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## ● First record of *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992 (Plecoptera: Taeniopterygidae) from China

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**Abstract:** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992 is recorded from China for the first time. This discovery also represents the second known species of the rarely known genus *Mesyatsia* Ricker & Ross, 1975 from China. Detailed illustrations of the habitus, wing venation, and terminalia of both male and female adults are provided.

**Keywords:** aquatic insect; biodiversity; morphology; new record; stonefly

## ● 中国首次记录马氏魅带襁（襁翅目：带襁科）

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**摘要：**本文首次在中国记录了马氏魅带襁 *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992。该发现使鲜为人知的魅带襁属 *Mesyatsia* Ricker & Ross, 1975 在中国的已知物种增至 2 种。文中提供了该物种雌雄成虫的整体形态、翅脉特征及生殖器形态的详细特征图。

**关键词：**水生昆虫，生物多样性，形态学，新记录，石蝇

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## ● Introduction

The genus *Mesyatsia* Ricker & Ross, 1975 comprises six nominal species distributed across the Palearctic region, including *Mesyatsia imanishii* (Uéno, 1929), *Mesyatsia karakorum* (Šámal, 1935), *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992, *Mesyatsia nigra* Zwick, 1980, *Mesyatsia o-notata* (Okamoto, 1922), and *Mesyatsia tianshanica* (Zhiltzova, 1972), with *M. tianshanica* known only from female specimens (DeWalt *et al.* 2025). To date, *M. karakorum* is the only species recorded from China, specifically from Xizang and Yunnan Province (Kimmins 1947; Du & Chen 2019; Chen 2021).

*Mesyatsia makartchenkoi* was originally described from southern Primorye in the Russian Far East by Teslenko & Zhiltzova (1992). Hwang *et al.* (2021) later recorded and redescribed *M. makartchenkoi* from Gangwon-do, South Korea. In this study, I present the first record of *M. makartchenkoi* from China. Clear photographs of both male and female adults are provided.

## ● Material and methods

The specimens examined in this study were collected by hand. Morphological observations were conducted using a SDPTOP SZM45 stereo microscope. Photographs of adults and genitalia were captured with a Canon EOS 5DSR digital camera with a Canon MP-E 65 mm macro lens. Images were optimized and assembled using Adobe Photoshop. All specimens are deposited in the Insect Collection of Jiangsu University of Science and Technology (ICJUST), Jiangsu Province, China.

## ● Taxonomy

### Family Taeniopterygidae Klapálek, 1905

### Subfamily Brachypterainae Zwick, 1973

### Genus *Mesyatsia* Ricker & Ross, 1975 魅带襮属

### *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992 马氏魅带襮

*Mesyatsia makartchenkoi*, Teslenko & Zhiltzova 1992: 57; Zhiltzova 1995: 17; Zhiltzova 2003: 129; Zhiltzova 2006: 632; Teslenko 2007: 158; Teslenko 2009: 697; Teslenko & Zhiltzova 2009: 103; Chen & Ye 2020: 467; Hwang *et al.* 2021: 419.

**Material examined.** 4♂♂, 2♀♀: CHINA: Jilin Province, Antu County, Changbaishan Nature Reserve, 1793 m, 5.IV.2025, Cheng Peng leg.

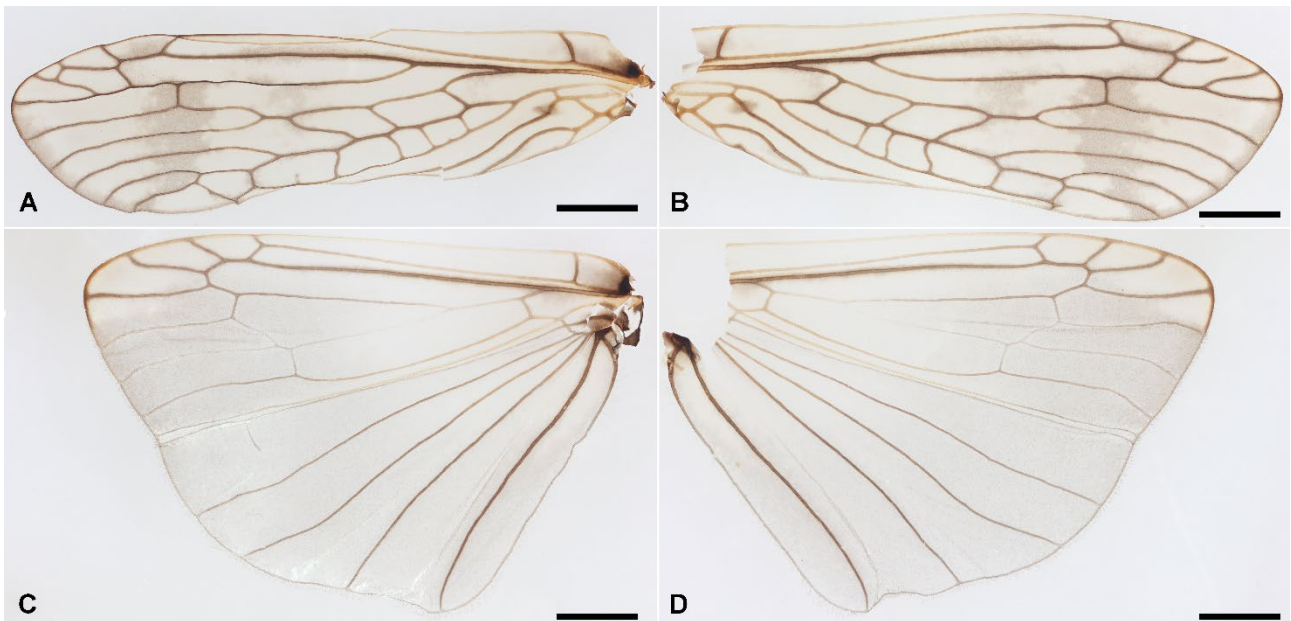
**Diagnosis.** Male ventral vesicle present; posterior margin of tergum 10 with two rounded lobes; basal plate of epiproct with two finger-shaped lobes; posterior margin of sternum 9 with tongue-shaped apex; cerci with five segments. Female postgenital plate broad, elongated; cerci with six to seven segments.

**Remarks.** This species exhibits slight intraspecific variation in body color patterns, wing venation, and the shape of the male and female terminalia, both within specimens from China (Figs 1–8) and among specimens from different countries (Teslenko & Zhiltzova 1992; Hwang *et al.* 2021). In Chinese specimens, the wing venation of females has more terminal branches compared to males. The official Chinese name for the genus *Mesyatsia* is ‘中襮属’ in most websites and publications (<https://species.sciencereading.cn/>), however, which is repeated with the Chinese name of another genus *Mesoperla* Klapálek, 1913. Therefore, ‘魅带襮属’ unofficially proposed by the author in 2018 should be used for *Mesyatsia* since ‘中襮属’ is more suitable for *Mesoperla*.

**Distribution.** China (Jilin Province), Korea (Gangwon-do), Russia (Primorskii Territory).



**FIGURE 1.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** male habitus, dorsal view **B** male habitus, ventral view. Scale bars = 1 mm.



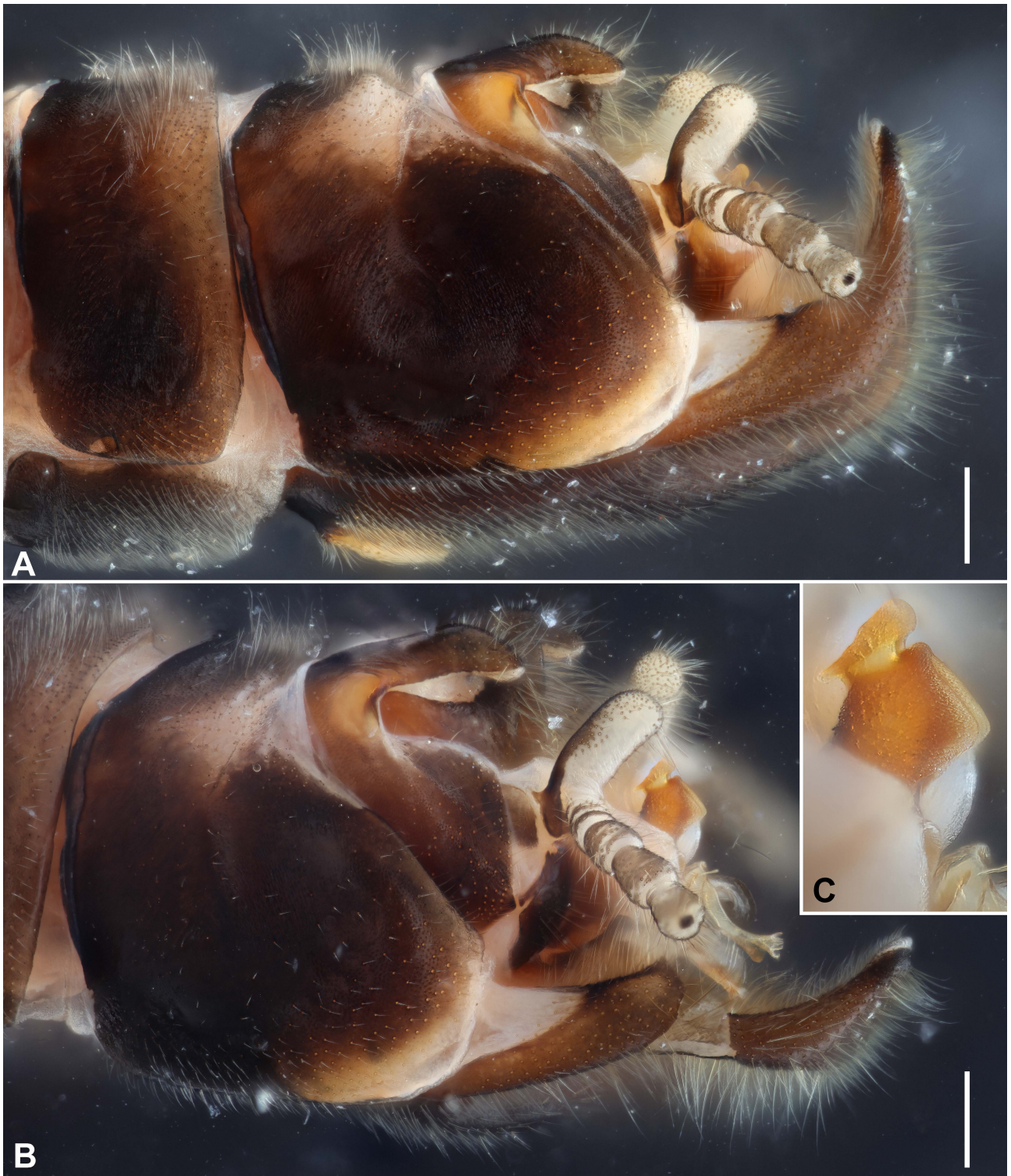
**FIGURE 2.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** male left forewing, dorsal view **B** male right forewing, dorsal view **C** male left hind wing, dorsal view **D** male right hind wing, dorsal view. Scale bars = 1 mm.



**FIGURE 3.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** male terminalia with white background, dorsal view **B** male terminalia with white background, ventral view. Scale bars = 0.2 mm.



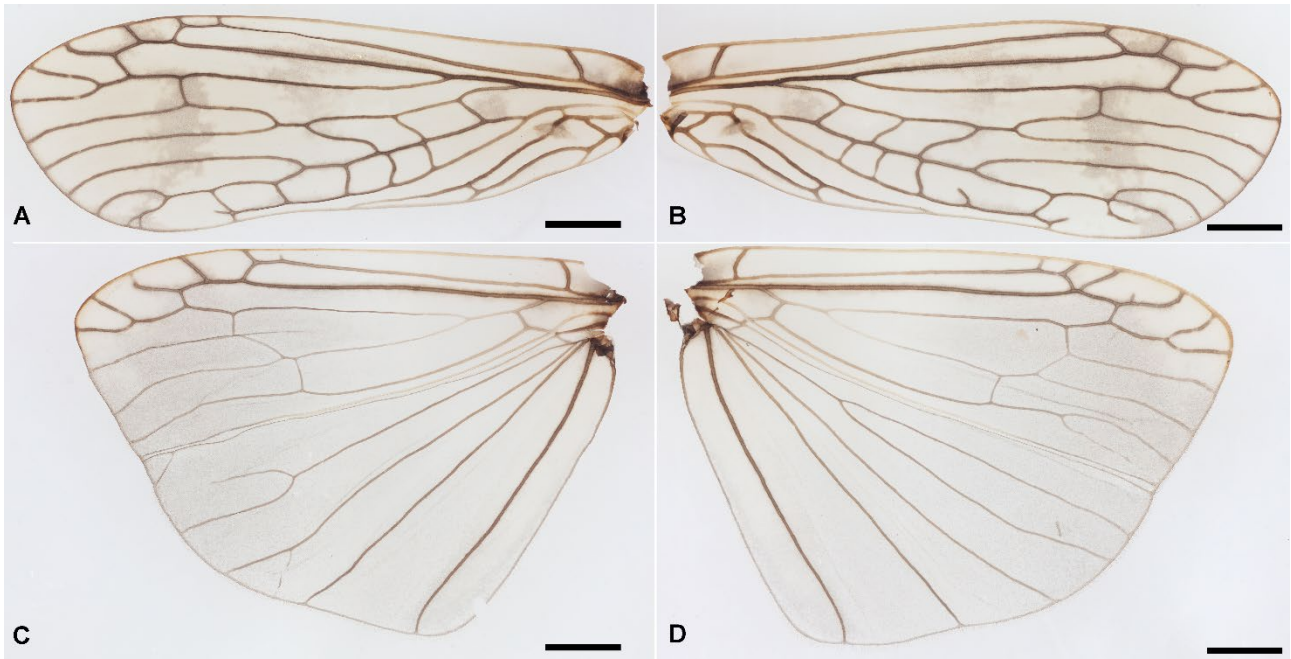
**FIGURE 4.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** male terminalia with black background, dorsal view **B** male terminalia with black background, slightly caudal view. Scale bars = 0.2 mm.



**FIGURE 5.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** male terminalia with black background, lateral view **B** male terminalia with black background, dorsolateral view **C** epiproct, lateral view. Scale bars = 0.2 mm.



**FIGURE 6.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** female habitus, dorsal view **B** female habitus, ventral view. Scale bars = 1 mm.



**FIGURE 7.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** female left forewing, dorsal view **B** female right forewing, dorsal view **C** female left hind wing, dorsal view **D** female right hind wing, dorsal view. Scale bars = 1 mm.



**FIGURE 8.** *Mesyatsia makartchenkoi* Teslenko & Zhiltzova, 1992: **A** female terminalia with white background, dorsal view **B** female terminalia with white background, ventral view. Scale bars = 0.2 mm.

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## ● References

- Chen Z-T 2022: Discovery of *Mesyatsia karakorum* (Šámal, 1935) (Plecoptera: Taeniopterygidae) in Yunnan Province of China. *Aquatic Insects*, 43 (3): 297–306.  
<https://doi.org/10.1080/01650424.2021.1967401>
- Chen Z-T & Ye X-H 2020: *Taenionema* (Plecoptera: Taeniopterygidae), a stonefly genus new to the fauna of China. *Zootaxa*, 4767 (3): 459–468.  
<https://doi.org/10.11646/zootaxa.4767.3.4>
- DeWalt RE, Maehr MD, Hopkins H, Neu-Becker U & Stueber G 2025: *Plecoptera Species File Online. Version 5.0/5.0*. Available from: <http://Plecoptera.SpeciesFile.org> (accessed 15.IV.2025).
- Du YZ & Chen ZT 2019: Review of the rare and little-known Chinese species of the family Taeniopterygidae (Plecoptera), with description of two new species of *Kyphopteryx*. *Zootaxa*, 4550 (1): 129–134.  
<https://doi.org/10.11646/zootaxa.4550.1.7>
- Hwang JM, Hur JM, Kang JH, Bae YJ & Murányi D 2021: The first record of the winter stonefly genus *Mesyatsia* Ricker & Ross, 1975 (Plecoptera: Taeniopterygidae) from Korea. *Journal of Species Research*, 10 (4): 419–421.
- Kimmins DE 1947: New species of Himalayan Plecoptera. *Annals and Magazine of Natural History*, 13 [1946]: 721–740.  
<https://doi.org/10.1080/00222934608654596>
- Klapálek F 1905: Conspectus Plecopterorum Bohemiae. *Casopis Československé Společnosti Entomologické*, 2: 27–32.
- Klapálek F 1913: H. SAUTER'S Formosa-Ausbeute: Plecoptera II. *Supplementa Entomologica*, 2: 112–127.
- Okamoto H 1922: Zweiter beitrag zur Kenntnis der Japanischen Plecopteren. *Bulletin of the Agricultural Experiment Station, Government General of Chosen*, 1 (1): 1–46.
- Ricker WE & Ross HH 1975: Synopsis of Brachypterinae (Insecta: Plecoptera). *Canadian Journal of Zoology*, 53: 132–153.  
<https://doi.org/10.1139/z75-017>
- Šámal J 1935: Plecoptera. In: Visser PC, Visser JH & Cvitković JV (Eds) *Wissenschaftliche Ergebnisse derNiederlandischen Expeditionen in den Karakorum und angrenzenden Gebiete 1922, 1925 und 1929/1930*. Zoologie, Leipzig, pp. 221–225.
- Teslenko VA 2007: A survey of stonefly (Plecoptera) fauna in respect of stream zonation in the Far East of Russia. *Eurasian Entomological Journal*, 6 (2), 157–180.
- Teslenko, V.A. 2009: Stoneflies (Plecoptera) of the Russian Far East: diversity and zoogeography. *Aquatic Insects*, 31 (Supplement 1): 693–706.  
<https://doi.org/10.1080/01650420902812230>
- Teslenko VA & Zhiltzova LA 1992: A new species of the genus *Mesyatsia* Ricker and Ross from Southern Primorye (The Soviet Far East). *Aquatic Insects*, 14 (1): 57–63.  
<https://doi.org/10.1080/01650429209361463>
- Teslenko VA & Zhiltzova LA 2009: *Keys to the Stoneflies (Insecta, Plecoptera) of Russia and Adjacent Countries. Imagines and Larvae*. Dalnauka, Vladivostok, 382 pp.
- Uéno M 1929: Studies on the stoneflies of Japan. *Memoirs of the College of Science, University of Kyoto, Series B*, 4 (2): 97–155.
- Zhiltzova LA 1972: Taeniopterygidae, a family of stoneflies (Plecoptera) new to the fauna of the Central Asia. *Zoologicheskii Zhurnal*, 51 (12): 1815–1822.
- Zhiltzova LA 1995: *Catalogue of Type Specimens in the Collection of the Zoological Institute, Russian Academy of Sciences. Stoneflies (Plecoptera)*. Zoological Institute, St. Petersburg, 38 pp.
- Zhiltzova LA 1997: Zoogeographic features of the Euholognatha fauna (Plecoptera) of Russia and adjacent territories (within the limits of the former USSR). In: Landolt PL & Sartori M (Eds) *Ephemeroptera and Plecoptera. Biology-Ecology-Systematics*. MTL, Fribourg, pp. 186–192.
- Zhiltzova LA 2003: Plecoptera, Gruppe Euholognatha. *Fauna of Russia and Neighbouring Countries, New Series*, 145: 1–538.

Zhiltzova LA 2006: A review of stoneflies of the family Taeniopterygidae (Plecoptera) in Russia and adjacent countries. *Entomological Review*, 86: 632–634.

<https://doi.org/10.1134/S0013873806060029>

Zwick P 1973: Insecta Plecoptera. Phylogenetisches System und Katalog. *Das Tierreich*, 94: 1–465.

Zwick P & Sivec I 1980: Beitrage zur Kenntnis der Plecoptera des Himalaja. *Entomologica Basiliensia*, 5: 59–138.

## ● Additional information

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