



On the male of the orb weaving spider *Micrathena cyanospina* (Lucas, 1835) (Araneidae, Araneae)

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Most species of spiders exhibit some degree sexual size dimorphism (SSD). Females are usually larger than males, about 20% on average (Vollrath 1998), although this difference can be much larger. By convention, species in which the adult males are half or less of the adult female size are considered sexually dimorphic, some representing cases of extreme SSD (Hormiga *et al.* 2000). It is worth mentioning that although males are called dwarfs, large SSD is often a consequence of female gigantism rather than male dwarfism (Hormiga *et al.* 2000).

While *Nephila* and their relatives represent one of the most familiar examples of this phenomenon, it is also frequent within the family Araneidae, which also presents some of the most extreme cases of SSD (Head 1995, Vollrath 1998, Hormiga *et al.* 2000). One of the consequences of extreme SSD is that for many species only females are known, as males are often overlooked by collectors and thus they remain undescribed. For example, the proportion of species known only from females is larger in genera characterized by extreme sexual size dimorphism, like *Mastophora* (50 spp. described, 62% based only in females), *Cyrtophora* (46 spp., 67% only females), and *Gasteracantha* (99 spp., 79% only females), than in genera where SSD is not so pronounced, as *Eriophora* (19 spp., 10.5% only females), *Parawixia* (31 spp., 26% only females), and *Wagneriana* (41 spp., 22% only females) (Platnick 2010).

We describe here the minute male of the exotic species *Micrathena cyanospina* (Lucas 1835). The genus *Micrathena* Sundevall 1833 has currently 105 described species (Platnick 2010) and was recently revised by Levi (1985). They are diurnal, orb-weaving spiders, occurring exclusively in forested habitats, and have a Neotropical distribution, with four species reaching southern states of the USA (Levi 1985). Females are showy spiders, since most species possess a colorful abdomen armed with at least one pair of large “spines.” Males have darker coloration and are much smaller and lightly built, usually with an unarmed abdomen. Although they are not considered dwarfs, since their body length usually exceeds 50% of the length of the female, they are much less conspicuous. Females of *Micrathena cyanospina* are characterized by a large size (10–11.7 mm) and stands out by having an unusually long pair of spines, reaching two to three times the length of the body (Fig. 6). We are associating the males of *Micrathena* that we are describing with *M. cyanospina* for two reasons. First, a male and a female of this species were collected together during the day using a beating tray. Although it may not constitute a direct evidence of co-specificity, it certainly provides robust support for it, as it is well known that adult males are often found adjacent to the female’s web (Robinson & Robinson 1980). Second, it belongs to the same *Micrathena* species group, the *militaris* group (Levi 1985) characterized by the lack of stridulating ridges on the book-lung covers and by the modified palpal tibia of the males, with lobes on its distal margins. Species of the *spinosa* group also share these characters, but all the males of this sister group have a trapezoidal abdomen, unlike our specimens.

We collected our study specimens during two sampling expeditions to mountain regions located at the north of Brazilian Amazonia (Amazonas state, Brazil), the Serra do Tapirapecó and the Pico da Neblina (for more details on the sampling location and collecting methods, see Nogueira *et al.* 2011).

The description format follows Levi (1985). All measurements are in millimeters. The specimens are deposited in the following collections (abbreviations and curators in parenthesis): Instituto Nacional de Pesquisas da Amazônia, Amazonas (INPA, A. Henriques), Instituto Butantan, São Paulo (IBSP, I. Knysak).