

POLYNESIAN VOYAGERS: SPIDER BIODIVERSITY ACROSS THE HAWAIIAN ARCHIPELAGO

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The extreme isolation of the Hawaiian archipelago has allowed the development of some of the world's most spectacular examples of arthropod radiation. The Hawaiian Islands are formed by a volcanic "hot spot" connected to the earth's core. As the Pacific tectonic plate continually rolls northwestward over the hot spot, new islands are formed. Consequently, the islands of the Hawaiian archipelago are arranged across a temporal gradient, the youngest islands being farthest southwestward. Because these islands are historical replicates, they present an exceptional opportunity to investigate the evolutionary factors that contribute to biotic diversity. Our work has been directed towards understanding the systematic relationships and biodiversity of spider groups that have undergone dramatic radiation within the archipelago. Specifically, we discuss how phylogenetic patterns of endemic spider groups explain their current distributions and ecological diversity.