

## Galls



Paul Weston, Cornell

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## Gall Makers

- Abnormal growth on plants
- Galls restrict injury by the gall maker
- Many gall makers attacked by inquiline species who invade the galls.
- Insect Gall makers seldom if ever kill trees
  - This is not the case for some bacterial gall makers such as (crown gall), or nematode gall makers (soybean cyst nematode)

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## Gall Makers

- Rust mites (Eriophyid)
- Flies (Gall Midges -Ceccidomyid)
- Wasps (Cynipids, Sawflies)
- Bugs
  - Psyllids
  - Adelgids
  - Aphids
  - Phylloxera
- Beetles (minor importance)

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Maple Bladder Gall



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Ash Flower Gall



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Walnut Petiole Erineum



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Maple Eyespot Gall



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Maple Eyespot Gall



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Vein Pocket Gall



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### Oak Spangle Gall



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### Horned Oak Gall



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### Hedgehog Gall of Oak



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## Wool Sower Gall



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## Jumping oak gall



Leaf top

Leaf bottom

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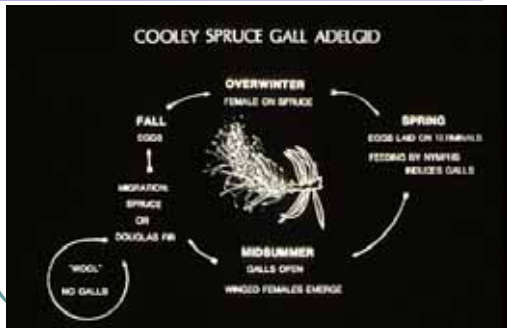
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## Cooly Spruce Gall Adelgid Life Cycle



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Distortion by Cooley spruce gall adelgid on Douglas fir (May)



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Cooley Spruce Gall Adelgid in June



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Cooley Spruce Gall in July



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Cooley Spruce Gall- Summer Adults



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Eastern Spruce Gall Adelgid



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Hackberry Nipple Gall



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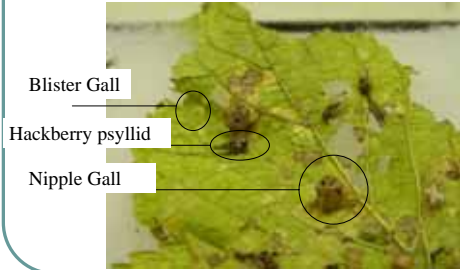
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## Hackberry Galls and Gall Makers



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## Hackberry Petiole Gall



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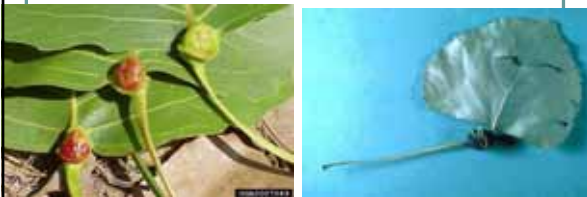
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## Poplar Petiole Galls



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Hackberry Witch's Broom



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Poplar Saperda (Longhorned Beetle)



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