Sericologia 54(1): 36-42, 2014
ISSN 0250-3980

Research Paper

BIOLOGY AND BEHAVIOUR OF THE LEAF-ROLLER, *DIAPHANIA PULVERULENTALIS* (HAMPSON) (LEPIDOPTERA: PYRALIDAE) AT DIFFERENT TEMPERATURES

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ABSTRACT

Life cycle features of *Diaphania pulverulentalis,* a pest of mulberry, *Morus alba* L. (Moraceae) were studied at three different conditions of temperatures of 20 ± 1 °C, 25 ± 1 °C and 30 ± 1 °C. The developmental cycle of this insect is characterized with distinct stages of egg, larva, pre-pupa and pupa. There was a clear trend of decrease in the duration of different stages *viz.,* egg (5.93, 3.77, 2.47 days), caterpillar (11.61, 9.88, 6.50 days), pre-pupa (3, 2.38,1.77 days) and pupa (12.70, 9.16, 6.46 days) corresponding to increase in temperature (20 ± 1 °C, 25 ± 1 °C and 30 ± 1 °C, respectively). The average duration of life cycle of *D. pulverulentalis* at 20, 25 and 30 °C was 33.24, 25.19 and 17.2 days, respectively with the mean fecundity of 399.2, 373.2 and 250 eggs, respectively. A detailed account on the studies carried out on mating, oviposition, longevity and sex-ratio is provided in this paper.

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Key words: Biology, *Diaphania pulverulentalis*, fecundity, life cycle, longevity, mating, oviposition, sex-ratio.