Spruce aphid, *Elatobium abietinum*

Spruce aphid is a non-native aphid originally from Europe that has been established in Southeast Alaska for decades and has previously been reported in coastal forests of Prince William Sound and Kodiak Island. More recently, the aphid was confirmed on the western side of the Kenai Peninsula. Spruce aphid is a pest of spruce trees, particularly Sitka spruce. In Alaska, coastal spruce in tidewater areas and stressed areas, such as urban locations, are particularly susceptible to this aphid.

**Identification**

Spruce aphids are small (1/16\(^{th}\) inch), soft-bodied insects. The aphids are green and usually wingless; however, a winged generation may be produced to facilitate spread.

**Feeding and Damage**

Like other aphids, spruce aphid has sucking mouthparts, which are used to suck sap from the needles of trees. They feed primarily on older needles, causing them to turn yellow and brown and drop from the tree. Current year’s needles are usually not damaged, though they may be fed on during population outbreaks. Spruce aphid is most active and damaging in late winter/early spring and also in the fall. Aphid activity tends to slow during summer.

Spruce aphid populations fluctuate according to weather conditions. Mild winters allow the aphids to rapidly build up large populations. Cold winter temperatures (below about 15°F) and sudden drops in temperature can help reduce aphid numbers.

**Detection and Monitoring**

Early detection of aphid populations is important for managing this pest. Begin looking for aphids in mid- to late winter, particularly if the weather has been mild. Monitor weekly through the spring to note any new infestations and track populations. Sturdy, white paper may be useful in monitoring. Hold the paper under a branch and lightly tap the branch against the paper. Do this at several locations. If aphids are present, treatment may be warranted.
Control

Damage from feeding that occurs in the early spring is often not observed until later in the spring or summer. If trees are not treated until the damage is obvious, the effectiveness of control measures will be minimized. If you observe aphids during your monitoring, several control options are available, including:

1. Do nothing: Spruce aphid is not usually a tree-killing pest; its damage is largely aesthetic. However, trees stressed by other factors in addition to aphid feeding are more susceptible to mortality. Spruce aphid outbreaks do not tend to last more than a few years and several natural factors contribute to spruce aphid control.

2. Maintain or improve tree vigor: Provide supplemental water during dry spells, if possible, and prevent unnecessary injury to the trees.

3. Insecticide treatments: There are several active ingredients that can be used on ornamental trees for the control of aphids. Common products include, but are not limited to, acephate, bifenthrin, cyfluthrin, azadirachtin, horticultural oils, and imidacloprid. Application methods vary for different products and include sprays, soil drenches, or stem injections. Some products may discolor needles or need to be applied repeatedly. Please read and follow all label directions carefully! Remember, the label is the law!

If you are not familiar with or do not have the proper equipment to apply a product, consider hiring an arborist or tree care expert to assist you. Note that pesticides are subject to restrictions on application depending on weather and proximity to water. Because this pest is commonly found in coastal areas, follow any restrictions to application near bodies of water or warnings about impacts on fish, other aquatic animals, or any other non-target species.

Additional information:
UAF Cooperative Extension Service IPM program can assist with pest identification and control questions. Contact the IPM program at www.uaf.edu/ces/ipm.