

**LOBESIA BOTRANA (SCHIFF.)**

**(POLYCHROSIS BOTRANA)**

**LEP. OLETHREUTIDAE**

BY A. GHARIB

**Distribution**

Northern Africa, Near East, southern and middle Europe, Japan and U.S.S.R.

**Economic importance**

The larvae feed on flower buds, developing fruits, and ripening grapes. In addition to primary damage to the grapes, the wounds attract other insects and subject the fruit to pathogenic fungi. In some cases 3rd and 4th generation larvae will feed on the dried raisins in the store houses.

**Hosts**

Other than grape, *L. botrana* has been recorded from, currant, plum, gooseberry, blackberry, jujube, dogwood, privet, sumac, viburnum, virginia creeper, strawberry, madrone, and spurgeflax daphne.

**Life history and habits**

Under conditions in Rezaiyeh, adults from overwintering pupae emerge about the first week in May. Each female lays about 50 to 60 eggs on the flower buds or pedicels of grape, and the eggs usually hatch in about 10 days. Before feeding on a cluster of buds the young larvae spins a web around it. The larvae feed on the buds for about three weeks and then pupate in the bud clusters or under rolled edges of the leaves. The pupal stage lasts about 10 days.

Adults from this generation oviposit on the fruit in July, the eggs being laid singly. The larvae hatch in about 5 days and penetrate the grapes, one to each fruit. The infested grapes shrivel up or become rotten. These larvae usually pupate inside the dried fruits. The third generation larvae appear about the 3rd week in August, causing the most damage by feeding on the ripening grapes, migrating from one to another and spinning webs. Few of these larvae pupate before harvest, and many are gathered with the grapes. Pupation and hibernation occur in cocoons among fallen leaves and grapes, in the cracks of the soil or under the vine bark.

## Description

The egg is from 0.5 to 0.7 mm. in diameter and yellow in color. On hatching the larva is about 1 mm. long and greenish in color. The fullgrown larva is 8 to 12 mm. long by about 2 mm. wide. Color is variable, being shades of green, rose, red or brownish - red.

Head capsule is honey - yellow colored with black eye spots. The pupa is from 5 to 7 mm. long and brownish in color. Adult has a wing expanse of 12 to 13 mm. The general coloring is reddish - gray. When at rest the wings are folded. There are 3 transverse bands on the forewing. Toward the tip of each wing is a black triangular spot. The hindwing is grayish - brown.

## Control methods

### Mechanical methods :

Thoroughly clean up around the grape vineyards and rake and burn the fallen leaves and grapes during the fall or winter; or by plowing the vineyards and adjacent land as soon as the frost is out of the ground in the spring.

### Chemical control :

#### 1. Paris Green in Bordeaux mixture :

Copper sulfate	1 kg
Hydrated lime	1 kg
Paris green	200 gms
Water	100 liters

Paris green in the above bordeaux mixture should be used only for the first generation larvae .

2. DDT in water :

DDT 50% wettable powder	1 kg
Water	400 liters

3. DDT in Bordeaux mixture :

DDT 50% wattle powder	1 kg
Bordeaux mixture	400 liters

4. Nicotine sulfate :

Nicotine sulfate 40%	250-300 gms
Spreader	100 gms
Water	100 liters

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