

Underground gourmet: Selected terrestrial cave invertebrates and their meal preferences

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A Trachysphaera costata millipede Credit: Prof. Jaroslav Smrz

Doubting whether terrestrial cave invertebrates feed on just anything they can find in the harsh food-wise environment underground, Dr. Jaroslav Smrz, from Charles University, Vinicna, and his international team conducted a research in Slovakian and Romania caves. They tested the hypothesis that these species have rather negligible selection of food. Their microanatomical research into the gut content of several microwhip scorpions, oribatid mites, millipedes, springtails and crustaceans showed, however, that there is an evident meal preference among the species.

The results confirmed that the studied groups can adapt and develop under the pressure of extreme environmental factors. Therefore, the researchers concluded a low level of food competition. The study is available in the *Subterranean Biology* open-access journal.

The scientists studied the cells and tissues of the selected [invertebrates](#) and found out that the gut contents were nearly identical between the representatives of each group. This was the case even when the specimens had been collected from various locations. For instance, all microwhip scorpions proved a preference for cyanobacteria, while the mites favored the bacteria found in bat guano and the millipedes - fungi.

"The limited food offer seems to be used very unambiguously and thoroughly by the invertebrate communities," the research team explained. "Therefore, the competition for [food](#) can be actually regarded as very low," they concluded.



A Eukoenenia spelaea microwhip scorpion. Credit: Prof. Jaroslav Smrz



A *Mesoniscus graniger* woodlice Credit: Prof. Jaroslav Smrz

More information: Smrz J, Kovac L, Mikes J, Sustr V, Lukesova A, Tajovsky K, Novakova A, Reznakova P (2015) Food sources of selected terrestrial cave arthropods. *Subterranean Biology* 16: 37-46. [DOI: 10.3897/subtbiol.16.8609](https://doi.org/10.3897/subtbiol.16.8609)

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