

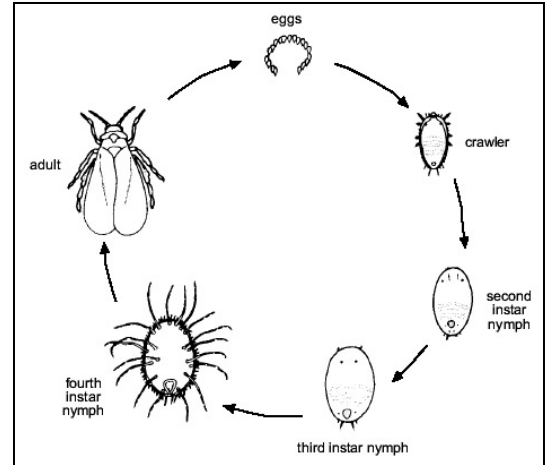
COMMON GREENHOUSE PESTS

- WHITEFLIES -

Whiteflies are not flies. They are in the order Hemiptera (the true bugs) with aphids and scales. They have piercing-sucking mouthparts that pierce leaf cells and suck up the plant's sap. They excrete a sticky substance called honeydew on the plant surfaces on which black sooty mold can grow. Some species can transmit viral diseases to certain crops. They have a broad host range and colonize over 500 different plant species.

Life Cycle

Whiteflies go through 6 stages in about 3 weeks, depending on temperature. Most of their life is spent on the undersides of leaves. Eggs are oval or bullet-shaped and are usually deposited in a circular pattern. The eggs hatch into crawlers (nymphs) which move around the leaf until they find a suitable place to settle and begin feeding. They remain in that spot throughout the next 3 nymph stages until becoming an adult. Once the adult (about 0.05 in long) emerges, it immediately finds a place on the undersides of leaves to begin feeding and laying eggs. One female can lay up to 600 eggs in her lifetime.

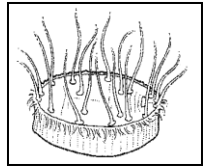


Species Identification

Greenhouse/Glasshouse Whitefly (*Trialeurodes vaporariorum*)



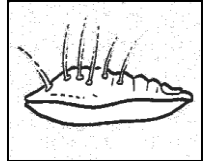
- Fourth instar nymphs are clear in color and appear “cake like” when viewed from the side and have long waxy hair-like threads projecting from its body.
- Adults have yellow bodies and white wings that they hold flat or horizontally over their body.



Silverleaf (Cotton) & Tobacco (Sweetpotato) Whitefly (*Bemisia argentifolii* & *B. tabaci*)



- Fourth instar nymphs are yellow in and appear “flat” when viewed from the side.
- Adults have yellowish bodies and white wings that they hold ‘tent-like’ or vertically over their body.
- Some strains/biotypes highly pesticide resistant (Q biotype). Lab tests needed to determine biotypes.



Bandedwinged Whitefly (*Trialeurodes abutilonea*)



- Fourth instar nymphs closely resemble greenhouse whitefly.
- Adults hold wings flat or horizontally over their body.
- Wings have distinct smoky-grey zig zag lines.
- Usually not a problem for greenhouse crops, but commonly seen.



Photo Credits & References:

J. K. Clark, UC Statewide IPM Program, University of California, Koppert Biological Systems. 1992. *Knowing and Recognizing: The Biology of Glasshouse Pests and Their Natural Enemies*. , M. L. Flint. July 1995. *Whiteflies in California: a Resource for Coop. Ext.* UC IPM Publ. 19.