

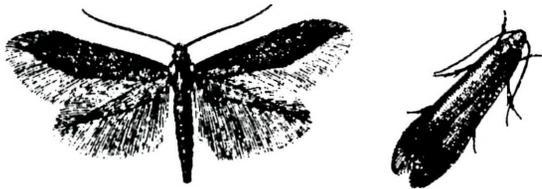
## MINER PEST

APPLE  
LEAFMINER  
(Art Agnello)



❖❖ It's a relatively slow period of the summer, so this might be a good time to go over the specifics of an insect pest that is relatively minor, and we hope it stays that way:

Apple Leaf Miner, *Lyonetia speculella*



Larval food plants recorded for this species are apple, plum, cherry (including pin cherry), birch and grape. Female moths oviposit in tender new foliage by piercing the undersides of leaves and depositing single eggs inside the leaf tissue. The hatched larvae form serpentine mines, which are visible as wavy brown lines on the tops of leaves. As the larvae grow, they enlarge their mines into brown blotches, within which they consume all of the leaf tissue between the upper and lower epidermis. Larvae eject their black feces through slits in the bottom of the blotches. When they become full-grown, they leave their mines to pupate, usually by de-



scending to lower leaves on a silken thread. Just before pupating, the larvae spin silken cocoons, which are suspended by threads and resemble a hammock. There are probably 4-6 generations per year in this area, but only the late summer larvae are noticeable (or problematic); moths are generally never even caught before the end of July.

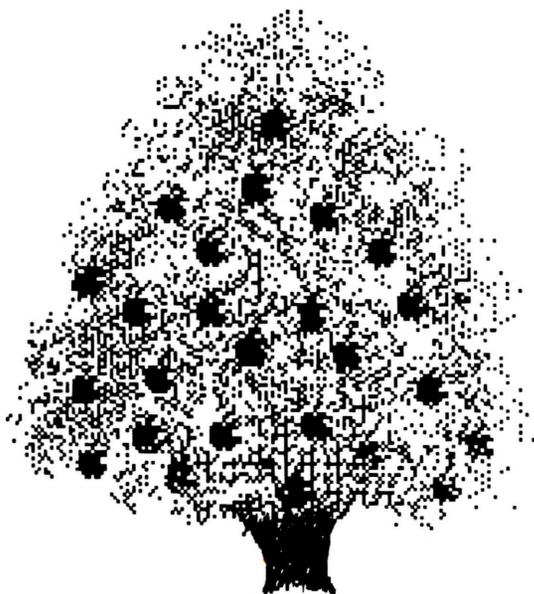
Larval feeding is confined to the youngest foliage, particularly terminal leaves of vigorously growing shoots. Root initials or water sprouts that are partially shaded are the preferred sites for feeding and pupation. Severely mined leaves turn brown and die; most such leaves drop off prematurely, thereby decreasing the number of some of the most photosynthetically active leaves. The potential for damage is greater in young orchards than in mature ones, and vigorous trees usually suffer more injury than do less vigorous trees.

Populations of Apple Leaf Miner normally do not attain high abundance and cause noticeable damage until the beginning of the harvest period. Insecticidal control of larvae or adults may not be a reasonable tactic because of the pre-harvest intervals of most candidate materials (i.e., carbamates that are used against STLM). Broad-spectrum insecticides used in cover sprays are unlikely to control larvae or adults because leafminer numbers have increased in orchards that have been sprayed regularly with these chemicals. A 1990 field trial in West Va. compared the effectiveness of different insecticides applied 2 times (7-day interval) in August against different life stages of this insect. All the materials tested - Asana, Thiodan, Lannate, Vydate, Cygon, and (to a lesser extent) Carzol -

continued...

effectively reduced population levels of larvae and pupae, and Asana also had some effectiveness against egg numbers.

Two cultural practices may affect the amount of larval damage. The preferred food of the miners is the new growth of vegetative shoots. The removal of root and water sprouts may greatly reduce the amount of available food for larvae, and thereby control the growth of moth populations. Another practice that may influence leafminer abundance is fertilization. Application of fertilizer in excess amounts or late in the season would enhance vegetative growth, particularly late in the growing season. Abundant larval food at this time would permit additional generations of the insect. These leafminers cause very little injury to unfertilized apple trees with poor or moderate shoot growth. For the present, a good pruning program and restraint in fertilizer use may be the best available means to control populations of this leafminer. ❖❖



## PEST FOCUS

### Geneva:

**Spotted tentiform leafminer** larvae are in the tissue feeding stage.

So far we have not caught any **Comstock mealybug** crawlers, but expect to any time from now until about the first week of August. If you are planning to put up tape traps, better get while the gettin's good.

**Apple maggot** oviposition was observed 7/16.

### Highland:

Most **spotted tentiform leafminer** 2nd brood mines are those of tissue feeders and about half of them contain pupae.

**Leafhoppers** at less than 0.25/leaf on R. Del. check trees.

**Apple maggot** oviposition was observed 7/22.

## scaffolds

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**scaffolds** FRUIT JOURNAL

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This newsletter available on CENET, on the Tree Fruit News bulletin board under FRUIT.

**INSECT TRAP CATCHES (Number/Trap/Day)**

Geneva NY

HVL, Highland NY

	<u>7/15</u>	<u>7/19</u>	<u>7/22</u>	<u>7/26</u>		<u>7/12</u>	<u>7/19</u>	<u>7/26</u>
Redbanded Leafroller	4.8	4.0	3.0	1.1	Redbanded Leafroller	0.3	0	0.9
Spotted Tentiform Leafminer	865.3	419	399	284.3	Spotted Tentiform Leafminer	119.0	27.3	10.0
Oriental fruit moth (apple)	14.8	8.6	8.5	2.9	Sparganothis Fruitworm	0.6	0.2	0
Oriental fruit moth (peach)	2.2	1.1	3.2	2.0	Oriental fruit moth	2.2	2.2	1.0
Lesser appleworm	1.0	0.6	1.5	0.6	Fruittree leafroller	0	0.1	0
Codling moth	1.0	0.1	2.7	1.5	Lesser appleworm	0	0	0
Obliquebanded leafroller	2.0	1.0	0.8	0	Codling moth	1.7	3.7	3.0
Lesser peachtree borer (cherry)	1.3	0.3	0.3	1.4	Variigated leafroller	0.2	0	0
Lesser peachtree borer (peach)	2.7	0.3	0.8	0.9	Obliquebanded leafroller	1.0	0.1	0
American plum borer (plum)	1.0	0.8	3.3	3.4	Apple maggot	0.1	0.3	0
American plum borer (cherry)	0.8	0.8	0.2	2.0				
Peachtree borer	0.7	0.4	2.2	1.3				
Apple maggot	0.2	0.09	0.4	0.2				
San Jose scale	-	-	-	2.8*				

\* 1st catch

(Dick Straub, Peter Jentsch)

**UPCOMING PEST EVENTS**

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1 - 7/26):	1975	1407
(Highland 1/1 - 7/25):	2443	1698

**Coming Events:****Ranges:**

Redbanded leafroller 2nd flight subsiding	2037-2665	1342-1777
Codling moth 2nd flight start	1599-2302	1030-1531
Oriental fruit moth 2nd flight subsiding	1806-2783	1164-1963
Comstock mealybug 2nd generation crawlers emerging	2106-2468	1447-1631
Spotted tentiform leafminer 2nd flight subsiding	2331-2783	1148-1690

NOTE: Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide.

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