

Accomplishments Report



Table of Contents

Introduction	3
2023 CASRI Admin Team	4
2023 Accomplishments Summary	5
2023 CASRI Partner Accomplishments	
Tree Plantings	6
Spruce Release	7
Habitat Restoration	8
Research, Surveying, and Monitoring	9
Project and People Spotlights	
Ecological Restoration of Cheat Mountain, WV - Mined Lands Complete - New Mine Pond Decommissioning Phase Begins	12
Landscape-Level Spruce NEPA Takes Flight	15
Historical Aerial Photography	16
Climate-Informed Red Spruce Seedling Production	18
Partner Profiles	20

Introduction

The Central Appalachian Spruce Restoration Initiative (CASRI) is a robust partnership between 20+ federal and state agencies, and global to local non-profits dedicated to restoring red spruce (*Picea rubens*) ecosystems in the Central Appalachians. See page five for a full list of CASRI partners. Since its inception in the early 2000s, CASRI partners have restored thousands of acres of red spruce and worked with dozens of local communities to make progress on CASRI's ambitious mission to restore historic red spruce-northern hardwood ecosystems across the high elevation landscapes of Central Appalachia.

Red spruce was once abundant across the high-elevation habitats of Central Appalachia. After large-scale clear-cutting as a result of extensive logging in the late 1800 & early 1900s, these forests are now scattered patches at the very highest elevations. CASRI partners use multiple tactics such as tree plantings, red spruce release, habitat restoration of wetlands, and non-native invasive species removal to help reconnect and extend these isolated forest patches of red spruce. CASRI works on both public and private lands with a multitude of partners to coordinate restoration across the Central Appalachians.



Contracted planters on Sharp's Knob. Courtesy of Green Forests Work

2023 CASRI Administrative Team



Kris Hennig, Kristopher.Hennig@usda.gov

Kris currently works for the US Forest Service out of the Forest Headquarters on the Monongahela National Forest as Partnership Coordinator. From previous positions within federal and state agencies and academic institutions, Kris brings a breadth of ecological and environmental experience from plant and fungal community ecology, climate change, successional dynamics, wildlife sciences, microbial ecology, and land management amongst others. He holds a Master's degree in Biology from the University of

Mississippi. "In my eyes, no other forested ecosystem engages the senses quite like a mature red spruce forest. CASRI partners are an innovative, collaborative, and supportive bunch. This partnership wouldn't have experienced such success without such a solid team of conservation professionals backing its efforts over the years."

Aleyna Weitzner

Hi everyone! My name is Aleyna Weitzner and I was born and raised in New Jersey on the shore. I graduated from New York University with a Bachelor's in Environmental Studies and Art in May 2023. I really enjoyed learning about urban ecology and was even able to participate in oyster monitoring with the Billion Oyster Project, an organization dedicated to reseeding the oyster population of the New York harbor. I've worked with the Prospect Park Alliance conducting plant surveys and learning park management. I'm really enjoying serving for the Forest Service through AFNHA in the South Zone of the Monongahela National Forest and learning so much more about botany!

Julia Smeltzer

My name Julia and I am the current Chesapeake Conservation and Climate Corps member with the MD/DC Chapter of The Nature Conservancy. I recently graduated from Haverford College with a double major in Biology and Environmental Studies. I have a lot of experience working in coastal ecosystems, during undergrad I spent two years working on a project studying carbon cycling in salt marshes and I spent last summer as a Scientist in Parks intern doing research in the intertidal zone of Acadia National Park. I have really enjoyed learning more about forestry and spruce ecosystems during my time with CASRI!

2023 Accomplishments Summary

In total, CASRI partners planted approximately 168,147 trees, including red spruce and native hardwoods, conifers, and shrubs, over approximately 367 acres in Central Appalachia. There were 12 acres of non-native and invasive species treatment, 22.5 acres of wetland creation and 2 miles of stream restoration in spruce habitat. Partners also completed 32 acres of soil and hydrologic restoration as well as 1.7 miles of road to trail conversion and 1216 acres of spruce release. In addition to the above, CASRI partners engaged in extensive research, monitoring, and outreach, including salamander surveys, soil studies, journal publications, and newspaper articles. The stories and accomplishments below give a small glimpse of all that CASRI partners accomplished in 2023.

<u>Partners</u>

Bolded partners contributed information to the 2023 Accomplishments Report (Thank you!)

Appalachian Forest National Heritage Area (AFNHA) Appalachian Mountain Joint Venture (AMJV) **Appalachian Regional Reforestation Initiative** (ARRI) Appalachian Landscape Conservation Cooperative (APPLCC) Canaan Valley Institute (CVI) Canaan Valley National Wildlife Refuge (CVNWR) Environmental Protection Agency (EPA) Green Forests Work (GFW) U.S. Forest Service Northern Research Station (NRS) **U.S.** Forest Service Monongahela National Forest (USFS-MOF) Natural Resources Conservation Service (NRCS)

Southern Appalachian Spruce Restoration Initiative (SASRI) The Mountain Institute (TMI) Marshall University The Nature Conservancy (TNC) Trout Unlimited (TU) Timberline Association, Inc. (TAI) U.S. Fish and Wildlife Service (USFWS) U.S. Forest Service George Washington-Jefferson National Forest (USFS-GWF) Virginia Tech (VT) West Virginia Division of Natural Resources (WVDNR) West Virginia Division of Forestry (WVDOF) West Virginia Highlands Conservancy (WVHC) West Virginia Land Trust (WVLT) West Virginia University (WVU)

2023 CASRI Accomplishments

Tree Plantings

Canaan Valley National Wildlife Refuge

Red Spruce and Canaan Fir Planting – Canaan Valley National Wildlife Refuge, with monetary and planting help from TNC and volunteers, planted 3,072 red spruce and 1,880 Canaan fir seedlings to celebrate Earth Day 2023. A total of 20 acres of Canaan fir and 14 acres of red spruce were planted. Roughly 100 protective tree tubes were installed on balsam fir trees during this planting.

Green Forests Works and USFS Monongahela National Forest

- *Mower Tract, Fish Hatchery Planting* The U.S. Forest Service, in partnership with Green Forests Work and many other partners, planted 105,215 seedlings of red spruce, native hardwoods, and 20 species of wetland shrubs on 160 acres of reclaimed mine land that was deep ripped in fall 2022. These were the final acres needing decompacted and reforested on the Mower Tract and marked the completion of work that began in 2009.
- Sharp's Knob The U.S. Forest Service, in partnership with Green Forests Work and many other partners, planted 14,850 seedlings of red spruce, native hardwoods, and 16 species of wetland shrubs on 26 acres of reclaimed mine land that was deep ripped in 2022. These were the final acres needing decompacted and reforested on Sharp's Knob and marked the completion of work that began in 2018.

<u>Green Forests Works, Appalachian Stewardship Foundation, The Nature Conservancy, and</u> <u>USFS Monongahela National Forest</u>

• *Gandy Creek, Pharis Knob, First Fork, and Beaver Creek* – The U.S. Forest Service Watershed Program, in partnership with The Nature Conservancy, Appalachian Stewardship Foundation, Green Forests Work, and many other partners, planted a total of 38,630 red spruce, hardwood, and wetland shrub seedlings at 4 sites spanning 127acres of stream riparian habitat.

Kumbrabow State Forest

• *Whitman Road Tree Planting* – The West Viriginia Division of Forestry, in collaboration with the Randolph County 4-H Club, planted approximately 1,000 red spruce seedlings in parallel with the Whitman Road, spanning a length of about .75 miles.

The Nature Conservancy

Plant a Billion Trees Campaign – TNC's Plant a Billion Trees campaign provided financial support of > \$150,000 for CASRI partners on various projects covered throughout this accomplishment report.

- Cheat Mountain Club Planted a mix of spruce and northern hardwoods, 50 trees in total, at the Cheat Mountain Club
- *Cranesville Swamp* **Preserve** Planted approximately 3,500 red spruce at Cranesville Swamp on the Feather tract. 50 volunteers joined for the two-day planting covering about 20 acres. An additional 500 trees were distributed locally.

West Virginia Highlands Conservancy and Timberline Association, Inc.

• *Canaan Valley* – The West Virginia Highlands Conservancy, in partnership with Timberline Homeowners Association of Canaan Valley, continued a nearly 20-year effort to plant red spruce trees across the HOAs footprint by planting 700 seedlings. These plantings create connectivity with or expand red spruce forests and other natural areas that occur within adjacent National Wildlife Refuge land.

West Virginia Land Trust

• *Yellow Creek Natural Area –* WVLT planted 100 Canaan fir seedlings to streamside old-field habitat at its Yellow Creek Natural Area near Davis. With help from NCCC AmeriCorps all the trees and shelter was planted in one day. This location was chosen because upstream is a small mature fir swamp that bridges Yellow Creek.

Spruce Release

Canaan Valley National Wildlife Refuge

- *Spruce Release –* Canaan Valley National Wildlife Refuge continued non-commercial spruce release on one acre along the Blackwater River by girdling only hardwoods. This an area that was planted approximately 20 years ago and the spruce are ready to be released.
- *Beech Brush Removal* Canaan Valley National Wildlife Refuge manually cut one acre of beech brush on Cabin Knob in sensitive Cheat Mountain Salamander habitat where understory spruce in working its way onto the mid story. It is our hope that cutting this beech brush occasionally will get the red spruce seedlings and sapling into the mid-story and ultimate the over-story faster.

The Nature Conservancy

- Mower Tract Completed 99 acres of non-commercial spruce release
- Upper Greenbrier North Completed 280 acres of non-commercial spruce release
- Camp 5 Began commercial spruce release within the Camp 5 sale area. In 2023, ~235 acres were completed using commercial methods.

USFS Gauley District of the Monongahela National Forest

• **Beech brush removal/Spruce Release** - Completed 600 acres of under and midstory red spruce release, primarily through treatment of diseased beech brush, in addition to diseased beech and other canopy

hardwood trees. This occurred under the Red Spruce Restoration/ Treatment of Diseased American Beech (Farm Bill) NEPA.

Habitat Restoration

Green Forests Work and USFS Monongahela National Forest

Mower Tract, Mower Ponds 24 Site Preparation – 22.5 acres of legacy mine sediment ponds below restoration areas were converted into large wetland complexes using an excavator. In spring 2024, red spruce, native hardwoods, and especially wetland shrubs will be planted on these acres, and an additional 24 acres of restored mined lands will undergo supplemental red spruce plantings. Partners include the U.S. Forest Service, Green Forests Work, Ridgewater LLC, and many others.

The Nature Conservancy

• *Habitat Restoration* – Treated 12 acres of NNIS along the Mower Basin Trail System, a spruce dominated landscape.

<u>USFS Greenbrier Ranger District of the Monongahela National Forest, West Virginia</u> <u>Department of Natural Resources, and West Virginia University</u>

• *Beaver Creek –* Implemented 1 mile of stream restoration using large woody material and heavy equipment in the red spruce ecosystem of Beaver Creek of Shavers Fork; selectively felling hardwoods in favor of retaining red spruce.

<u>USFS Greenbrier Ranger District of the Monongahela National Forest and Canaan Valley</u> <u>Institute</u>

• *Shavers Fork* - Restored soil and hydraulic conditions on 32 acres of legacy roads and trail. Improved soil and water condition on 1.7 miles of road-to-trail conversion within red spruce ecosystem of the Shavers Fork headwaters.

<u>USFS Marlinton - White Sulphur Ranger District Monongahela National Forest and Trout</u> <u>Unlimited</u>

• *Black Mountain Run and Mountain Lick* – 1 mile of stream restoration using directional felling in the red spruce ecosystem; selectively felling hardwoods in favor of retaining red spruce.

USFS Marlinton - White Sulphur Ranger District Monongahela National Forest

• Sharps Knob Restoration – 51 acres of non-native red pine trees were commercially removed in preparation for mined land restoration, including decompaction of the ground and planting of red spruce and other native trees/shrubs.

Research, Surveying, and Monitoring

Canaan Valley National Wildlife Refuge

• *Cheat Mountain Salamander Monitoring* – Canaan Valley National Wildlife Refuge conducted Cheat Mountain Salamander surveys with the new long-term monitoring protocol developed by WV DNR, based on our detection probability protocol. All 46 survey points were visited three times in the spring and three times in the fall. In addition, temperature and relative humidity logger data was downloaded and uploaded to USGS. A mark and recapture study was continued for the 3-mile trail underpass where we are trying to determine if CMS are crossing the trial via the underpass. For the second year, we marked rebacked salamanders. In addition, we did not see any marked salamanders of either species crossing the trail.

Green Forests Work

- *Research –* Sherman, Lauren Breanna, "Pond-breeding amphibian responses to wetland creation and reforestation on a legacy surface mine in the Monongahela National Forest" (2023). *Theses and Dissertations--Forestry and Natural Resources*. 73. <u>https://uknowledge.uky.edu/forestry_etds/73</u>
- Research Davenport, Rebecca N., "Effects of Forest Reclamation and Landscape Features on Avian Occupancy, Species Richness, and Abundance in Appalachia" (2023). Theses and Dissertations--Forestry and Natural Resources. 70. <u>https://uknowledge.uky.edu/forestry_etds/70</u>

National Resource Conservation Services (NRCS)

• *Modeling Spodic Properties* - Establishment of an official NRCS project to re-model spodic properties (based off the "Draft Spodic Intensity Model, Leonard), specifically mapping spodic intensity in collaboration with NRCS national level Digital Soil Mapping Research Soil Scientist Travis Nauman, members of the USFS (Jason Teets, and Dylan Stout), Dr. Jim Thompson (WVU) and the Morgantown Soil Survey Office (Jim Leonard and Megan Thomas). The project is slated to be completed by the end of fiscal year 2025. Preliminary models will be tested over the next two field seasons before the final product is available for public/organizational use. Initially the project will be completed at a 30 m resolution, with further investigation into the usefulness of doing the model at a finer 10 m resolution. The model will cover the full extent of the Monogahela National Forest and the Byers historic red spruce extent, buffered using HUC 12 watersheds, and totaling well over 3,000,000 acres. This project expands the total range of the model, the number of covariates and covariate types used in the model, methodology used, as well as will provide statistical information associated with the model output. More information forthcoming.

The Nature Conservancy

• *Monitoring* - Gathered 420 snapshot monitoring data points evaluating spruce response to release.

<u>USFS Marlinton - White Sulphur Ranger District Monongahela National Forest and Trout</u> Unlimited

• *Williams River Watershed* - 105 miles of legacy road and Forest system road assessments to evaluate condition of these features and potential for future treatment of spruce and associated northern hardwood plantings.

Project and People Spotlights in 2023

West Virginia Land Trust

Project Highlights

Ecological Restoration of Cheat Mountain, WV - Mined Lands Complete: New Mine Pond Decommissioning Phase Begins

For over 40 years, exotic grasslands and stunted non-native plantations, legacies of coal strip mining, scarred the high elevation red spruce/northern hardwood forested landscape on the Monongahela National Forest's Cheat Mountain. A colossal undertaking was initiated in 2010 to undo the compaction and dominance of exotic species caused by mining, and to restore watershed function and ecosystem services provided by our high alevation forests.

high elevation forests.

Site preparation work included pushing down of stunted, exotic conifers, decompaction of the ground, creation of wetlands, and spreading of woody material across the restoration areas, and each spring tens of thousands of native seedlings were planted.

After 13 years of ecological restoration work at the Mower Tract, and 6 years at Sharp Knob, this phase of restoration is finally complete: over 1,700 acres are on a trajectory toward becoming red spruce/northern hardwood forests again. More than



Row by row, a D9 bulldozer decompacts legacy mined land after pushing a stunted exotic conifer plantation out of the way. Woody material is spread back over the land and provides numerous benefits to soil production and wildlife habitat, as well as to the 105,000 seedlings that were planted there the following spring.

930,500 tree and shrub seedlings have been planted at the two project sites throughout the life of the project. Nearly 400,000 of the planted seedlings are red spruce from local genetics, and the rest are of 64 native species important to the local forest- a mix of early successional and later successional species. The U.S. Forest Service Monongahela National Forest and Green Forests Work owe the success of these projects to dozens of partners that have been involved over the years, numerous donors, national service work crews, and over 500 volunteers that have planted trees at various volunteer events.

These project sites have been utilized to educate and to demonstrate effective restoration practices, and seven graduate student researchers have studied the wildlife and vegetation responses to the ecological restoration work. Additionally, many recreation opportunities have been created, including an extensive network of hiking and biking trails, and dozens of new campsites.

We are proud of what has been accomplished through this amazing partnership, however, there are still scars on the landscape due to mining practices and additional human intervention is needed.

On the Mower Tract there is a series of over 100 abandoned sediment ponds bordering the downslope side of our completed restoration areas. Mining practices at the time did not require their removal, as is required today, and they serve little ecological benefit and are a source of thermal



Green Forests Work's President, Chris Barton, stands among the tallest red spruce planted 11 years ago (in 2011) on Barton Knob of the Mower Tract.



Mine sediment holding ponds below ecological restoration areas at the Mower Tract. (Photo by Matt Barton)

pollution to downstream coldwater fish habitat.

To address this problem, we began a new phase of our restoration work last fall to decommission many of these ponds and mitigate the thermal pollution. The plan is to turn the ponds into complexes of many small wetlands, which will allow for more water infiltration into the soil and reduce surface water warming to protect species such as native brook trout. The project will take several years and will require extensive earth moving and restructuring, followed by spring tree and shrub planting. A mixture of native wetland trees and shrubs will

grow and eventually shade the area. The first project, for which excavator work was completed in fall 2023, eliminated 18 ponds; this area will be planted in spring 2024.

For more details and a full report about the completion of the reforestation and ecological restoration phase at Mower Tract and Sharp Knob, and the beginning of pond decommissioning work visit <u>https://www.greenforestswork.org/project-reports</u> and select "2023 Report: Ecological Restoration on the Monongahela National Forest".





Before. A mine pond at the Mower Tract before decommissioning. (Photo by U.S. Forest Service)

After. A new wetland complex constructed by an excavator in place of a mine pond at the Mower Tract. (Photo by U.S. Forest Service)

Landscape-Level Spruce NEPA Takes Flight By: Kris Hennig

From small beginnings, come great things. In less than twenty years, the red spruce ecosystem and its restoration has taken on a level of importance and scale across the Central and Southern Appalachians that CASRI and Southern Appalachian Spruce Restoration Initiative (SASRI) stakeholders could only have dreamed of in their early days. In 2023, the Cherokee National Forest (CNF), George Washington and Jefferson National Forests (GWJ), Monongahela National Forest (MNF), and the National Forests in North Carolina, began working together across National Forest System lands to initiate a landscape red spruce-fir ecosystem restoration project.

The selection of a red spruce tree from the Pisgah NF as the 2022 U.S. Capitol Christmas Tree was a large driver for this current project's trajectory. Selection of a red spruce for this honorific title provided substantial public outreach opportunities to highlight the ecological importance of and historical impacts experienced by the red spruce ecosystem. Following soon after, the Southern Appalachian Subregion (which include the Cherokee, Chattahoochee-Oconee, and George Washington and Jefferson NFs) identified red spruce restoration as a subregional priority project and initiated NEPA on a spruce restoration project for Subregion. The Monongahela National Forest was soon invited to join this landscape level NEPA project given the Forest's years of red spruce restoration efforts and the significant scale of current and historical red spruce cover across the Monongahela National Forest.

In support of the red spruce NEPA project, The Nature Conservancy (TNC) launched a "Red Spruce Technical Advisory Board" (RSTAB) to provide expert and science-informed technical recommendations on red spruce ecosystem restoration methods and potential impact. Beginning in 2024, TNC will engage with CASRI and SASRI partners over two months to develop these recommendations.

Copperhead Environmental Consulting will be conducting the environmental assessment, which includes approval of activities where biological and cultural surveys are complete while also providing a framework for subsequent projects to be implemented post-decision utilizing an implementation checklist (the MNF will take the former approach, Southern Apps Subregion the latter).

There is much more to come for this landscape level project in 2024, but all signs point toward a greater emphasis on red spruce ecosystem restoration across the Central and Southern Appalachians!

Historical Aerial Photography

By Dylan Stout

Since December 1937, the United State Department of Agriculture building on Sycamore Street in Elkins, WV has served as the headquarters for Monongahela National Forest. A whole lot of history and land management has occurred within these walls during that time. All of the work accomplished over the years is important to understanding how land management actions influence our forests today, but some historical projects tell the story better than others.

In late 2022, U.S. Forest Service staff identified dozens of boxes with thousands of aerial images taken across the National Forest going back decades. These images represent a treasure trove of information about past land use that has direct implications for present day conditions on the ground. In June of 2023, the Monongahela National Forest GIS staff started to investigate these historical aerial images at the Supervisors office to get a better understanding of what we had. We started by identifying all the years we had photos for and a rough estimate for the number of photos we housed. These photos come from 1932-2003 and include over 10,000 single frame aerial photographs. After testing the process of scanning and georeferencing the images and their usefulness, we decided to start scanning the aerial photos with the long-term hope of digitizing these images for direct comparison with existing aerial imagery in our databases. In September 2023, the Monongahela National Forest partnered with Davis and Elkins College GIS program to work with their students to scan and georeference images from one of the earliest larger sets in 1945. As a result of this effort, all images from this 1945 dataset were scanned and a good portion having been georeferenced. The students at the college have georeferenced about 150 images this semester and may continue into next semester. We have begun cataloging later years, starting with 1956-58, and will slate those images as the next set to begin scanning. We will continue this process, by decade, for the imagery we have, that cannot be obtained through other means.

The 1945 aerial imagery consists of just over 1,600 single frame images and capture dates from early 1945 to early 1946. These images cover both federal, state, and private lands. As of 1/9/24, 129 images have been georeferenced by the Monongahela National Forest GIS staff and an estimated 150 images more have been georeferenced by the Davis and Elkins student partnership. These 1945 images give us a great insight into the landscape nearly 80 years ago. They have been successfully used to identify past disturbances, areas of ecological significance, and information on past management practices.

Comparison of these historical and existing present day aerial images can inform restoration needs of today by identifying past land use. To date, historic aerial imagery has helped identify red spruce stands that were prevalent in the 1940's that still exist today. There have been several instances of this methodology identifying trees or stands of significant age on the forest. This imagery is also an additional tool that can and has been used to identify areas that were once conifer dominated, that have changed composition. Typically, these changes were the result of commercial harvesting, as evidenced by spiral drag lines or noticeable clear cuts in the imagery. These historic images have also been used to identify plantations and other intentional reintroductions of conifer species on the landscape. This gives us more context into the history of repopulation/restoration of Red Spruce on the forest. Not all species that were planted were native, so identifying non-native species like Norway Spruce gives us more information and possibilities for future Red

Spruce restoration opportunities. There are certain to be many additional ways these images can be used to inform restoration and management or other natural resource needs that haven't yet been conceived of!



Aerial image collected in November 1956. The nomenclature at the top right indicates the flight line and location for where this image was taken amongst a broader group of images collected at the same time. Take note of the connical grouping of drag lines evident in this image highlighting a historical harvest strategy not used today.

<u>Climate-Informed Red Spruce Seedling Production</u> By Katy Shallows



For over two decades CASRI partner Dave Saville has produced red spruce seedlings for restoration in the central Appalachians. Saville began production in 1987 with just 100 seedlings and has ramped up over the years with partner demand to 285,000 in 2024. Where to harvest red spruce cones for restoration has been a question for CASRI partners from the beginning. Should the seed be sourced from populations near the restoration sites? Should the seedlings be from a single source or mixed from multiple sources?

As climate change insights evolved, more questions concerning red spruce climate adaptive capacity emerged as pertinent to the viability of restoration. At the 2018 CASRI conference, partners learned about a new Appalachians-wide red spruce genetic research that could be used to help answer new questions on climate adaptation needs. In 2019 Saville, TNC, and researchers from the University of Vermont (UVM) got together as restoration practitioners, conservation strategists, and scientists to use the research insights to increase the genetic diversity of the red spruce restoration seedlings while also minimizing the load of deleterious mutations that can lead to inbreeding depression. By increasing genetic diversity of restoration sites we are setting up the future populations with greater capacity to evolve with future climate changes. The 58,000 seedlings produced for this first effort were planted across 255 acres in Maryland, West Virginia and Virginia on public and private lands in conjunction with other management actions such as red spruce release. The plantings were monitored for success in 2022 and a paper describing the findings will be published in Applications in Plant Sciences in 2024 led by UVM grad Anoob Prakash and others at the Keller Lab, Steve Keller and Thibaut Capblancq, with co-authors from CASRI, Katy Shallows (TNC Appalachians Program), Dave Saville, Deborah

Landau (TNC Maryland), Chad Landress (USFS Monongahela National Forest), and Tal Jacobs (TNC Virginia).

The next steps in the climate-informed seed source selection process include new insights from common garden studies incorporated in the web-based tool (https://fitzlab.shinyapps.io/spruceApp/) created by Susanne Lachmuth. The collaboration has continued and broadened to include more climate-informed red spruce cone collections in 2021 across the central and northern Appalachians that have been used in restoration in West Virginia, Maryland, Pennsylvania, Vermont, New Hampshire and Maine in 2023 and 2024. We look forward to continuing to scale red spruce climate adaptation for future forests!

Partner Profiles 2023

This section is dedicated to showcasing some of our dedicated CASRI partners. Thank you for your hard work!

Amy Albright: U.S. Capitol Christmas Tree

Beginning in 1970, the U.S. Forest Service has annually provided a Christmas tree to be erected and lit on the West Front Lawn of the U.S. Capitol in Washington D.C. Since then, a different national forest has been chosen each year to provide "The People's Tree". This is a big honor for the selected national forest and an excellent opportunity to engage and educate the public around their mission or particular initiatives. The Monongahela National Forest was selected to provide the tree in 2023. U.S Forest Service employee and CASRI member Amy Albright was selected as the U.S. Capitol Christmas Tree project manager. Now that Amy's term as the project manager is over, we wanted to ask her about the experience!

What has the experience of being the U.S. Capitol Christmas Tree project manager looked like?

It has been a wild ride this year! It's been such an honor and a once-in-a-career opportunity to be able to work on the U.S. Capitol Christmas Tree project. I had no idea how much this was going to impact the communities, and how fully everybody here in West Virginia and on the Monongahela National Forest was going to embrace this whole process.

Why did you want to be the U.S. Capitol Christmas Tree project manager?

I thought it would be such a unique opportunity to work with such a wide group of people on the MNF. I had previously worked in National Environmental Policy Act, so I had experience in project planning with teams. I knew that being the U.S. Capitol Christmas Tree project manager would allow me to engage with the public in a different way, and that was something I really wanted to experience.

What have the outreach and education efforts been from the standpoint of spruce trees? Did you talk about Red and Norway spruces?

Every year the national forest selected to provide the U.S. Capitol Christmas Tree is given a national spotlight. It's a huge opportunity to engage the public and highlight a particular initiative. This year, the Monongahela National Forest's Forest Supervisor, Shawn Cochran, wanted to get back to the basics and educate the public about the U.S. Forest Service's multiple use mission. There is often public confusion surrounding how the Forest Service manages the land. Many people are familiar with National Parks, and their mission to protect and preserve land, which is quite different from what the Forest Service does, which is to manage national forests for a variety of different resources and uses. We wanted to educate the public about the active management that the U.S. Forest Service uses to improve conditions and create healthy forests.

The multiple use mission was a really broad topic, but it helped open up conversation with people who weren't familiar with the USFS. While touring the US Capitol Christmas Tree around West Virginia, I was often asked, "Why cut down a perfectly good tree to send to Washington, D.C.?" That opens the door to talk about active management and creating healthier forests through thinning trees and using prescribed fire, as well as restoring red spruce.

The Architect of the Capitol provided the forest with a set of characteristics that make a great U.S. Capitol Christmas Tree - 60-80 feet tall, straight stem, full branches, pretty in 360 degrees. Forest staff searched for good candidates across its 921,000 acres and narrowed the list of candidate trees to eight trees: half were Norway spruce and half were red spruce. In July 2023, the Architect of the Capitol's director of grounds travelled to the Monongahela National Forest to select the tree. He looked at all eight trees and weighed the benefits and negatives of each tree and where they were located, and eventually selected the 63-foot Norway spruce on the Greenbrier Ranger District to represent the forest and state of West Virginia as the 2023 U.S. Capitol Christmas Tree!

The media especially was very interested in discussing the tree selection, and it was a great opportunity to tell the story of how management on the MNF has changed over the last 100 years – how the Civilian Conservation Corps planted many Norway spruce during the 1930s, and how management has shifted over time to restoring native red spruce communities.

Were you at all worried about the transportation and if it would lose needles?

Needle loss was a concern, but we used a water bladder to help prevent the tree from drying on its journey! Just after harvest, the tree used a lot of water and we were adding gallons to the bladder bag every day. By the time the tree arrived in Washington, D.C., water use tapered off and water was added every few days. MNF has provided both a Norway spruce in 1970 and a red spruce in 1976, so we knew historically that both species would transport well.

How have you engaged with the people of West Virginia because of this? What's something you wouldn't have expected that ended up happening?

We knew people would want to participate in this historic event, but the outpouring of support far exceeded our expectations! One of the most fulfilling parts of this U.S. Capitol Christmas Tree campaign was being able to engage with West Virginians and discover all of the ways they are impacted by the MNF.

It was amazing how many people had a connection to a previous U.S. Capitol Christmas tree. We met a woman whose father drove the 1976 U.S. Capitol Christmas Tree to Washington, D.C. West Virginia lumberjack, Arden Cogar, Jr., joined long-time MNF employee, Ron Polgar, to harvest the 2023 tree using a crosscut saw. Cogar's father served as the sawyer of the 1976 tree. Even the youth tree lighter, Ethan Reese, had a connection to the MNF: his great-great grandfather was one of the MNF's first Forest Superintendents.

Leading up to the harvest, MNF staff reached about 20,000 people through individual school programs, public events, and youth groups such as 4-H and Girl Scouts. Our education staff used a Project Learning Tree curriculum about the Forest Service multiple use mission and active management of lands to reach elementary and middle schoolers in the state. They used the U.S. Capitol Christmas Tree as an introduction to the Forest Service, which led to discussions of harvesting Christmas trees from the forest, and ultimately led to identifying other forest products our national forests provide.

What was it like to drive it through the winding roads of West Virginia?

The tree was transported on a 103-foot long tractor trailer, about 30 feet longer than normal, so the trip was a bit nerve wracking! On harvest day, we had to use a special daycab and shorter trailer to drive the tree on a twisty 14-mile gravel road. That was followed by a 19-stop tour around West Virginia and surrounding states to visit towns and allow the public to wish the tree well on its journey to the U.S. Capitol. The two truck drivers were fantastic and incredibly



Amy Albright with the U.S. Capitol Christmas Tree

professional. They gave me full confidence that they could handle the stress of transporting the tree!

Anything that members of CASRI might take from your experience?

The project was able to highlight Canaan fir trees this year, another high elevation native conifer species found in West Virginia. The Forest Service not only provided the U.S. Capitol Christmas Tree for the West Lawn of the Capitol, but this project also provides smaller trees for Federal buildings throughout D.C., including a 25-foot Canaan fir in the USDA building.

This year, the USDA tree and other smaller companion trees were provided by Jim Rockis, a sponsor of the 2023 US Capitol Christmas Tree project and a Canaan Fir grower out of Bruceton Mills, West Virginia. He has been conducting genetic work for three decades on Canaan firs with Dave Saville. Facebook and news articles, as well as an interpretive panel beneath the USDA tree, highlighted Jim's genetic work on Canaan fir.

CVNWR - Dawn Washington

Dawn Washington has been a huge part of CASRI and its' success since the earlier days of the group's formation. Starting as the Supervisory Wildlife Biologist with the Canaan Valley National Wildlife Refuge in 2012, Dawn recognized the importance of red spruce and red spruce restoration to the overall forest health, resilience, and habitat quality that existed on the Refuge. Dawn was a regular contributor to CASRI in addition to integrating her staff and AmeriCorps interns into on-the-ground red spruce restoration efforts and CASRI subcommittees that help develop supporting products that have helped refine and improve CASRI partners restoration success. In 2023, Dawn took a position in North Carolina as Refuge Manager at Alligator River and Pea Island National Wildlife Refuge. We wanted to catch up with Dawn one last time to ask her about her time with Canaan Valley NWR and CASRI. Thanks for all of your time and hard work with CASRI Dawn! You will be missed!

When did you start working with CASRI/Red Spruce?

I started working with CASRI as soon as I came on as the Supervisory Wildlife Biologist in January 2012 at Canaan Valley NWR. Marquette Crockett (*Current Co-coordinator of the Southern Appalachian Spruce Restoration Initiative*), the other biologist took me to my first meeting in Elkins at the SO.

What is your favorite memory working with spruce/in spruce areas?

There are too many! But I would have to say doing night Cheat Mountain salamander genetic sampling work in the most pristine red spruce forest on the Refuge where the entire forest floor is carpeted in moss with CMS everywhere!

What do you think the refuge has had the most impact on during your time with CASRI?

I think the Refuge has the most impact on work with relation to the Cheat Mountain salamander (CMS) and red spruce forests. We have learned so much from the work we have spearheaded on CMS, balance restoring the spruce forest at the landscape level and how that restoration will ultimately benefit CMS. There is no time to waste! We must plant trees in existing CMS occupied areas now! In addition, we have worked very hard to learn more about how fragmentation in the spruce forest is impacting their movements.



Dawn Washington stands amongst the beauty of Canaan Valley National Wildlife Refuge