

A new species of *Micadina* Redtenbacher, 1908 (Phasmida: Necrosiinae) from Guangdong Province, China

George Wai-Chun Ho

Ho, G. W. C. 2012: A new species of *Micadina* Redtenbacher, 1908 (Phasmida: Necrosiinae) from Guangdong Province, China. – Entomol. Fennica 23: 177–180.

Micadina cheni sp. n. is described and illustrated. It differs from other *Micadina* species by its unique spoon-shape of cerci. A key is given to males of all Chinese *Micadina* species.

G. W. C. Ho, Hong Kong Entomological Society, P. O. Box No. 73749, Kowloon Central Post Office, Hong Kong; E-mail: georgehwc@hotmail.com

Received 20 February 2012, accepted 8 March 2012

1. Introduction

Studying the Chinese phasmids has become simpler since publication of two major works, a catalogue of species by Hennemann *et al.* (2008) and Chen and He's monograph (2008).

Redtenbacher erected the genus *Micadina* in 1908 (Redtenbacher 1908: 533). Thirteen species are recognized in this Palearctic and Oriental genus distributed over Korea, Japan, Taiwan and China (Kwon *et al.* 1992, Otte & Brock 2005, Hennemann *et al.* 2008, Chen & He 2008, Ichikawa & Okada 2008). Whilst collecting phasmids in primary forest in north Guangdong, China, an unnamed male *Micadina* was found. This new species is readily distinguished from other *Micadina* species by its spoon-shaped cerci. Accordingly, *Micadina yingdeensis* Chen and He, 1992 and *M. cheni* Ho sp. n. are presently recognized in Guangdong Province.

2. Material and methods

The specimens of the new species are deposited in Research Institute of Entomology, Zhongshan (Sun Yat Sen) University, Guangzhou, Guangdong, China (ZSU) and the private collection of

George, W. C. Ho, Hong Kong, China (GH). Morphological terms largely follow Bragg (1997, 2001).

3. Genus *Micadina* Redtenbacher, 1908

Type-species. *Marmessoidea phluctaenoides* Rehn, 1904: 73, by subsequent designation of Shiraki, 1935: 71.

Literature. Shiraki, 1935: 71 [Key to Japanese species]; Otte and Brock, 2005: 202; Ichikawa and Okada, 2008: 14 [Key to Japanese species]; Chen and He, 2008: 122 [Key to Chinese species].

Remarks. A key to males of *Micadina* is provided. Females are not included in the key as females have not been described for three species.

3.1. Key to males of Chinese *Micadina*

Adapted from Chen and He 2008

1. Anal segment longer than eighth tergum, cerci straight at base. 6.
- Anal segment not longer than eighth tergum, cerci straight at base or slightly curved. 2.

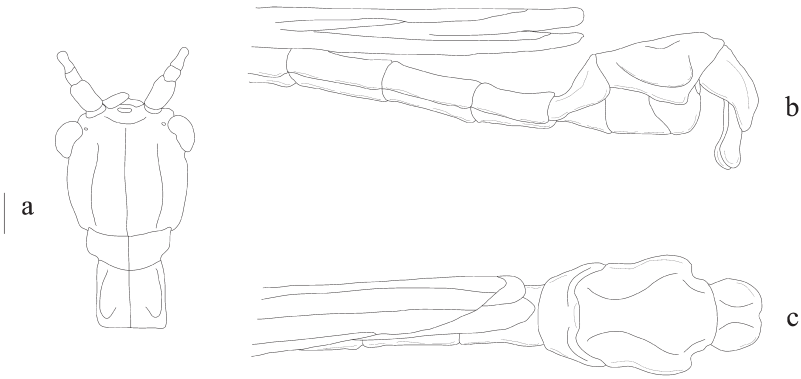


Fig. 1. *Micadina cheni* Ho sp. n. – a. Male holotype, head and pronotum, dorsal view. – b. Male holotype, apical half of abdomen, lateral view. – c. Male holotype, apical half of abdomen, dorsal view. Scale bars 1 mm.

2. Anal segment shorter than eighth tergum. 3.
 – Anal segment about as long as eighth tergum. 5.
 3. Cerci curved inward; apex of anal segment arched. *M. sonani* Shiraki, 1935
 – Cerci slightly curved, apex of anal segment truncate. 4.
 4. Lateral margin of ninth tergum distinctly arched. *M. fujianensis* Liu and Cai, 1994
 – Lateral margin of ninth tergum slightly arched. *M. yingdeensis* Chen and He, 1992
 5. Cerci curved inwards. *M. zhejiangensis* Chen and He, 1995
 – Cerci straight. *M. phluctaenoides* Rehn, 1904
 6. Cerci short, not exceeding the apex of anal segment. 7.
 – Cerci long, exceeding the apex of anal segment. 8.
 7. Hind half of anal segment nearly curved beneath. *M. difficilis* Günther, 1940
 – Hind half of anal segment completely curved beneath. *M. involuta* Günther, 1940
 8. Cerci straight, not spoon-shape. *M. bilobata* Liu and Cai, 1994
 – Cerci spoon-shape. *M. cheni* Ho sp. n.

3.2. *Micadina cheni* Ho sp. n. (Fig. 1a–c, Fig. 2a–b)

Type material. Holotype: 1♂, Yueyun, Shaoguan, Guangdong Province, China, 19.VII.2008, Ho, G. W. C. (ZSU). Paratype: 1♂, as holotype but (GH).

Diagnosis. The new species is different from other *Micadina* species by postero-lateral angles of ninth tergum dilated into a triangular angle and

cerci cylindrical at base, and broadened posteriorly in second half as spoon-shape.

Description. Male. Small. Body elongate, mainly green.

Head: Green, smooth, oval, longer than wide. Genae with a thin and brownish postocular stripe. Apical margin of frons as long as the first antennal segment. With a distinct small oval depression between the base of antennal segment, nearly as long as the length of second antennal segment. Occiput rounded and convex. Median furrow distinct, reaching to the hind margin of head. Eyes brownish, oval, big and prominent, longer than the first antennal segment. Ocelli indistinct, green, very small, placed above the eyes. Antennae brownish, long and filiform, segments indistinct; longer than fore legs, but shorter than body length; the first segment longer than third segment, cylindrical; second segment shorter than the first segment. Mouthparts orange.

Thorax: Pronotum green with a black medio-longitudinal stripe, rectangular, distinctly shorter and narrower than head, with distinct transversal and longitudinal sulcus crossing before middle, sparsely granulated, but granules not obvious; ventral surface smooth; anterior margin concave, hind margin truncate. Mesonotum mainly brown, also blackish with greenish, as long as the combined length of metanotum and median segment together, shorter than mesofemora, densely granulated, granules irregular size, medio-longitudinal carina distinct. Mesosternum without granules. Metanotum smooth. Prosternum, mesosternum and metasternum yellow.

Abdomen: Cylindrical and slender. Median segment shorter than metanotum. Almost parallel from second to seventh tergites with faint medio-

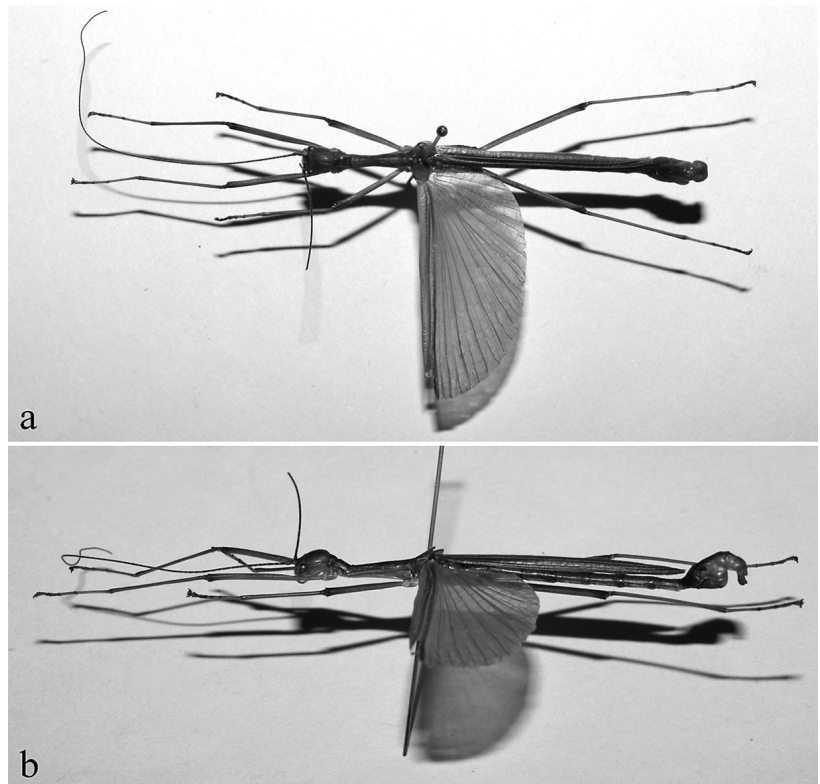


Fig. 2. *Micadina cheni* Ho **sp. n.** – a. Male paratype, dorsal view. – b. Male paratype, lateral view.

longitudinal carina. Eighth tergum expanded behind, with yellow edge, hind margin concave. Ninth tergum being the longest length, almost the combined length of eighth tergum and anal segment together, both sides slightly concave, postero-lateral angles dilated into a triangular angle from lateral view, hind margin rounded. Anal segment green, longer than eighth tergum, concave at hind margin, v-shape, the two lateral angles rounded, with setae. Poculum smooth, tapering posteriorly, apex rounded, reaching to the hind margin of ninth tergum. Cerci reddish brown, non-cylindrical, long and spoon-shape, straight and cylindrical at base, broadened posteriorly in second half, apices flattened and rounded, slightly curved inward, projecting over the end of anal segment.

Legs: Elongate and slender. All coxa orange. All femora dull green with rufous apices. All tibiae rufous with black tip. All tarsi rufous. Hind legs just projecting over the end of abdomen. Mid legs shorter than the length of alae.

Wings: Tegmina short, nearly half-length of

metanotum, elevated portion distinctly protruded, black and blunt at tip, a short yellow line present beneath the black protruded angle. Alae long, reaching to the seventh tergum, costal region green, anal region dull rose.

Female. Unknown.

Measurements. Length (mm): Body length 40, head 3.2, antennae 35, pronotum 2.2, mesonotum 6, metanotum 4, median segment 2, profemora 10.5, mesofemora 7.5, metafemora 11, protibiae 9.5, mesotibiae 7, metatibiae 10.5, cerci 2.2., tegmina 2.5, alae 24.

Distribution. Shaoguan, north Guangdong Province, China.

Etymology. Named in honour of Professor Chen Shu-chun for his extensive work on the Chinese phasmid fauna.

Acknowledgments. Deeply thanks to Paul Brock and an anonymous referee for their comments on the draft and Prof. Pang Hong (Head of Research Institute of Entomology, Zhongshan University), and Dr. Zhang Binglan, Mr. Xie Weicai, and Miss Tong Bo (Research Institute of Entomology, Zhongshan University) for their kind assistance.

References

- Chen, S. C. & He, Y. H. 1992: *Micadina yingdensis* new species: a new walking stick injurious forest pest from Guangdong Province. — *Forest Research* 5: 207–209.
- Chen, S. C. & He, Y. H. 1995. — In: Wu, H. (ed.), *Insects of Baishanzu Mountain, Eastern China*: 63–68. China Forestry Publishing House, Beijing. 586 pp.
- Chen, S. C. & He, Y. H. 2008: *Phasmatodea of China*. — Science Press, China. 476 pp.
- Günther, K. 1940: Neue Stabheuschrecken (Phasmoïden) aus China. — *Decheniana* 237: 237–248.
- Hennemann, F. H., Conle, O. V. & Zhang, W. W. 2008: Catalogue of the stick and leaf-insects (Phasmatodea) of China, with a faunistic analysis, review of recent ecological and biological studies and bibliography (Insecta: Orthoptera: Phasmatodea). — *Zootaxa* 1735: 1–76.
- Ichikawa, A. & Okada, M. 2008: Review of Japanese species of *Micadina* Redtenbacher (Phasmatodea, Diapheromeridae), with description of a new species. — *Tettigonia* 9: 13–31.
- Kwon, Y. J., Ha, J. S. & Lee, S. W. 1992: Classification of the order Phasmida from Korea. — *Nature and Life* 22: 43–58.
- Liu, S. L. & Cai, B. L. 1994: Descriptions of three new species of *Micadina* from China (Phasmatodea: Heteronemiidae). — *Acta Entomologica Sinica* 37: 87–90.
- Otte, D. & Brock, P. D. 2005: *Phasmida Species File – Catalog of stick and leaf insects of the world*. — The Insect Diversity Association and the Academy of Natural Sciences, Philadelphia. 414 pp.
- Redtenbacher, J. 1908: Die Insektenfamilie der Phasmiden. III. Phasmidae Anareolatae (Phibalosomini, Acrophyllini, Necrosiini). — Verlag, Engelmann, Leipzig. 248 pp.
- Rehn, J. A. G. 1904: Studies in the orthopterous family Phasmidae. — *Proceedings of the Academy of Natural Science of Philadelphia* 56: 38–107.
- Shiraki, T. 1935: Orthoptera of the Japanese Empire (Part IV) Phasmidae. — *Memoirs of the Faculty of Science and Agriculture, Taihoku Imperial University, Formosa* 14: 23–88.