



Conference Abstract

# Preliminary results from a survey of lava tube caves in the southwest region of the Ka'ū district of the Big Island, Hawai'i

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## Abstract

The discovery of troglobionts in lava tube caves on the Hawaiian Islands archipelago altered our understanding of how species may evolve and permanently inhabit subterranean environments. To date, 74 troglobionts are reported from the islands with 44 known from the youngest (Big Island). Previous lava tube cave surveys on the Big Island have focused on the wetter, eastern side of the island and in lava tubes at higher elevations. Along with members of Cave Conservancy of Hawai'i, we surveyed 24 lava tube sections on the drier, western side of the Big Island, primarily in Hawaiian Ocean View Estates in the Ka'ū District. Surveys occurred during late November and early December of 2015–2017. Species present in each cave were documented by observation and limited collections of specimens for identification purposes. Significant species were discovered in these caves, representing new locations for rare and limited species previously documented from different regions on the island, and/or new, undescribed species from significant lineages that are federally listed on other islands. The most significant species observed included a reduviid thread-legged bug (*Nesidiolestes* sp.), a terrestrial amphipod (*Spelaeorchestia* sp.), a microvelliid (*Cavaticovelia* sp.), and a new cave-adapted

planthopper (*Oliarus* sp.). While identification of the collected specimens is ongoing, documenting these significant species from lava tube caves in Ka'ū District illustrates the need for continued bioinventory work in this area.

## **Keywords**

Hawaii, lava tubes, troglobionts, biological surveys

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