

# Students help restore chestnut trees

**By Roger Moon Bedford Times-Mail | Posted: Sunday, August 11, 2013 12:00 am**

SALEM — Carroll Ritter, environmental education coordinator for Sycamore Land Trust, is a leader in an effort to restore American chestnut trees.

Trees now growing in Salem are part of that effort.

Salem Community Schools students, in conjunction with the Indiana Chapter of the American Chestnut Foundation, planted about 100 chestnut trees in the school's outdoor learning lab in April.

A news release from Sycamore Land Trust reports the American chestnut tree, once the dominant tree in eastern forests, was virtually wiped out in the 20th century by chestnut blight.

The tree was native to Washington County and is considered a promising species for improving forest health, combating global warming and reclaiming used mine sites. The planting in April marked the first time for such an effort at an Indiana public school, and is one of only a few in the nation.

“The outstanding cooperation of teachers, administration and students at Salem has enabled us to begin creating one of the most outstanding outdoor laboratories in the state,” Ritter said in a news release. “The ongoing development of a 16-acre prairie, wetland enhancement, riparian corridor improvement, invasive species removal and 6-acre tree planting are almost unheard of for a school system. With the inclusion of planting a research plot reintroducing the American chestnut, we truly have a gem of a project.”

As a science teacher at Salem High School, John Calhoun is enthusiastic about the project.

“This is a great opportunity for students to do science that really matters,” Calhoun said. “So often in a high school science class we do experiments, but this experimental data is being used by professionals in the scientific community. It also is a great historical lesson and an opportunity for students to understand why this species was important and what kind of role it may play in the future.”

The lab will be used by advanced biology classes to study topics including ecology, modern genetics and botany. The science behind the planting can be used in what is called STEM (science, technology, engineering and mathematics) education and gives students a tangible way to experience what normally is taught only in the classroom.

The news release reports the outdoor lab also is an example of the emerging phenomenon of “citizen science,” with results of the planting to be fed back into the national effort to restore the American chestnut.

The planting includes pure American chestnut, Chinese chestnut, an intermediate cross between the two and the American Chestnut Foundation's "Restoration 1.0" chestnut. The Restoration 1.0 trees represent the product of 30 years of research by the American Chestnut Foundation and constitute the leading candidate for reintroducing the American chestnut to American forests.

Michael Saunders and Jim McKenna of Purdue University and Philip Marshall of the Indiana Department of Natural Resources also are assisting with the project.

Phase 1 of the Salem project began in the spring, with site preparation and designing the planting scheme and methodology for tracking. The major emphasis of beginning this effort is to involve students from all grade levels in assisting with planting, watering, tracking growth, and careful monitoring of survival. Opportunities abound for studies in botany, genetics, economics, history, math and general science.

The project is also considered a valuable research opportunity for students to collect data for the national database. Data will be collected showing grid reference position, GPS coordinates, calipered metric stem diameter growth, vertical growth, and overall condition. Over a period of years, classes can track their trees. Given the reality that some trees will not survive for various reasons, new ones will be added.



**SALEM** — Students and others participating in the planting of chestnut trees in the Salem Community Schools outdoor laboratory earlier this year were, left to right, Savannah Wilbert, John Calhoun (Salem High School science teacher), Nathan Kachnavage (SHS graduate and a local forestry consultant), Logan Bowling, Kyle Jones, Sydney Calhoun, Adam Fisher, Emily Motsinger, Conner Williams, Dustin Day, Gunner Day, Carroll Ritter (from Williams, and a consultant with the Sycamore Land Trust), Zane Jackson, Joseph Bortka, Courtney Kelley, Ben Rutledge and Greg McCurdy (Salem High School science teacher).