

COPPER BASIN, TN Tree Planting Event

23 April 2019

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Do you know that the Welsh started mining copper in Wales in the middle ages, which is when the Cornish began mining tin in Cornwall? Why is that important to today's Copper Basin students? It's because everything in the Copper Basin today—schools, homes, churches, roads, and businesses—owes its existence to those miners. When copper was discovered on Potato Creek in the Copper Basin in 1843, Tennesseans lacked the skill to mine and smelt it, so Welsh and Cornish miners were recruited because they had those skills.



Did Welsh and Cornish miners come to America looking for potential mining jobs? No, British Parliament outlawed Celtic languages such as Welsh and Cornish in an attempt to force all residents of the British Isles to use English. But the Welsh and Cornish practiced their religion in their native tongues, so when it became a crime to do so, they immigrated to America for religious freedom. They came to Tennessee for the

opportunity to put their mining skills to profitable use. In the process, they taught those skills to native Tennesseans.



When the Welsh and Cornish miners came to the Copper Basin, as many as one in four trees in early Appalachian forests was an American chestnut. Hernando De Soto, an early explorer to the region, noted in his 1542 journal, "*Where there be mountains, there be chestnuts.*"



By 1861, trees were becoming scarce in the Basin. Wood was needed to fuel the smelters. The Polk County ores contained significant sulfur content. When roasted, the sulfur was released, forming sulfur dioxide, which later rained down as sulfuric acid. After the trees had been cut, the gases from the open smelting destroyed the remaining vegetation. Who could have foreseen that the largest man-made biological desert in the nation would emerge out of this economic fervor? It was a stiff price to pay, but copper from Basin helped the United States win two world wars.



Although the mining and smelting operations destroyed the American chestnut in the Basin, by the 1940s, American chestnuts were being destroyed elsewhere by the blight that originated from the import of Chinese chestnuts to New York City in 1904. Since the 1940s, reclamation efforts have been underway by many stakeholders to restore the Basin. The latest evolution has been the incorporation of the Forestry Reclamation Approach as has been successfully demonstrated in coal-mine reclamation.



Ginger Montgomery's ecology class at Copper Basin High School made history last year by planting 50 blight-resistant American chestnut hybrids at the former Mary Mine. This year, her class planted 54 blight-resistant American chestnut hybrids at London Mill in the Burra Burra Creek watershed. Restoring the American chestnut is a fitting tribute to the mines and mills that gave communities in the Basin their existence. Imagine the great-great grandchildren of these students visiting the site someday to view the breath-taking beauty of an American chestnut forest and saying, "My great-great grandparents planted these trees."



Heavy rains the previous week threatened to postpone the event, but that's the beauty of mine land reclaimed by the [Forestry Reclamation Approach](#). Rainfall infiltrates into the loose, rocky ground to irrigate tree roots, such that on the day of the event, planting conditions were ideal, and so were weather conditions!



Trees and tools for the planting event were provided by the Coal Creek Watershed Foundation, the Tennessee Mining Association, and the U.S. Office of Surface Mining. The event was hosted by Glenn Springs Holdings (Occidental Petroleum), Copperhill Industries, and the Tennessee Department of Environment and Conservation.



Basin students work to bring back forest

Story and pictures by Lauren Bearden

Copper Basin High school students planted hybrid chestnut trees to help restore the original forest trees of the region in honor of Arbor Day at a reclaimed mining site, April 23.

Imagine walking through the forest in the Copper Basin and surrounding region in the 1800s. Would it look like the forest of today? No. There would be an abundance of large chestnut trees, according to Coal Creek consultant Barry Thacker.

Chestnut trees have been recorded in these mountains as early as 1542 when Hernando De Soto explored this region. He wrote in his journal, "Where there be mountains, there be chestnuts."

What happened to the American Chestnut trees? According to Thacker, the largest tree of the forest had a few things going against it.

Once copper was discovered on Potato Creek in the Copper Basin in 1843, mining became the area's lifeblood. Trees and vegetation were destroyed as a byproduct of that progress, whether being cut down and used as fuel to power the smelters or from acid rain caused by the sulfuric acid being released from the ore when roasted or processed, said Thacker.

Another reason for the disappearance of the chestnut trees was the introduction of a Chinese Chestnut to the United States. The Chinese variety was not

a forest tree, it was an orchard tree, and it carried a fungus-based blight which, by the 1940s, killed the remaining American Chestnut forest trees.

Researchers discovered, however, that the Chinese Chestnuts were resistant to the blight they carried.

About 40 years ago began the mission to restore a forest of chestnut trees, which complimented mining land reclamation efforts.

The American Chestnut Foundation studied each variety of tree and eventually came to the hypothesis that a hybrid of 94 percent American and 6 percent Chinese may be the ideal combination of genes, said Thacker, enabling the trees to be large forest trees while also being blight

resistant.

Enter CBHS students. "You are here to reintroduce an American icon to the Copper Basin," Thacker said.

U.S. Office of Surface Mining representative Chris Miller demonstrated how to properly plant the trees to give them the best shot of surviving.

The group of juniors and seniors then broke into smaller groups and planted about 55 trees at the London Mill Treatment Plant near Burra Burra Creek in the Copper Basin.

However, Miller warned them there is one more enemy of the tree. He said the trees are also susceptible to Black Ink Root Rot.

The fungal root rot can

See RESTORE B3➤



Copper Basin High School seniors Brooklyn Payne, Sierra Deal and Virginia Chambers planted several hybrid chestnut trees in honor of Arbor Day and as part of an ongoing research project by The American Chestnut Foundation.



Regan Holder, Kaitlynn Cribbs and Seth Allen were among the Copper Basin High School students who planted about 55 Restoration Chestnut trees after U.S. Office of Surface Mining representative Chris Miller demonstrated how to properly plant the trees.



Regan Holder scoops soil over the root ball of a Restoration Chestnut she planted at the reclamation site at the London Mill Treatment Plant.



Copper Basin High School students, from left, Cole Dilbeck, Blayne Collins, Destani Speirs, Kaylee Allen, Whitney Deal, RJ Cavender, JR Garrett, James Lemay, and Dade Montgomery take a quick break with Glenn Springs Holdings representatives Ben Faulkner and Scott Deal, volunteer David Turner and Glenn Springs Holdings representative Jason Hubbard.

Restore: Basin students plant trees

➤ **Continued from B1**

occur when the roots are exposed to compacted, wet soil. The solution is to “rip” the soil so it drains well prior to planting, he said. They were instructed not to pack in the root ball too tight, but rather to lightly tamp the soil around the hole.

Each tree featured a metal tag stamped with an identification number. This tag tells researchers the lineage of the tree so they can then identify the most optimal lines to use for further study.

Student Regan Holder said of the project, “I think it’s pretty awesome.” And, Kaitlynn Cribbs said, “I like how in 10 years I can

be like, ‘Hey I planted that tree.’”

The goal of the program is to cultivate a genetically strong hybrid chestnut tree that can be grown in nurseries and resist the fatal blight plaguing the early American Chestnut.

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Glenn Springs Holdings representative Scott

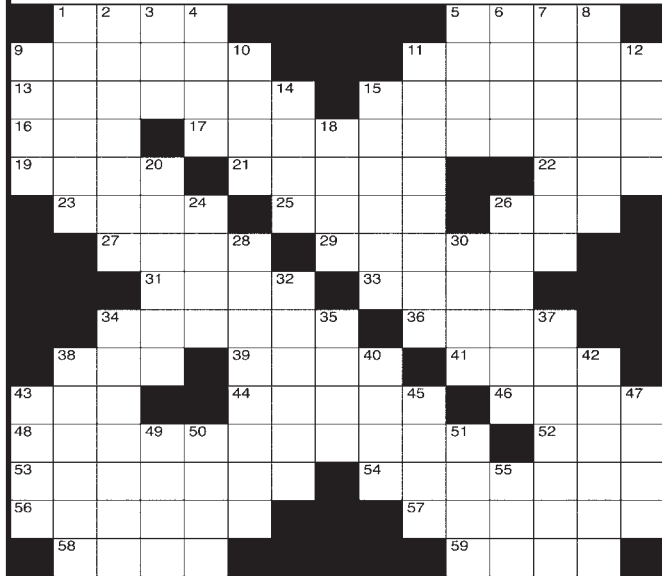


Kaitlynn Cribbs and Chloe Stuart, Copper Basin High School seniors, work together to plant a hybrid chestnut tree.

Deal said the London Mill Treatment Plant site should be a stop along a public

trail that should open, if all things go as planned, over the next few years.

CROSSWORD



CLUES ACROSS

- | | | |
|-----------------------------|------------------------------|--------------------------------------|
| 1. Type of fruit | 23. Horizontal mine passage | 44. Ned __, composer |
| 5. Unit of time | 25. Greek war god | 46. A fit of irritation |
| 9. Oil company | 26. Have already done | 48. Ability to move objects mentally |
| 11. Benson's "partner" | 27. Six (Spanish) | 52. Luke's mentor |
| 13. Fictional mob boss Tony | 29. Remarks for the audience | __-Wan |
| 15. Visual record | 31. Relaxing spots | 53. Herbal medicine ingredient |
| 16. Small constellation | 33. Prevent from seeing | 54. Oscar-winning |
| | 34. Disguised | |