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LILY LEAF BEETLE, *LILIOCERIS LILII* **COLEOPTERA: CHRYSOMELIDAE**



ADULT



LARVA



EGGS



PUPA

The lily leaf beetle is an exotic pest that was introduced to Connecticut around 1995. It was found in the early 1990's in the Boston area. Most likely this insect arrived in the United States from Europe in a shipment of

lily bulbs. Both adults and larvae do serious damage to lily plants.

Description

The 6 – 10 mm (1/4 to 3/8") long adult beetle has brilliant red wingcovers with black legs, head, antennae and body. Adults have a defense mechanism of squeaking when they are lightly squeezed.

Gelatinous eggs, laid in a single row, are orange to red. A dark head develops as the eggs mature.

Larvae are red-orange and sac-like but appear darker because of the feces they usually carry on their backs. The head is black.

The 12mm long (1/2") pupa, which is rarely seen because it is in the soil, is bright orange.

Life Cycle

Adults overwinter in protected areas around the garden. Beetles emerge over a few weeks in April and begin feeding. Mating takes place in May and June. Females can lay up to 450 eggs each over a period of several weeks from June into July.

Gelatinous eggs are laid only on true lily. Rows of eggs are found near the underside midrib on leaves. Depending on temperature, eggs hatch in seven to ten days. Larvae tend to feed gregariously on the underside of foliage. Often larvae will feed from the tip of the leaf inward. After feeding for two to three weeks in July and August, mature larvae drop to the soil, burrow down and pupate. Pupae are a bright orange color and do not feed. New, bright red adults emerge 15 – 20 days later and feed on foliage until cold weather.

There is one generation per year. However, adults may live for two years. Adults

appearing in the spring will be those that emerged the previous August and second year adults. Thus adults may be present from April through October and it can seem that there is more than one generation per year.

Hosts and Damage

Leaves of all true lilies: Asiatic, Oriental, tiger lilies and hybrids are eaten first. As the population grows, buds, flowers and stems are also eaten. Populations can build so quickly that entire plantings seem to disappear overnight. Adults also will feed on *Fritillaria*, *Polygonatum*, *Solanum*, *Smilax*, *Nicotiana* and other plants but are not able to complete their life cycle on these hosts. They do not feed on daylilies.

Management

Handpicking larvae and adults, while wearing gloves, can be effective in a small planting. Azadirachtin, which is among the compounds registered for use against this pest in Connecticut, will control small larvae and repel adults. Multiple applications are necessary as eggs hatch over a period of weeks. Permethrin may be used against larvae and adults. Imidacloprid, applied as a systemic to be taken up by the roots, may provide season-long control. Consult the label for dosage rates and safety precautions. Follow all label directions.

Two parasites are being researched for biological control.

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