Winter Freeze Injury to Plants and Trees

By Sandy Farber Bandier
Extension Agent II/Master Gardener Coordinator

This winter has delivered more than a few punches to the landscape. The DC Metro Area have reported multiple instances of winter injury to flowering and evergreen landscape plants as a result of the winter wallop. While it is not unusual to see some freeze damage after a DC winter, this year the extent and severity was notable.

For early flowerers, timing was everything. Damage was reported on blossoms of magnolias, spring flowering bulbs and even bamboo! This occurred sporadically around the area and severity of damage seemed to depend upon where plants were in their blooming phase when the freeze hit and their location in the DC Metro Area. Flower buds that were still tight may pull through.

Winter burn was also noticed on many evergreen plants across the area. This winter burn occurs when water is lost from the living tissue faster than the roots can replenish it. When the ground is frozen, the roots are unable to transfer water into the leaf or needle tissues exposed to biting winds and the winter sun. This results in leaf and needle desiccation that appears as bleaching, yellowing or browning, and leaf drop. Damaged plants observed with winter burn include: white pine, arborvitae, rhododendron, boxwood, ivy, etc.

These freeze injuries can often be confused with salt injury from treating icy roads. In general, if the browning plant is near a sidewalk or roadway where salt or brine could be splashed, sprayed, or become airborne drift, chances are the damage is the result of a chemical burn caused by salt or a combination of salt and freeze. Salt damage may appear as yellowing or browning and is likely to be one-sided (the side facing the road).

Freeze injury will appear as yellowing, bleaching, browning, or crisping up as well. Winter burning may, but not always, appear more uniformly across the exposed plant, or on the windward side. Segments of plants below the snow line may bloom due to the insulating effects of the snow on the buried limbs. If a plant is not near a roadway, winter freeze damage is likely the culprit of early spring browning.

Also consider the native range of the plant in question. Some varieties planted in the DC Metro Area may be in the northernmost reach of their range and be more susceptible to winter injury.

For more information, email sfarber@udc.edu.