

# 2003 Tree Borer Survey



Diane Alston

Utah State University

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

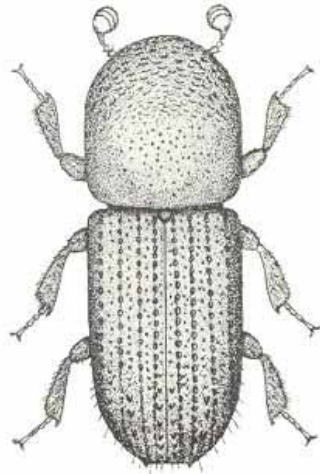
- Apple, Peach, Cherry
- Panel Traps
  - Ethanol Lure
  - Flatheaded borer
  - Shothole borers
- Pheromone Traps
  - Species specific pheromones
  - Moth borers



# Beetle Borers Collected



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



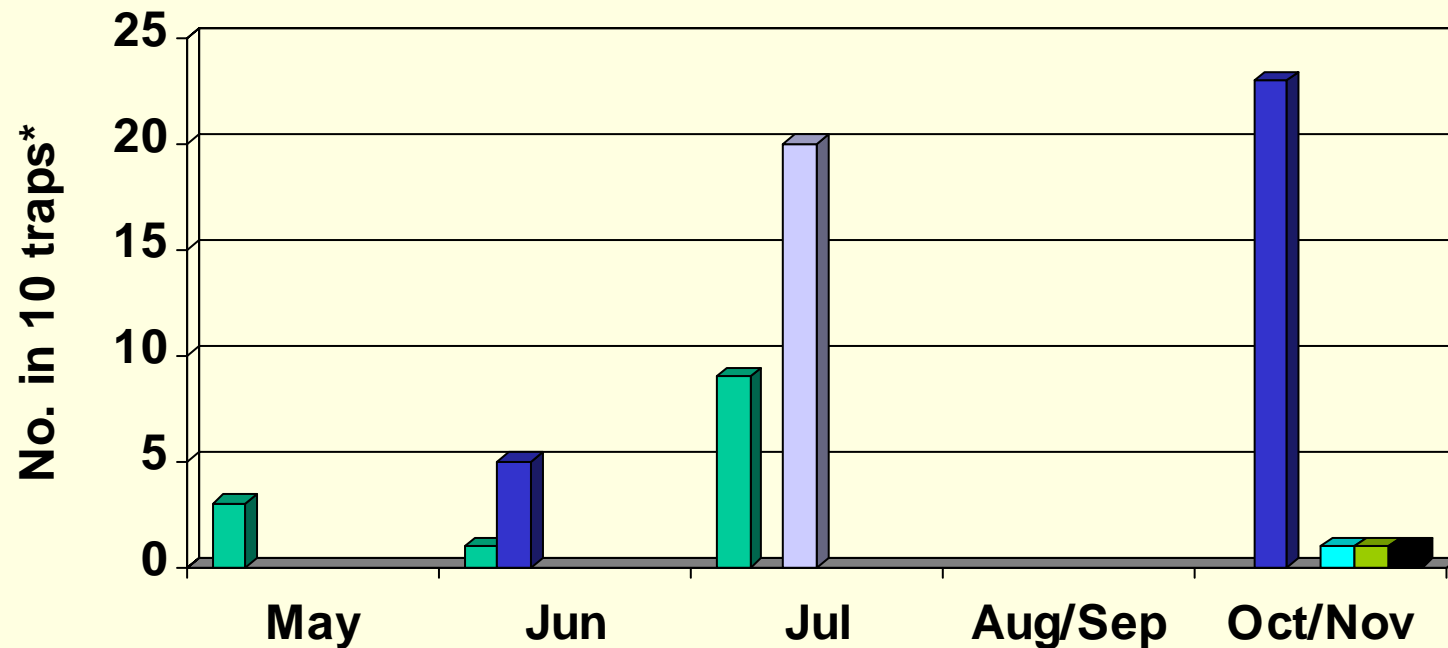
Bark Beetles:  
Ambrosia beetle  
(*Xyleborus saxeseni*)  
Shothole borer  
(*Scolytus rugulosus*)  
European Elm BB  
(*Scolytus multistriatus*)  
Ips (*Ips integer*)  
<¼ inch



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

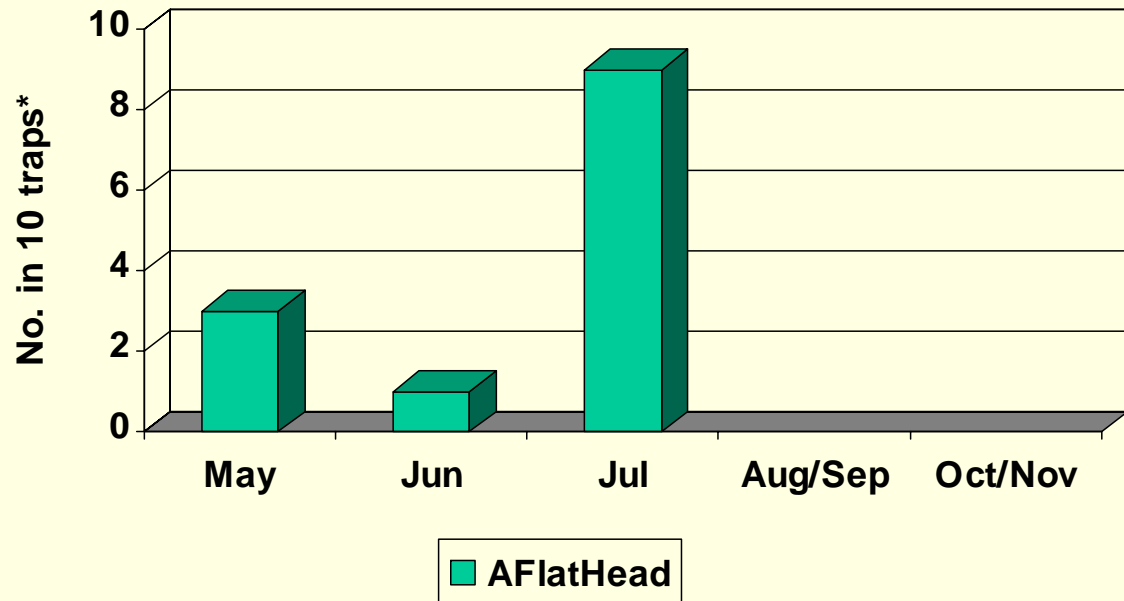


Apple Flatheaded Borer

Peak adult flight:

May-Jul

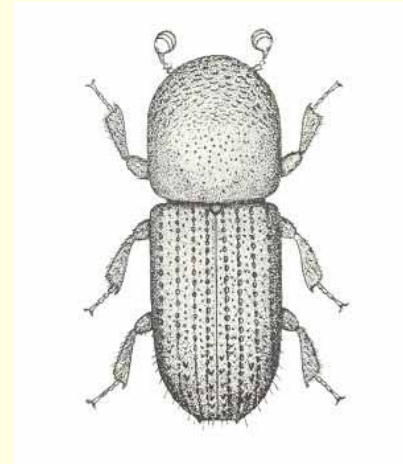
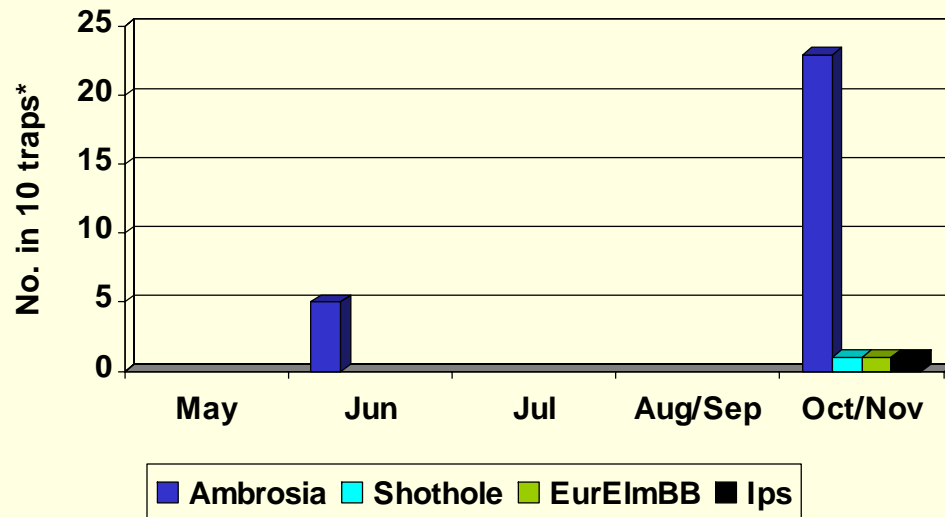
Protective trunk spray  
about Jun 1 and repeat  
3-4 wk later if needed



Lorsban, Thiodan,  
Guthion, Malathion

# Management of Bark Beetles

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



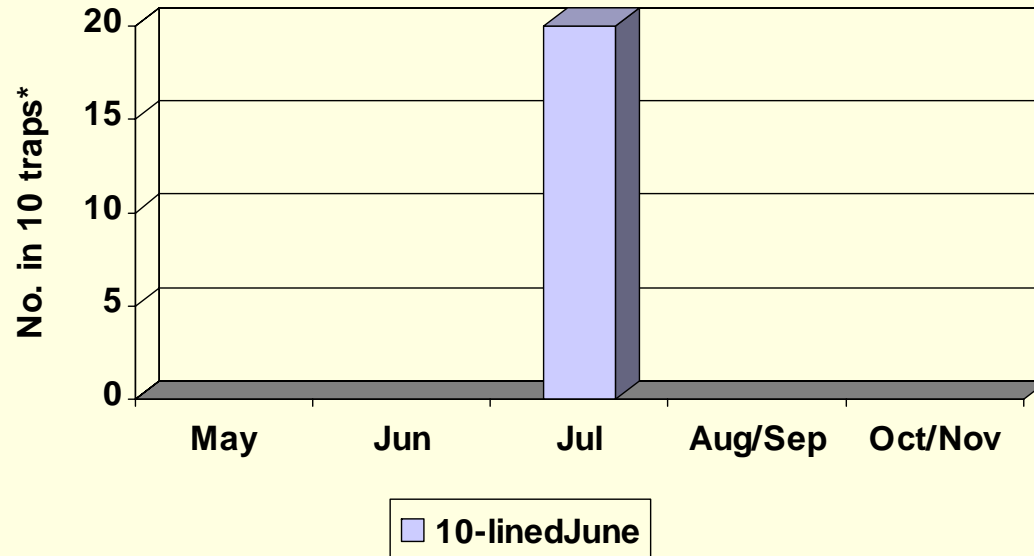
Ambrosia/Shothole Borers  
Summer flights  
Treat late May/early Jun  
and late Aug/Sep (unprotected)

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



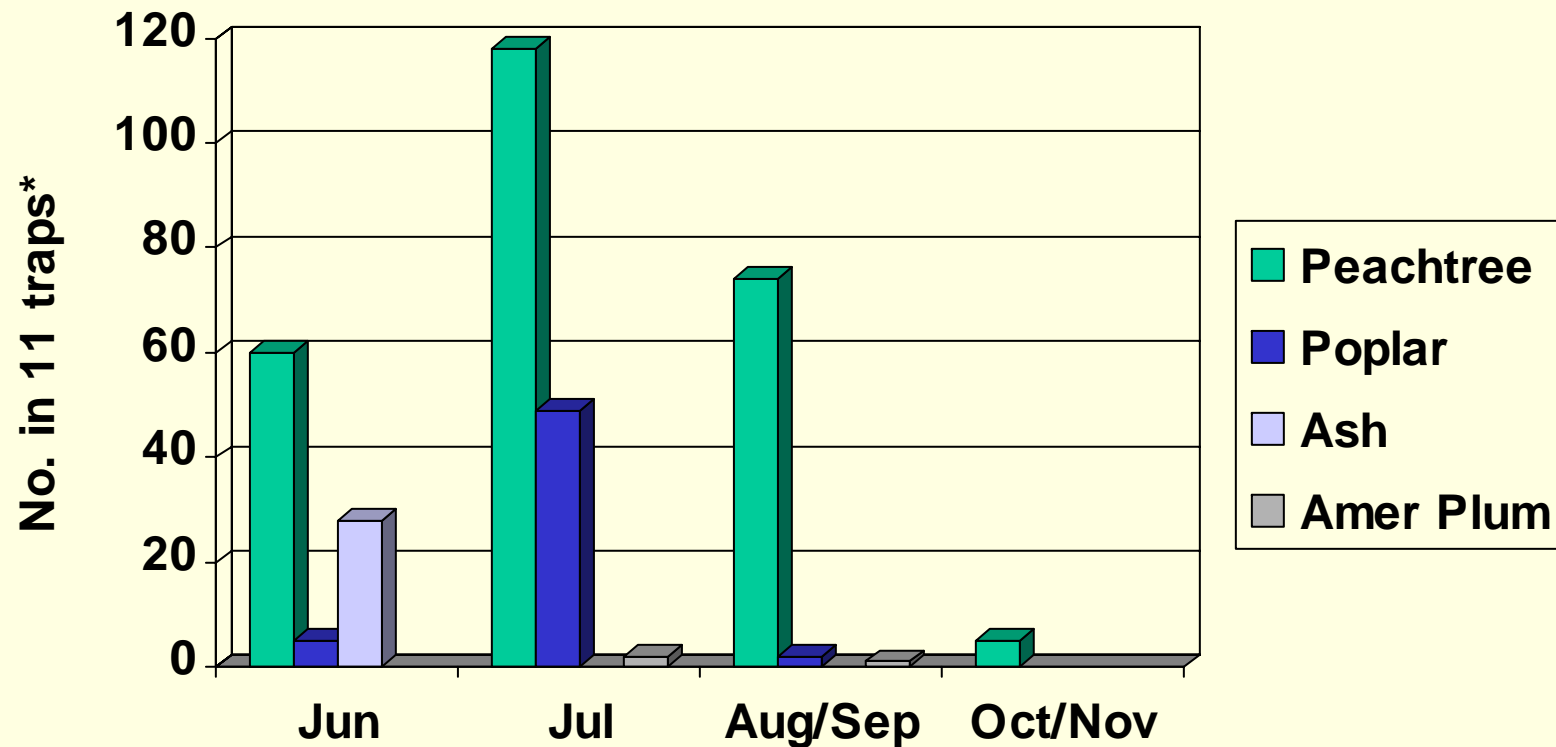
Ash Borer

## 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 1<sup>st</sup> , Aug 1<sup>st</sup>

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 1<sup>st</sup>, 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 1<sup>st</sup>, Aug 1<sup>st</sup>

## ➤ 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

