



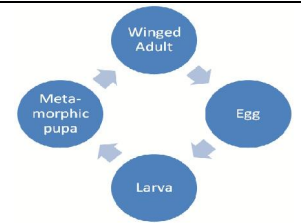
# MISSOURI BOTANICAL GARDEN

## William T. Kemper Center for Home Gardening

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### *Insect Order ID: Hemiptera (Whiteflies)*

**Life Cycle**—A form of complete metamorphosis: Adults lay eggs. Larvae eat, grow and molt. This stage is repeated a varying number of times, depending on species, until hormonal changes cause the larvae to pupate. They form a pupal case, inside of which the pupae change in form and in color and develop wings. The emerging adults look completely different from the larvae.



**Adults**—Infested plants, when disturbed, usually produce a cloud of minute, white flying insects. Body and wings covered with white powdery wax. Forewings and hindwings almost the same size. Wings held side by side and slightly peaked above the body. *(Click images to enlarge or orange text for more information.)*



Usually seen as a cloud of white flying insects



High populations, sometimes even outdoors



Body & wings covered with white powder



Wings side by side over body

**Eggs**—Whitefly lay tiny eggs on the undersides of leaves. Adult females usually lay between 200 to 400 eggs. Sometimes the eggs are deposited in a circular pattern in groups of 30 to 40 as the female will often keep her mouth part in the plant to feed while moving in a circle to deposit eggs.

**Larvae**—Look completely different from adults. Flattened and wingless. Never with wingbuds. Some late stages are edged with long filaments. Produce honeydew. *(Click images to enlarge or orange text for more information.)*



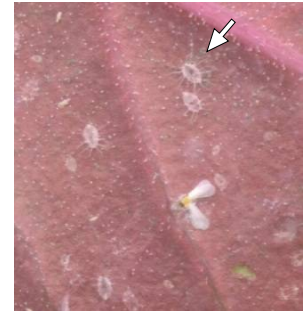
Clear, oval



Flattened  
No wingbuds

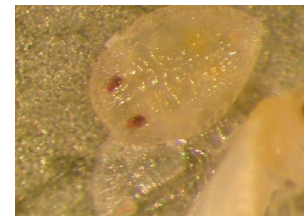


Difficult to see



Some edged with  
long filaments

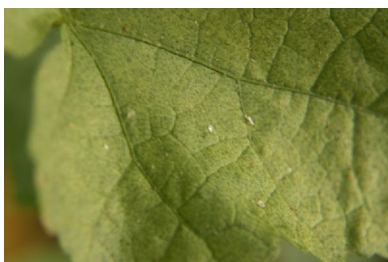
**Pupae**—Whitefly go through a pupal stage from which the winged adults emerge. In some areas, this is an overwintering stage, although not in the St. Louis area, where they do not overwinter outdoors. *(Click images to enlarge or orange text for more information.)*



Flattened pupa

**Beneficial / Benign Aspects**—Few, if any, beneficial aspects.

**Damage**—Over 1200 known species. Primarily an indoor pest in the St. Louis area as they do not overwinter outdoors. Both adults and nymphs have piercing/sucking mouthparts. They pierce plant tissues and suck out juices. They do NOT make holes. Many have toxic saliva, so that the damage on leaves may appear as cupping, curling, distortion or stunting. Others cause yellowing and dropping leaves. They are phloem feeders and so produce honeydew. Sooty mold may also be present growing on the honeydew. *(Click images to enlarge or orange text for more information.)*



Yellowed leaf



Cupped, puckered  
distorted leaves



Sooty mold  
growing on honeydew

**Comments**—Formerly classified in the order Homoptera. Now classified in the order Hemiptera, Suborder Sternorrhyncha, Superfamily Aleyrodoidea.