Forest Service, U.S. Department of Agriculture
Cherokee National Forest

NEWS

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2009 Fall Color Information

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Why Do Leaves Change Color?

CLEVELAND, TN - September 28, 2009 ... Is it a wet period followed by a cold spell - that brings out the color in leaves? Or is it a dry period followed by a hard rain, or the first frost after a full moon?

Despite the many theories and attempts to predict nature's colors, the fact is, trees tune into light to produce their annual beauty pageant that brightens the hillsides each fall. This even oversimplifies the complex interaction of chemicals, temperatures, length of days and moisture which scientists have yet to fully understand.

According to the Forest Service, U.S. Department of Agriculture trees are signaled to start changing colors in their leaves when days become shorter and nights become longer. As days get shorter, trees release a kind of hormone, restricting sap-flow to the leaves.

As autumn approaches, certain influences both inside and outside the plant cause chlorophyll to be replaced at a slower rate than it is being used. Chlorophyll helps leaves turn sunlight into food all summer, but dwindles as fall progresses. When this happens, other pigments that have been present (along with the green chlorophyll) in the cells all during the leaf's life begin to show through. They give us the colorations of yellow, orange, brown, and other hues in between.

The reds, purples, and their combinations come from another group of pigments that are not present in the leaf during the growing season. They develop in late summer in the sap of cells of the leaf. Their formation depends on the breakdown of sugars in the presence of bright light as the level of phosphate in the leaf is reduced. Phosphates and other chemicals and nutrients, moves out of the leaf into the stem of the plant. The brighter the light during this period, the greater the chances are for a more brilliant fall.

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1st add -- Why Leaves Change Color

These chemical processes are at work in the Cherokee National Forest. Leaf watchers and outdoor enthusiasts will soon be treated to nature's display of fall brilliance.

According to Forest Service officials at the Cherokee National Forest colors in the northern portion of the Forest usually peak first, followed by areas further south. The peak period varies each year and from area to area. The last two weeks in October are usually a good time to see lots of colors. Of course, peak periods can vary and things can change quickly. Sometimes it is difficult to tell exactly when the leaves will be at their peak.

For fall color information about national forests throughout the nation, including the Cherokee NF please call **1-800-354-4595**. This number provides recorded messages with the latest fall color conditions and viewing information. Fall foliage information is posted to this number as significant color changes begin to show.

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- Fall Colors -

Following is a summary of which species of trees provide the various colors of fall.

Brilliant Red:
Red Maple, Sugar Maple, Silver Maple

Crimson to Purple:
Dogwood, Sumac, Sourwood, Sassafras

Yellow to Bronze:
Yellow Poplar, Hickory, Black Walnut, Beech, Yellow Birch, Yellow Buckeye

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