

## **UTILITY OF THE NUCLEAR GENE ELONGATION FACTOR 1- $\alpha$ FOR ASSESSING RELATIONSHIPS AMONG HAWAIIAN CRAB SPIDERS**

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Spiders of the family Thomisidae are characterized as ambush predators that employ color mimicry of plants to capture prey. The twenty described species of Hawaiian thomisids exhibit a diversity of plant host affiliations and host-specific cryptic coloration. This diversity led previous systematists to place the Hawaiian species into several different genera, suggesting that they descended from several independent colonization events to the archipelago. Recently, all Hawaiian species were hypothesized to comprise a monophyletic group having undergone dramatic morphological diversification subsequent to colonization. This hypothesis is tested with a phylogenetic analysis of the nuclear gene elongation factor 1- $\alpha$ . Specifically, a 525 bp region of this gene containing two exons separated by a 168 bp intron was sequenced from Hawaiian representatives as well as closely related taxa from North and South America, Africa, and several islands of French Polynesia. We evaluate the resulting hypothesis with a phylogeny generated from previously collected mitochondrial sequence data, and determine the combinability of the two data sets for a total evidence analysis.