



Elytroderma Needle Cast

Elytroderma deformans



HOST: PONDEROSA PINE

**DAMAGE: GROWTH LOSS,
BRANCH MORTALITY**



Witches' broom

Ecology

Elytroderma deformans is a needle cast fungus that causes branch deformities, needle discoloration, and needle loss. Needles are infected by wind-borne spores in late summer/fall. *Elytroderma* enters the needles and grows into the twigs, becoming systemic within the tree and causing symptoms the following spring. Spores are produced mid to late summer the year after infection. *Elytroderma* needle cast is the only needle cast in Montana that lives within the twigs and reinfects every year. Death is uncommon and usually only occurs on small, young trees.

Identification

- Brooms of bushy, round needles (referred to as “witches’ brooms”)
- Needles that are red/orange at the tips but green at the base
- Thin, black, elongated fruiting bodies (spore structures) growing at the base of needles
- Shedding of needles from within the broom



Elytroderma fruiting bodies

Management

- Increasing spacing between trees to promote drying of foliage
- Remove trees with severe infections
- Shift to non-host species, such as Douglas-fir and larch, in areas where infections are chronic and severe
- Thin stands to increase residual tree vigor