

Woolly Pine Needle Aphid

Schizolachnus piniradiatae (Davidson)

Hemiptera: Aphididae

Kulman, H. M. 1967. Within-tree distribution and winter mortality of eggs of the woolly pine needle aphid, *Schizolachnus piniradiatae*. Annals of the Entomological Society of America 60: 384-387.

Objective: To develop a sampling method for overwintering *S. piniradiatae* eggs as a means of predicting subsequent infestation levels on individual trees.

Abstract: Woolly pine needle aphid, *Schizolachnus piniradiatae* (Davidson), occurs on numerous species of pine (*Pinus* spp.). It is widespread in Canada but has also become a pest in the USA. A study conducted on 5-year-old, plantation-grown red pines (*Pinus resinosa* Ait.) in West Virginia indicated that trees can be classified as moderately or severely infested by *S. piniradiatae* based on the percentage of needles bearing egg masses. The percentage of needles infested by *S. piniradiatae* described the infestation level more accurately than the number of eggs per needle. Severely infested red pines had at least twice the percentage of infested needles than moderately infested trees. No oviposition preference was observed for new, 1-yr., or 2-yr. needles. This sampling method may aid managers in making control decisions for *S. piniradiatae*.

Sampling Procedure: Select red pines separated by at least 15.24 m in mid-March, before egg hatch begins. From both the middle and lower crown, randomly select two branches on opposite sides of each tree (four branches per tree). Examine needles on the branches for *S. piniradiatae* egg masses. Classify individual trees as moderately or severely infested based on the percentage of needles bearing egg masses.

Percentage of needles bearing eggs	Infestation level
10.1-20%	moderate
>20%	severe

Note: The described infestation levels and aphid distributions may differ among other pine species, trees of different age classes, or trees not grown in plantings. This method should be used with caution until validated for other pine hosts in other regions.