

# Scales

Scale insects are very small and fairly flat. They change the appearance of the tree surface. In the picture (right), the white cottony-looking stuff is a scale insect infestation.

- Beech scale
- Pine needle scale

***Beech scale infestation.***

*Pennsylvania Department of Conservation and Natural Resources—Forestry Archive, Bugwood.org.*





# Beech scale



Beech scale alone does not kill a beech tree, but the combination of scale and *Nectria coccinea* fungus will.

The pale yellow body of the individual female scale is less than  $\frac{1}{16}$ " in diameter and looks like a somewhat flattened sphere. The top of the scale is covered with short white wool-like threads, and since the scales feed together in huge numbers, the bark of infested trees looks like it is covered with white wool.



*Joseph O'Brien, USDA Forest Service, Bugwood.org.*



**Beech scale crawler.**

*Joseph O'Brien, USDA Forest Service, Bugwood.org.*

## Pine needle scale



The pine needle scale can disfigure trees, stunt growth, cause death of needles or twigs, and kill entire (young) trees. The pine needle scale feeds on needles of conifers including Scots, Mugo, Austrian, and red pines and less often on spruce and Douglas-fir.

***Females and newly-hatched crawlers of the next generation.***

*E. Bradford Walker, Vermont  
Department of Forests, Parks and  
Recreation, Bugwood.org.*



Adult females appear as white flecks on the needles. Females bear eggs in late summer that hatch the following spring. Crawlers are very tiny (less than  $\frac{1}{32}$ " long), and look like red dust against the dark green needles. Female crawlers settle in one place where they feed while forming and enlarging a protective covering until they reach maturity and lay eggs.

## Pine needle scale, continued



Scott Tunnock, USDA Forest Service, Bugwood.org.



***Black mold growth often develops  
on the exudates of the insects.***

Scott Tunnock, USDA Forest Service, Bugwood.org.