



Aphids

- many different types/colours (red, green, black, etc)
- can be difficult to control
- asexual reproduction
- give birth to “live” young who can start feeding right away
- life cycle is 20-40 days
- one female born in Spring can produce thousands of descendants in one season
- Unfortunately, they are vectors of plant viruses.

Plants affected:

Attack many indoor and outdoor plants

Evidence:

They are found in large groups often on stem and underside of leaves. They remove sap causing wilting and curling, galls or abnormal growth. Their excrement, called honeydew, supports the growth of sooty mould.

Management:

- Encourage beneficial insects such as: Ladybird beetles, lacewing larvae, several species of wasp that parasitize aphids
- Birds will also eat aphids
- Check at your local garden centre for pesticides, such as insecticidal soap, that are allowed for use in Ontario. Check the label of any product to see if it is effective against aphids. Spray directly on the affected parts of the plant.
- Knock aphids off plants with a spray of cold water
- Pour hot water on the soil to kill the eggs
- Use dormant oils on affected trees for overwintering eggs. (Not all trees and shrubs tolerate dormant oil - read label, see Fact Sheet)
- Excessive use of nitrogen causes soft, lush growth that attracts aphids
- Good weed control limits host plants for these pests



Mealybugs

- tiny white cotton-like deposits in the leaf axil or at the soil line
- act as a vector for several plant diseases
- mealybug females feed on plant sap, normally in roots or other crevices. They attach themselves to the plant and secrete a powdery wax layer (therefore the name mealybug) to protect themselves while they suck the plant juices
- Small infestations may not inflict significant damage. In larger amounts though, they can induce leaf drop

Plants affected:

Indoor plants particularly succulents as well as some outdoor plants

Evidence:

As they feed upon plant fluids the leaves turn yellow and drop. New growth may become distorted; plants may wilt and become stunted. Their excretion of the clear sticky honeydew supports the growth of sooty mould.

Management:

- Prune out light infestations or dab insects with a Q-tip dipped in rubbing alcohol
- Mealybugs are attracted to plants with high nitrogen levels and soft growth therefore do not over water or over fertilize
- Use beneficial insects such as ladybugs, lacewings and the Mealybug Destroyer (*Crypolaemus montrouzieri*) which are natural predators of this pest
- Spray plant with a strong stream of water to reduce pest numbers
- A commercial insecticidal soap will work fast on heavy infestation by damaging the outer layer of soft-bodied insect pests, causing dehydration and death within hours. Monitor plant and repeat. Some plants may be injured by soap sprays, read label, see Fact Sheet- Botanical Insecticides



Scale

- most scale insects are parasites of plants, feeding on sap drawn directly from the plant's vascular system.
- often on stems & leaf veins
- they secrete a waxy coating for defense; this coating causes them to resemble reptilian scales or fish scales, hence the name
- during feeding by soft scale species, excess plant sap is excreted as a sweet, sticky material called honeydew. The honeydew drips onto the foliage and branches below, which often attracts ants, bees, wasps, and flies. Also, a dark fungus called black sooty mould can be found growing on the sweet honeydew. This fungus blackens roofs, porches, and any plant foliage where the honeydew is deposited

Plants affected:

Attacks trees, shrubs and indoor plants

Evidence:

They remove sap, reducing vigour. An entire tree or shrub may be killed by an infestation

Management:

- Heavily infested plants are often best discarded
- Remove scales with cotton swab dipped in rubbing alcohol. Repeat every few weeks.
- Prune out and deposit in sealed bag in garbage
- Horticultural and Dormant oil (See Fact Sheet on Dormant Oil)
- Insecticidal sprays are most effective against the crawler stage. Monitor with a hand lens to tell when crawlers are active. Dead scales may cling to the plant for a relatively long time, are not damaging to the plant, but can make it appear that the infestation is still ongoing. Living scales will exude liquid when crushed.



White Fly

- Whiteflies are small (under 1mm), white, fly-like insects in their adult stage. The nymphal stages are tiny, flattened, oval scales that have no obvious legs, do not crawl (except immediately after egg hatch for a day or so). With no obvious head, thorax, or abdomen, they do not look like a "typical" insect. Because of their appearance and their location on the undersides of leaves, the nymphal stages may go unnoticed.
- typically feed on the underside of plant leaves
- can carry and spread disease (whitefly has also been shown to transmit almost 60 viral plant diseases)

Plants affected:

Indoor and outdoor plants

Evidence:

If you disturb a plant that is heavily infested with whitefly, a cloud of the insects will fly up off of the plant. The feeding of the adults and developing nymphs will weaken plants, causing leaves to turn yellow, look dry or fall off plants early. A severe infestation can cause a loss of vigor, stunt plant growth or cause wilting.

Management:

- Plant Cosmos which is an excellent flower attracting Ladybugs, Lacewings and parasitic wasps which prey on aphids, whiteflies, caterpillars and beetle larvae
- Use yellow sticky traps to monitor and trap.
- Vacuum adults from leaves and then remove the infested leaves
- Greenhouses can release *Encarsia formosa* parasitic wasps to control the greenhouse whitefly
- Outdoors use dill, yarrow, coriander and parsley to attract native parasitic wasps and predatory beetles
- Cut out areas of large infestation
- Spray with insecticidal soap at two week intervals. Some plants are harmed by insecticidal soap, read labels.