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Beyond Classical Approaches

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MORPHOLOGICAL COMPARISON OF *AMORPHOPHALLUS INFUNDIBULIFORMIS* FROM DIFFERENT LOCALITIES

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ABSTRACT

Genus *Amorphophallus* comprise of around 200 species, but only 16 species have been recorded in Borneo. All of the 16 species spread across Borneo living in diverse habitat such as secondary forest, mix Depterocarp and limestone forests. Among them *A. infundibuliformis* Hett., A. Dearden & A. Vogel is particularly can be found growing in the riverine forest and secondary forest. Growing in different localities and environment might have affected this species in terms of its morphology. Plant samples have been collected from Sungai Sembedid (Pakan), Sungai Isu (Simunjan) and Lapuk, Miri. A detail studies on the morphological characteristics differences of the plant samples were conducted. From the results, we identified that there were slightly variations in leaf petiole, leaflets and fruits collected from different localities.

Keywords: *A. infundibuliformis*, morphology characteristics, different localities

INTRODUCTION

Amorphophallus (Family Araceae: Tribe Thomsonieae) (Bogner *et al.*, 1985) is herbaceous foliage growing from tuberous rhizome, an underground storage organ. Each species may have different size and shape of tuber to support the whole plant structure. The inflorescence is similar to other genus in Araceae where it consists of spathe that usually encases the spadix. However, the unique feature is the inflorescence arises from the ground with no leaves and it also produces strong unpleasant smell like decaying of salted fish to attract pollinators. Genus *Amorphophallus* distributed throughout the tropics, ranging from West Africa eastward into Polynesia, but majority of the species are located in tropical and subtropical zones (Hetterscheid & Ittenbach, 1996). This genus currently encompasses around 200 species and currently only 16 species can be found in Borneo. One of them is *A. infundibuliformis* Hett., A. Dearden and A. Vogel which can be found in Sarawak. This species usually found growing in secondary, kerangas and mixed dipterocarp forest (Ipor *et al.*, 2007). Based on this information, it is desirable to study its morphological variations between different localities for the purpose of identification in future.

MATERIALS AND METHODS

Sample collections were conducted at several parts of Sarawak such as Simunjan, Sarikei and Miri for morphological description compilation. Collected samples then were preserved as herbarium specimen and deposited at Herbarium Universiti Malaysia Sarawak. Tubers and seeds were also collected and cultivated in the greenhouse at UNIMAS for living collection and further morphological observation for species identification.

RESULTS AND DISCUSSION

Morphological Characteristics

Small to medium sized herb, 0.3-0.6 m tall. *Tuber* depressed-globose. *Petiole* cylindrical, 50-70 cm long, diameter 10-15 mm; color background dark green with numerous irregular white spots, surface rough with white crust scattered from base to upper part. *Cataphylls* present at base, yellow to brownish, decayed. *Petiolule* cylindrical, 12-15 cm long, color the same with petiole, surface also the same but the amount of white crust not as much on petiole. *Leaf* solitary; *leaf blade* dissected into three main parts and each part divided again; *leaflets* 4.0-12.0 x 8.0-17.0 cm, ovate to elliptic, base somewhat obtuse but asymmetric, apex acuminate, margin entire;