

BROWN CRUMBLY ROT (RED BELT FUNGUS)

Fomitopsis pinicola (Sw.:Fr.) P. Karst

DISTRIBUTION

Throughout host range in BC.

HOST SUSCEPTIBILITY:

Commonly occurs on a wide range of deciduous and coniferous hosts. Coniferous hosts include all true firs, Englemann, white and Sitka spruce, lodgepole, western white and ponderosa pine, Douglas-fir, western redcedar, all hemlocks, and western larch. This fungus is most common on dead trees, stumps or logs, but it can gain entry to living trees through wounds, holes bored by insects or dwarf mistletoe infections. The fungus is commonly associated with wounds, dead tops and dead trees.

SIGNS AND SYMPTOMS:

The perennial fruiting bodies form on the trunk of the host and are either shelf-like or hoof shaped. Young conks start as thick mounds of white to cream tissue without visible pores. As they age, growing to a width up to 75 cm, the lower surface stays white but develops minute pores and the upper surface becomes zoned, in a wide range of colour from dark brown to black. The margin of the upper surface usually develops a distinctive red-brown band, cola coloured, lighter than the rest of the surface. At all stages, the fruiting bodies are leathery and corky.

The wood becomes yellow to pale brown in colour during the early stage of the decay. As the decay develops, the wood breaks into small cube-like sections that are dry, soft and crumbly and smells like rotten eggs. Note brown cubical rot and white mycelium in the cracks of decayed wood. White mycelial felts often form in the cracks.

DAMAGE:

Brown crumbly rot is one of the most damaging and frequently occurring wound parasites in old-growth forests. The presence of conks indicates extensive decay. Second-growth trees can also be infected, making them subject to breakage and windthrow. The major role of this fungus is degrading and decomposing trees killed by other agents. This role



Figure 232. A typical fruiting body of *Fomitopsis pinicola*.

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is an important one in the forest for recycling and removing dead woody debris. Both heartwood and sapwood are decayed.

CAN BE CONFUSED WITH:

The distinctive red-brown band on the margin of the fruiting body distinguishes the brown crumbly rot conks from other rot conks. Several other fungi cause similar decay at the advanced stage, but the wood decayed by the brown crumbly rot tends to be lighter in colour. Brown crumbly rot decay tends to develop laterally, from the tree centre out into the sapwood, and less vertically in comparison with brown cubical rot (*L. sulphureus*) or brown trunk rot (*F. officinalis*). Spruce crown symptoms (in the central interior BC) caused by brown crumbly rot are very similar to those caused by tomentosus root rot (*I. tomentosus*).

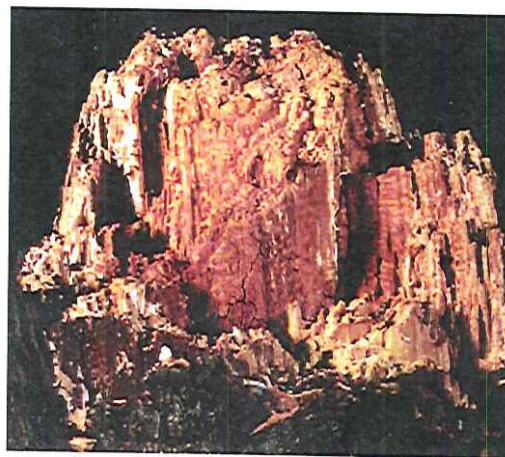


Figure 233. Advanced decay of Douglas-fir by *F. pinicola*. Note brown cubical rot and white mycelium in the cracks of decayed wood.