



Entomological Notes

Department of Entomology

HONEYLOCUST PLANT BUG

Diaphnocoris chlorionis (Say)

The honeylocust plant bug is a key pest of honeylocust, *Gleditsia tricanthos*. It is a fairly recent problem, not becoming a concern until the 1950s and 1960s with the introduction of the thornless cultivars often grown in nurseries and used in landscapes. The insect can be found throughout the eastern United States; anywhere honeylocust is growing naturally or in the landscape.

DESCRIPTION

This key pest is a plant bug that belongs to the insect family Miridae. This species is easily overlooked because the color of the nymph and adult closely resembles the new growth of the tree. The nymph looks nearly identical to the adult in color and form, except for its smaller size and shortened wing buds. The nymph has a distinct orange spot in the middle of the abdomen. Both stages of the insect are rather active and adults will fly when disturbed. Adults are approximately 3/16 inch long, and light green to yellow (Fig. 1). The insect has beaklike mouthparts that are used to remove fluids from plant cells. The overwintering egg is light colored, resembling a grain of rice.

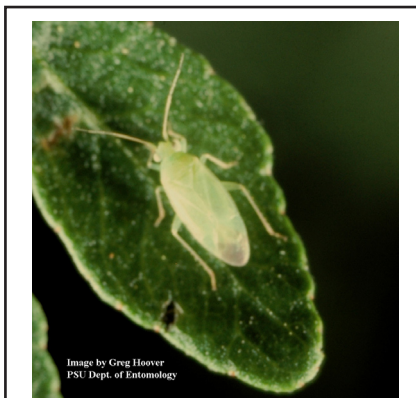


Figure 1. An adult honeylocust plant bug.

LIFE HISTORY

Adult females lay linear clusters of eggs just under the bark of 2- to 3-year-old twigs in midsummer. Eggs begin to hatch just after the vegetative buds of honeylocust begin to break in early spring. After eggs hatch in late April, nymphs undergo five instars until maturing into adults in early June. Nymphal development requires approximately 30 days.

Populations are most abundant during early June, slowly declining in late June, and disappearing by early July. This pest has one generation per season.

DAMAGE

This plant bug species is a fairly unpredictable pest when trying to prepare for an infestation. Both nymphs and adults can feed on the foliage with piercing-sucking mouthparts, although nymphs cause the most damage. In early spring young nymphs crawl into unfolding leaves and begin feeding just after bud break. Damage is caused when the insect injects toxic saliva during feeding. The toxin kills cells around the feeding site causing a yellow spot that eventually turns brown. Feeding could result in leaf rolling, distortion, stunting, and chlorosis. Heavy infestations may cause complete defoliation of the host, although tree death rarely occurs. The most common damage is leaf distortion, discoloration, and dwarfed leaflets (Fig. 2). This damage remains apparent throughout the growing season. The most susceptible cultivars seem to be those with yellow leaves such as ‘Sunburst’. The green-leaved varieties such as ‘Shademaster’ and ‘Skyline’ are less susceptible to injury caused by this pest. Damage may weaken the tree and leave it susceptible to attack by secondary insects and diseases.

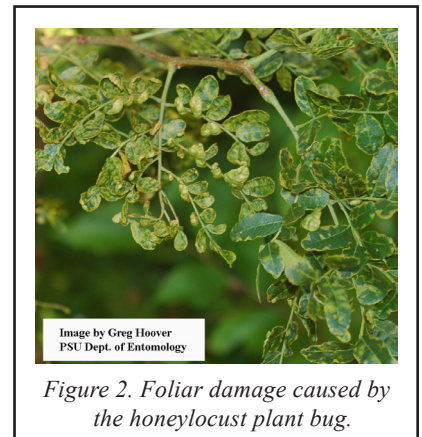


Figure 2. Foliar damage caused by the honeylocust plant bug.

MANAGEMENT

Newly emerging leaves should be monitored in the spring for symptoms of stippling and distortion. The use of a black beating tray in the spring will assist in determining the presence of the young, nymphal stages of this pest.

Non-chemical

Nymphs may be knocked off leaves with a high-pressure spray of water. Planting green-leaved cultivars that are less susceptible to attack by this pest than the yellow-leaved cultivars will reduce the risk of an infestation of this pest.

Chemical

Large established trees can withstand multiple years of damage from this pest without serious harm. However, insecticidal soap and horticultural oil may be applied according to label directions in early spring after nymphs appear and when new leaflets are

forming. Conventional insecticides should be applied according to label directions in the spring to prevent leaf damage. To effectively manage this pest, registered insecticides should target young nymphs 7 to 10 days after bud break in late April to early May. It is important that the foliage and bark are completely covered. Chemical control may not always be effective because this pest is highly mobile and individuals may migrate from untreated areas.

WARNING

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

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