

# Sap-Sucking Insects, Gall Formers and Mites

## Spruce Aphid *Elatobium abietinum* (Walker)

**Hosts:** Engelmann spruce and blue spruce

**Symptoms/signs:** The spruce aphid is a small green, soft-bodied insect about 1 to 1.5 mm in size. Both winged and wingless forms occur. Spruce aphids feed by inserting their needle-like mouthparts into host foliage and sucking the sap from the needles. First symptoms of feeding are yellow patches on the needles. If the population increases, discoloration intensifies and affected needles turn brown and drop prematurely.

**Biology:**

Like other aphids, the spruce aphid bears live young with females producing females. Nymphs mature within 3 weeks. During favorable years, large colonies develop during the winter and feed during mild periods. Populations reach a low point during the summer and may be very difficult to find. In the fall, aphids may reappear and begin feeding on the current year's foliage. Greatest population increases generally occur from late winter into early spring in northwestern North America and Europe, however, the highest population densities in the Southwestern United States occur in the fall.

**Effects:** Since populations decline prior to needle flush in late spring and early summer, the new foliage is unaffected by the overwintering population of aphids. Current year's foliage is not affected until aphids begin building up again in the fall. Defoliation



Figure 60. Adult spruce aphid.

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is usually partial, but in some outbreaks trees are completely defoliated. Heavy defoliation can result in tree mortality, especially if trees are also infected with dwarf mistletoe. All age classes of spruce are infested. Outbreaks are sporadic, usually short-lived, and associated with dry winter and spring conditions (i.e. outbreaks begin in the fall).

**References:** 55, 56, 58, 114

*Figure 61. Spruce aphid defoliation of Engelmann spruce on the White Mountains, Arizona.*



*Figure 62. Closeup of defoliation caused by spruce aphid.*