5c384b

Fig. 4A-C

Type material. Holotype: Worker, China, Guangxi Zhuang Autonomous Region, Hechi, Huanjiang Maonan Autonomous County. 25.192742°N 108.651622°E, 1192 m, 4.v.2025, Shuojie Wang leg., En-427661 (SYSBM); **Paratype:** 1 worker, with the same data as holotype, En-427662 (SYSBM).

Measurements: Holotype worker: TL 9.78, HL 2.15, HW 1.13, CI 53, SL 2.11, SI 187, ML 0.81, WL 2.91, PW 1.11, PH 1.05, PL 1.04, GL 2.87, LPI 101, DPW 0.75, DPI 72.

Paratype worker (*n* = 1)**:** TL 9.97, HL 2.15, HW 1.09, CI 51, SL 2.11, SI 194, ML 0.89, WL 3.01, PW 1.05, PH 1.03, PL 1.02, GL 2.90, LPI 101, DPW 0.73, DPI 72.

Description: Head in full-face view trapezoidal, longer than wide, strongly widening anteriorly; posterior margin narrow and nearly straight; posterior corners bluntly angulate. Compound eyes located at the midline of head, large and distinctly convex. Frons narrow; frontal carinae indistinct; frontal furrow present and reaching to the midline of head; frontal lobes slightly convex and lamellate. Scape long, surpassing occipital margin of head by its half-length; diameter of scape in thickest part smaller than diameter of eye. Antennae 12-segmented; all flagellar segments longer than wide, cylindrical; flagellar segment I shortest, segment II longest (slightly longer than segment III); segments III and IV subequal in length; segments IV to X subequal in length. Antennal sockets exposed. Clypeal lobe broadly triangular, with a distinct central carina; anteromedian clypeal margin rounded. Mandible slender, outer margin slightly concave, with a single apical tooth; masticatory margin edentate.

In lateral view the outline of promesonotal dorsum moderately convex; promesonotal suture distinct; metanotal groove deeply impressed; posterodorsal corner of mesonotum right-angulate. Propodeum lower than promesonotum, dorsum moderately convex, longer than declivity; propodeal junction broadly rounded; propodeal edge indistinct. Prora well-developed, quadrate, projecting anteriorly in lateral view. In dorsal view pronotum broadest in mesosoma, sides strongly convex. Mesonotum narrowest in mesosoma, broader than long. Propodeum longer than broad, widening posteriorly, sides weakly convex.

In lateral view petiolar node trapezoidal, large and thick, posterior margin of petiole higher than anterior margin; anterior and dorsal margins slightly convex, posterior margin straight; anterodorsal corner broadly rounded, posterodorsal corner narrowly rounded. In dorsal view petiolar node longitudinally elongate and nearly trapezoidal, widening posteriorly, longer than broad; anterior margin strongly convex, lateral sides weakly convex, posterior margin nearly straight. Anterior lobe of subpetiolar process nearly triangular and located at anteroventral corner in lateral view. Ventral margin of petiole deeply concave anteriorly and nearly straight posteriorly.

Head largely rugose, densely punctate. Mandible and clypeus with longitudinal striae. Mesosoma strongly punctate; mesopleuron and metapleuron with finely crossed striae. Propodeal dorsum longitudinally rugose. Petiolar node densely punctate. Gaster smooth and shiny; first gastral tergite finely and densely punctate.

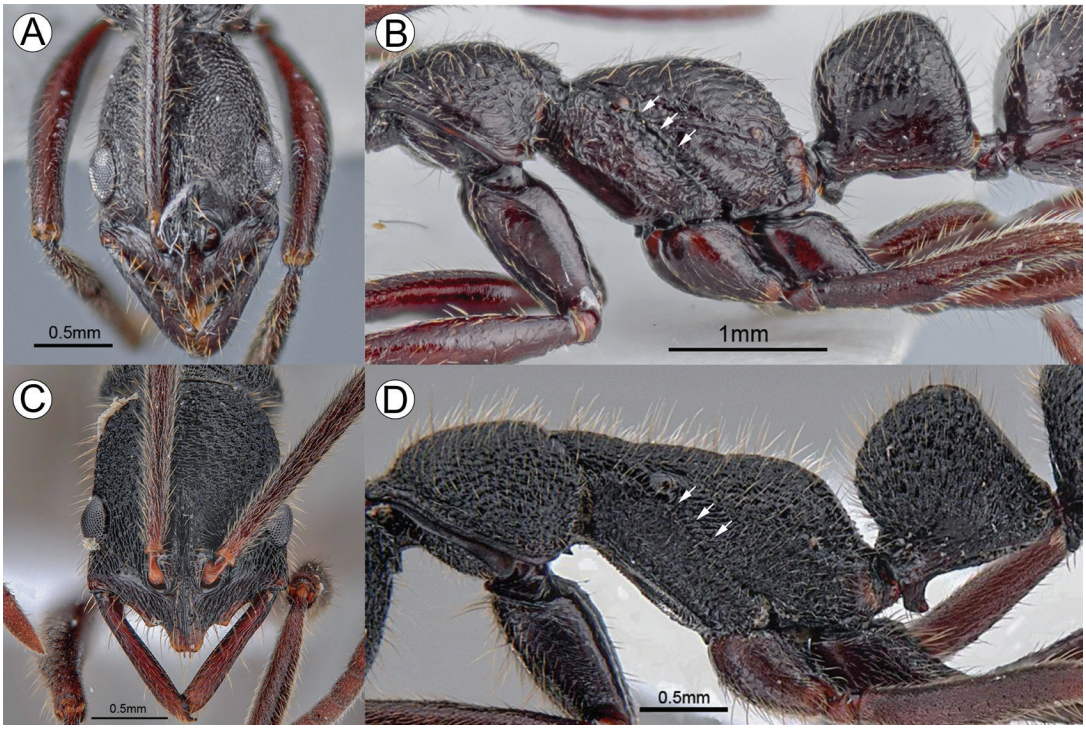

Fig. 5. *L. scabra* **sp. nov.** and *L.* cf. *binghamii* Forel, 1900 workers. A, C. Head in full-face view; B, D. Lateral view of mesosoma and petiole. A, B. *L. scabra* **sp. nov.**; C, D. *L.* cf. *binghamii* (Images by Matthew T. Hamer).

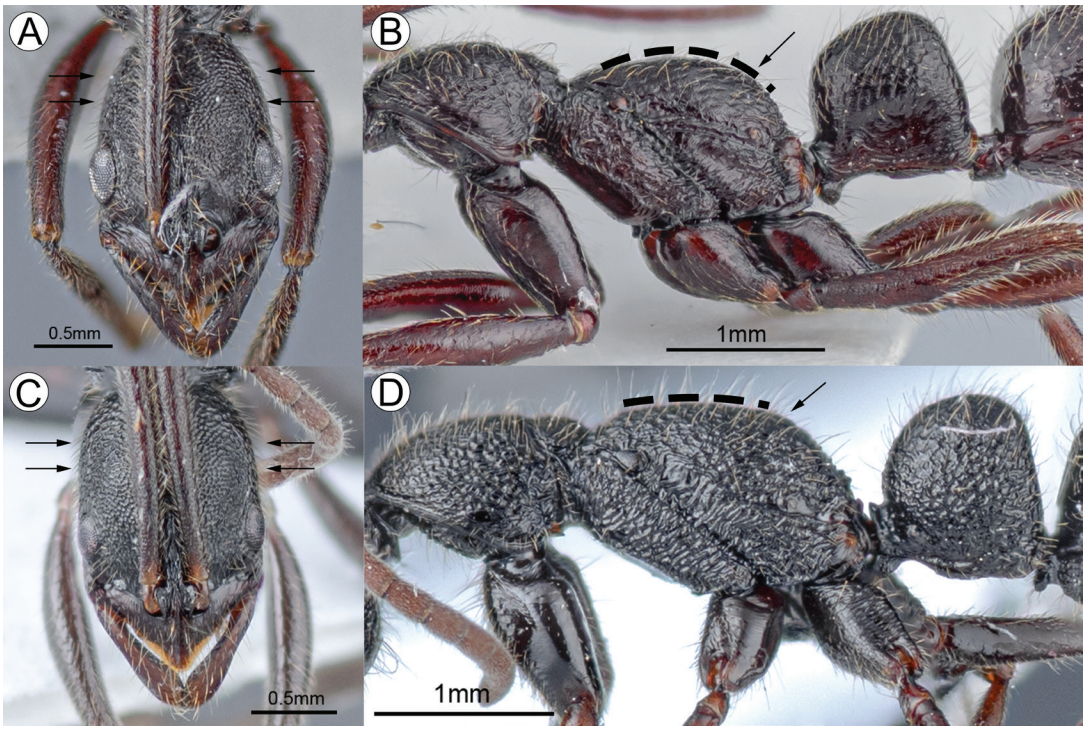

Fig. 6. *L. scabra* **sp. nov.** and *L. hezhouensis* Zhou, 2001 workers. A, C. Head in full-face view; B, D. Lateral view of mesosoma and petiole. A, B. *L. scabra* **sp. nov.**; C, D. *L. hezhouensis*.

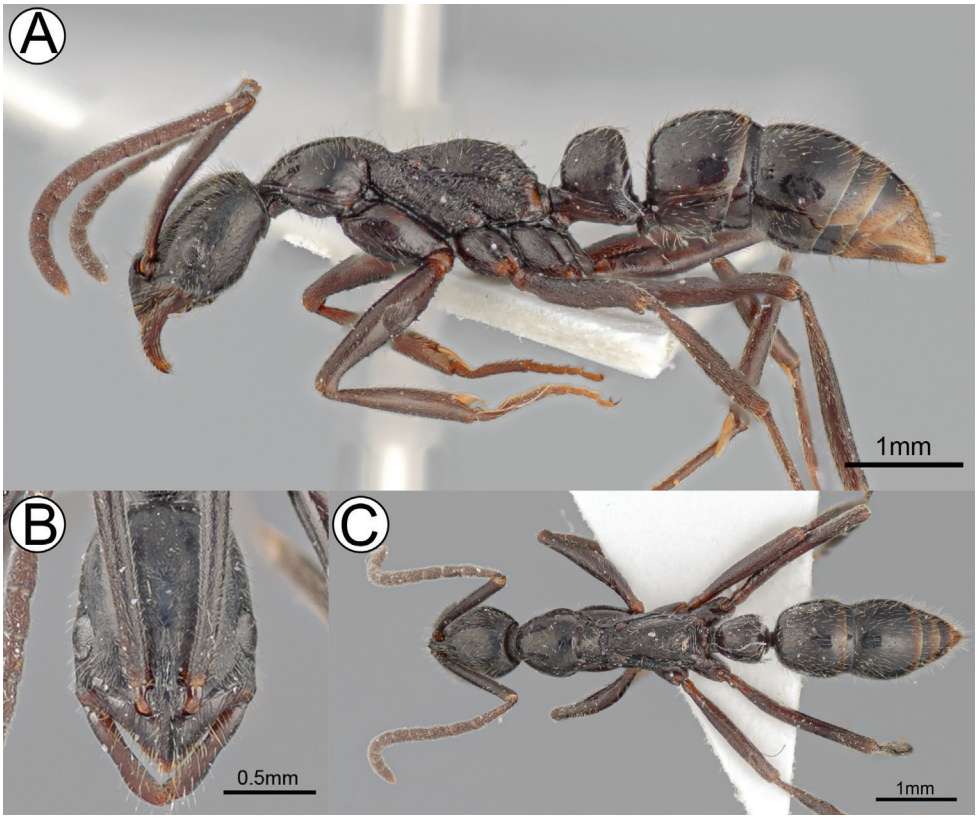

Fig. 7. Worker of *Leptogenys sunyatseni* **sp. nov.** (holotype). A. body in lateral view; B. head in full-face view; C. body in dorsal view.

Body surface with abundant suberect to subdecumbent hairs and abundant decumbent pubescence. Scapes and tibiae with abundant subdecumbent hairs and dense decumbent pubescence. Body color black; antennae, legs, and gastral apex dark reddish brown.

Comparative Notes:

L. scabra **sp. nov.** is close to *L. binghamii* Forel, 1900, but can be distinguished based on the following characters: (1) In *L. scabra* **sp. nov.**, metanotal groove deeply impressed in lateral view (*vs.* not impressed in *L. binghamii*; Fig. 5B, D), propodeal dorsum moderately convex, propodeal junction indistinct (*vs*. propodeal dorsum nearly straight, propodeal junction distinct and broadly rounded in *L. binghamii*; Fig. 5B, D); (2) In *L. scabra* **sp. nov.**, the anterodorsal corner of petiolar node narrowly rounded (*vs.* broadly rounded in *L. binghamii*; Fig. 5B, D), ventral margin of petiole concave anteriorly (*vs*. nearly straight in *L. binghamii*; Fig. 5B, D); (3) In *L. scabra* **sp. nov.**, head, mesosoma, petiolar node and first gastral tergite abundantly punctate (*vs.* densely coarsely reticulate in *L. binghamii*; Fig. 5A, B, C, D).

L. scabra **sp. nov.** is also close to *L. hezhouensis* Zhou, 2001, but can be distinguished based on the following characters: (1) In *L. scabra* **sp. nov.**, head strongly widening anteriorly in full-face view (*vs.* weakly widening anteriorly in *L. hezhouensis*; Fig. 6A, C); (2) In *L. scabra* **sp. nov.**, propodeal dorsum moderately convex in lateral view (*vs.* nearly straight in *L. hezhouensis*; Fig. 6B, D), propodeal junction indistinct (*vs.* distinct and broadly rounded in *L. hezhouensis*; Fig. 6B, D); (3) In *L. scabra* **sp. nov.**, petiolar node relatively lower, about 1.1 times as high as long (*vs.* relatively higher, about 1.2 times as high as long in *L. hezhouensis*; Fig. 6B, D), anterodorsal corner narrowly rounded (*vs.* indistinct in *L. hezhouensis*; Fig. 6B, D), petiolar node longer than broad in dorsal view (*vs.* about as long as broad

in *L. hezhouensis*; Fig. 6B, D); (4) In *L. scabra* **sp. nov.**, head, mesosoma, petiolar node and first gastral tergite abundantly coarsely punctate (*vs.* densely coarsely reticulate in *L. hezhouensis*; Fig. 6A, B, C, D).

Biology. This species inhabits flat areas within moderately dense forests, characterized by a rich understory of herbaceous plants and a ground surface covered by a layer of leaf litter. Nests are located within rotting wood on the soil surface, and the colonies are relatively small, with fewer than 50 workers.

Etymology: The specific epithet scabra means "rough", referring to the rough sculpture on most parts of the body of this species.

***Leptogenys sunyatseni* Chen et al., sp. nov.**
https://zoobank.org/NomenclaturalActs/6e9df58f-ce1d-4011-a51a-f982a5aea870

Fig. 7A-C

Type material: Holotype: 1 worker, China, Yunnan Province, Xishuangbanna, Jinghong city, Menghan. 21.914710°N 100.959827°E, 550 m, 29.i.2024, Jixuan Li leg., En-427659 (SYSBM); **Paratypes:** 1 worker, with the same data as holotype, En-427660 (SYSBM).

Measurements. Holotype worker: TL 8.10, HL 1.52, HW 0.99, CI 65, SL 1.46, SI 148, ML 0.81, WL 2.45, PW 0.86, PH 0.81, PL 0.75, GL 2.57, LPI 108, DPW 0.59, DPI 79.

Paratype worker (*n* = 1)**:** TL 7.47, HL 1.47, HW 0.97, CI 66, SL 1.64, SI 169, ML 0.79, WL 2.49, PW 0.85, PH 0.79, PL 0.75, GL 1.97, LPI 109, DPW 0.58, DPI 77.

Description: Head in full-face view roughly trapezoidal, widening anteriorly, lateral margins slightly convex; posterior margin nearly straight; posterior corners bluntly angulate. Compound eyes located at the midline of head, moderate in size, slightly convex. Frons narrow; frontal carinae distinct; frontal furrow present and reaching to the level of posterior margin of eyes; frontal lobes distinct. Scape long, surpassing occipital margin by its apical third; diameter of scape in thickest part smaller than diameter of eye. Antennae 12-segmented; all flagellar segments longer than wide, cylindrical; flagellar segment II longest (slightly longer than segment III); segments III and IV subequal in length. Antennal sockets partially concealed. Clypeus broad, with a distinct central carina, anteromedian clypeal margin prominent and truncate. Mandible slender, outer margin slightly concave; masticatory margin with a single small apical tooth.

In lateral view the outline of promesonotal dorsum moderately convex; promesonotal suture distinct; metanotal groove deeply impressed. Propodeum lower than promesonotum, dorsum straight anteriorly and convex posteriorly, propodeal junction broadly rounded, propodeal edge indistinct. Prora distinct, forming a pointed process. In dorsal view pronotum broadest in mesosoma, sides moderately convex. Mesonotum narrowest in mesosoma, broader than long. Propodeum longer than broad, sides weakly convex.

In lateral view petiolar node trapezoidal, large and thick, posterior margin of petiole higher than anterior margin; anterior and dorsal margins weakly convex, posterior margin straight; anterodorsal corner broadly rounded, posterodorsal corner narrowly rounded. In dorsal view petiolar node nearly trapezoidal, widening posteriorly, about as long as broad, anterior margin strongly convex, sides weakly convex, posterior margin straight. In lateral view anterior lobe of subpetiolar process large and triangular, located at anteroventral corner; ventral margin of petiole straight.

Head mostly smooth but dull. Mandible and clypeus with longitudinal striae. Pronotum smooth and shiny. Mesonotum, metanotum, mesopleuron and metapleuron obliquely rugose. Propodeum largely rugose, propodeal declivity transversely striate. Petiolar node and gaster smooth and shiny.

Body surface with abundant suberect to subdecumbent hairs and abundant decumbent pubescence. Scapes and tibiae with dense decumbent pubescence, without erect hairs. Body color black; mandible, antennae, legs, and gastral apex dark reddish-brown.

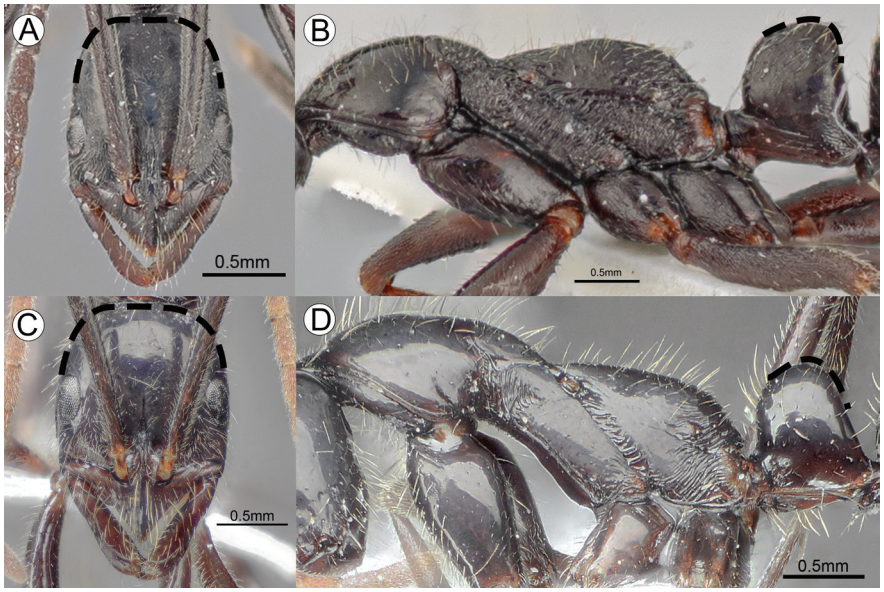

Fig. 8. *L. sunyatseni* **sp. nov.** and *L. sunzii* Xu & He, 2015 workers. A, C. Head in full-face view; B, D. Lateral view of mesosoma and petiole. A, B. *L. sunyatseni* **sp. nov.**; C, D. *L. sunzii* (Images by Zhenghui Xu).

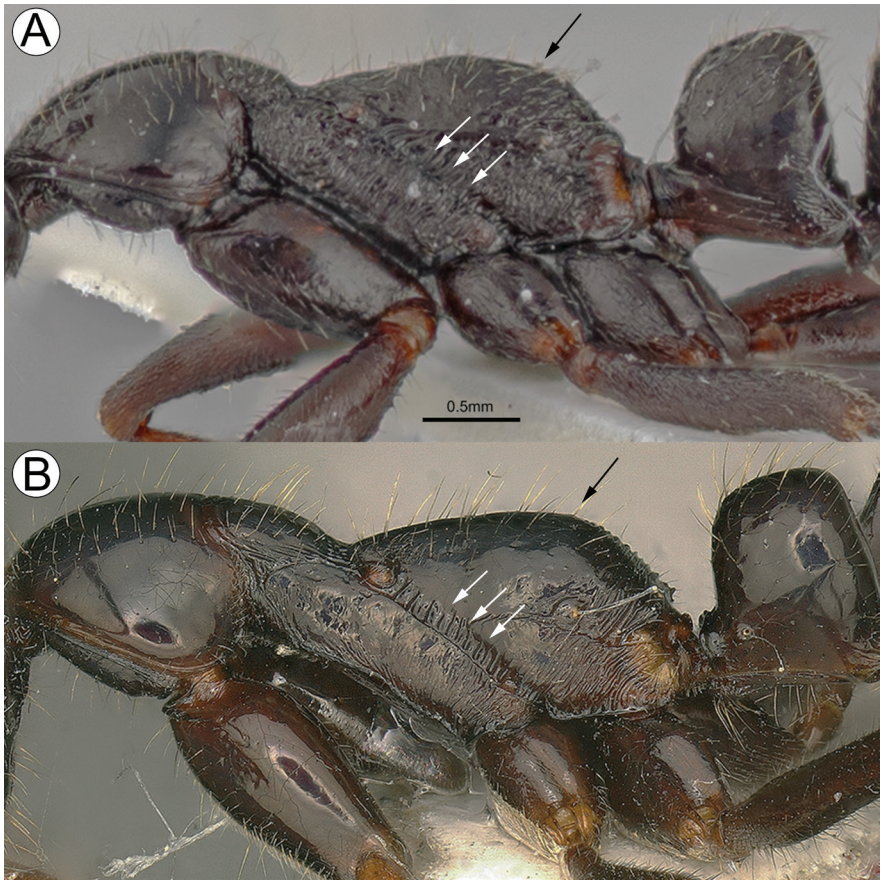

Fig. 9. *L. sunyatseni* **sp. nov.** and *L. laeviterga* Zhou et al., 2012 workers. A, B. Lateral view of the mesosoma and petiole. A. *L. sunyatseni* **sp. nov.**; B. *L. laeviterga* (Images by Zhilin Chen).

Comparative Notes:
L. sunyatseni **sp. nov.** is close to *L. sunzii* Xu & He, 2015, but can be distinguished based on the following characters: (1) In *L. sunyatseni* **sp. nov.**, the head smooth but dull in full-face view (*vs.* smooth and shiny in *L. sunzii*; Fig. 8A, C); (2) In *L. sunyatseni* **sp. nov.**, in lateral view dorsal margin of petiolar node weakly convex (*vs.* strongly convex in *L. sunzii*; Fig. 8A, C); (3) In *L. sunyatseni* **sp. nov.**, mesopleuron, metapleuron and propodeal sides finely obliquely rugose (*vs.* smooth in *L. sunzii*; Fig. 8B, D); (4) In *L. sunyatseni* **sp. nov.**, propodeal junction evenly rounded (*vs.* obtusely angulate in *L. sunzii,* Fig. 8B, D).

L. sunyatseni **sp. nov.** is also close to *L. laeviterga* Zhou et al., 2012, but can be distinguished based on the following characters: (1) In *L. sunyatseni* **sp. nov.**, in lateral view anterodorsal corner of petiolar node broadly rounded (*vs.* narrowly rounded in *L. laeviterga*; Fig. 9A, B); (2) In *L. sunyatseni* **sp. nov.**, mesopleuron, metapleuron, and propodeal sides finely obliquely rugose (*vs.* mostly smooth in *L. laeviterga*; Fig. 9A, B).

Biology. This species inhabits gently sloping mountainous forests with a dense understory of shrubs and leaf litter-covered ground. Nests of this species have been located beneath stones. The observed colonies are relatively small, with no colonies exceeding 30 workers found to date.

Etymology:
The specific epithet is named in honor of Mr. Sun Yat-sen (1866-1925), who was a national hero, the great pioneer of the Chinese democratic revolution.

Key to species of *Leptogenys* found in China based on the worker caste (based on Chen et al., 2024 and Hamer et al., 2024)

1. Masticatory margin of mandible with > 2 teeth and denticles in addition to the apical one 2
– Masticatory margin of mandible usually edentate, at most with 1 tooth in addition to the apical one...8
2. Head quadrate or roughly trapezoidal in full-face view approx. as broad as long. Petiolar node longitudinally compressed and squamiform in lateral view, acute at summit, without distinct dorsal margin, the node above anterior and posterior articulations ≥ 2 × as broad as long in dorsal view 3
– Head rectangular in full-face view, distinctly longer than broad. Petiolar node longitudinally thickened or elongate, or roughly triangular, or cubical in lateral view, dorsal margin long or narrowly convex, always distinct, the node above anterior and posterior articulations ≤ 1.5 × as broad as long in dorsal view 4
3. Medial side of eyes on dorsum of head longitudinally striate, anteromedian clypeal margin broadly angulate. Antennal segments IV–VI approx. as broad as long. Subpetiolar process broad and triangular. Body color reddish brown (Myanmar, India, China, Thailand).....
.....*L. birmana* Forel
– Medial side of eyes on dorsum of head smooth and shiny, anteromedian clypeal margin bidentate. Antennal segments IV–VI longer than broad. Subpetiolar process narrow and cuneiform. Body color brownish black (India, Sri Lanka, Vietnam, China).....*L. processionalis* Jerdon
4. Petiolar node erectly triangular in lateral view, dorsal and anterior margins form a single arch, the two margins not separated by a distinct blunt angle (Vietnam, China).....*L. davydovi* Karavaiev
– Petiolar node subquadrate in lateral view, dorsal and anterior margins not forming a single arch, the 2 margins separated by a distinct blunt angle 5
5. Petiolar node thickly trapezoidal in lateral view, dorsal margin as long as or longer than anterior margin. Body color brownish yellow (Myanmar, China)..... *L. crassicornis* Emery
– Petiolar node thinly trapezoidal in lateral view, dorsal margin distinctly shorter than anterior margin. Body color reddish brown to black.....6
6. Mandible < 5 teeth, dorsum of the propodeum appears nearly straight and aligns with the promesonotum in the same horizontal plane .....
.....*L. zhoui* Chen et al.
– Mandible ≥ 5 teeth, the dorsum of the promesonotum higher than the propodeum 7
7. Body size is relatively large (TL 6.4 mm). Subpetiolar process semicircular, rounded at apex. Body color reddish brown (China: Guangxi.....
..... *L. strena* Zhou
– Body size is relatively small (TL 5.2 mm). Subpetiolar process triangular, angulate at apex. Body color black (India, Myanmar; China: Yunnan).....*L. lucidula* Emery

8. Head dorsum striate throughout...9
– Head dorsum punctate throughout or mostly smooth and shiny, at most punctate or rugose anterior to eyes 11
9. Head slightly wider than long in full-face view. Petiolar node posterodorsal corner prominent with elongated triangular denticle .... *L. hainanensis* Chen et al.
– Head longer than wide in full-face view. Petiolar node posterodorsal corner broadly rounded without triangular denticle 10
10. Clypeus with distinct longitudinal central carina. Sides of pronotum smooth, finely rugulose or finely reticulate; sides of mesothorax, metathorax and propodeum irregularly rugose (India, Sri Lanka, Myanmar, China, Thailand, Philippines, Malaysia, Singapore, Indonesia, New Guinea, Solomon Islands ..... *L. diminuta* Smith
– Clypeus without longitudinal central carina. Mesosoma and petiolar node regularly longitudinally striate (India, Myanmar, Thailand, Vietnam, China, Malaysia, Indonesia, New Guinea ..... *L. kitteli* Mayr
11. Head dorsum punctate throughout 12
– Head dorsum mostly smooth and shiny, at most punctate or rugose anterior to eyes 21
12. First gastral segment mostly punctate..... 13
– First gastral segment smooth and shiny 17
13. Head roughly rectangular in full-face view, not widening anteriorly, posterior margin roundly convex. Anteromedian clypeal margin strongly convex (China)..... *L. hezhouensis* Zhou
– Head roughly trapezoidal in full-face view, distinctly widening anteriorly, posterior margin nearly straight. Anteromedian clypeal margin truncate or nearly truncate 14
14. Antennae relatively shorter, only one fourth of length of scape surpassing posterior head corner, segments III and IV approx. equal. Anterior margin of petiolar node in lateral view straight and vertical (China) ..... *L. yandii* Xu & He
– Antennae relatively longer, 1/3 to 1/2 of length of scape surpassing posterior head corner, segment III distinctly longer than segment IV. Anterior margin of petiolar node weakly convex and slope, anterodorsal corner broadly rounded 15
15. Head in full-face view strongly widening anteriorly. Metanotal groove in lateral view deeply impressed. Propodeal dorsum in lateral view moderately convex ..... *L. scabra* **sp. nov.**
– Head in full-face view weakly widening anteriorly. Metanotal groove in lateral view weakly impressed or nearly straight. Propodeal dorsum in lateral view nearly straight..... 16
16. Eyes larger and occupying 1/3 of head side. Antennae shorter, 1/3 of scape length surpassing posterior head corner. Head dorsum finely densely punctate. Dorsa of mesosoma, petiole, and first gastral segment sparsely punctate with interspaces relatively shiny; sides of mesosoma and petiolar node longitudinally rugose, posterior 2/3 of side of first gastral segment smooth and shiny, second gastral segment smooth and shiny. Total length 5–6 mm (India, Philippines, China)..... ..... *L. punctiventris* Mayr
– Eyes smaller and occupying 1/4 of head side. Antennae longer, near 1/2 of scape length surpassing posterior head corner. Head, mesosoma, petiole and first gastral segment densely punctate with interspaces coarsely reticulate rugose and dull, second gastral segment sparsely punctate. Total length 9–10 mm (Myanmar, India, China) . ..... *L. binghamii* Forel
17. Clypeus truncate at apex (China)..... ..... *L. huapingensis* Zhou
– Clypeus convex at apex, not truncate 18
18.. Dorsal faces of head, mesosoma and petiolar node densely punctate and opaque..... 19
– Dorsal face of head loosely punctate with interspaces relatively shiny, dorsal faces of mesosoma and petiolar node smooth and shiny...20
19. Inner margin of mandible roundly convex, basal corner bluntly angulate. Pronotum densely punctate with sides longitudinally striate. Anterodorsal corner of petiolar node broadly rounded in lateral view. Body color black. Robust species with total length 7.1–7.8 mm (China) .... *L. zhuangzii* Xu
– Inner margin of mandible nearly straight, basal corner rounded without clear angle. Pronotum finely rugulose with sides smooth and shiny. Anterodorsal corner of petiolar node narrowly rounded in lateral view. Body color blackish brown. Slender species with total length 4.5–5.0 mm (China) ..... *L. laozii* Xu
20. Petiolar node higher than long in lateral view, with anterodorsal corner narrowly rounded. Mesopleuron and metapleuron mostly smooth and shiny. Body color black to blackish brown. Total length 4.5–5.2 mm (China) ..... *L. mengzii* Xu

– Petiolar node as high as long in lateral view, with anterodorsal corner broadly rounded. Mesopleuron and metapleuron mostly densely rugose and opaque. Body color reddish brown. Total length 5.6–6.4 mm (China) ..... *L. rufida* Zhou et al.
21Petiolar node strongly elongate in lateral view, ~ 1.5 × as long as high (China) ..... *L. pangui* Xu
– Petiolar node moderately to weakly elongate in lateral view, < 1.2 × as long as high..... 22
22. Petiolar node moderately elongate, as long as high or distinctly longer than high in lateral view 23
– Petiolar node weakly elongate, distinctly higher than long in lateral view...28
23. Clypeus truncate at apex. Larger species with total length 8–14 mm 24
– Clypeus convex at apex. Smaller species with total length 4.5–7 mm 26
24. In lateral view propodeal junction bluntly angulate. Larger species with total length > 13mm ..... *L. qini* **sp. nov.**
– In lateral view propodeal junction broadly rounded. Smaller species with total length < 13mm 25
25. Clypeus anterior clypeal lobes divided into 2 teeth. dorsal faces between eyes and antennal sockets smooth and shiny, without longitudinal rugae. Petiolar node relatively broader in dorsal view, 1.3 × as long as broad, (India, Sri Lanka, Philippines, China)..... *L. chinensis* Mayr
– Clypeus anterior clypeal lobes round, dorsal faces between eyes and antennal sockets longitudinal rugose and opaque. Petiolar node relatively narrower in dorsal view, 2 × as long as broad (Indonesia, Vietnam, Thailand, China) ..... *L. kraepelini* Forel
26. Petiolar node as high as long in lateral view. Sides of mesothorax, metathorax, and propodeum mostly irregularly rugose and opaque..... *L. confucii* Forel
– Petiolar node distinctly longer than high in lateral view. Sides of mesothorax, metathorax, and propodeum mostly smooth and shiny 27
27. In full-face view, head lateral margin convex; head dorsum predominantly smooth, with very sparse punctation; eye larger (EL 0.29–0.37) ..... *L. peuqueti* Andrй
– In full-face view, head lateral margin straight to weakly tapering posteriorly; head dorsum densely punctate; eye smaller (EL 0.22–0.27) ..... *L. grohli* Hamer et al.
28. In full-face view head smooth but dull. mesopleuron, metapleuron and propodeal sides finely obliquely rugose..... *L. sunyatseni* **sp. nov.**
– In full-face view head smooth and shiny. mesopleuron, metapleuron and propodeal sides mostly smooth..... 29
29. In full-face view, greatest width of eye roughly equal to or less than the greatest width of antennal scape. Petiolar node relatively longer in lateral view, 1.3 × as high as long, dorsal margin distinctly longer than anterior margin (China)..... *L. laeviterga* Zhou et al.
– In full-face view, greatest width of eye markedly greater than the maximum width of antennal scape. Petiolar node relatively higher in lateral view, ~ 1.4 × as high as long, dorsal margin as long as anterior margin (China) ..... *L. sunzii* Xu & He

ACKNOWLEDGMENTS

We are especially grateful to Prof. Zhenghui Xu (Southwest Forestry University, China), Prof. Zhilin Chen (Guangxi Normal University, China) for presenting precious advice and providing type specimen image. We thank Mr. Matthew T. Hamer (The University of Hong Kong, China), Mr. Ying Zhong (Guangzhou College of Technology and Business, China), Mr. Ruipu Hu (Nanjing University, China) to provide valuable advice on species taxonomy. We also thank Mr. Changlin Qin, Mr. Jixuan Li, Mr. Dayu Zhou, and Mr. Lang Feng for providing the required specimens for this paper. We appreciate Yifan Tang for assisting with the shooting of the images in this paper and thank Ms. Binglan Zhang (Sun Yat-sen University, China) for help in preserving the type specimens. Our gratitude also extends to Ms. Ruping Wang and Ms. Xiaoting Pan (Jurong Country Garden School) for providing enlightenment and guidance to the first author.

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