



Common name: **Scale**

Scientific name: Order *Homoptera*. Soft Scale--family *Coccidae*, Armored Scale--family *Diaspididae*

Size: Adult--1/10" to 1/5"

Identification: Adult scales attach themselves to bark, shoots, or foliage. If they are hollow and flake off easily, they are dead. Live ones range in color from white to dark brown.

Biology and life cycle: Soft scales like garden and ornamental plants. Armored scales prefer orchard crops. All have incomplete metamorphosis. Soft scales are covered with a secreted waxy or cottony material. Males may have a single pair of wings. Females can give birth to live scales as crawlers. Nymphs have legs and brown antennae. Armored scales secrete and build a stronger coating. Young are born alive or hatch from eggs and are active until after the first molt. Males have wings, well-developed antennae, and simple eyes--females don't.

Habitat: Garden, farm, and landscape plants.

Feeding habits: Scales suck plant sap through piercing, sucking mouthparts. Will attack many ornamental and food crops.

Economic importance: Can do severe damage by reducing vigor and stressing plants. Serious citrus pest.

Natural control: Twicestabbed, lindorus, and vedalia lady beetles; parasitic aphids; parasitic wasps. Healthy plants.

Organic control: Horticultural oil year round has been the recommendation in the past. A better plan is to spray with plant oil products in the growing season. A mixture of Plant Wash and 2 oz of orange oil per gallon of water has shown great results. Adding a cup of natural diatomaceous earth per gallon of water will also help. Cedar Gard is also an excellent product.

Insight: Mealybugs are closely related to scale and controlled with the same methods. San Jose scale, a tiny species of scale related to the fruit tree pest, is used to make shellac. Scale insects only attach stressed and unhealthy plants. Make sure the plants are not being over-watered or under-watered first. Then apply the Sick Tree Treatment to the root zone of the plants.