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The Effects of the Fungus *Beauveria sp.* on the Cave Cricket, *Hadenoeus subterraneus*

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Abstract

The cave cricket, *Hadenoeus subterraneus*, is a keystone species in cave ecosystems within Mammoth Cave National Park (MCNP). Within MCNP, many cricket cadavers have been found with a thick, white fungus growing on them; this fungus has previously been identified to be *Beauveria bassiana*. However, new molecular data suggests that this may actually be the species *B. amorpha*. Cricket cadavers with *Beauveria sp.* were collected from MCNP and cultured on potato dextrose agar. Cultures will be sent to the USDA for a genetic analysis and identification of the fungus. The purpose of this study is to examine if the relationship between the cave crickets and the fungus is of parasitic or saprophytic nature. Fifteen crickets will be exposed to a 1×10^6 conidia solution, while the other 15 will be exposed to a Tween-80 solution for the control group. Mortality rates will be observed daily and analyzed.