

The Talking Forest

Holmes Educational State Forest

Winter 2021



Photo taken by Hunter Cook with TESF

Moving to the Land of

Ponderosa Pine

After nearly seven years as an Educational Ranger at Holmes ESF, it is time to say farewell. Ranger Amy is moving on to her next career chapter with the USDA Forest Service in central Idaho. Those snow-covered lands are filled with ponderosa pine (*Pinus ponderosa*), lodgepole pine (*Pinus contorta*), Douglas fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), and western larch (*Larix occidentalis*). You can see a western larch on the Crab Creek Trail at HESF near the pollinator garden. It is a deciduous conifer, which means it loses its needles in the winter and produces cones. Compared to the 60- to 120-foot conifers of the eastern United States, the canopies of these common trees in Idaho stand 110 feet to greater than 180 feet tall.

Amy will be working at one of many national forests in central Idaho. She will be stationed six hours from Wallace, ID as a senior firefighter on a Type IV engine. Fire suppression, prescribed fire, community incident management and fuels mitigation will all be new challenges for her.



**Farewell and Good
Luck, Holmes 2!**



Photo taken by John Kinsella (Amy's dad)

Announcing ... Holmes ESF Now Open Year-Round!

We are pleased to announce that North Carolina's educational state forests are now open for the entire year. Before 2020 ended, the decision was made to keep forests open so the public could continue enjoying fun forest activities through the winter season. Not all amenities will be accessible to the public but movement-based activities, such as hiking trails, are still available.

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

Holmes Educational State Forest

1299 Crab Creek Road
Hendersonville, NC 28739

828-692-0100

holmesesf.ncfs@ncagr.gov

Forest Hours:

Nov. 1 — end of February

Closed Mondays

Tuesday—Friday 9 a.m. to 5 p.m.

Closed Saturday—Sunday

Closed State Holidays

March 1 — Oct. 31

Closed Mondays

Tuesday—Friday 9 a.m. to 5 p.m.

Saturday—Sunday 11 a.m. to 6 p.m.

Youth Group Campground:

April 1 — Oct. 31

Visit our website for more
Information.

www.ncesf.org/holmes.html

Susan Fay, ESF Supervisor

EJ Dwigans, Educational Ranger



HESF 2020 Favorite Moments

We would like to thank everyone for another year and are truly grateful for the opportunity to serve our surrounding communities. These six photographs represent a couple of our favorite moments while working on the forest in 2020.



This is one of my favorite spots on the forest. Visit the pollinator garden and observe the many plants that help our forest pollinators. Special thanks to the N.C. Cooperative Extension, Henderson County Master Gardeners who have done a fantastic job maintaining and providing new plants for the garden.

Photo taken by Susan Fay



Lion's Mane Mushroom: In addition to being an excellent fall edible species, Lion's Mane mushrooms are considered medicinal and contain promising neuroregenerative compounds that could one day be used to treat Alzheimer's patients.

Photo taken by EJ Dwigans



Crab Spider: Unlike spiders that spin webs, crab spiders are ambush predators. They camouflage themselves and hide inside flowers, waiting for their prey to land. These spiders can almost always be found in our pollinator garden during the warmer months.

Photo taken by EJ Dwigans



An NCFS initial attack crew was dispatched to Western Texas in late August/early September. Amy was part of this Type II crew.

Photo taken by Jason Noble with BRIDGE



It's a fun challenge to try and figure out what tree you are observing without leaves. To what tree do you think this bud belongs? Want to know more about tree identification in the winter? Check our website for any upcoming programs.

Photo taken by Susan Fay

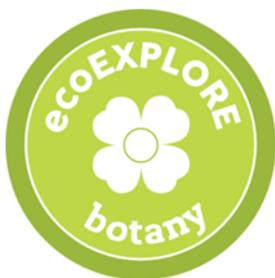


Amy enjoyed filming and compiling an educational video about tree growth rings geared toward first through fifth grade students but suitable for all ages to enjoy.

Screenshot taken by Amy Kinsella

Self-Guided Activities Continue at HESF

Holmes ESF continues to follow the guidance of the Centers for Disease Control and Prevention and the N.C. Department of Agriculture and Consumer Services to maintain visitor safety during the COVID-19 pandemic. Although in-person, ranger-led classes remain suspended currently, visitors are welcome to complete some self-guided activities while in the forest. With the change of seasons from winter to spring, there is still a wide variety of life to observe and phenology to enjoy while quietly hiking the trails. For all self-guided opportunities, visit HESF's website at www.ncesf.org/holmes.html.



Newest project runs March 1, 2021 – April 30, 2021 – It's Botany Season! Join ecoExplore and Holmes ESF for some botany fun. Visit the exoExplore website for more information including fun facts and tips about plants. Take the challenge and earn your Botany Field Badge. **Earn Bonus Badges** – look for bonus badges being offered on the ecoExplore website. Every observation that is submitted earns one extra point toward prizes. Visit www.ecoexplore.net for more information.

Busy, Busy, Beavers!

Through rain and snow, the beavers here at Holmes have been busy this winter! There have been at least two beavers working hard to build three dams along the drainage creek flowing under our main gate. They have effectively raised the water level by more than 4 feet in some areas. Beavers work fast and tracking their progress is fun, although catching a glimpse of a beaver is often hard since they are mostly active at night. With the help of Alan Cameron, a forest volunteer, we've been able to capture night footage of the beavers in action.

Beavers are herbivores, feeding on the inner bark of many tree species. The resident beavers here at Holmes prefer yellow poplar, red maple and black cherry. Even though beaver populations in the state have been flourishing for many years, most folks visiting the forest have never seen a beaver or a beaver dam before. Furthermore, most folks are unaware that there is a difference between a beaver dam and a beaver lodge. Beavers build dams in flowing water to create water deep enough to swim in. Beavers don't live inside the dams they



Photo taken by Alan Cameron, all-around awesome forest volunteer



Photo taken by EJ Dwigans

build but instead live in lodges or burrows. When there is enough space, lodges are built far from the bank with

underwater entrances to protect them against predation. When there isn't much space, as is the case here at Holmes, they dig burrows underneath the stream banks. These burrows also have underwater entrances.

During the 1800s, the North American Beaver (*Castor canadensis*) was almost hunted and trapped to extinction due to the demand for its valuable fur. The last report of a native beaver taken in the state was in 1897. In the 1930s and 1940s many states began restocking programs and in 1939, 29 beavers from Pennsylvania were released on what is now the Sandhills Game Land. This restocking program continued between 1951 and 1956. During this time, 54 beavers were trapped and released in nine North Carolina counties, including Henderson County.

Beavers are considered "pests" by many landowners. They chew down valuable trees, clog up drainage ditches and culverts, and flood areas that people don't want flooded, such as agricultural

fields. However, beavers provide great benefit to the local environment. Physically, beaver ponds help control erosion and sedimentation. This is incredibly important as sediment from runoff is the No. 1 pollutant in our rivers and streams. Beavers create wetlands that provide habitat for an incredible diversity of plants and animals. Here at Holmes, it didn't take long for the wood frogs to find the beaver ponds and begin laying eggs. These wetlands also help filter out excess nutrients and toxic chemicals that may affect water quality downstream.

Noticing beaver activity on your property? The North Carolina Wildlife Resources Commission is a great resource for any questions you may have about beavers. Their website can be found here: <https://www.ncwildlife.org/>.

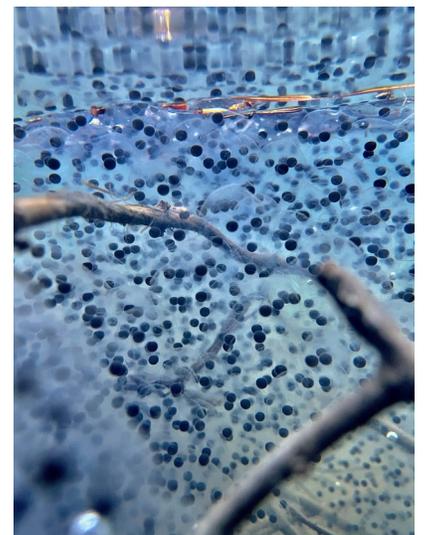


Photo taken by EJ Dwigans

Forest Improvements: Holmes ESF Public Restrooms



Photo taken by Susan Fay

Even during the winter months, Holmes ESF staff is hard at work. With help from talented electricians, improvements were made to the Holmes ESF public restrooms. New wiring, outlets and light switches were completed and lighting up the restrooms by the end of January 2021. During this improvement project, a leak in the roof was discovered and repaired.

Other projects on the horizon include painting the public restrooms and finishing up two new informational kiosks. One kiosk is located at the office, and the other is on the path to the covered shelter.

Countdown to Spring!

It won't be long before we can start looking for this year's new wildflowers. You'll know the time has arrived with the emergence of trout lily, spring beauty and the Oconee bell.



Photos taken by Susan Fay

New Instructional Videos Available Online

We are proud to announce two new environmental education instructional videos for kindergarten through fifth grades and now available online for kindergarten through fifth grades! Formal teachers, nonformal educators, parents, community partners and curious students can now enjoy two twenty-minute videos from the comfort of their virtual screens! These videos are now available on the N.C. Forest Service YouTube channel and the Holmes ESF website, and are perfect for elementary school-aged audiences! Look us up at [https://](https://www.ncesf.org/hSchool.html)

www.ncesf.org/hSchool.html.



Tree Growth Rings: Discover what tree grow rings are and how they can be used to determine a tree's age and growing pattern in this twenty-minute video

(First – third grades) 1.L.2, 1.L.1, 3.L.2



Forest Soils Investigation: Explore the components which make up the soil profile, and the interrelationships between elements in the forest environment

(Third – fifth grades) 3.L.2.4, 5.L.2.2, 5.L.2.3

Hope for our Hemlocks

The Hemlock Woolly Adelgid (HWA) is an invasive insect from East Asia that has been ravaging our native hemlock trees (*Tsuga canadensis* and *Tsuga caroliniana*) since at least 1951 when it was discovered in Richmond, Virginia. It was first reported in North Carolina in 1995 and as of 2015 this insect was occupying 90% of the Eastern hemlock’s range in North America. Killing mature trees in 4-10 years, HWA is considered a threat not just to our native hemlocks but to entire natural communities that have been built around these forest giants. Typically found in moist, shady groves along north-facing slopes, hemlocks provide significant shade to the forest floor and streams. Temperature rise in our mountain streams from the loss of Hemlock shade is a major concern for native trout and other endemic fish species. These fish and the macroinvertebrates they feed on depend on cold water to survive as it contains higher levels of dissolved oxygen. Many rare and delicate plants also depend on the cool moist ecosystems that form around hemlocks.

Forest managers and silviculturists are working hard on promising research to slow the spread of HWA and while there is currently no silver bullet solution, a combination of chemical, biological, genetic, and silvicultural methods is being used to successfully combat these pests. Even with these tried and true methods of control, secondary pests and pathogens already present in the environment stand by, ready to attack trees after they have been weakened by an HWA infestation. As our climate continues to change, the threat of prolonged drought and higher temperatures will only be exacerbated.

Here at Holmes, through our partnership with the Hemlock Restoration Initiative (HRI), we have been able to chemically treat more than 600 hemlocks growing in the forest. Recently, the HRI established an impact plot of 10 Eastern hemlock trees along the Forest Demonstration Trail. Marked with a number and



Photo taken by Margot Wallston



Connecticut Agricultural Experiment Station, Connecticut Agricultural Experiment Station, Bugwood.org

white painted stripe, be sure to keep an eye out for this plot as you hike the trail.

Have questions about the hemlock trees on your property? The HRI website is a great resource for landowners and anyone interested in learning more about this invasive insect.

Visit <https://savehemlocksncc.org/>.

The Hemlock Restoration Initiative (HRI) is a group, sponsored by the N.C. Department of Agriculture and Consumer Services and USDA-Forest Service Forest Health Protection, whose main objective is to restore hemlocks damaged by HWA, throughout North Carolina.

Special Thanks to Margot Wallston and HRI friends and volunteers.

Working on Holmes ESF hemlock trees since 2016!

Look for our next newsletter in Spring 2021.



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