4th Regional Conference on Natural Resources in the Tropics, 2012 (NTrop4):
Sustaining Tropical Natural Resources Through Innovations, Technologies and Practices.

THE SPECIES DIVERSITY OF *Mapania aublet* (CYPERACEAE) FROM MALAYSIA

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Abstract

Twenty (20) species of *Mapania* were collected from Peninsula Malaysia and Borneo, of which three, *M. multiflora*, *M. sapuaniana* and *M.* sp. 1 are new records for Borneo. From published literature, Malaysia recorded a total of 32 species. A field key is provided.

1. INTRODUCTION

Cyperaceae is the third largest family in the monocotyledons and seventh largest family in the angiosperms with 106 genera and 5387 species (Govaerts *et al.*, 2007). They form a huge, morphologically diverse, geographically widespread, and ecologically and economically important family (Naczi, 2005). Nevertheless, there are some species which are narrowly distributed, specific to certain habitats and of conservation concern (Naczi and Ford, 2008). The difficulty of assessing the specific level of endemism was mention by Goetghebeur (1998), due to lacking of recent revisions and reliable continental checklists as many species are known from one single specimen or a single locality only.

Mapania first described by Aublet (1775) and allies form one of the two branches at the base of the Cyperaceae phylogenetic tree. This group of mostly forest-dwelling sedges is widely distributed throughout the tropics. Many *Mapania* occur in rainforest at low altitudes, a habitat that is threated globally. Many are also endemic, narrowly distributed and of conservation concern. Several *Mapania* species are known to be used in basket and mat-making, while others are known to local people for medicinal purposes such as a fever remedy. The greatest diversity in the genus occurs in Borneo with 25 species (of 84 estimated worldwide), of which 12 are endemic (Simpson, 1992). Knowledge of the genus is limited due to lack of detailed studies.

As there is an increase of habitat destruction to rainforest nowadays, the threat to *Mapania* species is alarming. Through several fieldtrips conducted in 2008, it was found that most forests that existed within the last 5-10 years have been cleared for oil palm and rubber plantations, as well as logging. Suitable habitat which was known to be able to hold four to six species previously (Simpson, 1992) was discovered with only one to two species or none at all. This reality signifies that the disturbance outcome is a decline in the number of species. *Mapania* species are in danger of going extinct before they can be described and classified.

In this paper, we attempt an updated list to this genus, including new putative species, as well as presenting modified key for Malaysian taxa.

2. MATERIALS AND METHODS

Mapania samples were collected from Peninsula and East Malaysia through several fieldtrips conducted in December 2007 to February 2008 and from November 2008 to February 2009. Of the 84 species recognised, 42 are distributed in Southeast Malaysia, in which 32 species in Malaysia. A list of *Mapania* species collected was given in Table 1.