

## **Garden Update**

**Week of June 7, 2021**

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### **Winter Dieback of Trees and Shrubs**

A recent discussion thread launched on the Shady Lane listserv by Justin Evertson of the Nebraska Statewide Arboretum asked observers how trees in their landscapes weathered the negative double-digit cold of winter. Used to extreme cold conditions, native trees and shrubs weathered the tough winter best. Others (that were thought to be very cold hardy) lost all living canopy growth and are now sending out sprouts at the base. Still others are no surprise at all, such as the Japanese maple, a marginal species for this region at best, which had major dieback and/or outright death.

Overall, the winter injury is divided into 3 main groups, with the first being composed of trees and shrubs with sparsely-leafed branches and stems. Woody plants that fall into this category include privet, burning bush, lilac, tuliptree, and sycamore. For these plants, recovery is a strong possibility though it may take several years.

The second group is made up of trees and shrubs that lost their top branches and stems to winter damage, with new growth arising from the base. Trees and shrubs in this group include black gum (also known as tupelo), Korean evodia, magnolia, and Siberian elm. The good news about this group is the plants survived. The bad news is tree growth is nothing like normal. A more accurate question would be do we really want to save them? That is a tough one to answer. It involves years of monitoring the tree, re-training a new central leader, and thinning out sprouts that give the appearance of a shrub instead of a tree. If you are willing to devote the time and effort to take on this task, then do so. Otherwise remove the old plant and replace it with something with greater hardiness.

Conifers suffered dieback too, with the death of the tops of trees. Spruce trees were hit hardest, but juniper and pine were also affected. The dead central leader can be pruned out and a lower branch can be trained upright by tying the branch to a pole placed along the stem. Lower limbs can be trimmed back to give the new leader time to grow. Staking and tying materials are to be removed in one year to forestall stem girdling.

The third group consists of plants lost altogether, like boxwood and doublefile viburnum. Thankfully, the number of plants in this group is not many but planting something believed to be hardy only to lose it is frustrating. In many cases, trees had been growing successfully for years, only to die from freeze injury just when we thought they were large enough to weather most anything.

Oddly enough, not all species were affected uniformly. The paperbark maple in my yard looks just fine while in other landscapes, the tree had serious dieback. Tree health prior to the winter will impact its survival from an extreme weather event and the drought of 2020 compromised tree health.

This past winter emphasized the importance of provenance. Provenance refers to the source of seed, with trees grown from regional seed sources showing higher survivability than trees grown from seeds that come from outside the region. Differences in soil, precipitation, winter cold, and summer heat will negatively impact trees and shrubs grown from seed sources outside the region. When purchasing a tree or shrub, researching the plant's hardiness and where it came from are essential to plant success.