Cottonwood leaf beetle

Chrysomela scripta
Order Coleoptera, Family Chrysomelidae; leaf beetles
Native pest

Host plants: Cottonwood, other poplars and several species of willows, particularly basket willow (*Salix viminalis*)

Description: Adult beetles are 6 mm long. They are light yellow with black stripes on their wing covers. Mature larvae are blackish with two white spots on each side. They are about 12 mm long.

Life history: Adults emerge in early spring, feeding on bark and new leaves. Females lay yellow, oval eggs in clusters under leaves. Young larvae are gregarious feeders, skeletonizing leaves. Older larvae feed separately, consuming entire leaves, with the exception of the larger veins. There are two to four generations a year.

Overwintering: Adults under loose bark or in grass clumps.

Damage symptoms: Adults remove leaf tissue and cause damage to leaves. Young larvae skeletonize leaves; older larvae consume all but large veins. Severe infestations occasionally cause defoliation.

Monitoring: In May look for skeletonization of leaves or for shot hole damage. Look again in July for similar damage caused by the second generation of beetles. Adults and larvae are both visible on damaged foliage.

Cultural control: Pubescent varieties tend to offer some resistance.

Chemical control: Early instar larvae may be controlled by applications of *Bacillus thuringiensis* var. *tenebrionis.* Chemical sprays in May or July before larvae pupate may be effective, but look for the presence of beneficial insect predators before spraying.

Biological control: Natural enemies include pentatomid (stink) bugs, assassin bugs, ants, lacewings, lady beetles (such as *Coleomegilla maculata*), spiders, wasps (such as the pteromalid *Schizonotus latus),* and parasitic tachinid flies. In Wisconsin, *C. maculata* ate 25% of the eggs, while 26% of the pupae were attacked by a tachinid fly*, S. latus* (Bauer and Pankratz 1993).

Plant mortality risk: Low

Biorational pesticides: azadirachtin, *Bacillus thuringiensis* var. *tenebrionis*, horticultural oil, insecticidal soap, spinosad

Conventional pesticides: acephate, bifenthrin, carbaryl, chlorpyrifos (nursery only), cyfluthrin, deltamethrin, fluvalinate, imidacloprid, lambda-cyhalothrin, permethrin

Defoliation caused by cottonwood leaf beetle adults. (102)
Photo: Whitney Cranshaw

Feeding and defoliation caused by cottonwood leaf beetle larvae. (101)
Photo: Whitney Cranshaw

Defoliation caused by cottonwood leaf beetle larvae. (104)
Photo: Whitney Cranshaw

Cottonwood leaf beetle (continued)

Cottonwood leaf beetle adult. (72)
Photo: Vera Krischik

Cottonwood leaf beetle eggs. (103)
Photo: Whitney Cranshaw

Cottonwood leaf beetle adult. (73)
Photo: John Davidson

Cottonwood leaf beetle larva; notice the enlarged glands above each leg that store defensive chemicals the larva exudes when disturbed by predators. (74)
Photo: Vera Krischik