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Biology and Natural Enemies of *Plutella xylostella* (L.) on its New Host Food Plant

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The diamondback moth, *Plutella xylostella* (Yponomentidae : Lepidoptera) is a well known pest of brassica, cruciferous, solanaceous and liliaceous crops. It was observed damaging a cruciferous medicinal plant, the cress, *Lepidium sativum* L. grown at the University Campus, Junagadh during winter of 1997-98. This pest has been reported earlier on wild crucifer, *Lepidium virginicum* in Japan (Begum *et al.* 1996) and the watercress, *Nasturtium afficinale* R. Br. in Cuba (Pla, 1985). A close perusal of the published literatures have shown that the present medicinal plant was recorded for the first time as a food plant of this pest in Saurashtra region of Gujarat. Therefore, studies on its biology and natural bioagents were carriedout.

The larval population of the pest was observed 8 to 10 larvae plant during January, 1998. The larvae infested severaly the leaves, flowers and tender seeds. The seed damag recorded was 25.4 per cent. The larvae an pupae were collected from the field and reare in laboratory to study its biology and natura enemies. The egg period lasted for 2-3 days The larva completed its development in 9 to 10 days and then pupated in the dense silken cocoon on the plants. The pre-pupal and pupal periods lasted for 1 and 6 to 7 days, respectively. The adult moths survived for 4 to 5 days. The sex ratio was 1.6 females : 1.0 male in the field collected sample.

Two braconids, Cotesia (*Apanteles plutellae* Kurdji and *Cotesia* sp. were found parasitizing the larvae of the pest. They were solitary endoparasitoids causing 20 per cent parasitism during February 1998. The cocoon and adult stages of *C. plutellae* lasted for 4 to 6 and 3 to 4 days, respectively. An eulophid, *Tetrastichus sokolowskii* (Kurdjumov) was also found parasitizing 24 per cent of the pupae. It was agregrarious parasitoid, yielding 20 to 22 adults from a parasitized host pupae. Female parasitoid was bigger than the male parasitoid. Females outnumbered the males (16 females : 8 males). The adult parasitoids survived for 4 to 5 days. The record of these bioagents was also reported on this pest infesting the cabbage in Middle Gujarat at Anand (Yadav *et al.* 1975 and 1979).

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