

**COOLEY SPRUCE GALL APHID**  
*Adelges cooleyi*

- Natural range -** This insect is native to western North America and widely established in eastern North America and Europe.
- Species affected -** Spruces, alternate host - Douglas-fir
- Type of damage -** Causes cone-shaped galls on the branch tips of spruce. Infestations on Douglas-fir can cause yellowing of foliage.
- Symptoms -** Cone-shaped galls appear on the tips of spruce. Galls are green in early summer and turn a brown color after the insects have emerged. Small, white cottony masses characterize infestations on Douglas-fir. Infested needles can become yellow and twisted.
- Importance -** This is a common insect in both natural forests and urban situations. Infestations are mostly unsightly and cause little permanent damage to trees.
- Remarks -** This aphid has a complex life cycle consisting of 6 life forms alternating between spruce and Douglas-fir. The entire life cycle requires two years to complete. When spruce is scarce or absent, a cycle of two generations is common on Douglas-fir. Cone shaped galls on spruce are formed only when Douglas-fir is present.

*(See following page for photos)*



Upper left –Cooley spruce gall aphid gall with immature aphids (green).  
Upper right – Old Cooley spruce gall aphid gall (brown).  
Lower – Infestation of Cooley spruce gall aphid on Douglas-fir.