

WHITEFLIES



Whitefly adults, pseudo-pupae, nymphs, and eggs (in a circle and scattered) are on this severely infested fuschia foliage.

The giant whitefly, *Aleurodicus dugesii*, attacks hibiscus and creates a lot of cotton-candy like strands.

There are many species of whiteflies in Florida. Infestations usually occur on the new tender foliage. As the insects feed they produce honeydew that leads to the growth of black sooty mold fungi. Feeding by the nymphs on the lower leaf surface results in mottling and yellow spots on the upper leaf surface. When a branch on a heavily infested plant is shaken, a cloud of adult whiteflies appears, like a snowstorm that escaped from one of those desk top snow globes. Feeding may cause new leaves to curl and be malformed. Leaves will defoliate prematurely and twigs will wither due to this sap-sucking insect. Many plant species are attacked. Some preferred hosts are: azalea, citrus, fuschia, gardenia, hibiscus, rose, Sandankwa viburnum, etc.

Whiteflies are not related to true flies, which belong to the order Diptera. Rather, they are in the order Hemiptera (prev. Homoptera), which also includes aphids, scales and mealybugs. Adults are small (1-3 mm) insects and resemble miniature white moths. Their body color is yellow or orange, but appears white due to a waxy layer that covers the entire insect. After mating, females deposit 50-150 cigar-shaped eggs on the lower leaf surface. When the crawlers (1st instar nymphs) hatch, they disperse over the lower surface. They insert their needle-like mouthparts and begin to suck sap from the plant. After the first molt, the crawlers loose their six legs and antennae and become flattened, scale-like nymphs. The length of the life cycle from egg to adult ranges from four to six weeks, with many overlapping generations occurring per year.

What to Do:

Whiteflies seem to show up out of nowhere in a landscape, typically when infested greenhouse plants or nursery stock are planted. Often, whiteflies are usually kept in check by parasitic wasps, predatory insects and insect-pathogenic fungi. If numerous, several applications of pesticides will reduce populations. Applications of horticultural paraffinic mineral oil will minimize immature stages and eggs of whitefly populations, but not satisfactorily control the adults. The oil will also dry up the sooty mold fungus which will eventually wash off in a few days. A product that offers residual and/or systemic properties will be needed for established populations. Products that contain Orthene (acephate) or a soil drench with imidacloprid (Bayer Advanced Garden Tree & Shrub Insect Control) will slow populations. Read pesticide labels carefully to avoid potential plant injury. Do not apply products to citrus or vegetables unless they are listed on the label. Yellow sticky traps can be used to monitor whitefly infestations.

Doug Caldwell, Ph.D. *Commercial Landscape Horticulture Extension Educator with the University of Florida Collier County Extension. The Extension Service is an off-campus branch of the University of Florida, Institute of the Food and Agricultural Sciences and a department of the Public Services Division of Collier County government. E-Mail drcaldwell@ifas.ufl.edu ; call (239) 353-4244*