

RESEARCH LABORATORY TECHNICAL REPORT

Cottony Camellia Scale

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Cottony camellia scale (*Pulvinaria floccifera*) (CCS), also known as cottony taxus scale, is a soft scale pest of numerous evergreen and deciduous woody plants. Both the insect's common and scientific names allude to the woolly, white wax it produces as a protective case, or ovisac, around its eggs. CCS occurs in states along the Atlantic and Pacific Coasts as well as some inland states.

Description and Life Cycle

CCS adult females deposit hundreds of eggs within white ovisacs in mid- to late-spring (Figure 1). At approximately $\frac{1}{4}$ in (5-10 mm) length, ovisacs are longer than the adults and are typically found on the underside of leaves (Figure 2). Because of their comparatively large size and contrast with green foliage, this life stage is usually the easiest to identify.

First instar nymphs, also referred to as “crawlers,” emerge from eggs beginning in June and settle on leaves to begin feeding. These oval-shaped, pale yellow nymphs feed on plant tissue throughout the growing season using their piercing-sucking mouthparts. As temperatures begin to drop in the fall, they will often migrate to twigs to overwinter as second instars. Adult females are $\frac{1}{8}$ in (3 mm) in length and protected by a waxy covering (test) which varies in color from tan to brown. Younger adults have a stripe down the middle of their test that fades with age (Figure 3). Upon reaching maturity, females migrate to leaves, deposit their eggs, and die. CCS has one generation per year. The genus *Pulvinaria* contains two other species—cottony maple leaf scale and cottony maple scale—that may be confused with CCS.

Figure 1: Eggs clustered within a white ovisac



Figure 2: Collection of ovisacs on the underside of a leaf

Photo credit: Brian Kunkel, University of Delaware, Bugwood.org



Figure 3: Young adult cottony camellia scale clustered on a twig

Photo credit: United States Collection of Scale Insects Photographs, USDA Agricultural Research Service, Bugwood.org



Hosts

Cottony camellia scale has been reported on 37 different families of plants. Commonly occurring host plants of cottony camellia scale in residential landscapes include camellia, holly, yew, English ivy, rhododendron, hydrangea, mulberry, Japanese maple, sweetbox, euonymus, pittosporum, and jasmine.

Damage

As with many other sap-sucking insects that feed on foliage, plant damage manifests as light-green to yellowish leaf discoloration. Feeding by soft scales results in the production of large amounts of honeydew, which can promote the growth of sooty mold fungi on foliage (Figure 4). In addition to being aesthetically displeasing, sooty mold reduces the amount of sunlight available to the host. The combination of these stressors can weaken a plant and make it more susceptible to other insects and diseases.

Management

Treatments should target the highly susceptible crawler stage following emergence in June. Although second instar nymphs are more protected than crawlers, dormant season treatments can also be effective. Product applications for the well-protected egg and adult life stages are not recommended, and may reduce populations of naturally occurring beneficial insects. Please contact your Bartlett Arborist Representative to learn about management strategies.

Figure 4: Heavy sooty mold on camellia infested with CCS



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