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4<sup>th</sup> Lab

Identification of insect pests of apple and their  
damage and symptom

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## Apple trees

*Malus domestica*

Worldwide production 86 million  
tones.

China accounting half of the  
total.

Many pest attack the quality of  
the Fruits are reduced.



## 1- Codling Moth



*Cydia pomonella*  
(Tortricidae : Lepidoptera)

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## Diagnostic Characters:

The **adult** moths have a wingspan of about 1/2 to 3/4 inch.

Their forewings are gray to dark brown and bear a copper-colored circular marking near the tip of the forewing making them difficult to detect.

the hindwings are brown.

**Eggs** are laid individually on leaves or fruit and are very difficult to find, especially in a commercial orchard.

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# larvae

Larvae are pinkish-white caterpillars with brown heads, about (18 mm) long. Make holes in fruit, burrow to the core, and frequently damage the fruits and seeds.



pupa



Adult



larvae



Egg

## Host plants:

Apple  
Pear  
Apricot  
walnut  
Peach

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## Nature of Damage :

Early Larval instars feed on the fruits and make a tunnel in it

Larval damage to fruit is characterized by entry and exit holes, rot that surrounds larval feeding areas, and frass accumulation.

make the fruit unmarketable

If left uncontrolled, larvae can cause extensive damage, often infesting 20 to 90% of the fruit, depending on the variety and location.

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## 2- Great Peacock Moth



*Saturnia pyri*  
(Saturniidae : Lepidoptera)

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## Diagnostic Characters:

Adult is a big moth its Wingspan about (87-166)mm. the body and the wings are chocolate-brown It has identically marked by two spots as eye shape from the fore and hind wings.



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## Egg Stage



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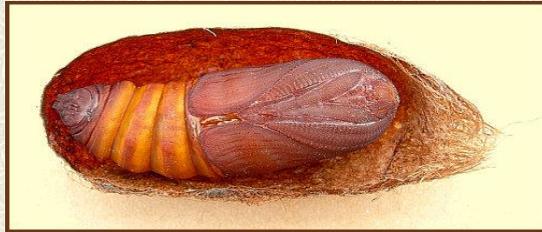
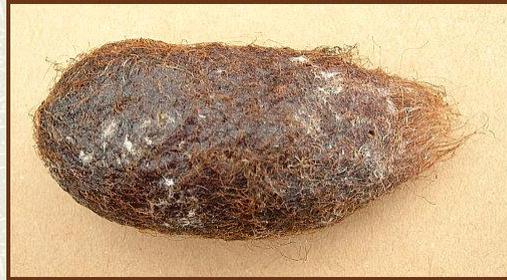
## Larval Stage

Larvae are black and spotted by hairy orange spots then change to green. length up to 120 mm.  
carry stinging hairs,  
those on the 4th instars.



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## Pupal Stage



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## Host plant

Apple  
plum  
poplar  
and walnut

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## Damage:

Larvae feed on the foliage parts and Feeding usually consists of eating channels into a leaf.

The leaves are consumed and leaving only noticeable bare twigs.



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## 3- (Apple aphid)



*Aphis pomi*  
(Aphididae : Homoptera)



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## Description of the pest:

Small soft bodied insects on underside of leaves and/or stems of plant, nymphal stages are dark green and change to yellow-green with darker green spots as they mature.

Wingless females have a pear-shaped body, and grow to a maximum length of about 2.2 mm.



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## Damage:

*A.pomi* prefers the undersides of young leaves as Feeding sites. It is mainly found on young shoot. Leaves carrying colonies may roll and curl. The aphid occasionally feeds on immature apples

Heavy infestation, especially of young trees, can lead to stunting. The honeydew produced by the insects cause to growth of sooty molds. On leaves, this may delay photosynthesis, thus affecting yield. Most damage occurs in the spring in apple orchards, when many rapidly-growing shoots are available and natural predators have not yet emerged in large numbers

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**Hosts:-**  
Apple  
Pear  
quince

**symptom**



## 4- Leopard Moth



*Zeuzera pyrina*  
(Cossidae : Lepidoptera)

## Description:

**Adult:** (50 – 60) mm wingspan for the female and (35 - 40)mm for the male. The thorax is white and hairy with (6) black spots. The wings are white, sprinkled with small metallic black spots.



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## Larvae

- # **Larvae:** (50 to 60) mm,
- # bright yellow with numerous small black points on each segment
- # The head and the thorax are shiny black .



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## Host Plants:

Apple ,  
Pear  
Olive  
Pomegranate  
*Citrus*

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## Symptom

Larvae bore stem of the trees and attacked trees become weakening and sometimes killing trees.

presence of the caterpillars is indicated by the accumulation of frass and wood particles that comes out of the entry holes.

extremely susceptible to wind damage affected .

Old trees are severely damaged, particularly in dry years.

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## Symptom



## 5- Common name: Asian long-horn beetle



*Anoplophora glabripennis*  
Cerambycidae: Coleoptera:

## Description

**Adult** characterized by extremely long antennae which are often as long as or longer than the beetle's body.

The beetle is black with about 20 irregular white spots on the body

The antennae have 11 segments, each with a whitish blue base.

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## Larvae

The larva is a legless grub up to 50 mm long when fully grown.

It is creamy white in color, with a chitinized brown mark on the prothorax.



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## Damage

In the warmer months the adult beetles chew their way out of the tree leaving,  $\frac{1}{4}$  inch or larger, perfectly round exit holes. Adult female beetles chew called oviposition sites or egg sites, into the bark of the host tree.

