



Two new species and taxonomic notes on the Neotropical spiny orb-weaving spiders *Micrathena* and *Chaetacis* (Araneae: Araneidae), with remarks on the development of *Micrathena excavata*

IVAN L. F. MAGALHÃES¹ & ADALBERTO J. SANTOS²

Departamento de Zoologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais. Av. Antônio Carlos 6627, 31270-901, Belo Horizonte, MG, Brazil.

E-mail: ¹ivanlfmagalhaes@yahoo.com.br; ²oxyopes@yahoo.com

Abstract

In this paper, *M. yanomami* n. sp., from Brazilian Amazonia, *Chaetacis bandeirante* n. sp., from Central Brazil, and the males of *M. gaujoni* Simon, 1897 and *M. ruschii* (Mello-Leitão, 1945) n. comb., respectively from Ecuador and Brazil, are described and illustrated for the first time. An ontogenetic series of the last development stages of both sexes of *Micrathena excavata* (C. L. Koch, 1836) is illustrated and briefly described. Adult females are larger and have longer legs and larger abdomens than adult males. Probably females undergo at least one additional moult before adulthood, compared to males. *Micrathena ornata* Mello-Leitão, 1932 is considered a junior synonym of *M. plana* (C. L. Koch, 1836), and *M. mastonota* Mello-Leitão 1940 is synonymized with *M. horrida* (Taczanowski, 1873). *Acrosoma ruschii* Mello-Leitão, 1945 is revalidated, transferred to *Micrathena* and considered a senior synonym of *M. cicuta* Gonzaga & Santos, 2004. *Chaetacis necopinata* (Chickering, 1960) is recorded for Brazil for the first time. *Chaetacis incisa* (Walckenaer, 1841) is considered a *nomen dubium*.

Key words: taxonomy, Brazil, ontogenetic series, sexual dimorphism, abdominal spines

Introduction

The spiny orb-weaving spider genera *Chaetacis* Simon, 1895 and *Micrathena* Sundevall, 1833, currently with 10 and 105 species respectively (Platnick 2011), are predominantly Neotropical, with only three species of the latter occurring as far as the northeastern United States (Levi 1985), and considered to be sister taxa (Scharff & Coddington 1997). *Micrathena* includes some of the most common and well-studied New World orb-weavers, with special reference to *M. gracilis* (Walckenaer), which has been used as a model for physiological (Bukowski & Christenson 1997a), natural history (Bukowski & Christenson 1997b), behavioral (Uetz & Hartsock 1987) and ecological (Vanderhoff *et al.* 2008) studies, among others. Both genera are usually found in forests and woodlands and are well-known for the presence of abdominal spines in females and their often bright, eye-catching coloration (Levi 1985).

As most American araneid genera, *Micrathena* and *Chaetacis* have been subject of an exhaustive revisionary work by Levi (1985). Since then, the taxonomy of *Chaetacis* has remained untouched, while that of *Micrathena* has received attention sporadically, with papers such as the description of males of three species previously known only from females (Bonaldo 1990; Lise 1995; Nogueira & Brescovit in press), a new synonymy at the genus level (Scharff 1991) and a new synonymy at the species level and the description of a single new species (Gonzaga & Santos 2004).

Micrathena and *Chaetacis* are also well-known for the marked differences between males and females in body size and in general morphology, and both genera have been included in studies about the evolution of sexual dimorphism (see Elgar *et al.* 1990; Hormiga *et al.* 2000). Levi (1985: 444) stated that “it would be instructive to raise young [*Micrathena*] from different species groups from egg-sacs” to understand how males differentiate from females over the course of several instars. Despite that, little has been done on describing ontogenetic series of *Micrathena* species; hence, in this paper we illustrate and describe part of the ontogenetic series of *M. excavata* (C. L. Koch, 1836) to try to improve the knowledge of the basic biology of these organisms.