



2003 Tree Borer Survey



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2004 Utah State Horticultural
Association Convention

2003 Tree Borer Survey

- Status of trunk borer pests
 - Current Utah situation
- 2003 tree borer survey data
 - Beetle borers
 - Moth borers
- Observations on root borers
- Orchard management strategies



Apple Flatheaded Borer (*Chrysobothris femorata*)



Moth Borers



Clearwing Moth:
Greater Peachtree Borer



Snout Moth:
American Plum Borer

Shothole Borers



Bark Beetles



Why are borers more troublesome?

- 5 years of drought/heat – tree stress
- Sources of borers
 - Sanitation!!
 - Wood piles – get rid of cut wood before May
- 2-3 yr old trees susceptible
- Sunscald, winter injury, pruning wounds
 - Paint trunks
- Keep vegetation away from trunks



2003 Trunk Borer Survey

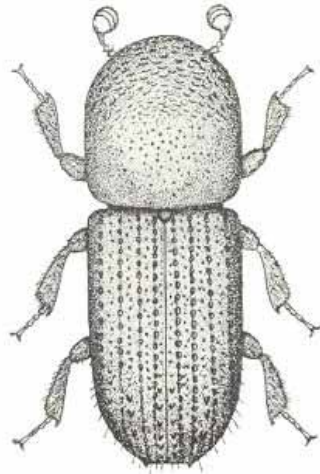
- Apple, Peach, Cherry
- Panel Traps
 - Ethanol Lure
 - Flatheaded borer
 - Shothole borers
- Pheromone Traps
 - Species specific pheromones
 - Moth borers



Beetle Borers Collected



Apple Flatheaded
Borer
(*Chrysobothris
femorata*)
¼ - ½ inch

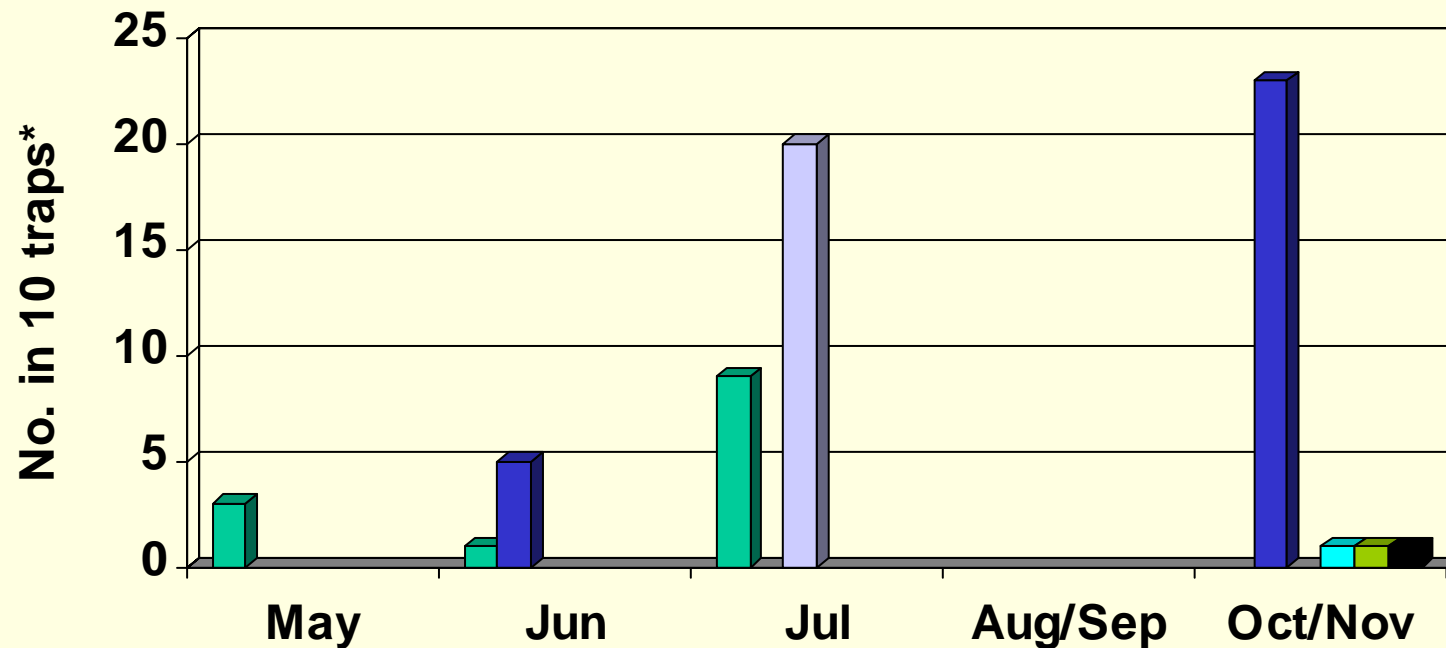


Bark Beetles:
Ambrosia beetle
(*Xyleborus saxeseni*)
Shothole borer
(*Scolytus rugulosus*)
European Elm BB
(*Scolytus multistriatus*)
Ips (*Ips integer*)
<¼ inch



Ten-lined June Beetle
(*Polyphylla
decemlineata*)
1 – 1 ½ inch
Root borer

Beetle Borers Collected in Panel Traps with Ethanol Lures



■ AFlatHead ■ Ambrosia ■ 10-linedJune ■ Shothole ■ EurElmBB ■ Ips

*10 traps at 10 sites (Box Elder, Davis & Utah Counties)

Management of Flatheaded Borers

Sanitation, remove infested wood, paint/protect trunks, prevent stresses

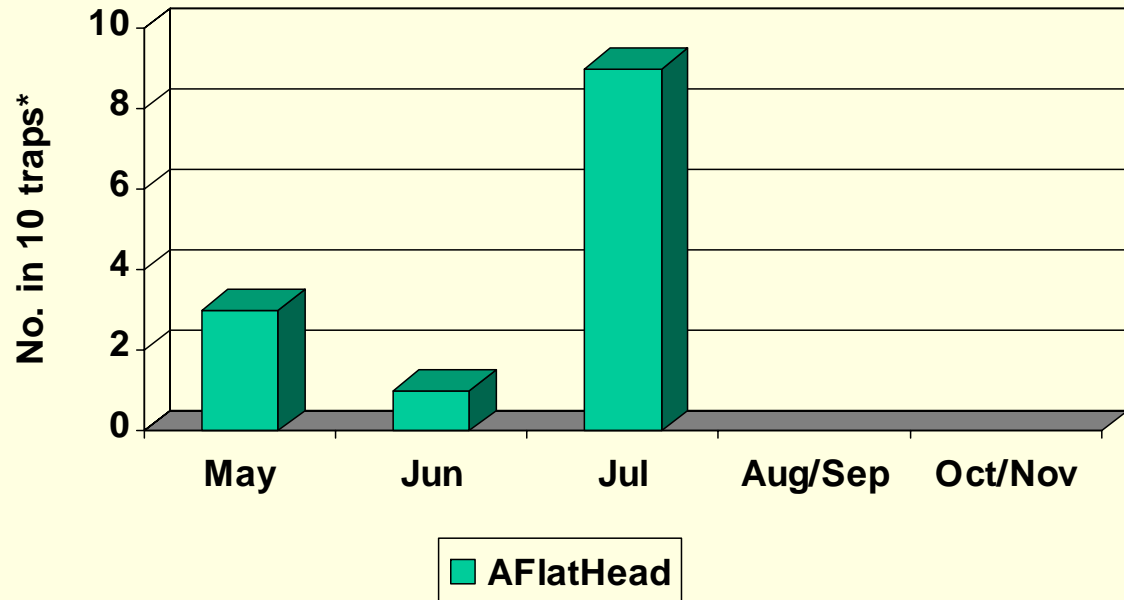


Apple Flatheaded Borer

Peak adult flight:

May-Jul

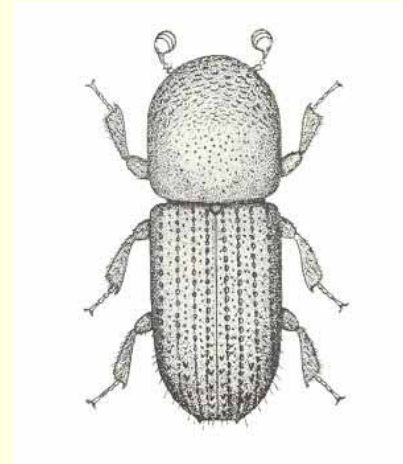
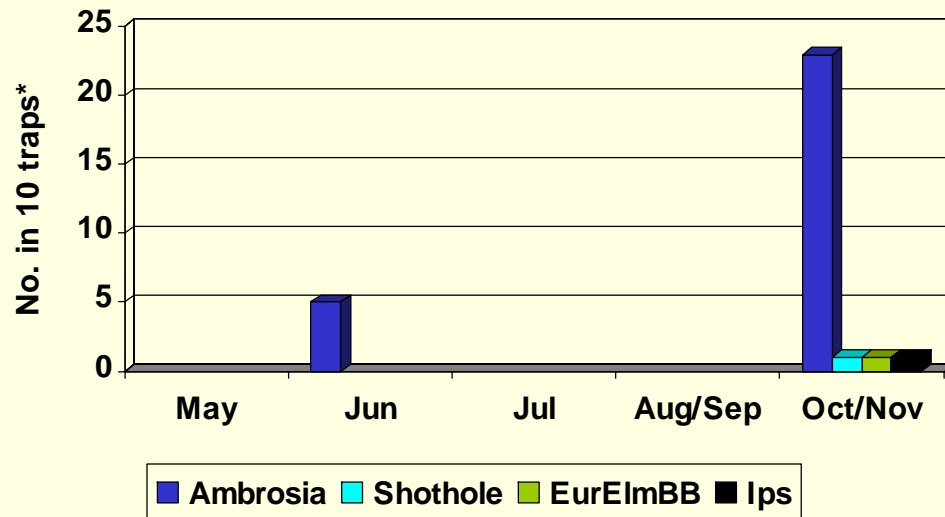
Protective trunk spray
about Jun 1 and repeat
3-4 wk later if needed



Lorsban, Thiodan,
Guthion, Malathion

Management of Bark Beetles

Sanitation, remove infested wood, paint/protect trunks, prevent stresses



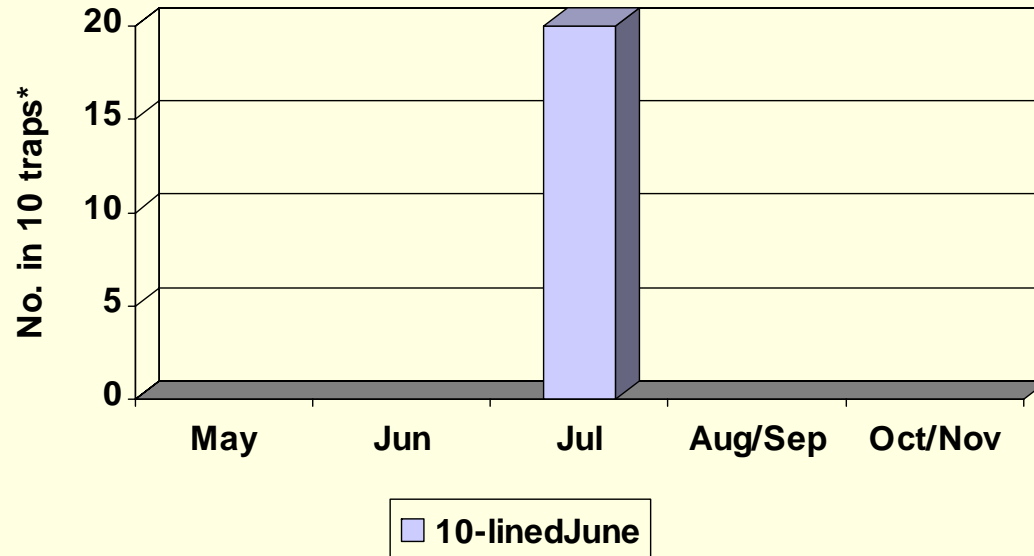
Ambrosia/Shothole Borers
Summer flights
Treat late May/early Jun
and late Aug/Sep (unprotected)

Lorsban, Thiodan,
Guthion, Asana, Malathion

Management of June Beetles

Sanitation, remove infested wood, paint/protect trunks, prevent stresses

Prevent in new plantings



Ten-lined June Beetle

Root borer

2-4 yr life cycle

Peak adult flight:
Jul & Aug

Protect new orchard sites

Moth Borers Collected

Clearwing Moths



Greater Peachtree
Borer /
Peach Crown Borer



Poplar Clearwing Moth /
Cottonwood Crown Borer



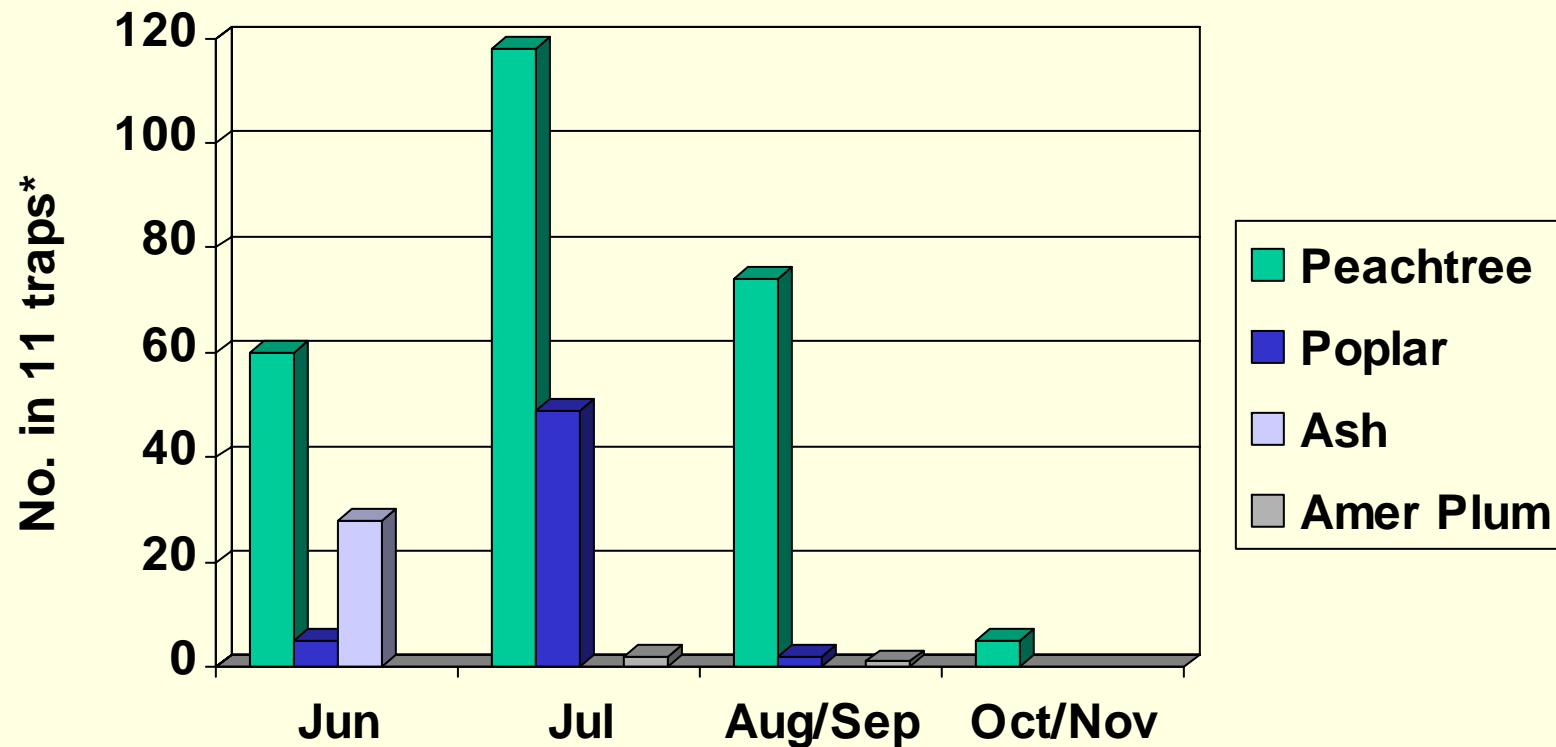
Ash Borer

Snout Moth



American Plum Borer

Moth Borers Collected in Pheromone Traps



*11 traps at 11 sites (Box Elder, Davis & Utah Counties)

Management of Greater Peachtree Borer



Utah: peach, nectarine, apricot
Very effective mating disruption

Isomate-P

not limited by small orchards

place dispensers at biofix

(late Jun)

Protective trunk sprays

Jul 1st , Aug 1st

Lorsban – one application

Thiodan – two applications

Observations of Other Borers



Leaf-notching / Root-feeding
Weevils

Otiorhynchus meridionalis

Lilac weevil
Strawberry root weevil



Pest of ornamentals
Insecticide application in
May when notching first
appears

Observations of Other Borers



Larvae bore into roots
and crown

Large beetle
Prionus californicus

Adults fly at night



Older sweet cherry roots
with extensive damage

No success with insect-
parasitic nematodes

Orchard Management Strategies for Borers

- Sanitation!!! (get rid of cut wood by May)
- Maintain tree vigor!!!
- Prevent trunk injury
 - White paint
 - Remove vegetation
- Avoid planting new orchards near sources



Orchard Management Strategies for Borers

➤ Preventive Trunk Sprays

- Flatheaded Borer: Jun 1st, repeat if needed
- Ambrosia beetles/Shothole borers: late May/early Jun (already insecticides going on) & late Aug/Sep (trees unprotected)
- Greater Peachtree Borer: Isomate-P, Jul 1st, Aug 1st

➤ Root Borers

- New sites; Imidacloprid (Admire) – soil application – not registered yet

Future Plans for Tree Borer Research

- More survey (expand, more intensive to define flight periods, different traps, lures)
 - Seeking funding through USDA APHIS pest survey program (Homeland Security)
- Validate, refine timing of sprays & insecticides
 - Grower cooperators

