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A checklist of the Caddisflies (Insecta: Trichoptera) from the Yintiaoling Nature Reserve of China, with description of one new species

LANG PENG[1,2,5+], XIN-YU GE[3,6+], QIAN-LE LU[4,7] & CHANG-HAI SUN[1,8,*]
[1]*Department of Entomology, Nanjing Agricultural University, Nanjing 210095, China*
[2]*School of Ecology, Hainan University, Haikou 570228, China*
[3]*College of Life Sciences, Tianjin Normal University, Tianjin 300387, China*
[4]*College of Life Sciences and Oceanography, Shenzhen University, Shenzhen 518000, China*
[5] *2020202045@stu.njau.edu.cn; https://orccid.org/0000-0002-5644-8248*
[6] *skygxy@tjnu.edu.cn; https://orccid.org/0000-0002-8409-2584*
[7] *frogstaillu@gmail.com; https://orccid.org/0000-0001-6291-9117*
[8] *chsun@njau.edu.cn; https://orccid.org/0000-0003-4061-1028*
[+]*These authors contributed equally to this work*
**Corresponding author*

Abstract

A checklist of trichopteran species in Yintiaoling Nature Reserve of China is compiled for the first time. Based on the collected material, 24 species from 15 families are recorded, among which, a new species, *Molannodes wuxiensis* Peng & Sun, **sp. nov.**, is described. In addition, two other species, *Kisaura borealis* (Kuhara, 1999) and *Apsilochorema nilgiri* Mey, 1999 are new to the Chinese fauna and 21 species are newly recorded species for Chongqing. The new species is described, illustrated, and diagnosed, and habitus photographs of most of the recorded species are provided.

Key words: fauna, *Molannodes*, morphology, new geographical records, Chongqing

Introduction

Trichoptera are the most diverse order of primarily aquatic insects, with more than 17,000 known extant species worldwide, belonging to 52 families (Morse 2024). Trichoptera larvae live in all types of clean freshwater bodies, including clear springs, streams, muddy ponds, marshes, and larger lakes and rivers. They are vital participants in aquatic food webs due to the diverse diet of their larvae, while the larvae are also food for fish and other predators (Morse *et al.* 2019). The relative abundance of Trichoptera is used in the biological assessment and monitoring of water quality (Holzenthal *et al.* 2007). They are widely distributed in the world's major biogeographic regions except the Antarctic Region, and the Oriental Biogeographic Region is the region with the greatest number and density of caddis species (Morse *et al.* 2019). There are more than 1100 known trichopteran species in China belonging to 110 genera and 28 families (Yang *et al.* 2016). Many trichopterologists believe that there are still a large number of trichopteran new species unknown to humans (more than 30,000 more new species according to Schmid 1984), many of which can be found in biodiversity hotspots, such as the Shennongjia World Natural Heritage (Xie *et al.* 2017).

Yintiaoling Nature Reserve is located on the northeast edge of Chongqing, Southwest China, and is a branch of Shennongjia primeval forest. It covers an area of 22,423.1 hectares and is characterized by a high forest coverage, an annual precipitation of about 1,400 mm, a subtropical-humid climate, and rich freshwater habitat that provides superior conditions for Trichoptera to thrive (Peng *et al.* 2019; Zhang *et al.* 2019). However, exploration of the diversity of Trichoptera in the Reserve have been very limited, with only six species previously reported from Chongqing, belonging to the families Hydropsychidae and Psychomyiidae (Yang *et al.* 2016; Qiu & Morse 2021).

This study provides a checklist for caddisflies of the Yintiaoling Nature Reserve, including 24 species in 15 families and 20 genera. Among them, 13 families and 18 genera are recorded for the first time in Chongqing. Of a total 24 species, one new species *Molannodes wuxiensis* Peng & Sun, **sp. nov.**, of family Molannidae is described,

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two newly recorded species for China, *Kisaura borealis* (Kuhara, 1999) and *Apsilochorema nilgiri* Mey, 1999 are identified and the other 21 species are documented as new record species for Chongqing. Furthermore, habitus photographs of living specimens of most of the species are provided. The checklist and the habitus photographs will serve as guides for future studies of caddisflies in China.

Materials and Methods

The specimens were collected by Zhi-Sheng Zhang (ZZS) and members of his research team: Hui-Yi Chen (CHY), Xu-Long Chen (CXL), Bin Luo (LB), Qian-Le Lu (LQL), Hao-Yu Ma (MHY), Xiao-Wei Ma (MXW), Tian-Yu Ren (RTY), Bing Tan (TB), Bing-Jun Wang (WBJ), Lu-Yu Wang (WLY) and Xuan-Wei Zhou (ZXW). Live adults were observed and photographed with a Canon EOS 90D camera with a Laowa FF 100mm F2.8 CA-Dreamer Macro 2x; all photos were taken by Qian-Le Lu.

All specimens were stored in 95% ethyl alcohol immediately after collection. Male abdomens used for illustrations were cleared with 10% NaOH solution and heated to 90°C for 10 minutes to remove all the non-chitinous tissues. Then the cleaned genitalia were rinsed in distilled water and mounted on a depression slide with lactic acid for examination. Genitalia structures of males were traced with pencil using a Nikon Eclipse 80i microscope equipped with a camera lucida. Pencil drawings were scanned with an Epson Perfection V30 SE scanner, then placed as templates in Adobe Photoshop v.8.1 software and inked digitally with a Wacom CTL-671 tablet to produce final illustrations. Then each abdomen was stored in a microvial together with the remainder of the specimen in 95% ethanol.

The terminology for the male genitalia of *Molannodes* mainly follows that of Wiggins (1968). In this article, the term "inferior appendage" is used in preference to "clasper." In the description of *Molannodes*, due to the presence of morphological differences, the term "dorsal mediate branches of segment X" is used for "dorsal mediate plate of segment X", and the term "mediate processes of inferior appendages" is added.

All specimens are deposited in the Insect Collection, Nanjing Agricultural University, Nanjing, Jiangsu Province, P.R China (NJAU).

Taxonomy

Order Trichoptera Kirby, 1813

Family Molannidae Wallengren, 1891

Genus *Molannodes* McLachlan, 1866

Molannodes wuxiensis Peng & Sun, sp. nov.

(Figs 1–2)

Type material. Holotype male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Shuangyang Township, Yanping management station, 31°28′12.57″N, 109°47′46.81″E, alt. 1796 m, 18 August 2022, leg. LQL.

Etymology: *wuxiensis*, name derived from the type locality, with masculine gender.

Diagnosis: The species is similar to *Molannodes epaphos* Malicky, 2000 from Zhejiang, China. However, the new species can be easily distinguished by the following character set of the new species: (1) the dorsal mediate branch of segment X is completely divided into two processes (notched apically in *M. epaphos*); (2) the distal ends of the pair of small processes of sternite VIII are blunt (acute in *M. epaphos*); (3) a mediate process of each inferior appendage is located between its dorsal and ventral branches (not mentioned or illustrated for *M. epaphos* by Malicky 2000). In his description of *M. epaphos*, Malicky (2000) indicated that his species is well characterized by the combination of features mentioned in his description and is not very similar to any other species of the genus.

Description: Length of each forewing 12 mm (n = 1). Body dark brown; each segment of antennae with yellow rings; wings dark brown without obvious markings; abdomen brown dorsally, yellow ventrally; legs yellow (Fig. 2). Venation consistent with typical wing veins of this genus (Fig. 1a).

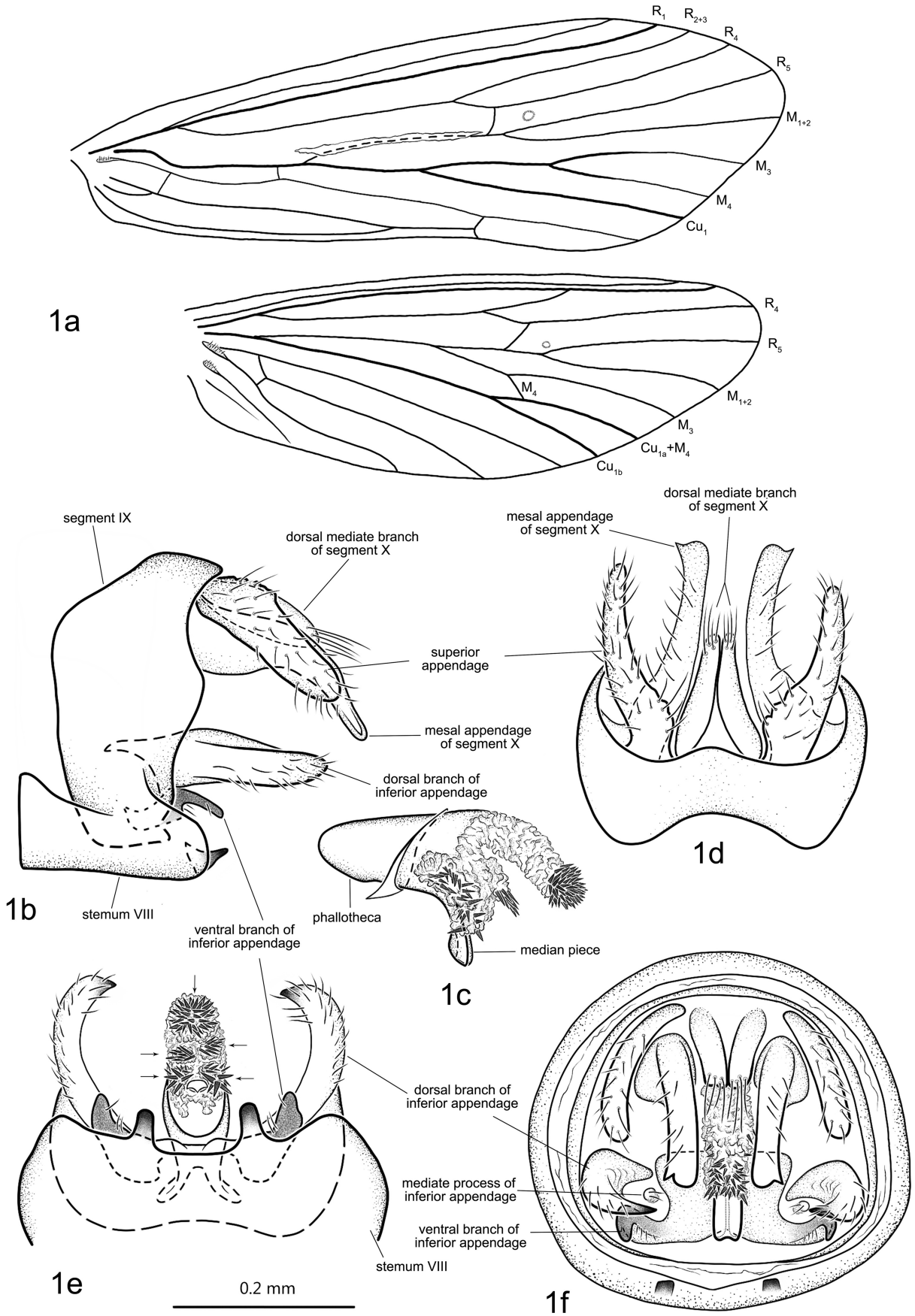

FIGURE 1. Male wings and genitalia of *Molannodes wuxiensis* **sp. nov.**: **1a**, wing venation; 1b–1f, male genitalia: **1b**, left lateral; **1c**, phallus, left dorsolateral; **1d**, dorsal; **1e**, ventral; **1f**, caudal. Scale bar refers to figures 1b–1f. Arrows see text.

FIGURE 2. Live adult of *Molannodes wuxiensis* **sp. nov.**, male. Length of each forewing 12 mm.

Male genitalia: Sternite VIII rectangular in ventral view (Fig. 1e), with one pair of small sclerotized processes on posterior margin; subtriangular in lateral view (Fig. 1b). Segment IX with anterior margin slightly inflated anterad above middle in lateral view (Fig. 1b); with posterolateral margins convex at mid-height and anterior margins concave in both dorsal and ventral views (Figs 1d–1e). Segment X with pair of dorsal mediate branches elliptical in lateral view (Fig. 1b); digitate and appressed in dorsal view (Fig. 1d); distal ends with long setae in dorsal and caudal views (Figs 1d, 1f). Mesal appendages of segment X elongate-triangular, tapering apically and slightly narrowed at middle in lateral view (Fig. 1b); digitate in dorsal view (Fig. 1d); each with shallow notch apically in dorsal and caudal views (Figs 1d, 1f). Superior appendages digitate, slightly expanded basodorsally in lateral and dorsal views (Figs 1b, 1d). Dorsal branch of each inferior appendage digitate in lateral view (Fig. 1b); curved mesally in ventral view (Fig. 1e); with sharp distal strongly sclerotized in ventral and caudal views (Figs 1e–1f). Ventral branch of each inferior appendage horn-like in lateral and ventral views (Figs 1b, 1e); in caudal view, ventral branches fused with each other basally, forming rectangular and slightly sclerotized plate. Mediate process of each inferior appendage shaped as small, setose lump between dorsal and ventral branches (Fig. 1f). Phallus with phallotheca short, tubular, and sclerotized in lateral view (Fig. 1c); endotheca membranous, forming one large dorsal branch and two pairs of small ventral branches, each of these five branches with cluster of short spines on apex in lateral and ventral views (Figs 1c, 1e, marked with arrows). Median piece of phallus arising below endotheca in lateral view (Fig. 1c) sclerotized; grooved dorsally, slight notched apicomesally in caudal view (Fig. 1f).

Distribution: China (Chongqing).

Family Hydropsychidae Curtis, 1835

Genus *Hydropsyche* Pictet, 1834

Hydropsyche dolon Malicky & Mey, 2000

(Fig. 3)

Hydropsyche dolon Malicky & Mey, 2000, in Malicky & Chantaramongkol 2000: 800 (type locality: Shaanxi, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Hongqi management station, 31°30′33.23″N, 109°49′10.50″E, alt. 1124 m, 11 April 2022, leg. ZZS, WLY, LB, TB, RTY, LQL, ZXW,

MHY & MXW; 1 male, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.94″N, 109°52′39.44″E, alt. 1259 m, 13 April 2022, leg. ZZS, WLY, LB, TB, RTY, LQL, ZXW, MHY & MXW; 1 male, Yintiaoling Nature Reserve, Hongqi management station, 31°30′32.29″N, 109°49′10.65″E, alt. 1117m, 22 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing, Shaanxi).

Remarks. This species was originally reported from Shaanxi Province (Malicky & Chantaramongkol 2000). We record this species from Chongqing for the first time.

FIGURE 3. Live adult of *Hydropsyche dolon* Malicky & Mey, 2000, male. Length of each forewing 10 mm.

Family Philopotamidae Stephens, 1829

Genus *Dolophilodes* Ulmer, 1909

Dolophilodes didactylus (Sun & Yang, 2001)

(Fig. 4)

Doloclanes didactylus Sun & Yang, 2001, in Sun *et al.* 2001: 194 (type locality: Yunnan, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Township, Xi'an Village, 31°24′1.34″N, 109°51′51.90″E, alt. 1637 m, 24 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing, Yunnan, Inner Mongolia), Bhutan.

Remarks. This species was reported from Yunnan Province and Inner Mongolia Autonomous Region of China, and Bhutan (Sun *et al.* 2001; Malicky 2007; Yang *et al.* 2016). We record this species from Chongqing for the first time.

Genus *Kisaura* Ross, 1956

Kisaura borealis (Kuhara, 1999)

(Fig. 5)

Dolophilodes (*Kisaura*) *borealis* Kuhara, 1999: 181 (type locality: Hokkaido, Japan; male)

Material examined: 5 males, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21-22 June 2022, leg. WLY.

Distribution. China (Chongqing), Japan, Russia.

Remarks. This species was reported from Japan and Russia (Kuhara 1999; Arefina & Armitage 2005). We record this species from China for the first time.

FIGURE 4. Live adult of *Dolophilodes didactylus* (Sun & Yang 2001), male. Length of each forewing 7 mm.

FIGURE 5. Live adult of *Kisaura borealis* (Kuhara, 1999), male. Length of each forewing 8 mm.

Kisaura eteokles Sun & Malicky, 2002

(Fig. 6)

Kisaura eteokles Sun & Malicky, 2002: 531 (type locality: Zhejiang, China; male)

Material examined: 2 males, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Guanshan forestry station, 31°31′8″N, 109°43′1″E, alt. 1984 m, 21 June 2022, leg. ZZS & CXL.

Distribution. China (Chongqing, Zhejiang).

Remarks. This species was originally reported from Zhejiang Province (Sun & Malicky 2002). We record this species from Chongqing for the first time.

FIGURE 6. Live adult of *Kisaura eteokles* Sun & Malicky, 2002, male. Length of each forewing 9 mm.

Family Stenopsychidae Martynov, 1924

Genus *Stenopsyche* McLachlan, 1866

Stenopsyche grahami Martynov, 1931

(Fig. 7)

Stenopsyche grahami Martynov, 1931: 4 (type locality: Sichuan, China; male)
Stenopsyche tapaishana Schmid, 1959: 318 (type locality: Shaanxi, China; male; synonymized by Malicky 2013: 45)

Material examined: 2 males, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Guanshan forestry station, 31°31′8″N, 109°43′1″E, alt. 1984 m, 21 June 2022, leg. ZZS & CXL.

Distribution. China (Chongqing, Sichuan, Hubei, Shaanxi, Tibet, Yunnan).

Remarks. This species is distributed in both Palearctic and Oriental Regions of China (Yang *et al.* 2005). We record this species from Chongqing for the first time.

Stenopsyche navasi Ulmer, 1926

(Fig. 8)

Stenopsyche navasi Ulmer, 1926: 37 (type locality: Shandong, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Hongqi management station, 31°30′32.29″N, 109°49′10.65″E, alt. 1117 m, 22 September 2022, leg. WLY, LQL, WBJ, CHY & CXL; 1 male, Yintiaoling Nature Reserve, Guanshan forestry station, 31°31′8″N, 109°43′1″E, alt. 1984 m, 21 June 2022, leg. ZZS & CXL.

Distribution. China (Chongqing, Beijing, Hubei, Shandong, Shanxi, Sichuan, Tianjin, Tibet, Yunnan, Zhejiang).

Remarks. This species widely distributed in both Palearctic and Oriental Regions of China (Yang *et al.* 2016). We record this species from Chongqing for the first time.

FIGURE 7. Live adult of *Stenopsyche grahami* Martynov 1931, male. Length of each forewing 28 mm.

FIGURE 8. Live adult of *Stenopsyche navasi* Ulmer, 1926, male. Length of each forewing 24 mm.

Family Psychomyiidae Walker, 1852

Genus *Psychomyia* Latreille, 1829

Psychomyia chompu Malicky & Chantaramongkol, 1993

(Fig. 9)

Psychomyia chompu Malicky & Chantaramongkol, 1993: 1162 (type locality: Thailand; male)
Psychomyia suni Schmid, 1997:13 (India, male; synonymized by Qiu & Morse 2021: 508).

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Guanshan forestry station, 31°31′8″N, 109°43′1″E, alt. 1984 m, 21 June 2022, leg. ZZS & CXL.

Distribution. China (Chongqing, Shaanxi, Sichuan), Bhutan, India, Nepal, Thailand (Malicky & Chantaramongkol 1993; Schmid 1997; Malicky 2006, 2007).

Remarks. This species was reported from Shaanxi and Sichuan Provinces in China (Qiu & Morse 2021). We record this species from Chongqing for the first time.

FIGURE 9. Live adult of *Psychomyia chompu* Malicky & Chantaramongkol, 1993, male. Length of each forewing 5 mm.

Family Polycentropodidae Ulmer, 1903

Genus *Nyctiophylax* Brauer, 1865

Nyctiophylax gracilis Morse, Zhong & Yang, 2012

(Fig. 10)

Nyctiophylax gracilis Morse *et al.*, 2012: 51 (type locality: Jiangxi, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY.

Distribution. China (Chongqing, Anhui, Guangxi, Jiangxi, Sichuan, Zhejiang).

Remarks. This species widely distributed in the Oriental Region of China (Zhong *et al.* 2014). We record this species from Chongqing for the first time.

Genus *Plectrocnemia* Stephens, 1836

Plectrocnemia plicata Schmid, 1959

Plectrocnemia plicata Schmid, 1959: 321 (type locality: Yunnan, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Hongqi management station, 31°30′32.29″N, 109°49′10.65″E, alt. 1117 m, 22 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing, Henan, Sichuan, Yunnan).

Remarks. This species distributed in both Palearctic and Oriental Regions of China (Schmid 1959; Zhong *et al.* 2012). We record this species from Chongqing for the first time.

FIGURE 10. Live adult of *Nyctiophylax gracilis* Morse, Zhong & Yang, 2012, male. Length of each forewing 6 mm.

Family Rhyacophilidae Stephens, 1836

Genus *Rhyacophila* Pictet, 1834

Rhyacophila ternifolia Sun & Yang, 1995

Rhyacophila ternifolia Sun & Yang, 1995: 31 (type locality: Sichuan, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.94″N, 109°52′39.44″E, alt. 1259 m, 13 April 2022, leg. ZZS, WLY, LB, TB, RTY, LQL, ZXW, MHY & MXW.

Distribution. China (Chongqing, Sichuan).

Remarks. This species was originally reported from Sichuan Province (Sun & Yang 1995). We record this species from Chongqing for the first time.

Rhyacophila quadrifida Sun & Yang, 1995
(Fig. 11)

Rhyacophila quadrifida Sun & Yang, 1995: 28 (type locality: Shaanxi, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Township, Grand Canyon, 31°26′19.06″N, 109°50′46.30″E, alt. 875 m, 25 September 2022, leg. WLY, LQL, WBJ, CHY & CXL; 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY.

Distribution. China (Chongqing, Beijing, Shaanxi, Sichuan, Xinjiang).

Remarks. This species is distributed from northwest to southeast China (Sun & Yang 1995; Yang *et al.* 2016). We record this species from Chongqing for the first time.

FIGURE 11. Live adult of *Rhyacophila quadrifida* Sun & Yang, 1995, male. Length of each forewing 10 mm.

Genus *Himalopsyche* Banks, 1940

Himalopsyche triloba (Hwang, 1958)

(Fig. 12)

Rhyacophila triloba Hwang, 1958: 279 (type locality: Sichuan, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Hongqi management station, 31°30′32.29″N, 109°49′10.65″E, alt. 1117 m, 22 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing, Sichuan).

Remarks. This species was reported from Sichuan Province (Hwang 1958). We record this species from Chongqing for the first time.

FIGURE 12. Live adult of *Himalopsyche triloba* (Hwang, 1958), male. Length of each forewing 10 mm.

Family Glossosomatidae Wallengren, 1891

Genus *Glossosoma* Curtis, 1834

***Glossosoma subaequale* Schmid, 1971**
(Fig. 13)

Glossosoma subaequale Schmid, 1971: 629 (type locality: Shaanxi, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Township, Huangcaoping, 31°24′50.13″N, 109°55′40.2″E, alt. 2039 m, 25 June 2022, leg. WLY; 15 females, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY.

Distribution. China (Chongqing, Fujian, Henan, Shaanxi, Tibet).

Remarks. This species is distributed from northwest to southeast China (Schmid 1971; Yang *et al.* 2005; Oláh & Li 2020). We record this species from Chongqing for the first time.

FIGURE 13. Live adult of *Glossosoma subaequale* Schmid, 1971, female. Length of each forewing 9 mm.

Genus *Agapetus* Curtis, 1834

***Agapetus* sp.**
(Fig. 14)

Material examined: 1 female, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Township, Grand Canyon, 31°26′19.06″N, 109°50′46.30″E, alt. 875 m, 25 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Remarks. This genus is distributed in both Palearctic and Oriental regions of China (Yang *et al.* 2016). We record this genus from Chongqing for the first time.

Family Hydrobiosidae Ulmer, 1905

Genus *Apsilochorema* Ulmer, 1907

***Apsilochorema nilgiri* Mey, 1999**
(Fig. 15)

Apsilochorema nilgiri Mey, 1999: 177 (type locality: India; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY; 1 female, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.57″N, 109°52′39.45″E, alt. 1228 m, 23 September 2022, leg. WLY, LQL, WBJ, CHY & CXL; 1 female, Yintiaoling Nature Reserve, Lanying Grand Canyon, 31°26′19.06″N, 109°50′46.30″E, alt. 875 m, 25 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing), India.

Remarks. This species was reported from India (Mey 1999). We record this species from China for the first time.

FIGURE 14. Live adult of *Agapetus* sp., female. Length of each forewing 6 mm.

FIGURE 15. Live adult of *Apsilochorema nilgri* Mey, 1999, female. Length of each forewing 7 mm.

Family Lepidostomatidae Ulmer, 1903

Genus *Lepidostoma* Rambur, 1842

***Lepidostoma* sp.**
(Fig. 16)

Material examined: 1 female, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Hongqi management station, 31°30′33.23″N, 109°49′10.50″E, alt. 1124 m, 11 April 2022, leg. ZZS, WLY, LB, TB, RTY, LQL, ZXW, MHY & MXW; 1 female, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY; 1 female, Yintiaoling Nature Reserve, Hongqi management station, 31°30′32.29″N, 109°49′10.65″E, alt. 1117 m, 22 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Remarks. This genus is distributed in both Palearctic and Oriental Regions of China (Yang *et al.* 2016). We record this genus from Chongqing for the first time.

FIGURE 16. Live adult of *Lepidostoma* sp., female. Length of each forewing 10 mm.

Family Goeridae Ulmer, 1903

Genus *Goera* Stephens, 1829

***Goera ramosa* Yang & Armitage, 1996**
(Fig. 17)

Goera ramosa Yang & Armitage, 1996: 557 (type locality: Sichuan, China; male)

Material examined: 4 males, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY.

Distribution. China (Chongqing, Gansu, Sichuan).

Remarks. This species is distributed in both Palearctic and Oriental Regions of China (Yang & Armitage 1996; Yang *et al.* 2016). We record this species from Chongqing for the first time.

FIGURE 17. Live adult of *Goera ramosa* Yang & Armitage, 1996, male. Length of each forewing 10 mm.

Family Apataniidae Wallengren, 1884

Genus *Apatidelia* Mosely, 1942

***Apatidelia egibiel* Malicky, 2012**
(Fig. 18)

Apatidelia egibiel Malicky, 2012: 1283 (type locality: Shaanxi, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.94″N, 109°52′39.44″E, alt. 1259 m, 13 April 2022, leg. ZZS, WLY, LB, TB, RTY, LQL, ZXW, MHY & MXW.

Distribution. China (Chongqing, Shaanxi).

Remarks. This species was originally reported from Shaanxi Province (Malicky 2012). We record this species from Chongqing for the first time.

Family Limnephilidae Kolenati, 1848

Genus *Limnephilus* Leach, 1815

***Limnephilus distinctus* Tian & Yang, 1993**
(Fig. 19)

Limnephilus distinctus Tian & Yang, 1993, in Tian *et al.* 1993: 880 (type locality: Sichuan, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Township, Xi'an Village, 31°24′1.34″N, 109°51′51.90″E, alt. 1637 m, 24 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing, Sichuan).

Remarks. This species was reported from Sichuan Province (Tian *et al.* 1993). We record this species from Chongqing for the first time.

FIGURE 18. Live adult of *Apatidelia egibiel* Malicky 2012, male. Length of each forewing 7 mm.

FIGURE 19. Live adult of *Limnephilus distinctus* Tian & Yang, 1993, male. Length of each forewing 21 mm.

Genus *Pseudostenophylax* Martynov, 1909

Pseudostenophylax kriton Malicky, 2011

(Fig. 20)

Pseudostenophylax kriton Malicky, 2011: 37 (type locality: Shaanxi, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Grand Canyon, 31°26′19.06″N, 109°50′46.30″E, alt. 875 m, 25 September 2022, leg. WLY, LQL, WBJ, CHY & CXL.

Distribution. China (Chongqing, Shaanxi).

Remarks. This species was reported from Shaanxi Province (Malicky 2011). We record this species from Chongqing for the first time.

FIGURE 20. Live adult of *Pseudostenophylax kriton* Malicky, 2011, male. Length of each forewing 25 mm.

Pseudostenophylax fumosus Martynov, 1909

Pseudostenophylax fumosus Martynov, 1909: 282 (type locality: Inner Mongolia, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Lanying Township, Huangcaoping, 31°24′50.13″N, 109°55′40.2″E, alt. 2039 m, 25 June 2022, leg. WLY.

Distribution. China (Chongqing, Anhui, Inner Mongolia, Shaanxi, Sichuan, Tibet, Yunnan).

Remarks. This species is distributed in both Oriental and Palearctic regions of China (Yang *et al.* 2016). We record this species from Chongqing for the first time.

Family Odontoceridae Wallengren, 1891

Genus *Marilia* Müller, 1880

Marilia sp.

Material examined: 1 female, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Shuangyang Township, Zhuanping, Sancha river, 31°29′48.46″N, 109°55′50.52″E, alt. 1731 m, 21 June 2022, leg. WLY.

Remarks. This genus is distributed in Oriental region of China (Yang *et al.* 2016). We record this genus from Chongqing for the first time.

Family Leptoceridae Leach, 1815

Genus *Mystacides* Berthold, 1827

***Mystacides absimilis* Yang & Morse, 1997**
(Fig. 21)

Mystacides absimilis Yang & Morse, 1997, In Vshivkova *et al.* 1997: 200 (type locality: Sichuan, China; male)

Material examined: 1 male, China, Chongqing, Wuxi County, Yintiaoling Nature Reserve, Linkouzi, 31°28′28.66″N, 109°52′40.27″E, alt. 1224 m, 21 June 2022, leg. WLY.

Distribution. China (Chongqing, Sichuan), Russia.

Remarks. This species is distributed in both Oriental and Palearctic regions (Vshivkova *et al.* 1997; Ivanov 2011). We record this species from Chongqing for the first time.

FIGURE 21. Live adult of *Mystacides absimilis* Yang & Morse, 1997, male. Length of each forewing 7 mm.

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