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## Taxonomic review of *Tapiena* (Orthoptera: Phaneropteridae: Phaneropterinae), with key to species and new species from Thailand

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### Abstract

The genus *Tapiena* (Orthoptera: Phaneropteridae: Phaneropterinae), consisting of species from around Asia and Africa, is reviewed. Henningian species concept was applied and morphology was used to estimate species boundaries. From Sakaerat Environmental Research Station, Thailand, two new species are described: *Tapiena sakaerat* **Tan, Liu, Artchawakom sp. n.** and *Tapiena denticulata* **Tan, Liu, Artchawakom sp. n.** This represents the first record of the genus *Tapiena* in Thailand. A key to the species of *Tapiena* (for males only) is also provided.

**Key words:** Phaneropterinae, *Tapiena*, new species, key, Thailand

### Introduction

The genus *Tapiena* Bolívar, 1906 (Orthoptera: Phaneropteridae: Phaneropterinae) belongs to the tribe Holochlorini. *Tapiena* currently consists of 26 species: one from Africa, three from India, ten from China and 12 from Southeast Asia (Eades *et al.*, 2014). This genus received little taxonomic attention until recently. Taxonomic activity has focused on species from China (Liu & Kang, 2007, 2010; Kang *et al.*, 2014). Here, *Tapiena* is reviewed. Recent collections in Thailand led to the discovery of two species previously undescribed: *Tapiena sakaerat* **Tan, Liu, Artchawakom sp. nov.** and *Tapiena denticulata* **Tan, Liu, Artchawakom sp. nov.** This also represents the first record of the genus from Thailand. The Henningian species concept was applied and morphology was used to determine the species. Examination of other species revealed that *Tapiena pardalis* (Walker, 1869) from India and *Tapiena chelicerca* Karny, 1931 from Sulawesi may be incorrectly placed in *Tapiena*. Finally, a key to the species of *Tapiena* (for males only) is also provided.

### Material and methods

Opportunistic collection, sweep-netting and light-trapping were carried out by MKT in the dry evergreen forest and dry dipterocarp forest of Sakaerat Environmental Research Station, Nakhon Ratchasima, Thailand. Photographic images were made using the Visionary Digital System. Scales given with the images are approximate as the image taken with different equipment had to be adapted to size. Specimens were preserved by drying and pinning. Measurements of specimens were made using a 0.05 mm vernier caliper.

In the measurements, the following abbreviations are used: BL = body length; BWL = body with wing length; PL = pronotum length; PW = pronotum width; TL = tegmen length; HWT = hind wing tail length (part of hind wing surpassing tegmen); HFL = hind femur length; HTL = hind tibia length.

Depositories: ZRC—Zoological Reference Collection, Lee Kong Chian Natural History Museum (former Raffles Museum of Biodiversity Research), National University of Singapore.

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