

Glassy-winged Sharpshooter

The glassy-winged sharpshooter (GWSS) is an insect native to the southeastern United States and Mexico. The adult GWSS are ½ inch long, dark brown, and have red veins on their wings. GWSS feed on the xylem fluid of a plant and are often found feeding on the upright growing tips. In an hour's time, one adult GWSS can drink ten times its body weight in plant fluids. To put that in perspective, it is equivalent to an average man drinking 200 gallons a day!!



Adult glassy-winged sharpshooter



Actual size of a GWSS

Nymphs

GWSS nymphs have olive-gray bodies, red eyes, and are wingless. There are five nymphal stages from egg to adult and it takes 40 - 50 days to fully develop. GWSS nymphs, like the adults, like to feed on the new growing tips of plants.



GWSS Eggs

Eggs are laid on the underside of leaves typically in groups of 2-27. The average egg mass contains eleven eggs. The egg mass looks similar to a blister on the leaf surface and a white excretion may be visible around the egg mass, especially when fresh. Hatched egg masses appear as crescent shaped brown scars.



GWSS egg mass



Old GWSS egg scar (top)

Fresh GWSS egg mass with white excretion (bottom)

Why is GWSS such a problem?

GWSS is a very good vector of the bacterium *Xylella fastidiosa*. GWSS contract this bacterium by feeding on infected plants. Once infected, the insect will carry and transmit the bacterium to plants through its feeding activity for the rest of its life.

Xylella fastidiosa causes different diseases in different plant species. Some of the diseases caused by *Xylella fastidiosa* are listed below:

- Oleander Leaf Scorch
- Almond Leaf Scorch
- Alfalfa Dwarf Disease
- Citrus Variegated Chlorosis
- Phony Peach Disease
- Pierce's Disease of Grapes

The most widely publicized disease this bacterium causes is Pierce's disease in grapes. The *Xylella* bacteria blocks the xylem tissue of the grape vine, which inhibits the plant's ability to obtain and transport water. A grape vine that is infected with *Xylella* will die in one to five years as a result.

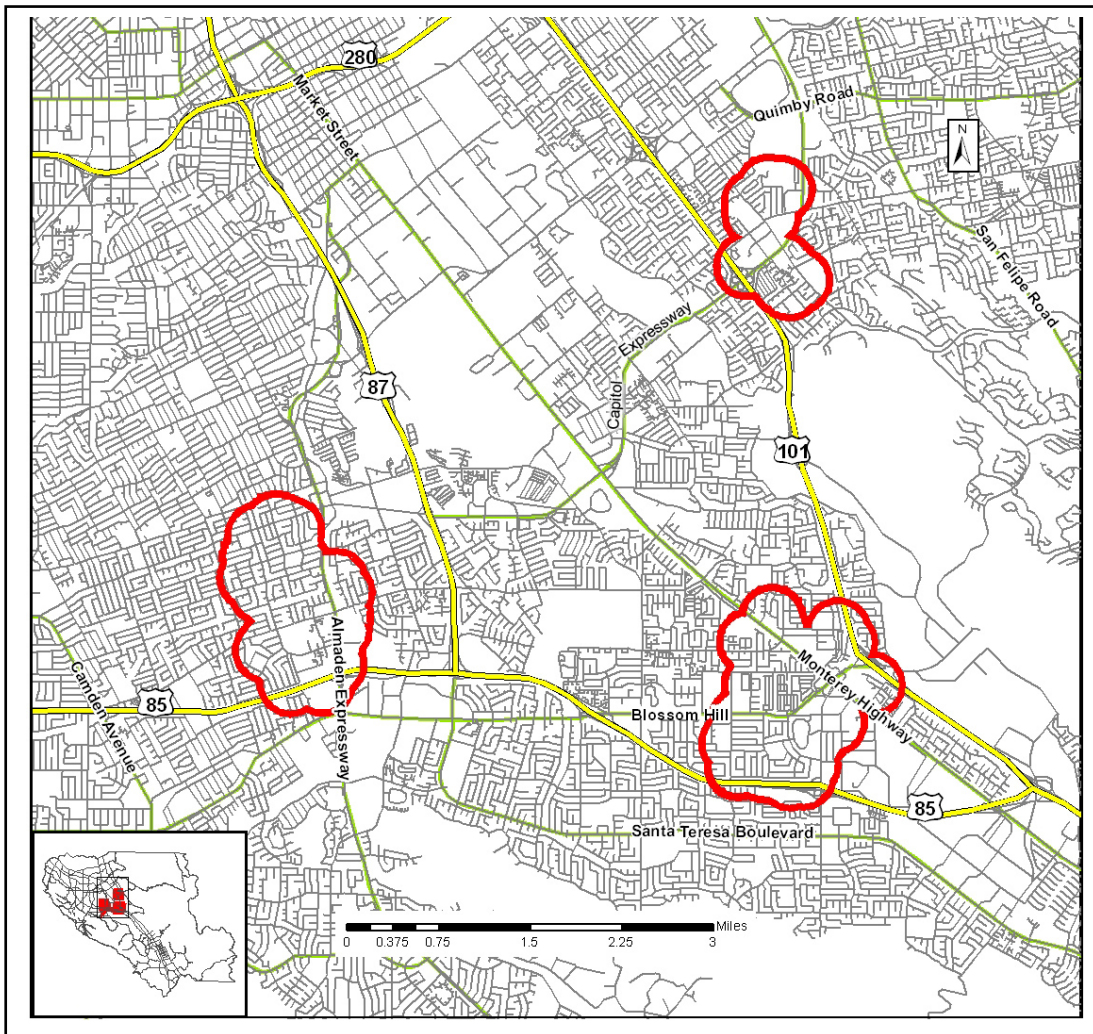


Pierce's disease has been present in California since the late 1800's. Historically, the disease was spread by other native species of sharpshooters. However, native species are not nearly as efficient vectors of the disease compared to GWSS. The first outbreak of Pierce's disease associated with GWSS occurred in the Temecula region of southern California in 1997. This infestation caused an estimated \$12 million loss in grape production.

What is happening in Santa Clara County?

There are several counties in southern California infested with GWSS and it was discovered that the movement of nursery stock from these areas was spreading the pest. In 2000, our county joined other counties in the statewide GWSS Management Program. All nursery stock commercially moved from southern to northern California is quarantined and then profiled and inspected by county agricultural inspectors. Our goal in Santa Clara County is to intercept hitchhiking GWSS and keep them from becoming established in our County.

As of July 2007, Santa Clara County has three established populations of GWSS. We have an infestation in the Branham Lane / Almaden Expressway area, another in the Blossom Hill / Cottle Road area, and one in San Jose / Evergreen area. The Cupertino / De Anza infestation area was declared eradicated in January 2006.



Detection of GWSS in these areas involves performing front yard and back yard surveys of properties and intensive trapping using yellow sticky traps. To help control the population, we have been treating properties where GWSS is found and nearby properties. The material applied is called Merit (Imidacloprid). Merit is applied to the foliage of plants and is also injected into the soil near non-fruiting trees.

* Vegetable gardens and lawns are not treated.

Part of our integrated pest management strategy to control GWSS in Santa Clara County involves the release of a tiny parasitic wasp, *Gonatocerus triguttatus*. The sting-less wasp is about the size of an aphid (1.5mm long). The female wasp lays its eggs inside the GWSS eggs and the wasp larvae kill the developing GWSS nymphs. We hope this wasp will become established in Santa Clara County and will control the GWSS population.



Gonatocerus triguttatus



Parasitized egg mass found in Cupertino