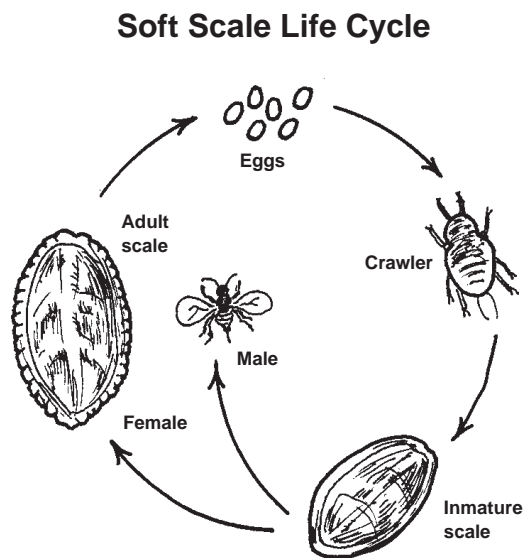


SCALES

Cottony Maple, Euonymus, European, Holly, Juniper, Lecanium, Oystershell, Pine Needle, and San Jose

Description

Scales are small, inconspicuous, wingless insects up to 6 mm in length. Their body shape is usually oval with a waxy or scale-like covering. Mature female scales lay large masses of eggs under their bodies. Each egg hatches into a crawler stage that moves about actively for a few days to find suitable feeding sites. The crawler stage is the target for chemical control. After this stage they become stationary on leaves, branches, or trunks of plants. Scales all feed on the sap of their host plant, secreting excess sap as honeydew on which black sooty mould grows. They reduce plant vigour and cause wilting, yellowing, and distortion of leaves.



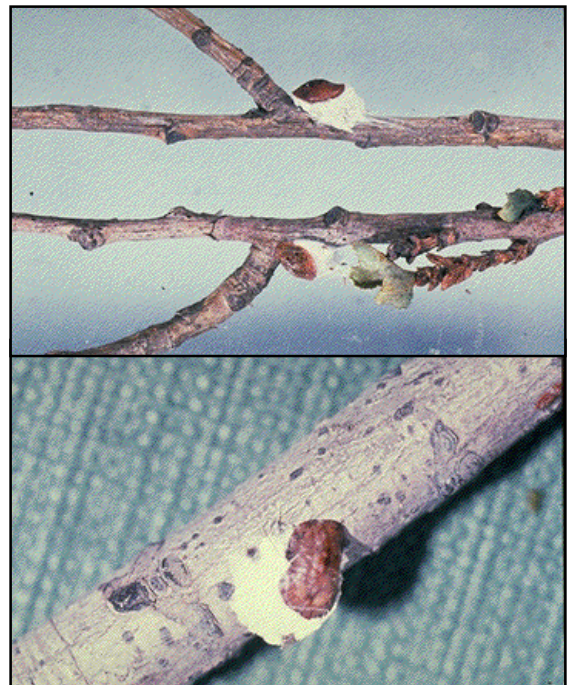
Cottony Maple Scale (*Pulvinaria innumerabilis*)

This scale gives trees a cottony-white appearance. The scale is oval, flat and brown. The cottony white egg sac protrudes from one end of the scale and is up to three times as long as the scale. There is one generation each year. Immature scales overwinter on the bark of twigs and branches. Eggs are laid in late spring, with crawlers emerging in June and July. These young scales attach themselves to young twigs in fall and overwinter.



Cottony Camellia Scale

Henry Gruber



Cottony Maple Scale

Pacific Forestry Centre

Euonymus Scale (*Unaspis euonymi*)

This scale causes characteristic yellow or whitish spots on the leaves of its host plants. They may have up to two generations per year, depending on the length of the season. Fertilized females overwinter, with eggs hatching out in early June.

European Scale (*Gossyparia spuria*)

European scales produce only one generation per year. Eggs are laid towards the end of June. Crawlers emerge, and develop up to the 2nd instar nymph. They overwinter at this point in the base of buds or cracks of bark, emerging the following year to continue their development.

Holly Scale (*Synaspidotus britannicus*)

Holly scale is light brown, oval and about 2 mm in diameter. Females are immobile, but males have wings, and can fly. Scales cause yellow spotting of leaves, and reduced plant vigour. One generation is produced per year with eggs being laid in June and July. Nymphs overwinter on trees, and on lower leaves.

Juniper Scale (*Carulaspis juniperi*)

Juniper scale attacks cones, twigs and needles of conifers. Trees turn greyish or yellowish when large amounts of sap are removed. Scales are white in colour, 1.5 mm in diameter, with pinkish to yellow eggs and young. One generation is produced per year, with fertilized females overwintering. Eggs are produced in May and continue to hatch until late June.

Lecanium Scale (*Lecanium corni*)

Lecanium scale attacks most deciduous shade trees, shrubs and fruit trees. It is 6 mm in size, shiny brown and wart-like. Crawlers are yellowish brown, and flattened, emerging in late July.

Oystershell Scale (*Lepidosaphes ulmi*)

Oystershell scale grow to about 3 mm in length. It has one generation per year. The eggs, resembling small oyster shells, overwinter under the female scale, hatching in mid-May.



Oystershell Scale



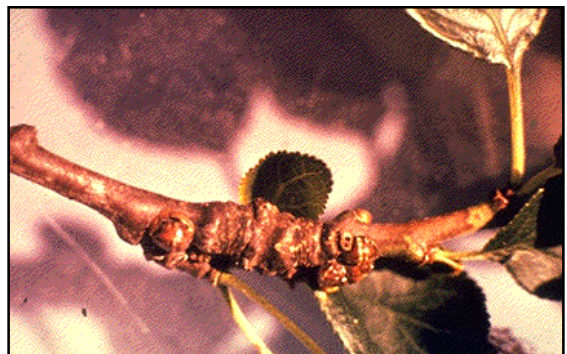
Holly Scale



Juniper Scale



Lecanium Scale



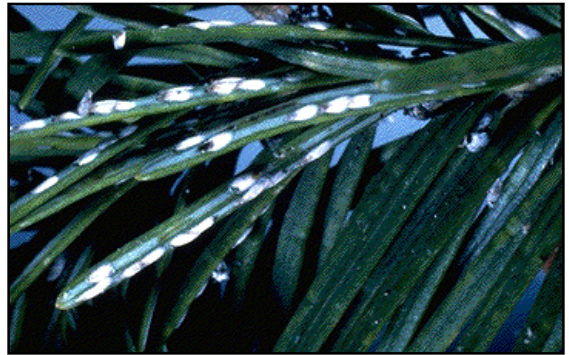
Lecanium Scale

B. Duncan

Alberta Environment Centre

Pine Needle Scale (*Phenacaspis pinifoliae*)

Pine needle scale prefer previous year’s growth. In severe infestations, growth is affected, needles drop, and secondary problems may set in. Scales are egg-shaped, and white with a light yellow spot at the narrow end. One generation occurs per year, with eggs overwintering under scales.

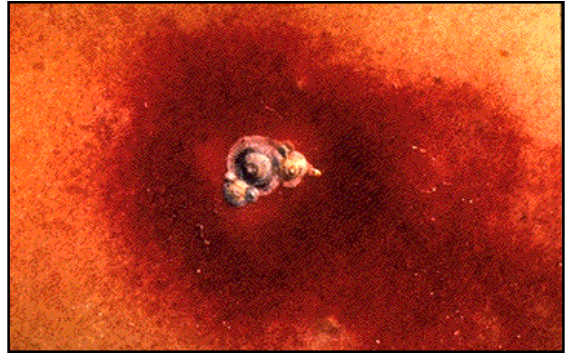


B. Duncan

Pine Needle Scale

San Jose Scale (*Aspidiotus perniciosus*)

These scales are grey to black depending on development stage. They have a bright yellow body underneath their shell. Overwintering females give birth to two generations of live yellow crawlers in June. A second generation hatches in August to October. This group overwinters and gives birth the following spring.



San Jose Scale

Hosts

Cottony Maple Scale

- Acer*
- Carya*
- Diospyros*
- Maclura*
- Morus*
- Platanus*
- Populus*
- Prunus*
- Quercus*
- Rhus*
- Rosa*
- Salix*
- Spiraea*
- Viburnum*

Euonymus Scale *continued*

- Olea*
- Pachistima*
- Pachysandra*
- Prunus*
- Solanum*

Holly Scale

- Buxus*
- Ilex*
- Ligustrum*
- Mahonia*
- Prunus*

Juniper Scale

- Cedrus*
- Cupressus*
- Juniperus*
- Thuja*

European Scale

- Ulmus*

Euonymus Scale

- Buxus*
- Camelia*
- Celastrus*
- Daphne*
- Eugenia*
- Euonymus*
- Hedra*
- Hibiscus*
- Ilex*
- Jasminum*
- Ligustrum*
- Lonicera*

Lecanium Scale

Most deciduous shade trees, shrubs and fruit trees.

Oystershell Scale

Most deciduous shade trees, shrubs and fruit trees.

Pine Needle Scale

- Pinus ponderosa*
- Pseudotsuga*

San Jose Scale

Most deciduous shade trees, shrubs and fruit trees.