



Conference Abstract

Spatial distribution and population data of cave millipedes, genus *Pseudonannolene* Silvestri, 1895 (Diplopoda, Spirostreptida) from Brazil

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Received: 01 Oct 2018 | Published: 02 Oct 2018

Citation: Gallo JS, Bichuette ME (2018) Spatial distribution and population data of cave millipedes, genus *Pseudonannolene* Silvestri, 1895 (Diplopoda, Spirostreptida) from Brazil. ARPHA Conference Abstracts 1: e30225. <https://doi.org/10.3897/aca.1.e30225>

Abstract

Millipedes are widely found inside caves, where they are favoured by the darkness and the high humidity. Despite this, no population studies focusing their distribution along environmental gradients have been done so far. This study aimed to estimate the population density and spatial distribution of one troglomorphic species of *Pseudonannolene* from a cave located in southeast Brazil. The data were obtained through the visual census method through bases distributed in different zones and substrates along the cave. The population density varied from 0.07 ind.m⁻² (9 individuals) at the beginning of the dry season to 0.402 (37 individuals) at the beginning of the rainy season. In relation to zonation and substrate, the largest number of individuals was found in the twilight zone and in the soil and rocky substrates. The number of individuals captured was higher in samplings conducted early and middle rainy season, despite the effect of seasonality was marginally significant. The abundance was low in both environments (hypogean and epigean), corroborating that the low population density is an intrinsic characteristic of the group as a whole. The low population density of *Pseudonannolene* may be due to: 1) the low calcium content in the soil and, consequently, in the cave; 2) the effect of guano scarcity in the cave, since this is the main trophic resource for these millipedes in the subterranean environment;

and 3) the effect of seasonality, as it may be a consequence of the stress caused by theatypical drought of the last two years, so this population would be in recovery.

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Presented at

24th International Conference on Subterranean Biology

Acknowledgements

ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade); PPG-ERN (Programa de Pós-Graduação em Ecologia e Recursos Naturais); LES (Laboratório de Estudos Subterrâneos da UFSCar); CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico); FAPESP (Fundação de Amparo a Pesquisa do Estado de São Paulo); IP (International Paper)

Funding program

CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico); CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior); FAPESP (Fundação de Amparo a Pesquisa do Estado de São Paulo); IP (International Paper)

Hosting institution

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