

Gray-Brown Saprot

The pouch fungus

Pathogen—Gray-brown saprot is caused by *Cryptoporus volvatus* (= *Polyporus volvatus*), the pouch fungus.

Hosts—Gray-brown saprot is common on most recently killed conifers except cedar and five-needle pines. Conks are frequent on dead ponderosa pine.

Signs and Symptoms—Fruiting bodies of the pouch fungus are often scattered on the bark surface of trees killed by bark beetles and fire (fig. 1). Rounded, white, or tan conks that are about 1 inch (2.5 cm) in diameter form on the outer bark (figs. 1-2). This fungus causes a grayish to gray-brown-colored white rot of the sapwood (fig. 3).

Disease Cycle—Fruiting occurs within 1-3 years after a tree dies. Conks often emerge through holes in the bark produced by bark beetles or woodborers. Conks are leathery and scaled at first with an air space and a pink pore layer inside. At maturity, the conks break open on the underside, releasing spores. Spores are disseminated by wind, and there is evidence that bark beetles may acquire spores as they fly due to electrostatic forces. New conks may be produced on a dead tree each year for up to 3 years. Conks live only one summer and deteriorate on the tree within 2 years.

Impact—The pouch fungus is a common saprotting organism of recently killed trees. It can cause extensive sapwood decay, and it rapidly colonizes the outer sapwood (fig. 3).

Management—Prompt salvage is the only means of damage control. Timber volume loss caused by pouch fungus decay can be substantial. The rapid decay of sapwood necessitates timely harvest of bark beetle and/or fire-killed trees. Occasionally, pouch conks appear on trees with green foliage following a light-intensity fire or bark beetle strip attack. Usually, these trees die by the following year and should be marked for salvage removal if consistent with the project guidelines.



Figure 1. Numerous conks of the pouch fungus on boles.
Photo: Sandy Kegley, USDA Forest Service, Bugwood.org.



Figure 2. Close-up view of the pouch fungus. Photos: Susan K. Hagle, USDA Forest Service, Bugwood.org.



Figure 3. Saprot caused by pouch fungus in a tree attacked by Douglas-fir beetle. Photo: Russ Hogan, Bugwood.org.

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