



Ornamentals

Scale Insects

Pest **37**
Fact
Sheet

Introduction & description

In appearance, scales in general show little resemblance to typical insects. They are well protected because they live under a waxy, almost impermeable shell. The female lays her eggs under the shell which offers them protection. When the eggs hatch, the "crawler" stage is motile and will crawl about on the host plant to select a feeding site. It is during the crawler stage of development that scales are easily killed with insecticides.

Except for the males of some species, adult scales are permanently affixed to a position selected during the crawler stage. Scale infestations frequently go undetected until the infected plant is completely encrusted. The needlelike mouth parts are inserted into the plant and sap is withdrawn. Scales also secrete a clear sticky substance called honeydew which will coat objects below infested plants. Honeydew in turn will support the growth of a black fungus called sooty mold.

Scale insects vary in size, shape, color, host preference, and life cycle. The following species are common to New Hampshire trees and shrubs.

Oystershell Scale Brown oyster shell shape about 1/8" long. They are found on twigs of lilac, ash, redbud, dogwood, poplar, willow, horse chestnut, elm, beech, walnut, cotoneaster, apple, birch, pachysandra, and others. The winter is passed as white eggs under the scale coverings. The eggs hatch in May, about the time the lilac blooms begin to fade. They become mature by August. There is one generation per year.

Euonymus Scale This scale is obvious as brownish encrustations of the stems and twigs, and whitish spotting of the leaves, mainly on the underside. The primary host is euonymus, but it is also found on pachysandra and celastris (bittersweet). The females overwinter on the stems and leaves. The young crawlers are produced in May or early June. A second generation occurs in midsummer.

Fletcher Scale The adult female is light yellowish-brown, almost globular, and about 3-5 mm in diameter. It commonly attacks *Taxus*, juniper, and arborvitae. Only the females overwinter. They lay their eggs in late May and the eggs hatch by early July. Foliage on the inner portions of heavily infested plants is often blackened by the sooty mold growing on the honeydew excreted by the scales. There is one generation per year with crawlers appearing again.

Pine Needle Scale The primary host of the pine needle scale is pine or spruce and occasionally Douglas Fir and hemlock. The egg of the pine needle scale overwinters under old female scales and hatch into crawlers during the month of May. Females develop white scales about 1/10 inch long, while the male scales measure about half that length. The pine needle scale reaches maturity by July. A second generation reaches maturity during the fall.

Control

Consult your county Extension Educator (see county office telephone listing on next page) for specific pesticide recommendations.

Scale	Where to Treat	When to Treat	Comments
Euonymus Scale	Twig, stem and leaf surfaces.	April, mid-June, mid-August to mid-September.	Winged Euonymus is resistant. Crawlers are active from mid-late June and again from mid-August to mid-September. Wrap black electrical tape (sticky side out) around infested twigs to monitor crawlers. Eggs begin to hatch early June. Two sprays are often necessary, 10 days apart.
Fletcher Scale	Foliage and twigs.	April, early July, early September.	A more serious pest of Taxus than Arborvitae. Depending on the host, crawlers begin to emerge in late June. Two sprays are often necessary, 10 days apart.
Oystershell Scale	Bark of twigs and branches on Willow, Ash, Lilac, Apple, Pachysandra and dozens of other species.	April, early June.	Slow to spread; can go undetected for years on host plant. There is one generation of this scale each year. Crawlers active in June. Eggs hatch in late May. Two sprays are often necessary, 10 days apart.
Pine Needle Scale	Needles of white, red, Scotch, Austrian and Mugho pines.	April, mid-June, mid-August.	A very serious pest of ornamental pines. Heavy damage can lead to needle drop giving the plant a spindly appearance. Crawlers active from mid May into June and again into August. Two sprays are often necessary, 10 days apart.

UNH Cooperative Extension County Office Telephone Numbers

Belknap (603) 527-5475	Carroll (603) 539-3331	Cheshire (603) 352-4550	Coos (603) 788-4961	Grafton (603) 787-6944
Hillsborough Goffstown (603) 641-6060	Merrimack (603) 796-2151	Rockingham Brentwood, NH 03833 (603) 679-5616	Strafford (603) 749-4445	Sullivan (603) 863-9200

Stop! It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. If unsure of registration status of a particular pesticide product, contact the NH Division of Pesticide Control at (603) 271-3550. Store pesticides in their original containers in a locked cabinet or shed away from food. Dispose of unused pesticides or empty containers safely, according to NH regulations. If you suspect pesticide poisoning, call the New Hampshire Poison Control Center at 1-800-562-8236.



Stanley R. Swier
Extension Specialist, Entomology

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Revised 1/03