

Glassy-winged Sharpshooter

Homalodisca vitripennis

Description:

The glassy-winged sharpshooter is a large insect compared to other leafhoppers. Adults are about 1/2 inch long and are generally dark brown to black when viewed from the top or side. Wings are clear with red venation, but appear dark brown due to the body coloration beneath them. Before laying eggs, the female secretes a chalky white substance that she transfers to the upper wings forming white spots. After laying the eggs, she covers them with this chalky material by transferring it from the wings. Thus, the white spots on the wings are only visible on females shortly before laying a batch of eggs and are not present on males. The abdomen is whitish or yellow. The head is brown to black and covered with numerous ivory to yellowish spots.



Clockwise from left: egg mass, nymphs, adult.

Distribution:

The glassy-winged sharpshooter was inadvertently introduced into southern California in the early 1990s. This insect is native to the southeastern United States and was most likely brought into California accidentally as egg masses in ornamental or agricultural plant foliage. Glassy-winged sharpshooter has become established in most of southern California and in certain localized sites in central and northern California. The glassy-winged sharpshooter continues to spread slowly northward in the Central Valley. Infestations that have appeared in various other counties in central and northern California have been eradicated or suppressed. There is great concern that this insect may eventually invade most California counties.

Life Cycle:

In spring, overwintering adults lay eggs in masses of about 10 to 12 under the lower leaf surface of young, fully developed leaves. Nymphs hatch in 10 to 14 days and feed on the leaf petioles or small stems while they progress through five immature stages. In profile, the nymphs look similar to that of the adult, except they are smaller, wingless, uniform olive-gray in color, and have prominent bulging eyes. In southern California and in the San Joaquin Valley, glassy-winged sharpshooter has two generations per year. Egg laying for the second generation occurs between mid-June through October. The nymphs emerging from these egg masses develop into overwintering adults.

Hosts and Economic Importance:

The glassy-winged sharpshooter ranges over many habitats, including agricultural crops, urban landscapes, native woodlands, and riparian vegetation. It is reported to feed on hundreds of plant species but is especially attracted to oleander, citrus, crape myrtle, and grapes. Hosts for the glassy-winged sharpshooter vary widely and include woody plants and annual and perennial herbaceous plants. It occurs in unusually high numbers on citrus. The glassy-winged sharpshooter obtains its nutrients by feeding on plant fluids in the water-conducting tissues of a plant (the xylem). The main problem associated with glassy-winged sharpshooters is that they can spread the disease-causing bacterium *Xylella fastidiosa* from one plant to another. This bacterium is the causal agent of devastating plant diseases such as Pierce's disease of grape, oleander leaf scorch, almond leaf scorch, and mulberry leaf scorch. When a glassy-winged sharpshooter feeds on a plant that is infected with *X. fastidiosa*, it acquires the bacteria, which multiplies within the insect's mouthparts. The sharpshooter then transfers the bacteria to another plant when it feeds. The establishment of glassy-winged sharpshooter in the Temecula region of Southern California led to a Pierce's disease epidemic that devastated its wine industry.