



A new species of *Neocarus* Chamberlin & Mulaik, 1942 (Acari: Opilioacarida) from Brazilian caves and karst areas

LEOPOLDO FERREIRA DE OLIVEIRA BERNARDI¹, MAURICIO SERGIO ZACARIAS²
& RODRIGO LOPES FERREIRA³

¹Pós-Graduação – Ecologia Aplicada, bolsista CAPES, UFLA, Lavras. E-mail: leopoldobernardi@yahoo.com.br

²Embrapa Café/EPAMIG – Lavras, MG. E-mail: zacarias@epamig.ufla.br

³Laboratório de Ecologia Subterrânea, Setor de Zoologia/Departamento de Biologia, UFLA, Lavras. E-mail: drops@ufla.br

Abstract

A new species of the genus *Neocarus*, *Neocarus potiguar* n. sp., is described from caves and the epigeal environment of the Apodi Carbonatic Group, northeast Brazil. This new species is distinguished by the presence of smooth setae on the basal portion of the evaginated ovipositor, 25–27 *ch*-type setae on the palp tarsus and one (rarely two) setae on the pregenital area of the adult female.

Key words: Parasitiformes, Opilioacaridae, Brazil, Taxonomy.

Introduction

The order Opilioacarida conserves many morphological aspects that make it the most primitive group among the living Acari (Grandjean 1936; Walter & Harvey 2009). This order is one of the smallest of the acarine groups, yet is widely distributed throughout tropical and temperate zones of the world. Eight of its ten known genera are present in the Old World, and only two, the genera *Neocarus* and *Caribeacarus*, are found in the Americas (Vázquez & Klompen 2002; Vázquez & Klompen 2009).

In South America, two species are recorded: *Neocarus ojasii* Lehtinen, 1980 from Venezuela, and *Neocarus platensis* (Silvestri 1905) from southern Brazil, Uruguay and Northern Argentina (Silvestri 1905; Van der Hammen 1969; Lehtinen 1980; Leclerc 1989). However, the genus *Neocarus* in Brazil is represented by numerous undescribed species, distributed throughout all regions of the country (Vázquez & Klompen 2002; Bernardi *et al.* 2009). Herein, we take a step towards improved knowledge of the Brazilian *Neocarus* fauna, by describing a species from northeastern Brazil.

Material and methods

Study area. The specimens examined in this work came from collections conducted in karst areas (epigeal and hypogean environments) located in Rio Grande do Norte state (Fig. 1). All collection localities are from a limestone formation called the Apodi group. Most of the area is covered by limestone outcrops locally called “lajedos”. Such formations embrace several caves, with an extraordinary subterranean biodiversity (Ferreira *et al.* 2010).

The region is under the domain of an exclusively Brazilian biome, called Caatinga. It is a warm area, characterized by a semi-arid climate, where rainfall is concentrated in a few months of the year, resulting in long drought periods (Rizzini 1976). Its average annual precipitation is around 800 mm, concentrated mainly between the months of October and May, and the average annual temperature is 28 °C (Fig. 1).

Methods. All specimens were collected with the aid of a brush and stored in vials of 70% alcohol. Most material was studied as slide-mounted specimens. For this purpose, specimens were cleared in Nesbitt's solution, dis-