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A NEW INSECT PEST IN W.A.

Oriental Fruit Moth (*Cydia molesta* Busck)

By C. F. H. JENKINS, M.A., Government Entomologist

IN recent weeks a new insect pest for Western Australia has been recorded. This is the Oriental fruit moth, sometimes known as the Oriental peach moth and the peach tip moth, both names indicating that peaches are the most susceptible of a wide variety of host fruits.

The insect has been established for many years in the Eastern States but no previous records have been made from this State. The native home of the moth is doubtful but it has been recorded from Japan, Italy, North America and Eastern Australia.

Prior to the advent of D.D.T., normal insecticide treatments were very unsatisfactory against this pest, although some degree of control was obtained with nicotine sulphate sprays. The use of 0.1% D.D.T. cover sprays during the growing season, however, have given good control in Victoria in recent years.

For the information of growers, the following notes concerning the life history and habits of the insect are made available.

DESCRIPTION

Egg.—The egg is small and greyish-white in colour and is mostly found on the under-sides of the leaves.

Larva.—The larva ranges in length from 1/16 inch to a little over 1/2 inch. In colour it is white with a black head and dark-coloured thorax when small, but as the larva increases in size it becomes pink or almost red.

Pupa.—The pupa is enclosed in a silken cocoon to which may adhere particles of bark, sand, leaves or other foreign matter.

Summer cocoons are more fragile than over-wintering ones and may be found on fruit, in axils of twigs, and under pieces of bark and other similar situations. Winter cocoons are usually found between branches or under the rough bark on the trunk.

A young pupa is yellowish-brown but gradually becomes a darker red in colour.

Adult.—The adult is a small greyish-brown moth with a wing span of about half an inch. Males and females are are similar in appearance and are most active about sun-set.

TYPE OF INJURY

(a) **Twigs.**—The larvae generally enter tender growing twigs and later two or three of the leaves wilt. Two to four year old trees seem most susceptible to attack and this is particularly true in well kept orchards with vigorously growing trees.

(b) **Fruit.**—There may be from one to six larvae per fruit and late ripening varieties are more susceptible to attack. The infested fruit usually ripens prematurely and some may drop.

Points of entrance are side entrance, stem entrance and invisible entrance.

(1) **Side Entrance.**—This usually takes place early in the spring and may be where two fruit are in contact, where

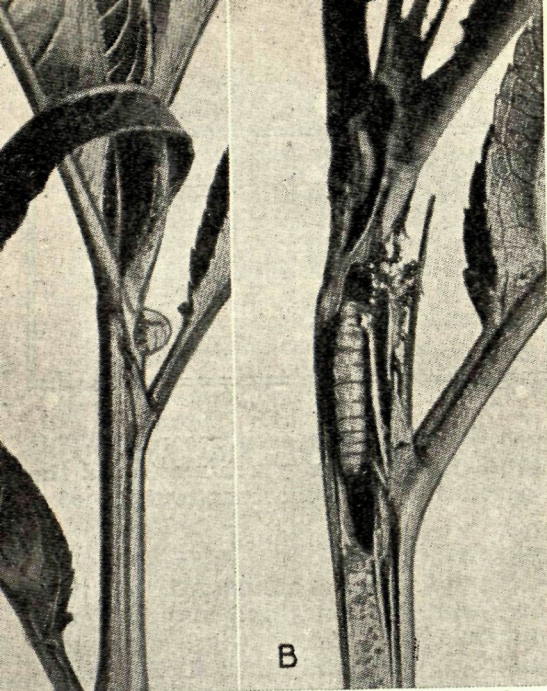


Fig. 1.—A. Newly infested peach twig showing one wilted leaf and pile of frass where the Oriental peach moth larva has entered. B. Infested twig split open to show channel and larva within. Considerably enlarged.

a leaf rests against a fruit or on the open surface of the fruit. Gum exudes from the point of entrance and this turns dark later, giving a distinct blotch at picking time.

(2) *Stem Entrance*.—This occurs by entry through the soft skin of the fruit around the stem, leaving a small pile of frass. It is easily overlooked and occurs in almost fully grown fruit.

(3) *Invisible Entrance*.—In this type of entrance there are no external signs of entry as the larva has entered through the fruit stem.

These three types of entry are found in peaches, side entrance being commonly used by the pest for other types of susceptible fruit.

Infested peaches, particularly late varieties, are frequently infected with brown rot near the entrance or exit holes of the larvae.

Injury to apples and pears is similar to that caused by codlin moth.

Growers in all districts are requested to watch carefully for this pest and to forward any suspect insects to the Department of Agriculture for identification.

CONTROL MEASURES

The control measures outlined are based upon those which have been found most effective in the Eastern States and abroad.

Chemical Control.—Prior to the advent of D.D.T. and the other “new insecticides,” chemical control of the Oriental fruit moth was most unsatisfactory. Present indications are, however, that satisfactory control can be obtained from D.D.T. sprays.



Fig. 2.—A peach twig that has been infested for several days by the Oriental peach moth. Notice the dying back of the terminal leaves. Watch for this condition when pruning.

It is desirable to maintain an effective cover over the fruit from the time it is first susceptible till it is harvested. This may, therefore, mean a spray application about every four weeks. 0.1% water emulsions of D.D.T. are recommended.

Fruit Residues.—Tests in Victoria on peaches have shown that from three late applications of 0.2% D.D.T. the residue was 5.5 parts per million. 0.2% D.D.T. showed no significant control improvement over 0.1% which should leave much less residue.

Cultural Methods of Control:

1. Hessian or chemically treated corrugated cardboard

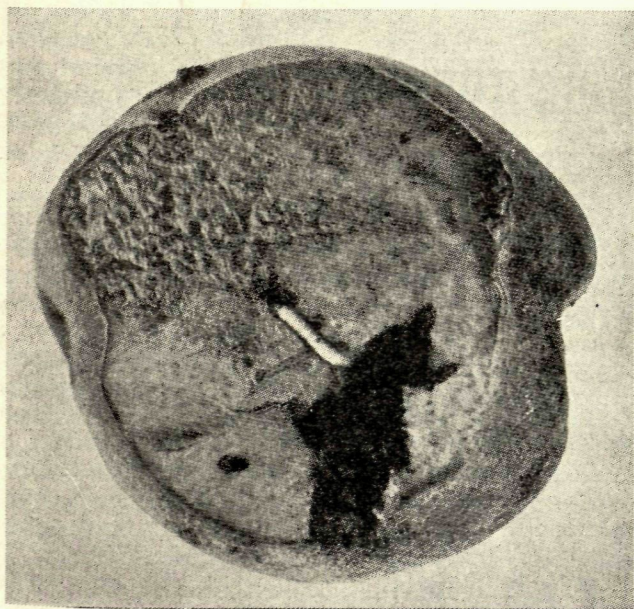


Fig. 3.—Work of oriental peach moth larva within a peach (enlarged).

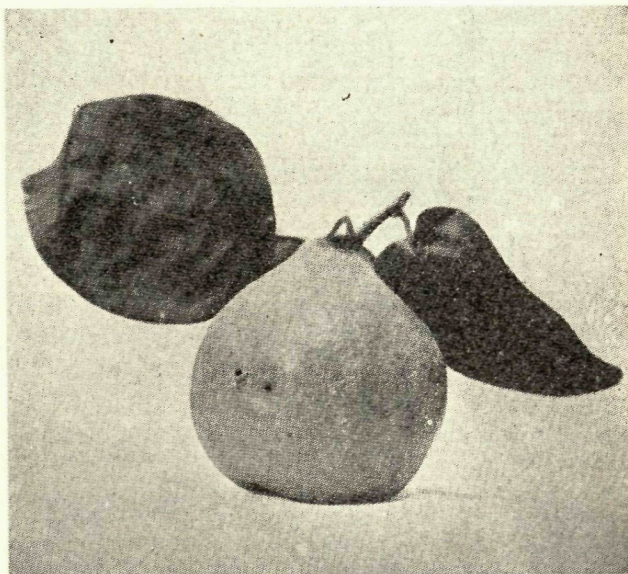


Fig. 4.—A quince infected by the Oriental peach moth, showing exit holes.

bands should be placed around tree trunks.

2. Infested fruit should be destroyed by burning, boiling or deep burying.

3. Loose bark on the butts and main limbs should be scraped off and sheltering caterpillars and pupae destroyed.

4. Fruit tree props, wooden fences and similar harbourages close to trees may shelter caterpillars and pupae.

5. Infested terminal shoots should be removed and destroyed.

6. Deep cultivation in orchards in early spring has been found to bury the pupae in the soil and prevent the emergence of moths.



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