



## Redescriptions of two incompletely described species of mole cricket genus *Gryllotalpa* (Grylloidea; Gryllotalpidae; Gryllotalpinae) from China with description of two new species and a key to the known Chinese species

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### Abstract

*Gryllotalpa jinxiuensis* You et Li, 1990 and *Gryllotalpa henana* Cai et Niu, 1998, which were incompletely described, are redescribed and illustrated here based on a fuller character set of tegmen veins, stridulatory file and genitalia. Two new species of *Gryllotalpa* from Henan and Zhejiang, China are also described.

**Key words:** Orthoptera, Gryllotalpinae, morphology, taxonomy, identification

### Introduction

*Gryllotalpa* is the largest genus among the five genera in the mole cricket subfamily Gryllotalpinae. It is distinguished from other genera by the following characters: fore tibiae with four dactyls; tympana covered and opening in the form of a slit; basal spur of fore leg arising from femur; veins in lateral field of fore wings pointing toward wing-tips.

Some 64 species of *Gryllotalpa* have been described in the world (Shiraki 1930; Chopard 1969; Bennet-Clark 1970; Baccetti & Capra 1978; Otte & Alexander 1983; Townsend 1983; Ingrisch 1990; Baccetti 1992; Broza *et al.* 1998; Ingrisch & Bonn 2006; Li *et al.* 2007; Ma *et al.* 2008; Eades & Otte 2010) of which eight occur in China (Li *et al.* 2007; Ma *et al.* 2008). But two species, *Gryllotalpa jinxiuensis* You et Li, 1990 and *Gryllotalpa henana* Cai et Niu, 1998, were described without some very important characters, e.g. veins of tegmen, stridulatory file and teeth, and even genitalia. Fortunately, we acquired specimens and give their fuller descriptions and illustrations here. We also describe two new *Gryllotalpa* species from China.

### Material and measurements

Identifications are primarily based on males. The measurement methods recommended by Townsend (1983) are used. All measurements are in millimeters (mm). The nomenclature of genitalia and tegmen used in this study mainly follows that of Ingrisch & Bonn (2006). Genitalia were prepared by dissecting the genitalia complex into a concentrated solution of KOH for about 5 hours. The figures of genitalia and parts of body were compiled using a highly sensitive QIMAGING Retiga 4000R digital camera (CCD) and Auto-montage imaging software. The body was photographed with a Nikon D100 using a Micro-Nikkor 105 mm macro lens.

Abbreviations: BL body length, PL pronotum length, PW pronotum width, FWL fore wing length, HLL hind leg length, CL cerci length, SAL length of stridulatory area (harp), SAW width of stridulatory area, SFL length of stridulatory file; NST number of stridulatory teeth; c1 cell one of tegmen, c2 cell two; ep. epiphallus, ip. internal process of ectophallus parameres, pa. parameres of ectophallus, tr. transversal sclerite.