



4-H FORESTRY JUDGING TEAM SECTION II FOREST ENTOMOLOGY

Aphids

This pest will attack almost any plant. Heavy infestations distort foliage shape, cause dieback, or weaken the tree. Honeydew & sooty mold is also associated with aphid infestations. Aphids are tiny bugs (1/50 to 1/4 " long) that are soft bodied. They are typically pear shaped insects that come in a variety of colors.



Bagworm



Foliage (leaf or needle) feeding bagworms are typically pests on trees such as junipers. The larvae & females live in silk bags that are usually covered with pieces of foliage from the tree to hide themselves. The pest can almost defoliate (take all the leaves off) a tree.

Conifer Sawfly

Sawfly caterpillars are often a problem in pines due to their habit of completely defoliating small trees. Control of these caterpillars is usually not necessary as trees will grow new needles to replace those that were eaten. If defoliation occurs many years in a row chemical control may be necessary. A variety of conifer sawfly are pictured below.



Eastern Tent Caterpillar

Eastern Tent Caterpillars make their webs or “tents” in the forks of limbs. Caterpillars are 2 ½” in long with a black head and white stripe down the back which is bordered by red-brown & black lines.

Fall Webworm

A characteristic sign of fall webworm is the webs they form around leaves on the tips of tree limbs. Adults are pure white moths with occasional brown spots with a 1 ¾ “ wing span. Caterpillars are covered with long gray hairs. The caterpillars vary in color from yellow to brown or green. They have dusky stripes down each side.



Gypsy Moth

A gift of France, the gypsy moth is a severe pest of some hardwood trees. Older larvae are grayish brown caterpillars with tufts of hair on each segment. Another key feature are the double rows of blue & red spots. There are 10 blue and 12 red spots in all. Adult male moths are dark brown, with wavy dark bands across the forewings. Females are white and cannot fly.



Insect Gall

Galls on leaves are usually not a problem for most trees. They come in a variety of sizes on a variety of trees. The galls are usually round hard “rocks” on the surface of leaves caused by insects laying eggs on the leaves.



Locust Borer



Adult beetles are about $\frac{3}{4}$ " long with yellow lines across black wing covers. It also has very long antennae. Larvae tunnel into wood, reducing value & weakening the tree.

Nantucket Pine Tip Moth



A pest of young trees under 10' high. The tip moth attacks the terminal bud by boring inside & destroying the tip of the tree. This results in a multi-stemmed tree that has its growth slowed, but the tree usually grows out of the damage.



Pales Weevil



A very serious pest of newly planted pines, the pales weevil is a small oblong shaped beetle at $\frac{1}{2}$ " long. The reddish brown colored weevils have patches of yellowish hairs on their wing covers. Damage from this sap-sucker is easy to identify by looking for small irregular shaped feeding patches in the bark. Heavy damage may girdle the stem causing wilting or death. Feeding on the roots or root collar is also common.

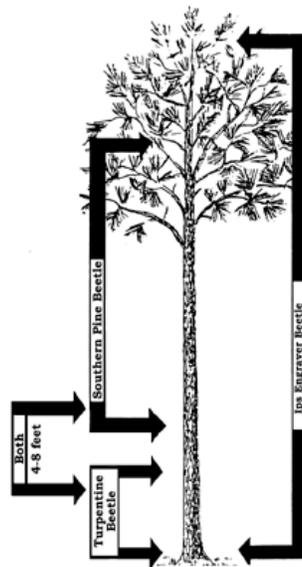
Periodic Cicada



Known as the 13 year or 17 year locust the periodic cicada is a unique pest in forestry. They typically affect black walnut trees where the female lays her eggs inside twigs. The adults emerge as large (1-1/2" long), dark, heavy bodied insects with

membranous wings and red eyes. Nymphs (baby cicadas) live in the soil feeding on plant roots.

Pine Bark Beetles



Southern Pine Beetle

IPS Engraver Beetle

IPS

Black Turpentine

Black Turpentine

Black Turpentine Beetle

The largest of the boring pine beetles we will learn at 1/3 " long. This beetle is readily attracted to the odor of fresh pine resin from skinned or damaged pine trees. Inside the bark the beetle creates vertical tunnels. Attacks can eventually girdle the tree (go all the way around tree base) and the tree slowly dies.



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Ips Engraver Beetle



Not too big, not too small the Ips beetle are easy to notice by looking for their scooped out hind ends and rounded heads. They are usually 1/8 to 1/4" in length. This pest commonly attacks trees weakened by drought, fire, hail, lightning, etc. Outbreaks are most common in summer and fall where single trees or groups of trees die due to girdling and bluestain fungus.

Southern Pine Beetle

The nastiest & smallest of all pine beetles the Southern Pine Beetle is only 1/8 " long. It has a rounded hind end compared to the shovel shaped hind end of Ips beetles. You can also look for a notch in the head using a hand lens. Look for criss-crossing S shaped galleries inside the bark. Death of trees infested with Southern Pine Beetles is very quick due to girdling and also by the bluestain fungus that is introduced to the tree by the beetle. Outbreaks are often triggered by over-crowding, soil moisture stress, or man made causes such as damage.



Pine Webworm



Caterpillars have tan heads, a yellowish body with two dark brown stripes along both sides. Caterpillars construct a silky web around themselves and the stem of the pine seedlings. The webs become filled with droppings as the caterpillar feeds on the needles.

