

## NEW RECORD OF THE NUCLEOPOLYHEDROSIS OF *THIACIDAS* *POSTICA* WALKER FROM INDIA

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THE hairy caterpillar, *Thiacidas postica* Walker (Lymantriidae: Lepidoptera) has been recorded as a defoliator of country ber, *Zizyphus jujuba*<sup>1</sup> from India and Burma<sup>2</sup>. It has now become a sporadic but serious pest of grafted varieties of ber, *Z. mauritiana*<sup>3</sup>. During the survey for naturally occurring insect pathogens, heavy incidence of the pest was noticed near Aruppukottai, Tamil Nadu in October, 1986. On close examination, a few larvae were found very sluggish. The larvae were collected and observed in the laboratory. Three days after collection, a few larvae were dead hanging head downwards from the leaf tip. Integument of the dead larvae was found ruptured, releasing creamy internal contents. Tissue smears were prepared from dying and dead larvae and examined under light microscope. It showed the presence of polyhedral inclusion bodies which appeared refringent.

Early stage larvae of *T. postica* (50 in numbers) were fed on ber leaves dipped in an aqueous suspension of polyhedral inclusion bodies ( $6 \times 10^6$  PIBs per ml) of the causative viral agent for 48 hr and subsequently fed on the clean untreated ber leaves. The larvae showed all signs of the disease syndrome characteristic of nuclear polyhedrosis infection, namely moving towards the top of the host plant, cessation of feeding and sluggish movements (behavioural abnormalities), loosening of hair from the integument coupled with stretching of intersegmental membranes and whitening of venter (morphological abnormalities) and death followed with rupturing of the integument and release of inclusion bodies<sup>4</sup>. Cent per cent mortality was registered within 4-8 days which confirmed the pathogenic nature of the nuclear polyhedrosis virus isolated.

Only three natural enemies have been recorded on *T. postica* so far. They are: *Enicospilus striatus* Cam. (Ichneumonidae: Hymenoptera), *Thrycolyga sorbillans* Wd. (Tachinidae: Diptera) from India and *Zenillia modicella* Wulp. (Tachinidae: Diptera)

from Sri Lanka, Java and Malaysia<sup>5</sup>. This appears to be the first report of a nuclear polyhedrosis virus infection in this hairy caterpillar in India.

3 December 1986; Revised 22 January 1987

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## CARBOXYL ESTER HYDROLASE (EC 3.1.1.1) IN *ANTHERAEA MYLITTA* LARVAL TISSUES

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CARBOXYL ester hydrolases (CE: EC 3.1.1.1) are a family of enzymes with overlapping properties<sup>1,2</sup>. Although these enzymes are not directly involved in any pathway of intermediary metabolism, they have been implicated in the regulation of juvenile hormone titres<sup>3</sup>, metabolism of lipids<sup>4</sup>, detoxification of xenobiotics<sup>5</sup>, digestion<sup>6</sup> and reproduction<sup>7</sup>. Since it is known that the CEs occurring in various tissues of animals may differ significantly in their properties<sup>2,8</sup>, studies were undertaken to determine the kinetic properties of this enzyme in the fat body and haemolymph of the full grown larvae of the Tasar Silk moth, *Antheraea mylitta*.

Insects used in the present study were full grown larvae of *A. mylitta*. The average weight of the larvae was  $29.3 \pm 5.4$  g. Five larvae were bled and 18 ml of haemolymph was collected. The pH of haemolymph was 6.85. The bled larvae were dissected and the fat body collected. Acetone powder of the fat body was prepared according to the method described previously<sup>9</sup> and that of haemolymph proteins as follows: to cold ( $-15^{\circ}\text{C}$ )