

Common Oak Scales

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Oak species are used as the primary or secondary host by a large number of scale insects. High populations of any one of these insects devitalize host plants by sucking large portions of the sap. This is especially severe on plants that are under stress from deficiencies of light, water, nutrients, etc. The first symptoms of scale insect attack are small withered leaves, followed by tip dieback of small branches; then larger branches may die. This makes the plant more susceptible to attack by woodboring insects, diseases and winter injury. After a few years of heavy, uncontrolled infestations, younger trees may die, while larger ones become disfigured or distorted and lose their aesthetic appeal as ornamental plants.

Scale insects are dispersed over long distances by the movement of infested plants. They may be moved short distances in the crawler stages by wind, animals or equipment. Two commonly found species are the obscure scale, *Melanaspis obscura* (Comstock) and the golden oak scale, *Asterolecanium variolosum* (Ratzeburg), which account for most of the scale insect damage on oaks in the United States.

Obscure Scale

The obscure scale is a major pest on oak, chestnut, and pecan trees throughout the Eastern United States (Figure 1). It is also found on dogwood, grape, maple, plum and willow. It has been considered the most serious insect pest affecting ornamentals in some states in certain years. This insect has only one generation per year, but beyond this its life cycle is very

complex, varying from host plant to host plant and from location to location. In mid-Atlantic states, the winter is passed as the first instar crawlers settle on white oak and as second instar crawlers appear on pin oak. Mobile crawlers appear on pin oak in early July, but they are not found on white oak for another four weeks.

Figure 1: Obscure scale on live oak twig



Figure 2: Close up of obscure scale on twig



The obscure scale blends itself in with the bark of the host plant and, as its name implies, is most difficult to see even under conditions of high infestation (Figure 2). Except for very young crawlers and adult males, a circular wax covering of scales under which it feeds always protects the insect. It is approximately circular, slightly convex, hard, thick, brittle and dark gray in color. The nipple is shining black, usually covered by gray secretions surrounded by a whitish ring. When the armors are removed, the thin ventral scales are white and very conspicuous against the bark.

Golden Oak Scale

The golden oak scale, also called the pit-making scale, was introduced into this country from Europe and has spread over most of the Eastern United States and into Canada. As the name implies, it is golden in color and produces pits on the bark of infested trees.

This scale is circular, slightly convex, shining greenish-gold with a marginal fringe and minute glossy spines. The scales' feeding produces pits in the bark underneath and around the area where it is attached. Galls or swellings may be produced around these areas. It passes the winter as adult females underneath armors of wax. Depending on the location, eggs are laid from May through July, and hatch into mobile crawlers in about two weeks. Apparently, there is only one generation per year.



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