

The Talking Forest

Holmes Educational State Forest

Fall/Winter 2021

A Little Friendly Competition (Future Farmers of America)

In October, Holmes Educational State Forest hosted groups from eight counties in Western North Carolina for the annual Future Farmers of America (FFA) Forestry Competition. This event is part of the National FFA Forestry Career and Development path with the purpose of stimulating student interest and promoting forestry instruction in the agricultural education curriculum. By participating in this event students gain an understanding of the economic impact of the forest environment and the forestry industry, while recognizing environmental and social factors affecting the management of forests. Counties represented include Swain, Macon, Jackson, Haywood, Transylvania, Buncombe, Madison, and Rutherford. During the event, student teams from each county competed in four areas of forestry discipline:

Saw Timber Estimation: Using Biltmore sticks, students estimated the merchantable volume of sawtimber and pulpwood in pre-selected trees.

Orienteering: Using compasses and forestry pacing standards, students completed an orienteering course and were judged based on accuracy.

Forestry Tool ID: Students were tested on how well they could identify various forestry tools and instruments.

Tree ID: Students were tested on their ability to identify 20 tree species native to North Carolina.

Thanks to Andy VonCanon (NC State Extension Associate – FFA) for organizing the event as well as our North Carolina Forest Service colleagues for helping administer the event!

Chris Sharpton, Assistant District Forester, District 1
Anthony Moore, Service Forester, District 1
Brian Rogers, District Ranger, District 1
Kristen Kelley, Henderson County Ranger
Denton Gravely, Transylvania County Forest Fire Equipment Operator
Lee Wicker, Western Lands Management Program Management Forester, Region 3
Jeremy Waldrop, Forestry Technician, DuPont State Recreational Forest
Katelyn Keller, Education/Outreach Coordinator, DuPont State Recreational Forest
Susan Fay, Education Forest Supervisor, Holmes Educational State Forest
E.J. Dwigans, Educational Ranger, Holmes Educational State Forest



Photos taken by EJ Dwigans

Holmes Educational State Forest

1299 Crab Creek Road
Hendersonville, NC 28739

828-692-0100

holmesesf.ncfs@ncagr.gov

Forest Hours:

March 1 — Oct. 31

Closed Mondays

Tuesday—Friday 9 a.m. to 5 p.m.
Saturday—Sunday 11 a.m. to 6 p.m.

Nov. 1 — end of February

Closed Mondays

Tuesday—Friday 9 a.m. to 5 p.m.

Closed Saturday — Sunday

Closed State Holidays

Youth Group Campground:

April 1 — October 31

Visit our website for more

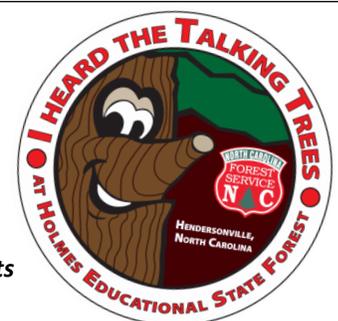
Information.

www.ncesf.org/holmes.html

Susan Fay, ESF Supervisor

EJ Dwigans, Educational Ranger

Visit all of North Carolina's State Forests. From the coast to the mountains, we have 10 state forests across this great land. See NCFS website for more information, www.ncforestservice.gov.



Forest Improvements!

Photos taken by Susan Fay

New roof and paint for the tree cookie. Work completed November 2021.



With the help of Kirsten McDonald, DuPont's new communications director, new rack cards and tear-off maps are in the works.



BRIDGE helped cut down multiple hazard trees. Learn more about BRIDGE @www.ncforestservice.gov/fire_control/bridge.htm or on Facebook @www.facebook.com/NCFSBRIDGE



Splitting firewood for next year's shelter and campground reservations.

Did You Know, We Have a History!

Part III: In the late 1970's, Holmes began to transition from a small state forest, which emphasized recreation, to a forest that could be used as an outdoor classroom by local school teachers. During this time, rangers created the Forestry Demonstration Trail, the Forest Trail, the Forestry Center and several small exhibits referred to as Forestry Stations. The trails and exhibits were developed to assist with public interpretation and describe the concept of forestry. The Forestry Demonstration Trail also included self-guided study sites utilized by teachers to educate students on different forestry related subjects such as water, forest measurements, and forest growth.

By 1985 Holmes, now considered an Educational State Forest with a staff of three (Bob Siegler, forest supervisor, Wade Carpenter and Sherry Suttles, education rangers), began a new era within the N.C. Forest Service by teaching forestry related subjects to local school children while in an outdoor setting. Some of the first recorded ranger-led programs were in April, 1985 and included 18 organized programs with 443 persons attending. Throughout the year, teachers could choose between 13 different programs. Subjects included *Story of Smokey*, *New Forest for Wildlife*, *Wildflowers*, *Tree Ring*, *Meet Your Tree*, *Firewood*, and *History of Paper*. Schools attended from all over including Flat Rock, Mills River, Candler, Asheville, and Tryon City. Other programs offered included teacher workshops, *Project Learning Tree* and *Investigating Your Environment*, special events such as *Smokey Bear Day* and a day camp that taught children about forests, wildlife, soil and water.

Other notable achievements: April 1992, work started on a soil and water study site by the Henderson, Transylvania, and Buncombe County Soil Conservation Service, Mountain Area Resource Conservation and Development, and USDA Soil Conservation Service. Work included the installation of an amphitheater and a new boardwalk built over a wetland. In April 2005, in a joint research study between University of Tennessee and the N.C. Forest Service, 237 butternut seedlings (AKA white walnut) were planted near the office on a 10ft x 12ft spacing. In 1995, it was estimated that 77% of butternuts were dead due to a fungal disease that caused stem cankers. Seeds were collected from surviving butternuts with the hope that the seedlings that were grown would provide disease resistant stock for future generations.

Today, Holmes' program offerings have expanded not only to schools but to the general public. When time allows and the weather cooperates, rangers teach a wide variety of forestry related subjects. Our most popular general public programs include guided hikes focused on wildflowers, mushrooms, and basic tree identification. Check our website for upcoming programs in 2022!



Butternut bud. Photo by Susan Fay

Fun Fall Fungi

To most folks, fall may not seem like the best time of the year to find edible fungus. However, seasoned mushroom hunters know that this change in weather brings out some of the best edible mushrooms in our area. The first that comes to mind is the remarkable Lion's Mane mushroom (*Hericium erinaceus*). This fungus can be found between fall and early spring here in Western North Carolina and is easily identified by its white, spore producing spines. The Lion's Mane mushroom is a saprophyte (feeds on dead plant matter) and grows predominately on dead hardwood tissue. It can often be found growing out of the decaying parts of living trees, and if you're lucky enough to find one, it will continue to fruit on the same tree year after year until its nutrient source is depleted. There are many ways to prepare this mushroom, but my absolute favorite is the "faux crab cake" preparation method. In this recipe, the mushroom is shredded, mixed with panko breadcrumbs and spices, then deep fried to perfection.

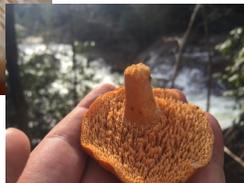
Another fall species that comes to mind is the Hen of the Woods or Maitake (*Grifola frondosa*). This distinct mushroom is more often than not found growing at the base of oak trees. While there are no toxic imitators, Hen of the Woods may be confused with Black Staining Polypore (*Meripilus sumstinei*), which is only considered inedible because it becomes increasingly tough as it matures. Just like the Lion's Mane mushroom, Hen of the Woods will continue to fruit on the same tree year after year. I enjoy this mushroom tempura fried as well as on homemade pizza.

The Velvet Foot mushroom (*Flammulina velutipes*) is another good fall edible mushroom. However, this species should not be collected by beginner foragers as it is often confused with the toxic Deadly Galerina (*Galerina marginata*). The two species look remarkably similar and can frequently be found growing side by side on the same log. Genetically identical, cultivated forms of the Velvet Foot mushroom can be found in some grocery stores and are sold as "Enoki" mushrooms. These cultivated varieties look completely different than their wild counterpart because they are grown in the absence of light under high CO² conditions.

Other decent fall edibles include Oyster Mushrooms (Pleurotus species) and Hedgehog Mushrooms (Hydnum species).



Cultivated Enoki Mushrooms.
Photo by Joanna Tkaczuk



Hedgehog Mushrooms. Photos by EJ Dwigans



Hen of the Woods. Photo by EJ Dwigans.



Lion's Mane. Photo by EJ Dwigans.



Oyster Mushroom. Photo by EJ Dwigans.

Updated Statistics on Self-Guided Activities!

To date, our iNaturalist project "Holmes Educational State Forest Bioblitz!" has 232 observations that include 151 different species by 41 observers. We've made progress, but let's do more! Visit the iNaturalist website at www.inaturalist.org for more information. Click on "community" then "projects" and search for "Holmes Educational State Forest Bioblitz!".

Don't forget about ecoExplore. Earning points for badges and prizes can be rewarding, but it's the time you'll spend outside exploring that makes this a great program. Visit their website, www.ecoexplore.net, for more information and updates on the latest projects and events. Also, by clicking on the various badges, you can find fun facts and tips about any current subject.

Current Badge: Mammalogy, November – December, 2021, with a field focus on rodents starting in December. One of NC's biggest rodents can be found at Holmes. Just look for the trees they have been working on.



Photo taken by Susan Fay



Photo by EJ Dwigans

Volunteers in Action — Invasive Removal!

On Nov. 5, Ranger Dwigans led a team of volunteers for a day of service that was organized for Aaron Paula Thompson’s birthday. Participants removed invasive species including Multiflora Rose, Oriental Bittersweet, Autumn Olive, Japanese Honeysuckle, and Chinese Privet. The day of service was a successful one with more than five trash barrels worth of invasive plants removed! The group also donated a new bench for the deck of our forestry center, so be sure to stop by the forest sometime and sit a spell!

Volunteers in Action — Planting Native Fruits!

On Nov. 18, Ranger Dwigans and friend of the forest, Will Garvey, planted American Pawpaw and American Persimmon trees around the pollinator garden and rock labyrinth. The seedlings were graciously donated to the forest by Will Garvey and Robin Hoofnagle after being groomed from seeds at their home. Staff at Holmes Educational State Forest are looking forward to watching these trees grow over the next few years.

The American Persimmon (*Diospyros virginiana*) and the Pawpaw (*Asimina triloba*) are two of North America’s native fruits that evolved alongside mammoths, giant sloths, and other megafauna of the Pleistocene epoch prior to the arrival of humans onto the continent. These large animals were ecologically responsible for consuming and distributing the seeds of these trees. As human activity spread and began hunting, these animals were killed off, leaving the American Persimmon and Pawpaw without an ecological partner to help with seed dispersal. Since then, humans have become the most probable source of seed dispersal for these two species within their native ranges.

The Pawpaw tree produces large yellow/green/brown fruit and can be found in fertile, well-drained bottomlands as well as hilly upland habitats. They are the largest native edible fruit in the United States. The taste of a Pawpaw fruit is best described as a cross between a banana and a mango. They may be eaten raw or included in desserts such as ice cream and pudding. The tree’s flowers smell of rotten flesh and are typically pollinated by blowflies and carrion beetles. For this reason, Pawpaw growers often hang roadkill on the branches around these flowers to increase the likelihood of pollination. The leaves of the Pawpaw contain a natural insecticide called [acetogenins](#). After consuming these leaves, the larvae of the Zebra Swallowtail butterfly are able to “collect and store” trace amounts of these chemicals, making them unpalatable to birds and other potential predators throughout their entire life cycle. Trees typically begin producing fruit in seven to eight years.

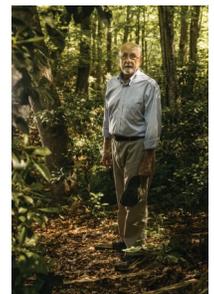
The American Persimmon is a small, to medium sized deciduous tree that grows in well drained soil. The yellowish orange fruits are eaten by a variety of wildlife and may be used in pies, jams, puddings and other desserts. Its heartwood is extremely valuable but can take up to a century after the tree begins growing to develop. If you’ve ever eaten an unripe persimmon, you know why the fruit is typically eaten after the first frost, once it’s had time to ripen. Unripe persimmon fruit is extremely unkind and can be quite an unpleasant experience for the beginning forager.



Photo by EJ Dwigans

Volunteers in Action — October Environmental Lecture Series!

The rangers here at Holmes Educational State Forest were pleased to offer a three-part Environmental Lecture Series by Tom Baugh in October. Tom is a retired conservation biologist with more than 40 years of experience in the field working with one university and two federal agencies. Most recently he served as steward at the Bat Fork Bog Plant Conservation Preserve in Hendersonville and has worked in a variety of habitats from wetlands to deserts. Thanks to Tom for volunteering his time to provide an informative and entertaining experience for our forest visitors!



Tom Baugh. Photo by Evan Anderson.

Look for our next newsletter in Winter/Spring 2022.

The North Carolina Forest Service is a division of the North Carolina Department of Agriculture and Consumer Services. Steve Troxler, Commissioner

