



Newsletter Landscaping and Trails Committee

High Desert Gardening

August (1) 2021

Staking Trees and Stake Removal

Sharon M. Douglas

Many streetscape and yard trees in the Mirehaven community were staked at the time of planting. Although the International Society of Arboriculture reports that staking is usually not necessary and can even be detrimental to most trees, staking may be necessary when planting bare-root trees or on extremely windy sites. Research has shown that trees establish more quickly and develop stronger trunk and root systems if they are not staked at the time of planting.

Staking typically uses one or two stakes in conjunction with a wide, flexible tie material on the lower half of the tree that will hold the tree upright and minimize injury to the trunk. However, it should still allow some movement or sway of the tree, since movement caused by the wind helps young trees develop into strong, structurally balanced trees. Natural sway from wind also results in shortened, stronger stems, increased trunk diameter, and enhanced root development—a better balance between canopy, trunk caliper, and root system. Natural bending stress on unstaked trees results in growth of reaction wood (wood that forms in plants as a reaction to gravity). This

increased level of reaction wood helps trees resist against failure under more severe wind conditions.

Trees supported by stakes typically grow taller than unstaked trees, but have smaller diameters near the ground, which result in trunks with little or no taper. These tall, thin trees are more likely to fail after the support materials are removed or have been left on too long.

If you have staked trees on your property, it is important to remove support staking and ties after the first year of growth or one growing season. Therefore, most of the stakes on trees in Phase 1 and 2 should have already been removed.

Helpful links:

https://www.treesaregood.org/portals/0/docs/newsroom/DontPlantRun_May12.pdf

<https://www.extension.purdue.edu/extmedia/fnr/fnr-547-w.pdf>

Cactus in the High Desert

Beth Duncombe

Like so many in our neighborhood, my husband and I are new to the high desert. We

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moved from the Las Vegas NV desert where we actively engaged in beautiful xeriscape planting for our garden. We now live in a very different desert and are learning so much about the high desert. For example, barrel cactus and saguaros grew well outdoors all year in Las Vegas; not so well here.



(Pictures from our garden) Top Left-*Trichocereus* hybrid “Cherry Red” Bottom Left-*Theocactus bicolor* (Glory of Texas) Top Right-*Theocactus bicolor* (Glory of Texas) Middle Right-*Astrophytum ornatum* (Monks Hood) Bottom Right-*Astrophytum capricorne* (Goat’s Horn)

In February, a year ago (right before the world shut down), we visited a cactus and succulent expert in Tucson who had spent thirty years in the high deserts of Mexico studying the plants. We bought about 10 different cacti and succulents from him and planted them in our small, front courtyard. Beginning this past February, our cacti began to bloom and have continued blooming prolifically into August. They are the most beautiful and active cactus flowers I have ever seen, and they seem to thrive here.



Mammillaria melanocentra



Echinocereus triglochidiatus (King Cup Hedgehog)

Resources:

This link on 505 Outside has beautiful pictures of cactus and other high desert-friendly plants.

<https://www.505outside.com/plants/desert-accents/>

The Albuquerque Cactus and Succulent Society of New Mexico-a local organization that showcases and provides information about cactus and succulents in the high desert. Their site contains beautiful pictures

of many different kinds of cactus.
<https://www.new-mexico.cactus-society.org>

Santa Fe Cactus and Succulent Society will begin in person meetings in September
<https://www.santafecactusclub.org>

Spittlebugs

Sharon M. Douglas

Have you recently seen what looks like spit or foam on your rosemary or cherry salvia? This “spittle” is an indication of an infestation of spittlebugs. Aside from the ick factor, these insects are considered more nuisance than life-threatening pests. Spittlebugs have a broad host range that includes many ornamental plants as well as small fruits, herbs, and vegetables.



Spittlebug on culinary rosemary.



Photo: Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org
Spittlebug on pine.

Spittlebugs have three life stages: egg, nymph, and adult. In early spring, the nymphs emerge from overwintering eggs. These nymphs are the larval or young form of the adult insect called a froghopper. Nymphs feed on the xylem or water-transport system of the tender, succulent tissues of a plant. Since xylem fluid is not very rich in amino acids, the nymphs must process large quantities of sap in order to get the compounds they require for growth and development. They produce the frothy “spit” mixture by mixing air with their vast quantities of fluid excretions—this is not out their mouth, so it technically isn’t spit. Spittle masses can be up to $\frac{3}{4}$ inch in diameter.



Photo: Whitney Cranshaw, Colorado State University, Bugwood.org
Spittlebug nymph.



Photo: Louis Tedders, USDA Agricultural Research Service, Bugwood.org

Pecan spittlebug adult.

The foam serves several purposes—it protects nymphs from predators, provides insulation from temperature extremes and low humidity typical of our New Mexico environment, so the tender nymphs do not dry out, and also provides protection from pesticides.

Feeding is usually more a cosmetic or curiosity factor, but it can cause some distortion and stunting of the tissues if the population is very heavy. Fortunately, feeding by the nymphs is fairly short-lived, 5-8 weeks. Nymphs molt into adults in summer and emerge from spittle masses.



Photo: John Ruter, University of Georgia, Bugwood.org

Heavy feeding damage from spittlebugs.

Adult spittlebugs are $\sim 1/4$ - $1/3$ inch long. They are usually not even seen because they do not produce spittle when feeding so they do not attract attention. They start out green and

then turn brown or grey and are similar to leafhoppers, but fatter. They are called froghoppers because they have enlarged hind legs and often fly or jump when disturbed. Adults move to nearby grasses or broadleaf weeds and can be long-lived, up to 6 months. The adult females return to their preferred host, often plants in your garden or landscape, in early fall and lay clusters of eggs in plant debris or in leaves and stems. Depending on the species, there is usually one generation per year and the eggs overwinter in the leaf litter, leaves, and stems. There is no effective way to prevent future infestations from year to year.

As a plant pathologist, I should note that although spittlebugs are considered more nuisance than life-threatening pests, there are some reports in the scientific literature that they can transmit the fastidious bacterium, *Xylella fastidiosa*. This pathogen can cause serious decline and death of many plant hosts, and among the diseases it causes are Pierce's disease of grapevine, phony peach, and bacterial leaf scorch. Research is ongoing on the potential importance of spittlebugs in spreading this pathogen in gardens and landscapes, although I haven't found evidence that this pathogen is associated with any issues in our Mirehaven community.

Spittlebugs rarely need to be managed. They are often controlled by nature: adults are fed upon by birds; nymphs are assaulted by a number of common other arthropods, such as assassin bugs and spiders; and eggs and nymphs are attacked by several types of parasitic wasps.

Other management strategies include removing weeds near your gardens to eliminate potential food sources, hand-picking them, and spraying them with strong blasts of water to dislodge nymphs from the

plants—this is by far the most common and effective management strategy.

Pesticides are not necessary or effective against spittlebug nymphs, since they are protected inside their spittle masses from any pesticide sprays.

Helpful links:

<http://ipm.ucanr.edu/PMG/GARDEN/VEGETATION/PESTS/spittlebugs.html>

<https://mdc.mo.gov/discover-nature/field-guide/spittlebugs-froghoppers>

https://aces.nmsu.edu/pubs/_h/H174/