

Title: The Palynology of Flower Plant in Chiang Mai University for Honey Identification Database

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ABSTRACT

Honey is produced by bees through the foraging of nectar and pollen from flowers. The pollen content of honey is a key indicator of its variety and identity. In monofloral honey, at least 70% of the pollen must be from a single plant species, while multifloral honey requires a pollen database for accurate identification. In this study, we collected pollen from various types of flowers around Chiang Mai University from July 2024 to January 2025. A total of 84 flower species were sampled, and the palynology was recorded by examining pollen under a microscope, noting features such as size, shape, and color. The comparison of the pollen data with eight honey samples revealed that the predominant pollen in monofloral honey was longan pollen (*Dimocarpus longan*) and lychee pollen (*Litchi chinensis*). In contrast, multifloral honey samples predominantly contained pollen from species such as blackjack (*Bidens pilosa*) and sensitive plant (*Mimosa pudica*). Furthermore, the dominant pollen types were analyzed using a Scanning Electron Microscope (SEM) and have been deposited in a specialized pollen database. This database will serve as a valuable tool for the identification of pollen in Thai honey and will contribute to efforts aimed at improving the quality of Thai honey in the future.

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