

Update on Three New Invasive Pests in VT, NH, ME

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UNH Cooperative Extension

January 10-12, 2012

BMSB (Brown marmorated stinkbug)

disc. NH Jul 2010.

VT: 2011 ME: 2006



**SWD (spotted wing drosophila) was
disc. in NH/ME/VT
September 2011.**



Agriculture

- Agricultural Business Management
- AG Resources Calendar
- Beginning and Small Farm Programs
- Dairy, Livestock, Equine and Poultry
- Ecological and Organic Agriculture
- Forages and Field Crops
- Fruit and Vegetable Crops
- Greenhouse and Floriculture
- Growing Degree Days
- Home Horticulture
- Integrated Pest Management
- Landscape, Nursery and Turf
- Master Gardener
- Pesticide Safety Education Program (PSEP)
- Problem Diagnosis and Testing Services

Brown marmorated stinkbug

Have You Seen This Insect in New Hampshire?

NEW -- A map  which shows the towns in New Hampshire with a confirmed BMSB sighting as of 8/23/11.

Current Status of BMSB, April 2, 2011

Dr. Alan Eaton, UNH Cooperative Extension

Brown marmorated stinkbug has currently (April 2, 2011) been found in every state east of the Mississippi River, plus Minnesota, Iowa, Nebraska, Arizona, California, Oregon, Washington (33 total). In New Hampshire it has been found in Portsmouth and Stratham.

The host range is very wide, and new hosts are documented in North America every year. Currently they include tree fruit, small fruit, vegetables, shade trees, sweet & field corn. Among ornamentals: maples, dogwood, crabapples, hawthorns, elms, sycamore, serviceberry. We are too far north for one highly favored host to survive: *Paulownia tomentosa* (Empress tree).

We anticipate that in New Hampshire the insect will have one generation per year. Adults overwinter in protected places, like crevices in structures and inside walls. They should begin emerging in May (?). They begin laying eggs about 2 weeks after emergence. Nymphs should be found in spring and summer, and overwintered adults might be found on plants as late as July. New adults may appear as early as August.

So far in New Hampshire, **nuisance problems** have been detected in only one neighborhood in Portsmouth.



Brown marmorated stinkbug

Photo by David R. Lance, USDA/APHIS/PPQ

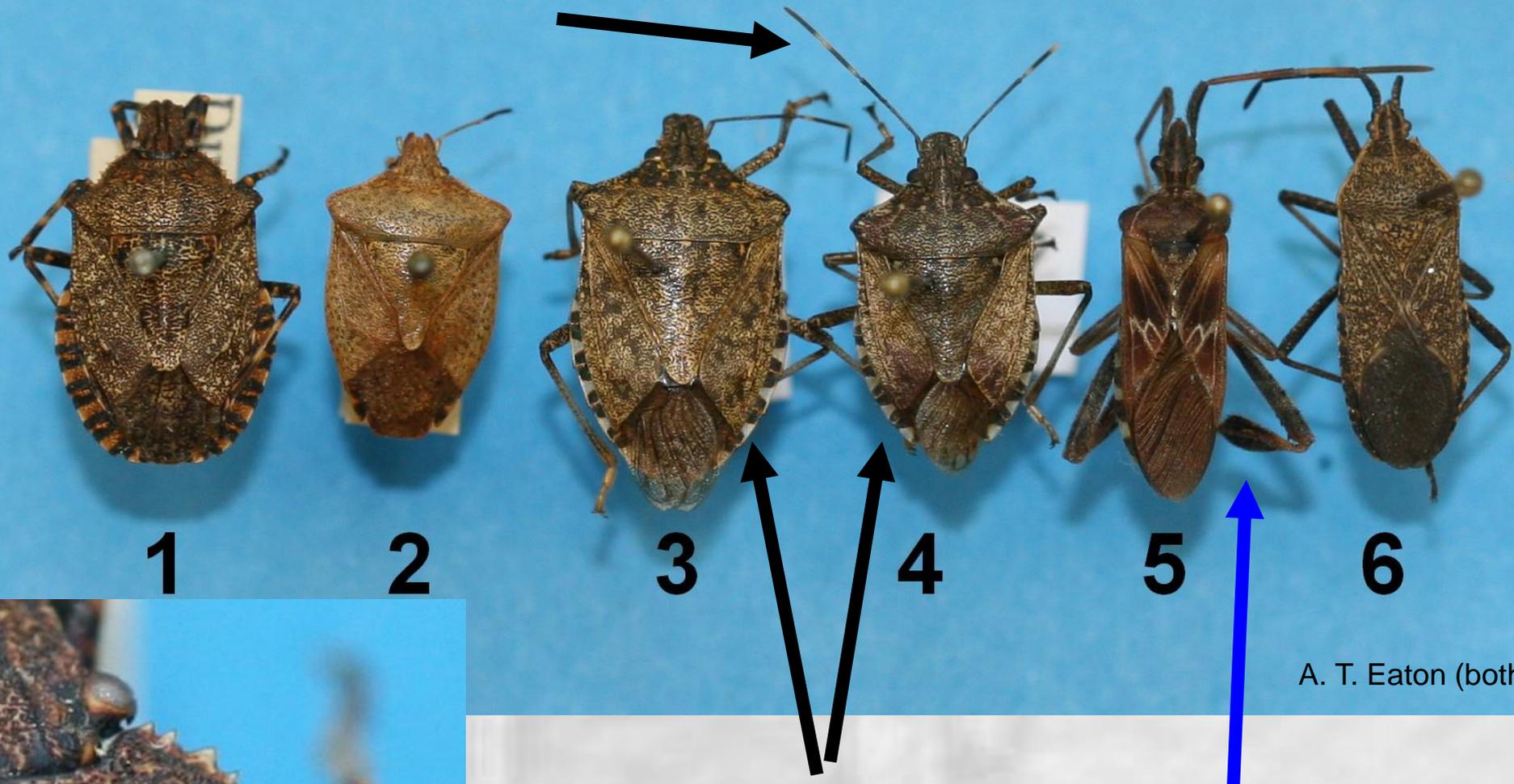
Brown marmorated stinkbug (BMSB) [*Halyomorpha halys*]

BMSB is native to China, Japan, Taiwan and Korea. It was first discovered in the US in eastern Pennsylvania in 1998. A November 26, 2010 USDA NRCS bulletin says it has been found in 29 states. BMSB was confirmed in Portsmouth, New Hampshire in the summer of 2010.

This invasive insect presents two types of problems:

- 1) it can be a significant household nuisance and
- 2) it can be a serious agricultural pest.

Brown Marmorated Stinkbug



A. T. Eaton (both)

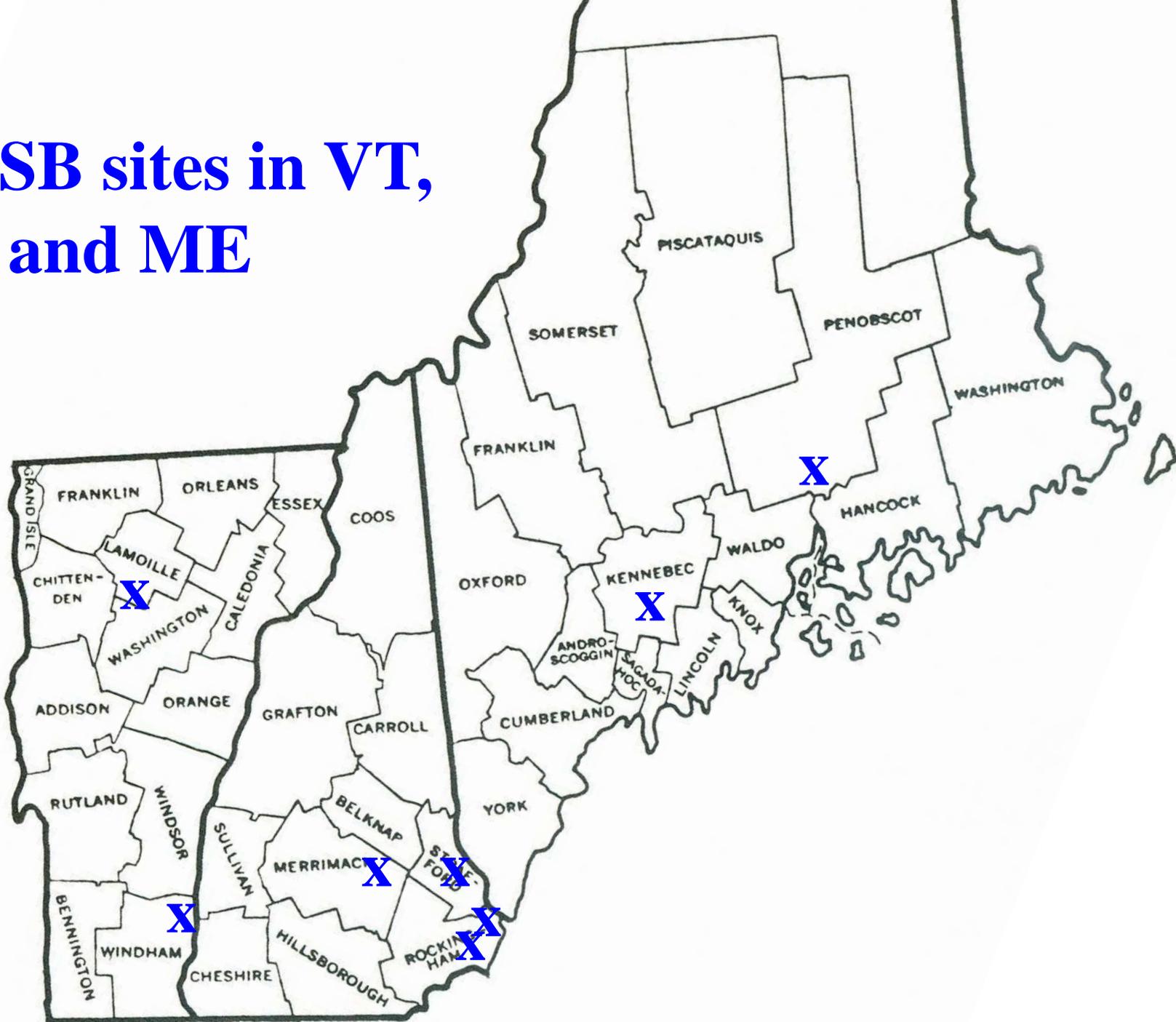
Many people turned in samples that they thought were BMSB.





As of Jan. 2012 there are only four NH municipalities with confirmed BMSB records.

BMSB sites in VT, NH and ME







Our numbers are VERY LOW, compared to those in Maryland and West Virginia.

It will take years before they become serious agricultural pests here.

Down south they attack:

Peaches, apples, tomatoes, corn, beans, ornamental trees & shrubs...

Brown Marmorated Stinkbug

Research is underway on:

- biological controls
- attracting with lights
- attractant odors/pheromones
- insecticide efficacy
- traps
- host range
- basic biology



**SWD (spotted wing drosophila) is
from China & Japan.**

Hawaii: 1980

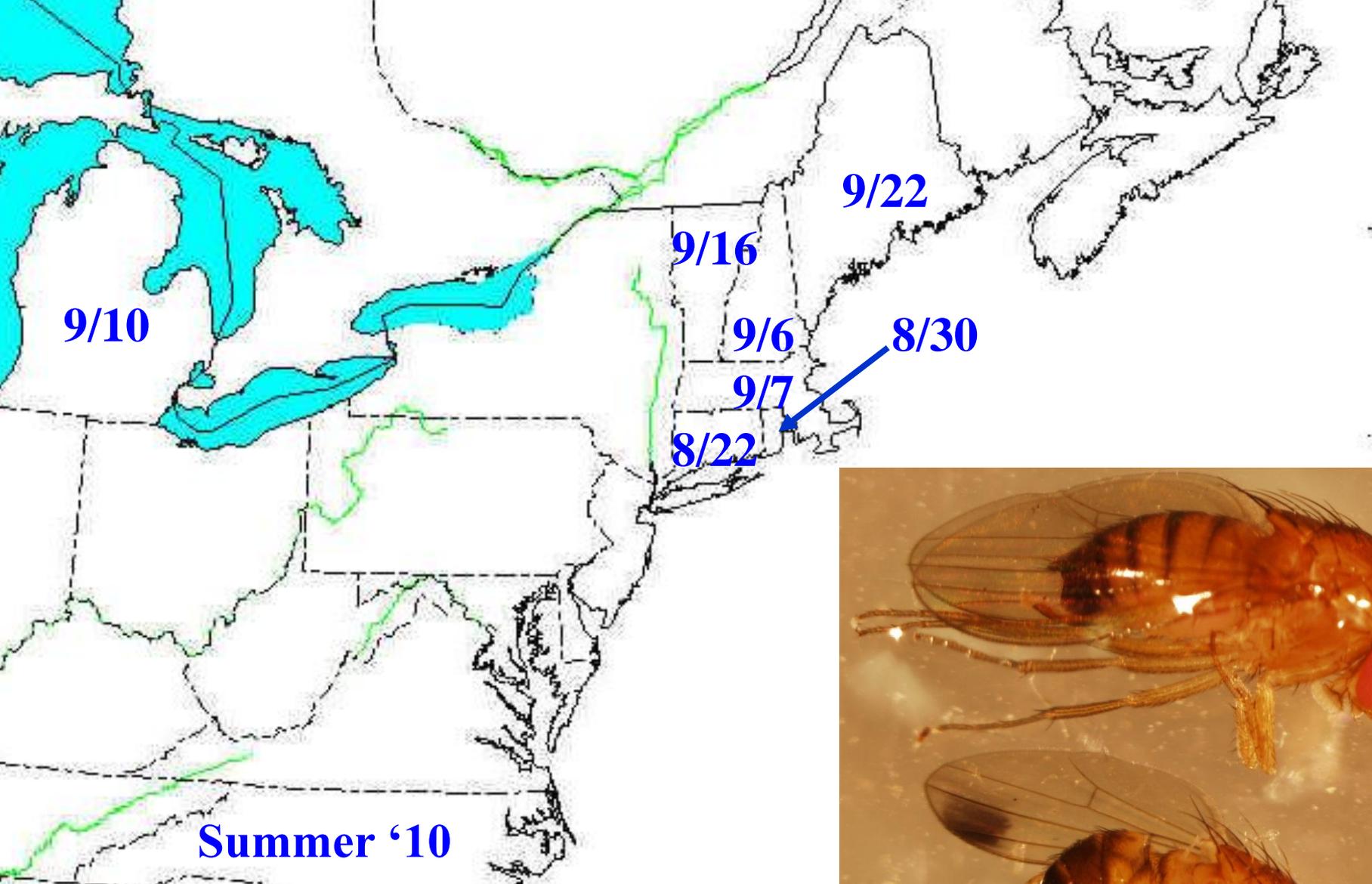
CA: 2008

FL spring '10

NC summer '10

MI Sept '10





Spotted Wing Drosophila

Unlike our other Drosophilids, the female of SWD has a saw-edged egg-layer, enabling it to lay eggs through the skin of sound fruit.



The two spots on the male's wings and the serrated egg-layer of the female are unique. They distinguish this species from the 39 other spp. of drosophilids we have in NH.

Egg to adult:
Approx. 14 days
(as short as 8d in
some conditions).
Up to 300 eggs/female



The literature says it attacks:

bramble fruit

strawberries

blueberries

cherries

grapes

plums

peaches, nectarines

pears, pluots, currants, figs, oranges,

kousa dogwood, mulberry, cranberry...

If skin is cracked: tomato, apple, pear.



2012 Season:

- 1. This insect will survive our winter.**
- 2. We hope it will have low numbers early in the season, and not build up to very high levels until late.**
- 3. Sanitation will be important: Remove and destroy all over-ripe fruit promptly. Dumping it on a pile does not destroy it!**
- 4. Frequent monitoring will be needed.**
- 5. Controls should be tied to monitoring.**



You will have to monitor your fruit plantings for SWD.

Traps can't attract them from long distances, so data from other farms won't be of much help.

Monitoring

1. Place traps in the crop as ripening starts, in shaded spot, in the fruiting zone.
2. Males are easily recognized by the dark spot on each wing.
3. Threshold = ??
4. Bait: apple cider vinegar + additives
5. Check twice/wk



Monitoring

**6. Contech trap: flies drown in the bait.
Both sexes are identifiable. You'll need a
microscope for females.
Change bait frequently,
or identification is stinky
and difficult.**

(Works best in shade.)



Spraying

1. We will learn more about insecticide options this winter & spring. **2ee**

2. Spraying will interrupt picking patterns, esp. PYO. Sprays control for 1-5 days (??)



3. Pesticide effectiveness:

<http://www.ipm.msu.edu/SWD.htm>

Fruit Quality

- 1. Lightly infested fruit probably can be eaten (soon) with no noticeable effects.**
- 2. Infested fruit that are held for several days will decompose quickly.**
- 3. Heavily infested raspberries, held at room temperature Sept 6, turned to “borscht” less than two days after picking.**



**Emerald Ash Borer hasn't been found
in NH/VT/ME yet. In NA it hits only Ash
(*Fraxinus*)**



Photo: David Cappaert,
Mich State Univ. Bugwood.org

Discovered in USA: Michigan 2002

Ontario

WI IL IN
OH PA NY
WV

Closest: Orange & Ulster Cos., NY



Kills:
White ash
Green ash
Black ash

Out-of-state firewood quarantine

A faint, grayscale background image of a building with a prominent steeple, possibly a church or university building, centered behind the text.

Questions?