

RED RING ROT

Phellinus pini (Thore:Fr.) Ames

DISTRIBUTION

Throughout host range in BC.

HOST SUSCEPTIBILITY:

Western hemlock, pine, spruce, western larch, Douglas-fir and western redcedar are common hosts of this true heart rot decay fungus. Red ring rot has also been reported on the true firs, yellow cedar and mountain hemlock. This fungus attacks living, dead or down trees.

SIGNS AND SYMPTOMS:

The fruiting bodies are perennial and vary from thin shell-shaped to bracket-like and hoof-shaped. They are leathery when small and become woody with age. They range in width up to 30 cm. The upper surface is ridged and a dull light to dark greyish-brown. The upper edge of an actively growing conk is light gold-brown and velvety. The under surface is light brown and covered in large, irregular shaped pores. The conks usually develop near knots or branch stubs. This fungus also forms blind conks, punk knots and swollen knots, which are filled with a yellow-brown mycelial mass.

The early stage of decay appears as a reddish to purplish stain in the still-firm heartwood. This stain often forms concentric rings when examined in cross section. In later stages, spindle-shaped pockets of whitish mycelia form parallel to the grain. These pockets are distinct from the surrounding dark red wood, which remains relatively firm.

DAMAGE:

Decay by this fungus causes both a loss of volume and a decrease in the grade of milled products. Less commonly, red ring rot can even progress from the heartwood to the sapwood and cause tree death. Losses in BC probably exceed the other heart-rots in value due to the broad host range and common occurrence of the fungus. When conks are present the extent of the decay is very large passing several metres beyond that last visible conk. Tree collapse or breakage is common with this fungus.



Figure 248. Fruiting body on pine.



Figure 249. Fruiting body on Douglas-fir.

DDP

WILDLIFE HABITAT:

Decay caused by red ring rot is usually confined to the diameter of the heartwood at the time of infection. Consequently, trees that are able to compartmentalize the decay will add new radial growth and become excellent wildlife trees. Trees in this condition will have a sound outer shell of wood surrounding decayed heartwood, providing opportunities for nest hole construction by cavity excavating birds.

CAN BE CONFUSED WITH:

When present, the fruiting bodies are a reliable tool for field identification. The conks vary in shape but are hard and woody with large irregular shaped pores on the under surface. In the early stage of decay, red ring rot may be confused with brown stringy trunk rot (*E. tinctorium*), which stains the heartwood a tan colour, or with the natural reddish discoloration in some pines. In the later stage of decay, the white pockets of rot may be confused with yellow-pitted rot (*Hericium abietis*), except that the yellow-pitted rot pockets are usually longer with blunter ends, and appear in a more irregular fashion in the wood. The decay of tomentosus root rot (*I. tomentosus*) appears very similar to red ring rot. Tomentosus also produces white rot pockets at the advanced stage of decay, but these pockets do not have well defined margins against the surrounding wood.



Figure 252. Longitudinal section depicting pockets of mycelia which form in late decay stage.



Figure 250. Red ring rot is often indicated by blind conks on the stem which have a punky interior.



Figure 251. The suspected blind conk shown in Fig. 250 must be cut into to be confirmed.