INSECT VISITORS IN 2016

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Lewis and Clark County Master Gardener Celebration

March 4, 2017
WESTERN CONIFER SEED BUG
LEPTOCLOSSUS OCCIDENTALIS

- Feeds on seeds of pines and Douglas-fir
- 2016-Epic year
  - Especially in Helena
- Some minor seed damage to pines
- More of a nuisance invader in the fall
- Harmless to humans
  - Bites are not common
  - Don’t reproduce in the home
- Often confused with assassin bugs
Attacks stressed trees
- Weakened, storm-damaged, & felled trees

Injuries occur from larvae tunneling and girding trees

Small ventilation holes appear above the egg galleries
- Egg galleries have two arms with a central chamber

Sap may ooze from wounds in twigs, staining the bark
ASH

ASH FLOWER GALL MITE, ERIOPHYES FRAXINIFLORA

- Eriophyid mite
- Distortion of male flowers
- Flower growth remains yellow/green
- Female overwinters under bud scales
- In spring, females feed, lay eggs, and initiate gall formation on new buds
- Doesn’t significantly affect health of tree
  - Mainly cosmetic
ASH

LEAF CURL ASH APHID, PROCIPHILOS FRAXINIFOLII

- Develops on new growth
  - Winged stages disperse to ash leaves after bud break
  - Colonies decline after new growth stops

- Damage
  - Tightly rolled/thickened leaves
  - Copious amounts of honeydew

- Trees will recover from damage
- Plum leafcurl aphid-similar damage in Prunus sp.
ASPENS, COTTONWOODS, POPLARS

POPLAR BUDGALL MITE, ERIOPHYES PARAPOPULI

- Large, irregular shaped galls
  - Poplars, cottonwoods
- Buds and leaves become distorted
- Overwinter in galls from previous season
- Move and feed on new buds
- Mostly cosmetic injuries
  - Mainly controlled by predatory mites
Distorted leaf buds, aphids feed within

Summer: Gall splits, winged generation emerges

Alternative host may be loosestrife

Winged aphids return to old galls in fall

Mostly cosmetic
  Difficult to prune
  High in the canopy
ASPENS, COTTONWOODS, POPLARS
POPLAR BLACKMINE BEETLE, ZEUGOPHORA SCUTELLARIS

- Adults skeletonize leaf undersides
  - Chew small pits in the leaves
- Eggs laid on skeletonized areas
- Larvae penetrate leaf and mine between layers
- Pupate in soil
- Mostly cosmetic-minor damage
ASPENS, COTTONWOODS, POPLARS

POPLAR BORER, SAPERDA CALCARATA

- Native
- Most destructive pest of poplars
- Damage
  - Early stages of attack-moist bark areas and sawdust
  - Tree not always killed, but susceptible to wind breakage
  - Younger larvae develop under bark-sapwood, girdling trees
  - Borer holes can provide routes for wood rots, decays, secondary pest infestations
- Adults lay eggs on trunk and large branches in late summer under bark
- Larvae 2-5 years to mature
ASPENS, COTTONWOODS, POPLARS
ASPEN LEAFMINER, *PHYLLOCNISTIS POPULIELLA*

- Serpentine mines on upper leaf surface
- Mostly cosmetic, secondary issue
BUR OAK
CYNIPID GALL WASP, CALLIRHYTIS FLAVIPES

- 2014-unprecedented woodpecker damage on oaks
- Inconspicuous galls under bark
- Hundreds of wasps in chambers under bark
- Summer generation on leaf midribs

Management
- Woodpecker deterrents
- Trees recover
BUR OAK

OAK ROUGH BULLET CALL WASP

- All parts of the plant can support galls
- Wasps emerge from old galls in late fall and lay eggs in the buds
- Galls darken and exude a honeydew-like material
- One wasp per gall
- Treatment---???
...ATTRACTS NUISANCE WASPS
CRABAPPLES/APPLES/PEARS
APPLELEAF BLISTER MITES, ERIOPHYES MALI

- More urban settings
- Looks similar to disease
- Attack developing fruit and emerging leaves
- Produces blisters in which female lays eggs
- Activity slows in warmer summer months
- Three main damages:
  - Bud dries and fails to develop
  - Fruit damage
  - Curling or blistering of leaves
- Mainly cosmetic injuries
**SPRUCE**

**SPRUCE SPIDER MITE, Oligonychus Ununguis**

- Mainly spruce and juniper
- Feed on the sap of conifer needles
- Damage symptoms include
  - Flecking at base of needles
  - Grayish appearance

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**SPRUCE**

**COOLEY SPRUCE GALL ADELgid, *ADElGes COOLEYI***

- 2 hosts
  - Douglas-fir and spruce
- Commonly found on the new growth of spruce trees
- Most galling typically takes place on shaded sides (north, east)
- Early in the season as 2-4” growths
SPRUCE
SPRUCE BUD SCALE, PHYSOKERMES PICEAE

- Closely resemble buds
- Can cause dieback with major outbreaks
- Major honeydew production
- Spends winter on needles of spruce
- Eggs hatch June/July
SPRUCE
WHITE PINE WEEVIL, PISSODES STROBI

- Adults fly or crawl to leader
- 1-12 mating pairs on leader
- Female makes a cavity in bark
  - Deposits 1-5 eggs
  - Can be hundreds of eggs in single leader

Management
- Pruning terminal and training new leader
## MAPLES

### BLADDER GALLS (ERIOPHYID MITES)

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[Image of a leaf with gall formation]
**WILLOW**

**WHITE SATIN MOTH, LEUCOMA SALICIS**

- Introduced into Montana around 2010
  - Issues in Clancy in 2015
  - Established in 5 MT counties
    - Lewis & Clark, Cascade, Gallatin, Big Horn, Silver Bow

- Major (almost complete) defoliation of willows
  - Other hosts-poplars, aspens, cottonwoods

- Defoliation occurs by June

- Attracted to lights
WILLLOW

WILLLOW REDGALL SAWFLY, PONTANIA PROXIMA

- Pupae overwinter in soil or debris
- Females emerge in spring, lay eggs on unfurling leaves
- Initiates gall formation
- Red bean-shaped swellings
- Mainly cosmetic
  - Larvae parasitized & controlled by wasps
LILACS

ROOT WEEVILS, OTIORRHYNCUS SP.

- Characteristic damage-notches along leaf margins
  - Adults
  - Larvae feed on plant roots
    - no significant damage noticed yet in MT

- Host range
  - Several shrubs and perennials

- Adults-flightless

- Home invaders in late summer/fall

- Mostly cosmetic

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Other hosts include cherry, plum, hawthorn, and pear.

Larvae (immature stage) will feed on the upper surface of leaves.

“Skeletonizing” injuries
- Major defoliation

Looks similar to herbicide damage.
PLANTED TOO DEEP
RIGHT TREE, RIGHT PLACE
ROAD CHEMICAL DAMAGE
ELM TREE
WINTER KILL

- Trees majorly affected
  - Apples (particularly crabapples)
  - Mountain ash
  - Ash
  - Juniper, pine, spruce
- Browning from outside inward
- Scale back bark to look at cambium
- Management
  - Water and keep trees healthy
QUESTIONS

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