

Problem: Marcescence on Trees



Host Plants: Various

Description: During certain years, leaves and seedpods of various trees and shrubs may not drop during the fall. Normally, trees usually begin to prepare for winter by absorbing nutrients from the leaves and inducing each leaf to form an abscission layer at the base of the leaf stem. The abscission layer weakens cell walls and allows the leaves to fall. A quick change from warm to very cold weather during the fall may kill the leaves before the abscission layer has formed. Therefore leaves have remain attached to the tree. This condition is known as marcescence. Marcescent simply means to wither without falling off.

There are actually two types of marcescence. Some trees, such as many species of oaks, are naturally marcescent and make up the first type. The second which we are discussing here is due to a sharp drop in temperature resulting in trees not dropping leaves that normally would. Trees may gradually lose marcescent leaves over winter or they will be pushed off when new growth begins in the spring.

Though marcescence will not harm a tree directly, a heavy snowfall or ice storm could cause much more limb breakage than normal due to more surface area being available for snow or ice to collect. Also, the quick drop in temperature can cause direct damage to the plant. Some plants may be killed outright while others may be burned back to the ground but come back from the roots. Also, the tips of branches may be killed, especially with conifers. Be careful when assessing damage to pines as needles may be killed but the twig may still be alive. If the bud is soft, it is still alive. If dry and brittle, it is dead.

Recommendations: There is nothing we can do to help plants other than prune off dead growth, prune back dead branches and give the plants excellent care during the stress of summer by watering as needed.

References:

1. [Winter Leaves that Hang On](#). Penn State Extension, Forest Resources News, December 17, 2012
2. [Landscape Health Update: Cold Snap Lingerin Effects](#), Colorado State University Extension, Plant Diagnostic Clinic, February 2, 2015

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