

# The Birmingham News

## Talladega tree avoids blight

**Group seeks to pollinate, create offspring from rare tree; largest chestnut in state**

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Alabama's largest known living American chestnut tree, found last year in the Talladega National Forest, is 85 feet tall, 14 inches in diameter and healthy, and has somehow avoided the effects of the blight that virtually killed off what was once a dominant tree of the Appalachian Mountains.

This month, the Alabama chapter of the American Chestnut Foundation led an expedition to the tree, which is flowering now, to gather pollen and to pollinate it in hopes of producing offspring from the rare specimen. The tree's pollen will be useful in the national effort to breed a blight-resistant chestnut and may be particularly important in producing a seedling adapted to the Deep South.

"It's extremely significant," said David Morris, president of the Alabama chapter, "We're lucky that the Forest Service found it when they did, and the timing is incredible."

The Talladega tree was discovered last year by timber scouts employed by the Forest Service, who were surveying the area for a timber sale. They noticed some strange-looking burs on the ground, looked up and were amazed. Timber is now being cut nearby, but the Forest Service has set up a protective buffer around the ridge where the chestnut is located. The tree's DNA has been analyzed and its identity as an American chestnut has been confirmed.

"Everybody is excited here," said Mark Miller, a timber management assistant with the U.S. Forest Service. "Especially us timber folks."

The Alabama tree is rare but not unique. Larger trees have been identified in other states. Recently, a half dozen smaller healthy trees were found near Warm Springs, Ga. In a testament to the enduring attachment to the tree, the story of the Georgia trees made international news.

Meghan Jordan, director of communications for the American Chestnut Foundation, said interest in the tree is growing as the effort to create a blight-resistant chestnut gets closer to its goal.

"It brings back memories in the elderly and inspires hope in the young that the tree will come back," she said.

### **No one sure:**

No one is quite sure why the Talladega tree has avoided falling prey to the blight, which is caused by an easily spread fungus. Other chestnuts on the ridge have succumbed or are suffering from it. A DNA analysis of the Talladega tree found that, generations ago, one of the tree's maternal ancestors was a Chinquapin tree, a relative of the chestnut. Some experts theorize a passed-down trait might be protecting the tree. Others believe the Talladega tree simply hasn't been exposed to the fungus.

It remains to be seen whether the tree can reproduce. Some twigs from the tree have been grafted onto existing rootstock and are being grown for experimentation.

"There are trees scattered throughout the country that have natural blight resistance, and we don't know why," said Jimmy Maddox, a plant physiologist retired from the Tennessee Valley Authority who cares for Alabama's chestnut research orchard near Tusculumbia. "At this point, we are assuming it is a quirk of nature."

The foresters who visited the tree theorized that the area had been cut more than 40 years ago, and this particular chestnut seedling survived and was able to grow without competition.

Now, its top is part of the tree canopy, its creamy white flowers in the full sun.

"Lord, have mercy!" exclaimed the coincidentally named Tim Chestnut, when he first saw the tree. It was by far the largest chestnut the Georgia forester had ever seen. "Excuse me, I'm having a moment," he said, both in awe and in jest.

The American chestnut once covered ridges from Maine to Mississippi, an estimated 4 billion trees. This time of year, when their canopies were filled with flowers, the mountains appeared snow-capped.

The trees were the redwoods of the East, averaging five feet in diameter with specimens recorded at 8 to 10 feet in diameter. Its lumber was prized because it was as light as pine but as tough as oak and rot resistant. Mature trees provided a profusion of edible nuts for the diet as well as a cash crop.

The blight was accidentally imported from Asia in the early 1900s and spread rapidly. Small trees continue to grow up from old roots. But before the trees get very large, the blight finds them. The bark pops off, the tree dies.

For the past couple of decades, biologists have attempted to breed a blight-resistant American chestnut by mixing the American species with the Chinese chestnut tree, which is resistant to the blight. As the hybrid grows, it is bred again and again with the American chestnut, in an effort to keep the immunity of the Chinese tree but create a tree that is otherwise American.

According to Jordan, the research project is 25 years old, and biologists still are a couple of years away from having seedlings to plant on national forest land. It will be years beyond that before a blight-resistant chestnut is available to the public.

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