



# AUTUMN'S PALETTE

The majestic colors of the season may  
compell us to take long walks or drives

PHOTO BY PAUL STRELTSOV ON UNSPLASH

Maple leaf shows its fall colors. Fall foliage forecast is very favorable for leaf peeping.

**Q**uestion: What causes the leaves on my trees to change colors? This year, some of the leaves started to change early. Does that mean an early winter?

**A**nsWER: When I observed the trees changing colors back in Kansas and asked the “why” question, I was told that it was because of Jack Frost. Depending on who I asked, I was told that Jack spent his fall evenings and nights painting the leaves in brilliant colors. Or, that Jack caused them to change colors by touching them with his frosty fingers. Both answers were creative enough to satisfy the curiosity of a 7-year-old and plant the seeds for a later exploration of the spectacular fall colors.

While the floral colors in our gardens sustain us at home during the spring and summer, it is the fall change in the color of our trees that draws us out for long walks and drives in the country. The real Jack Frost is not an elf but a much more complex chemical reaction. This phenomenon happens because the shorter days produce less light and a change in

temperatures that causes the trees to slow and then stop the production of chlorophyll.

Our trees work through the spring and summer to produce chlorophyll, which is used in photosynthesis to change carbon dioxide, water and sunlight into the sugars and oxygen they need to grow and stay healthy. When they stop producing the chlorophyll (which provides the green color to our leaves), the other less dominant colors start to appear.

In some trees, the xanthophylls (yellow), in another tree, the carotenoids (orange) and, in yet another, the anthocyanins (red and purple) will take over and produce the beautiful pallet of colors for our enjoyment. Sadly, these pigments also break down, and the leaves turn brown.

Early color changes do not necessarily forecast an early winter. The most brilliant color changes happen with warm days and cool nights. Soils that have dried out due to drought or prolonged high temperatures can delay the color change, and a frost will almost always stop it and cause the leaves to fall.

While I am not the first person to paraphrase from the title “Yes, Virginia, there is a Santa Claus,” I do feel I should give credit to the originator. My thanks to Francis Pharcellus Church, and my apologies to those of you too young to remember his article in the New York Sun. It was penned in response to a letter written by 8-year-old Virginia O’Hanlon.

Church’s article became a mainstay of Christmas lore, the most reprinted newspaper editorial, the subject of a play, a musical and, finally, a movie. If this historical event has somehow slipped from your memory, or was never there, it is worthwhile looking up and reading.

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*Do you have a gardening question? Please e-mail, call or visit the Douglas County Master Gardener Plant Clinic at [douglasmg@oregonstate.edu](mailto:douglasmg@oregonstate.edu), 541-672-4461 or 1134 SE Douglas Ave., Roseburg. Douglas County Master Gardeners are trained volunteers who help the OSU Extension Service serve the people of Douglas County.*