

The Talking Forest

Holmes Educational State Forest

Summer 2021

Volunteers in Action!

Here at Holmes Educational State Forest, removing and stopping the spread of invasive plant species is a constant struggle. There are two things that make a plant invasive. First, invasive plants are non-native to the ecosystems they inhabit and never evolved to grow there in the first place. Second, invasive plants cause harm to the ecosystems they inhabit. They tend to outcompete native species and can threaten biodiversity, water quality, as well as other benefits we receive from the forest environment.

Native to Eastern Asia, the Multiflora Rose shrub is one of the more prevalent invasive plant species at Holmes. You can find it on almost any trail, growing in large impenetrable thickets. Originally introduced for erosion control, broken off bits of the plant can easily re-root and grow into a new thicket. Three months ago, Holmes Rangers were approached by a local citizen who was concerned about the growth and spread of Multiflora Rose along the Forest Demonstration Trail. Duane Bowker and his wife Ellen have been regular visitors to Holmes Educational State Forest since they moved to the area from the Jersey Shore in 2015. Duane began his career studying the basics of the visual system (Ph.D. from The Center for Visual Science, University of Rochester, 1980) before starting a career at AT&T Bell Laboratories as an engineer. During that time he was granted 15 patents related to voice and data communications and digital signal processing. After retiring in 2012, Duane has filled his time backpacking, hiking, traveling and volunteering. Over the last several years, Duane has volunteered 103 work days with Conserving Carolina to remove invasive and non-native plants in our area. Now, after 40 hours of pulling, cutting, and treating hundreds of plants, Duane has put a sizable dent in the Multiflora Rose population here at Holmes ESF! We greatly appreciate Duane's contributions over the last few months! We encourage anyone interested in volunteering their time at Holmes Educational State Forest to contact E.J. Dwigans (ej.dwigans@ncagr.gov) to inquire about opportunities.



Duane's wife Ellen before Duane got to work off the Campground Road.

Photo taken by Duane Bowker

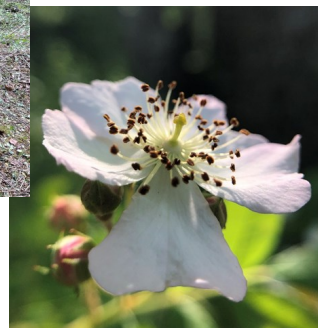


After Duane's hard at work off the Campground Road.

Photo taken by EJ Dwigans



This is what over 40 hours and 34 barrels of pulled multiflora rose looks like. The pile measures about 4 feet in height by 10 feet in length. A true test of persistence! Photo taken by Susan Fay.



Multiflora Rose flowering
Photo 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—October 31

Closed Mondays

Tuesday—Friday 9am to 5pm
Saturday—Sunday 11am to 6pm

November 1— end of February

Closed Mondays

Tuesday—Friday 9am to 5pm

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: Lantern Hooks and New Metal Roof

Holmes staff and Bob Twomey, from DuPont State Recreational Forest, recently installed two lantern hooks at the youth group campground. These should allow groups an easier way to provide light during nighttime hours.

We also began installing a metal roof over our tree cookie. The cookie was in dire need of a new roof due to the old cedar shingles rotting and falling to the ground. If you get a chance, walk by and see our progress.



Photos taken by Susan Fay



About our cookie: Our tree cookie came from a Southern Red Oak that had fallen on a house in Halifax County, North Carolina. One of the sections made it to Holmes where it has been displayed since the early 1980's. How old was it when it came down? Let us know what you think.

Bob Seigler, former forest supervisor, standing next to our tree cookie, 1985



Did you know, we have a history!

Part II: By 1955, the NC Division of Forestry began growing Fraser fir in addition to the White pine, Yellow poplar and Black locust they had been growing since the late 1930s. The Christmas tree industry started to pick up steam and Holmes was one of two nurseries in North Carolina providing them to mountain area landowners. The nursery provided tree seedlings up to the late 1960s when the operation was moved to Avery County near Linville.

In 1972, Holmes was designated a small state forest with the purpose of providing demonstrations on sound forestry practices that gave landowners an opportunity to observe techniques they could use to improve their woodland environment. By 1973, with the assistance of grant money from US Bureau of Outdoor Recreation, the state began construction on the forest's infrastructure such as trails, restrooms and forestry center.

October 1975 Guy U. Justus and others began constructing the picnic shelter's wooden frame. Soon after, Bobby McDowell, Holmes first Forest Supervisor, and Ralph White finished the shelter by laying all the rock and brick.

Jan. 16, 1977 at 11 a.m., with snow on the ground, Holmes State Forest opened to visitors. Two rangers, David Dethero and Alec Hurt, gave tours throughout the forest which included a stop at the shelter to allow everyone to get warm by a fire. Later that year, on May 22, Holmes State Forest was officially dedicated with a ribbon cutting performed by Mrs. Ellen Eversman, John Simcox Holmes's niece. During that first year it was reported Holmes had 17,801 visitors.



Dedication 22 May 1977, Ellen Allston Eversman



Bobby, 1977 with his dog "Woody"



Guy U. Justus, 1975

Fun fact: Bobby McDowell, who was a native of Henderson County, started his Forest Service career in 1951 when the forest was still a tree nursery. Bobby's forest service career lasted over 20 years and included doing all the stone work on three other state forest covered shelters, Clemmons, Tuttle and Rendezvous Mountain.

Look for our last installment of "Did you know, we have a history!" in fall 2021. It will cover 1980 through 2021.

References for Invasive Species

Wondering what we turn to when looking for more information on invasive species? The following are just a couple of references we've used in the past to aid in proper identification and removal.

Check out these online resources to learn more about invasive plants and pests in your area!

https://www.ncforestservice.gov/forest_health/invasives.htm — North Carolina Forest Service Forest Health

<https://ncwildflower.org/invasive-exotic-species-list/> — North Carolina Native Plant Society

<http://nc-ipc.weebly.com/nc-invasive-plants.html> — NC Invasive Plant Council / Southeast Exotic Pest Plant Council

<https://www.invasivespeciesinfo.gov/us/north-carolina> — USDA National Invasive Species Information Center

http://www.namethatplant.net/books_ncdot.shtml — To download "Invasive Exotic Plants of North Carolina" by Cheri Smith

<https://savehemlocknc.org> — Hemlock Restoration Initiative

Fun Fact: Since 2016, the Hemlock Restoration Initiative has been helping Holmes State Forest with treatments to over 600 hemlocks found within our boundaries. The Hemlock Restoration Initiative is a group sponsored by NC Department of Agriculture and Consumer Services and USDA-Forest Service Forest Health Protection.

Self-Guided Activities at Holmes ESF Continue!

To date, our iNaturalist project "Holmes Educational State Forest Bioblitz!" has **220 observations** that include **145 different species** by **36 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 their latest projects and events. Also, by clicking on the various badges, you can find fun facts and tips about any current subject.



Pandorus Sphinx Moth
Photo taken by Susan Fay

Current Badges: Entomology, July 1, 2021 – Aug. 31, 2021, Beetles, Duck, Wildflower, and Soil. And coming soon, Ichthyology!



Crab Spider and Fruit fly. Photo taken by EJ Dwigans



Imperial Caterpillar. Photo taken by EJ Dwigans



Moth infected by Cordyceps. Photo taken by EJ Dwigans

Pretty Parasites

The fact that parasites are all around us may be enough to creep most people out, but have you considered that some parasites play an active role in our forest ecosystems. Maybe you've found a plant growing in the forest that isn't green. If so, you may have stumbled upon one of the numerous parasitic plants that occupy our region. These plants aren't green because they have no chlorophyll. Without chlorophyll these plants can't photosynthesize and thus cannot create energy from the sun. Instead, they must steal their nutrients from another source. In the case of Beech Drops, nutrients are stolen from the roots of surrounding plant species. Other species of parasitic plants like Ghost Pipes are known as myco-heterotrophs and obtain nutrients by parasitizing underground mycorrhizal fungal networks. These fungal networks grow in association with the roots of plants, providing the plants with water and mineral nutrients such as phosphorous. The plant, in turn, provides the fungal networks with organic molecules like the sugars they produce through photosynthesis. Parasitic plants take advantage of this mutualistic relationship by stealing nutrients directly from the fungal networks. Other parasitic plants like Dodder can steal nutrients directly from a plants vascular system rather than its roots. These plants can be found spring-summer and are often quite beautiful and photogenic. Keep an eye out for these cool plants the next time you're in the forest!



One-flowered
Broomrape
(*Orbanche uniflora*)



Sweet Pinesap
(*Monotropis odorata*)



Ghost Pipes
(*Monotropa uniflora*)



Beech Drops
(*Epifagus virginiana*)



Pinesap
(*Monotropa hypopitys*)

Photos by EJ Dwiggins

Holmes State Forest now Offering Lecture Series on Ecology

Holmes Educational State Forest is pleased to announce a three-part lecture series on the science and application of Ecology. These integrated PowerPoint modules will include (1) the Principles of Ecology, (2) The Principles of Conservation Biology, and (3) The Principles of Restoration Ecology. The modules will be offered at 10 a.m. on Oct. 12, 19 and 26. NCEE Criteria III and CEU credits available upon request. Participation is limited to 20 people per lecture and will be held in Holmes Educational State Forest picnic shelter. Each presentation will last 45 minutes followed by a 15 minute discussion. Picnic tables are available for seating however participants are encouraged to bring their own chairs. These programs are free but you **MUST SIGN UP** to participate. Call now (828 692-0100) or email (holmesesf.ncfs@ncagr.gov) to reserve your spot!

Our speaker will be Tom Baugh

Tom is a biologist with a focus on Ecology and 40+ years experience in various aspects of Conservation Biology with one university and two US federal agencies. He most recently served as Steward at Bat Fork Bog Plant Conservation Preserve in Hendersonville. Tom has worked in wetland habitats from the U.S. deserts and coasts, to the southern Appalachian Mountains and with numerous species from fish to plants. He is a member of several professional organizations and is published in scientific, technical, and 'popular' literature.

For more information about Tom Baugh, see Bold Life's Aug. 2021 article titled "Spring to Life".

Look for our next newsletter in Fall 2021.



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

