



<http://dx.doi.org/10.11646/zootaxa.3815.2.5>

<http://zoobank.org/urn:lsid:zoobank.org:pub:3BA7D445-C2E9-47DD-8A5E-A840ADFE9550>

***Mucha* Ozerov and *Ortalischema* Frey newly recorded from China with descriptions of two new species (Diptera, Sepsidae)**

XUANKUN LI & DING YANG¹

Department of Entomology, China Agricultural University, Beijing 100193, China.

E-mail: (XKL) xuankunli_1991@126.com; (DY) dyangcau@126.com, dyangcau@aliyun.com

¹Correspondence author

Abstract

Eleven genera and 55 species of Sepsidae were known to occur in China. Here two genera, *Mucha* Ozerov and *Ortalischema* Frey, are newly reported from China with the following two new species: *Mucha liangi* sp. nov. and *M. yunnanensis* sp. nov. Two species, *Mucha tzokotucha* and *Ortalischema maritima*, are newly recorded from China. Thus, there are a total of 13 genera of Sepsidae distributed in China. A key to the species of *Mucha* and a key to the Chinese genera of Sepsidae are provided.

Key words: *Mucha*, *Ortalischema*, new species, taxonomy

Introduction

Eleven genera and 55 species of Sepsidae were known to occur in China (Ozerov 2005, 2012; Xiao & Du 2007, 2008). Here we newly found two rare genera, *Mucha* Ozerov and *Ortalischema* Frey, in China with two new species and two newly recorded species. A key to the Chinese genera of Sepsidae is provided.

The genus *Mucha* is a newly established genus with five known species distributed only in the Oriental region (Ozerov 1992, 2012; Iwasa & Thinh 2012). It is characterized by the following features: flagellomere elongated, arista plumose (mostly on dorsal side, except *Mucha plumosa* Ozerov also with short rays on ventral side); postgena wide; face with well-developed facial carina; abdominal syntergite 1+2 with one pair of strong setae. This genus might be closely related to *Dicranosepsis* and *Allosepsis*, as the male fore femur bears a small ventral tubercle with 2 pv setae.

The genus *Ortalischema* is a small genus with only two known species distributed in the Palaearctic region (Frey 1925; Ozerov 1985; Pont & Meier 2002; Iwasa 1985, 1995). It is characterized by the following features: only 1 vt present; fore tarsus flattened and banded black and white, which is sexual dimorphism (see detailed description below); epandrium with a small rounded anterior lobe and a large oval posterior lobe, both lobes with long thick marginal setulae in inner-lateral side. This genus is proved to be sister group to *Orygma*, and moved to subfamily Orygmatinae (Su *et al.*, 2008; Lei *et al.*, 2013).

Material and methods

The specimens were studied and illustrated with ZEISS Stemi 2000-c microscope. Genitalic preparations were made by heating the apical portion of the abdomen in lactic acid at 180°C for 15–25 min. After examination it was transferred to glycerine and stored in a microvial pinned below the specimen. Photographs of bodies were taken using a ZEISS Stemi 2000-c stereo microscope with Canon 450D with a 105mm macro lens; photographs of genitalic were taken using a ZEISS AxioStar plus with Canon 450D with a 105mm macro lens. All specimen photographs were stacked using Helicon Focus 3.1 Free. Type specimens examined are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.

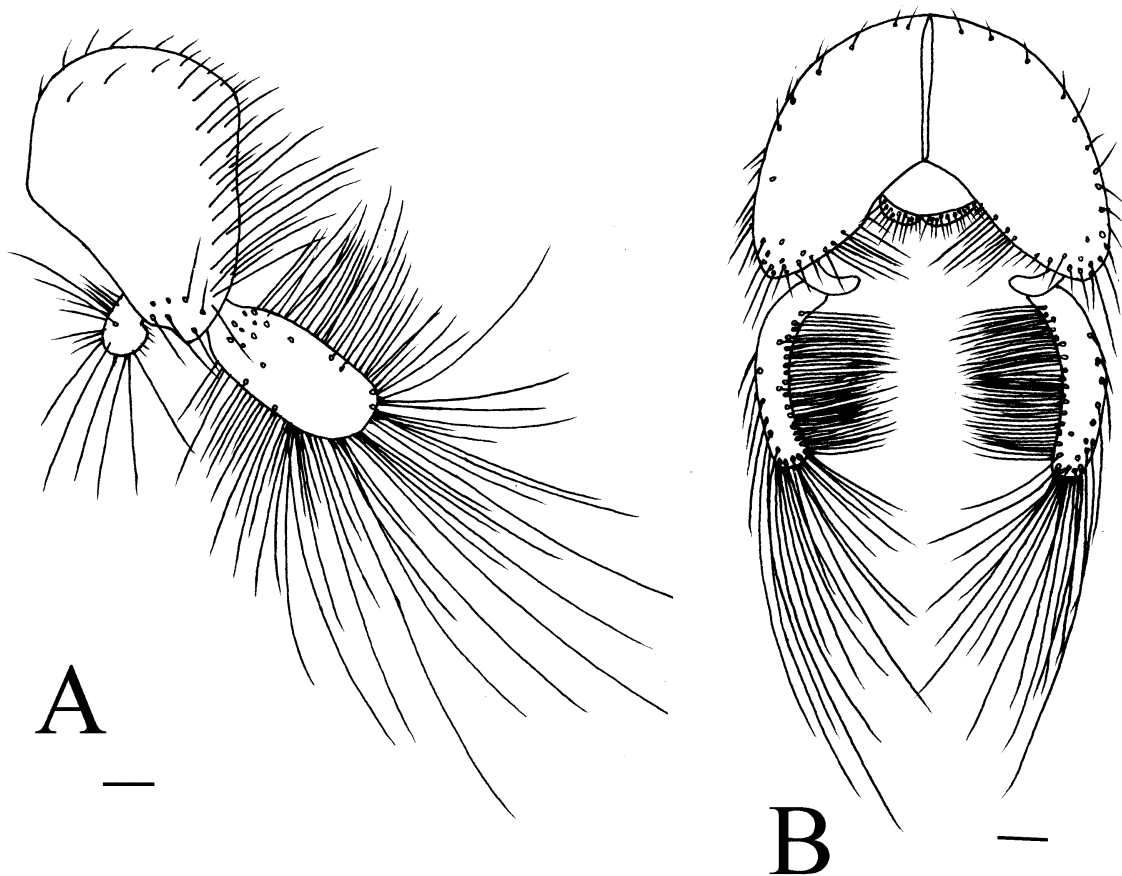


FIGURE 8. *Ortalischema maritima* Ozerov, male. **A**, genitalia, left lateral view; **B**, genitalia, posterior view. Scale bars = 0.1 mm.

Acknowledgements

Authors express their sincere thanks to Dr. Mitshiro Iwasa for his great help and identifying the specimens. Authors also express their thanks to Dr. Gang Yao (Hangzhou), Mr. Qibiao Dong (Manzhouli), Mr. Yuqiang Xi (Beijing) and Mr. Feiyang Liang (Beijing) for their kind help and collecting the specimens. Two anonymous reviewers are thanked for providing useful comments on an earlier draft of this paper.

References

- Frey, R. (1925) Zur Systematik der Diptera Haplostomata II. Fam. Sepsidae. *Notulae Entomologicae*, 5, 69–76.
- Iwasa, M. (1985) Supplementary notes on the Sepsidae from Japan (Diptera). *Kontyu*, 53 (4), 632–638.
- Iwasa, M. (1995) Revisional Notes on the Japanese Sepsidae (Diptera). *Japanese Journal of Sanitary Zoology*, 63 (4), 781–797.
- Iwasa, M. & Thinh, T.H. (2012) Taxonomic and faunistic studies of the Sepsidae (Diptera) from Vietnam, with descriptions of six new species. *Entomological Science*, 15 (1), 99–114.
<http://dx.doi.org/10.1111/j.1479-8298.2011.00482.x>
- Lei, Z., Ang, S.H.A., Srivathsan, A., Su, K.F.Y. & Meier, R. (2013) Does better taxon sampling help? A new phylogenetic hypothesis for Sepsidae (Diptera: Cyclorrhapha) based on 50 new taxa and the same old mitochondrial and nuclear makers. *Molecular Phylogenetics and Evolution*, 69, 153–164.
<http://dx.doi.org/10.1016/j.ympev.2013.05.011>
- McAlpine, J.F. (1981) Morphology and terminology: adults. In: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Tesky, H.J., Vockeroth, J.R. & Wood, D.M. (Eds.), *Manual of Nearctic Diptera. Vol. 1. Agriculture Canada Monograph 27*. Hull, Canadian Government Publishing Centre, pp. 9–63.

- Ozerov, A.L. (1985) K taksonomii roda *Ortalischema* (Diptera, Sepsidae) [To the taxonomy of the genus *Ortalischema* (Diptera, Sepsidae)]. *Zoologicheskii zhurnal*, 64 (8), 1267–1269.
- Ozerov, A.L. (1992) Novyy rod i tri novykh vida murav'eviodok (Diptera, Sepsidae) iz V'etnama [New genus and three new species of sepsid flies (Diptera, Sepsidae) from Vietnam]. *Zoologicheskii zhurnal*, 73 (3), 147–150.
- Ozerov, A.L. (2005) World catalogue of the family Sepsidae (Insecta: Diptera). *Zoologicheskie Issledovaniya*, 8, 1–74.
- Ozerov, A.L. (2012) A new genus and three new species of the family Sepsidae (Diptera) from China and Vietnam. *Russian Entomological Journal*, 21, 113–116.
- Pont, A.C. & Meier, R. (2002) Fauna Entomologica Scandinavica, Vol. 37. *The Sepsidae (Diptera) of Europe*. Brill Academic Publishers, Leiden, 221 pp.
- Su, K.F.Y., Kutty, S.N. & Meier, R. (2008) Morphology versus molecules: the phylogenetic relationships of Sepsidae (Diptera: Cyclorrhapha) based on morphology and DNA sequence data from ten genera. *Cladistics*, 24, 902–916.
<http://dx.doi.org/10.1111/j.1096-0031.2008.00222.x>
- Xiao, C.X. & Du, Y.Z. (2007) Two new record species of the genus *Nemopoda* Robineau-Desvoidy, 1830 (Diptera: Sepsidae) from China. *Entomotaxonomia*, 29 (1), 74–78.
- Xiao, C.X. & Du, Y.Z. (2008) Five new record species of *Dicranosepsis* Duda (Sepsidae) from China. *Acta Zootaxonomica Sinica*, 33 (2), 420–422.