

## Horticulture 2013 Newsletter No. 44 November 5, 2013

Video of the Week: [Transforming Leaves from Trash to Treasure](#)

### ORNAMENTALS

#### A Time for Stunning Fall Color



Red Maple

Four seasons. Aren't you glad to live in a part of the world that gets to experience the wonder and joy of environmental change? Winter, spring, summer...fall. The rhythm of our lives is partly set by the events that we anticipate and celebrate in each quarter of the year. I think fall is my favorite season, however, I might say the same thing when spring comes around next year. I love that we get to experience the changes and find new things to enjoy with each cycle. What a fantastic way to live.

Fall is incredible! Changing leaf colors, cooler temperatures, pumpkins, mums, s'mores, hayrides, and the fragrance of my neighbor's wood-burning stove all signal the changing season. Pretty soon we'll be basking in the glow of family and friends at the Thanksgiving table, enjoying the bounty of the season of the past summer.

So, how will our fall leaf color turn out this year? In stark contrast from the last several years, we have had great weather and decent rainfall in 2013. While we may still lose some plants to the stresses caused by the weather in the last few years, the ones that are thriving will reward us with a great show of fall color.

This year as I've marveled at the beginnings of fall leaf change, I've been thinking about what's actually happening inside the plants. It's the plant nerd in me—I've just got to know what's going on inside those little cells to give us such a great gift. So, pull up a chair and tighten your bootstraps—I'm gonna toss a few big terms at you today. **Senescence** is the technical term for the developmental processes that lead to leaf color change and death. In the case of autumn leaf color change, these processes are initiated by environmental cues: day length shortens (less sunlight to photosynthesize) and temperatures cool (signaling the plant to protect itself from freezing, cell-busting conditions). Senescence is a normal process that is controlled by the plant's own genetic program.

Evergreens have to stick it out over the winter with their exposed leaves/needles, but deciduous plants make a costly choice to drop all of their leaves for the winter and grow new ones when environmental conditions are favorable in the spring. If leaves of deciduous plants are genetically programmed to die, what are they doing with that huge investment of plant tissue? Well, I'll spare you the glory of the gene- and enzyme-driven description and share the simple one. Essentially, the plant is taking all of the valuable resources (water, sugar, minerals, proteins, carbohydrates, amino acids, etc.) out of the leaves and storing them in the main body (stems and roots) of the plant until it's nice enough to play outside again.

When this change (senescence) starts to happen, the chloroplast is the first organelle in the cells to deteriorate. Chloroplasts are full of the green pigment chlorophyll, which is used in photosynthesis. When the plant stops making new food with photosynthesis it doesn't need the chlorophyll anymore and breaks it down for storage. With the green gone, we can now see other pigments reflected in the leaf surface (red, purple, orange, yellow). As each plant is controlled by genes telling it when and how to begin storing resources, so too are the primary senescence colors for that genus and species of plant. That's how we can recommend certain plants for red, purple, orange and yellow fall color.

Breeders spend many years choosing plants with superior fall color. Selection for this trait can only occur once per year, thus finding great plants is a slow process. Fortunately, new cultivars of trees and shrubs that consistently express good fall colors are common. Isn't fall in this part of the world great?

One last thing...the 'Flamingo Pineapple' mum I tried this year? Total success! (Cheryl Boyer)

## PESTS

### Millipede Invasion



Millipedes, or "thousand-legged worms," are an arthropod relative of insects. They can be distinguished from centipedes by the number of legs per body segment. Millipedes have four legs per segment, while centipedes have only two. Also, the millipedes' legs are quite short and often are not seen if viewing the millipede from above. Though usually found in damp locations outside, they can become a problem inside the house and cause homeowners a great deal of concern.

Household invasions are often sudden and sporadic and may be in response to rain. Millipedes feed primarily on decaying organic material, rarely on living tissue. They do not bite people or damage household furnishings directly, but they will leave a mess and give off an odor if crushed.

Millipedes are worm-like and most often brownish-black in color. The legs ripple as they move. Millipedes often curl up into a "C" shape like a watch spring if touched. Remember you may not

see the legs unless viewing the millipede from the side. They defend themselves by releasing a disagreeable odor when disturbed.

Millipedes require high moisture to survive and often die in a day or two after entering a house. Dead millipede bodies can then be vacuumed up and disposed of. Drying out moist areas inside will also help with control. Sealing and caulking around openings in the foundation will help keep populations low. If this is not enough, spraying cyfluthrin (Home Pest Control Indoor & Outdoor Insect Killer), proxopur (Baygon), or resmethrin in a three-foot band around the outside of the house will take care of them before they get inside. (Ward Upham)

## MISCELLANEOUS

### Roasting Pumpkin Seeds



Now that Halloween is past you may be wondering what to do with the pumpkins that were used to decorate for the holiday. Consider roasting the seeds before freezing temperatures destroys the pumpkin fruit. Cut open the pumpkin and remove the seeds and stringy material. Seeds should be washed and dried and the “strings” discarded. Toss the seeds with a little oil before roasting. Flavor can be enhanced by adding a sprinkling of salt to the oiled seeds. Seeds can then be spread on a cookie sheet and roasted for about 25 minutes at 325 degrees F. Times may vary depending on the size and moisture content of the

seed. Seeds are done when they turn a golden brown. If seeds are not eaten immediately, store in a zip closure bag in the refrigerator. (Ward Upham)

### Winter Care of Houseplants



During the short days of winter, houseplant growth slows, resulting in a need to change how we care for them. Although frequent watering may have been necessary during the long days of summer, the same amount now could cause problems. Excess water fills air spaces within the soil resulting in roots that receive less oxygen than they need. Water by touch, not by calendar. If the soil is dry an inch deep, it is time to water. Be sure to add enough so that some water flows out the bottom of the pot. This will help wash out excess

salts that tend to accumulate within the potting soil.

Fertilization also should be reduced. Normally, it is best to apply half the amount of fertilizer for flowering houseplants and one-fourth the amount for foliage houseplants. Too much fertilizer results in plants that become leggy and weak. Location is another factor that should be considered this time of year. Since day length is so short, houseplants may be helped by being moved to areas of the room that receive more light, such as a south-or east-facing window. Avoid placing plants where drafts from doors or direct output from heating ducts may contact them. Relative humidity also tends to be low during the winter. If you do not have a humidifier, frequent misting of the plants or placing them on water-filled trays of pebbles can help raise the humidity. (Ward Upham)

### Keep Compost Pile Moist



This is the time of year when there are lots of materials available to compost. Remember that the compost needs to be kept moist so that the bacteria and fungi can break down the raw materials. Use a sprinkler to soak through the pile to the center. Allow the pile to drain. The goal is for the pile to remain moist; not waterlogged. Edges will dry out the quickest and may need a light sprinkling from time to time.

If you are interested in composting but don't know how it is done, see our video at <http://tinyurl.com/c8aw6lk> and/or our publication at <http://www.hfr.ksu.edu/doc1757.ashx> (Ward Upham)

### Draining Hoses and Irrigation Lines



Hoses and shallow irrigation lines may be damaged over the winter if water is not drained. If there is a main shut-off valve for the system, close it and then run through the zones to make sure any pressure has a chance to bleed off. Lawn irrigation systems usually have shallow lines. Though some lines may be self-draining, check to be sure there are no manual drains. If so, they should be opened. Be sure to map them so they can be closed next spring before the system is pressurized.

Drain hoses by stretching them out and coiling them for storage. Water will drain as you pull the hose toward you for coiling. Store in a protected place. UV light can make hoses brittle over time. (Ward Upham)

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