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Conference Abstract

Hiding deep underground - two new subterranean beetle genera for Slovenia

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Abstract

By offsetting the discipline of speleobiology with the discovery of the first subterranean beetle *Leptodirus hochenwartii,* Slovenia became the country with the longest tradition of speleobiological research. Subterranean beetles have been an undepletable study subject for almost two centuries, giving the impression that not much novelty is expected in beetle fauna. However, recent discoveries of two new beetle genera for Slovenia, one of them even being a new genus for science, have put this view into a new perspective. With the development of caving techniques and growing interest for surveying deep vertical caves, also the intensity of speleobiological studies of these caves gradually increased. So, it was only in 2017, that the first specialized, hygropetric beetle, was found in Slovenia. In Southern part of the country, a sole female specimen from genus *Croatodirus* (fam. Leiodidae), probably belonging to a new species, was collected from a cave in Mt. Snežnik, at depth of 475 m. Second, in the same year, even more spectacular finding came from the Southern Calcareous Alps. During sampling of a cave on Mt. Raduha, a peculiar and highly troglomorphic Trechinae (fam. Carabidae) was found at depth 450 m, near the cave hygropetric. Thorough morphological examination of a single male collected revealed characters similar to the ones known in the Southern Dinaric *Scotoplanetes* - genus known to inhabit the cave hygropetric. However, when the newly discovered genus was put into Alpine Trechinae phylogenetic framework, its sister relation with a narrow-endemic genus *Aphaenopidius* was revealed. Such rare and occasional findings raise questions regarding

the completeness of our knowledge on alpha taxonomy and the mechanisms underlying convergent evolution in the subterranean realm.

Poster: Suppl. material 1

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Supplementary material

Suppl. material 1: Hiding deep underground - two new subterranean beetle genera for Slovenia doi

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