Delissea Cave System in Hawaii

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Abstract

The Delissea Cave System lies in lava flow that originated high on the slopes of Hualalai volcano, on the island of Hawaii. Exploration and mapping began in 2003 with a majority of trips taken place over the last 7 years. An abundance of cave entrances and passages have been found in the Puʻuwaʻawaʻa ahupuaʻa flow. The cave ranges from 820 meters elevation to over 2200 meters elevation, making this the greatest vertical range of any lava tube cave in the world. This presentation will cover the exploration that has revealed a set of passages more complex than previously thought. The cave System now stands at 51 kilometers of surveyed passage of which over 32 km are connected into one long and deep cave. The pukas (pits) are host to a large and diverse population of native plants and trees, including the Delissea tree, which was thought to be extinct. Biologists have found a wide variety of cave-adapted organisms. Many fossil bird bones from now-extinct bird species have been collected. Examples of geological, mineralogical, paleontological, and biological resources will be illustrated through photographs that have been taken on this project.

Just one of the many lava falls and puka entrances to the cave system.

Skylight with tree roots along with golden slime (microbes) on ceiling.

Splatter formations in an area called the “Spaghetti Factory”. Photos by Bosted.