TORONTO
Parks, Forestry & Recreation
Urban Forestry Branch
355 Lesmill Rd
Toronto, Ontario, M3B 2W8

Forest Health Care

Aphids

Aphids are small soft-bodied insects that feed on plants by sucking sap from leaves and stems. They live in colonies. All aphid species have sucking mouthparts, thin long legs, pear-shaped bodies and they differ in colour. Aphids also occur in winged and wingless forms. They reproduce fast and usually have several generations in one year. In this climate they over-winter as an egg on plants. Most trees are able to tolerate high populations of aphids.


aphid colony on the twig


aphids on the maple leaf

Host and Damage

There are many different aphid species. Each of them is adapted to feed on one or a group of tree species.

Aphids usually do not cause any significant damage to trees, but they can weaken them and make them susceptible to other pests. The natural enemies of the aphids, such as ladybeetles and lacewings, often control most of the population.

As a part of their activity, aphids produce sticky liquid called honeydew. It drips onto leaves, tree stems and branches, cars, furniture and other objects beneath the tree. A black sooty mold fungus may grow on honeydew. The mold does not injure a tree, but by covering the leaves, it can reduce photosynthesis. Honeydew attracts ants, wasps and flies. Ants that feed on honeydew protect and spread the aphid colony to maintain the food source.

Aphids may cause leaf curling, bud distortion, gall formations and twig dieback. They are also important vectors of plant viruses.

The ladybeetle-a natural enemy of the aphids


eggs


larva


adult

Specific Management Practices for Control of the Aphids:

- A heavy rainfall usually reduces aphid populations. Using a hard jet of water from a hose has the same effect on them. Wash them down when their numbers increase. Do this in the morning hours, so the leaves remain dry for the rest of the day. This is important since damp leaves will promote other foliar disease development.

- Preserve and encourage the presence of natural aphid enemies. Avoid using broad-spectrum insecticides; they also kill ladybugs, lacewings, parasitic wasps and other beneficial insects that feed on aphids.

- A sticky band around the tree trunk can restrict the movement of ants that tend and farm the aphid colonies. Check with your local Garden Centre for sticky band availability.

General Management Practices to Improve Plant Health:

- Water your trees during dry spells. Infrequent, but deep soaking preferably during the early morning hours is recommended. Water absorbing roots are located in the upper 25 cm of the soil and extend outward well beyond the canopy dripline.

- Place organic mulch, (e.g. wood chips), or living mulch, (e.g. ground cover plants) around tree bases to keep the soil moist for longer periods and encourage healthier roots.

- Avoid unnecessary excavating, grade changes, soil compaction, root cutting or hard surfacing around trees. These activities destroy vital roots, which may lead to the decline or death of trees.

- Refrain from using salt or herbicides around trees.

Forest Health Care is a holistic approach to tree care that focuses on improving the health of trees in an urban environment. Our objective is a healthy, sustainable urban forest. Trees in urban forests are often stressed by compacted soil, drought, poor planting and pruning techniques, air pollution, road salt, damage from construction and much more. Trees planted in the right sites and properly maintained are less likely to suffer and are more resistant to pest problems.

Pest problems are managed using a decision making process that considers the following:

- Identification of the host and the pest.
- Monitoring of the host and the pest.
- Selection of the appropriate management strategy.
- Evaluation of the management plan.

Our focus is on pest management programs that are environmentally, socially and economically sound.