

# Landscape and Garden Pests

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## Fruit Pests

## Major Fruit Pests

### APPLE, PEAR

codling moth  
woolly apple aphid  
fire blight

### PEACH

greater peachtree  
borer

### CHERRY

western cherry  
fruit fly

## Codling Moth

The primary pest of apple and pear  
Active from mid spring through summer



## Codling Moth Management

Thin fruit to one apple/ cluster



Mow or remove dropped fruit all season



Remove unmanaged trees



## Codling Moth Management

Treatments should begin about 3 weeks after bloom

Conventional Products – apply every 14-17 days

- Spectracide Triazicide or GardenTech Sevin (14 days)

Organic Products – apply every 7-10 days

- Safer BioNeem
- Ferti-lome, Monterey, or Natural Guard spinosad
- Safer End-all Plus Neem

## Woolly Apple Aphid

Reduces tree vigor; may cause death of young trees

Overwinter **on roots** or in the tree as adults

Become active in **mid-spring**



## Woolly Apple Aphid Mgmt

### Mid to late May

insecticidal soap (2 applications; organic)

horticultural oil (1%; 2 applications; organic)

pyrethroid labeled for fruits plus 1% oil

(zeta-cypermethrin, lambda-cypermethrin)



## Fire Blight

Caused by a bacterium – *Erwinia amylovora*





## Fire Blight Management

Winter pruning (removing cankers)

Delayed-dormant copper

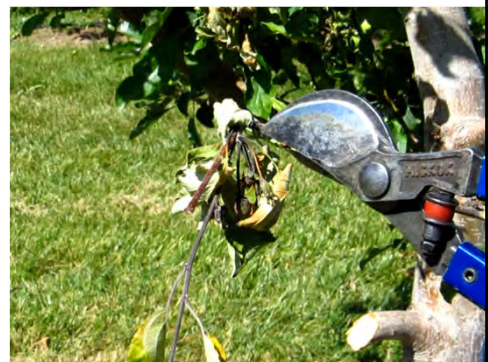
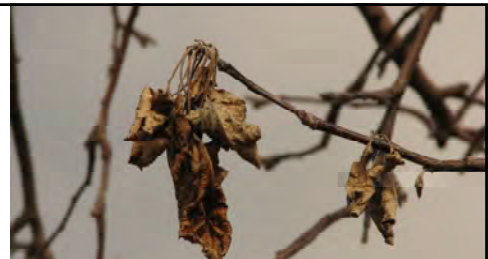
can be mixed with the oil application

**During bloom (warm, wet conditions) –**

streptomycin - slight systemic activity

*Bacillus subtilis* (Serenade Garden Spray)

Spring/Summer pruning (remove infections)



## Greater Peachtree Borer

Larvae attack the lower trunk of peach, nectarine, apricot

Can kill younger trees



## Greater Peachtree Borer Management

Protect young trees until bark is thickened (3-5 yr)

Remove weeds from around base of tree

### Insecticides

Spray base of tree once/month from **mid June to mid-September**

permethrin

## Western Cherry Fruit Fly

Overwinters in the soil

Adults emerge in May

Females lay eggs under the skin of fruit







## Western Cherry Fruit Fly Management

### Insecticides

Target adults

Starting at first blush (yellow-pink) up to harvest

same products as Codling Moth

## Western Cherry Fruit Fly Management

Add tarp under tree



Remove dropped fruit



Remove all unharvested fruit



Net entire tree



## Landscape Pests

## Major Landscape Pests

SCALES

SPIDER MITES

WOOD-BORING INSECTS

## Scales

Insects that are immobile for most of their lives

**Soft Scales:** rounded body has attached covering for protection

**Armored Scales:** rounded body has detachable covering for protection



## Soft Scales



newly hatched  
eggs: **crawlers**

crawlers settle  
on leaves for the  
summer, and  
move back to  
twigs in late  
summer



feed on phloem  
(sap) causing  
honeydew



## Armored Scales

NO honeydew

feed on  
individual  
cells



San Jose scale





## Scale Insecticide Options

Dormant oil (2%)

armored scales: only kills nymphs (not adults)

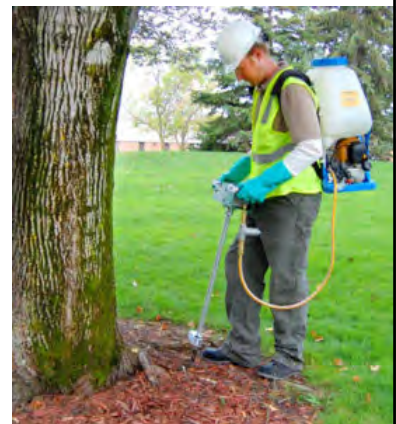
works well on soft scales

Systemic insecticide applied to the soil – early to mid-spring

Foliar sprays applied during crawler emergence only:

horticultural oil (1%), soap

insecticides that are insect growth regulators



Spider Mites







## Spider Mite Monitoring

Shake branches over white cloth tray or paper to look for small, dislodged mites

Examine foliage of lowest branches first in late spring

(Right) Beating foliage to dislodge mites and predators.  
(Below) Examining mites to determine if they are pests.



## Spider Mite Management

### Cultural

- Prevent dusty conditions
- Areas that are unsprayed have fewer mites

### Insecticides

- Horticultural oil (1%)
- Insecticidal soap
- Miticide (not insecticide)

## Wood-boring Insects

Clearwing moths

Borers (flatheaded, roundheaded)

Bark beetles

Most have similar life cycles:

- overwinter as larvae inside host tree

- adults emerge in spring and mate

- lay eggs on bark of host tree

- larvae feed inside tree through summer



## Clearwing Moths: Lilac-ash borer





## Flatheaded Borers

Pacific flatheaded borer

Flatheaded apple-tree borer



Bronze birch borer





## Bark Beetles

Mountain pine bark beetle  
outbreak in western North America



# Bark Beetles

Ips (engraver beetle)



## Borers and Bark Beetle Management

Prevention is top priority:

- keep trees healthy

- remove all infested material, wood, and debris

Trunk sprays to PREVENT egg-laying/egg-hatching

- only broad spectrum products are effective

- use with caution

- must be timed with peak flight periods of target insect
- applied to entire bole and larger limbs



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