European Journal of Taxonomy 1043: 152–165
https://doi.org/10.5852/ejt.2026.1043.3215

europeanjournaloftaxonomy.eu
ISSN 2118-9773
2026 · Zhu Q.-D. & Shi F.-M.

*Received: 20 November 2025* • *Accepted: 22 January 2026* • *Published: 9 March 2026*

*Topic editor: Tony Robillard* • *Section editor: Ming Kai Tan* • *Desk editor: Laura N. Cuypers*

**Research article**

urn:lsid:zoobank.org:pub:160FA775-AAF9-4FDA-A5BD-061E2D02EE5C

# Three new species of the genus *Tachycines* Adelung, 1902 (Orthoptera, Rhaphidophoridae) from China

Qi-Di ZHU [1,*] & Fu-Ming SHI [2]

[1]College of Agronomy, Jiangxi Agricultural University, Nanchang 330045, China.
[2]College of Life Sciences, Hebei University, Baoding 071002, China.

[*]Corresponding author: qidizhu0323@163.com
[2]Email: shif_m@126.com

**Abstract.** The genus *Tachycines* is one of the most species-rich genera of the family Rhaphidophoridae, with 97 species recorded from China. Herein, three new species of *Tachycines* from China are described, i.e., *Tachycines* (*Gymnaeta*) *storozhenkoi* sp. nov., *T.* (*G.*) *wuxiensis* sp. nov. and *T.* (*G.*) *gracilentus* sp. nov. Images illustrating the morphology of these species are provided.

**Keywords.** Cave crickets, China, new species, Rhaphidophoridae, taxonomy.

Zhu Q.-D. & Shi F.-M. 2026. Three new species of the genus *Tachycines* Adelung, 1902 (Orthoptera, Rhaphidophoridae) from China. *European Journal of Taxonomy* 1043: 152–165.
https://doi.org/10.5852/ejt.2026.1043.3215

## Introduction

Adelung (1902) erected the genera *Tachycines* Adelung, 1902 and *Gymnaeta* Adelung, 1902, and assigned *T. asynamorus* Adelung, 1902 as type species of the genus *Tachycines*. Kirby (1906) assigned *G. beresowskii* Adelung, 1902 as type species of the genus *Gymnaeta*. Subsequently, *Gymnaeta* was treated as a subgenus of *Tachycines* (Karny 1934). Gorochov & Storozhenko (1992) transferred *Tachycines* and *Gymnaeta* into the genus *Diestrammena* Brunner von Wattenwyl, 1888 as subgenera according to the shapes of male genitalia and subgenital plate of female. Later, Qin *et al.* (2018) reinstated Karny's classification system and regarded *Tachycines* as a distinct genus consisting of the subgenera *Tachycines* and *Gymnaeta*. Currently, we are using the classification system proposed by Qin *et al.* until more conclusive evidence is obtained.

Prior to 2000, only seven species of the genus *Tachycines* were reported from China (Adelung 1902; Karny 1926, 1934; Würmli 1973; Storozhenko 1990; Gorochov 1994). It was not until the 21st century that some cave species attracted widespread attention (Gorochov *et al.* 2006; Jiao *et al.* 2008; Rampini *et al.* 2008). In recent years, a large number of species (including cave species and surface species) of the genus *Tachycines* collected from Fujian, Guizhou, Guangxi, Hunan, Hubei, Jiangxi, Sichuan, Yunnan and Zhejiang have been reported (Zhang & Liu 2009; Gorochov 2010a, 2010b; Qin *et al.* 2018, 2019; Feng *et al.* 2019, 2020, 2025; Huang & Luo 2019; Zhou & Yang 2020, 2022; Zhu *et al.* 2020; Li *et al.* 2021; Zhu & Shi 2021; Hong *et al.* 2022; Lin *et al.* 2023; Lapteva & Storozhenko 2024).

Until now, the genus *Tachycines* includes 106 species, of which 97 are distributed in China (Zhu *et al.* 2020; Zhu & Shi 2021; Hong *et al.* 2022; Zhou & Yang 2022; Lin *et al.* 2023; Lapteva & Storozhenko 2024; Feng *et al.* 2025), and the others in Japan, Korea, Vietnam, India and the Philippines (Griffini 1912, 1913; Chopard 1916, 1921; Karny 1934; Yamasaki 1969; Gorochov 1990; Storozhenko & Paik 2007; Storozhenko *et al.* 2015). This paper describes three new species of *Tachycines* from China.

## Material and methods

Specimens were collected by hand at night. The genitalia were dissected with an insect needle and then put in 10% NaOH solution to dissolve the tissues. Morphological images were taken with a Zeiss AxioCam Icc 5 digital camera attached to a Zeiss Stereo Discovery V12 microscope and edited with Adobe Photoshop 2022. Measurements followed Zhu & Shi (2021). The type specimens are deposited in the Insect Museum, Jiangxi Agricultural University, Nanchang, China (JXAUM).

## Results

Class Insecta Linnaeus, 1758
Order Orthoptera Latreille, 1789
Superfamily Rhaphidophoroidea Walker, 1869
Family Rhaphidophoridae Walker, 1869
Subfamily Rhaphidophorinae Walker, 1869
Tribe Rhaphidophorini Walker, 1869
Genus *Tachycines* Adelung, 1902

***Tachycines* (*Gymnaeta*) *storozhenkoi*** sp. nov.
urn:lsid:zoobank.org:act:5899B506-B37A-4814-8D64-AFDC274A05AF
Figs 1, 2A–B, 3

### Diagnosis

The habitus of the new species is similar to that of congenerically known species, but the dorsal sclerite and dorso-median lobe shapes of the male genitalia are distinctly different, the basal area of the dorsal sclerite is narrow, the anterior margin slightly concave, the basal third nearly parallel on both sides, then gradually widens, the apical third approximately twice as wide as the basal area, the lateral margin parallel, the posterior margin broad and deeply concave (Fig. 2A). Both sides of the subapical area of the dorso-median lobe have one small lobe (Fig. 2A).

### Etymology

This species is named after Sergey Yurievich Storozhenko, a renowned Russian entomologist who has made profound contributions to the classification of Orthoptera in the world.

### Material examined

#### Holotype

CHINA • ♂; Chongqing, Wuxi, Shuangyang; 31°29′12″ N, 109°49′14″ E; 1022 m a.s.l.; 12 Aug. 2022; Q.D. Zhu leg.; JXAUM.

#### Paratypes

CHINA • 1 ♂, 1 ♀; same data as for holotype; JXAUM • 3 ♂♂, 3 ♀♀; Chongqing, Wuxi, Shuangyang; 31°28′29″ N, 109°52′40″ E; 1289 m a.s.l.; 13–14 Aug. 2022; Q.D. Zhu leg.; JXAUM.

**Other material**

CHINA • 1 ♂, 1 ♀; Chongqing, Wuxi, Lanying; 31°24′19″ N, 109°53′33″ E; 1816 m a.s.l.; 16 Aug. 2022; Q.D. Zhu leg.; JXAUM • 1 ♂, 1 ♀; Chongqing, Wushan, Zhuxian; 31°16′31″ N, 110°5′40″ E; 1521 m a.s.l.; 5 Aug. 2023; Z.S. Zhang and L.Y. Wang leg.; JXAUM.

## Description

Body. Medium-sized.

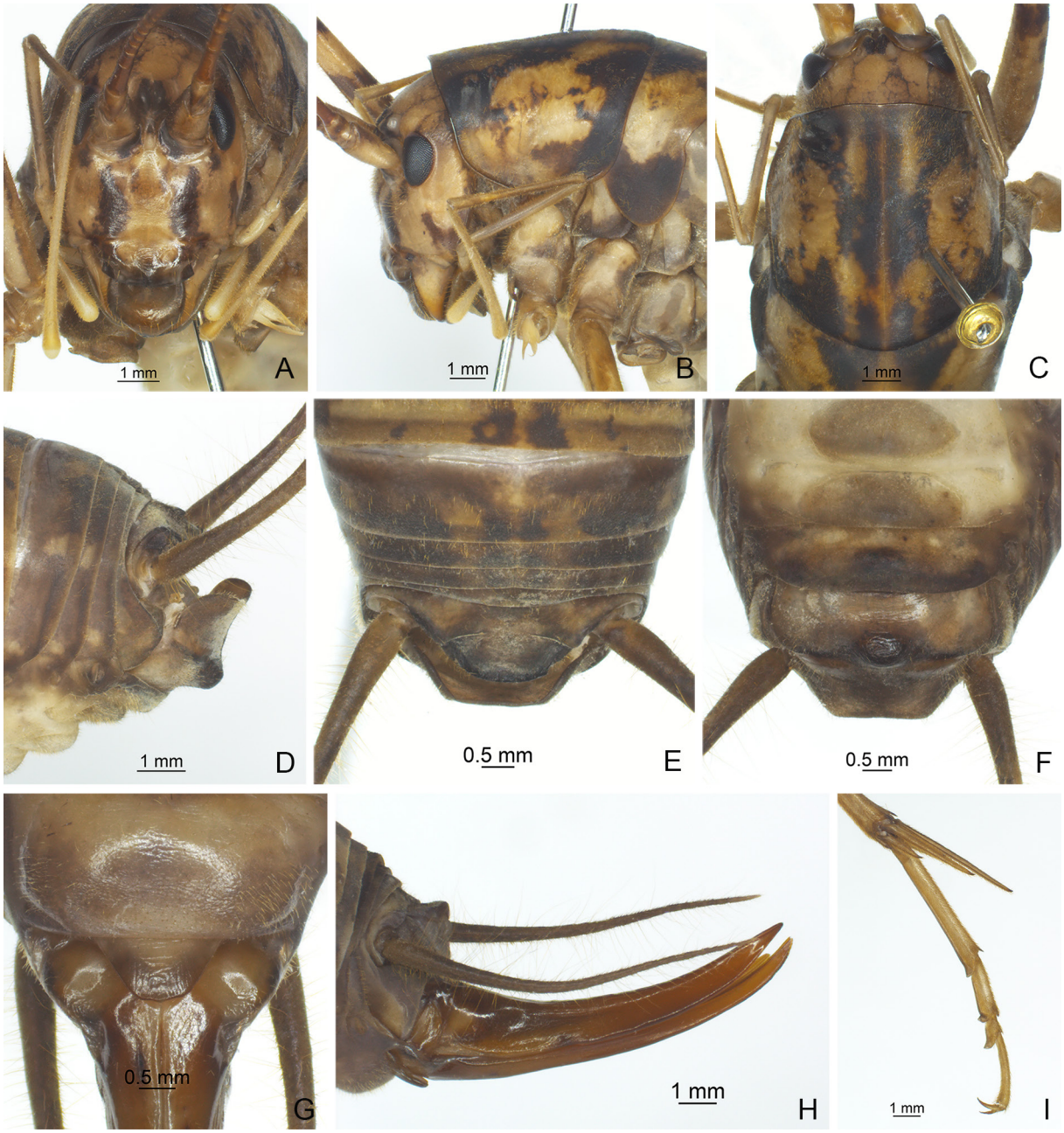


**Fig. 1.** *Tachycines* (*Gymnaeta*) *storozhenkoi* sp. nov. **A–F, I**. Holotype, ♂ (JXAUM). **A–C**. Head and pronotum. **A**. Frontal view. **B**. Lateral view. **C**. Dorsal view. **D–F**. Apex of abdomen. **D**. Lateral view. **E**. Dorsal view. **F**. Ventral view. **I**. Hind tarsus in lateral view. – **G–H**. Paratype, ♀ (JXAUM). **G** Subgenital plate. **H**. Ovipositor in lateral view.

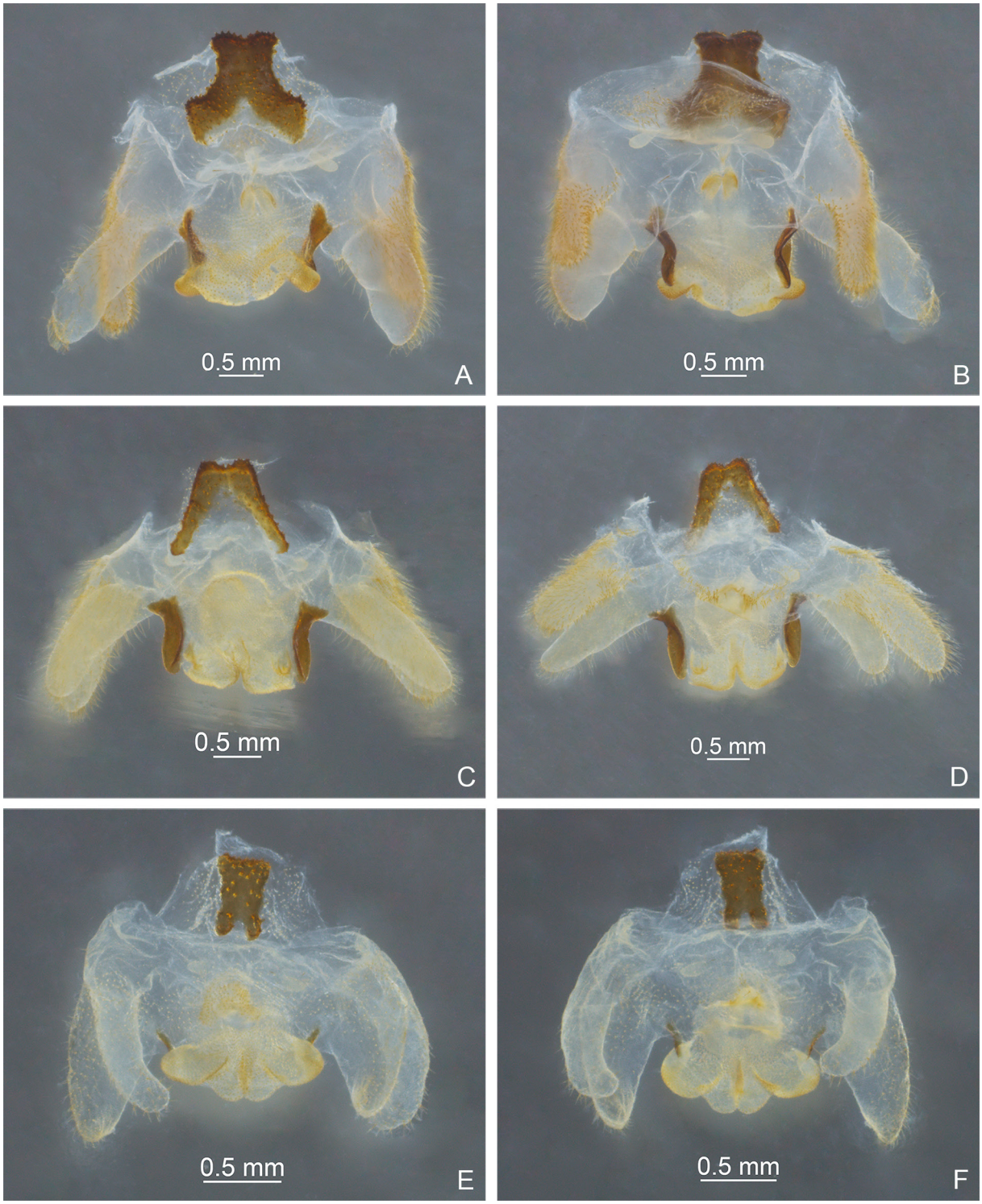


**Fig. 2.** Male genitalia of *Tachycines* spp. **A, C, E**. Dorsal views. **B, D, F**. Ventral views. **A–B**. *Tachycines* (*Gymnaeta*) *storozhenkoi* sp. nov., paratype, ♂ (JXAUM). **C–D**. *Tachycines* (*Gymnaeta*) *wuxiensis* sp. nov., paratype, ♂ (JXAUM). **E–F**. *Tachycines* (*Gymnaeta*) *gracilentus* sp. nov. paratype, ♂ (JXAUM).

Head. Fastigium verticis with two conical tubercles, apices obtuse, separated, pointing forwards. Eyes ovoid, protruding forwards; median ocellus oval, located between antennal sockets, lateral ocelli nearly circular, occupying two-thirds of lateral rostral tubercles. Apical segment of maxillary palp obviously longer than subapical one, apex globular.

Thorax. Pronotum broad, anterior margin of disc straight, posterior margin arcuate; lateral lobe longer than high, ventral margin arc-shaped. Mesonotum and metanotum short, posterior margin of mesonotum arcuate, posterior margin of metanotum straight. Fore coxa with one small spine; femur unarmed on ventral surface, internal genicular lobe with one small spine, external genicular lobe with one long spine; tibia with one inner spine and two outer spines on ventral surface, apex with one outer spine on dorsal surface and a pair of spines on ventral surface with one small spine in between. Middle femur unarmed on ventral surface, internal and external genicular lobes with one long spine, respectively; tibia with one inner spine and one outer spine on ventral surface, apex with a pair of dorsal spines and a pair of ventral spines with one small spine in between. Hind femur unarmed on ventral surface, internal genicular lobe with one small spine, external genicular lobe unarmed; tibia with 63–65 inner spines and 61–63 outer

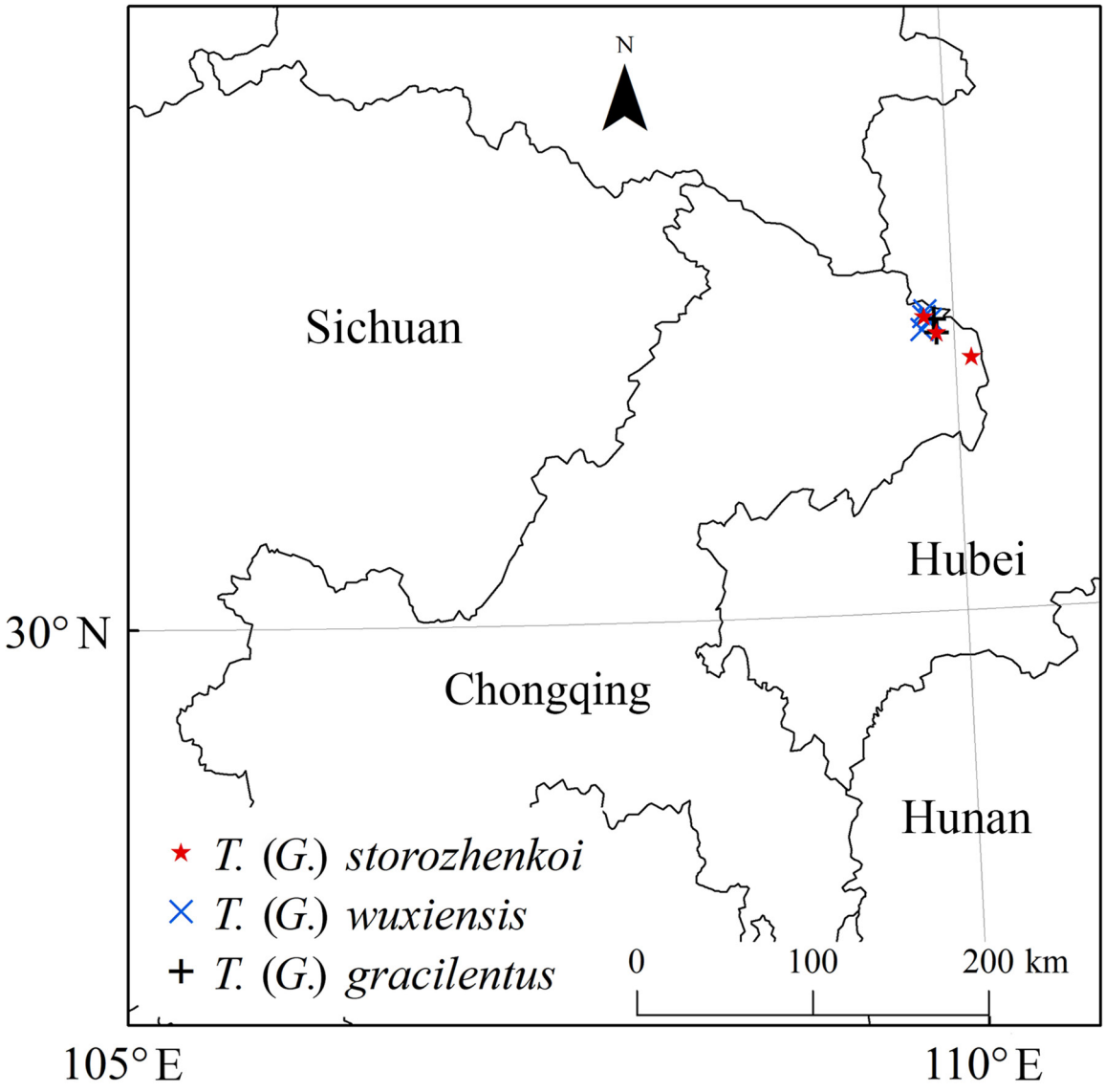


**Fig. 3.** Distribution of the three new species of *Tachycines* in China.

spines on dorsal surface, subapex with a pair of dorsal spines, apex with a pair of dorsal spines and two pairs of ventral spines, intero-dorsal spine obviously shorter than hind basitarsus; hind basitarsus with one dorsal spine.

Male abdomen. Posterior margins of all abdominal tergites straight. Epiproct semicular, paraproct triangular in lateral view. Cercus long, conical, apex acute. Genitalia with dorsal sclerite, basal area narrow, anterior margin slightly concave, basal third nearly parallel on both sides, then gradually widenening, apical third approximately twice as wide as basal area, lateral margin parallel, posterior margin broad and deeply concave; dorso-median lobe with lateral sclerite, length twice the width, basal third slightly narrow, anterior margin blunt, posterior margin broad and rounded, extended to subapical area of dorso-median lobe; both sides of subapical area of dorso-median lobe with one small lobe, apical area with a pair of lobes, dorso-lateral lobe cylindrical, longer than dorso-median lobe, ventro-lateral lobe shorter than dorso-lateral lobe, ventro-median lobe short. Subgenital plate transverse and broad, in the middle with a conical protuberance, posterior margin straight.

Female abdomen. Ovipositor short, slightly curved upwards, dorsal margin smooth, apical areas of ventral margin denticulate. Subgenital plate trapezoid, basal area broad, gradually narrowing to apical area, posterior margin straight.

Coloration. Body light brown, with brown spots. Eyes black, ocelli yellowish-brown. All tibia and femur with ring-like brown stripes, basal half of hind femur with penniform brown stripes.

**Measurements** (mm)

Body length: ♂: 19.68–22.76, ♀: 20.44–25.04; length of pronotum: ♂: 6.16–6.84, ♀: 6.66–7.46; length of fore femur: ♂: 13.96–15.26, ♀: 13.72–14.78; length of hind femur: ♂: 26.28–28.24, ♀: 27.34–29.40; length of hind tibia: ♂: 27.54–31.30, ♀: 29.22–31.64; length of hind basitarsus: ♂: 6.08–6.10, ♀: 5.74–6.30; length of ovipositor: 11.18–11.84.

**Distribution**

China (Chongqing).

***Tachycines* (*Gymnaeta*) *wuxiensis*** sp. nov.
urn:lsid:zoobank.org:act:C9049DC1-C8D2-4684-983A-679C622898DC
Figs 2C–D, 3–4

**Diagnosis**

The new species is similar to *Tachycines* (*Gymnaeta*) *buyii* Zhou & Yang, 2022 and *T.* (*G.*) *portae* Zhou & Yang, 2022 in the male genitalia, but it can be distinguished by the basal area of the dorsal sclerite of the male genitalia being less concave and the apical area distinctly wider (Fig. 2C–D). In *T.* (*G.*) *buyii*, the dorsal sclerite of the male genitalia is nearly H-shaped (Zhou & Yang 2022: 128, fig. 7a), and in *T.* (*G.*) *portae*, the dorsal sclerite of the male genitalia is nearly door-shaped (Zhou & Yang 2022: 129, fig. 8a).

**Etymology**

The name of the new species derives from the type locality.

**Material examined**

**Holotype**

CHINA • ♂; Chongqing, Wuxi, Shuangyang; 31°29′12″ N, 109°49′14″ E; 1022 m a.s.l.; 12 Aug. 2022; Q.D. Zhu leg.; JXAUM.

**Paratypes**

CHINA • 4 ♂♂, 5 ♀♀; same data as for holotype; JXAUM.

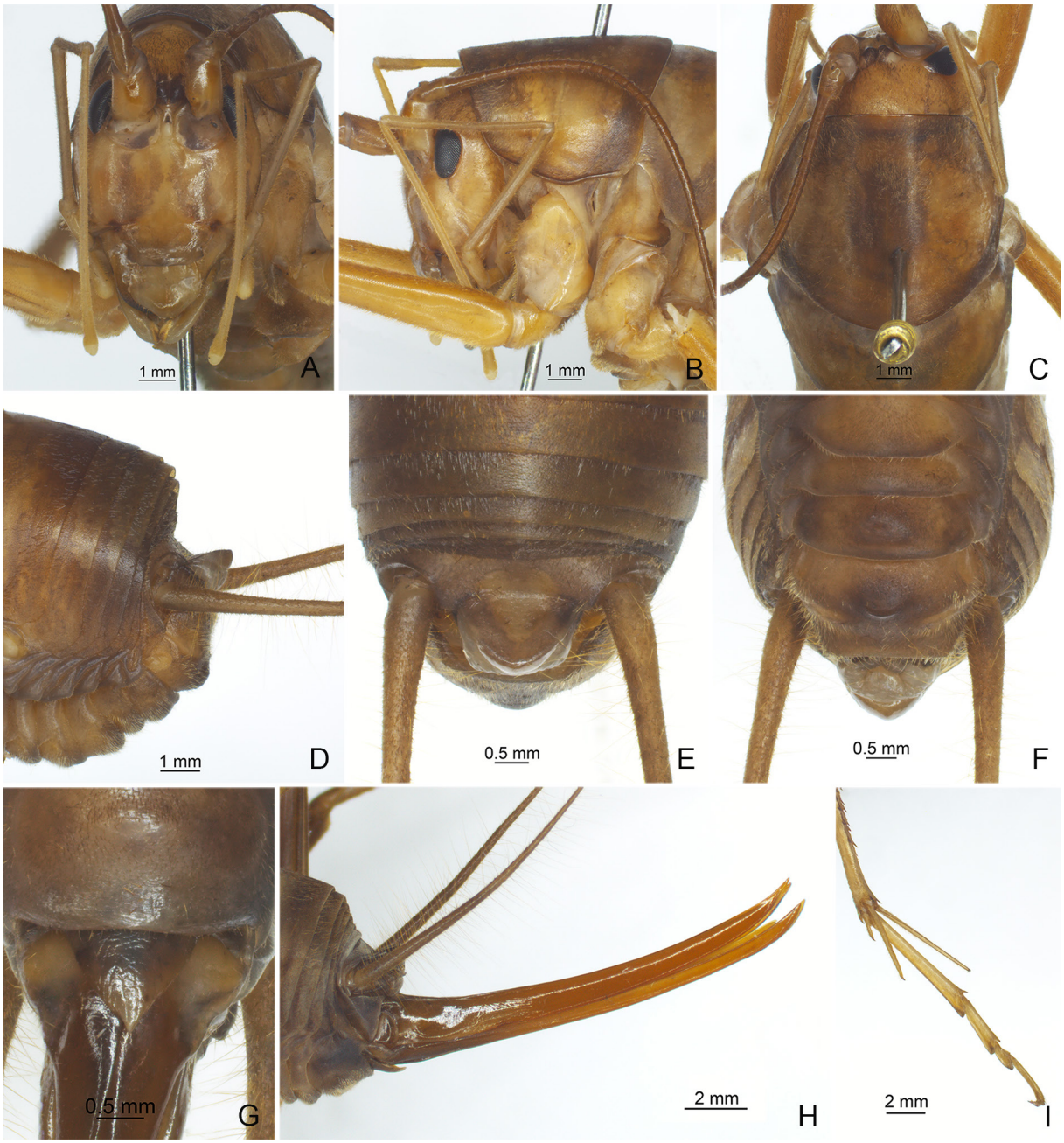


**Fig. 4.** *Tachycines* (*Gymnaeta*) *wuxiensis* sp. nov. **A–F, I**. Holotype, ♂ (JXAUM). **A–C**. Head and pronotum. **A**. Frontal view. **B**. Lateral view. **C**. Dorsal view. **D–F**. Apex of abdomen. **D**. Lateral view. **E**. Dorsal view. **F**. Ventral view. **I**. Hind tarsus in lateral view. – **G–H**. Paratype, ♀ (JXAUM). **G**. Subgenital plate. **H**. Ovipositor in lateral view.

**Other material**

CHINA • 2 ♂♂, 6 ♀♀; Chongqing, Wuxi, Shuangyang, Longtandong; 31°30′58″ N, 109°49′43″ E; 1217 m a.s.l.; 11 Aug. 2022; Q.D. Zhu leg.; JXAUM • 1 ♂, 3 ♀♀; Chongqing, Wuxi, Shuangyang, Suidaodong; 31°28′23″ N, 109°51′29″ E; 1386 m a.s.l.; 13 Aug. 2022; Q.D. Zhu leg.; JXAUM • 2 ♂♂, 3 ♀♀; Chongqing, Wuxi, Lanying; 31°25′22″ N, 109°48′23″ E; 822 m a.s.l.; 18 Aug. 2022; Q.D. Zhu leg.; JXAUM • 1 ♂, 1 ♀; Chongqing, Wuxi, Shuangyang; 31°28′13″ N, 109°47′47″ E; 1796 m a.s.l.; 19 Aug. 2022; Q.D. Zhu leg.; JXAUM.

**Description**

Body. Medium-sized.

Head. Fastigium verticis short, with two conical tubercles, apices obtuse, separated, pointing forwards. Eyes ovoid, protruding forwards; median ocellus oval, located between antennal sockets, lateral ocelli nearly circular, situated on lateral surface of basal rostral tubercles. Apical segment of maxillary palp obviously longer than subapical one, apex globular.

Thorax. Pronotum broad, anterior margin of disc straight, posterior margin arcuate; lateral lobe longer than high, ventral margin arc-shaped. Mesonotum and metanotum short, posterior margin of mesonotum arcuate, posterior margin of metanotum straight. Fore coxa with one small spine; femur unarmed on ventral surface, internal genicular lobe with one small spine, external genicular lobe with one long spine; tibia with one inner spine and two outer spines on ventral surface, apex with one outer spine on dorsal surface and a pair of spines on ventral surface with one small spine in between. Middle femur unarmed on ventral surface, internal and external genicular lobes with one long spine, respectively; tibia with one inner spine and one outer spine on ventral surface, apex with a pair of dorsal spines and a pair of ventral spines with one small spine in between. Hind femur unarmed on ventral surface, internal and external genicular lobes with one small spine, respectively; tibia with 57–62 inner spines and 60–63 outer spines on dorsal surface, subapex with a pair of dorsal spines, apex with a pair of dorsal spines and two pairs of ventral spines, intero-dorsal spine obviously shorter than hind basitarsus; hind basitarsus with one dorsal spine.

Male abdomen. Posterior margins of all abdominal tergites straight. Epiproct tongue-shaped, paraproct triangular in lateral view. Cercus long, conical, apex acute. Genitalia with dorsal sclerite, basal area narrow, anterior margin slightly concave, gradually widenening to apical area, posterior margin deeply concave, dorso-median lobe with lateral sclerite, nearly oval, anterior margin straight, posterior margin blunt, extended to subapical area, apical area with a pair of lobes, dorso-lateral lobe cylindrical, longer than dorso-median lobe, ventro-lateral lobe nearly equal to dorso-lateral lobe, ventro-median lobe short, with a concavity. Subgenital plate transverse and broad, in the middle with conical protuberance, posterior margin straight.

Female abdomen. Ovipositor narrow and long, slightly curved upwards, dorsal margin smooth, apical areas of ventral margin denticulate. Subgenital plate triangular.

Coloration. Body uniformly light brown. Eyes black, ocelli yellowish-brown. Basal half of hind femur with penniform yellowish-brown stripes.

**Measurements** (mm)

Body length: ♂: 16.08–19.66, ♀: 17.66–21.04; length of pronotum: ♂: 5.66–5.82, ♀: 5.56–5.72; length of fore femur: ♂: 14.56–15.56, ♀: 13.28–14.20; length of hind femur: ♂: 26.56–27.40, ♀: 24.66–26.14; length of hind tibia: ♂: 30.78–30.90, ♀: 27.46–29.48; length of hind basitarsus: ♂: 6.04–6.24, ♀: 5.50–5.54; length of ovipositor: 14.20–14.74.

**Distribution**

China (Chongqing).

***Tachycines* (*Gymnaeta*) *gracilentus*** sp. nov.
urn:lsid:zoobank.org:act:5AA44ED5-BE37-4D2A-B3F2-8DBEFB849B28
Figs 2E–F, 3, 5

**Diagnosis**

The new species is similar to *Tachycines* (*Gymnaeta*) *nulliscleritus* Zhu, Chen & Shi, 2020 in the shape of the male genitalia, but it can be distinguished by the length distinctly shorter than the height, the dorso-median lobe with a lateral sclerite and the apical area of the dorso-median lobe with two pairs of lobes (Fig. 2E–F). By contrast, *T.* (*G.*) *nulliscleritus* is slightly shorter than high, the dorso-median lobe without a lateral sclerite and the apical area of the dorso-median lobe has a pair of lobes (Zhu *et al.* 2020: 91, fig. 16m). The subgenital plate of the female is trapezoid, the middle of the posterior margin slightly protruded (Fig. 5G), whereas in *T.* (*G.*) *nulliscleritus*, the subgenital plate is triangular.

**Etymology**

The name of the new species derives from the gracile lateral sclerite of the dorso-median lobe of the male genitalia.

**Material examined**

**Holotype**

CHINA • ♂; Chongqing, Wuxi, Lanying; 31°24′51″ N, 109°55′47″ E; 2067 m a.s.l.; 17 Aug. 2022; Q.D. Zhu leg.; JXAUM.

**Paratypes**

CHINA • 1 ♂, 5 ♀♀; same data as for holotype; JXAUM.

**Other material**

CHINA • 1 ♂, 4 ♀♀; Chongqing, Wuxi, Lanying; 31°24′19″ N, 109°53′33″ E; 1816 m a.s.l.; 16 Aug. 2022; Q.D. Zhu leg.; JXAUM • 1 ♂; Chongqing, Wuxi, Shuangyang; 31°28′29″ N, 109°52′40″ E; 1289 m a.s.l.; 14 Aug. 2022; Q.D. Zhu leg.; JXAUM.

**Description**

Body. Smaller than in other congeneric species.

Head. Fastigium verticis with two tubercles, short, apices obtusely rounded, pointing forwards. Eyes ovoid, protruding forwards; median ocellus oval, located between antennal sockets, lateral ocelli circular, situated on lateral surface of basal rostral tubercles. Apical segment of maxillary palp obviously longer than subapical one, apex globular.

Thorax. Pronotum broad, anterior margin of disc straight, posterior margin arcuate; lateral lobe longer than high, ventral margin arc-shaped. Mesonotum and metanotum short, posterior margin of mesonotum arcuate, posterior margin of metanotum straight. Fore coxa with one small spine; femur unarmed on ventral surface, internal genicular lobe unarmed, external genicular lobe with one long spine; tibia with one outer spine on ventral surface, apex with one outer spine on dorsal surface and a pair of spines on ventral surface with one small spine in between. Middle femur unarmed on ventral surface, internal and external genicular lobes with one long spine, respectively; tibia with zero to one outer spine on ventral surface, apex with a pair of dorsal spines and a pair of ventral spines with one small spine in between.

Hind femur unarmed on ventral surface, internal genicular lobe with one small spine, external genicular lobe unarmed; tibia with 49–51 inner spines and 49–53 outer spines on dorsal surface, subapex with a pair of dorsal spines, apex with a pair of dorsal spines and two pairs of ventral spines, intero-dorsal spine clearly shorter than hind basitarsus; hind basitarsus with one dorsal spine.

Male abdomen. Posterior margins of all abdominal tergites straight. Epiproct tongue-shaped, paraproct triangular in lateral view. Cercus long, conical, apex acute. Genitalia with dorsal sclerite, quadrilateral, length distinctly shorter than height, basal area slightly broad, anterior margin slightly concave, then slightly narrower, nearly parallel on both sides, posterior margin with concavity, dorso-median lobe with lateral sclerite, gracile, kidney-shaped, located on both sides of base of dorso-median lobe, apical area

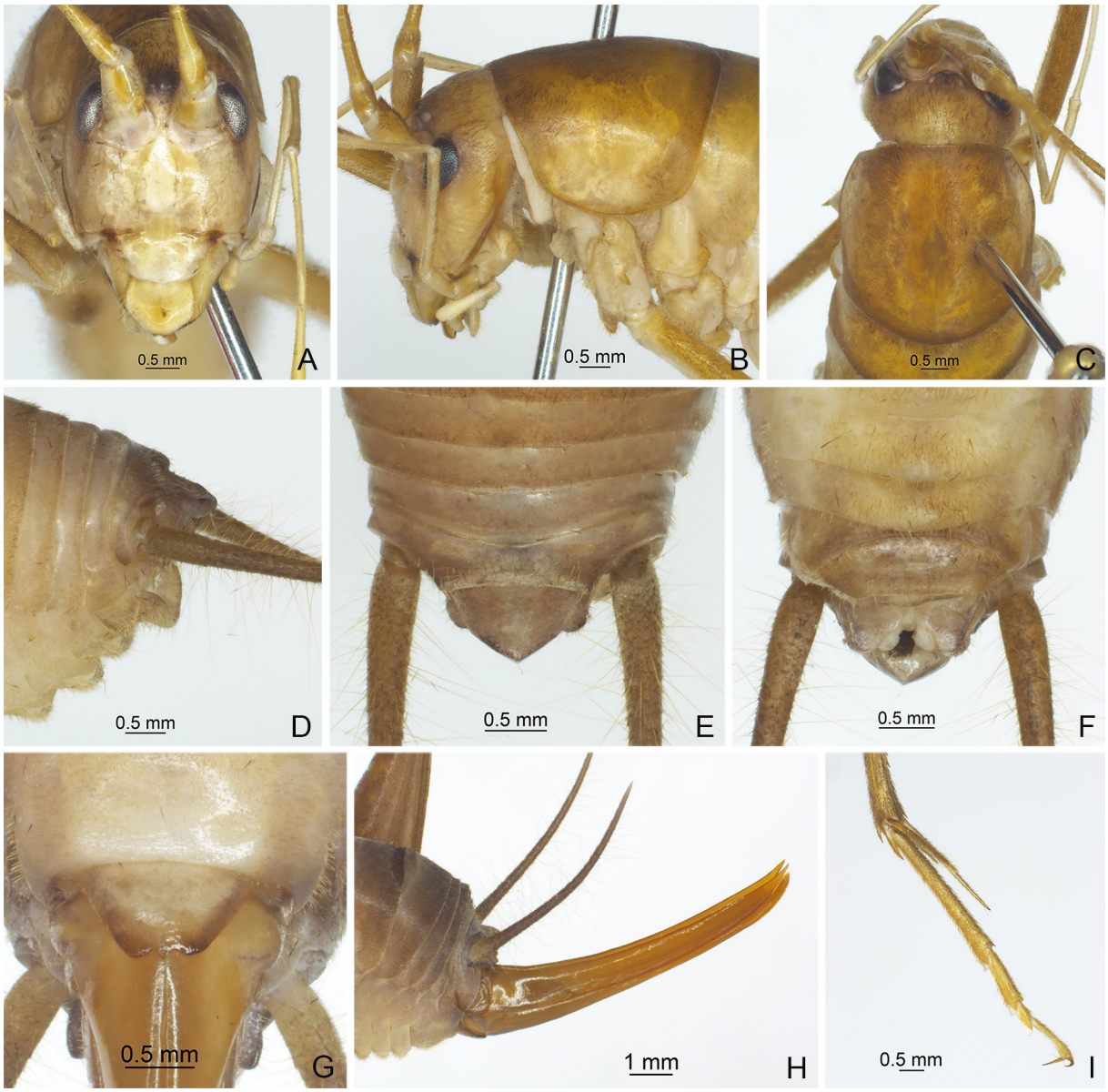


**Fig. 5.** *Tachycines* (*Gymnaeta*) *gracilentus* sp. nov. **A–F, I**. Holotype, ♂ (JXAUM). **A–C**. Head and pronotum. **A**. Frontal view. **B**. Lateral view. **C**. Dorsal view. **D–F**. Apex of abdomen. **D**. Lateral view. **E**. Dorsal view. **F**. Ventral view. **I**. Hind tarsus in lateral view. – **G–H**. Paratype, ♀ (JXAUM). **G**. Subgenital plate. **H**. Ovipositor in lateral view.

with two pairs of lobes, dorso-lateral lobe slightly longer than dorso-median lobe, ventro-lateral lobe cylindrical, shorter than dorso-lateral lobe, ventro-median lobe short, with concavity. Subgenital plate transverse and broad, posterior margin straight.

Female abdomen. Ovipositor slightly curved upwards, dorsal margin smooth, apical areas of ventral margin denticulate. Subgenital plate trapezoid, the middle of posterior margin slightly protruded.

Coloration. Body uniformly light brown.

**Measurements** (mm)

Body length: ♂: 12.10–12.32, ♀: 11.60–12.74; length of pronotum: ♂: 3.42–3.48, ♀: 3.46–4.00; length of fore femur: ♂: 7.52–8.24, ♀: 7.14–8.24; length of hind femur: ♂: 12.74–14.70, ♀: 15.00–15.60; length of hind tibia: ♂: 14.22–15.70, ♀: 16.48–16.68; length of hind basitarsus: ♂: 2.22–3.06, ♀: 3.24–3.58; length of ovipositor: 7.26–8.54.

**Distribution**

China (Chongqing).

## Discussion

*Tachycines* is one of the most abundant genera of Rhaphidophoridae, with 106 species known to the world and 97 species recorded in China. The vast majority of species are distributed in China, with a few in Japan, Korea, Vietnam, Philippines and India (Cigliano *et al.* 2025). In addition to its rich species diversity, the uniqueness of the genus *Tachycines* also lies in the fact that nearly half of the species are cave dwellers (Gorochov *et al.* 2006; Rampini *et al.* 2008; Feng *et al.* 2020; Zhu *et al.* 2020; Li *et al.* 2021; Zhu & Shi 2021; Zhou & Yang 2022; Lin *et al.* 2023; Lapteva & Storozhenko 2024; Feng *et al.* 2025). The South China Karst, as one of the world's biodiversity hotspots, boasts an abundant diversity of species (Monro *et al.* 2018). Cave crickets are one of the most common groups in cave ecosystems, but they are far less understood than other groups, such as beetles (Tian *et al.* 2023; Yin 2025). Here, one cave species along with two surface species of the genus *Tachycines* are described. In the future, the phylogenetic relationship between surface species and cave species, as well as the adaptive evolution mechanism of cave species will be further explored.

## Acknowledgments

This research was supported by the National Natural Science Foundation of China (No. 32400365) and the Funding on the survey of invertebrates from Yintiaoling Nature Reserve (Nos CQS21C00739, CQS24C00333).

## References

Adelung N. 1902. Beitrag zur Kenntnis der Paläarctischen Stenopelmatiden (Orthoptera, Locustodea). *Annuaire du Musée zoologique de l'Académie impériale des Sciences de St.-Pétersbourg* 7: 55–75.

Chopard L. 1916. Diagnoses d'Orthoptères cavernicoles nouveaux (Stenopelmatidae). *Bulletin de la Société entomologique de France* 20: 276–279. https://doi.org/10.3406/bsef.1915.25824

Chopard L. 1921. On some cavernicolous Dermaptera and Orthoptera from Assam. *Records of the Indian Museum* 22: 511– 527.

Cigliano M.M., Braun H., Eades D.C. & Otte D. 2025. Orthoptera Species File Online. Version 5.0/5.0. Available from http://Orthoptera.SpeciesFile.org [accessed 11 Nov. 2025].

Feng X.L., Huang S.H. & Luo C.Q. 2019. A new species of the subgenus *Tachycines* (*Gymnaeta*) (Orthoptera: Rhaphidophoridae) from karst caves of southern Guizhou, China. *Zootaxa* 4674 (4): 491–495. https://doi.org/10.11646/zootaxa.4674.4.8

Feng X.L., Huang S.H. & Luo C.Q. 2020. Three new cave species of the subgenus *Tachycines* (*Gymnaeta*) (Orthoptera: Rhaphidophoridae: Aemodogryllinae) from northern Guizhou, China. *Zootaxa* 4820 (3): 563–571. https://doi.org/10.11646/zootaxa.4820.3.9

Feng X.L., Xiao J. & Zhao Z.X. 2025. Two new species of the subgenus *Tachycines* (*Gymnaeta*) (Orthoptera: Rhaphidophoridae: Aemodogryllinae) from a karst cave in China. *Zootaxa* 5594 (2): 395–400. https://doi.org/10.11646/zootaxa.5594.2.11

Gorochov A.V. 1990. New and little-known taxa of orthopterans of the suborder Ensifera (Orthoptera) from tropics and subtropics. *Entomologicheskoe Obozrenie* 69 (4): 820–834. [In Russian.]

Gorochov A.V. 1994. News of systematics and faunistics of Vietnam insects Part 4. *Proceedings of the Zoological Institute of the Russian Academy of Sciences* 257: 37–50.

Gorochov A.V. 2010a. New species of the families Anostostomatidae and Rhaphidophoridae (Orthoptera: Stenopelmatoidea) from China. *Far Eastern Entomologist* 206: 1–16.

Gorochov A.V. 2010b. New data on the Chinese representatives of the genus *Diestrammena* (Orthoptera: Rhaphidophoridae: Aemodogryllinae). *Far Eastern Entomologist* 212: 12–15.

Gorochov A.V. & Storozhenko S.Yu. 1992. On the fanua of the subfamily Aemodogryllinae (Orthoptera, Rhaphidophoridae) in Vietnam. *Proceedings of the Zoological Institute of the Russian Academy of Science* 245: 17–34.

Gorochov A.V., Rampini M. & Di Russo C. 2006. New species of the genus *Diestrammena* (Orthoptera: Rhaphidophoridae: Aemodogryllinae) from caves of China. *Russian Entomological Journal* 15: 355–360.

Griffini A. 1912. Description de nouvelles espèces de Gryllacrididae et Stenopelmatidae du Muséum d'Histoire naturelle de Paris. *Bulletin du Muséum national d'Histoire naturelle* 18: 1–6.

Griffini A. 1913. Sopra alcuni Grillacridi e Stenopelmatidi della collezione Pantel. *Atti della Società Italiana di Scienze Naturali* 52: 61–104.

Hong B., Huang S.H. & Luo C.Q. 2022. Description of a new species of the subgenus *Tachycines* (*Tachycines*) (Rhaphidophoridae: Aemodogryllinae: Aemodogryllini) from Guizhou, China. *Zootaxa* 5209 (4): 497–500. https://doi.org/10.11646/zootaxa.5209.4.9

Huang S.H. & Luo C.Q. 2019. A new species of the subgenus *Tachycines* (*Tachycines*) (Othoptera: Rhaphidophoridae) from Guizhou, China. *Zootaxa* 4658 (2): 396–400. https://doi.org/10.11646/zootaxa.4658.2.14

Jiao Z.J., Niu C.Y., Liu X.W., Lei C.L. & Bi W.X. 2008. Descriptions of Chinese species of the subgenus *Diestrammena* (*Gymnaeta*) Adelung (Orthoptera: Rhaphidophoridae). *Zootaxa* 1917 (1): 55–60. https://doi.org/10.11646/zootaxa.1917.1.4

Karny H.H. 1926. Beiträge zur malayischen Orthopterenfauna XII. Anostostominen und Rhaphidophorinen aus Südsumatra. *Treubia* 9: 11–12.

Karny H.H. 1934. Zur Kenntnis der ostasiatischen Rhaphidophorinen (Orth. Salt. Gryllacrididae). *Konowia, Zeitschrift für Systematische Insektenkunde* 13 (3): 216–218.

Kirby W.F. 1906. *A Synonymic Catalogue of Orthoptera*. British Museum (Natural History), London, 2: 1–562. https://doi.org/10.5962/bhl.title.6745

Lapteva S.V. & Storozhenko S.Yu. 2024. To the knowledge of the genus *Tachycines* Adelung, 1902 (Orthoptera: Rhaphidophoridae: Aemodogryllinae). *Caucasian Entomological Bulletin* 20 (2): 229–232. https://doi.org/10.5281/zenodo.14197613

Li B., Feng X.L. & Luo C.Q. 2021. Four new species of the subgenus *Tachycines* (*Gymnaeta*) (Rhaphidophoridae: Aemodogryllinae: Aemodogryllini) from caves in northern Guizhou, China. *Zootaxa* 4991 (1): 150–160. https://doi.org/10.11646/zootaxa.4991.1.7

Lin C., Huang S.H. & Luo C.Q. 2023. Description of five new species of the subgenus *Tachycines* (*Gymnaeta*) (Rhaphidophoridae: Aemodogryllinae: Aemodogryllini) from caves in Guizhou, China. *Zootaxa* 5389 (5): 582–596. https://doi.org/10.11646/zootaxa.5389.5.4

Monro A.K., Bystriakova N., Fu L., Wen F. & Wei Y. 2018. Discovery of a diverse cave flora in China. *PLoS ONE* 13 (2): e0190801. https://doi.org/10.1371/journal.pone.0190801

Qin Y.Y., Wang H.Q., Liu X.W. & Li K. 2018. Divided the genus *Tachycines* Adelung (Orthoptera: Rhaphidophoridae: Aemodogryllinae: Aemodogryllini) from China. *Zootaxa* 4374 (4): 51–475. https://doi.org/10.11646/zootaxa.4374.4.1

Qin Y.Y., Liu X.W. & Li K. 2019. Review of the subgenus *Tachycines* (*Gymnaeta*) Adelung, 1902 (Orthoptera, Rhaphidophoridae, Aemodogryllinae, Aemodogryllini). *Zootaxa* 4560 (2): 273–310. https://doi.org/10.11646/zootaxa.4560.2.3

Rampini M., Di Russo C. & Cobolli M. 2008. The Aemodogryllinae cave crickets from Guizhou, southern China (Orthoptera: Rhaphidophoridae). *Monografie naturalistiche* 3: 129–141.

Storozhenko S.Yu. 1990. Review of the subfamily Aemodogryllinae (Orthoptera, Rhaphidophoridae). *Entomologicheskoe Obozrenie* 69 (4): 835–849. [In Russian.]

Storozhenko S.Yu. & Paik J.C. 2007. *Orthoptera of Korea*. Dalnauka, Vladivostok.

Storozhenko S.Yu., Kim T.W. & Jeon M.J. 2015. *Monograph of Korean Orthoptera*. National Institute of Biological Resources, Incheon.

Tian M.Y., Huang S.B. & Jia X.Y. 2023. A contribution to cavernicolous beetle diversity of South China Karst: eight new genera and fourteen new species (Coleoptera: Carabidae: Trechini). *Zootaxa* 5243 (1): 1–66. https://doi.org/10.11646/zootaxa.5243.1.1

Würmli M. 1973. *Tachycines* (*Tachycines*) *meditationis* n. sp., eine neue Rhaphidophoride (Saltatoria) aus China. *Mitteilungen der Entomologischen Gesellschaft Basel* 23 (1): 1–9.

Yamasaki T. 1969. Results of the speleological survey in South Korea 1966. XVII. Cave-dwelling camel crickets from South Korea. *Bulletin of the National Science Museum* 12: 615–621.

Yin Z. 2025. Illuminating the darkness: an exceptionally diverse fauna of subterranean Pselaphinae (Coleoptera: Staphylinidae) in Asian karsts. *Insect Systematics and Diversity* 9 (5): ixaf046. https://doi.org/10.1093/isd/ixaf046

Zhang F. & Liu X.W. 2009. A review of the subgenus *Diestrammena* (*Gymnaeta*) from China (Orthoptera: Rhaphidophoridae: Aemodogryllinae). *Zootaxa* 2272 (1): 21–36. https://doi.org/10.11646/zootaxa.2272.1.2

Zhou X.L. & Yang W.C. 2020. A new species of *Tachycines* Adelung, 1902 (Orthoptera, Rhaphidophoridae, Aemodogryllinae, Aemodogryllini) from karst caves in Guizhou, China. *ZooKeys* 937: 21–29. https://doi.org/10.3897/zookeys.937.49173

Zhou X.L. & Yang W.C. 2022. Ten new species of genus *Tachycines* (Orthoptera, Rhaphidophoridae, Aemodogryllinae) from karst caves in Guizhou, China. *ZooKeys* 1109: 115–140. https://doi.org/10.3897/zookeys.1109.73937

Zhu Q.D. & Shi F.M. 2021. Description of four new species of the subgenus *Tachycines* (*Gymnaeta*) Adelung, 1902 (Orthoptera: Rhaphidophoridae) from caves in China and additional notes on some previously known species. *European Journal of Taxonomy* 764: 1–17. https://doi.org/10.5852/ejt.2021.764.1465

Zhu Q.D., Chen H.M. & Shi F.M. 2020. Remarks on the genus *Tachycines* Adelung, 1902 (Orthoptera: Rhaphidophoridae: Aemodogryllinae) with description of eight new species from caves in southern China. *Zootaxa* 4809 (1): 71–94. https://doi.org/10.11646/zootaxa.4809.1.4

Printed versions of all papers are deposited in the libraries of two of the institutes that are members of the *EJT* consortium: Muséum national d'Histoire naturelle, Paris, France and Royal Museum for Central Africa, Tervuren, Belgium. The other members of the consortium are: Royal Belgian Institute of Natural Sciences, Brussels, Belgium; Meise Botanic Garden, Meise, Belgium; Natural History Museum of Denmark, Copenhagen, Denmark; Naturalis Biodiversity Center, Leiden, the Netherlands; Museo Nacional de Ciencias Naturales-CSIC, Madrid, Spain; Leibniz Institute for the Analysis of Biodiversity Change, Bonn – Hamburg, Germany; National Museum of the Czech Republic, Prague, Czech Republic; The Steinhardt Museum of Natural History, Tel Aviv, Israël.