



TRIBUNE/Steve Steiner: The cylindrical burr-like objects are the flowers and the round burr-like objects will eventually contain chestnuts.

“Local farmers do their part to save sick trees”

By Steve Steiner Staff reporter ssteiner@elkintribune.com

Despite the overbearing heat, Steve Motsinger, Paul Sisco and Margot Wallston were hard at work Monday at a grove of chestnut trees on Motsinger's property in State Road.

They were there to inoculate a select number of trees — but not to make them healthy.

"We'll be inoculating the trees with the fungus that causes the blight," said Sisco. "The purpose is to measure how fast it (the fungus) grows."

That 'blight' Sisco referred to was the one that decimated the American chestnut tree population. It was first discovered in the early years of the 20th Century, and is believed to have been accidentally brought over from Asia from imported Asian chestnut lumber or live Asian chestnut trees. By the 1940s, the fungus virtually wiped out the American chestnut tree population.

However, measuring how fast the fungus would grow was not the only purpose behind the inoculation.

The three are members of the American Chestnut Foundation, an organization that is trying to bring back the American chestnut tree, through a hybrid with either Chinese or

Japanese chestnut trees. The grove on Motsinger's property is one of 96 — from Maine to Alabama — involved in this project; Sisco is a scientist with the foundation; and Wallston is a summer intern from the University of North Carolina at Asheville, where she is working on a post-baccalaureate program, majoring in environmental studies, ecology and environmental biology.

What they are attempting through cross-breeding is to develop a strain that can resist the fungus.

"Let me put it this way," Sisco said. "If 'red' is resistant and 'white' is susceptible, the best we can get out of this (Motsinger's) orchard is pink."

From there, the next step will be to pollinate a "pink" tree from Mostinger's orchard to a "pink" tree from another orchard and repeating the process until a highly-resistant chestnut tree is developed.

Among the 80 trees in Motsinger's orchard are several from the Smokie Mountains.

"What we would like to do is introduce blight-resistant trees back to the Smokies, but we want Smokies trees," said Motsinger.

As Sisco and Wallston began punching out fungi from petri dishes, Motsinger pointed out several trees that already showed signs of infection.

"What you do is look where a branch starts out from the trunk," Motsinger said. "You first notice a rust color and what looks like rust on the branch, then bark that has blistered, that lets you know."

As a result, the trunk dies, but shoots then grow from the trunk. Unfortunately, eventually, those also have a short lifespan. Where once American chestnut trees were once majestic — the biggest one in North Carolina measured 110-feet high and 17-feet in diameter (and was located in Francis Cove in Haywood County), Currently, the biggest known tree east of the Mississippi River is only 67-feet high and four-feet in diameter and is located in Adair County, Kentucky. A larger tree is located in Portland, Oregon, where the blight did not strike. It was brought to the area by descendents of Daniel Boone, who had migrated there in the 19th Century.

On a somewhat positive, however, Sisco said chestnut trees still bear edible fruit.

"The taste is sweet," he said. "It has less fat than most nuts and is high in vitamins. In terms of nutrition, it is a much healthier nut."

Motsinger's involvement came about, in part, because of a relative.

"I had always heard stories," Motsinger said. "My great-uncle, Dan Chatham, after World War I, salvaged as many trees as he could."

Those stories and that interest led Motsinger to discover about the American Chestnut Foundation on the Internet, and introduced him to Sisco, who had been looking to start a particular type of orchard.

"He wanted to try a low elevation, and I believe this area is about 1,100 - 1,200 feet (above sea level)," said Motsinger.

Motsinger was not positive, but he believed the trees in his orchard came from trees that had been grown at elevations approximately 3,000 feet.

While Sisco bore out a small hole in the trunk, Wallston applied the fungi, and Motsinger wrapped tape around the site, to keep the fungi from falling out. They inspected their handiwork.

"I'll be back in November," said Sisco.