



## Three new species of the oonopid spider genus *Ischnothyreus* (Araneae: Oonopidae) from Tioman Island (Malaysia)

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### Abstract

Three new species of the genus *Ischnothyreus* (*I. tioman*, *I. tekek* and *I. namo*) are described from Tioman Island off the eastern coast of Peninsular Malaysia. Two of the described species show peculiar cheliceral modifications that are discussed with respect to similar structures found in other families.

**Key words:** taxonomy, systematics, morphology, Asia

### Introduction

With currently 755 described species in 83 genera (Platnick 2011), goblin spiders (Oonopidae) are an extremely diverse spider family. Most of them are ground-dwellers and live in litter or under bark, but some species are also found in the tree canopy (Fannes *et al.* 2008). They are small (0.5–4.0 mm), haplogyne, usually six-eyed spiders, and are most diverse in the tropical and subtropical regions of the world (Jocqué & Dippenaar-Schoeman 2006). The genus *Ischnothyreus*, established by Simon in 1893, currently comprises 41 species. Occurring worldwide, the genus is most abundant in the Oriental region (Platnick 2011). Recently, 17 new species were reported from Borneo (Kranz-Baltensperger 2011). The genus is also present in Australia (Edward & Harvey 2009). Males of *Ischnothyreus* have strongly sclerotized palps and modified endites, the females can be recognized by the winding genital tube.

In this contribution three new species of *Ischnothyreus* are described from Tioman Island, a small island close to mainland Malaysia (Fig. 7). This is the first record of *Ischnothyreus* from Tioman. Two of the newly described species show peculiar cheliceral modifications, hitherto not recorded for this genus. The present paper is part of a world-wide revision of the family Oonopidae, “The Goblin Spider PBI” Project (<http://research.amnh.org/oonopidae/>).

### Material and methods

The specimens were collected on the island of Tioman between 2001 and 2007 and are deposited in the Muséum d’histoire naturelle de la Ville de Genève, Switzerland (MHNG).

Specimens were examined with a Leica MZ16 stereomicroscope. Details were studied with a Zeiss Axioplan 2 compound microscope. For drawings and photographs, male palps and female genitalia were embedded in Hoyer’s mixture (Kraus 1984), slide-mounted, and allowed to dry for at least 12 hours under room conditions. Drawings were made on wrinkle paper using a technical pen for lines and a Staedtler Omnichrom 108–9 liner for shading (Kraus 1968). Images of genitalia were taken with an Axio Cam Mrcs using Axio Vision Rel. 4.6 software. Images of somatic features were taken with a JVC digital camera KY-F70B and Leica DFC 420, using automontage software. Illustrations were finished with Adobe Photoshop CS4, the plates were composed with Adobe InDesign CS4. The online data matrix of the Planetary Biodiversity Inventory of goblin spiders (PBI) was used for species descriptions (<http://research.amnh.org/oonopidae/>). *I. tioman* is described first; the other descriptions mention only