

LECTURE 13. Larva and types of larvae

LARVAE

Larval stage is the active growing stage. It is the immature stage between the egg

and pupal stage of an insect having complete metamorphosis. This stage differs radically from the adult.

TYPES OF LARVAE: There are three main types of insect larvae namely oligopod, polypod and apodous.

1. **OLIGOPOD** : Thoracic legs are well developed. Abdominal legs are absent. There are two subtypes.

a. **Campodeiform** : They are so called from their resemblance to the dipluran genus

Campodea. Body is elongate, depressed dorsoventrally and well sclerotised. Head is prognathous. Thoracic legs are long. A pair of abdominal cerci or caudal processes is usually present. Larvae are generally predators and are very active. e.g. grub of antlion or grub of lady bird beetle.

b. **Scarabaeiform** : Body is 'C' shaped, stout and subcylindrical. Head is well developed.

Thoracic legs are short. Caudal processes are absent. Larva is sluggish, burrowing into wood or soil. e.g. grub of rhinoceros beetle.

2. **POLYPOD or ERUCIFORM** : The body consists of an elongate trunk with large sclerotised head capsule. Head bears a pair of powerful mandibles which tear

up vegetation. Two groups of single lensed eyes (Stemmata) found on either side of the

head constitute the visual organs. The antenna is short. Three pairs of thoracic legs and

upto five pairs of unjointed abdominal legs or prolegs are present.

Thoracic legs are

segmented and they end in claws which are used for holding on to the

leaf. Bottom of the proleg is called planta which typically bears rows or circlet of short hooked spines or crochets which are useful in clinging to the exposed surface of vegetation and walking.

Abdominal segments three to six and ten typically bear prolegs. e.g. Caterpillar (larvae of moths and butterflies).

a. Hairy caterpillar : The body hairs may be dense, sparse or arranged in tufts. Hairs may cause irritation, when touched. e.g. Red hairy caterpillar.

b. Slug caterpillar : Larva is thick, short, stout and fleshy. Laval head is small and retractile. Thoracic legs are minute. Abdominal legs are absent.

Abdominal segmentation is indistinct. Larva has poisonous spines called scoli distributed all over the body. Such larva is also called platyform larva.

c. Semilooper : Either three or four pairs of prolegs are present. Prolegs are either wanting or rudimentary in either third or third and fourth abdominal segments. e.g. castor semilooper.

d. Looper : They are also called measuring worm or earth measurer or inch worm. In this type, only two pairs of prolegs are present in sixth and tenth abdominal segments. e.g.

Daincha looper.

3. APODOUS: They are larvae without appendages for locomotion. Based on the degree of development and sclerotization of head capsule there are three subtypes.

a. Eucepalous : Larva with well developed head capsule with functional mandibles, maxillae, stemmata and antennae. Mandibles act transversely. e.g. Wiggler (larva of mosquito) and grub of red palm weevil.

b. Hemicephalous : Head capsule is reduced and can be withdrawn into thorax.

Mandibles act vertically.

e.g. Larva of horse fly and robber fly.

c. Acephalous : Head capsule is absent. Mouthparts consist of a pair of protrusible curved

mouth hooks and associated internal sclerites. They are also called vermiform larvae. e.g.

Maggot (larva of house fly).

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