

# Identifying Poria Fungus

**Q.** While renovating a home in New Jersey, I found a fungus-like growth a few inches long growing between the tile floor and the base molding in the bathroom. The house is on a concrete slab. Is there anywhere I can have this growth tested to see if it is poria?

**A.** Stephen Quarles, cooperative extension advisor on wood durability at the University of California Forest Products Laboratory in Richmond, Calif., responds: Yes, there are laboratories that can identify fungi based on culturing samples taken from decayed wood on site, but the process can be time consuming and the service may not be free. Two laboratories that provide the service are the Center for Forest Mycology Research at the U.S. Forest Products Lab in Madison, Wisc. (contact Harold Burdsall, 608/231-9234), and the Department of Forest Products at Oregon State University in Corvallis (contact Jeffrey Morrell, 541/737-4222). Should you decide to pursue this, call Dr. Burdsall or Professor Morrell for specifics on how to collect and prepare the sample for shipment.

Because the laboratory procedure can take a month or longer to complete, it may be safer for you to diagnose it in the field. *Meruliporia incrassata* (the recently changed scientific name for poria) can be identified by the presence of the water-conducting rootlike tube called a rhizomorph and by the appearance of the fruiting body and the dark colored spores it produces. The rhizomorph looks like a barkless root and smells like a mushroom if broken open.

Since the required repair scenario for homes damaged by a water-conducting decay fungus is different from that for non-water-conducting decay fungi, it is critical to determine whether or not the damage has been caused by poria. For



**Figure 1.** The rhizomorph of the poria fungus is a rootlike tube.

non-water-conducting decay fungi, you have to find the source of liquid water that is making the wood wet enough for decay to occur, and stop it. With poria, the rhizomorphs supply the water, and therefore they all need to be found and severed. Severing the rhizomorphs will eliminate the water source and kill the fungus.

Finding and cutting the rhizomorphs can be difficult, particularly with slab-on-grade construction. The rhizomorphs can move through some very tight openings, such as plumbing penetrations and cold joints between two concrete pours. To prevent poria from infecting the house again, you need to change the construction detail that allowed the rhizomorph to get to the house without drying out (for example, by providing an adequate air gap between wood and soil).

Because of the importance of finding the rhizomorphs, you should consider enlisting the help of a pest control operator with poria experience. The



**Figure 2.** One identifier of *Meruliporia incrassata* is its fruiting body.

University of California Forest Products Laboratory has prepared a poria package with a summary of many of the published documents on *Meruliporia incrassata*. To request this package, call 510/215-4261 and leave your name and address after the recorded message.

### Barn Door Hardware

**Q.** *I am currently building a barn and am looking for some old-fashioned barn door hinges. Do you know any sources for wrought-iron strap hinges with character?*

**A.** *Martin Holladay responds:* You can order custom-made wrought-iron strap hinges from Lehman's Hardware of Kidron, Ohio (330/857-5757; [www.lehmans.com](http://www.lehmans.com)). Another company, Kayne & Son Custom Hardware of Candler, N.C. (828/667-8868), sells strap hinges that are custom-made from chemically blackened steel.

### Black Stripes on a Cathedral Ceiling

**Q.** *I have been asked to determine the cause of black shadow marks on a cathedral ceiling in a new home. The black marks correspond to the bottom sections of the rafters, near where the rafters meet the wall. The black shadows do not resemble stains from water leaks. There is a gas fireplace on one of the outside walls; the fireplace has been tested for leakage, and it checked out fine. The owner burns a large candle, which sits on the fireplace mantle. Could the ceiling shadows be caused by soot from the candle?*

**A.** *Frank Vigil, senior building science specialist at Advanced Energy in Raleigh, N.C., responds:* Reports are increasing of problems with black stain deposition on interior surfaces. Since particulate is attracted to cooler surfaces, it is not uncommon to see black staining following the framing members behind sheetrock. The source of the particulate varies. We have documented sources ranging from furnaces and water heaters to fireplaces, candles, outdoor cooking grills, and even automobile tires.

Although you say the fireplace has

been tested for leakage, not all technicians test for all possible problems. Was the fireplace tested under pressure or simply examined? Is the fireplace a "sealed" unit? Some units appear to be sealed, but when tested under negative pressure can leak significantly. Is there a standing pilot light? If so, how large is it? Does it impinge on any of the logs? Has the gas pressure been tested? Was the orifice examined to make sure it is the correct one for the fuel being burned? These items should all be checked, since we have found that any one of them might be the source of particulate matter.

We also know that some candles — as well as certain candle-burning practices — can be the source of black stain deposition. Unfortunately, it can be difficult to predict beforehand which candles will lead to problems. Many types of jar candles, imported candles, and highly fragranced candles can burn dirtier than other types. Candles that are poorly designed or have improper wicks can also be problematic. Improper burning practices include failing to keep the wick trimmed, burning a candle anywhere near a draft (for example, near a heating register or ceiling fan), and burning a candle for too many hours. Any of these practices can lead to staining.

If you suspect that a candle is the cause of the staining, tell the homeowner to stop burning the candle for a few months. If the stains return to the ceiling after repainting, you know the source is from something else. Covering the stains requires a good quality sealer, such as Kilz, prior to painting. Otherwise, the stain will bleed back through the paint.

Because particulate is attracted to cooler surfaces, there is a strong likelihood that the ceiling insulation is poorly installed — perhaps because the insulation is compressed at the edges or because there are voids or gaps along the edges of the insulation. The owner of the house may wish to improve the ceiling insulation.

For more information, see my article "Black Stains in Houses: Dirt, Dust or

Ghosts?" in the Jan./Feb. 1998 issue of *Home Energy* magazine (510/524-5405).

### Sound-Control Batts

**Q.** *Are sound-control batts any different from regular fiberglass batts?*

**A.** *Architect Jerry Germer responds:* There is little if any difference between fiberglass sound-control batts and unfaced fiberglass thermal batts. Owens Corning's published R-values for their 3<sup>1</sup>/<sub>2</sub>-inch-thick thermal batt insulation and their sound attenuation batts are identical at R-11. An Owens Corning representative says that the two products are tagged differently mainly for marketing purposes. CertainTeed's 3<sup>1</sup>/<sub>2</sub>-inch sound-control batts also come in at R-11. According to a representative of Schuller International, their sound-control batts are slightly less dense than their thermal-control batts. While their 3<sup>1</sup>/<sub>2</sub>-inch sound-control batts achieve R-11, their thermal batts in the same thickness are rated at R-13 and R-15.

In most cases, sound-control batts are priced the same as comparable thermal batts. But if you can find thermal batts at a lower price than sound-control batts, there is no reason not to use them for sound control.

### Eaves Membrane and Drip Edge

**Q.** *Should peel-and-stick eaves membrane be installed over or under the drip edge?*

**A.** *Tim Harwood, sales coordinator at Grace Construction Products, responds:* Eaves membrane should always be installed first, under the drip edge, in order to provide maximum protection to the roof sheathing. After installing the drip edge, you can install an extra band of eaves membrane over the top of the drip edge, if desired. This second layer is extra insurance for those who want to be sure that all moisture is conveyed onto the drip edge.

**GOT A QUESTION?** Send it to On the House, JLC, 186 Allen Brook Ln., Williston, VT 05495; or e-mail to [jlc@bginet.com](mailto:jlc@bginet.com).

