

Witches' broom

Pucciniastrum goeppertianum (fungus)

Witches' broom is a relatively minor disease of highbush blueberries, but it can be severe near balsam fir trees (*Abies*), the alternate host for the rust fungus.

Symptoms. Diseased plants have broom-like masses of swollen, spongy shoots with short inter-nodes and small leaves. Young stems on the brooms are initially yellow or reddish, but later become brown and shiny, and, eventually, dry and cracked.



Swollen shoot of witches' broom.

Heavily infected plants produce no fruit. The brooms can persist for many years, producing infected new growth every year.

Disease cycle. Airborne spores produced on fir needles infect blueberry leaves and stems in the summer. The fungus becomes locally systemic and perennial in blueberries. Overwintering spores develop in the swollen stems and, in the spring, produce spores that re infect fir needles.

Management. Because the pathogen is systemic in the blueberry crown, pruning will not eliminate the disease. Remove fir trees within 500 yards (460 m) of planting; eradicate infected plants with a herbicide; 'Rancocas' is a resistant cultivar.



Infected (left) and healthy (right) blueberry stems.