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LEAF ANATOMICAL AND MICROMORPHOLOGICAL SYSTEMATIC SIGNIFICANCE OF *Schoutenia* Korth. IN PENINSULAR MALAYSIA

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Abstract

An anatomical and micromorphological study of the leaf epidermis was conducted on the *Schoutenia* from the Tiliaceae family in Peninsular Malaysia. This genus is also classified in the subfamily Dombeyoideae according to classification based on plastid *atpB* and *rbcl* DNA sequence. The objective of the study is to identify similarities and variations in the anatomical and micromorphological characteristics of the *Schoutenia* taxon studied to overcome identification problems, especially for species that are difficult to distinguish due to similar morphological characteristics. Anatomical study methods involve specimen collection, sliding microtome slices, epidermal peels, tissue clarification, staining, and observation under a light microscope. The method of studying the micromorphology of the leaf epidermis involves critical point drying, gold coating, and observation under a scanning electron microscope. The results of the study show some significant characteristics for the differentiation of *Schoutenia* species studied, namely wax on the leaf epidermis, adaxial epidermal cuticle ornamentation, the external shape of midrib and leaf margins, the presence of intraxillary phloem and sclerenchyma phloem. Several identified features can be used as diagnostic features to identify the species of *Schoutenia* studied directly. Therefore, the results of the study clearly show the taxonomic value of the anatomical and micromorphological characteristics of the *Schoutenia* genus from the Malay Peninsular. © 2024, Microscopy Society of Malaysia. All rights reserved.

Author Keywords

Malvaceae; Microscopic; systematic; taxonomic

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