



**SARATOGA SPITTLEBUG**  
*Aphrophora saratogensis* (Fitch)

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**Symptoms and Damage**

The Saratoga spittlebug has been a serious pest of young red pine plantations in the reforestation of blueberry-sweet fern barrens of eastern Maine. The immature stage or nymphs of this pest feed on a variety of alternate hosts consisting of herbs and shrubs where they cover themselves with frothy masses of spittle composed of eliminated plant juices for protection from desiccation and natural enemies. Adults closely resemble the young red pine twigs on which they feed. When abundant enough, their feeding puncture wounds and sap withdrawal can cause twig mortality. The resulting flagging, yellowing, or reddening of twig foliage, is one of the most noticeable feeding damage symptoms and is usually indicative of two or three years of heavy spittlebug feeding.

Heavily infested trees that are less than 15 feet tall show the greatest degree of damage to adult spittlebug feeding. The numerous feeding punctures and heavy withdrawal of sap brought on by extensive feeding can stunt, deform, or kill growing shoots and may even kill entire trees. Seedling mortality is most apparent after several seasons of heavy spittlebug feeding.

**Hosts**

Adults feed on red, Scotch, jack, and white pines, and occasionally balsam fir.

**Life Cycle**

The overwintering eggs are laid beneath bud scales in the upper part of the red pine. Upon hatching the following spring (usually in May) the young nymphs crawl to the ground and commence to feed on alternate host plants where they conceal themselves within spittle masses. The younger nymphs are black with scarlet abdomens and become dark brown in the last stage of development. The older nymphs seem to prefer sweet fern where large numbers of them may inhabit large community spittle masses. When fully grown, usually in late June or early July, the nymphs shed their skin to become adults and fly to pine where they remain, feeding until September. The adults are approximately 3/8" long, winged, wedge-shaped, and tannish-brown with a white arrow-shaped marking on the backside. Trees that are next to sweet fern seem to have higher populations of adults. The adults soon mate followed by the start of egg laying within a few days.

**Control**

**Non-chemical:** Planting of red pines in areas of high concentrations of the preferred alternate host, sweet fern, should be avoided.

**Chemical\*:** Elimination of sweet fern by herbicidal treatment can also bring about a gradual reduction in the nymph population. In instances where herbicidal control of alternate hosts is not feasible, and serious tree damage imminent, the infestation may be controlled by treatment of the adults in July with malathion or carbaryl or chlorpyrifos.

**\*NOTE:** These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Pesticide recommendations are contingent on continued EPA and Maine Board of Pesticides Control registration and are subject to change.

**Caution**

For your own protection and that of the environment, apply the pesticide only in strict accordance with label directions and precautions.