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Dewey M. Caron, Extension Entomologist Derby Walker, Extension Agent
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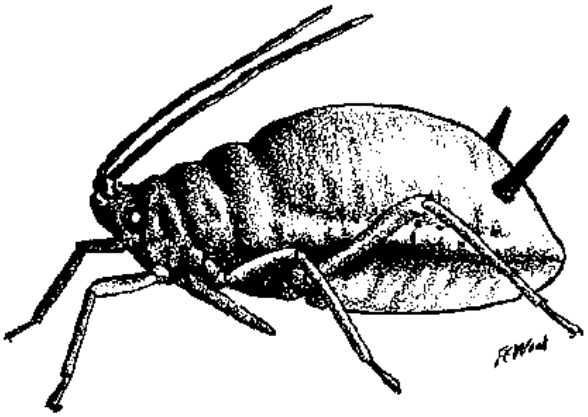
Aphids



Aphids (order ***Homoptera***), or plant lice, are one of the most common plant pest insects. Although common, they usually do not occur in damaging numbers. Under certain conditions, however, their populations can build to a large enough size to cause serious plant injury or aesthetic damage. They may even kill the plant. Aphids also have been shown to transmit more plant diseases than any other type of insect.

Appearance

Aphids are generally quite small, often only 1/8 inch in length, though a few species grow larger. While aphids can be many colors, the most common are yellow or light green. They also can be black, shades of red, brown, white, or grey. Some might even be covered with a white cottony material. Most aphids are wingless, but colonies may have both winged and wingless forms.

Aphids have thin legs and long, thin antennae. They also have long slender "beaks," or mouthparts, which they stick into plants to suck the juices (sap) from the plant tissue. When aphids occur in small numbers, this feeding activity doesn't hurt plants. But aphid populations can build up quickly, and when this happens, damage to the plant can occur. The result is wilting and yellowing, which can cause leaves to curl, leading eventually to the plant's death.

Where massive aphid populations are feeding, the plant leaves may turn black. Aphids release "honeydew," a sugary solution left after partial digestion of plant sap. Sometimes honeydew from aphids falls like a fine rain, landing on lower plant leaves or small plants growing below taller plants, where it dries in a clear, shiny drop. The drop turns black because a black fungus or mold grows on the sugary substance. While the leaves aren't hurt directly as a result of honeydew droplets, the sooty cover shades out necessary sunlight.

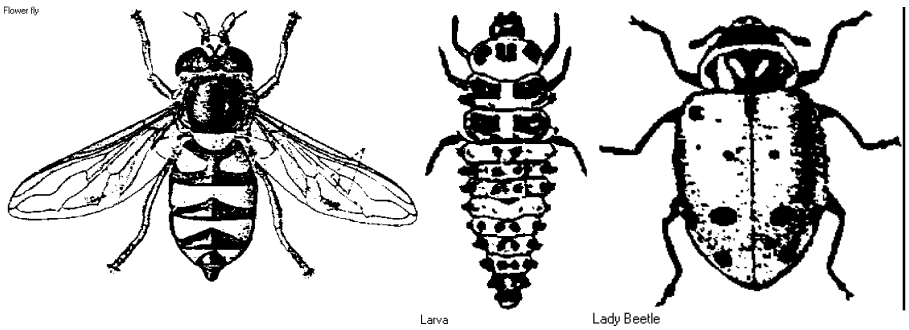
Life cycles

Aphids usually overwinter as eggs. Females reproduce parthenogenically (without males), and numbers build up rapidly under favorable conditions. Aphid populations sometimes build up so quickly that they are not noticed until damage is done.

Throughout the summer, females continue to produce females (generally they are born alive) without male fertilization. Finally, in the fall, a generation of both males and females appears. The two sexes then mate, after which females deposit eggs that will not hatch until the following spring.

Biological control

Before considering insecticidal sprays for aphids on shrubs and trees, carefully examine infested leaves for the presence of natural enemy life stages. These include the eggs, larvae, pupae, and adults of aphid predators, such as lady beetles (ladybugs), lacewings, and flower flies. Also look closely for aphids that contain wasp parasites. Parasitized aphids, called "mummies," are round and tan-colored. When the minute wasp emerges from the aphid mummy, a small hole is left in the aphid's back. It takes only a few predators and parasites on a small plant or branch terminal to reduce aphid populations.



Physical (mechanical) control

Aphid populations can be reduced by washing the terminals of sturdy plants, such as shrubs and trees, with strong water sprays from a garden hose. Aphids on house/garden plants may be removed by cleaning the stems in your fingers or brushing with cotton swabs dipped in water or alcohol.

Chemical control outdoors

If no aphid predator or parasite life stages are present and the level of plant damage is objectionable, chemical sprays are warranted. Two very safe materials are Insecticidal Soap and horticultural oil sprays. Spray coverage must be thorough for good control because these materials are only effective for an hour or two. Repeat applications are helpful when using these materials.

Systemic insecticides are most effective for killing leaf-feeding aphids, but contact materials can be effective with good coverage. Disulfoton, dimethoate and imidacloprid are systemic insecticides which are labeled on several plants. Contact insecticides are preferred in the

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control of bark-feeding aphids. Azadirachtin, cyfluthrin, endosulfan, malathion, pyrethrin, esfenvalerate and neem are contact type materials labeled for home use.

Chemical control indoors

Indoor sprays labeled for aphid-infested house plants are usually pump sprays or pressurized-can sprays containing Insecticidal Soap or a general insecticide. Be sure the chemical is labeled for indoor use and the pest and plant you want to spray is on the label.

ALWAYS FOLLOW ALL LABEL DIRECTIONS AND PRECAUTIONS.

Remember some insecticides do not discriminate between killing beneficial insects and pests. You can select products that do little if any harm to the beneficial insect population. They kill beneficial insects as well as aphids, and aphids can bounce back much more rapidly after an insecticidal spray than their enemies. Plants should be watched very closely, and only when aphid populations seem to be reaching damaging levels should insecticides be used.

Pesticides mentioned in this publication are generally listed as the active ingredient or common chemical name. The active ingredient is the chemical in the formulation that is active against the pest. Read the pesticide label to determine if the correct active ingredient is present. Regardless of the product you choose, be sure the plant and/or the pest you want to control is on the label.

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