



## Taxonomic study of the genus *Myrmarachne* of Borneo (Araneae: Salticidae)

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### Abstract

Twenty-two species of the genus *Myrmarachne* are reported from Borneo in the present study. Among those, eight are new to science, *M. acromegalis* **sp. nov.**, *M. alticephalon* **sp. nov.**, *M. brevicelicera* **sp. nov.**, *M. crassebolus* **sp. nov.**, *M. cyrtodens* **sp. nov.**, *M. endoi* **sp. nov.**, *M. lambirensis* **sp. nov.** and *M. sabahna* **sp. nov.** The following synonymies are proposed: *Myrmarachne topali* Żabka, 1985 **syn. nov.** as a junior synonym of *M. hanoi* Żabka, 1985, *M. gigantea* Żabka, 1985 **syn. nov.** as a junior synonym of *M. maxillosa* (C. L. Koch, 1846). The females of *M. assimilis* Banks, 1930, *M. biseratensis* Badcock, 1918, *M. gedongensis* Badcock, 1918, *M. markaha* Barrion & Litsinger, 1995 and *M. shelfordii* Peckham & Peckham, 1907 are described for the first time.

**Key words:** Ant-mimicking jumping spiders, new species, Southeast Asia

### Introduction

Due to Batesian mimicry (Cushing 1997, 2012; McIver & Stonedahl 1993), *Myrmarachne* species resemble ants both in morphology and behaviour. The evolutionary advantages of ant-mimicry are well studied (Huang *et al.* 2011; Nelson & Jackson 2006a, 2006b, 2009a, 2009b; Nelson *et al.* 2005). *Myrmarachne* has diversified in tropical Africa, Southeast Asia and Australia, and more than 200 species are recorded from the world (Platnick 2012; Prószyński 2012). Although about 130 species have been described in South and Southeast Asia, local faunas are not sufficiently studied. From Borneo, the third largest island in the world, only four species have been described until now (Peckham & Peckham 1907; Prószyński, 2001; Edwards & Benjamin 2009). In the present paper, we describe eight new species, and redescribe fourteen species except for *Myrmarachne christae* because we could not obtain proper specimens of the species for redescription.

### Materials and methods

Specimens were collected in Borneo, mainly sites in Sabah, and from Limber Hills National Park, Sarawak. Additional specimens for comparison with Bornean specimens were collected from throughout Southeast Asia. Specimens were studied under a Nikon SMZ 1000 and LEICA M165C microscopes, at Kagoshima University (Japan) and Universiti Malaysia Sabah (Malaysia). To observe the detailed structures of the female epigynes, they were detached from the bodies, cleared in 10% KOH solution at room temperature for approximately twenty fours. Drawings were made using a camera lucida attached to the Nikon SMZ 1000 stereomicroscope. For pictures of the epigyne, multi-focused montage images were produced using Helicon 4.75 Pro from a series of source images taken by a Canon EOS Kiss x4 digital camera attached to a Nikon ECLIPSE E600 microscope.

Type material was borrowed from the following institutions: Museo Civico di Storia Naturale, Genova (**MSNG**); Museum of Comparative Zoology, Harvard University (**MCZ**); Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw (**MIZ**). We also examined some type specimens at the Natural History Museum, London (**BMNH**). Type materials designated in the present study are mainly deposited in the Institute for Tropical