



<http://dx.doi.org/10.11646/zootaxa.3709.2.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:18F7293F-E21A-4386-8DBC-5807A0A42BEF>

## Description of the male, larva and nymphal stages of *Cryptocellus iaci* (Arachnida, Ricinulei), with an overview of tarsal sensilla and other integumental structures

LIDIANNE SALVATIERRA<sup>1</sup>, ANA LÚCIA TOURINHO<sup>1,3</sup> & GONZALO GIRIBET<sup>2</sup>

<sup>1</sup>Instituto Nacional de Pesquisas da Amazônia, Coordenação de Biodiversidade (CBIO), Programa de Pós-Graduação em Entomologia, INPA, Avenida André Araújo, 2936, Aleixo, CEP 69011-970, Cx. Postal 478, Manaus, Amazonas, Brazil.

E-mail: [lidiannetrigueiro@gmail.com](mailto:lidiannetrigueiro@gmail.com); [amtourinho@gmail.com](mailto:amtourinho@gmail.com)

<sup>2</sup>Museum of Comparative Zoology, Department of Organismic and Evolutionary Biology, Harvard University, 26 Oxford Street, Cambridge, Massachusetts 02138, USA. E-mail: [ggiribet@g.harvard.edu](mailto:ggiribet@g.harvard.edu)

<sup>3</sup>Corresponding author. E-mail: [amtourinho@gmail.com](mailto:amtourinho@gmail.com)

### Abstract

The male, larva and nymphal stages of *Cryptocellus iaci* Tourinho, Lo Man-Hung & Bonaldo, 2010, a species previously known only from a single female, are described based on specimens from around the type locality, in an area of both Terra Firme forest and igapó (flooded forests), at the Jufari River, Roraima State, Brazil. The specimens were illustrated using live photography, stereomicroscopy, and scanning electron microscopy, allowing us to examine and describe the large diversity of tarsal sensilla and other integumental structures in *Cryptocellus* and to compare them to those of the previously studied *Pseudocellus*. Based on the male somatic characters *Cryptocellus iaci* is placed in the *foedus* species-group. *Cryptocellus iaci* has two sensilla of type 1 on the distal tarsomeres of legs III (DT III), while only one has been reported for *Pseudocellus* spp., suggesting a potential value in this type of character for systematic studies of the group.

**Key words:** Brazil, Amazon forest, Rio Negro, taxonomy, Ricinoididae

### Resumo

O macho, larva e estágios ninfais de *Cryptocellus iaci* Tourinho, Lo Man-Hung & Bonaldo, 2010, espécie previamente conhecida apenas pela fêmea, são descritos baseados em espécimes coletados próximos a localidade tipo, em áreas de Terra Firme e igapó (floresta inundada), no rio Jufari, Roraima, Brasil. Os espécimes foram ilustrados usando fotos dos animais ainda vivos, de estereomicroscopia e microscopia eletrônica de varredura, permitindo examinar e descrever a grande diversidade de cerdas tarsais e estruturas tegumentares em *Cryptocellus* e compará-las com as estruturas já estudadas em *Pseudocellus*. Baseado nos caracteres somáticos do macho, *Cryptocellus iaci* é alocada no grupo de espécies *foedus*. *Cryptocellus iaci* possui duas cerdas do tipo 1 nos tarsômeros distais da perna III (TD III), enquanto apenas uma cerda foi encontrada em *Pseudocellus* spp., o que sugere o valor potencial destes caracteres para estudos de sistemática do grupo.

### Introduction

Ricinulei, one of the smallest arachnid orders, includes 75 living species (Harvey 2003; Pinto-da-Rocha & Andrade 2012; Valdez-Mondragón & Francke 2011; Valdez-Mondragón & Francke 2013) in three genera: *Ricinoides* Ewing, 1929, with 11 species endemic to West Africa (Ewing 1929), and the New World genera *Cryptocellus* Westwood, 1874 and *Pseudocellus* Platnick, 1980, with 37 and 27 named species, respectively.

Brazil is home to a single genus, *Cryptocellus*, with ten species from Amazonia: *C. abaporu* Bonaldo & Pinto-da-Rocha, 2003, *C. adisi* Platnick, 1988, *C. becki* Platnick & Shadab, 1977, *C. conori* Tourinho & Saturnino, 2010, *C. foedus* Westwood, 1874, *C. iaci* Tourinho, Lo Man-Hung & Bonaldo, 2010, *C. icamiabas* Tourinho & Azevedo, 2007, *C. simonis* Hansen & Sørensen, 1904, *C. tarsilae* Pinto-da-Rocha & Bonaldo 2007, and *C. canga* Pinto-da-