

SCIENTIFIC NOTE

APANTELES PROBLEM IN MUGA SILKWORM CROP**Himangshu Barman***

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Although pest infestation incidence is remarkably low under indoor rearing condition, certain insect pest particularly *Apanteles sp.* has been found to infest indoor muga crop. *Apanteles sp.* is a predator on several Lepidopteron insect including *Antheraea assamensis* Helfer. Muga crop in indoor is usually infested by *Apanteles sp.* at second and third instar and, infested larvae become stunted, weak and less locomotive, but still remain feeding leaf until predator's larvae come out of their body and form cocoons in group over it.

Apanteles belongs to Braconidae of Hymenoptera and contains several members that are important larval parasitoids of Lepidopteran pests. Several species of *Apanteles* attack leafrollers. *Apanteles sp.* may play a key role in biological control of leafrollers when combined with mating disruption or soft insecticides. *Apanteles* adults are susceptible to broad-spectrum insecticides. But *Apanteles* is difficult to rear inside laboratory to parasitoid leafroller insects as a bio-control measure. It is nature misfortune that this beneficial creature of nature also parasitoid our most valued Muga silkworm crop causing considerable damage, particularly in indoor rearing practice. It is because *Antheraea assamensis* is also a Lepidopteran insect. Thus *Apanteles* is a pest of Muga silkworm crop.

The larva of *Apanteles* spends most of its life inside the host larva. It is usually only observed after it leaves the host when ready to pupate. At this time it is a typical maggot form and is creamy white. The maggot immediately form cocoons on the body of host larvae which appear as white fuzzy cocoon in group as many as 15. It is oblong and about 1/8 inch long. After cocoon formation by the parasite on their body, interestingly the host larvae of Muga worm still remain alive as such for considerable duration. The adult *Apanteles sp.* is about 1/8 to 3/16 inch long with a black body and long antennae. The female has a short ovipositor at the end of the abdomen.



Plate I. Pictures of *Apanteles* sp. cocoon formation over the body of Muga Silkworm (*Antheraea assamensis* Helfer) after piercing out of the body of Muga larvae by matured larvae of the parasite.