

Imported Willow Leaf Beetle

Plagiodera versicolora (Laicharting); Family: Chrysomelidae

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Imported willow leaf beetle adults.
Photo by David Cappaert, Michigan State University,
Bugwood.org



Larvae on a willow leaf.
Photo by Paul Weston, Cornell University, Bugwood.org

Injury

Adults and larvae of the imported willow leaf beetle both feed on foliage of willows during the summer months. Adult chew holes and notches in the leaves. The larvae skeletonize the leaves, feeding on both sides of the leaves and eating the tissue between the veins. With a heavy infestation, all the leaves may turn brown. Trees with a heavy infestation may appear dead or scorched because of the brown skeletonized leaves. Lighter infestations may cause the foliage to appear "dirty" or partly brown from skeletonization.

Description

The beetles are stout, oval, metallic bluish-green, about 1/8 inch in length. The larvae are slug-like in form with a tapering abdomen, and bluish-black in color. Larvae are about 1/4 inch long when mature, and usually feed on the willow foliage in groups.

Life History

The adult beetles emerge from their overwintering quarters under the loose bark of willows, or in piles of debris and leaf litter nearby, and begin feeding on young willow foliage in late April. Feeding and egg laying occur throughout the month of May. Females lay yellow eggs in clusters on the undersides of the leaves. The young larvae emerge a few days later and begin feeding. Second generations begin in early June through July. In some years there may be a third generation. In late August or September, the beetles again seek shelter under the bark or in piles of leaves where they will overwinter.

Management

Although damage may be unsightly, it is usually not fatal to the tree. Even if total browning occurs in one season, it is seldom severely damaging, but if it should occur two or three years in a row, it could be serious to the health of the tree, especially trees that are not well established. Natural enemies exist, including several parasites, and one pupal parasite looks to be especially effective in reducing the populations of this insect.

With some ornamental pests, such as this one, it is a judgment decision on the part of the plant owner whether to engage in some type of control measure, or to let nature take its course. If management of the pest is desired, insecticides registered in 2009 in New York State for use on leaf beetles include: acephate, carbaryl, cyfluthrin, and neem oil. One spray should be applied in mid to late May or early June (192-448 GDD -- see **note** below). Careful observation will determine if more than one spray is necessary.

Note: GDDs (growing degree days) are a way of measuring temperatures and are associated with insect activity. Your local radio station may make this information available, or see this website:

http://www.nrcc.cornell.edu/grass/degreedays/dd_weekly.html

5/1973, Prepared by:Carolyn Klass	Warren T. Johnson
Sr. Extension Associate	Professor
Dept. of Entomology	Dept. of Entomology
Cornell University	Cornell University
2/2003, Revised by:Carolyn Klass	Paul A. Weston
	Sr. Research Associate
	Dept. of Entomology
	Cornell University

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This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. *READ THE LABEL BEFORE APPLYING ANY PESTICIDE.*