

Giant Conifer Aphids

Feed on sap of twigs, branches, and roots

Name and Description—*Cinara* spp. [Homoptera: Aphidae]

Giant conifer aphids are soft-bodied, generally gregarious insects that are often found in large groups. They have piercing-sucking mouth parts that are used to feed on the sap in twigs, branches, trunks, and roots. Most species are restricted to feeding on one genus of tree; many attack only one tree species. Giant conifer aphids are large aphids, up to 1/4 inch (6 mm) long, and are long legged and dark colored (figs. 1-2). Aphids have a pair of tube-like structures on their abdomen and can be winged or wingless.

Hosts—Many different conifer species. Each *Cinara* species is specific to a tree genus or tree species. About three dozen species occur in the Rocky Mountain Region.

Life Cycle—There are several generations a year. Eggs hatch in the spring into small aphids. They molt through several stages, becoming larger aphids each time. Females give birth to live young, except with the last summer generation when eggs are laid on needles or bark. Aphids secrete honeydew as they feed and other insects, especially ants, bees, and wasps, feed on the honeydew (fig. 3). Honeydew is also a good growth medium for sooty mold.

Damage—Heavy infestations of giant conifer aphids cause yellowing of the foliage and reduce tree growth, especially in young trees (fig. 4). Populations are usually highest in late spring and may crash by early summer. The best evidence of an aphid population is the presence of honeydew (clear, sugary, sticky liquid), ants attracted to honeydew, or ladybeetles that feed on aphids. The juniper aphid, *C. sabiniae* (Gillette and Palmer), is common on juniper and can be destructive. Giant conifer aphids can also be found in Christmas tree plantations. Damage can be difficult to distinguish from damage caused by other sucking insects and needle diseases. Aphids can be confused with other sucking arthropods such as mites, mealybugs, or scale insects.

Management—Natural controls, including natural enemies such as ladybeetles, lacewings, syrphid flies, or parasitic wasps, usually bring aphid population under control. Often, damage is not noticed until the aphid population declines from natural controls. If direct control becomes necessary, aphids can be controlled with insecticides. However, trees should be inspected for natural enemies before an insecticide is applied. Furthermore, because giant conifer aphid populations can build up by early spring, application timing is often critical.



Figure 1. Powdery juniper aphids, *Cinara pulverulens*. Photo: Whitney Cranshaw, Colorado State University, Bugwood.org.



Figure 2. Spruce shoot aphid, *Cinara pilicornis*. Photo: Andrea Battisti, Università di Padova, Bugwood.org.



Figure 3. Ants feeding on honeydew secretions. Photo: E. Bradford Walker; Vermont Department of Forests, Parks and Recreation; Bugwood.org.

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Figure 4. Aphid damage on juniper (photo taken from side of tree). *Photo: Sheryl Costello, USDA Forest Service.*

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1. Cranshaw, W.S.; Leatherman, D.A.; Jacobi, W.R.; Mannix L. 2000. Insects and diseases of woody plants of the central Rockies. Bulletin 506A. Fort Collins, CO: Colorado State University, Cooperative Extension. 284 p.
 2. Furniss, R.L.; Carolin, V.M. 1977. Western forest insects. Misc. Publ. 1339. Washington, DC: U.S. Department of Agriculture, Forest Service. 654 p.