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# Green Lacewings

<b>Order:</b>	Neuroptera (lacewings, dobson flies, alder flies, and others)
<b>Family:</b>	Chrysopidae (green lacewings and aphidlions)
<b>Metamorphosis:</b>	Complete (egg-larvae-pupa-adult)
<b>Mouthparts:</b>	Chewing/sucking in larvae and chewing in adults



Larva of **GREEN LACEWING**, see color print, Fig. 28A, on publication B-1013.

Lacewings are among the most common insect predator in many cropping systems. A common species in the region is the goldeneye lacewing, *Chrysopa oculata*. Some species are available commercially.

## Body Form

**Eggs:** Lacewing eggs are usually found in clusters on the undersides of leaves. Each egg in a cluster is laid on the terminal end of slender silken stalk produced by the female. They are oval and white, yellow, or light green. A related group (brown lacewings) does not lay its eggs on a stalk.

**Larvae:** Larvae are approximately 1/3 inch in length when full grown. Lacewing larvae are dorso-ventrally flattened and very active with three pairs of well-developed legs. Their bodies taper in both directions. Setae (hairs protruding from the body wall) are apparent with the aid of a hand lens. The larvae are generally yellow, white, or gray, and possibly mottled with red and brown markings. One of the most distinctive features of lacewing larvae is the hollow sickle-shaped jaws that allow them to withdraw fluids from many soft-bodied insects (this feature may be seen using a hand lens or observed as the larvae feed).

**Pupae:** The lacewing pupae are tan to brown and are surrounded by a white, silken, net-like cocoon.

**Adults:** Adults are light green with lacy wings. They are approximately 1/3 to 1/2 inch in length and slender bodied. The wings are held arched over the body when at rest. Goldeneyed lacewings have long filamentous antennae and iridescent red-gold eyes. A related group (brown lacewings) is about half the size and is brown.

## Life History

Goldeneyed lacewings overwinter as larvae or pupae in plant debris. Adults are active and lay eggs throughout spring and summer. Upon hatching, lacewing larvae immediately seek food. They are voracious

cious predators on many soft-bodied insect pests such as aphids, mealy bugs, and caterpillars. After undergoing three molts, the larvae form white, cocoon-like puparia. Adults emerge from the puparia and feed on plant nectar, honey dew, and pollen. There may be one to two generations per year.

### **Plant Benefit**

Various studies have indicated that lacewing larvae feed on as many as 75 aphids prior to pupation. They significantly reduce aphid populations in a wide variety of cropping systems, like alfalfa.

### **Management**

Green lacewings are naturally occurring biological control agents. Some species are available commercially and have shown benefits, particularly in enclosed greenhouse situations. The manipulation of these species in cropping systems has shown limited success. The presence of naturally occurring species should be encouraged by the judicious use of insecticides. Neither the larvae nor the adults are pestiferous to plants.

*Sources of further information:* Guides on crop production and pest management will often include information on beneficial insects like green lacewings.



Adult **GREEN LACEWING**, see color print, Fig. 28B, on publication B-1013.

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