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A new genus and two new species of Opilioacaridae (Acari: Parasitiformes) from Amazonia, Brazil with a key to world genera

MA. MAGDALENA VÁZQUEZ[1], MARCEL SANTOS DE ARAÚJO[2] & REINALDO JOSÉ FAZZIO FERES[3]

[1]*University of Quintana Roo, Division de Ciencias e Ingenierias, Chetumal, Quintana Roo, Mexico. E-mail: marvazqu@uqroo.mx*
[2]*Programa de Pós-Graduação em Biologia Animal, Departamento de Zoologia e Botânica, IBILCE, Universidade Estadual Paulista (UNESP) Rua Cristóvão Colombo 2265, CEP 15054-000, São José do Rio Preto, SP, Brazil. E-mail: marcelsantosa@gmail.com*
[3]*Departamento de Zoologia e Botânica, Instituto de Biociências, Letras e Ciências Exatas (IBILCE), Universidade Estadual Paulista (UNESP), Rua Cristóvão Colombo 2265, São José do Rio Preto CEP 15054-000, Brazil. E-mail: reinaldo@ibilce.unesp.br*

Abstract

Collections of Opilioacaridae made close to 50 years ago in Manaus in the Amazonian Region have allowed the description of a new genus and two new species from Brazil, *Amazonacarus setosus* n.gen, n.sp. and *A. paraensis* n.gen, n.sp. These species show a unique combination of characters in the Opilioacaridae: a high number of foliate setae (10) on the palp tarsus with each seta bearing many lobes (6–7), a group of large, serrate setae (26–31) on the palp tibia (this group of setae is much smaller in other species), and 5–7 dorsal setae on idiosomal segment XVIII. *Indiacarus* and some *Opilioacarus* show 3–5 setae on segment XVIII, but these genera (and *Caribeacarus*) have fewer foliate setae on the palp (3–4). Females of *Amazonacarus* have an ovipositor of the "complex" type, with spiny projections and 2–4 genital setae, while males have two pairs of rounded, large glands.

Key words: Amazonia, Opilioacaridae, Brazil, new genus, new species

Introduction

The suborder Opilioacarida is considered one of the most ancient groups among the living Parasitiformes (Grandjean 1936; Krantz & Walter 2009). They retain primitive aspects shared with other arachnid groups. For example, they moult even as adults and can regenerate lost legs in 15 to 20 days (Coineau & Legendre 1975; Vázquez & Palacios-Vargas 1989).

Recent taxonomic studies have enriched the knowledge of their world diversity as well as the habitats they occupy, with material collected in regions with very high biodiversity such as México (Vázquez & Klompen 2002, 2009) and Madagascar (Vázquez & Klompen 2010). Of 11 genera currently described, two are restricted to the New World, *Neocarus* Chamberlin & Mulaik and *Caribeacarus* Vázquez & Klompen.

Brazil has an exceptional diversity of plants and animals (Lewinsohn & Prado 2005), but the species richness, biodiversity and geographic distribution of some groups are still unknown (Lewinsohn *et al*. 2005). This is the case with the Opilioacaridae, a group poorly known in Brazil.

The first opilioacarid registered in Brazil was *Neocarus platensis* Silvestri (Hammen 1969). There are other records (Schuster 1969; Moraes & Flechtmann 2008), but these are not accompanied by descriptions. Recently, two new species from this region were described, *Neocarus potiguar* Bernardi *et al*. 2012 and *Caribeacarus brasiliensis* Bernardi *et al*. 2013.

During investigations of the soil mite fauna, we found specimens with a unique combination of characters, allowing the description of two new species belonging to a new genus.

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TABLE 1. Number of setae on the different stages for species of *Amazonacarus* **n. gen**.

	sternal papillae	sternitogenital region	genital verrucae	pregenital area	genital area	preanal segment
Amazonacarus setosus **n. sp.**						
females	3 + 1	3 + 1	3 + 1	-	-	5 - 6
males	3 + 1	3 + 1	3 + 1	4-5	5-7	4
tritonymph	2 + 1	3 + 1	3 + 1	-	-	4
deutonymph	2-3 + 1	3 + 1	2 + 1	-	-	3
Amazonacarus paraensis **n. sp.**						
females	2-3 + 1	3 + 1	4-3 + 1	-	-	6
males	2-3 + 1	3 + 1	3 + 1	7-15	12-15	4
tritonymph	3 + 1	3 + 1	3 + 1	-	2*	3
deutonymph	2 + 1	3 + 1	2-3 + 1	-	-	3

TABLE 1. (Continued)

	anal valves	trochanter chelicera	median cheliceral segment	circumbuccal setae	hypostomal setae	eugenital setae
Amazonacarus setosus **n. sp.**						
females	12/12	1	3	4	14 - 15	2
males	8/8	1	3	4	10 - 11	-
tritonymph	8/8	1	3	4	10	-
deutonymph	8/8	1	3	4	6 - 7	-
Amazonacarus paraensis **n. sp.**						
females	12/12	1	3	4	14	4
males	9/9	1	3	4	12	-
tritonymph	8/8	1	3	4	10 - 11	-
deutonymph	6/7	1	3	4	6	-

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