Eastern Spruce Gall Adelgid

DAVEY Institute

TREE DOCTOR TIPS

Eastern Spruce Gall Adelgid *(Adelges abietis)*

DESCRIPTION:

The Eastern spruce gall adelgid, *Adelges abietis*, is a soft-bodied, aphid-like insect that sucks plant juices. As immature adelgids feed, they form cone-shaped galls containing more adelgids. These galls can cause disfigurement and weaken trees, which may lead to their decline or death.

HOSTS:

Tree species that are more susceptible to Eastern spruce gall adelgids include Norway and white spruces. The insect may also infest red, black, Engelmann and Colorado spruce trees.

BIOLOGY AND SYMPTOMS:

Immature females, or nymphs, overwinter on branches near the bases of buds. They molt in the spring and lay eggs on the needles, usually before the buds break. In about 7 to 10 days the eggs hatch and the nymphs begin feeding, causing needles and twigs to grow abnormally and form protective, pineapple-shaped galls. When the galls open in late summer, mature nymphs emerge and molt. These winged, adult females may stay on the host or fly to a different tree to lay eggs. The eggs hatch in another 7 to 10 days, releasing a second generation of nymphs that crawl to the bases of buds on twigs and branches to overwinter.

Heavy gall infestations can weaken branches and make them more likely to break.

MANAGEMENT:

When selecting new plants to add to your landscape, try choosing resistant trees, appropriate to your area. Common trees that may be more resistant to adelgids include:

- Pines
- Hemlocks
- Firs

Before you buy a spruce tree, inspect the trees to be sure they are not already infested with adelgids by looking for common symptoms, such as galls or weakened branches. Galls that are still green on small trees can be pruned and removed as soon as they are observed (usually from late May to mid-July).

In early spring, look for adelgids before the trees break dormancy. Application of an appropriate insecticide may reduce damage.

Your local arborist can inspect your trees to recommend management strategies and treatments and identify other diseases or insects that may be contributing to the spruce gall adelgid problem.

A

B

FIGURE A. HATCHED GALL FROM THE EASTERN SPRUCE GALL ADELGID

FIGURE B. GALL DAMAGE ON SPRUCE BRANCH NEAR BUD TIP

(photo credit: Stanislaw Kinelski, Bugwood.org)

*The scientists at **The Davey Institute** laboratory and research facility support our arborists and technicians in diagnosing and prescribing based on the latest arboricultural science. For specific treatment and application details, your arborist may consult The Davey Institute PHC Handbook.*