Incense Cedar Scales

by Kathi Joye

Have you ever noticed charcoal-colored bark on the trunks of certain incense cedars (Calocedrus decurrens)? It appears as if the trees have been scorched in a forest fire. The black that you are seeing is a non-pathogenic fungus called sooty mold (Arthrobotryum spongiosum). What causes the mold to grow? Why does sooty mold grow on some incense cedars and not others? Does the mold harm the cedars? What do you do if you have this problem? These are questions that you might ask if you have encountered sooty mold in your yard.

The causal agent for the mold growth is incense cedar scale (Xylococculus macrocarpae). Also known as Monterey cypress scale, it invades both incense cedar and Monterey cypress. Scale is a type of tiny, sucking insect. This type of scale is soft-bodied, oval-shaped and has mouth parts that feed on cedar sap. Females lay eggs once a year on cedar foliage. Crawlers (baby scale insects) emerge from eggs, then molt into legless, immobile adults. Incense cedar scale excretes a sugary substance called honeydew that adheres to the cedars. Sooty mold is found growing in the areas where the honeydew accumulates—the mold obtains its nourishment from the honeydew. So, indirectly, incense cedar scale causes sooty mold to grow on cedars.

Sooty mold is commonly found on the trunks of small trees. This is because incense cedar scale prefers the underside of loose flaky bark typically found on the smaller cedars or, sometimes, the limbs of larger ones. White waxy threads surround the scale under the bark. Since fungi thrive in dark, moist places, the growth of sooty mold is predominant in areas that receive minimal amounts of sunlight. As a result, small cedars in dense stands exhibit a greater abundance of 'black bark' than those in isolation. Also, growth of the mold typically occurs on lower portions of trees that are shaded compared to upper portions that are exposed to sunlight. Interestingly, infestations of scale are more commonly found in native groupings of cedars than those found in urban areas.

Scale insects are usually not harmful to a tree's vigor. Birds forage for scale on cedar bark during winter months when other insects are scarce, reducing the density of scale and keeping the populations in check. However, a heavy abundance of scale insects, particularly on the foliage of young trees, can be deleterious and cause cedar leaves to turn yellow or red. These color changes result in impaired photosynthesis which eventually leads to dieback of treetops and to gradual death of the trees.

Action against incense cedar scale should only be taken if the infestation of a tree is severe or if the damage to the tree is unacceptable. If a tree's health has greatly deteriorated, remove the tree. Applications of horticultural oils to the bark can help control scale infestation. Non-stressed trees are more apt to resist invasions of scale so be sure that your cedars are growing under optimal conditions: adequate water, fertile soil that drains well, and full to near-full sunlight.

To reiterate, the sooty mold growing on your incense cedars is attracted to and nourished by the honeydew produced by tiny insects called scale. Scale (and sooty mold) is typically found on young trees found in dense stands. Thinning dense stands may improve the health of your trees; however, in most cases, you do not need to worry about scale infestations on your incense cedars.

The good news is that an infestation of cedar scale is usually not as dire as the blackened bark might indicate. You only need to worry if it begins to take over enough of the tree to compromise its health.

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