

APPENDIX

LAST INSTAR LARVA OF XANTHOPIMPLA STEMMATOR THUNBERG
(HYMENOPTERA : ICHNEUMONIDAE), A PUPAL PARASITE OF
JAWAR STEM BORER*

K.S.Heble, V.G.Kshirsagar & D.G.Patil
Department of Zoology, Willingdon College, Sangli (M.S.)India.

ABSTRACT

Detailed description with figures of body, head capsule and mandible of last instar larva of Xanthopimpla stemmator Thunberg is given.

(key words : Hymenoptera, Ichneumonidae, pupal parasite, Xanthopimpla stemmator.)

INTRODUCTION

Jawar stem borer, Chilo zonellus S.(Lepidoptera : Pyralidae) is a noxious pest of jawar (Sorghum Sp.), maize (Zea Sp.) and sugarcane (Saccharum sp.). Being an internal feeder, it is difficult to control by applying pesticides. Due to surplus application of pesticides natural enemies of pest are also killed and natural balance in the field gets disturbed. Infestation of jawar stem borer is increased since the introduction of hybrid varieties which are susceptible to the attack of pests. Therefore application of biological control is safe and useful for the control of jawar stem borer. Xanthopimpla stemmator Thunberg is one of the important pupal parasite of jawar stem borer. This species is widely distributed in Maharashtra and found among jawar, maize, rice fields and coarse grasses. It can be bred on pyraloid borers and introduced as a pupal parasite of jawar stem borer.

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DESCRIPTION

Last instar larva of X.stemmator is hymenopterous grub like larva. It occupies entire space within the pupal case of host with head capsule towards anterior end of the host pupa. Its body is yellowish white and 4.4 times as long as broad. Body is widest at seventh postcephalic segment. Eleventh postcephalic segment is longer than any other segment. Last segment is bilobed. It has lateral body fold below the row of spiracles. Like other ichneumonids it is limbless and static larva. Its body is elongate, cylindrical, tapering to both ends and slightly flattened ventrally and convex dorsally. Body is divisible into cephalic capsule, three thoracic segments and ten abdominal segments. Cephalic capsule is semispherical with a dorsomedian notch, 0.95 times as long as broad. Oral frame is situated on anterior surface, just below the centre of cephalic capsule, 1.02 times as long as broad. Mandibles are highly sclerotized, 1.36 times as long as broad. Oral frame is formed by similar sclerotized structures as that of the ichneumonids with less cocoon spinning. Labial and stypeal sclerites are weakly developed. Larva has nine pairs of fine, sclerotized spiracles. The first pair of spiracle is thoracic, horizontal, 2 times as long as broad and situated dorsolaterally on posterior region of first thoracic segment. Remaining eight pairs are abdominal, circular and placed laterally to the body.

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