

# **Insect & other arthropod pests of oaks**

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# Pests of Oak

- 800 galls
- We'll only cover a few
- So let's start at the top of the tree
- And, we'll see what occurs in & on the sturdy oaks –
- On the way to firm footing of the soil -
- And, then Steve can add his “rot” to the gall I've imposed upon you.

# Where it all begins – the ‘nut’ of it all



**ACORN WEEVILS**

UGA0014201

Then comes the spring and the  
oak flourish only to be  
constrained by the appetite  
of the

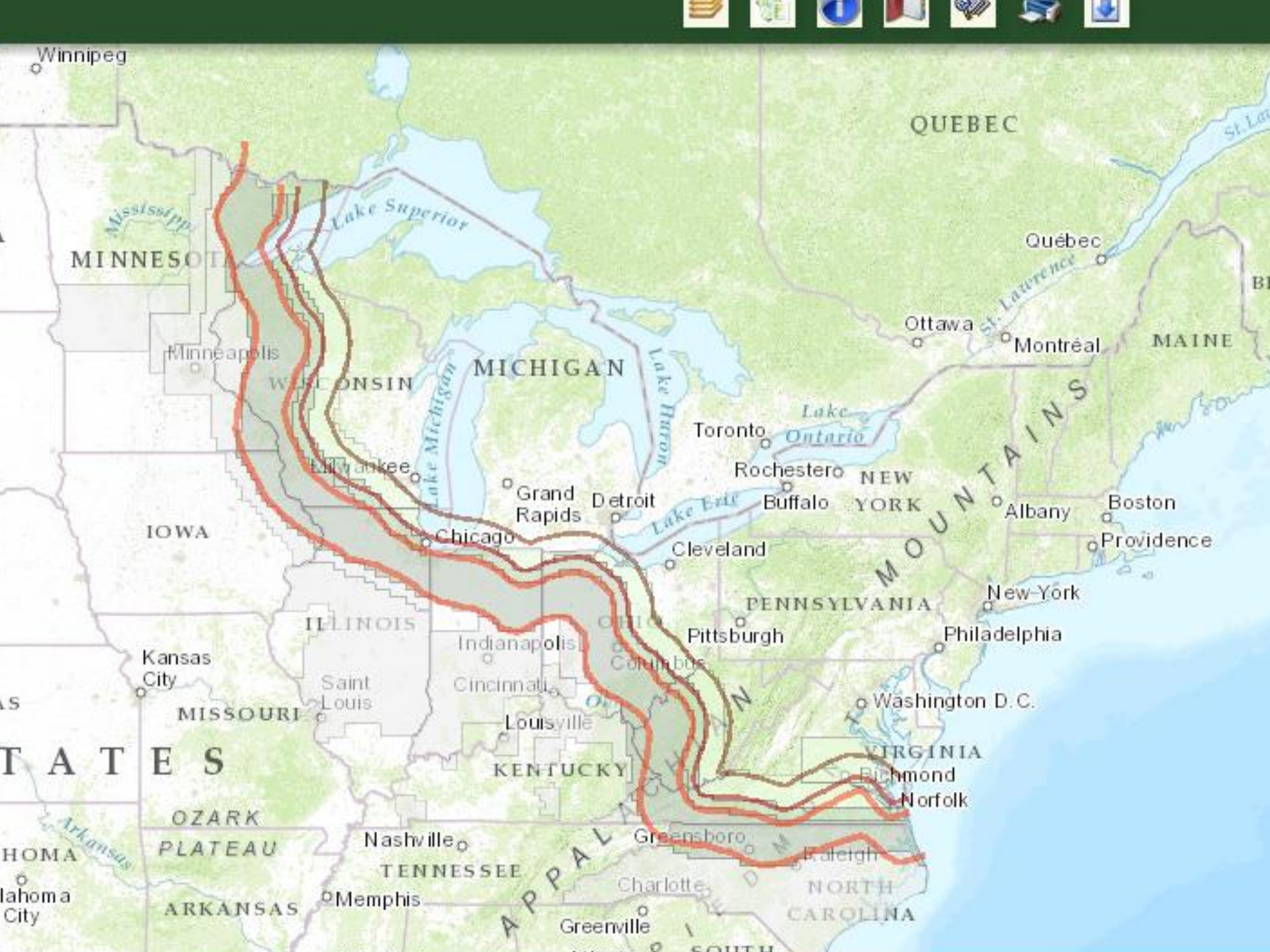
**SPRING DEFOLIATORS**

# European Gypsy Moth



# Gypsy Moth Life Cycle





# Gypsy Moth Treatment

- Pennsylvania
- 41,802 acres with Btk
- For Suppression













# Forest Tent Caterpillar – Life Cycle



Egg case



Larvae



Pupal case



Adult



# Forest tent caterpillar



# Cankerworms

Spring cankerworm



Fall cankerworm

5439081



5445619

Cankerworm defoliation  
Shows up in late spring

*Looper Epidemic  
1979-1981  
2002-2005*



*Linden Looper*

UGA5203014



*Half Wing Geometer*

UGA0907045



# Elm spanworm

- Just one of many spanworms or looper caterpillars that feed on hardwoods in early spring
- Spanworms are also known as loopers, cankerworms, and inchworms
- Often found with other species such as the linden looper, spring cankerworm, fall cankerworm, and Bruce spanworm.....



# Oak Leafroller & Oak Leaftier



Oak  
Leaftier



Oak  
Leafroller



Oak Leaftier  
defoliation

UGA1470036

# Palmerworm



UGA1394044

# Jumping Oak Gall



Spring is passing and the oak  
that flourished in the spring  
now may face the

**SPRING/SUMMER DEFOLIATORS**

# Slug Oak Sawfly



Steve Katovich  
USDA Forest Service, Forest Health Protection



Variable  
Oak Leaf  
Caterpillar



Saddled Prominent



Green Striped  
Mapleworm







# Oak Skeletonizer

Now it is summer and the oak  
that has made it past the  
**Spring defoliators**  
and the  
**Spring/Summer defoliators**  
is 'breathing' easier.

Only the  
**SUMMER DEFOLIATORS**  
remain to impact oak health.

# Walking Stick





Red Humped  
Oakworm  
*Symmerista  
canicosta*

Red Humped  
Caterpillar  
*Schizura  
concinna*





Spiny Oakworm



Pinkstriped Oakworm

Orangestriped Oakworm





# Oak Apple gall



# Horned Oak gall



# Oak Bullet gall



# Gouty Oak gall



Corn  
Seed  
Ball  
Gall







*Periodical Cicada*

*2004 -*

*17 year brood*

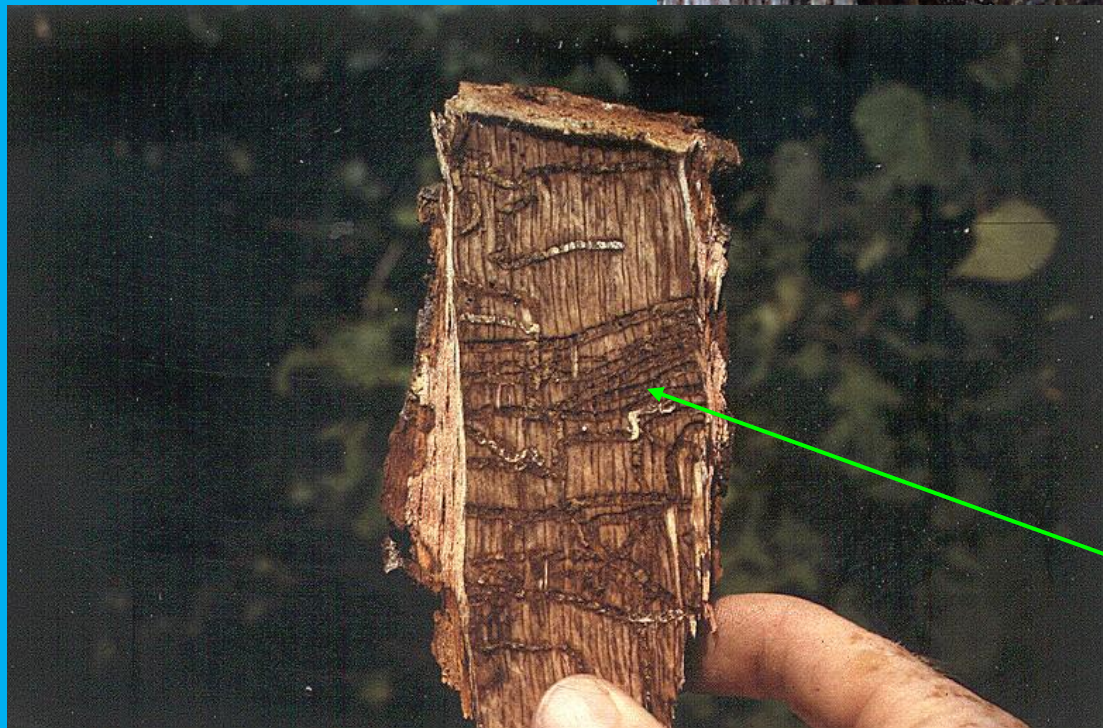


UGA1430168



UGA0488037

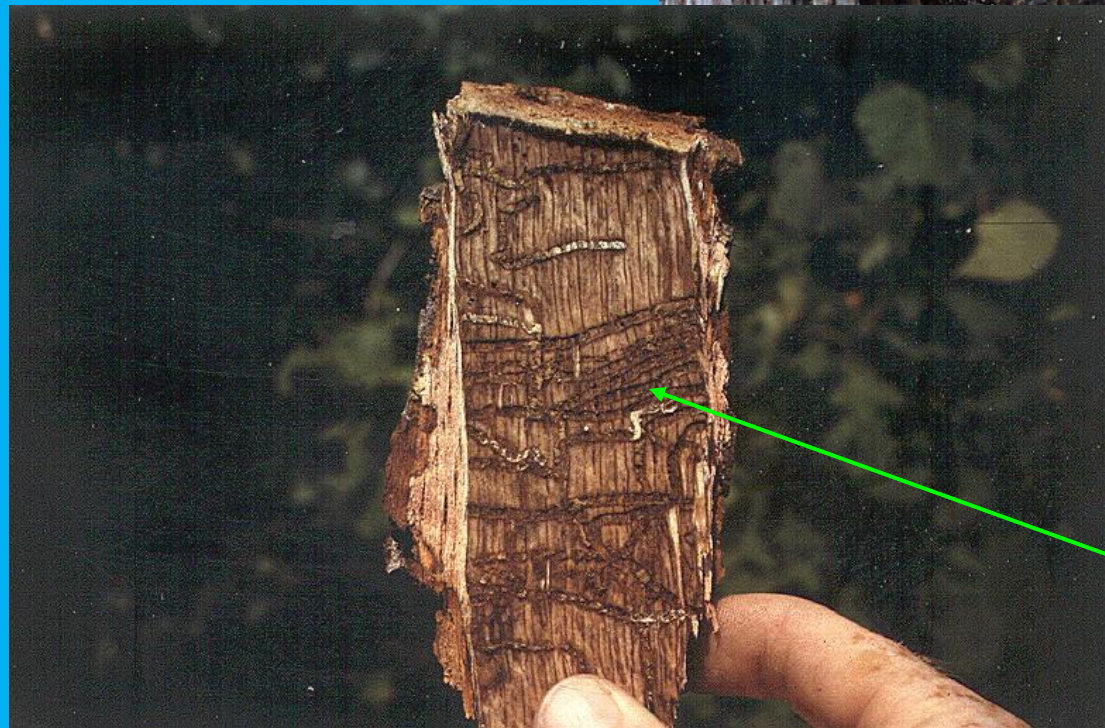
*Two Lined  
Chestnut Borer*



Larvae

Tunnels or Galleries

# *Two Lined Chestnut Borer*



**LARVAE**

**TUNNELS OR GALLERIES**

















Red Oak Borer



White Oak Borer







# True Powderpost Beetles (Lyctidae)

- 2-7.5mm in length
- Various shades of brown to black
- Head is not covered by prothorax
- Larvae loosely fill galleries with very fine powder

\*indicates economically important beetles



Southern Lyctus Beetle\*



Brown Lyctus Beetle



Western Lyctus Beetle



European Lyctus Beetle



Velvety Powderpost Beetle\*

# False Powderpost Beetle (Bostrichidae)

- 4-5.5mm in length
- Body shape varies from elongate to round
- Head is not visible from above, have humpbacked appearance
- Tightly pack galleries with coarse boring dust

\*indicates economically important beetles



Black Polycan



Leadcable Borer



Red-shouldered  
Shothole Borer\*



*Scobicia bidentata*



# Deathwatch Beetles (Anobiidae)

- 1.1-1.8mm in length
- Head not visible from above
- Body shape varies from elongate to round
- Fill galleries with small pellets

\*indicates economically important beetles

Furniture Beetle\*



Eastern Deathwatch Beetle



*Ernobius granulatus*



*Xyletinus pelatus*



*Priobium sericeum*



*Ptilinus ruficornis*

Deathwatch Beetle\*

Well, we've made it through  
the season  
and to the bottom of the tree.

Now for - what pest is next?



*Gold Spotted Oak Borer*



# *Gold Spotted Oak Borer*





*Oak Splendor Beetle*

- And now to the root of the oak problems

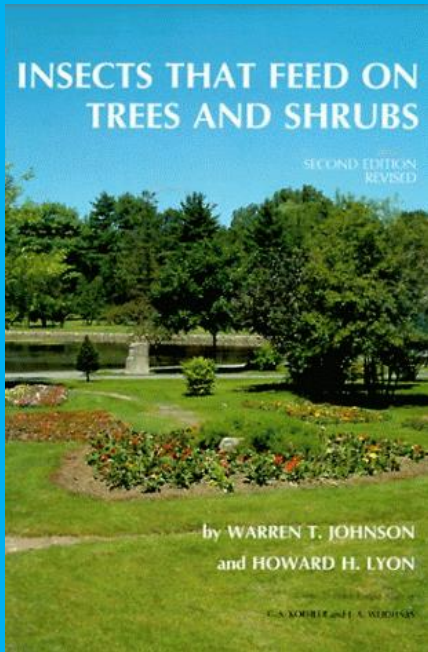
- **DISEASES**

- and here's
  - Steve Oak

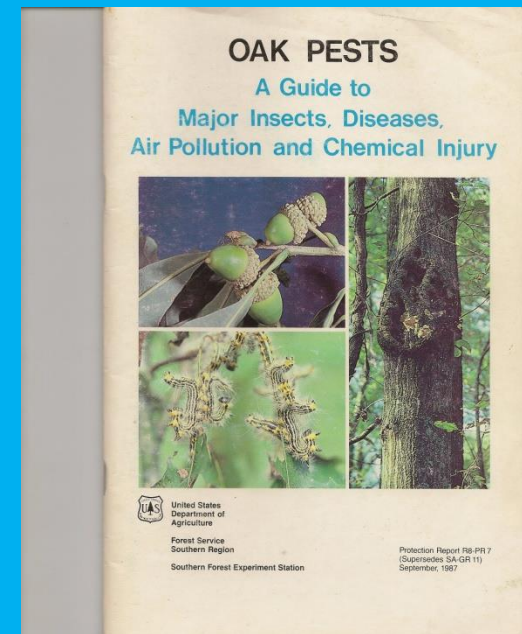
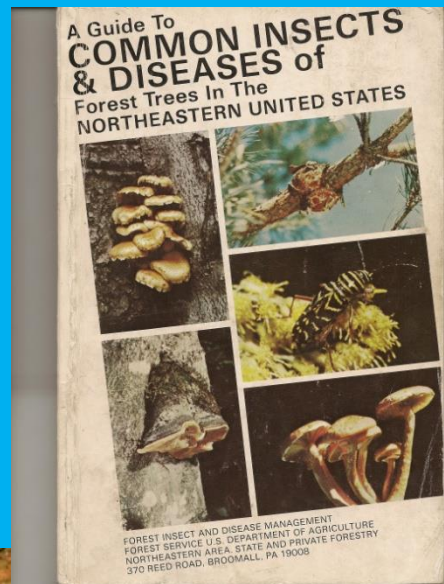
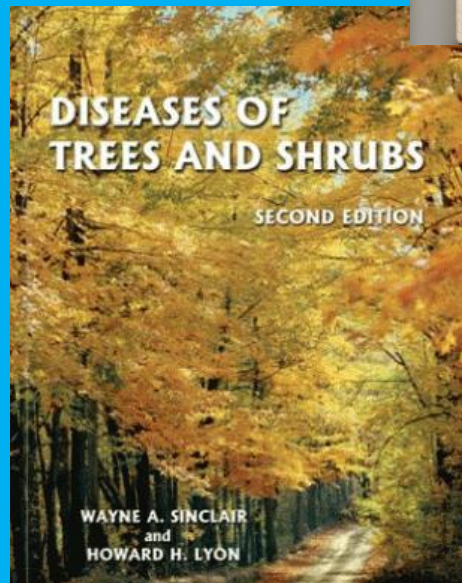
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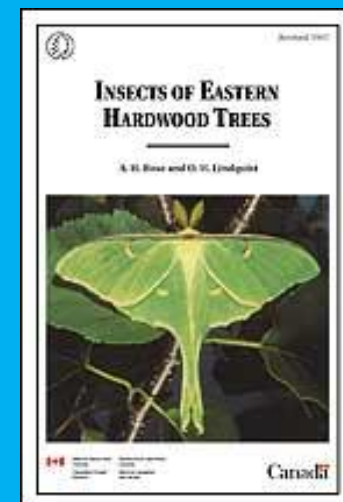
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