

CU expert: Fall foliage season has potential to be best in years

THE JOURNAL STAFF

CLEMSON — Hopes are high and fingers crossed that this year's fall foliage season will be one of the most spectacular in recent years, with hues of yellow, orange, red and purple about to join forces in a dazzling display of natural beauty.

"Thus far this year, all conditions point to having really good fall foliage," Clemson University forest ecologist Donald Hagan said. "We had a little bit of drought in the summer-time that added just the right touch of stress that

helps condense the season and cause a bunch of colors to pop all at once.

"Early October should be prime on the Blue

Ridge Parkway. Then the color will move its way downward throughout the month, finally peaking in the Clemson area and much of the Upstate in late October and early November."

The sudden appearance of an unexpected spate of extreme weather would be the only remaining obstacle standing in the way of a delightful extravaganza this autumn, which begins today.

"What really matters now is the weather we get in the next several weeks," Hagan said. "Violent storms, heavy winds and unseasonable heat or cold all have the potential to adversely affect the foliage. But if we get relatively normal weather, it will put the finishing touches on a very good fall color



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This year's fall foliage has the potential to be spectacular, rivaling this 2004 image at Grandfather Mountain near Boone, N.C.

season this year."

For people who love to look at leaves, the best possible weather pattern would be a succession of mild cold fronts, similar to the one that recently moved through the region. These kinds of fronts expedite the leaf-changing process by triggering the trees to begin early preparations for winter dormancy.

"When the cold front comes through, the sky is gray and the air damp," Hagan said. "But for the next several days, the air becomes pleasantly cool and the sky brilliantly clear. The sunny weather after a front brings out the

reds and purples that can turn an average foliage season into a great one."

Deciduous trees, which produce and drop leaves in a single year, invest a significant amount of energy in their foliage. Leaves grow in the spring when the buds burst and then do their best work during summer, collecting energy from the sun to manufacture sugars that feed the tree.

But by fall, the leaves have been literally flapping in the wind for a long time and are wearing out. So for the tree, the cost of maintaining its leaves exceeds the benefit of retaining them.

"One of the things that happens when a plant is getting ready to go dormant is it stops rebuilding chlorophyll," Hagan said. "So the green pigment in the leaf fades and disappears, revealing the orange and yellow pigments that were always underneath but obscured by the chlorophyll. But the red and purple colors are not already there.

"Instead, they are produced by a chemical reaction to bright sunlight, which is why the beautiful days following cold fronts are so valuable in producing the most desirable results."

In addition to inspiring the best palette of colors, clear fall days also perform a less-scientific duty by providing leaf-lookers with breathtaking panoramas.

"Don't go the day before the arrival of a cold front, go the day after when it's going to be clear," Hagan said. "The reds and purples will be ablaze and you'll be able to see for miles."

The past two years have not produced great fall color. Last year, the summer was too mild. In 2013, it was too wet.

But in 2015?

"I think it has the potential to be spectacular," Hagan said. "But it's not something where you sit back in mid-September

and say, 'On Oct. 20, we're going to the mountains.'

"I tell people just to be ready, keep their eyes on the weather, pay attention to these passing cold fronts. Look at it as an adventure. And be spontaneous. That's what makes it so much fun."