

Common Fungi Affecting Pacific Northwest Trees

Latin name	<i>Porodaedalea pini</i> (formerly <i>Phellinus pini</i>)						
Typical Host tree in the Pacific Northwest Region	Amabilis, grand, subalpine fir, western larch, Engelmann and Sitka spruce, jack, lodgepole, ponderosa and western white pine, Douglas-fir, western redcedar, yellow cedar, western and mountain hemlock, juniper, and yew.						
Form of fruiting body	Perennial	✓	Annual		Polypore	✓	Gilled
Type of decay	White rot	✓	Brown rot		Soft rot		
White rot - preferential loss of lignin, some break down lignin & cellulose. Brown rot - preferential loss of cellulose. Soft rot - breaks down cellulose.							
Typically attacks:	Live wood		Dead wood		Both		✓
Typical location of decay	Root rot		Butt rot	✓	Sap rot	✓	Heart rot
Comments:							
<p>Woody conk, light to dark brown, plate to hoof-shaped bracket around 3" (7.5 cm), but can be spread over the underside of branches. Upper surface is red / brown to black, zoned with a well defined margin. Lower surface is a lighter yellow / brown colour and poroid with irregular pores. Isolated conks are often seen on trunks with limited decay pockets beyond, but this is very species specific. In Engelmann spruce, lodgepole pine, and subalpine fir, expect to find extensive decay columns. The presence of multiple conks suggests a more extensive column of decay and should be investigated in more detail. Conks have been known to occur on large structural roots. An alternate form is the punk knot, which is a swollen or sunken resinous knot that has not fully calloused over. The pathogen is parasitic on live conifers and saprobic on dead wood.</p> <p>Decay is initiated by spores entering through branch stubs. Decay can move from heartwood into sapwood and may kill the tree. The incipient stage of decay is a red stain in the heartwood, often forming a well defined ring, hence the common name of "red ring rot." Advanced decay forms spindle-shaped area of white running parallel to the wood grain commonly termed "white pocket rot, white pitted rot, or white speck rot." Darker zone lines may be present. The early incipient stage does not seriously reduce wood strength. It is considered to be one of the most destructive heartwood decays in North American conifers.</p> <p>Risk assessment and management implications</p> <p>Examine the tree carefully to determine the number and location of the conks. In the early stages of infection expect to see pockets of decay behind each conk. In its advanced stage, there may be more extensive columns of decay and significant loss of wood strength. Trees with extensive heart rot are considered to have a high likelihood of failure. This pathogen is most common on older trees.</p> <p>Large old growth trees infected with <i>Porodaedalea pini</i> provide an excellent source of habitat as wildlife trees, and if possible, based on analysis of the target zone and landscape uses, they should be retained in that capacity.</p>							

Porodaedalea pini



Porodaedalea pini on Douglas-fir



Porodaedalea pini on Sitka spruce