

## **Aspergillus species isolated from mangrove forests in Borneo Island, Sarawak, Malaysia.**

### **Abstrak**

Study on the occurrence of *Aspergillus* spp. on selected mangrove forests in Sarawak was conducted to find out their diversity and distribution. Samples were obtained from mangrove soils and leaf litters at different locations, i.e. Sematan, Lundu, Kampung Bako, Bako in Sarawak. Soil and leaf litter samples were taken randomly at different locations with five replicates from each area. A total of 138 isolates of *Aspergillus* species were obtained from the soil and leaf litter samples by using direct plating and Warcup method. Based on both macroscopic and microscopic observations, using an identification key, individual isolates were classified within the genus *Aspergillus*, belonging to three subgenera, four sections and five species. The fungi isolates were identified as *A. terreus*, *A. flavipes*, *A. carneus*, *A. fumigatus* and *A. clavatus*. The most frequent isolated species was *A. flavipes* (63.04%), followed by *A. fumigatus* (16.7%), *A. terreus* (13.04%), *A. carneus* (5.8%) and *A. clavatus* (1.44%). All of the isolated *Aspergillus* species grew well on MEA and CYA at 25°C. *A. carneus* produced reddish sclerotia on MEA after seven days and this could be used as an important characteristic in this species identification. *A. clavatus* from mangrove soil in Kampung Bako has shown long conidiophores (ranging from 3-5 cm) with swollen hyphal structures, while *A. clavatus* from Sematan area has shorter conidiophores (ranging from 2.5-3.5 cm) on MEA.