

# Scale insects, outdoors

GWF354

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These are extremely common parasites of woody plants and some herbaceous plants. In large numbers, they can severely damage and disfigure their hosts.

**Q** What are scale insects?

**A** They are very small, flattened, sap-sucking insects that live beneath armoured scales. They are often matt and hard to spot. The adults seldom move, and unless they build up to high numbers, you could easily miss them. With some species you can see white egg masses in summer.

**Q** How do I recognise them?

**A** Look out for clusters of brown, yellow or white bumps which may be smooth or fluffy. Usually twigs, branches and trunks are affected but leaves can also be colonised.

Fruits are sometimes invaded by immature scale insects. Where this happens the fruit is dotted with red spots.

Like other sap-sucking insects, scale insects secrete a sugary solution called honeydew. This sticky liquid is deposited on the upper leaf surfaces and supports sooty moulds, which cause the leaves to become a dusty black.

**Q** Can you tell me more about them?

**A** Most scale insects are females. Once settled, they tend not to move although they sometimes can. They pierce the tissue beneath the scale with a specialised mouthpart to draw sap on which they live.

The males of most thrip species are tiny, short-lived flying insects, and tend to occur in relatively small numbers. Some kinds of scale insects, including most brown-scale populations, do without males, reproducing asexually. Eggs are laid in huge numbers, either in specialised white waxy masses or beneath the female's scale. After egg-laying the female dies but the scale often remains, sometimes for years. Eggs are usually laid in autumn and hatch in May, June and July. But some, such as the rose scale and oyster scale, hatch in autumn.

When the eggs hatch, the immature insects known as crawlers search for feeding sites, wandering over the plants before settling down. They don't move far unless transported on a leaf or by birds, and usually get into gardens on introduced plants. Once settled, the scale develops. Male scales are more elongated than the female ones. At maturity, males hatch from their scales as flying insects; the females remain static.

**Q** Does it matter which type of scale is affecting my plants?

**A** As the different species hatch at different times, it is helpful to know the identity of your scale so you can time your control measures most effectively. The

best way to control scale insects is to spray the young crawlers which are more vulnerable than the adults to pesticides. The most common types of scale include:

**Beech scale or felted beech coccus** (*Cryptococcus fagi*) feeds on green beech trees, beech hedges and to a lesser extent copper beech trees. It has a felty white covering so is easy to spot.

**Brown scale** (*Parthenolecanium corni*) is 6mm long, shiny brown like tortoiseshell, and feeds on over 300 different kinds of trees and bushes. Peaches are a favourite host, including indoor ones. Other susceptible plants include: acacia, azara, blackberry, broom, carpenteria, ceanothus, cherries, cotoneaster, currants, escallonia, gooseberries, laurel, Ionicera, magnolias, nuts, pyracantha, roses, spiraea, vines and also wisteria.

**Euonymus scale** (*Unaspis euonymi*) prefers a warmer climate and is most common in the south. It is most noticeable in the male form, which produces long white scales under leaves. Although *Euonymus japonica* is the main host, other euonymus can be affected and sometimes different plants, such as pachysandra.

**Horse-chestnut scale** (*Pulvinaria regalis*) is round and flat, 4mm

across, and perches on a white, waxy egg mass in early summer. They have only been around in Britain since about 1960, and have become a menace to chestnuts, dogwood, elm, holly, horse-chestnut, ivy, lime, magnolia, maple, sycamore and other woody plants mainly in southern England.

**Juniper scale** (*Carulaspis juniperi* and *Carulaspis minima*) are tiny, 1mm-long scales infesting junipers, thuja and cypresses.

**Mussel scale** (*Lepidosaphes ulmi*) is like a tiny 3.5mm long, mussel shell. It is very common on woody plants including bilberries, box, ceanothus, currants and heather, as well as many members of the rose family including chaenomeles, cotoneaster, fruit, hawthorns, ornamental apples and pears, roses and sorbus.

**Nut scale** (*Eulecanium tiliae*) occasionally attacks fruit and ornamental trees. It is very similar to brown scale.

**Oleander scale** (*Aspidiotus nerii*) is mainly an indoor pest, but it can infest spotted laurel (*Aucuba japonica*) outdoors.

**Oyster scale** (*Quadraspidotus ostreaeformis*) is like a grey miniature 2mm wide oyster shell. Although originally a pest of birch, it now attacks fruit trees including apples, apricots, cherries, currants, nectarines, peaches, pears and plums, as well as other woody plants.

**Pear scale** (*Quadraspidotus pyri*) This attacks apples, peaches,

pears and poplars in the south.

**Rose scale or scurfy scale** (*Aulacaspis rosae*) attacks roses indoors and outdoors, including wild ones.

**Soft scale** (*Coccus hesperidum*) is mainly an indoor pest but can be troublesome outdoors in sheltered gardens.

**Willow scale** (*Chionaspis salicis*) attacks many trees and shrubs, including alder, ash, broom, *Ceanothus*, currants, *Forsythia*, lilac, privet, spindle and willow.

**Woolly currant scale** (*Pulvinaria ribesiae*) and **woolly vine scale** (*Pulvinaria vitis*) are white, felted scales easily recognised by the woolly egg mass lifting the oval and wrinkled, 4-8mm scale, which occasionally attack currants, gooseberries and vines. Other plants like alder, hawthorn and willow are sometimes susceptible.

**Yew scale** (*Eulecanium corni* var. *crudum*) is restricted to yew, mainly in the south, and spoils trees and hedges.

**Q** What can I do about them?

**A** If you can catch an infestation in its early stages, the scales can be brushed off bark with an old toothbrush and soapy water, or scraped off leaves with a fingernail or sponge.

Often they get into the garden on infested plants bought from nurseries and garden centres. So check all new plants carefully before you buy them, especially underneath leaves and on the

underside of twigs. Sticky honeydew or sooty mould is also a useful giveaway.

**Q** Will spraying help to control scale insects?

**A** There are a range of sprays available including Organic Pest Control and Provado Ultimate Bug Killer aerosol.

**Q** Is there a biological control?

**A** Outdoors, there are many natural predators and parasites of scale insects. Ladybirds, birds and parasitic wasps get rid of many scales. There is a biological control available using nematodes to treat scale insects. However, in our trials, the nematode control was a big disappointment as it made no difference at all to scale insect infestations.