Port-Orford-Cedar Mapping within the Biscuit Fire

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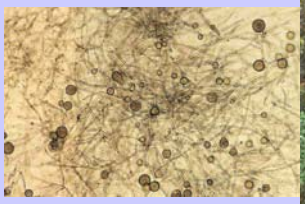
Port-Orford-cedar (POC)
Chamaecyparis lawsoniana

POC is native to an area along the Pacific Coast from Coos Bay, Oregon, to the mouth of the Mad River near Arcata, California. Its range extends from the coast to about 50 miles inland. There is also a small disjunct population in the Scott Mountains of California.

***Phytophthora lateralis* (PL)**

PL is a virulent, non-native root pathogen. It was introduced into the native range of Port-Orford-cedar in the early 1950s and its place of origin is unknown. It readily kills POC of all ages that are growing on sites favorable for infection. PL is spread via water or soil. A typical spread scenario involves infested soil being transported into an un-infested area on a vehicle or piece of equipment. The infested soil falls off of the vehicle and the pathogen first infects POC near the site of introduction. New spores from that infection are then washed downhill in surface water infecting additional hosts. This is especially lethal along drainages and creeks where infested water is channeled and flows near concentrations of healthy POC.



Phytophthora lateralis
Resting spores (chlamydospores) magnified 100 times

Characteristic crown discoloration as a result of PL. Less than 1% of all POC are considered to have complete resistance to the pathogen

After a crown fire on serpentine soils, POC survivors adjacent to a spring.

Upper North Fork of Silver Creek before and after the Biscuit fire.

1998

2004

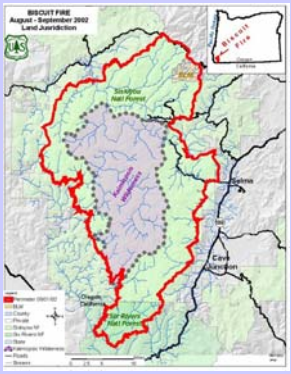
Some streamside areas with POC experienced a less severe fire event and had greater survival.

Biscuit Fire Data Sheet

2002 and 2005 Aerial Photo Mapping Of Port-Orford-cedar

Polygon Attribute Table

1) **2002 or 2004 Photo & Flight Line:**
2) **Polygon #**
3) **Root Disease?**
4) **Live POC % Canopy Closure**
5) **Survey Date**
6) **Est. # Live POC By Size Class**
7) **Est. # Dead POC By Size Class**
8) **Field Verification Level**
9) **Remarks**



Biscuit Fire

July 13 – November 9, 2002

499, 965 acres

Oregon: 471,130 acres

California: 28,835 acres

The Biscuit Fire had a stand replacement event on about 46,000 acres occupied by healthy POC and 900 acres infested with PL. This is about 48 percent of the inventoried acres with POC that existed before the fire.

Project Costs (through 2006)

Positive air photo transparencies (1,472)	**$48,576**
Photo transparencies scanned onto 740 CDs	**$27,620**
Service contract (photo interpretation and mapping)	**$25,840**
Service contract (create GIS layer)	**$23,542**
Labor estimate (Federal employees)	**$11,704**
2004 Air Photo Flight	**$7,000**
Total	**$144,282**
Acres Inventoried	**499,965**
Cost per Acre	**$0.29**

POC and PL Pre-Biscuit

POC acres: 89,880

PL acres: 3,022

Represents 29% of all POC on Federal lands.

POC and PL Post-Biscuit

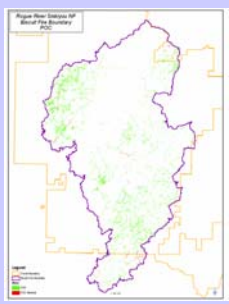
POC acres: 23,282

(25.9% of pre-fire acres)

PL acres: 835

(27.6% of pre-fire acres)

Reduced acres are a function of the fire and more precise mapping.



Landscape Patterns

Post-fire, POC is more strongly associated with riparian areas. This is a function of the fire and more precise mapping.

Areas of serpentine soils that still have POC tended to burn with greater severity that non-serpentine soils with post-fire POC.

In Oregon, approximately 34% of POC acres on serpentine soils (3,958 of 11,824 acres) were characterized by dead trees with or without needles. This compares to 13% of POC acres on non-serpentine soils (1,571 of 12,037 acres) characterized by dead trees with or without needles.