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Two new troglobitic *Newportia* (*Newportia*) from Brazil (Chilopoda: Scolopendromorpha)

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Abstract

Newportia (*Newportia*) *spelaea* **n. sp.** and *Newportia* (*N.*) *potiguar* **n. sp.** are here described from Bahia and Rio Grande do Norte State, respectively. These two species show highly troglomorphic traits, such as elongation of antennae, legs, ultimate legs, tergites, pronounced depigmentation and reduced sclerotization of the cuticle. Both species occur in caves located in a semi-arid biome (Caatinga) and can be considered troglobites.

Key words: *Newportia*, troglobites, new species, Brazil, Caatinga

Introduction

The genus *Newportia* Gervais, 1847 belonging to Newportiinae Pocock, 1896, is the most diverse genus of the Scolopocryptopidae. The genus is subdivided into four subgenera: *Newportia* Gervais, 1847, *Ectonocryptops* Crabill, 1977, *Ectonocryptoides* Shelley & Mercurio, 2005 and *Tidops* Chamberlin, 1915 with more than 60 species occurring throughout the Neotropics (Vahtera *et al*. 2013).

In Brazil, there are 14 species and 2 subspecies of *Newportia*: *N*. (*N*.) *adisi* Schileyko & Minelli, 1998, from Amazonas (Manaus) and Pará (Melgaço); *N*. (*N*.) *amazonica* Brölemann, 1905, from Amazonas (Manaus) and Pará (Santarém); *N*. (*N*.) *aureana* Bücherl, 1942, from Pará (Aurá) and Mato Grosso (Aragarcas); *N*. (*N*.) *brevipes* Pocock, 1891, from Pará (Aurá and Parauapebas) and Amazonas (Manaus); *N*. (*N*.) *ernsti ernsti* Pocock, 1891, from Pará (Aurá, Parauapebas and Melgaço), Amazonas (Manaus), Mato Grosso and Pernambuco; *N*. (*N*.) *ernsti fossulata* Bücherl, 1942, from Amazonas (Manaus), Pará (Aurá) and Mato Grosso (Nova Xavantina); *N*. (*N*.) *lasia* Chamberlin, 1921, from Amazonas (Manaus); *N*. (*N*.) *longitarsis longitarsis* (Newport, 1845), from Amazonas (Manaus); *N*. (*N*.) *longitarsis sylvae* Chamberlin, 1914, from Rondônia and Mato Grosso; *N*. (*N*.) *maxima* Bücherl, 1942, from Pará (Aurá) and Tocantins (Ilha do Bananal); *N*. (*N*.) *monticola* Pocock, 1890, from Amazonas (Manaus and Irandula); *N*. (*N*.) *paraensis* Chamberlin, 1914, from Pará (Belém); *N*. (*N*.) *patavina* Schileyko & Minelli, 1998, from Amazonas (Manaus); *N*. (*N*.) *pusilla* Pocock, 1893, from Amazonas (Manaus); *N*. (*N*.) *stolli* (Pocock 1896), from Amazonas (Manaus) and Pará (Fazenda Velha); *N*. (*N*.) *weyrauchi weyrauchi* Chamberlin, 1955, from Amazonas (Manaus) (Schileyko & Minelli 1998, Schileyko 2002).

The vast majority of the species in this genus are epigean, though there are two known troglobitic species (strict cave-dwellers) in the Neotropics: *N*. (*N*.) *troglobia* Chagas-Júnior & Shelley, 2003 from Mexico and *N*. (*N*.) *stoevi* Schileyko, 2013 from Puerto Rico. Although the concept of "troglobite" is an ecological-evolutionary approach (troglobites are those species not found outside caves), there are some difficulties in deciding this, since one should ensure that a species does not occur outside caves or other subterranean domains. This is especially difficult in tropical regions, due to the huge diversity observed in epigean environments, making it difficult to have knowledge of such diversity. An alternative and frequently used "tool" to help in these diagnoses is the troglomorphic traits, frequently observed in troglobitic species (Christiansen 1962). Such morphological

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TABLE 1. Some measurements (in mm) and ratios for troglobitic species of *Newportia* (*Newportia*). Measurements of *N*. (*N*.) *stoevi* according Schileyko, 2013 and *N*. (*N*.) *troglobia* according Chagas-Júnior & Shelley, 2003.

	N. (*N*.) *stoevi*	*N*. (*N*.) *troglobia*	*N*. (*N*.) *spelaea* **sp. n.**	*N*. (*N*.) *potiguar* **sp. n.**
Length of body	17.0	40	19	28 (22)*
Length of ul.	9.0	19	10	14.4 (11)
Body/length of ul.	1.8	2.1	1.9	1.9 (2)
Length of legs/wt	2	4	3	2 (2)
Antenna reach	5th tergite	6th tergite	8th tergite	5th (6th) tergite

*in parentheses, condition of paratype; ul.: ultimate legs; wt.: width of tergites.

Newportia (*N*.) *potiguar* and *Newportia* (*N*.) *spelaea* occur in the Caatinga Biome (northeastern Brazil). The latter species inhabits a cave that is a hotspot of subterranean biodiversity in Brazil, having a large number of troglobitic species. Prior to 2008, caves in Brazil were protected by law but currently a new legislation (Decree Law No. 6.640/2008) allows that caves can even be destroyed. To ensure the protection of caves it is necessary to prove the occurrence of at least one rare troglobitic species. Thus, the description of the new troglobitic taxa, besides improving the knowledge of this genus, raises the relevant status of the caves and contributes to the protection of these habitats which also harbor other important species.

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