

## Hemlock scale attacks trees

A relatively unknown insect is killing numerous hemlock trees in southwestern Connecticut.

Mark McClure, an entomologist at The Connecticut Agricultural Experiment Station in New Haven, says that hemlock scale is a severe problem in parts of Fairfield County, especially in Westport and New Canaan. The scale also occurs in scattered pockets in New Haven County, but is less of a problem than in Fairfield County.

The scale, which looks more like a fish scale than an insect during most of its lifetime, attacks the underside of needles and feeds on sap. It prefers new needles, and primarily attacks the bottom branches. It may kill a tree in a few years. It was discovered in Queens, N.Y. in 1908.

McClure has approached the problem from two directions: one is chemical, the other is biological. He has tried several insecticides and has studied their effects, and is studying natural enemies of the scale in hopes of finding a way to control it without chemicals.

In his tests of chemical controls, McClure has found that Cygon 2E foliar systemic insecticide gives over 99 percent control when used during the peak of hemlock scale crawler activity in mid-June to mid-July. Except in the crawler stage the insect is generally protected from insecticides by a scale-like excretion.

While control can be achieved, McClure notes that if applied incompletely or at the wrong time insecticides can actually help the scale flourish by killing off most of its natural enemies.

In his biological control efforts, McClure is collecting foliage from infested trees to study parasites and predators of the scale. The foliage is placed inside cardboard cylinders, and he identifies and studies natural enemies that emerge.



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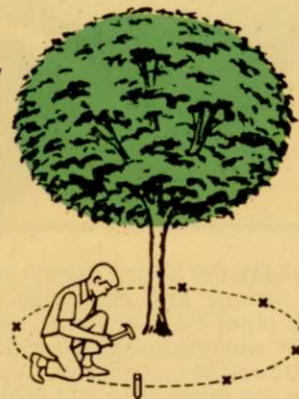
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