

## Review of the species of the genus *Marthogryllacris* (Orthoptera, Gryllacrididae, Gryllacridinae)

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### Abstract

A review of the genus *Marthogryllacris* Karny, 1937 was presented. The genus *Borneogryllacris* should be regarded as a subgenus of *Marthogryllacris*. Five new species were described: *M. (M.) rufonotata* sp. nov., *M. (B.) nanlingensis* sp. nov., *M. (B.) bimaculata* sp. nov., *M. (B.) spinosa* sp. nov. and *M. (B.) elongata* sp. nov.. A key to the species of *Marthogryllacris* and the distributional data were provided.

**Key words:** Gryllacrididae, Gryllacridinae, *Marthogryllacris*, *Borneogryllacris*, new species

### Introduction

The genera *Marthogryllacris* and *Borneogryllacris* were proposed by Karny in 1937 with the type species *Gryllacris martha* Griffini, 1914 and *Gryllacris borneoensis* De Haan, 1842, respectively. Liu *et al.* (2010) thought that the characteristics of *Marthogryllacris* were similar to *Borneogryllacris*, except for fastigium of vertex with distinct lateral carinae. Therefore, they believed these two genera should be regarded as two subgenera of the genus *Marthogryllacris*. However, they did not agree with Gorochov (2003) that *Capnogryllacris* is the synonym of *Borneogryllacris* because of their obvious distinction in median ocellus and processes in subgenital plate.

Up to now, there are three species of *Marthogryllacris* and six species of *Borneogryllacris* in China. In this paper, five new species are identified and described under the name of *M. (M.) rufonotata* Li, Liu *et al.* sp. nov., *M. (B.) nanlingensis* Li, Liu *et al.* sp. nov., *M. (B.) bimaculata* Li, Liu *et al.* sp. nov., *M. (B.) spinosa* Li, Liu *et al.* sp. nov., *M. (B.) elongata* Li, Liu *et al.* sp. nov.. All type specimens are deposited in the Shanghai Entomology Museum, the Chinese Academy of Sciences, Shanghai, China.

### *Marthogryllacris* Karny, 1937

*Gryllacris* (group of *martha*) Karny, 1929. *Proc. 4th. Pacif. Sci. Congr.*, 161, Fig 3.

*Gryllacris* (group of *bornoensis*) Karny, 1929. *Proc. 4th. Pacif. Sci. Congr.*, 162.

*Marthogryllacris* Karny, 1937. *Genera Insectorum*, 206: 104.

*Borneogryllacris* Karny, 1937. *Genera Insectorum*, 206: 105; Jin & Xia, 1994. *J. Orth. Res.*, 3: 16; Liu, 1999. *Fauna of Insect Fujian province of China*, 1: 175; Otte, 2002. *Orthoptera species file*, 8: 6.

*Marthogryllacris* (*Marthogryllacris*) & *Marthogryllacris* (*Borneogryllacris*) Liu *et al.*, 2010. *Insects of Fengyangshan National Nature Reserve*, 58–59.

**Type species.** *Gryllacris martha* Griffini, 1914.

**Generic diagnosis.** Body medium or large sized of the subfamily, stout. Median ocellus almost as large as lateral ocelli. Tegmina and wings well-developed. M vein of tegmina not united with CuA vein. Mid tibia without interno-apical spur. Male 9<sup>th</sup> abdominal tergite divided into 2 lobes, with acute apical spines, processes of male subgenital plate longer than or as long as subgenital plate.

**Coloration.** Body yellowish brown, antennae except two basal segments, apex of labrum, mandible and spurs and spines of legs black. Wings infuscate, sometimes hind margin of pronotum and tibiae suffused with darkish.

#### Measurements. (length in mm)

	Body	Pronotum	Tegmina	Hind femur	Ovipositor
♂	32.0–33.0	8.0	40.0–41.0	20.0–21.0	/
♀	40.0–51.0	9.0–9.5	40.0–46.0	22.0–23.0	26.0–31.0

**Material.** Holotype ♀, Lanpingfeng, Yuanbaoshan, Guangxi, China, Alt. 1300–1700m, 1992.IX.23, collected by Lu Wen; paratype 1♀, Chenzhou, Hunan, China, 1985.VII.31, collected by Zhang Ya-Lin and Chai Yong-Hui; 1♂, Suoluo, Chishui, Guizhou, China, 1994.VIII.10, collected by Du Yu-Zhou; 1♀, Taipingshan, Liping, Guizhou, China, Alt. 520–860m, 2006.VII.15–18, collected by Song Qiong-Zhang; 2♂♂, Nanling, Guangdong, China, Alt. 1000m, 2008.VII.6, collected by Huang Bao-Ping & Yan Ying; 1♂♀, Maoer Mountain, Xing'an, Guangxi, China, 2009.VIII.10, collected by Huang Bao-Ping & Yan Ying; 2♀♀, Daming Mountain, Wuming, Guangxi, Alt. 1200m, 2012.VII.28–31, collected by Bi Wen-Xuan.

**Distribution.** China (Hunan, Guangxi, Guizhou).

**Diagnosis.** This new species, with wings infuscate and 9<sup>th</sup> abdominal tergite of male with lobes sickle-like, is distinguishable from *M. (B.) spinosa* Li, Liu et Li sp. nov..

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#### References

- Gorochov, A.V. (2003) Contribution to the knowledge of the fauna and systematics of the Stenopelmatoidea (Orthoptera) of Indochina and some other territories: IV. *Entomologicheskoe Obozrenie*, 84, 900–921.
- Griffini, A. (1914) Note sopra dicesi Grillacridi appartenenti al K. Naturhistor. Hofmuseum di Vienna ed al K. Zoolog. Museum di Berlino. *Atti Sociedad Italiana Scienze Naturali*, 53, 1–335.
- Jin, X.B. & Xia, K.L. (1994) An Index-Catalogue of Chinese Tettigonioidea (Orthopteroidea: Grylloptera). *Journal of Orthoptera Research*, 3, 1–17.
- Karny, H.H. (1928) Gryllacridaen aus verschiedenen deutschen und osterreichischen Sammlungen. *Stettiner Ent. Zeit*, 89, 247–312.
- Karny, H.H. (1937) Orthoptera Fam. Gryllacrididae. *Genera Insectorum*, 206, 151–152.
- Liu, X.W. & Jin, X.B. (1994) List of Chinese Stenopelmatoidea and Tettigonioidea (Grylloptera). *Contributions from Shanghai Institute of Entomology*, 11, 1–100.
- Liu, X.W. (1999) Stenopelmatoidea. In: Huang, B.K. (Ed.), *Fauna of Insects Fujian Province of China*. Fuzhou: Fujian science and technology press, pp. 175–179.
- Liu, X.W., Bi, W.X. & Zhang, F. (2010) Orthoptera: Stenopelmatoidea. In: Xu, H-C (ed.), *Insects of Fengyangshan National Nature Reserve*. Beijing: China Forest University Press. pp. 59–61.