Is That Spittle on My Junipers?

Dr. Wayne S Johnson, IPM Specialist, University of Nevada Cooperative Extension
Jeff Knight, Entomologist, Nevada Department of Agriculture
Erin Post, University of Nevada, Reno

Is That Spittle On My Junipers?

No, it's Protective Froth from Spittlebugs!

During June each year in northern Nevada, juniper trees and shrubs may have what appears to be spittle on them. In southern climes, this occurs earlier in the year. The spittle is a froth produced by the nymph or immature western spittlebug to protect itself from harsh, drying conditions as well as from its natural enemies.

There are many spittlebugs that feed on conifers and broad-leaved ornamentals in the United States. Some cause deformed plants by shortening stem growth or creating malformed leaves. Most are unsightly for a short period and damage the plant very little. Several that occur in the west include:

The most asked about spittlebug in Nevada is the western spittlebug, Clastoptera juniperina. It lives throughout the Great Basin, the Rocky Mountains and many western states. This torpedo-shaped insect is small, usually 1/8 to 1/2 inch long. The western spittlebug has two spines on its hind legs or tibiae that distinguish it from other closely related insects. The adults are dark brown or black while the nymphs are ivory-colored with a brown head. The adult western spittlebug lays its eggs in late summer. The eggs hatch the following spring. The nymphs feed on junipers by sucking the sap from the newest foliage. While eating, the nymph excretes a clear fluid that surrounds its body. In the air, the fluid bubbles and forms a protective, spittle-like froth: hence the name, spittlebugs. This “froth” protects them from predators and keeps them from drying out. The adults do not produce the spittle. Unlike the nymph, they have wings and fly, walk and jump from bush to bush. Some species of spittlebug produce two generations per year where the season is long; the western spittlebug reproduces only once a year.
Spittlebug Damage to Plants

Spittlebugs cause few problems for plants. Some species of spittlebugs injure plants by causing leaf discoloration. Only in high numbers does severe damage occur and seldom plant death. The western spittlebug kills the cells it feeds on, but this is localized and a healthy juniper recovers easily with little long-term damage. Spittlebugs produce the unsightly spittle for about a month.

Controlling Spittlebugs

Because western spittlebugs fly, walk and jump, they move from one plant to another. Consequently, they move from one yard to another as well. It is important to enlist the help of neighbors when controlling this insect.

One tactic is to water-jet or brush the eggs and nymphs off junipers. Brushing the plant with a broom or spraying it with water in the late fall will remove some of the eggs that overwinter on it. Spraying the plant with a strong jet of water from a hose several times in the early spring not only dislodges the eggs from the juniper, but the foliage is cleaned from the dusts and salts that accumulate over winter. Repeatedly syringing the foliage in late spring, May and June, will remove many if not all of the nymphs from the leaves and branchlets so they do not feed. Most will die before they get back onto the plant.

Limit the amount of nitrogen fertilizer applied to junipers. Once established, junipers usually do not require much nitrogen. Too much stimulates succulent new growth which is very attractive to spittlebugs.

Pesticides can be used to control spittlebugs. Carbaryl (Sevin EC) and endosulfan (Thiodan EC) are recommended. Apply the pesticide as a cover spray when the eggs are hatching and the nymphs are small. Pesticides will not be effective once spittle masses have formed. The froth keeps the chemical away from the nymph.

If you have other plants, such as alder, birch, pine, Siberian peashrub, or flowering shrubs, attacked by a spittlebug, apply the pesticides before flower buds open. Do not apply chemicals during flowering; this will poison bees and other pollinators.

Always read the pesticide label before mixing or using a product and then follow the instructions precisely. When using pesticides wear the appropriate protective clothing and equipment as explained on the label. It is against the law not to use a product according to its labeled directions.