

# scaffolds

Update on Pest Management  
and Crop Development

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

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VOLUME 3

Geneva, NY

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WHO'S BORING?  
(Art Agnello)



❖❖ This is a good time to assess the situation with a number of species of borers in your apple and stone fruit trees. These are generally multi-season pests requiring a little foresight to maintain control once they have shown themselves to be present.

## DOGWOOD BORER

The larva of this clearwing moth feeds on apple trees, primarily on burrknot tissue on clonal rootstocks. Burrknots are aggregations of root initials that can develop on the above-ground portion of the rootstock; all commercial dwarfing and semi-dwarfing rootstocks have a tendency to develop burrknots. Some chemicals with hormone effects, such as NAA, can increase the expression of burrknots, as will failure to keep the area around the trunk weed-free and open to sunlight. White latex paint brushed on the exposed portion of the rootstock will prevent new infestations of the borers, and also protect against southwest injury to the bark. Dilute trunk applications of an insecticide with good residual activity can provide control of established infestations. At this point in the season, a spray of Lorsban 50WP or Thiodan 50WP would be the most effective materials if applied anytime until Aug. 15, bearing in mind the specific pre-harvest intervals.

## ROUNDHEADED APPLE TREE BORER

This pest, *Saperda candida* F., is a cerambycid beetle that attacks young, healthy trees (unlike many other longhorn beetles).

Warren Johnson, in his "Insects That Feed on Trees and Shrubs", writes of its having been a very serious problem for apple producers in the north-eastern U.S. during the mid-1880s. Next to the codling moth, it was the worst enemy of the apple tree. However, current pest management programs have generally relegated it to a rather minor status among most apple growers, except for homeowners and newer or smaller operations. This insect is also a pest of hawthorn, mountain ash, quince, shadbush, cotoneaster, and flowering crabapple.

The adult is an attractive light brown beetle, approximately 5/8-inch long, and olive brown with longitudinal white stripes. It emerges in N.Y. in June, and is active at night, normally hiding by day. The larva is a pale yellow grub, one inch long, and deeply divided between segments, with a dark brown head and blackish mandibles. Eggs are laid mainly from late June through July in the bark near soil level. Two weeks are required to hatch, after which the larvae bore into the sapwood, and create tunnels throughout the lower trunk area. This insect takes 2-3 years to develop, and is closest to the surface during first and last few months of its life.



Because of its concealed habit and long life cycle, control of this borer is problematic and can be rather labor-intensive. The following protocol should be followed to ensure the best success in eliminating this pest:

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- May: Ring the bottom 12–24" of trunks with oviposition barriers made of a) wire mosquito netting or hardware cloth, or b) several layers of newspapers. Barriers should be loose except at the bottom (cover with earth) and top (tie with a cord). You can mound the earth up 12" around the base of the barriers. Remove barriers at the end of the season (October).

- Late May through July: Apply a deterrent wash above the barriers on uninfested trunk using a paintbrush, consisting of an alkaline mixture of soap (e.g., M-Pede insecticidal soap @ 2.5 oz/gallon water) plus caustic potash (lye) mixed to the consistency of thick paint. Add 1 pint of crude carbolic acid per 10 gallons of wash, if desired, to increase efficacy. Apply every 2–4 weeks, depending on rainfall, to deter egg-laying on the trunk.

- June 15 and July 1 (1st & 2nd cover sprays, 802–1029 degree days [from March 1, base 50°F]): Spray foliage with multi-purpose orchard spray containing endosulfan (Thiodan) or chlorpyrifos (Lorsban), methoxychlor, or diazinon to reduce the adult population. Repeat sprays the last 10 days of July (1514–1798 degree days) to kill newly hatched borers.

- Mid- to late Sept: Check trunks above barriers for evidence of small larvae working just beneath the surface. Paint on kerosene or PDB (para-dichlorobenzene moth flakes) in cottonseed oil (saturated solution) wherever castings are found protruding from the bark.

- Late summer to mid-Sept: Check bark for small pinholes with sawdust exuding from them. Kill larvae with an awl or wire or knife (use caution so as not to damage tree) OR inject a mixture with a grease gun of: a) PDB + cottonseed oil (saturated solution), or b) 1.5% rotenone extract in ethyl alcohol.

If trees are girdled, you might try applying bridge grafts (1–2 per tree): in the spring, cut a piece of the current season's shoot growth, (a watersprout

is preferred) 1/2–3/4" diam., long enough to reach, split it and bevel the inside edges diagonally; apply to the trunk surfaces above and below girdling, tie in place and apply grafting wax at both ends; fertilize tree.

Keep the bases of trees weed-free to encourage birds (mainly and downy woodpeckers) and other natural enemies to control the beetles. If possible, destroy wild hosts within 300 yards (wild apple seedlings, hawthorn, shadbush, mountain ash). If a tree is injured beyond recovery, it should be taken out and burned before the following spring to prevent borers inside from completing their life cycle.



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**scaffolds** FRUIT JOURNAL

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## PEACHTREE BORERS

Remember to get your trunk and scaffold sprays on peaches and cherries during the first week of August if borers are a problem in your blocks. The peachtree borer and lesser peachtree borer increase the severity of *Cytospora* canker infections in peaches and are often found within the canker; by feeding in the callous tissues, they interfere with the tree's natural defenses against the disease. Infestations can be determined by the presence of the insect's frass, which resembles sawdust, in the gum exuded from the wound. In peaches, one effective approach is a post-harvest trunk and lower scaffold spray using Lorsban 4E at 3 qt, or Thiodan 50WP at 1.5 lb per 100 gallons. Alternatively, for varieties able to wait out the 14-day PHI, this is an appropriate time for the season's last treatment of Asana, Ambush, or Penncap-M, also applied to the trunk and scaffold limbs. In cherries, a coarse spray to the trunk and lower limbs can be applied, using Lorsban or a pyrethroid, as above. Do not spray the fruit. ❖❖

## CODLING MOTH MODEL

❖❖ The developmental model for 2nd generation codling moth larvae predicts that a control spray should be applied in problem orchards 1260 DD (base 50°F) after the start of the FIRST flight (5/23 in Geneva, 5/16 in the Hudson Valley). As of today, 7/18, 1070 DD have accumulated in Geneva and 1238 at Highland. A spray in problem orchards would be timely this week in the Hudson Valley, followed by a second one in 10–14 days. ❖❖

## PEST FOCUS

Geneva:

**Spotted tentiform leafminer** 2nd flight began 6/20. Degree days (base 43°F) since then = 782.

**San Jose scale** 2nd flight beginning.

**American plum borer** 2nd flight beginning.

Highland:

**European red mite numbers** increasing.

**Pear psylla numbers** increasing.

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

Geneva NY

HVL, Highland NY

	7/11	7/14	7/18		7/5	7/11	7/18
Spotted tentiform leafminer	413	106	70	Redbanded leafroller	0.1	0	0.1
Red-banded leafroller	0.9	0.2	0.1	Spotted tentiform leafminer	60	56.3	29.8
Lesser appleworm	1.4	0.8	0.9	Oriental fruit moth	0.9	0.6	0.8
Oriental fruit moth(apple)	7.4	5.8	3.3	Fruittree leafroller	0	0	0
Codling moth	2.3	2.7	0.3	Lesser appleworm	0.3	0.5	0.2
American plum borer(plum)	0.4	1.2	2	Codling moth	0.2	0.1	1.6
American plum borer(cherry)	0.5	0.3	1.5	American plum borer	1.1	0.3	0.9
Lesser peachtree borer	3.5	3	1.4	Sparganothis fruitworm	2.9	1.6	0.1
Peachtree borer	0.9	1.2	0.3	Tufted apple bud moth	0.4	0.1	0
Obliquebanded leafroller	0.6	0	0	Variiegated leafroller	0.3	0.1	0
Pandemis leafroller	0	0	0	Obliquebanded leafroller	0.1	0.2	0.1
Apple maggot	0.06	0	0.1	Apple maggot	0**	0.4	0.3

\*\* 0.3/trap /day 6/29 and 7/1. 6/29 1st catch.

\* = 1st catch

(Dick Straub, Peter Jentsch)

## UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations		
(Geneva 1/1 - 7/18):	1805	1296
(Highland 1/1 - 7/18):	2243	1549
<b><u>Coming Events:</u></b>	<b><u>Ranges:</u></b>	
Oriental fruit moth 2nd flight subsides	1806-2783	1164-1963
Redbanded leafroller 2nd flight peak	1479-2443	952-1381
STLM 2nd flight subsides	1773-2443	1148-1698
STLM 2nd gen. tissue feeders present	1504-2086	952-1201
Codling moth 2nd flight subsides	2782-3433	1796-2332
Comstock mealybug 1st flight subsides	1844-2245	1241-1450
CMB 2nd gen. crawlers emerging	2106-2468	1447-1631
Lesser peachtree borer flight peak	1099-2330	667-1526
Peachtree borer flight peak	869-2241	506-1494
Dogwood borer peak catch	1551-1952	986-1306

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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