

SOOTY MOLD

Integrated Pest Management for Home Gardeners and Landscape Professionals

Sooty mold is the common name applied to several species of fungi that grow on honeydew secretions on plant parts and other surfaces. The fungi's dark mycelium gives plants or other substrates the appearance of being covered with a layer of soot. Sooty molds do not infect plants but grow on surfaces where honeydew deposits accumulate. Honeydew is a sweet, sticky liquid that is excreted by plant-sucking insects as they ingest large quantities of sap from the plant. Because the insect cannot completely utilize all the nutrients in this large volume of fluid (which is a dilute solution of carbohydrates, amino acids, minerals, and other substances), it assimilates what it needs and excretes the rest as "honeydew." Wherever honeydew lands (e.g., leaves, twigs, fruit, yard furniture, concrete, sidewalks, or statuary), sooty molds can become established (Fig. 1).

Although sooty molds do not infect plants, they can indirectly damage the plant by coating the leaves to the point that sunlight penetration is reduced or inhibited. Without adequate sunlight, the plant's ability to carry on photosynthesis is reduced, which may stunt plant growth. Coated leaves may also prematurely senesce and die, causing premature leaf drop. Fruits or vegetables covered with sooty molds are edible. Simply remove the mold with a solution of mild soap and warm water.

Fungi that most commonly cause sooty molds in garden and landscape situations are in the genera *Capnodium*, *Fumago*, and *Scorias*. Less common genera include *Antennariella*, *Aureobasidium*, and *Limacinula*. The species of sooty molds present are determined by a combination of the environment, the host, and the insect species present.

Some sooty mold species are specific to a particular plant or insects, while others may colonize many types of surfaces and use honeydew produced by several kinds of insects.

A number of insects can produce the honeydew needed by sooty molds to grow. Most of these are plant-sucking insects in the order Homoptera, which includes aphids, mealybugs, soft scales, whiteflies, leafhoppers, and psyllids (including eucalyptus lerp psyllid) (Fig. 2). Both the immature and adult stages of these insects feed by sucking sap from plants, producing honeydew.

MANAGEMENT

Most plants will tolerate a small insect population and light amounts of sooty mold. When sooty molds are present on any surface (plants, furniture, etc.) in the landscape, it indicates there is, or has been, a sucking insect population present in the vicinity. Control of sooty molds begins with management of the insect creating the honeydew. For example, populations of aphids are usually highest on succulent, new growth. In some situations they can be dislodged with a strong stream of water. Also fertilize and water to keep plants healthy but not excessively vigorous.

Another important consideration may be ant management. Ants are attracted to and use honeydew as a source of food. Because of this, they will protect honeydew-producing insects from predators and parasites in order to harvest the honeydew. In many cases, predators and parasites are sufficiently abundant and quickly begin feeding on and reducing populations of scale insects, aphids, psyllids, whiteflies, or mealybugs once ants have been eliminated. If populations fail to decline,



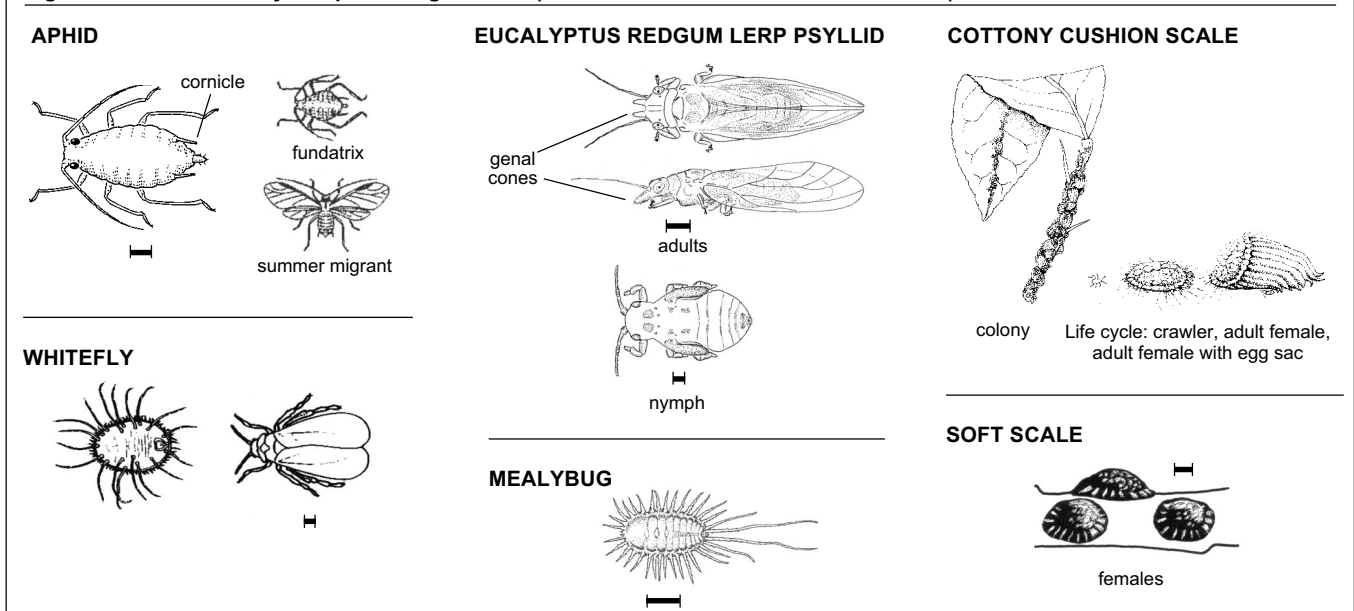
Figure 1. Sooty mold on oranges.

apply horticultural oils, neem oil, or insecticidal soap to suppress the problem insects. One or more applications may be needed. For detailed information on managing these pests see the appropriate *Pest Notes* listed in References.

Sometimes judicious pruning can be helpful in removing most of the infested plant parts. Also, keep ants out of trees and away from honeydew-producing insects by applying a sticky compound around the trunk and trimming limbs touching buildings or other access points. Baits, such as ant stakes placed under trees and shrubs, may help reduce ant foraging in some cases. More information on ant management can be found in *Pest Notes: Ants*, listed in References.

Once the honeydew-producing insects are suppressed, sooty molds will gradually weather away. In some instances, if necessary, sooty molds can be washed off with a strong stream of water or soap and water.

Figure 2. Common honeydew-producing insects. (Bars indicate actual size of the insects.)



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These free publications are available online at <http://www.ipm.ucdavis.edu/PMG/selectnewpest.home.html>

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