

MORPHOLOGICAL & ANATOMICAL FEATURES OF *CALAMUS ORNATUS* (ROTAN DOK)



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Introduction

Known as one of the commercial rattan species, *Calamus ornatus* (Rotan dok) is commonly found and has a wide variation. It is a massive clustering rattan climbing to great height. This rattan species produces a good quality cane that can be used for furniture manufacturing.

Materials and Methods

The identification of *Calamus ornatus* (Rotan dok) was observed based on its morphological features such as knee, shape and arrangement of leaves. The anatomical features of the rattan was identified under the light microscope.

Conclusion

Calamus ornatus (Rotan dok) is a species that has commercial value and is often used by the industry. This rattan contributes to the economy mainly through the production of furniture.

Results

Morphological features



A conspicuous and oblique knee.



The leaflets are regularly arranged and in linear lanceolate shaped.

Anatomical features



Figure 1 Cross-section: Vascular bundle with one metaxylem and two phloem fields and protoxylem vessels.



Figure 2 Longitudinal section: Ground parenchyma 'like stacks of coins'. Silica (arrow)

Anatomical features of *C. ornatus* as shown in Figure 1 & 2. Cross-section show metaxylem vessel one per vascular bundle. The protoxylem consists of a cluster 2-6 cells. Two phloem fields which every fields contained 4-6 cells. Fibre sheath of inner vascular bundles are 'horse-shoe shaped'. Longitudinal

section show ground parenchyma 'like stacks of coins'. Silica was observed in the ground parenchyma.

References

- 1) Dransfield, J. (1979). A manual of the rattans of the Malay Peninsula. *A manual of the rattans of the Malay Peninsula.*, (29). Forest Department, Ministry of Primary Industries Malaysia.
- 2) Weiner, G., & Liese, W. (1993). Generic identification key to rattan palms based on stem anatomical characters. *IAWA Journal*, 14(1), 55-61.

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