

Parasitic wasps (*Braconids, Chalcidids, Trichogrammas, Ichneumonids*)

Identification

There are thousands of parasitic wasp species, which differ in biology, host, and appearance. Some parasitic wasps are endoparasitic, developing within their host, while others are exoparasitic, developing on the outside of the host.

The adult wasps are very small, ranging from 1 to 35 mm in length, and often difficult to see with the naked eye. The damage done by the larvae or emerging wasp is usually more obvious than the adult. Infected or parasitized aphids appear swollen, tan or black in colour, and shell like. An exit hole will be present if the adult wasp has already emerged or the larva has left to make a cocoon.



Above: Parasitized aphid.

Preferred food

Parasitic wasps are grouped in three insect families.

The Ichneumonid wasp is parasitic to the egg and larvae of caterpillars and beetles. The female adult has a long, needle-like egg-laying structure at the back of the abdomen.

Braconid wasps inject their eggs into a broad host range, including caterpillars, flies, beetles and aphids. In some cases, they emerge early to pupate in cocoons adjacent to the host carcass.

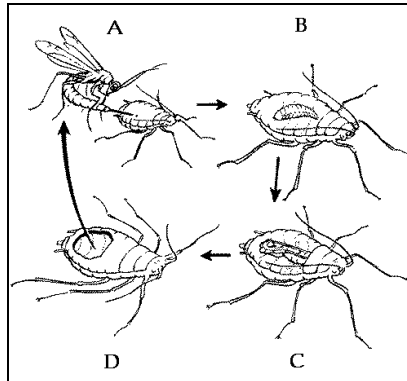
Chalcid wasps are very small and parasitize a wide range of caterpillars, flies and some beetles. A well-known member of this family is the *Trichogramma* wasp, which lays its eggs inside the eggs of many moths and butterflies.

Life cycle

The life cycle and number of generations per season varies depending on the parasite species.

In general, the female deposits one or more eggs into the body of a host insect. Upon hatching, the larvae feeds on the internal organs of the host in such a way that the host remains alive during the parasite development. In some cases, the dead host serves as a house for pupation. Later, the adult parasite emerges, leaving behind a mummified host carcass or a cocoon.

The presence of “mummies” amidst an aphid colony is an indicator that other “healthy” aphids may also be parasitized and will soon die.



Above: Parasite Life cycle (<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pni7404-3.html>)

Illustration by David Kidd

Status in ornamental plants

Parasites are efficient warriors that can devastate an aphid colony within days. The presence of a few mummified aphids is a sign of doom and gloom for the pest colony.

Unfortunately, the parasitic wasps tend to arrive after the aphid population has built to large numbers. Landscape and nursery managers must show patience to allow the parasites to establish. Most pesticides are detrimental to parasitic wasps. Using a toxic product to control an aphid outbreak will destroy the resident parasite population and may trigger future aphid flare-ups.



Above: Release of commercially available *Aphidius colemani* product.