Information

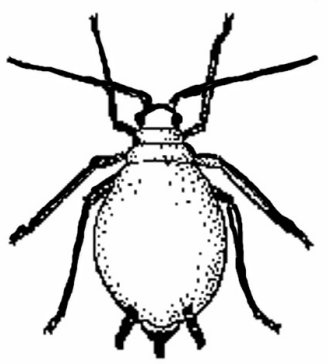
Bohart Museum of Entomology No. 039

Aphids

Aphids are very small, soft-bodied insects (Order Hemiptera, Suborder Homoptera, Family Aphididae). Their piercing / sucking mouthparts are used to suck out plant fluids, usually from the stems or leaves. There are many species, and they can be white, green, brown, black or red. Some species secrete a waxy white or gray substance over their body that gives them a wooly appearance. Nearly all plants are susceptible to one or another aphid species.

In general, adult aphids are wingless, although populations in the winter or fall may generate winged individuals. Aphids are most often found in dense groups, feeding on leaves or stems. Being wingless, they do not move readily when disturbed.

Aphids have many generations per year. They undergo both a sexual phase, involving one generation in the winter, and an asexual phase, involving many generations throughout the summer. During the asexual phase, adult females give birth to live offspring without mating. They can produce up to 12 offspring a day, and the offspring are all female. The young offspring are called nymphs, which molt (shed their exoskeleton) approximately 4 times before becoming an adult. It takes about 7 days for a newborn nymph to reach the adult (reproductive) stage. During the sexual phase, adult females will produce both male and female aphids. Males and females will mate and in some species eggs will be produced which are able to survive a harsh winter.

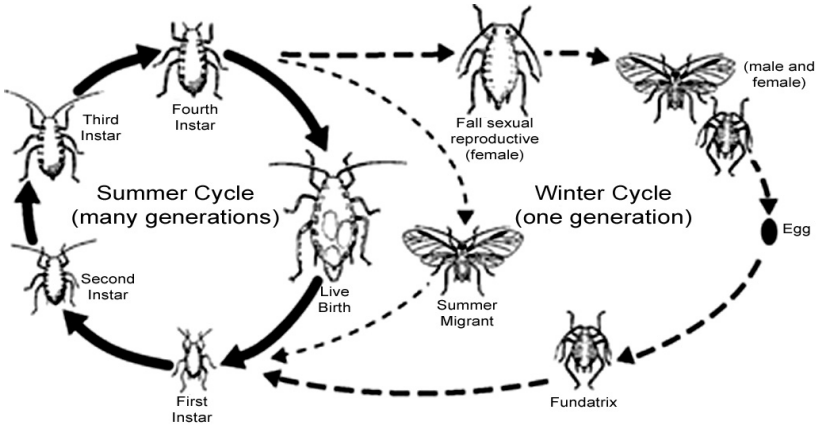


A wingless aphid

Low densities of aphids are usually not a problem in an ornamental or vegetable garden, however large numbers of aphids can be responsible for noticeable damage to garden plants. A high rate of infestation by aphids will cause the leaves of plants to curl and yellow. The insects themselves also produce a sticky excretion called honeydew that may promote the growth of a sooty mold fungus. Aphids also may transmit viruses from plant to plant. Squashes, cucumbers, pumpkins, melons, beans, potatoes, lettuces, beets, chards, and bok choy have all been known to have aphid-transmitted viruses associated with them. It is not necessary for large numbers of aphids to be present to transmit a virus.

Check your plants often during the spring and summer for the presence of aphids. Usually aphids cause the most damage during the warm (65-80º F) but not hot summer months. Check the underside of leaves, and pay special attention to plants in the upwind edge of a garden. The presence of ants may help you discover aphid populations, as ants are attracted to the sweet honeydew that aphids excrete.

There are several non-chemical means of controlling aphids. If you discover low levels of aphids it may be possible to prune the infected areas. High levels of nitrogen fertilizer such as blood meal have been shown to reduce aphid populations, however, be sure not to use more nitrogen than necessary. A strong spray of water is often enough to dislodge aphids from sturdier plants and to rinse off the honeydew.



General life cycle of aphids. Asexual reproduction occurs during most of the year (summer cycle). Some aphid species produce a generation of sexual individuals that produce overwintering eggs as shown in the winter cycle.

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