



Conference Abstract

Radiation and ancestral range reconstruction of the cave beetle genus *Anthroherpon* (Coleoptera, Leiodidae, Leptodirini)

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Received: 30 Aug 2018 | Published: 04 Sep 2018

Citation: Njunjić I, Hendriks K, Schilthuizen M, Merckx V, Perreau M, Deharveng L (2018) Radiation and ancestral range reconstruction of the cave beetle genus *Anthroherpon* (Coleoptera, Leiodidae, Leptodirini). ARPHA Conference Abstracts 1: e29414. <https://doi.org/10.3897/aca.1.e29414>

Abstract

The genus *Anthroherpon* Reitter, 1889 is the most species-rich genus of the exclusively subterranean subtribe Anthroherponina. It comprises 26 species and 55 subspecies distributed in the Dinaric mountains which are known to be a world biodiversity hotspot for subterranean fauna. Most species are short-range endemics and more than half of the species are known only from a single cave, but the genus as a whole has a wide range. This study provides a comprehensive evolutionary analysis of the *Anthroherpon* radiation, using a dated molecular tree as a framework for understanding the diversification of the genus and reconstructing its ancestral range. We reconstructed the phylogeny of *Anthroherpon* using Bayesian analysis of six loci, both mitochondrial and nuclear, and we inferred the ancestral range of the genus using BioGeoBEARS. Our main findings show that *Anthroherpon* is monophyletic and started to diverge approximately in the Early Miocene (ca. 22 MYA). The genus has diversified entirely underground. Our results show that troglobitic lineages like *Anthroherpon* can disperse and diversify underground over a large geographic area during long periods of time. Biogeographic reconstruction of the

ancestral range shows the origin of the genus in the area comprising three high mountains in western Montenegro: Dobreljica, Moračke planine, and Orjen. From this area the presumed ancestor dispersed to the other parts of its present range.

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Presented at

24th International Conference on Subterranean Biology, Aveiro, Portugal

Hosting institution

University of Aveiro