PORTHESIA MELANIA STGR. (*LEP. LYMANTRIIDAE*)

IN IRAN

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Summary

Porthesia melania Stgr., is one of the most destructive defoliators of oak-woods in southwestern Iran. In Iran it also occurs throughout west and is occasionally found near Tehran (Shemshak). The only other localities it is know from are Iraq and eastern part of Turkey.

Since 1973 the major outbreak of *P. melania* has been in Fars province but there are recent report from oak-woods near the Borujen area (Fig. 5).

The partial biology and adult morphology of this moth has been described by Mirzayans and Abai (1974). The following paper is the result of studies on the biology and control of this pest.

Biology

P. melania has one generation a year in which the larval stage lasts 8–10 months. In summer colonies of first instar larvae build shelters in trees with webbing and these are attached to the trees with a thick band of silk. The young larvae leave their shelters at night to feed but they may occaisionally be found during the day on the leaves. The first two instars are yellow and concentrate thier feeding on the mesophyll of the leaf surface. During the late summer and early fall the oaks-turn brown from the feeding of the young larvae (Fig. 3,4). The mature larvae feed on the whole leaf and always cause heavy defoliatoin in infested areas.

The larvae overwinter in colonies of 100–120 individuals inside tightly-rolled dead leaves on the trees. In the spring, as soon as the leaf buds open, the larvae become active and leave their shelters to feed on the tender foliage. During the first few weeks of spring the larvae devour the young leaves as fast as they appear. During this time the larvae crawl back into their shelter by day, but as they grow larger they remain on the leaves and trunk during the day. For the first few months the larvae cause severe damage until the trees begin recovery by growing new leaves.

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In Fars province larvae pupated in June and early July in small white cocoons on the soil and under rocks near the base of the trees. The adult emerge in 15–20 days and the females soon lay masses of 80–150 eggs on the upper surface of the leaves. These egg masses are coverred with bright yellow hairs from the abdomens of the female and hatch in 7–15 days. Both the male and female are attracted to light (Tal. 1).

In Iran the host plant of this moth is *Quercus* spp. and *Prunus* sp. but adult females have been found ovipositing on almond, poplar and other trees even though the first instar larvae are unable to feed and soon die.

The larvae and adult females are covered with barbed poison bearing hairs that cause a rash that can be quite severe in some people.

Control Measures

1. Destroying Shelters

In small isolated areas with a light infestations the larval shelters can be cut off the trees during the winter and burned.

2. Light Traping

Large number of both sexes are attracted to light traps and we have collected many adults with this method especially in Tchah Tchenar, Daryush Dam and Malavi.

3. Bacillus thnrigiensis Berliner

Two thorough applications of *B. thuringiensis* in August or early September will control infestations of *P. melania* Stgr., but poor roads, lack of readily available water for spraying, and the cost of transporting water are problems that usually make this method unfeasible.

4. Natural Enemies

We have found the Chalcid *Brachymeria intermedia* Nees. (Fig. 7) parasitizing the pupae and the Tachinid *Exotrista sorbilans* Weid. parasitizing the larvae. We have also found unidentified *Braconidae* parasitizing the larvae inside their shelters.

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