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Update on Pest Management
and Crop Development

F R U I T J O U R N A L

June 28, 1993

VOLUME 2

Geneva, NY

INSECT BITES

(Art Agnello)



MULLEIN PLANT BUG

(Reprinted from "Integrated Pest Management for Apple Orchards in Ontario", Canada)

APPLE MAGGOT

❖❖ The first adult was caught on volatile-baited sphere traps in a research orchard at the Geneva Station today, June 28. This corresponds with a DD accumulation of 1198 (base 43°F), 826 (base 50°F); the predicted mean values for this event are 1331(43°F) and 843 (50°F), close to an average year once. So nothing a treatment per volatile-trap) has been seen. Any rain we receive (such as the small amount that moved through the area this past weekend), in addition to warm temperatures, will increase the likelihood of finding flies in traps you may have out in commercial blocks. Recall that adults found in abandoned (or unsprayed) sites will still need 7-10 days before becoming mature enough to begin laying eggs. ❖❖



❖❖ There have been a few reports, especially in Red Delicious orchards at the Geneva Station, of apple damage that appears to have been caused by this close cousin of the Tarnished Plant Bug. We don't often see this pest in New York, but our colleagues just over the border in Ontario are quite familiar with it:

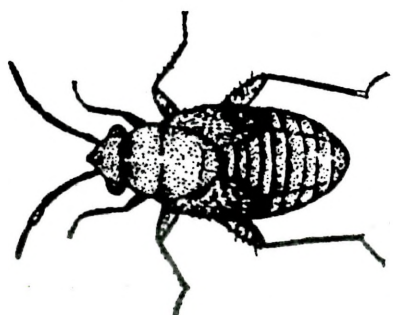
"Mullein bugs (MB) are beneficial most of the year, when they act as predators of mites, aphids and leafhoppers. However, mullein bugs may feed on fruit for a brief period after petal fall. Damage is often localized, but it may be quite severe.

"Mullein bugs overwinter as eggs laid in bark of last season's growth. Eggs hatch during bloom and the nymphs may (or may not) feed on young fruit. Most fruit injury occurs at this time. Initially, injury appears as a tiny pin prick on the fruit, surrounded by a water-soaked area which is not easily noticed. As the fruit enlarge, the MB injury forms a raised pimple on the surface of the fruit. Mullein bug damage is most serious in early cultivars and Red Delicious, Golden Delicious and Northern Spy, although injury to McIntosh is becoming more common. Much of the MB injured fruit will drop with the June drop.

"Begin monitoring for MB nymphs during bloom and continue at least once a week and continue until 2-3 weeks after petal fall. Mullein bug nymphs are very small (smaller than an adult aphid) and light green in color. They move very rapidly when disturbed. Nymphs can be detected



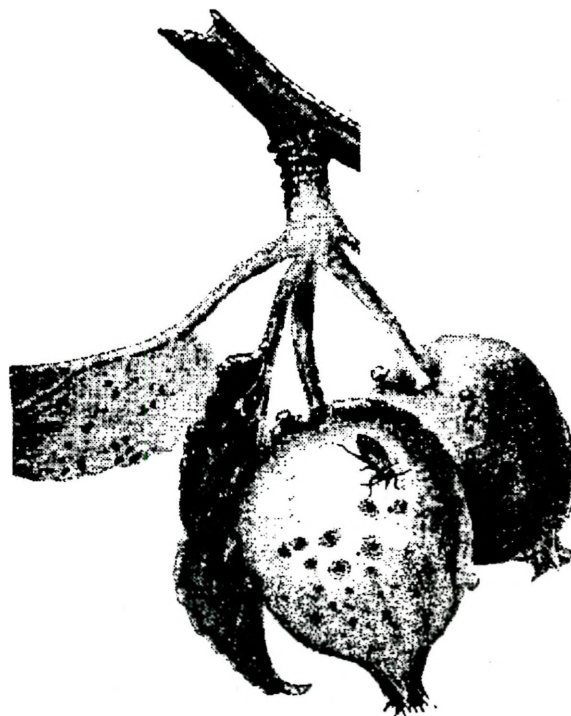
by limb tapping. A tapping tray and a rubber stick or hose are necessary equipment for tapping. Sample at least 25 branches per block and one branch per tree. Tap each branch sharply three times while holding the tray below the branch. Check the tray after tapping each branch. Mullein bug nymphs are often present in fruit clusters, so tap branches having bloom or fruit, rather than vegetative growth. Concentrate on sampling in blocks of Red Delicious, Golden Delicious and Northern Spy, as well as blocks where MB has been a problem in the past.



“There are no scientifically proven thresholds for MB control. However, a threshold of 3–5 nymphs per 25 tapped branches has been used successfully in Ontario. If large numbers of aphids or mites are present, it may be possible to increase the threshold.

“Although MB is not on the apple label, diazinon will provide good control if you are using it for a labeled pest. An application of an OP such as Guthion at petal fall may suppress MB, but will not provide adequate control once the threshold is reached. Mullein bugs are easier to control when they are young; considerable MB injury can occur in a short time. Control can also be achieved if Lannate was used for STLM control at petal fall. Pyrethroids applied at petal fall for STLM may provide short-term control of MB, but continued sampling will be necessary.”

Since this appears to be a recurring pest at least in the Geneva plantings, it looks as though we'll be undertaking some sampling and spray efficacy field trials of our own next season, to put together some suggested control recommendations for New York growers, should the need arise ♦♦.



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Dept. of Entomology

NYSAES, Barton Laboratory

Geneva, NY 14456-0462

Phone: 315-787-2341 FAX: 315-787-2326

E-mail: art_agnello@cornell.edu

Editors: A. Agnello, D. Kain

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>6/18</u> | <u>6/21</u> | <u>6/24</u> | <u>6/28</u> | | <u>6/13</u> | <u>6/20</u> | <u>6/27</u> |
|---------------------------------|-------------|-------------|-------------|-------------|-----------------------------|-------------|-------------|-------------|
| Redbanded Leafroller | - | - | 0 | 0 | Redbanded Leafroller | 0 | 0 | 0.1 |
| Spotted Tentiform Leafminer | 13.5 | 528.3 | 489.3 | 483 | Spotted Tentiform Leafminer | 7.4 | 48.7 | 51.9 |
| Oriental fruit moth (apple) | 0.6 | 0.3 | 0.2 | 0 | Sparganothis Fruitworm | 0.5 | 1.3 | 2.1 |
| Oriental fruit moth (peach) | 0 | 0 | 0 | 0 | Oriental fruit moth | 0.9 | 1.6 | 0.6 |
| Lesser appleworm | 0.6 | 0.3 | 0.3 | 1.6 | Fruitree leafroller | 0.3* | 0 | 0.1 |
| Codling moth | 12.6 | 12.8 | 10.3 | 5.1 | Lesser appleworm | 0.4 | 0.1 | 0 |
| Obliquebanded leafroller | 8.3 | 2.8 | 3.8 | 4.8 | Codling moth | 0.6 | 1.0 | 1.9 |
| Lesser peachtree borer (cherry) | 0.8 | 5.0 | 2.5 | 5.4 | Variegated leafroller | 1.6 | 2.3 | 0.4 |
| Lesser peachtree borer (peach) | 0.9 | 1.3 | 0.5 | 1.4 | Obliquebanded leafroller | 1.9 | 3.4 | 1.0 |
| American plum borer (plum) | 0.5 | 0.2 | 0 | 0.4 | Tufted apple bud moth | 0 | - | - |
| American plum borer (cherry) | 0.1 | 0.3 | 0.2 | 0.1 | Green fruitworm | 0 | - | - |
| Peachtree borer | 1.4 | 1.3 | 0.7 | 1.8 | Apple maggot | 0 | 0 | 0 |
| Apple maggot | 0 | 0 | 0 | 0.02* | | | | |

* 1st catch

(Dick Straub, Peter Jentsch)

PEST FOCUS

Geneva:

Obliquebanded leafroller 1st catch 6/13. Sampling for larvae should commence 600 DD (base 43° F) from this date. So far 398 DD₄₃ have accumulated.

Spotted tentiform leafminer 2nd flight began 6/21. Sampling for STLM sap-feeding larvae should commence in 500-700 DD₄₃ from this date. So far 207 DD₄₃ have accumulated.

White apple leafhopper 1st brood adults increasing in apple

Highland:

As of 6/27, 478 DD₄₃ had accumulated since the 1st catch of **obliquebanded leafroller**

The 2nd flight of **spotted tentiform leafminer** began 6/20 in the Hudson Valley. 194 DD₄₃ have accumulated since then.

UPCOMING PEST EVENTS

| | <u>43°F</u> | <u>50°F</u> |
|---|-------------|-------------|
| Current DD accumulations (Geneva 1/1 - 6/28): | 1198 | 826 |
| (Highland 1/1 - 6/27): | 1548 | 999 |

Coming Events:**Ranges:**

| | | |
|--|-----------|----------|
| Obliquebanded leafroller summer larvae hatch | 1076-1513 | 630-980 |
| Codling moth 1st flight subsiding | 1112-2118 | 673-1395 |
| Lesser peachtree borer flight peak | 1099-2330 | 667-1526 |
| Woolly apple aphid colonies present | 1200-1505 | 763-955 |
| Oriental fruit moth 2nd flight start | 1272-1586 | 772-1037 |
| Redbanded leafroller 2nd flight start | 1280-1744 | 804-1148 |
| Comstock mealybug 1st adult catch | 1270-1673 | 756-1105 |
| San Jose scale 1st gen. crawlers present | 987-1247 | 569-784 |
| Spotted tentiform leafminer 2nd flight peak | 1361-1979 | 854-1355 |

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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Dept. of Entomology
NYS Agricultural Exp. Sta.
Barton Laboratory
Geneva, NY 14456-0462

ARTHUR AGNELLO
ENTOMOLOGY
BARTON LAB

NYSAES