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MOLECULAR AND MORPHOLOGICAL SYSTEMATICS
OF TWO SPECIES OF THE SUBGENUS *MAGNADIGITA*
(PLETHODONTIDAE: *BOLITOGLOSSA*) FROM HONDURAS

A Thesis

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Master of Science

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Title: Molecular and Morphological Systematics of Two Species of the Subgenus *Magnadigita* (Plethodontidae: *Bolitoglossa*) from Honduras

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Tropical climbing salamanders (Plethodontidae: *Bolitoglossa*) are a diverse and species-rich radiation of salamanders throughout the Neotropics. Herein, I assess the taxonomy of the *Bolitoglossa* subgenus, *Magnadigita*, endemic to the cloud forests of Honduras. This thesis involves the development of a genetic barcoding dataset for rapid classification of species, and the identification of candidate species based on divergent mitochondrial genes. I identified two species that had strong phylogenetic structure: *B. porrasorum* and *B. celaque*. I assessed three divergent populations of *B. porrasorum*, and found that these populations had significantly distinct morphological and genetic traits that support my hypothesis of these populations representing distinct species. In addition, I used morphology, osteology, and phylogenetics to assess the two clades of *B. celaque*. I found significant divergences across these traits, and suggest *B. celaque* is a complex of two distinct species. Finally, I suggest appropriate taxonomic revisions that should be made to the Honduran *Magnadigita*.