

## **Development of *Pteroma pendula* Joannis (Lepidoptera: Psychidae) feeding on selected landscape trees in Peninsular Malaysia**

### **ABSTRACT**

Development time, survival rate and fecundity of *Pteroma pendula* fed on three different host trees, *Acacia mangium*, *Callerya atropurpurea* and *Cassia fistula*, were determined in the laboratory. A cohort of 100 eggs ( $n = 100$ ) were used for each host trees. Mortality and development time from eggs to adult were recorded and the fecundity was obtained from dissected fertilized females. The results revealed that higher survival rate was observed on the bagworms fed on *A. mangium* (38%) compared to those fed on *C. atropurpurea* (33%) and *C. fistula* (25%). Development time of the larvae fed on *A. mangium* was shorter than the larvae fed on the other two species. Higher survival rate and shorter development indicated that *A. mangium* is the most suitable host plant and provides better food quality to *P. pendula*. Generally, males have longer longevity than the females. Fecundity of the females that reared on *A. mangium* ( $76.33 \pm 1.77$ ) is significantly higher than those who reared on *C. atropurpurea* ( $69.8 \pm 1.85$ ) and *C. fistula* ( $69.2 \pm 1.07$ ). Low numbers of fertilized females were obtained due to the failure in the mating process, resulted by the non-synchronize development time of both females and males. As a conclusion, *P. pendula* showed a different extent of adaptation on different host trees and host-related factors is the most influential factors that affected their development.

**Keyword:** Bagworms; Leaf-eating pest; Landscape tree; Lepidoptera; Life table