

Cankers

Sooty Bark Canker

Encoelia pruinosa (Ellis & Everh.) Torkelson & Eckblad
(*Cenagium singulare* (Rehm) R.W. Davidson & Cash)

Host: Aspen

Symptoms/signs: Young cankers appear as slightly sunken areas with near normal bark color. Dead bark eventually falls off and reveals the black, sooty and crumbly inner bark diagnostic for this canker. Beneath the inner bark is a distinctive, black, feather-like pattern on the wood surface. The perennial cankers form a band of light gray bark that remains attached at the margin of each annual zone of expansion giving the tree a barber pole appearance. Gray to black leathery cup-shaped fruiting bodies develop on the inner bark along the canker margin. The wood beneath cankers is light gray.



Figure 212. Barber pole appearance of aspen bole infected with *Encoelia pruinosa*.

Biology: The

fungus infects trees through wounds and invades the inner bark and cambium. Cankers develop rapidly, extending as much as 1 m in length and 0.3 m in width in a year, however, the mean annual extension is about 45 cm vertically and 16 cm horizontally. The cup-shaped fruiting bodies—apothecia—develop on the surface of old dead inner bark and open when wet. Spores are forcibly ejected and wind disseminated when moisture and temperature conditions are favorable. These spores can cause new infections.

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Effects: *Encoelia pruinosa* is considered the most lethal and aggressive pathogen of aspen in the West because it can kill trees of all sizes in 3 to 10 years; some mature trees have been observed to die in 4 to 5 years. Sooty bark is found mainly on the larger dominant and codominant trees older than 60 years, in the middle elevational limits of aspen. Cankers are more common in stands disturbed by partial cutting, construction, camper damage, or animal damage.



Figure 213. Cup-shaped fruiting bodies of sooty bark canker.

Similar Insects and Diseases: *Cryptosphaeria* canker can also produce dead inner bark with a soot-like appearance. However, *Cryptosphaeria* produces a long lens-shaped, light-colored area, which lacks the barber pole design.

References: 38, 39, 44, 92