Dermestid Beetle

Mulberry silkworm is also attacked by several species of other insects like Coleopterans. These pests are generally of minor economic importance in restricted localities. The important ones which cause occasional damage are described below.

Dermestid Beetles

This group of insects belongs to the family Dermestidae of the order Coleoptera. They often attack pupae and adults in the grainages, and mostly cause extensive damage to the stored cocoons. Though a large number of species of dermestid beetle have been reported, description of the more important ones viz., *Dermestes ater* is given below:

Presence has been reported in India and Japan. They may exist in other countries as well.

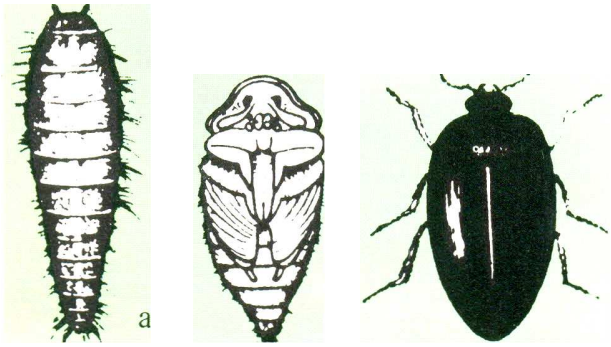
Dennestes ater

(a) Life Cycle

Adult

Cocoons damaged by dermestid beetle

Adults are black in colour. It measures about 7 mm in body length. Females start ovipositing in about 5 days after eclosion. The egg is milky white, elongated with an average measurement of 1.90 mm in length and 0.48 mm in width. Incubation period varies from 3-6 days. Newly hatched grub is white which gradually turns to brown in first instar itself. The colour of the grub turns to black from second instar onward. The first instar grub is about 2.4 mm in length. Morphologically the different instars are similar except in size. Grubs, in general, are spindle shaped and are covered with hairs of various lengths. The grub undergoes 4-6 moults in about 27-28 days. On an average, pupal period occupies about 7-8 days. Freshly emerged adult changes its colour from light yellow to dark brown.



Grub ***Pupa*** ***Adult***

Nature of Damage

Grubs and adults of most of the species are attracted by the smell of stifled and stored cocoons and dried pupae inside. They bore into the cocoons and eat the dried pupae. They also damage pierced and melted cocoons which are stored within the grainage building for the longer duration. Sometimes they also attack adult silk moths, eggs and rarely young silkworm larvae.

Prevention and control

1. Storage of rejected cocoons and perished eggs for long period should be avoided.
2. The rearing house and cocoon storage rooms should be cleaned periodically.
3. Before and after emergence of silk moth the grainage premises should be cleaned.
4. Wooden article of the storage room and grainage should be dipped in 0.2 per cent malathion solution for 2-3 minutes. After 10 days the trays should be thoroughly washed in water and sun dried for 2-3 days before reusing.
5. Passing of hot air (50-60°C) into the storage rooms and maintaining low humidity like 30 per cent and below help to kill the beetles.
6. Fumigation of dried cocoon storage room with methyl bromide at 0.5 g per 3 m^2 for three days kills all the stages of beetle. Necessary precautions must be followed for using this chemical as fumigants. This treatment should be undertaken, if the cocoon storage rooms are away from the grainage or rearing house.
