

## **Comparison of Insect Assemblages (butterfly, dragonfly and moth) in Different Lowland Forest Types in Sabah, Malaysia**

### **ABSTRACT**

A comparative study on butterfly, dragonfly and moth assemblages was conducted in different lowland forest types (mangrove, plantation and dipterocarp forests) in Sandakan, eastern Sabah. The family and species composition of the three insect orders in various sites are highlighted. Highest insect diversity was recorded in the dipterocarp forest, followed by plantation forest and mangrove forest. The variety and abundance of food sources for insects are higher in the dipterocarp forest compared to the other forests due to the higher plant diversity. However, the presence and abundance of host-specific insects depend on the availability of their host plant in the habitat. Of the three insect orders, moth was the most diverse, followed by butterfly and dragonfly in all the study sites. The similarity among species for the three insect orders among the forests was relatively low although they were located within the same district. This could have been affected by the adjacent land-use changes as well as forest fragmentation. Inventories from this study on insect assemblages have identified some species with conservation interest, nature tourism potential and insects that can be detrimental to the habitat. Such information would contribute towards best practices in sustainable forest management in Sabah.