

## OTHER PESTS AND CONDITIONS

- Leafy mistletoe (mostly oaks)  
\_\_\_ parasitic plant in tree crowns
- Sapsucker  
\_\_\_ rows of holes on trunk
- Mammals  
\_\_\_ browsing  
\_\_\_ debarking
- Weather  
\_\_\_ fire scar  
\_\_\_ ice breakage  
\_\_\_ lightning crack  
\_\_\_ freeze injury to trunk  
\_\_\_ freeze injury to leaves (Sp)
- Normal leaf shed  
\_\_\_ conifer (F)  
\_\_\_ magnolia (Sp, S)
- Trunk injury  
\_\_\_ mechanical injury  
\_\_\_ root girdling
- Ozone  
\_\_\_ dark spattering on leaves
- Herbicide  
\_\_\_ leaf deformation  
\_\_\_ defoliation
- Plant parasites of tree roots  
\_\_\_ squaw root (bear corn)

## GLOSSARY

- Blight** -- Any atmospheric or soil condition, parasite, or insect that kills, withers, or checks the growth of plants.
- Canker** -- A localized area of dead tissue on a tree stem or branch.
- Conk** -- Spore-forming structure formed by certain fungi, usually wood rotters.
- Defoliation** -- Loss of leaves.
- Frass** -- Insect excrement.
- Fungus** -- A non-green plant that reproduces by spores (examples: mushroom, bread mold).
- Gall** -- A swelling of plant tissue caused by attack of insects or disease-causing organisms.
- Grub** -- The larval form of beetles and wasps.
- Honeydew** -- A sweet secretion produced by sucking insects.
- Larva** -- An immature form of some insect species that hatches from an egg and differs fundamentally from adults.
- Pitch** -- A resin derived from the sap of conifers.
- Pupa** -- The resting, intermediate stage of insect development between the larval and adult stages.
- Resin** -- A sticky substance derived from plants.
- Sooty mold** -- A dark or black, velvety coating of fungi growing in insect honeydew on the leaves and fruit of plants.

**Spittle** -- A frothy liquid that looks like "spit."

## Note to Supervising Adult

Each insect or disease can be recognized one or more ways. Have youth check each characteristic as they observe it.

When youth can consistently recognize 10, 25, 50 or 100 characteristics, sign and return this checklist to the supervising Extension agent.

### Suggested Awards:

Beginner	Certificate
Novice	Hand lens
Advanced	\$50 scholarship
Master	\$100 scholarship

### Name of 4-H member

\_\_\_\_\_

**County** \_\_\_\_\_

**Address** \_\_\_\_\_

\_\_\_\_\_

**Signature of 4-H leader or forester**  
(certifies completion)

\_\_\_\_\_

**Date** \_\_\_\_\_

**Return to:**

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# VIRGINIA FOREST HEALTH PROJECT:

A CHECKLIST FOR  
OBSERVING INSECTS,  
DISEASES, AND OTHER  
FOREST HEALTH  
CONDITIONS



### Levels (check one)

- Beginner (10 observations)  
 Novice (25 observations)  
 Advanced (50 observations)  
 Master (100 observations)

## Virginia Cooperative Extension

Virginia  
Tech  
VIRGINIA POLYTECHNIC INSTITUTE  
AND STATE UNIVERSITY



VIRGINIA STATE UNIVERSITY

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## CONIFER INSECTS

(**Sp** = spring, **S** = summer, **F** = fall,  
**W** = winter, otherwise year-round)

### Defoliators (host)

- Conifer sawflies (pines)
  - \_\_\_ larval colonies (Sp, S)
  - \_\_\_ defoliation
- Bagworm (spruces)
  - \_\_\_ bags of silk and foliage (F, W)
- Pine webworm (pines)
  - \_\_\_ frass-filled webs on seedlings (F, W)

### Bark Beetles and Borers

- Southern pine beetle (pines)
  - \_\_\_ pitch tubes or sawdust
  - \_\_\_ bark galleries
- Ips engraver beetle (pines)
  - \_\_\_ pitch tubes
  - \_\_\_ bark galleries
- Black turpentine beetle (pines)
  - \_\_\_ pitch mass on lower trunk
- Regeneration weevil (pines)
  - \_\_\_ bark feeding on small stems (Sp, F)

### Meristem Feeders

- Nantucket pine tip moth (yellow pine)
  - \_\_\_ dead, resinous buds and tips
- White pine weevil (white pine)
  - \_\_\_ wilted, dead leader

### Piercing and Sucking Insects

- Pine bark adelgid (white pine)
  - \_\_\_ cottony colonies on bark
- Spittlebug (pines)
  - \_\_\_ spittle masses on twigs
- Spruce gall adelgid (Norway spruce)
  - \_\_\_ “pineapple” galls on twigs
- Hemlock woody adelgid (hemlock)
  - \_\_\_ cottony clusters on twigs
- Aphid
  - \_\_\_ insects (S, F)
  - \_\_\_ honeydew (S, F)
  - \_\_\_ sooty mold (S, F)
- Scale
  - \_\_\_ insects (S, F)
  - \_\_\_ honeydew (S, F)
  - \_\_\_ sooty mold (S, F)

## CONIFER DISEASES

### Foliage and Twig

- Needle cast (pines)
  - \_\_\_ spotted and dead needles
- Witches broom
  - \_\_\_ dense ball of needles and twigs

### Root and Butt Rot Decay

- Annosum root rot (pines)
  - \_\_\_ conk at ground line (W, Sp)
- Armellaria root rot
  - \_\_\_ shoestring fungus under bark
- Procerum root disease (white pine)
  - \_\_\_ basal canker, resin
  - \_\_\_ yellow foliage
  - \_\_\_ death
- Red heart (pines)
  - \_\_\_ conk on trunk

### Stem, Branch, and Cone

- Stem rust
  - \_\_\_ galls/cankers on stem
- Cedar-apple rust
  - \_\_\_ galls on twigs

### Other Pests

- Spider mite
  - \_\_\_ mite (S, F)
  - \_\_\_ silk (S, F)
  - \_\_\_ needle loss

## HARDWOOD INSECTS

### Defoliators

- Fall cankerworm (oaks)
  - \_\_\_ larva (Sp)
  - \_\_\_ defoliation (Sp)
- Lace bugs
  - \_\_\_ adult (Sp, F)
  - \_\_\_ leaf damage (S, F)
- Elm leaf beetle
  - \_\_\_ adult (Sp, F)
  - \_\_\_ leaf damage (Sp, F)
- Orange striped oakworm (oaks)
  - \_\_\_ larva (S, F)
  - \_\_\_ defoliation (S, F)

June bug or Japanese beetle

- \_\_\_ grub
- \_\_\_ adult (S)
- \_\_\_ defoliation (S)

Gypsy moth

- \_\_\_ egg mass
- \_\_\_ larva (Sp)
- \_\_\_ pupa
- \_\_\_ adult (S)
- \_\_\_ defoliation (Sp)

Eastern tent caterpillar (black cherry)

- \_\_\_ tent
- \_\_\_ larva (Sp)
- \_\_\_ egg mass (W)
- \_\_\_ defoliation (Sp)

Forest tent caterpillar (oaks)

- \_\_\_ larva (Sp)
- \_\_\_ defoliation (Sp)

Fall webworm

- \_\_\_ larva (S, F)
- \_\_\_ webs (S, F)

Walkingstick

- \_\_\_ adult (S, F)
- \_\_\_ defoliation

Locust leafminer (black locust)

- \_\_\_ beetle (Sp, S)
- \_\_\_ leaf galleries (S)

Tussock moth (hardwoods)

- \_\_\_ larva with “tussocks” (Sp, S)

### Bark Beetles and Borers

- Bark beetle
  - \_\_\_ bark galleries
  - \_\_\_ exit holes

Locust borer (black locust)

- \_\_\_ adult beetle (S, F)
- \_\_\_ feeding injury (Sp, F)

Roundheaded borer

- \_\_\_ larval galleries
- \_\_\_ exit holes

## Piercing and Sucking Insects

- Aphid
  - \_\_\_ insect (Sp, F)
  - \_\_\_ honeydew (S, F)
  - \_\_\_ sooty mold (S, F)
- Scale
  - \_\_\_ insect
  - \_\_\_ honeydew (S, F)
  - \_\_\_ sooty mold (S, F)

### Miscellaneous (host)

- Cicada (hardwoods)
  - \_\_\_ adult (Sp, S)
  - \_\_\_ egg-laying scars
  - \_\_\_ dead twigs (S)
- Gall maker (hardwoods)
  - \_\_\_ galls (Sp, F)
  - \_\_\_ gall aphid
  - \_\_\_ gall mite
  - \_\_\_ gall wasp

## HARDWOOD DISEASES

### Foliage and Twig

- Black knot (black cherry)
  - \_\_\_ branch galls
- Anthracnose
  - \_\_\_ leaf blotches (S, F)
- Powdery mildew (dogwood)
  - \_\_\_ whitening of leaves

### Cankers

- Nectria canker
  - \_\_\_ target-shaped trunk canker
- Chestnut blight (chestnut)
  - \_\_\_ canker
  - \_\_\_ dead/dying sprouts (S, F)

### Root and Butt Rot Decay

- Armellaria root rot
  - \_\_\_ shoestring fungus under bark
- Artist conk
  - \_\_\_ conk
  - \_\_\_ rot