

PhD Dissertation
Department of Environmental Science and Policy
College of Science
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Title: How Many Mouse-deer?: A Comprehensive Study of Systematics and Density Estimation of Chevrotains Using Phenotypic, Genomic and Ecological Data

Dissertation Director: Dr. Haw Chuan Lim

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ABSTRACT

This dissertation investigates chevrotain systematics and ecology to support biodiversity conservation efforts. Chevrotains are small hoofed mammals with a complicated taxonomic history and inadequate morphological and genetic validation. Rapid loss of their tropical forest habitats intensifies the need for clarity on phylogenetic relationships, taxonomy, and for reliable population data. This study integrates comprehensive morphological and genomic analyses, and tests population estimation methods using transect and camera trap sampling. Results reveal mixed support for current taxonomy, demonstrate the importance of combining data types, and offer practical guidance for density estimation. The findings inform future research and conservation strategies.