

Taxonomic Documentation of Plant Voucher Specimens from Yeak Laom Lake, Ratanakiri Province, Cambodia

Abstract

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Introduction: A plant voucher specimen is a pressed, mounted sample with collection data used for species verification and long-term study. This project was conducted at Yeak Laom Lake, Ratanakiri Province, Cambodia. This study aimed to collect 21 selected medical plant species based on their frequent use in local traditional medicine and their availability during the field survey period to support accurate species identification preserve ethnobotanical knowledge for future pharmacological and conservation research.

Methods: Plant specimens were collected through a field survey at Yeak Laom Lake, Ratanakiri province, Cambodia, using purposive sampling focused on 21 medicinal plant species identified with guidance from the traditional healer. For each species, data including morphological characteristics, habitat, photographs, and GPS coordinates were recorded along with ethnobotanical information obtained through consultation with traditional healers. Specimens were processed following standard herbarium procedures including cleaning, pressing, drying, and mounting on herbarium sheets with complete labels. Team members performed specific roles to ensure data accuracy and integration of scientific and traditional knowledge. Data were analyzed using descriptive statistics where the number of species per family was counted by SPSS.

Results: Successfully collected and prepared 21 species that based on traditional medicinal uses and field availability as herbarium voucher specimens. The highest representation was found in Acanthaceae (14.29%) and Apocynaceae (14.29%), each with 3 specimens. Families such as Araceae, Euphorbiaceae, and Fabaceae followed, each contributing 9.52% with 2 specimens. The remaining families Oleaceae, Araliaceae, Asteraceae, Celastraceae, Convallariaceae, Leeaceae, Polypodiaceae, Rosaceae, and Rutaceae, were represented by 1 specimen each, making up 4.76% individually. These findings indicated the taxonomic distribution of medicinal plant species collected from the study area.

Conclusion: Herbarium voucher specimens are essential for accurate plant identification, teaching, and long-term preservation. The project highlights the value of Taxonomically verified herbarium voucher specimens of medicinal plant that contributed to biodiversity documents, preservation of traditional knowledge, and future pharmacological research. Expanding voucher specimen

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work to other provinces in Cambodia will strengthen national biodiversity records.

Ethics statement: This study followed local rules and respected nature. Plants were collected carefully, and traditional knowledge was shared with permission.

Conflicts of interest: The authors have no conflict of interest.

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