

SUMMARY OF DOCTORAL THESIS

Author: Nguyen Huyen Thuong

Thesis Title: Research on the diversity and distribution characteristics of species in the Gecko family (Gekkonidae) in the Central Highlands, Vietnam.

Major: Forest Resources Management

Code: 9620211

Educational institution: Vietnam National University of Forestry

1. Goals and Subjects

Goals: The thesis study on species composition diversity, evaluate genetic relationships, and analyze distribution characteristics of Gecko species (Gekkonidae) at research sites in the Central Highlands. The study also aims to discover and describe new species to science and record new distributions of Gekkonidae in the study area.

Subjects: Gecko species (Gekkonidae) across 05 provinces in the Central Highlands region.

2. Methods

Inheriting previous research documents and data; Field surveys and specimen collection; Morphological analysis and specimen identification.; Molecular biological analysis; Determination of distribution characteristics; Statistical analysis, similarity comparison; And assessment of species with conservation value.

3. Principal Results and Conclusions

3.1. Principal Results

Academically, the thesis described diagnostic features and provided distribution data for 14 species belonging to 05 genera. It successfully described 03 species new to science and recorded new distributions for 07 species across 05 provinces in the Central Highlands. It also evaluated distribution characteristics by habitat types, altitudinal belts, and specific encounter sites.

Theoretically, the thesis provided updated data as a foundation for species diversity and distribution characteristics of the Gekkonidae family. It established a scientific basis for evaluating conservation values to support the management of locally endemic species.

3.2. Conclusions

The thesis achieved its objectives, specifically:

(1) Described 14 species across 05 genera and published 03 species new to science: *Dixonius gialaiensis* (Gia Lai), *Cyrtodactylus ayunpaensis* (Gia Lai), and *Cyrtodactylus chuyangsinensis* (Chu Yang Sin National Park, Dak Lak). It also recorded new distributions for 07 species across 03 genera (*Cyrtodactylus*, *Hemidactylus*, and *Gehyra*). (2) Determined genetic relationships for the *Cyrtodactylus irregularis* group, and the *Dixonius* and *Gekko* genera. (3) Identified distribution characteristics based on habitat (natural forest; rivers/streams; agricultural/residential; plantations/upland fields), altitude (0m–300m; 300m–800m; and above 800m), and microhabitat (trees, cliffs, walls, and ground). (4) Evaluated species of conservation value based on threat levels, endemism, and legal frameworks.

Date:

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