

## Aphids (Many species)



*Aphids of all ages: Adults in the foreground, immatures in the background. Arrow points to cornicles.*

**ID Tip:** Curled, distorted and often sticky, leaves with clusters of tiny, pear-shaped insects.

**Description:** Aphids are tiny, pear-shaped insects, 2-4 mm long (up to 1/8 inch). Most species live in crowded colonies, clustered together on the undersides of leaves or tips of young shoots. Colours range from light green to yellowish, pink, mahogany brown or powdery grey. With a hand lens you can see what looks like a pair of tail pipes pointing backwards from their tail end: these are cornicles and they distinguish aphids from similar small insects.

**Life Cycle:** For most of the growing season, only female aphids (called stem mothers) are present on plants. They give birth continuously, without mating or laying eggs. In the fall stem mothers produce both male and female aphids. These mate and the females lay eggs on tips of branches, in bark crevices and other protected spots. The eggs hatch in the spring into stem mothers. This is a generalized life cycle: there are many species of aphids, some with more complicated life cycles than described.

**Damage:** Aphids suck plant sap, which distorts the leaves, shoots and flowers. The first sign they are present is usually puckered or curled leaves, especially at the tips of growing shoots. Some species, such as potato aphids, have such toxic saliva that it takes just one or two aphids feeding on the underside of a leaf to cause distorted patches or yellow or reddish discoloured spots (see photo of currant aphid damage, next page).

Aphids also secrete honeydew as they feed. If many aphids are present, this leaves a sweet, sticky coating on the foliage below. Sooty moulds can grow on this coating, leaving unsightly dark streaks on leaves.

Most species of aphids are adapted to feed only on particular plants or groups of related plants. Only a few species, such as green peach aphid, feed on a wider range of host plants. There is no need to worry that aphids on a plum tree or on cabbages will move to other plants, such as roses or beans or maple trees (and vice versa).

### Prevention

Keep plants adequately watered and avoid over-fertilizing with nitrogen. Aphids thrive on slightly drought stressed trees and plants. For example, high numbers of cabbage aphids are common in late summer and fall on Brussels sprouts, broccoli and other mustard/cabbage family plants before fall rains supply generous moisture. In some cases, aphids are also worse on over-fertilized plants that are producing soft, succulent new leaves and shoots.

Copyright excerpt from: Gilkeson, Linda. 2013. *West Coast Gardening: Natural Insect, Weed & Disease Control*.

**Attract Natural Enemies:** Predators and parasites of aphids are numerous and widespread, even in urban neighbourhoods. Aphid midges, syrphid flies, aphid parasitic wasps, lady beetles and other insects are very good at controlling aphid infestations—often before you notice aphids are present. Planting nectar and pollen rich flowers, such as sweet alyssum, dill, cilantro and others, attracts these natural enemies of aphids to the garden (see pg. 105).

## Control

Before taking action, inspect aphid colonies for beneficial insects. These are very common and nearly always present among aphids. If you see predators or parasites it is likely that the aphid colony will soon collapse from attack. Wait for a couple of days and check again before deciding whether to take action.

It may be necessary to control aphids where the number of aphid predators is low (such as in a greenhouse or where insecticides have been over used) or when they are not keeping up with expansion of the aphid colony (such as in the fall, when predators begin to die off or move away to overwintering sites).

- **Water Sprays:** Blast aphids off of plants with a strong stream of water. This is most effective if it is followed up with a second spray of water a couple of days later. The second spray knocks off survivors of the first spray and their newly born offspring before they are old enough to reproduce. Water sprays are surprisingly effective on aphids and cause less harm to beneficial insects than insecticides.
- **Biological Control:** Buy and release aphid midges (*Aphidoletes aphidimyza*) (see pg. 111).
- **Pesticides:** As a last resort, spray insecticidal soap or other insecticides approved for organic growing, such as pyrethrins, neem (azadiractin). Consider, however, that these products also kill the many beneficial insects that are almost always present. Note: The “squish” method of crushing aphid colonies by hand also kills beneficial insects so I don’t recommend it.

Dormant oil sprays are effective controls for aphid species that lay over-wintering eggs on branches of fruit trees and bushes in the fall, including apple aphid, currant aphid and mealy plum aphid.



*A couple of currant aphids feeding on underside causes a reddish distortion.*



*It only takes one pea aphid to spread pea enation mosaic virus.*



*Cabbage aphids form crowded colonies in late summer.*