

# DIATOMS FROM CAVES AND LAVA TUBES IN HAWAII: TAXONOMY, SYSTEMATICS, AND BIOGEOGRAPHY

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This paper aims to understand the aerophilous cave diatom flora of three Hawaiian islands and the relationship between these islands based on community assemblage. Diatoms were collected in a total of nine caves and lava tubes on the islands Hawaii, Oahu, and Kauai. A total of 118 taxa were documented with light micrographs, and a Sorensen similarity index was calculated between the three islands. As hypothesized, the community assemblages of Kauai and Oahu are the most similar sharing 12.5% of taxa, while Hawaii and Oahu had the least similarity with an index of 9%. Cave diatom community composition may be affected by a number of factors including island age, island assemblage before the caves were colonized, the cave water source, human impacts, and physical properties of the particular caves and lava tubes.

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