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2nd Lab.

Types of larvae and pupa

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Forest Insects- 2nd stage

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Date: 31/1/2023

Egg

The egg is the first stage in the life cycle of most insects. Eggs can be laid singly, in clusters or in specialist structures called ootheca.

Insect eggs are very small and often susceptible to drying out (desiccation) so the female insect often selects the site to lay her eggs on very carefully

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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.

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There are three main types of insects larvae namely **Oligopod, polypod and apodous.**

1.**Oligopod:** Thoracic legs are well developed. Abdominal legs are absent. There are subtypes:-

A.**Campodeiform** flattened body with long legs usually filaments on the end of the abdomen.

Larvae are generally predators and very active. Examples Coleoptera (Coccienellidae)

B.Scarabaeiform

Scarabaeiform These larvae will usually C-shaped and sometimes hairy with a well-developed head capsule.

Scarabaeiform larvae are found in family Scarabaeidae order Coleoptera

2.**Polypod or Eruciform**

The body is cylindrical with a well-developed head capsule and very short antennae.

Eruciform larvae have both thoracic (true) legs and abdominal prolegs.

Eg: caterpillar (larvae of moths and butterflies).

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3. Apodous:- This larvae without appendages for locomotion. Based on the degree of development and sclerotization of head capsule, They are also called vermiform larvae. Eg: maggot (larva of housefly)

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Pupa: It is the resting and inactive stage in all holometabolous insects. During this stage, the insect is incapable of feeding and is inactive. During this transitional stage, the larval characters are destroyed and new adult characters are created. There are three main types of pupae:-

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Types of Pupa

1- **Obtect:-** Developing appendages held tightly against the body by a shell like casing. Often found enclosed within a silken cocoon.

Ex. : Lepidoptera

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2- **Exarate P.:** All developing appendages free and visible externally.
Examples: Hymenoptera

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3- **Coarctate P. (Puparium):** Body encased within the
hard exoskeleton of the next-to-last larval instars.
Examples: Diptera

	Larvae	Nymph
1	**Immature stage of endopterygotes**	**Immature stage of exopterygotes**
2	**It undergoes holometamorphosis**	**Undergoes hemimetamorphosis**
3	**The body is vermiform which differs from the adult in the structure and feeding habits**	**The body resemble the adult in all characters except the wings**
4	**The larva enters pupal stage**	**No pupal stage**
5	**Possess both thoracic and abdominal legs**	**Possess only thoracic legs**
6	**Eg. Lepidoptera and coleoptera**	**Eg. Hemiptera, Orthoptera**

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