INSECTS

HEAT WAVE

[H = Highland; G = Geneva]:

Roundheaded Appletree Borer
RAB Peak egglaying period roughly: June 19 to July 3 (H)/June 22 to July 7 (G).
Peak RAB egg hatch roughly: July 4 to July 23 (H)/July 7 to July 27 (G).

Dogwood Borer
Peak DWB egg hatch roughly: July 23 (H)/July 27 (G).

Codling Moth
Codling moth development as of June 22: 1st generation adult emergence at 67% (H)/59% (G) and 1st generation egg hatch at 12% (H)/6% (G).
1st generation 3% egg hatch expected: June 14 (H)/June 18 (G).

Lesser Appleworm
2nd LAW flight begins around: July 4 (H)/July 8 (G).

Obliquebanded Leafroller
Where waiting to sample late instar OBLR larvae to determine need for treatment, optimum sample date for late instar summer generation OBLR larvae: June 26 (H)/June 30 (G).

Oriental Fruit Moth
2nd generation OFM flight begins around: June 22 (H)/June 25 (G).
2nd generation, first treatment date, if needed: June 30 (H)/July 3 (G).

Redbanded Leafroller
2nd RBLR flight begins around June 23 (H)/June 26 (G).

Spotted Tentiform Leafminer
Rough guess of when 2nd generation sap-feeding mines begin showing: June 27 (H)/July 2 (G). Optimum first sample date for 2nd generation STLM sapfeeding mines is July 5 (H)/July 9 (G).

PEST FOCUS

Geneva: Redbanded leafroller 2nd flight began today, 6/22.
Highland: San Jose scale crawlers, and early fruit injury, noted on 6/19.
Insect model predictions for Highland/Geneva:
Obliquebanded leafroller larval emergence @350 DD43 (currently @ 568[H]/447[G]) (Hatch in Highland is predicted to be approx. 25%. Hatch in Geneva is predicted to be just beginning.)
**Obliquebanded Leafroller**

Assuming a biofix (1st adult catch) of OBLR this year from about May 29 (Highland) to 6/1 (Geneva) to Sodus (6/8) to Chazy (6/10), sites around the state have accumulated a total of anywhere from 330-568 DD (base 43°F) in the most advanced sites, with perhaps 270 DD in later northern regions. First egg hatch is generally expected at about 360 DD, which has already passed in Highland and Geneva, and should occur sometime this week in Sodus and somewhat later in the Champlain Valley. The 630 DD point in the insect’s development roughly corresponds to 50% egg hatch, and at 720 DD, the earliest emerging larvae have reached the middle instars that are large enough to start doing noticeable damage to foliar terminals and, eventually, the young fruits. This is also the earliest point at which visual inspection for the larvae is practical, so sampling for evidence of a treatable OBLR infestation would be recommended at that time in orchards where pressure has not been high enough to justify a preventative spray.

Guidelines for sampling OBLR terminal infestations can be found on p. 71 in the Recommends, using a 3% action threshold that would lead to a recommended spray of an effective leafroller material. Delegate, Belt, Altacor, Proclaim and Exirel are our preferred choices in most cases; Rimon, Intrepid, a B.t. material or a pyrethroid are also options, depending on block history and previous spray efficacy against specific populations. If the average percentage of terminals infested with live larvae is less than 3%, no treatment is required right away, but another sample should be taken three to five days (100 DD) later, to be sure populations were not underestimated.

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**Green Aphids**

Although small numbers of green aphids (Spirea aphid, Aphis spiraecola, and Apple aphid, Aphis pomi) may have been present on trees early in the season, populations have been increasing regularly as the summer weather patterns gradually become established. Both species are common during the summer in most N.Y. orchards, although no extensive surveys have been done to compare their relative abundance in different production areas throughout the season. It’s generally assumed that infestations in our area are mostly Spirea aphid.

Nymphs and adults suck sap from growing terminals and water sprouts. High populations cause leaves to curl and may stunt shoot growth on young trees. Aphids excrete large amounts of honeydew, which collects on fruit and foliage. Sooty mold fungi that develop on honeydew cause the fruit to turn black, reducing its quality.

Aphids should be sampled several times throughout this season starting now. Inspect 10 rapidly growing terminals from each of 5 trees throughout the orchard, noting the percentage of infested terminals, including rosy aphid-infestations, since they tend to affect the foliage similarly.
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to the green species at this time of the year. No formal
studies have been done to develop an economic
threshold for aphids in N.Y. orchards. Currently,
treatment is recommended if 30% of the terminals
are infested with either species of aphid, or at 50% ter-
ninal infestation and less than 20% of the termi-
nals with predators (below). An alternative thresh-
old is given as 10% of the fruits exhibiting either
aphids or honeydew.

The larvae of syrphid (hoverflies) and cecido-
myiid flies (midges) prey on aphids throughout the
summer. These predators complete about three
generations during the summer. Most insecticides
are somewhat toxic to these two predators, and
they usually cannot build up sufficient numbers to
control aphids adequately in regularly sprayed or-
chards. Check Tables 7.1.1 (p. 63) and 7.1.2 (p. 65)
in the Recommends for ratings of efficacy and im-
 pact on beneficials, respectively, for common spray
materials. Both aphid species are resistant to most
organophosphates, but materials in other chemical
classes that control these pests effectively include:
Admire, Asana, Assail, Aza-Direct, Beleaf, Dani-
tol, Lannate, Movento, Proaxis, Pyrenone, Thion-
ex, Vydate and Warrior.

**Woolly Apple Aphid**
WAA colonizes both aboveground parts of the
apple tree and the roots and commonly overwin-
ters on the roots. In the spring, nymphs crawl up
on apple trees from the roots to initiate aerial colo-
nies. Colonies initially build up on the inside of the
canopy on sites such as wounds or pruning scars
and later become numerous in the outer portion of
the tree canopy, usually during late July to early
August, but you may already begin to notice these
aerial colonies in high pressure orchards in the re-
gion. Refer to the June 9 issue of Scaffolds for an
overview of some control recommendations.

**Potato leafhopper**
PLH is generally a more serious problem in the
Hudson Valley than in western New York or the
Champlain Valley; however, healthy populations
can be found in WNY as well this season. Refer to
the June 1 issue of Scaffolds for an overview of its
biology and some control recommendations.

**Japanese Beetle**
This perennial pest overwinters as a partially
grown grub in the soil below the frost line. In the
spring the grub resumes feeding, primarily on the
roots of grasses, and then pupates near the soil sur-
face. Adults normally begin to emerge during the
first week of July in upstate N.Y. The adults fly
to any of 300 species of trees and shrubs to feed;
upon emergence, they usually feed on the foliage
and flowers of low-growing plants such as roses,
grapes, and shrubs, and later on tree foliage. On
tree leaves, beetles devour the tissue between the
veins, leaving a lacelike skeleton. Severely injured
leaves turn brown and often drop. Adults are most
active during the warmest parts of the day and pre-
fer to feed on plants that are fully exposed to the
sun.

Although damage to peaches is most common-
ly noted in our area, the fruits of apple, cherry,
peach and plum trees may also be attacked, all of
which have been suffering increasing damage from
these insects in recent years. Fruits that mature
before the beetles are abundant, such as cherries,
may escape injury. Ripening or diseased fruit is
particularly attractive to the beetles. Pheromone
traps are available and can be hung in the orchard
in early July to detect the beetles' presence; these
products are generally NOT effective at trapping
out the beetles. Fruit and foliage may be protect-
ed from damage by spraying an insecticide such as
Assail, Sevin, Endigo or Voliam Xpress (in apple)
or Admire, Assail, Sevin, Endigo, Leverage or Vo-
liam Xpress (in cherries or peaches) when the first
beetles appear.

(Information adapted from: Johnson, W.T. & H.H.
Lyon. 1988. Insects that feed on trees and shrubs.
NCR 63.) 💡

continued...
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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### INSECT TRAP CATCHES

<table>
<thead>
<tr>
<th></th>
<th>Number/Trap/Day</th>
<th>Geneva, NY</th>
<th>Highland, NY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redbanded leafroller</td>
<td>0.0</td>
<td>0.1</td>
<td>1.2*</td>
</tr>
<tr>
<td>Spotted tentiform leafminer</td>
<td>1.1*</td>
<td>6.0</td>
<td>15.3</td>
</tr>
<tr>
<td>Oriental fruit moth</td>
<td>0.1</td>
<td>0.3</td>
<td>0.0</td>
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<tr>
<td>Lesser appleworm</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Codling moth</td>
<td>0.6</td>
<td>0.1</td>
<td>0.7</td>
</tr>
<tr>
<td>San Jose scale</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>American plum borer</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Lesser peachtree borer</td>
<td>1.6</td>
<td>0.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Peactree borer</td>
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<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Dogwood borer</td>
<td>3.1</td>
<td>2.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Pandemis leafroller</td>
<td>5.3</td>
<td>2.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Obliquebanded leafroller</td>
<td>1.6</td>
<td>1.1</td>
<td>0.8</td>
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</table>

* first catch

### UPCOMING PEST EVENTS

<table>
<thead>
<tr>
<th>Current DD* accumulations (Geneva 1/1–6/22/15):</th>
<th>43°F</th>
<th>50°F</th>
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<tbody>
<tr>
<td>(Geneva 1/1–6/22/2014):</td>
<td>1140</td>
<td>711</td>
</tr>
<tr>
<td>(Geneva &quot;Normal&quot;):</td>
<td>1217</td>
<td>696</td>
</tr>
<tr>
<td>(Geneva 1/1–6/29, predicted):</td>
<td>1362</td>
<td>899</td>
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<tr>
<td>(Highland 1/1–6/22/15):</td>
<td>1463</td>
<td>969</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coming Events:</th>
<th>Ranges (Normal ±StDev):</th>
</tr>
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<tbody>
<tr>
<td>Pear psylla 2nd brood hatch</td>
<td>967–1185 584–750</td>
</tr>
<tr>
<td>San Jose scale 1st flight subsides</td>
<td>864–1238 515–769</td>
</tr>
<tr>
<td>San Jose scale 1st gen. crawlers present</td>
<td>1033–1215 619–757</td>
</tr>
<tr>
<td>Cherry fruit fly 1st catch</td>
<td>755–1289 424–806</td>
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<tr>
<td>Obliquebanded leafroller 1st flight peak</td>
<td>834–1226 485–771</td>
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<tr>
<td>Obliquebanded leafroller summer larvae hatch</td>
<td>1038–1460 625–957</td>
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<tr>
<td>Pandemis leafroller flight peak</td>
<td>883–1189 507–733</td>
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<tr>
<td>Oriental fruit moth 2nd flight begins</td>
<td>1269–1503 784–1075</td>
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<tr>
<td>Lesser appleworm 1st flight subsides</td>
<td>992–1528 603–983</td>
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<tr>
<td>Apple maggot 1st catch</td>
<td>1249–1669 795–1075</td>
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<tr>
<td>American plum borer 1st flight subsides</td>
<td>1200–1488 745–967</td>
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<tr>
<td>Comstock mealbug 1st adult catch</td>
<td>1308–1554 809–1015</td>
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</tbody>
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* [all DDs are Baskerville-Emin (B.E.)]

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