

## 20. Rosellinia Needle Blight

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### Hosts

Rosellinia needle blight, caused by the fungus *Rosellinia herpotrichoides*, has been reported on Douglas-fir and Sitka spruce.

### Distribution

This disease is found in coastal California, Oregon, Washington, and British Columbia.

### Damage

The disease can cause seedling mortality. More frequently, however, it causes extensive defoliation. Damaged seedlings must be culled.

### Diagnosis

Look for the characteristic white fungus mycelium covering the needles and small branches in the lower, inner portion of infected seedlings (fig. 20-1). The infected needles turn yellow, die, and eventually fall off (fig. 20-2). As the mycelium ages, it turns brown and flattens to form a wet mat of needles and fungal mycelium, upon which form conspicuous groups of black, round, beaked perithecia (fig. 20-3). Ascospores produced in the perithecia are dark brown, nonseptate, fusoid, and 23-26 x 9-10 microns.

### Biology

Perithecia produced on infected seedlings or nearby trees release airborne ascospores, which begin new infections. Infections usually occur in crowded seedling beds, where humidity is high. The fungus requires mild temperatures and long, continuous periods of high humidity for host infection and disease development.



**Figure 20-1**—Needles on Douglas-fir seedling matted together with mycelium of *R. herpotrichoides*.



**Figure 20-3**—Perithecia of *R. herpotrichoides* on seedling of Douglas-fir.

### Control

Reduce seedling densities to improve aeration, and lower the humidity in the interior of the seedbeds. No fungicides are registered for the control of Rosellinia needle blight.



**Figure 20-2**—Defoliation of Douglas-fir seedling caused by *R. herpotrichoides*.

### Selected References

- Shea, Keith R. 1964. *Rosellinia herpotrichoides* on Sitka spruce seedlings in Washington. Plant Disease Reporter. 48: 512-513.
- Smith, Richard S., Jr. 1966. Rosellinia needle blight of Douglas-fir in California. Plant Disease Reporter. 50: 249-250.