

Common Fungi Affecting Pacific Northwest Trees

Latin name	<i>Heterobasidion occidentale</i> (formerly <i>H annosum</i>)							
Typical Host tree in the Pacific Northwest Region	Found on a wide range of conifers and deciduous trees							
Form of fruiting body	Perennial	✓	Annual		Polypore	✓	Gilled	
Type of decay	White rot	✓	Brown rot		Soft rot			
<small>White rot - preferential loss of lignin, some break down lignin & cellulose. Brown rot - preferential loss of cellulose. Soft rot - breaks down cellulose.</small>								
Typically attacks:	Live wood	✓	Dead wood		Both			
Typical location of decay	Root rot	✓	Butt rot	✓	Sap rot		Heart rot	
Comments:								
<p>Considered to be the most economically damaging pathogen of trees in North America, <i>Heterobasidion</i> root rot is distributed by windborne spores over long distances (many miles / km). It can also spread by root grafting. The fruiting body is leathery, and appears on the underside of roots, the root flare, or downed logs. It is typically dark brown on the upper side and white underneath, although it may also be seen as a white mass covering root or trunk areas.</p> <p>Early stages of infection cause a staining of the wood. Advanced decay produces a white stringy, spongy wood and eventually a hollow tree with few if any structurally sound roots. Trees can be infected for many years before any above ground symptoms develop, by which time there will be extensive root decay in the roots and root collar area. The decay will be faster in the stem than the roots. The roots may also graft and gain support from adjacent healthy trees. Trees in decline typically show sparse chlorotic foliage and reduced needle or leaf growth. Failure at the base of the tree, or by windthrow are typical.</p> <p>Risk assessment and management implications Infected trees will have extensive root rot and possibly butt rot as well. If trees are removed the cut stump can be treated with a borax solution, which changes the wood chemistry and prevents new infection. If the stump is already infected borax makes no difference.</p>								



Heterobasidion occidentale
conks on the underside of a
downed log

Heterobasidion occidentale



Heterobasidion occidentale conks
on western hemlock



Advanced decay leaving white stringy, spongy wood.