

COMANDRA BLISTER RUST

Cronartium comandrae (Peck)

DISTRIBUTION

Throughout the hosts' range in BC.



Figure 169. Diamond-shaped stem canker.

HOST SUSCEPTIBILITY:

Lodgepole pine and ponderosa pine. Evident on all ages of trees.

SIGNS & SYMPTOMS:

Cankers with rough, cracked bark form on stems or branches, and resin flow may be present near the canker margin. In spring and early summer, cankers form white blisters containing powdery, yellow-orange spores. In the summer, cankers produce orangish-coloured liquid drops (spermatia). Branch cankers frequently girdle the branch, causing branch flagging. Stem cankers usually occur within 30 cm of ground level and rapidly girdle young stems. Rodents often chew on the cankers during the winter, leaving exposed wood. Secondary insects or fungi may also be associated with cankers. The life cycle of comandra rust requires an alternate host, either bastard toad-flax or pale (California) comandra.

DAMAGE:

Trees of all ages can be infected with stem cankers, which cause rapid mortality to young trees, and growth losses and poor form in older trees. If a canker girdles the stem, and if enough crown to support the tree exists below the canker, top mortality (spike-top) will result. Comandra blister rust outbreaks occur erratically due to variations in the distribution of the alternate hosts and the periodicity of environmental conditions necessary for infection.

SIMILAR DAMAGE:

Stalactiform blister rust cankers tend to be longer in length (up to 10 times as long as wide) whereas comandra rust canker are generally only 1.5-3 times as long as wide. Young western gall rust swellings on branches may resemble comandra rust cankers, but the swellings result from normal bark over abnormally thick wood tissue, whereas comandra swellings result from swollen bark.

Sweet-fern blister rust cankers on young trees are very similar in appearance to comandra blister rust. For sweet-fern blister rust, the alternate host, sweet gale, is found only in moist habitats, mainly at low elevations. Very little damage has been documented in natural stands, but severe losses have occurred in plantations located near swamps. On older trees, sweet-fern blister rust cankers develop thick longitudinal ridges in the bark, unlike comandra blister rust.



Figure 170. Branch canker.



Figure 171. Rough bark and resin flow are associated. Note swollen bark at canker margin.