

ABSTRACT

Bamboo borer, *Omphisa fuscidentalis*, one of the most delicious edible insect, is a main source of protein for deprived communities. The objective of this research was to eggs and larval production in the laboratory and establishment of a bamboo borer rearing center at Mae Fah Luang University. Pupae were detached from the culms, washed, weight individually to differentiate male and female sex ratio. After sexing the pupae, males and females were separated as different recipients. Eggs were put on a Petri dish lined with moist filter paper, and incubated at 28°C, and RH 80-90%. Young larvae were fed with young bamboo shoots for a month, and then transferred to fresh culms. The upper side of the culm was filled with water, and the lower side was used to rear larvae. The larvae were reared in at 24°C, and RH 86%. The larvae after pupating were kept in the Petri dish lined with moist filter paper at 25-26°C, and RH 68-75%. Four different types of ovipositor substrates; (a) waxy brown paper, (b) plastic paper, (c) paper (color), and (d) bamboo shoot leaf (size 2cm²) were used. The egg laying substrates were daily check for eggs. The results showed that each culm had slightly high number of males (64.13%) than females (57.13%). Maximum adult emergence (87.5%) was observed in the laboratory. The females were survived longer (4 days) than male moths (3 days) at 24.6-26.5°C, and RH 83-84%. The maximum percentage of larva mortality was 26% in the laboratory. The variation in larvae mortality was due to larval injury during the transfer of larvae from the old culm to new culm. The high number of egg laying substrate was bamboo shoot leaf. It is recommended for further research on study of termination of diapause stages of larvae and pupae.

Keywords: Bamboo borer / sexes / eggs/ larvae / pupae / egg laying substrates