TREE NEWS
YOU CAN USE
FEBRUARY 2026

WINTER DAMAGE TO TREES AND SHRUBS

Winter weather and frigid temperatures are upon us! Fortunately, we can move indoors to more conducive climatic conditions, but the same does not hold true for our landscape trees and shrubs. Trees have dealt with cold weather for millions of years and both complex background interactions and specific stages of dormancy help trees to overcome these hurdles. Here, we address what consequences you may see as a result of winter damage in trees and shrubs and how to best protect them.

Most of our deciduous trees and shrubs are able to withstand our frigid temperatures, but the same does not always hold true for our broadleaf and needled evergreen trees and shrubs. For both broadleaf and needled evergreens, two major types of damage may be observed in the landscape—solarization (i.e., bleaching of the foliage; Figure 1) and desiccation (i.e., drying of the foliage; Figure 2). Sustained low temperatures and lack of adequate soil moisture can become extremely detrimental to these evergreens. Common name species such as Aucuba, Camellia, Cryptomeria, Distylium, Indian Hawthorn, and Loropetalum are most commonly affected, while additional species such as Azalea, Arborvitae, Boxwood, Chamaecyparis, Cherry Laurel, Holly, Magnolia, Lenten Rose, and English Ivy may also be affected depending on their location in the landscape.

Figure 1: Solarization damage on Loropetalum.

Figure 2: Desiccation damage on Chamaecyparis.

For deciduous trees, the immediate effects of winter damage may be less pronounced (or even delayed) until early spring. Naturally, the buildup of ice and snow on branches and trees can lead to excessive weight that bends, bows, and breaks branches and trunks (Figure 3). When this additional weight is combined with saturated soils (from heavy snow melts) this can further lead to entire tree failures. In early spring, frost cracks (Figure 4a) can be another major concern—especially on thin barked trees. Sadly, frost cracks usually get worse before they get better (Figure 4b).

Figure 3: Ice buildup on American Beech twig.

Figure 4a: Initial frost crack on young Red Oak tree.

Figure 4b: Expansion of frost crack on young Red Oak tree in subsequent months.

Steps to implement to help reduce winter damage in trees and shrubs:

1. Ensure appropriate plant (and cultivar) selections that are hardy for your growing zone
2. Water trees and shrubs prior to freezing temperatures and during dry periods (especially for evergreens)
3. Ensure appropriate mulching practices are implemented to protect roots
4. Avoid fertilizing and/or pruning late in the fall (both of which might stimulate new growth)
5. Understand that microclimates do play a pivotal role in the success or failure of landscape plants
6. Ensure plant vigor year-round by managing pests and diseases

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