



There's Gold in Them Thar Trees

by Marilyn Loser

2013 October 23

Many cottonwood trees around town are still aglow. And it was easy to see the blanket of golden aspens on the hills to the west this fall. Earlier in the season, many green ash and hackberries were a beautiful yellow. However, in my neighborhood they began dropping their leaves particularly early and are totally bare.

We're seeing more than just gold, though. Many people have commented that they saw more red than usual in aspen groves. The palette of fall tree colors has expanded in town the last few years to include more reds and purples. This is due to planting a wider variety of tree species. On Sunday, the Korean Sun pear (*Pyrus fauriei* "Westwood") at corner of Main and Edison by Caton's Quick Lub was a bright red bubble. When Boy Scout Troop 307 planted the little sapling during Arbor Week of 2009 I had my doubts about its survival.

I'm surprised at the number of trees that still have green leaves. It seems healthy elms are staying green longer than usual. As I road my bike downtown along Sixth St. yesterday I was delighted to see brilliant red 'Autumn Blaze' maples (*Acer x freemanii rubrum*) next to very green 'New Horizon' elms (*Ulmus japonica x pumila*) at the east end of the railroad parking lot. I stopped to take a photo, but it took me awhile. As I patiently waited for cars to go by so I could get a photo from the other side of the street, well-meaning drivers kept stopping and waving me across the street. Along the same parking lot, a group of five trees is looking very purple—Canada Red chokecherry (*Prunus virginiana 'Shubert'*) and purple ash (*Fraxinus Americana 'Autumn Purple'*).

When you're going east on Sixth past the Alamosa Visitor's Center, note the seven trees that were planted in August. The Alamosa Convention & Visitor Bureau paid for the trees and Alamosa Parks and Recreation personnel planted them. The largest is a Lanceleaf cottonwood (*Populus x acuminata*) and the rest are white blossoming crabapples (*Malus 'Spring Snow'*) and Canada Red chokecherries. That makes a total of 22 trees along the Sixth Street corridor between Ross and Hunt.

Tree leaves contain chlorophyll that gives leaves their green color and carotene that gives them their yellow or orange color. Yes, carotene is the pigment that makes carrots, sweet potatoes, and cantalops orange. The cooler and shorter days of fall trigger chemical reactions that cause chlorophyll to disintegrate leaving the carotene to shine through and display brilliant yellow hues.

What about the purple leaves of Canada Red chokecherries and purple ash? Chokecherry leaves start out green in the spring and turn purple by summer. The ash leaves stay green all summer and only turn to purple in the fall. Unlike carotene that is present in the leaves all season, trees create the red pigment anthocyanin at different times during the season. Trees, like the chokecherry, produce anthocyanin in

summer. The pigment masks the green of chlorophyll. The purple ash only produces anthocyanin in fall when chlorophyll is breaking down. Many trees make little or no anthocyanin. Anthocyanins also provide the red in cranberries and red apples.

The quality of fall color show depends on weather, sunlight and soil moisture, according to the United States National Arboretum. "A growing season with ample moisture that is followed by a rather dry, cool, sunny autumn that is marked by warm days and cool but frostless nights provides the best weather conditions for development of the brightest fall colors."

For more information on fall tree colors, check out the news article for September 30, 2009, at AlamosaTrees.net.

“What an irony it is that these living beings whose shade we sit in, whose fruit we eat, whose limbs we climb, whose roots we water, to whom most of us rarely give a second thought, are so poorly understood. We need to come, as soon as possible, to a profound understanding and appreciation for trees and forests and the vital role they play, for they are among our best allies in the uncertain future that is unfolding.”
Jim Robbins, *The Man Who Planted Trees: Lost Groves, Champion Trees, and an Urgent Plan to Save the Planet*