



<http://dx.doi.org/10.11646/zootaxa.3821.1.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:71E0BC3B-91FE-41FB-BF0D-19C7AF014792>

Five new species of *Centorisoma* Becker from China, with an updated key to world species (Diptera, Chloropidae)

XIAOYAN LIU^{1,2} & DING YANG^{1,3}

¹Department of Entomology, China Agricultural University, Beijing 100193, China

²Hubei Insect Resources Utilization and Sustainable Pest Management Key Laboratory, College of Plant Science and Technology, Huazhong Agricultural University, Wuhan 430070, China

³Corresponding author. E-mail: dyangcau@126.com

Abstract

A review of the species of the genus *Centorisoma* Becker from China is provided. The following 5 species are described as new to science: *C. convexum* sp. nov., *C. medicconvexum* sp. nov., *C. neimengguensis* sp. nov., *C. pentagonium* sp. nov. and *C. sexangulatum* sp. nov. An updated key to the world species of genus *Centorisoma* is given.

Key words: Diptera, Chloropidae, *Centorisoma*, new species, China

Introduction

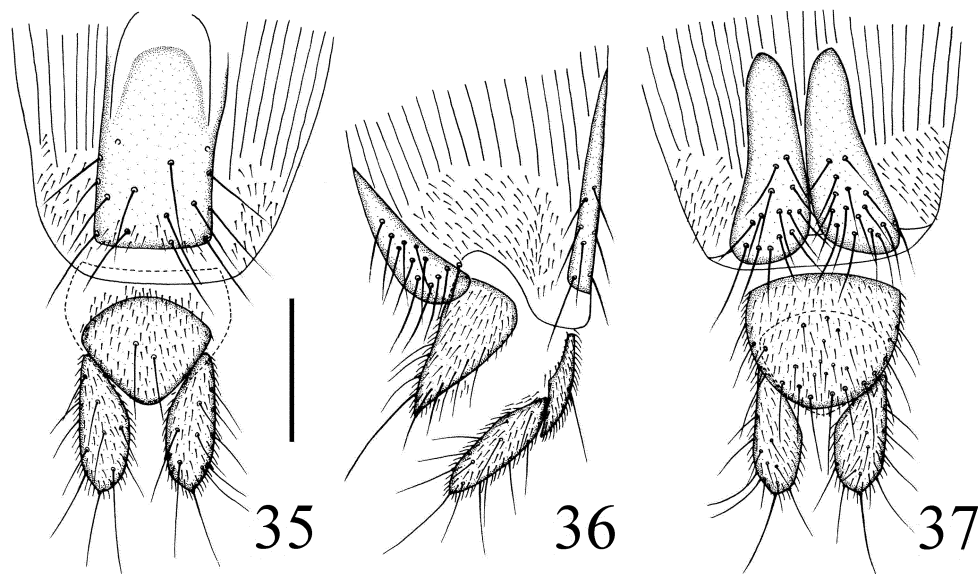
The genus *Centorisoma* was erected by Becker (1910). It belongs to the *Centorisoma* genus group (Andersson 1977), with the following characters: body and legs elongate; head much wider than long; facial carina indistinct; ocellar triangle shiny and smooth, its apex reaching to or near anterior margin of frons; antenna with basal 2 segments short, postpedicel longer than broad, 1.3–3.0 times as long as its basal breadth; scutum wholly black or yellow with black or reddish brown stripes; surface of scutum and scutellum strongly or moderately shagreened; mid tibia with a distinct black subapical spur; subanal lobe well developed; cercus rather large and well sclerotized (Andersson 1977; Kanmiya 1983; Nartshuk 2005; Liu & Yang 2012).

The genus *Centorisoma* is currently known only in the Palaearctic Region with 16 known species. Five of them are known from central and eastern Russia (Nartshuk 1965, 2005, 2010), three species from Mongolia (Nartshuk 1965, 1968), one species from Kazakhstan (Nartshuk 1965), three species from Japan (Kanmiya 1983; Nartshuk & Yang 2011), one species from South Korea (Nartshuk 2005), two species from North Korea (Nartshuk & Yang 2011), six species from China (Yang & Yang 1992; Liu & Yang 2012), only one species, *C. elegantulum* known to occur in Europe (Becker 1910; Kubik 2006; Nartshuk 1965, 1968, 2005).

In this paper, we described five new species, *C. convexum* sp. nov., *C. medicconvexum* sp. nov., *C. neimengguensis* sp. nov., *C. pentagonium* sp. nov. and *C. sexangulatum* sp. nov. There are eleven species of the genus *Centorisoma* known to occur in China. All the species are distributed in the Palaearctic China, two of them (*C. convexum* sp. nov. and *C. medicconvexum* sp. nov.) are also known from Guizhou and Sichuan, Southwest China, which belongs to the Oriental Region. An updated key to the world species of the genus *Centorisoma* is provided.

Material and methods

Specimens were studied and illustrated with ZEISS Stemi 2000–c. Genitalic preparations were made by macerating the apical portion of the abdomen in warm 10% NaOH for 17–20 min, after examination it was transferred to fresh glycerine and stored in a microvial pinned below the specimen. Specimens examined were stored in 75% ethanol



FIGURES 35–37. *Centorisoma sexangulatum* sp. n., female. 35 abdominal terminalia, dorsal view; 36 abdominal terminalia, lateral view; 37 abdominal terminalia, ventral view. Scale bar = 0.1 mm.

Distribution. China: Ningxia, Beijing, Hebei.

Remarks. The new species is somewhat similar to *C. flavum* Nartshuk in the ocellar triangle yellow, marginally and apically brown, with a diamond-shaped brown spot and the legs yellow except for fore tibia and tarsus brown. It can be separated from the latter by the following features: postpedicel 1.3 times as long as its basal breadth; longitudinal stripes on scutum yellowish orange except basal 2/3 of inner lateral stripes brown; cercus rather large, 1.5 times as long as wide. In *C. flavum*, the postpedicel is 1.8 times as long as its basal breadth; the longitudinal stripes on the scutum are reddish brown; the cercus is very small (Nartshuk 1965, 2005).

Etymology. The specific name is from the Latin *sexangulatus* (“hexagonal”), refers to the shape of the cercus.

Acknowledgements

We are grateful to Dr. Shan Huo, Dr. Jinjing Wang, Ms. Lihua Wang, Ms. Tao Li, Mr. Junchao Wang (Beijing), Dr. Yan Li (Shenyang), Dr. Tingting Zhang (Taian), Dr. Hui Dong (Shenzhen), Dr. Qifei Liu (Fuzhou), Ms. Weina Cui (Jining), Ms. Hui Yu (Shanghai), Dr. Jie Zeng (Kunming) and Dr. Jingxian Liu (Guangzhou) for collecting the specimens. Two anonymous reviewers are thanked for providing useful comments on an earlier draft of this paper.

References

- Andersson, H. (1977) Taxonomic and phylogenetic studies on Chloropidae (Diptera) with special reference to Old World genera. *Entomologica Scandinavica*, 8 (Supplement), 1–200.
- Becker, Th. (1910) Chloropidae Eine monographische Studie. i Teil. Palaearktische Region. *Archivum zoologicum*. Budapest, 1, 33–174.
- Kanmiya, K. (1983) A systematic study of the Japanese Chloropidae (Diptera). *Memoirs of the Entomological Society of Washington*, 11, 1–370.
- Kubík, Š. (2006) New records of Chloropidae (Diptera) from the Czech and Slovak Republics. *Entomofauna Carpathica*, 18 (1–2), 31–32.
- Liu, X.Y. & Yang, D. (2012) The genus *Centorisoma* Becker in China, with a key to world species (Diptera, Chloropidae). *Zootaxa*, 3361, 18–32.
- Nartshuk, E.P. (1965) Chloropidae (Diptera) of Siberia and the Soviet Far East. III. revision of the genus *Centorisoma* Becker. *Entomologicheskoe Obozrenie*, 44 (4), 542–547.
- Nartshuk, E.P. (1968) Two new species of Chloropidae (Diptera) from Mongolia. *Entomologicheskoe Obozrenie*, 47 (4), 937–941.

- Nartshuk, E.P. (2005) Grassflies (Diptera, Chloropidae) of South Korea, with a review of species of the genus *Centorisoma* Becker. *Entomologicheskoe Obozrenie*, 84 (2), 437–454.
- Nartshuk, E.P. (2010) Records of the grassflies (Diptera, Chloropidae) of the Palaearctic geoelement on the Altai Mountains. *Vestnik Zoologii*, 44 (1), 91–94.
- Nartshuk, E.P. & Yang, D. (2011) New data on grassflies of the family Chloropidae (Diptera) from Korea with analysis of the fauna composition. *Far Eastern Entomologist*, 226, 1–11.
- Yang, D. & Yang, C.K. (1992) A new species and a new record of Chloropidae (Diptera) from China. *Japanese Journal of Entomology*, 60 (3), 647–652.