

Singkone Chaiyalad 2012: Morphology and Anatomy of Bamboos and Rattans Commonly Used in Lao People's Democratic Republic. Master of Science (Forest Biological Science), Major Field: Forest Biological Science, Department of Forest Biology. Thesis Advisor: Assistant Professor Sarawood Sungkaew, Ph.D. 115 pages.

Bamboos and rattans have been intimately associated with the livelihoods and traditions of the Lao people for centuries. These two groups of plant have provided many raw materials and products widely used in Lao PDR. Those divers make a confused in local names of bamboos and rattans. Moreover, matching a product to the right species based on their raw material composition can be problematic. This study aimed to use a combination of morphological and anatomical procedures to identify the bamboos and rattans commonly used in the Lao PDR. Bamboo and rattan specimens were collected from the wild and the semi-processed products to provide materials for studying their morphology and anatomy. Morphological characteristics were studied by using the specimens collected and compared with herbarium specimens and taxonomic books. Anatomical characteristics were studied by using a compound microscope. Ten species from six bamboo genera and seven species from two rattan genera were found. Descriptions of the morphology and anatomy of these species are provided. The culm cross-section of bamboos fall into three types (out of four) described by Wong (1995) as follows: Type I (*Indosasa sinica*); while Type II was not found in this study; Type III (*Bambusa blumeana*, *B. polymorpha*, *B. tulda*, *Dendrocalamus membranaceus*, *Gigantochloa albociliata*, *Schizostachyum virgatum*, *Schizostachyum* sp., and *Thyrsostachys siamensis*); and Type IV (*Dendrocalamus brandisii*). The cane cross-section of rattans fall into two types, out of the total three, described by Siripatanadilok (1986) as follows: Type I (all six species of *Calamus*); while Type II was not found in this study; and Type III (one species of *Plectocomiopsis*). This study provides a potential reference source for the identification of bamboos and rattans in their products. The information can be used for the matching of products with the raw materials in specific species.

---

Student's signature

---

Thesis Advisor's signature