RESEARCH LABORATORY TECHNICAL REPORT

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Wax Scales

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Wax scales (*Ceroplastes* spp.) are soft scale insects that are perennial pests of several species of ornamental shrubs and trees. Wax scales feed on dozens of hosts, but Japanese and Chinese hollies, pyracantha, spirea, ivy, hemlock, euonymus, and boxwood are commonly infested plants. These insects are primarily pests in the southern U.S., but have expanded their range further north as the climate of these regions has become more conducive to their survival. Common wax scale pests include the wax scale (*C. ceriferus*), Chinese wax scale (*C. sinensis*), Florida wax scale (*C. floridensis*), and barnacle wax scale (*C. cirripediformis*). As is typical with soft scales, wax scales exude "honeydew," a sugary liquid attractive to ants and stinging insects. Honeydew also promotes the growth of unsightly black sooty mold.

Description

Female wax scales are larger than males, and can be up to 1/4 inch in diameter, but are typically smaller. These insects can look very different depending on life stage and species of scale. They appear as globular or circular insects with a layer of off-white/beige, pink, or gray wax (Figure 1). Knowing what host the wax scale is found on can be helpful in species identification.

Lifecycle

Adult females will begin feeding in the spring when the weather becomes consistently warmer and host sap production begins. Females will then lay eggs after as few as two weeks of feeding, depending on species. The eggs will hatch a few weeks later, and mobile "crawlers" will emerge. These crawlers will move to other parts of the host plant and settle inserting their straw-like piercing/sucking mouth into the plant. During the "nymph" stage, they begin secreting wax and then grow through two more life stages, finally maturing in late summer. The females will then overwinter as completely mature adults, and begin feeding again in the spring.

Figure 1: Adult female wax scale

Damage

Damage from wax scales will rarely kill plants. Host plants can tolerate small infestations, and even moderate ones, with little impact. However, if not managed, wax scales can build up on plants and infestations can become severe, at which point they can become unsightly and cause larger problems such as branch dieback. The excessive production of sticky honeydew will attract ants and stinging insects such as wasps and hornets, and cover pavement, outdoor

furniture, and anything else directly underneath the host plant. Honeydew will also lead to the growth of black sooty mold (Figure 2). Severe infestations can begin to weaken plants and make them susceptible to other issues and pests that could ultimately kill the plant.

Figure 2: Chinese wax scale and black sooty mold growing on honeydew

Management

Wax scale infestations, even severe ones, are typically manageable. If possible, physically removing adult females through the autumn and winter will help prevent populations from becoming large. Inevitably, scales not readily seen are missed, but an application of horticultural oil during the dormant season can effectively manage these remaining females. There are several other effective product options that can manage these pests during the growing season. Regular monitoring and appropriate cultural practices for plants will also reduce wax scale infestations.

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