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## Notes on the genus *Napialus* Chu & Wang (Lepidoptera: Hepialidae), with description of a new species from China

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### Abstract

*Napialus spinosus* Li & Wei, **sp. nov.** is described as new based on a male specimen collected in Jiangxi Province of China. Image of the adult, illustrations of the antenna, venation, and eighth abdominal segment as well as male genitalia are presented. A species checklist and key to the species of *Napialus* are provided and the known distribution of each species is mapped with respect to temperature gradients.

**Key words:** taxonomy, morphology, Oriental Region

### Introduction

The Hepialid moths of China, comprising nine genera, occur in southern and western China, except for *Phassus sinensis* Moore, *P. excrescens* (Bulter) and *Hepialus macilentus* Eversmann whose distribution extends to northeastern China (Chu 1984; Chu & Wang 1985a, 1985b; Chu *et al.* 2004; Grehan 2011). The genus *Napialus* Chu & Wang, 1985, type species *Napialus hunanensis* Chu & Wang, 1985, can be recognized by the flagellum of antennae devoid of scales, posteriorly dark, the R<sub>2</sub>+R<sub>3</sub> forked and pointed farther than one fifth length of wing from termen, and the well-developed pseudotegumen posteriorly with a pair of strongly sclerotized pseudoteguminal processes in the male genitalia. The genus comprising four described species and is endemic to China (Chu & Wang 1985a; Wu 1992; Chu, Wang & Han 2004). The present paper adds a fifth species, *Napialus spinosus* Li & Wei, **sp. nov.** to the genus. A checklist and a key to all the known species are presented, along with a map showing the distribution of these species.

### Material and methods

This study is based on the examination of thirteen specimens collected in Tongbo Hill in the northeastern Jiangxi Province of China at an overnight mercury-vapour light between 27th April and 4th May of 2012, according to the methods introduced by Landry and Landry (1994). Most of these specimens were *N. chenzhouensis*. However, upon close examination, one specimen proved to represent a distinct species, described as new below.

Terms for morphological structures follow Grehan (2012) and Mielke & Casagrande (2013). Genitalia was prepared and mounted following Li (2002). The map was made using DIVA-GIS (Hijmans *et al.* 2005a) based on temperature gradients of mean minimum temperature of the coldest month (January) in China of the year (Hijmans *et al.* 2004, 2005b). The type specimen is deposited in the Insect Museum, Jiangxi Agricultural University, Nanchang, China (JXAUM).

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