

ABSTRACT

The Biology, Ecology and Economic Importance of *Pyroderces rileyi* Walsingham, in Bananas in Jamaica

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Pyroderces rileyi Walsingham, the pink scavenger caterpillar, was observed on banana flowers during the early 1990s at Victoria Banana Company in Jamaica by Dr. J. Dixon and her research group. This pest was causing in between-finger scarring on the banana fruit and this was of great economic concern to the industry because scarred fruits are rejected by the U.K. market. The present research project investigated the life cycle, the level of infestation and damage, the effect of climatic factors on population size and the economic losses caused by this pest to the industry.

P. rileyi was found mainly in the eastern and central regions and to a lesser extent in the western area of the island. The entire life cycle from egg to adult lasted an average of 45 days. One larval hymenopterous parasite *Paraolinx* sp. (Eulophidae) was recorded.

Funnel and sticky traps baited with the pheromone (E)-11-tetradecenyl acetate were used in the monitoring of the adult population of *P. rileyi*. Pheromone baited funnel traps were more effective than pheromone baited sticky traps while unbaited window traps were ineffective.

Rainfall significantly affected population levels while temperature and evaporation did not. Average daily rainfall at 0-2 mm was correlated with higher catches of adults.

The percentage of the floral parts of the banana bunch which was attacked by *P. rileyi* increases as the age of the bunch increases. The level of between-finger scar which occurred from the presence of the

pest resulted in a total loss of 22628 kg of fruit, that is 2% of total production in 1997 at Springfield Farm.

Deflowering is a cultural practice used to improve the general appearance of the fruit. However, this study shows that it can also be used as a control measure for *P. rileyi*. It reduced population levels by 100% on deflowered fields and resulted in a reduction of between-finger scar by 30% and some other types of scar by significant levels.

Keywords: *Pyroderces rileyi*; banana; between-finger scar; pheromone trapping; control by deflowering; economic analysis.