

Observations on the biology and larval instars discrimination of wax moth *Achroia grisella* F. (Pyralidae: Lepidoptera)

ABSTRACT

The lesser wax moth (*Achroia grisella*), is a noxious pest of honey bee hives. The biology of this deleterious species was studied under laboratory condition at $31\pm 2^{\circ}\text{C}$ and of 66.28% RH. This study was conducted to provide an exhaustive consideration of the life cycle and larval growth of this insect under laboratory conditions. The average duration of egg, larval and pupal stages were 3.62 ± 0.11 , 30.72 ± 0.21 and 7.65 ± 0.083 days, respectively. Based on width and girth of head capsule, five larval instars were distinguished and further confirmed by Dyar's rule. The larval period varied significantly between male and female with the average being 29.84 ± 0.27 and 31.42 ± 0.33 days, respectively. The average adult lifespan varied significantly between males and females. The males lived almost twice as long as the females with the average days of 13.03 ± 0.51 and 7.46 ± 0.29 , respectively. The coupling time between males and females range between 9-18 min with the average of 12.20 ± 0.33 min. Developmental duration stages, adults' life span and larval instars were determined in the laboratory.

Keyword: Wax moth; Instars; Head capsule girth; Head capsule width; Dyar's rule