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WATER

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SOIL

PLANTS

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A LETTER FROM THE PRESIDENT

In 2009, I had the privilege to be on a panel at the United Nations in New York with Prince Albert of Monaco, Nobel Laureate Wangari Maathai and four others to celebrate the success of the "Plant for the Planet" campaign (plant one tree for each person in the world). Here, I stated for the first time in a public forum that the Forestry Reclamation Approach, a regional reforestation model created in Appalachia, has global application. Inspired by the event, and by the dedication of those on the panel, I returned home and worked with several colleagues to create Green Forests Work (GFW), a program to build upon knowledge we had gained from research and one that provides a much-needed service.

Thus far, GFW has completed over 300 volunteer tree planting projects/events throughout Appalachia. Those events have involved over 20,000 volunteers and resulted in the planting of over 3.1 million trees on lands impacted by the legacy of coal mining. In addition, the work has contributed millions of dollars to local communities in an economically distressed region of the US. The Appalachian work has received substantial support, accolades, and is making a difference on the environment and lives of those living in areas impacted by coal mining.

Now, it is time to show the global application of FRA that I so confidently stated in the UN panel. Although the tree species, weather and site conditions may differ from those in Appalachia, the fundamentals of soil science and restoration ecology are transferrable to other regions of the world. The Anglo American's Dawson Mine near Biloela, Australia was the test site to initiate this

global experiment. Just before the COVID-19 pandemic started to close things down, GFW's Director of Operations, Michael French, Dr. Nardia Grant of Unearthed Environmental Services, and I were joined by employees of Anglo America, Komatsu, students from Moura and Banana State Schools, and Traditional Owners from the Gangulu Nation to plant 4,000 trees. Albeit a small planting, but an empowering opportunity for all that were involved. I was again reminded of the words of Wangari Maathai who noted that "...the act of planting a tree reconnects the human spirit to the beauty and importance of the natural world – the basis for all life on Earth."

Green Forests Work continues to fulfill its commitment to plant for the planet's present and future generations. We do so with the tremendous support of all of our funders, partners and volunteers.

Thank you.

Dr. Chris Barton



Figure 1: Dr. Barton discusses potential species migration due to climate change on an experimental reforestation site at the Laurel Fork mine in eastern Kentucky.

BACKGROUND

Our Mission:

Green Forests Work's mission is to re-establish healthy and productive forests on formerly mined lands in Appalachia.

Our Vision:

GFW's vision is to create a renewable and sustainable multi-use resource that will provide economic opportunities while enhancing the local and global environment by converting reclaimed, non-native grasslands and scrublands into healthy, productive forestland. Our reforestation projects provide jobs for equipment operators, nursery workers, and tree planters, and improve the environment by eradicating exotic species and restoring ecosystem services. With the help of our partners and volunteers, this vision is quickly becoming a reality... Since 2009, we have planted more than 3 million trees across nearly 5,000 acres.



Figure 2: A rainbow over the GFW site near Pine Creek, Kentucky.

Year	Acres Planted	Number
2009	37	35,155
2010	204	145,285
2011	670	352,516
2012	321	228,249
2013	381	256,182
2014	362	200,181
2015	629	374,038
2016	386	239,720
2017	349	259,305
2018	665	401,728
2019	466	318,938
2020	515	328,350
Total:	4,985	3,139,647

Table 1: Summary of GFW's reforestation efforts from 2009 - 2020.

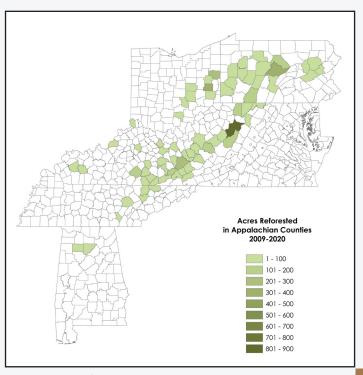


Figure 3: Map of projects supported by GFW in the Appalachian region.

Who We Are:

Green Forests Work (GFW) is a 501(c)(3) not-for-profit organization that focuses our reforestation efforts on lands that were surface mined for coal and conventionally reclaimed. The vast majority of these lands in Appalachia were forested before mining but were often reclaimed to hay/ pastureland or wildlife habitat post-mining land uses. Because these lands were reclaimed in compliance with all applicable laws and regulations, no further obligation to implement reforestation practices is required by the mining company, the landowner, state or federal government, or any other entity. In general, post-SMCRA lands that were reclaimed to hay/ pastureland or wildlife habitat experienced excessive soil compaction by heavy machinery during reclamation, which hinders successful forest establishment.

GFW targets lands that are not being used as intended by the post-mining land use and are typically dominated by non- native grasses, legumes, and, in many cases, invasive exotic species. When left unmanaged, these lands provide few benefits to society and wildlife, and they often serve as reservoirs for invasive exotic species that can disperse to adjacent lands. Due to the excessive soil compaction and well-established non-native vegetation on these lands, natural tree regeneration is often very limited and will not occur in a reasonable timeframe without intervention. GFW provides technical and financial assistance to private landowners and public land managers who wish to restore native forest cover on their lands that were impacted by mining activities.



Figure 4: Chris Osborne and Chris Barton overlook the Starfire surface mining complex in Breathitt County, Kentucky.

LANDSCAPE SCALE RESTORATION

As GFW's resources and partner base have grown, so too have the scope and impact of our projects. We have transitioned from undertaking relatively small projects to targeting landscapes for restoration, and we're focusing efforts on restoring declining forest types and working in priority areas for conservation. We have accomplished this by undertaking larger individual projects and by selecting projects that are in close proximity to projects from prior years. Our projects have grown from tens of acres in size to projects that now span hundreds of acres or more. Our efforts on the Monongahela National Forest have resulted in the restoration of more than 1,000 acres.



Figure 5: The Mower Tract on the Monongahela National Forest.

While some of our projects restore upland oak-hickory or oak-pine forest types that are common across the Appalachian region, we can often meet multiple objectives by restoring declining forest types in areas that will also benefit species of concern. As always, we're working to restore the forest type that would have existed prior to mining and we try to include species of concern in the mix

of seedlings that we plant (e.g. American chestnut, American elm, red spruce.)

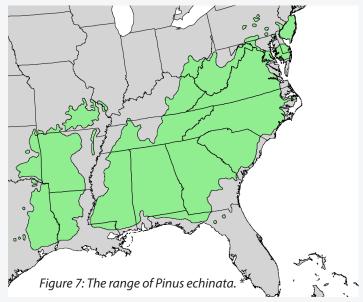
By working on landscape scales, GFW's projects are helping to maintain forest health and resiliency in the Appalachian region. Not only has this transition resulted in greater ecological benefits and watershed impacts, but it has also lowered our per-acre restoration costs so that we can expand the scope of our projects or undertake additional restoration projects.



Figure 6: A 5 year-old American chestnut on a surface mine in WV.

SHORTLEAF PINE AND OAK RESTORATION

Shortleaf pine (*Pinus echinata*) was once the most widespread and common species of pine in the southeastern US. However, shortleaf pine distribution and prevalence have greatly decreased since at least the mid-20th century due to timber harvesting, widespread fire suppression, the extensive planting of loblolly pine and other fast-growing hybrid pines for commercial timber production, southern pine beetle outbreaks, and other factors. The large declines in shortleaf pine distribution and prevalence led to the formation of the Shortleaf Pine Initiative, a collaborative effort of university, governmental, NGO, and environmental organizations who aim to restore shortleaf pine influenced forests throughout the southeastern US.



Shortleaf pine is relatively slow-growing compared to other pine species native to the eastern United States. However, shortleaf pine develops a deep taproot, which allows it to thrive in dry, rocky, upland sites where natural and

anthropogenic fires were formerly much

more common. Widespread fire suppression spanning decades has allowed the colonization of fire in-

tolerant hardwood and conifer species in areas that historically would have been dominated by shortleaf pine and shortleaf pine-upland oak forest types.



Figure 8: Individual shortleaf in an oak dominated stand.

Shortleaf pine forests with naturally occurring periodic fires provide numerous ecological benefits. Fires suppress the encroachment of intolerant species and perpetuate young forest habitat with horizontal and vertical gradients and groundcovers consisting of grasses, forbs, and herbaceous plants, which is required for breeding by several migratory Neotropical songbirds including Golden-winged warblers and Prairie warblers. Young forests provide habitat that is beneficial for breeding and foraging by ruffed grouse, American woodcock, Northern bobwhite quail, and wild turkey. Seeds of shortleaf pines are eaten by numerous mammals and birds, and mature shortleaf pines provide nesting sites for many birds including woodpeckers and mature pines also provide roost sites for several species of imperiled bats including Rafinesque's big-eared bat, the endangered Indiana bat, and the northern long-eared bat, which has been recently listed as threatened.

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Oak species (*Quercus spp*) are crucial members of deciduous and mixed deciduous/coniferous forest types throughout the Appalachian region. Oaks provide habitat and an invaluable food source for birds, rodents, ungulates, as well as insects, fungi, lichens, and other biota, and oaks are a crucial part of the wood products industry, providing timber for products such as building materials, furniture, and barrel staves. In recent decades, oak dominated and shortleaf-upland oak forests throughout the Appalachian range have experienced additional losses due to what is generally referred to as "Oak Decline." Oak decline has been attributed to invasive pests and pathogens, fire suppression, soil compaction, and other factors.



Figure 9: Upland oak-shortleaf pine forest in the Cumberland Plateau.

The declines seen in oaks, and especially white oak (*Quercus alba*) led to the formation of the White Oak Initiative, which is a collaborative effort that promotes restoration and forest management to improve conditions for the development of healthy oak stands.

GFW's projects in the southern Appalachian region help to achieve the objectives of both the Shortleaf Pine Initiative and the White Oak Initiative. The majority of our projects occur on upper slopes

and ridge top landscape positions, where both shortleaf pine and upland oaks would have been major components of the forest type prior to surface mining. Over the years, we have planted hundreds of thousands of oaks and tens of thousands of shortleaf pine for our reforestation projects.



Figure 10: 3-year old shortleaf pine seedlings growing on one of the experimental surface mined land reforestation projects undertaken by GFW on the University of Kentucky's Robinson Forest.

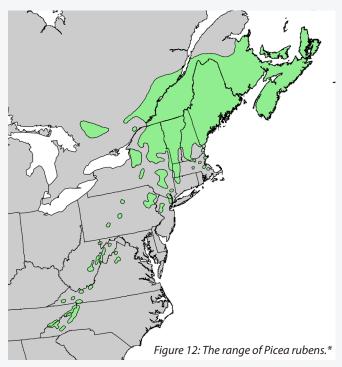


Figure 11: Examining growth rates on a pine growing on a surface mine in eastern Kentucky.

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RED SPRUCE RESTORATION

Red spruce (*Picea rubens*) forest communities in the central and southern Appalachians have historically had a limited distribution and are generally restricted to high elevation areas. Numerous species are dependent on the red spruce ecosystem, many of which are of conservation concern due to the historical rarity of red spruce communities, as well as the more recent reduction in red spruce abundance and distribution. In West Virginia alone, there are at least 240 rare species associated with red spruce ecosystems, including the federally endangered northern flying squirrel.



Red spruce forests once covered more than 500,000 acres of the West Virginia Highlands. After the industrial logging era of the late 19th and early 20th centuries, the ecosystem was reduced to less than 10 percent of what originally existed, and what remained was highly fragmented. Remov-



Figure 13: A red spruce.

al of the conifer dominated forests allowed the forest floor to be exposed to sun and wind, drying out the thick organic soils. Widespread fires sparkde by campfires and train cars hauling logs ignited the logging slash and burned the soils, eliminating the red spruce seedbank. The clearcutting and wildfires across extensive areas led to considerable erosion and eliminated the land's ability to bufferstorm events.



Figure 14: A red spruce forest.

The forests eventually regenerated; however, areas that had been dominated by red spruce were replaced with hardwood dominated forests. In addition to logging, the some areas on the Monongahela National Forest were mined for coal in the 1970s. Reclamation by law required the mining company to return the site to approximate original contour and control erosion. Erosion was controlled by compacting the soil and planting of non-native trees and grasses. Compacted soils and a non-native grass mat have prevented native species recolonization and the planted trees (primarily red pine and Norway spruce) are not growing to their full potential due to soil compaction.

GFW has been working with the US Forest Service and many other partners for approximately a decade to restore red spruce dominated forests on surface mined areas on the Monongahela. This work has led to additional opportunities for red spruce restoration. We have also been working with the Appalachian Regional Reforestation Initiative, Pennsylvania Environmental Council, PA – Department of Environmental Protection, and other partners to identify and implement red spruce restoration projects on formerly mined lands and publicly owned forests in Pennsylvania.

In 2021, we're aiming to restore forests with a red spruce component on 312 acres of mined lands and 250 acres of un-mined forested lands in West Virginia and Pennsylvania. We're also working to identify public lands within the proclamation boundary of the Monongahela that would be suitable for future restoration work. Our goal is to eventually create a less fragmented corridor of red spruce influenced forests along the Allegheny Front, extending from WV into PA.

AUSTRALIA

After the successful installation of the pilot project near Biloela, GFW staff began planning with our US partners and Australian colleagues to scale up native ecosystem restoration in Australia. Taking into account the unprecedented scale of the devastating brush fires experienced across eastern Australia in 2019-2020, these discussions revolved around the potential for plantings on surface mined lands to sequester carbon to mitigate the effects of climate change. As these

discussions continued, we found a great deal of enthusiasm for ecosystem restoration not only for mined land rehabilitation and fire rehabilitation, but also due to the ability of trees to improve water quality. It is likely that our future projects in Australia will meet multiple objectives including restoration of ecosystem services, habitat restoration, as well as improving water quality inputs to the Great Barrier Reef.



Figure 15: A eucalyptus woodland in Queensland, Australia.

2020 YEAR IN REVIEW

2020 was undoubtedly a challenging year. Some of our colleagues lost their jobs, and some of our friends and families lost loved ones. Our deepest sympathies go out to everyone who is suffering from the emotional, economic, and other tolls that this pandemic has placed upon us all.

Due to the pandemic, a few projects that we were supporting were cancelled and several more were postponed until 2021. GFW and our partners had to cancel all of our volunteer tree planting events after March 12 to protect our communities from the spread of SARS-CoV-2, and to ensure that we were complying with CDC guidelines and state executive orders. Because of the cancellations of projects and volunteer planting events, the economic stimulus that our projects provide to small local businesses was reduced. However, we relied heavily upon our professional contractors and we were able to complete the majority of our projects on time. When the planting season was over, we were able to restore **515** acres through the planting of **328,350** trees. We consider this a major success! The following pages highlight some of our projects from the 2020 planting season.



Figure 16: Mountain-laurel (Kalmia latifolia) growing at Cheat Mountain, West Virginia.



Figure 17: Two Appalachian Conservation Corps crew members, Mikayla Schuyler and Paul Turowicz, carry buckets of native grass and pollinator seed to be spread on the hillside of the Mower Tract on Cheat Mountain, West Virginia.

ROCKCASTLE RIVER WILDLIFE MANAGEMENT AREA

Kentucky

This project expanded upon our efforts to restore shortleaf pine-upland oak forests within the proclamation boundary of the Daniel Boone National Forest (DBNF) and represents the fifth consecutive year that we've undertaken a project within the DBNF. The goal of this project was to restore a shortleaf pine-upland oak forest type that would resemble the forest type that was present on the site prior to mining. In addition to the reforestation of 59.6 acres, GFW staff worked with the Kentucky Department of Fish and Wildlife Resources to restore a wildlife opening consisting of native warm season grasses and wildflowers to benefit pollinators.

Table 2: Species and numbers of each species planted at the 2020 RR-WMA site.

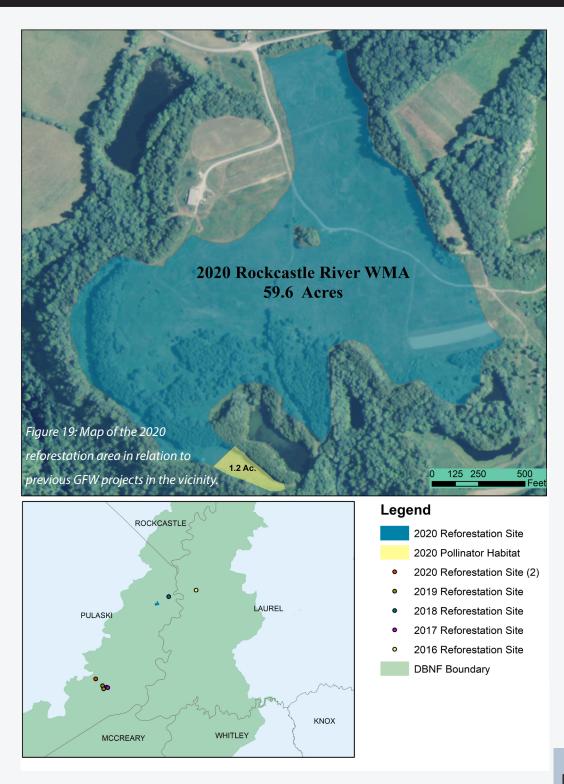
Common name	Scientific name	Number
White oak	Quercus alba	15,700
Northern red oak	Quercus rubra	4,700
Chestnut oak	Quercus prinus	4,000
Black oak	Quercus nigra	2,000
Shortleaf pine	Pinus echinata	2,900
American chestnut	Castanea dentata*	500
Black cherry	Prunus serotina	1,500
Shagbark hickory	Carya ovata	2,000
Mockernut hickory	Carya tomentosa	1,000
Pignut hickory	Carya glabra	1,000
Black locust	Robinia pseudoacacia	2,100
Sycamore	Planatus occidentalis	1,000
Silky dogwood	Cornus amomum	500
Blackgum	Nyssa sylvatica	500
Persimmon	Disopyros virginiana	500
Yellow poplar	Liriodendron tulipifera	1,000
American hazelnut	Corylus Americana	500
Total:		41,400

Since 2009, GFW has engaged more than 21,000 volunteers in our tree planting events.

Figure 18: Students from various universities assisting us with planting.



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REGIONAL CONSERVATION PARTNERSHIP PROGRAM

Kentucky **.**

Common name Scientific name Number White oak Ouercus alba 15,000 Northern red oak Quercus rubra 4,000 Chestnut oak Quercus prinus 4,000 Black oak Quercus nigra 2,000 Shortleaf pine Pinus echinata 2,500 Virginia pine Pinus virginiana 2,000 **American chestnut** Castanea dentata 500 Black cherry Prunus virginiana 2,000 Sycamore Planatus occidentalis 2,000 Silky dogwood Cornus amomum 1,000 Blackgum Nyssa sylvatica 600 Persimmon Diospyros virginiana 1,000 Yellow poplar Liriodendron tulipifera 1,000 American hazelnut Corylus americana 1,000 Eastern redbud Cercis canadensis 600 **Black locust** Robinia pseudoacacia 1,000 600 American plum Prunus americana Total: 40,800

Table 3: Species and numbers of each species planted on the Martin County site.

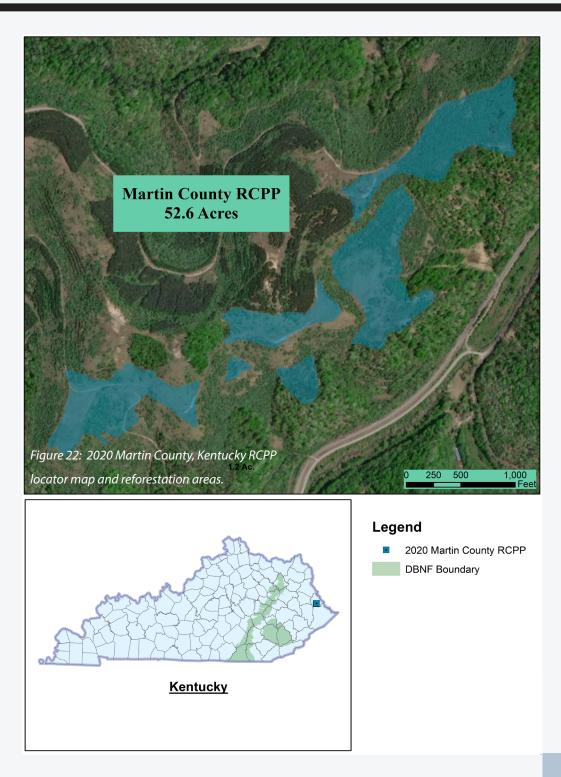


Figure 20: Bare soil is exposed after the non-native species were pushed into piles, which allows native species to colonize.

In 2015, the USDA - Natural Resources Conservation Service awarded a multi-year, multi-state, Regional Conservation Partnership Program (RCPP) grant to the American Bird Conservancy, the Appalachian Mountains Joint Venture, GFW, and other partners. The objective of this RCPP is to create future habitat for Cerulean warblers and other forest interior dependent songbirds by reforesting formerly mined lands. In the spring of 2020, GFW undertook two RCPP projects in southeastern Kentucky, one adjacent to the Daniel Boone National Forest, and one in Martin County. Both of the 2020 RCPP plantings resulted in the creation of additional of shortleaf-upland oak forest habitat.

Figure 21: Professional tree planters carry a mix of seedlings and follow the rips created by the bulldozer.





MONONGAHELA NATIONAL FOREST

West Virginia



Figure 23: Planting on the Monongahela near a small wetland.

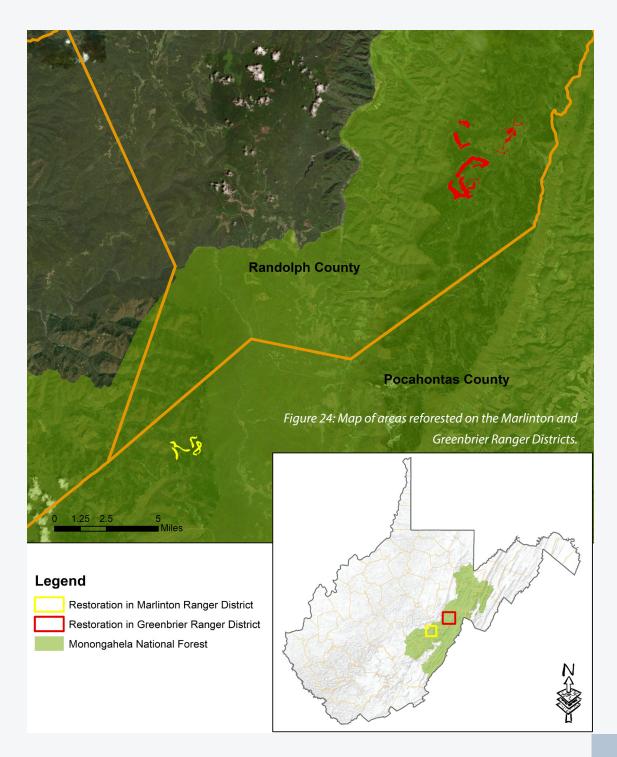
In 2020, GFW and our partners reforested 265 acres and created dozens of wetlands on the Monongahela National Forest. The long-term goal of this project is to increase the acreage of red spruce dominated forest cover on the Monongahela. As the trees mature, forest fragmentation will be reduced, benefiting numerous imperiled species that depend upon red spruce forests. In the short-term, these efforts will create young forest habitat, improve water quality by reducing erosion, and improve habitat for targeted wildlife through the creation of wetlands and vernal pools. GFW, the US Forest Service, and other partners seek to eventually restore red spruce forest cover on all suitable mined areas on the Monongahela as a part of our broader goal of creating a corridor of red spruce influenced forests along the Allegheny front.

Table 4: Species and numbers of each species planted on the Greenbrier Ranger District in 2020.

Common name	Scientific name	Number
Red spruce	Picea rubens	38,016
Quaking aspen	Populus tremuloides	10,000
Black cherry	Prunus serotina	8,610
Speckled alder	Alnus incana	8,250
Silky dogwood	Cornus amomum	6,125
Black chokeberry	Aronia melanocarpa	5,000
Bigtooth aspen	Populus grandidentata	4,000
Red osier dogwood	Cornus sericea	4,000
Ninebark	Physocarpus opulifolius	3,000
American hazelnut	Corylus americana	1,000
Red elderberry	Sambucus racemosa	967
Alternate leaf dogwood	Cornus alternifolia	808
Chokecherry	Prunus virginiana	538
Southern arrowwood	Viburnum recognitum	530
Winterberry	Ilex verticillata	440
Cucumber magnolia	Magnolia acuminata	250
American chestnut	Castanea dentata*	247
American hornbeam	Carpinus caroliniana	228
Mountain holly	Ilex montana	100
Hophornbeam	Ostrya virginiana	80
Fraser magnolia	Magnolia fraseri	75
Mountain ash	Sorbus americana	25
American elm	Ulmus americana	20
Serviceberry	Amelanchier arborea	5
American basswood	Tilia Americana	2
Swamp white oak	Quercus bicolor	2
Total:		92,318

Table 5: Species and numbers of each species planted on the Marlinton Ranger District in 2020.

Common name	Scientific name	Number
Red spruce	Picea rubens	11,332
Yellow birch	Betula alleghaniensis	8,400
Red maple	Acer rubrum	4,200
Black cherry	Prunus serotina	4,200
Quaking aspen	Populus tremuloides	3,000
Sugar maple	Acer saccharum	2,100
Speckled alder	Alnus incana	1,200
Mountain ash	Sorbus americana	1,200
Serviceberry	Amelanchier arborea	1,200
American chestnut	Castanea dentata*	250
Total:		37,082



APPALACHIAN CONSERVATION CORPS PARTNERSHIP

ı West Virginia & Kentucky ı

Restoring 200 acres of reclaimed mined land requires a considerable time commitment. Even after the planning and contract writing, site preparation includes marking the boundary, bulldozing any stunted, and often non-native vegetation, ripping the ground to loosen the compacted soil, and constructing wetlands. Once prepped, the site can be planted with tens of thousands of trees and shrubs that were ordered at least a year in advance. Getting this kind of project done requires partnerships. Partnerships are a cornerstone of conservation. No one organization has all the resources or knowledge. To affect change on a large scale, sharing and cooperating are a necessity.

The COVID-19 pandemic created many obstacles in 2020. At the Monongahela National Forest, GFW and the Greenbrier Ranger District were able to act fast and enact precautions, which allowed professional planters to fulfill their contract. While most of the nurseries could still ship their trees, one local nursery, which required USFS and GFW personnel to come retrieve the plants in person, had to close its doors to the public. When restrictions were lifted and precautions were in place, it was too late. The professional planters had already come and gone from the restoration site. The nursery was unable to house the plants until the following year, so the plants were transported to the Mower Tract. With only one GFW staff member located in West Virginia and the staff from USFS busy with their own field season projects, the question became: how will the plants, that number over 4,000, get planted?

The answer came in the form of a new part nership with the Appalachian

Conservation Corps (ACC). ACC is a non-profit, AmeriCorps-affiliated

organization that works on public lands throughout the greater Shenandoah Valley region. Members are generally 18-25 years old and are placed on work crews that vary in size. Work crews are tasked with completing various conservation projects which helps them to gain knowledge, acquire experience, and learn new skills. Hired by GFW and partnering with the USFS, a 6-member ACC crew worked on the 2020 Mower Tract restoration site.

Each crew has its own crew leader so the crew can operate without supervision, and by camping on site, the crew does not waste time traveling each day, particularly in West Virginia where work sites are remote. GFW hopes to motivate young West Virginians to stay in-state and be part of a workforce that helps to restore mine impacted landscapes. In total, the crew was able to plant 4,330 wetland shrubs and spread 160 pounds of native grass and pollinator seed.



Figure 25: Paul Turowicz with buckets of nannyberry standing atop a hill that overlooks a portion of the Mower Tract. Part of the 2020 restoration site can be seen in the background.

Later in the year, GFW hired a second crew to assist on GFW's 2016 Daniel Boone National Forest site along Pine Creek Church Road. Autumn olive (*Elaeagnus umbellata*), an invasive, deciduous shrub native to Asia, had regained a foothold in some parts of the reforestation site. The autumn olive was suppressing the planted trees and the shrubs would have soon begun producing abundant berries whose seeds could be spread to other areas by animals.

A five-person team from the Appalachian Conservation Corps was tasked with sawing down as many of the autumn olive shrubs as possible across the 29-acre site over a 10-day span in October. After sawing down the autumn olive plants, the crew sprayed the stumps with glyphosate herbicide, so they wouldn't regrow. Claudia Cotton, Forest Soil Scientist for the Daniel Boone National Forest, says that this is the most efficient way to remove and keep the autumn olive suppressed.

"We want these planted trees to grow back up and be similar to the forest that surrounds it. And also we want to reap the benefits that these native forests give us, which includes clean water, clean air, and habitat for many different birds and wildlife species. We want to protect this investment for the ecology of the area, for the forest and for everybody who uses the forest," Cotton said.



Figure 26: The ACC crew that worked on the Daniel Boone site, which includes Bill McGrane, Leah Cawthorn, Christian Gehman, John Southward, and Rachel Rosenberg.

GFW STAFF AND PARTNERS

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American Forests

American Rivers

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Arbor Day Foundation

Appalachian Headwaters

Appalachian Mountains Joint Venture

Appalachian Stewardship Foundation

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Mennen Environmental Foundation

Munn Family Charitable Fund

National Fish and Wildlife Foundation

National Forest Foundation

Network for Good

One Tree Planted

Pennsylvania Environmental Council

Renaissance Charitable Foundation

Roth Family Fund

Schuylkill Headwaters Association

Sheldon and Audrey Katz Foundation

Snowy Owl Foundation

Susquehanna River Basin Association

The American Chestnut Foundation

The Baum Foundation

The Helen and William Mazer Foundation

The Lemmon Foundation

The Mountain Institute

The Nature Conservancy

The Rudolph Family Charitable Fund

Three Friends Charitable Fund

West Virginia Highlands Conservancy

Zupon Charitable Fund

Educational Groups

Appalachian State University

Indiana University of Pennsylvania

Marian University

Pennsylvania State University

Radford University

University of Kentucky

University of Maryland

University of North Carolina-Chapel Hill

West Virginia University

Xavier University

Governmental Agencies

AmeriCorps

Appalachian Regional Commission

Appalachian Regional Reforestation Initiative

Conservation Legacy – Appalachian Conservation Corps

Kentucky Department for Natural Resources

Kentucky Department of Fish and Wildlife Resources

Kentucky Division of Forestry

Kentucky Division of Mine Reclamation and Enforcement

Office of Kentucky Nature Preserves

Pennsylvania Department of Conservation and Natural Resources

Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry

Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, Pinchot State Forest

Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, Weiser State Forest

Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation

GFW STAFF AND PARTNERS

Governmental Agencies, continued

Pennsylvania Department of Environmental Protection, Bureau of District Mining Operations

Pennsylvania Game Commission

United States Department of Agriculture, Forest Service-Daniel Boone National Forest

United States Department of Agriculture, Forest Service- Monongahela National Forest

United States Department of Agriculture, Natural Resources Conservation Service

United States Department of Agriculture, Appalachian Plant Materials Center

United States Department of the Interior, Fish and Wildlife Service

United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement

United States Environmental Protection Agency

West Virginia Department of Environmental Protection

West Virginia Department of Natural Resources

West Virginia Division of Forestry

Thank you for all that you make possible!

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Honorarium (in honor of)

Fr. John Rausch from Ralph and Diana Stinebrickner
Richard Rastetter from Tyson McDonald

In Recognition and Gratitude of

Lorraine Zupon from Mr. Michael J. Zupon and Ms. Lorraine S. Zupon

In Memory of

Fr. John Rausch from Green Forests Work
Larry Peterson from Susan Kassouf
Rudolf von Watzdorf from Susan Kassouf
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Green Forests Work

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