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Conference Abstract

What does sampling tell us about the ecology of troglofauna?

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Abstract

Little is known about the ecology of the troglofauna species occurring outside caves – which we term landscape troglofauna – because of the difficulties associated with viewing and sampling the habitats of these species. Some of the important information missing for most landscape species is as basic as the depth and substrate in which they occur. For example, does a particular species occur relatively close to the surface, over a range of depths or is it always found quite deep? Does the species use detritals, bedrock habitats or both? In addition to being important for understanding the structure and resilience of subterranean communities, this information is very useful for determining the likely impact of development projects on troglofauna species and their habitat. Because animals are difficult to collect, species ranges within a development site, and beyond it, are often inferred from the extent of their known habitat. In this talk, we address four issues relevant to the ecology and sampling of troglofauna. First, we examine whether troglofaunal capture rates can be related to season, antecedent rainfall or other factors. Second, we examine the effect on sampling yield of setting multiple troglofauna traps. Third, we examine the depths at which various groups of troglofauna mostly occur and check whether there is a match between depth of occurrence and assignment to troglophile or troglobiont categories. Finally we use results of troglofauna sampling in holes for which we have drill logs to we illustrate how knowledge about species' substrate types is used in environmental impact assessment. This work is a first step to improving our understanding of habitat preferences of troglofauna in Western Australia and some of the responses of

troglofauna to environmental variables. It is hoped the work will lead to the framing of more detailed studies.

Keywords

troglobiont, subterranean fauna, habitat, Western Australia

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