



## From the Director: Being Safe and Living Forward

by Doug Coleman

As we wish you, our members and friends the best during this time of crisis, we want to invite you to stay up to date through our virtual programming on our website and on social media. Two programmings that have been updated regularly are The Nine Minute Naturalist and the Peace Out(Side), which have been viewed on our webpage, twnf.org. Many parents have used these programs with distance learning for their children. Our greenhouse has never been busier this past Spring as we took orders on-line and arranged for pick up on Thursdays and Fridays.

At the time of this message, our building remains closed, but we have plans for near future social distance group hikes and activities that will align with CDC and be in compliance with the Commonwealth's mandates. It is our hopes that by the publication of this newsletter, we will have our doors open and ready for the "new normal."

In some ways, this crisis may have been a reminder to provide programming remotely as another choice for our members all along.

The Covid-19 canceled many of our spring programs but we plan to celebrate the 40th Wildflower Symposium the weekend of October 2nd, 2020.



This is an event to look forward to. Since the postponement of our spring event, staff has been planning a new format for fall as the late summer, early fall wildflower species peak with bloom. Expect to sort out the many species of goldenrods and asters while experiencing the conclusion of the annual hawk migration and other wildlife activity. Expect an exciting display of colorful fall beetles and other insects who make appearances on the flowers in that season. If timing is right, we may also see hints of the monarch butterfly and green darner dragonfly migrations as we hike along the ridgelines with the experts. Archaeology and Geology will also take center stage as we walk the paths of antiquity that formed our mountain ranges and better understand its First Nation inhabitants. Watch our website for updates as a star studded list of instructors weigh in as leaders.

## Staff

Doug Coleman – Executive Director  
Kathie Driscoll – Education Director  
Linda Ehinger – Staff Member  
Liz Fravel – Membership and Special Events  
Sharon Bolmey – Bookkeeping  
Josh Palumbo – Forest Management

## TNFW Board of Directors

Doug Coleman – Executive Director  
Rob Pritchard – TNFW Board President  
John Claman – TNFW Board Vice President  
Christine White – TNFW Treasurer  
Dr. Janet Steven – TNFW Secretary  
Elaine Davis  
Gerry DeWitt  
Emily Ferguson  
Bill Gatewood  
Beverly Holloway  
Dima Holmes  
John James  
Rod Kessler  
Marjolaine Marianella  
Rita McKenzie  
Susan McSwain  
Chastity Morgan  
Jay Roberts  
Dr. Dennis Whigham

## Membership Committee

Dima Holmes  
Larry Luessen  
Gunter Muller

## Science & Education Advisory

Emily Ferguson  
Dr. Linda Fink  
Dr. Jeffrey Halverson  
Dr. Catherine Holsof  
John James  
Dr. Ryan Klopf  
Dr. Steve Miller  
Dr. Chip Morgan  
Dr. Carole Nash  
Ann Regn  
Dr. Janet Steven – Co-Chair Dr.  
Dennis Whigham – Co-Chair Dr.  
Woodward Bousquet  
Dr. Donna Ware  
Anne Witt

The Nature Foundation at Wintergreen  
Route 1, Box 770  
Roseland, VA 22967  
www.twnf.org  
TWNF on Facebook

# The Great Outdoors: Landscape for Learning

*by Jude Michael, TNFW volunteer and outdoor enthusiast*

...there is an annual springtime dance of weekly, cascading colors that we are prone to overlook,

if we fail to get outdoors: colors that try to tease our attention; that ring-in the wild from the humdrum;

colors that signal varied sights and sounds into existence...to the sheer delight of the sanguine butterflies

the blooming wildflowers start for the green floor: hepatica, thimbleweed, trilliums, bloodroots, blue violets, toothworts, green and golds, arbutus, columbine, spring beauties, woodland stars, lady slippers, golden ragwort-

all dress for the occasion as they gladly play host to the eastern tiger swallowtails, the purple hairstreaks, and whites,

who also dress-to-the-nines and punch-up their dance cards...and as the bugs follow and fly-in for the party,

they lure the typical following of feathery, fashionable travel companions, the songbirds and gamebirds, who rush to make a crazy entrance and perform their sacred, powerful rituals:

warblers, swallows, finches, thrushes, kinglets, and wrens - what a spectacle to for our imagination!

not to be left-out or outdone there's a bewildering background show of flora and fragrances-

Sweetbay Magnolia and Fringetree blossoms, rhododendrons and mountain laurel, Virginia Sweetpire, Mohawks, Summersweet, Ninebark and Fetterbush which are all

beautifully arrayed to activate the scenery of the event - climbing up the slopes at a rate of 100 feet per day,

the oaks, tulip poplars, hickories leafing-out at the peaks by late may

...ever filled with enchantments, spring's enhanced landscape is a learning ground not to be excelled anywhere else

on earth...what a shame it'll be to have missed zephyrus' westerly winds as it breezes its way past us once again

and to not have witnessed all it brings - all the grandeur going-on all around us

(thank goodness for opportunities to play hooky...)

# An Unprecedented Reprieve

by Josh Palumbo

The Coronavirus pandemic of 2020 temporarily altered life around the globe on "a scale hitherto undreamt of" to quote Dr. Strange from Marvel lore. With tons of loss and sacrifice comes some positive if you are willing to look and accept what you find. House projects delayed for years have been completed. Many gardens were planted and flower beds weeded. One of the most intriguing benefits seen from this world wide shut down is the response of the environment to world slowing down. Here is an abbreviated list of studies and observations of environmental changes.

- The BBC reports emissions fell 25% in China since the end of the last quarter of 2019. This led to an 11.4% increase in good air quality days in 337 cities throughout China.
- New Delhi reported a 60% drop in particulate matter from March 23 to April 13 due to the lockdown. Seoul Korea saw a 54% decrease in its particulate matter from February 26 to March 18th.
- NASA reported a decrease of 30% in air pollution in the U.S. northeast through March of 2020.
- Scientists from the Royal Netherlands Meteorological Institute have reported a 45% decrease of nitrogen dioxide concentrations in Rome, Milan and Madrid and a 54% drop in Paris.
- The first grey wolf in over 100 years was photographed in Normandy France.
- Dolphins have been seen much more frequently from the shores of Istanbul as they pass through the usually hectic Bosphorus Strait.
- Leatherback turtles are laying eggs on the beaches of Thailand in numbers not seen in over 20 years.
- Water clarity is vastly improving along the canals of Venice with much marine life returning to the lagoon around the city.
- Multiple incidences of emboldened alligators along the coast of South Carolina due largely to the sharp decrease in tourists.
- Flamingos in lagoons of western Albania have grown a third in the absence of tourist and boating activity.
- Wild boar activity in the streets of Haifa Israel has increased due to low human activity.

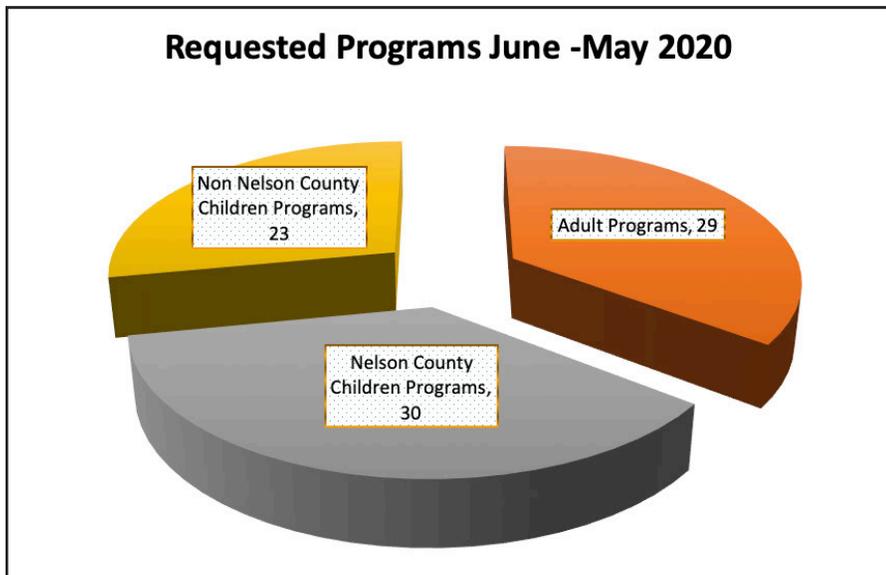
The negatives of a global pandemic are obvious and tragic from the human perspective. On the other hand, the environment is getting an unprecedented reprieve not seen since the industrial revolution and the benefit is quite obvious from the environment perspective. While the world will return to normal sooner or later, the worldwide shutdown has led to remarkable insights into air quality impacts and a awesome glimpse into wildlife activity impossible to see in a world moving at its usual frenzied pace.



# TNFW Educational Exposé

by Kathie Driscoll

With the dawn of each autumnal season, the Nature Foundation at Wintergreen's staff switches gears from the sultry programs of summer to a more rigorous academic curricula for area schools. 2019 was no different! Requests for summer programs came from near and far. We spoke to local groups like the Mountain Homesteaders on topics such as, Owl Physiology and Ethology while enlightening summer day youth campers on the rich history of the Blue Ridge Mountains. During the summer, nature enthusiasts are just plain different. We reached a diversity of organizations such as county libraries, adult clubs and retirement facilities, girl scout camps, 4-H campers and early childhood centers who wanted to experience nature. These outreach programs are wildly popular due to the time of year, a phenophase, if you will, of humans' peak interest of this interaction. As summer waned, however, so did our "summer" programming. TNFW adapted to the changing interests and needs of the community. As surely as the cool temperatures set in, we quickly aligned our outreach programs to the teachers' lesson plans and the framework of Virginia's Standard of Learning.



This pie diagram illustrates the distribution of the programs held June through April 2019-2020. The Nature Foundation at Wintergreen conducted 93 programs, 80 of which were for the Nelson County students and community.

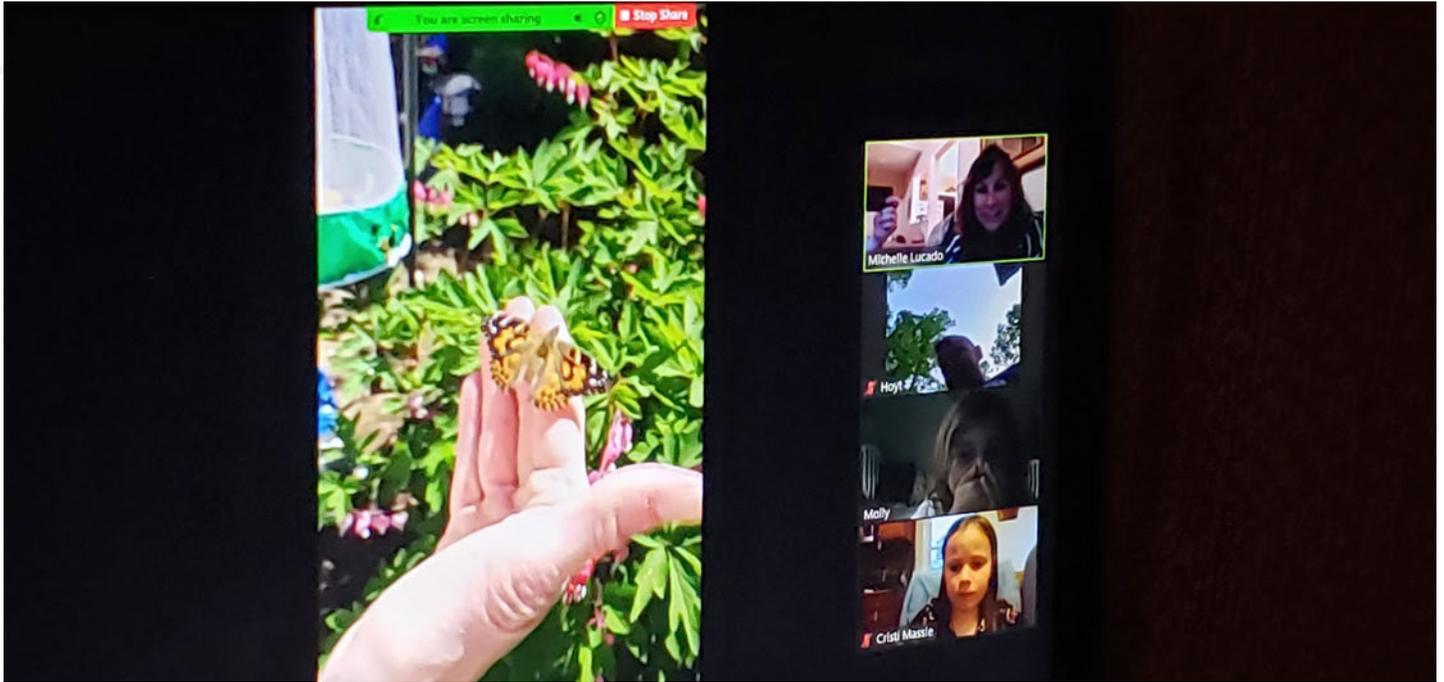
Educational outreach is a significant component of TNFW's mission. Our dedication to instill the appreciation of the natural resources of the Blue Ridge Mountains, and to reinforce its conservation, is evident through our work in the Nelson County community and school system. During the 2019 school year, TNFW's

connecting teachers with STEM practitioners' projects received a generous gift from an anonymous donor, enabling us to invite seven Nelson County teachers to participate in a workshop to design place-based, authentic research activities for the classroom. While we are unable to conduct the planned in-person workshop this May, interest from the teachers and scientists remains high. We are currently exploring options for developing virtual projects over the summer.

While the unprecedented disaster of COVID-19 abruptly changed the state's educational institution TNFW adapted to offer program material to close the gaps. By the end of April, our programs reached nearly 1,500 children and 900 adults, either in real time or virtual. Sadly, one of our beloved institutions fell victim to this pandemic. After 14 years of nurturing our youngest students in the exploration and love of nature, Rebecca's Rainbow Early Learning Center of Lynchburg closed its doors. This nature-based educational facility utilized TNFW for its science curricular requirements.



While many educational facilities struggle to keep their doors open, others have expanded their educational strategies with the help of technology and its availability to their students. One small successful partnership ended the 2019-2020 school year with Tye River Elementary School's Kindergartners. The teachers had applied to TNFW's Wish List program for Butterfly Life Cycle kits. They had hoped to end the year satisfying the State's SOL requirement of understanding the plants and animals basic needs and their life processes. COVID 19 ended the school season before they could complete the lesson plan with the live caterpillars. TNFW took on the role to acquire and raise the caterpillars to butterflies. Each stage of the insects' life was recorded and watched by 59 kindergarten students. They were able to complete the lesson plan and witness the release of 32 painted lady butterflies!



There is no boundary in educating children at any age, locality or ethnicity for TNFW about the wonders of science and nature.

# The New COB Botanical Garden

by John James

The next time you drive into Wintergreen, slow down and take notice of the new plantings along the roadway from the entrance sign on Beech Drive, past the gate house and all along Wintergreen Drive. With the help of the Nature Foundation, the WPOA has begun planting only native perennials, ferns, shrubs and trees along this road, and many of these plants are being supplied by our own greenhouse and nursery on Beech Drive.

What is less visible, but certainly worth the visit, is the new botanical garden in the parking area in front of the Community Office Building. Last August, Doug Coleman, John James and Jay Roberts met to discuss redesigning and planting the parking lot with native plants found in Wintergreen and Stoney Creek. They felt that area residents and visitors could come to this garden to see the plants that are special to Wintergreen and to take note of how they can be used within the landscape.

As the design for this garden took shape, plants were selected both for their seasonal interest and for their regional suitability. With a collection of more than 500 plants and 50 different species used in the garden there will be something blooming from early April through late October. Ferns, evergreens and grasses were added to provide extra color and texture and to expand the garden's seasonal interest. And because all of the plants are native, the garden will attract many more butterflies, bees and birds to this area. Most of the shrubs and trees have just been planted and the remaining plants will be installed before the beginning of summer.

An attractive walkway has been constructed through the center of the garden in order to connect the lower parking lot with the building entrance and to make it easy for visitors to experience, up close, all of the natural wonders there. In time, there will be a sign dedicating the garden and smaller signs identifying the plants.

This botanical garden will be a great addition to The Founder's Overlook, Trillium House, and the Lady Bird Johnson Garden, and will, hopefully, demonstrate to us that native plants have so much to offer the landscape.



# American Chestnut Tree Article

*Summarized by Jim Beavers, TNFW member*

"Can Genetic Engineering Bring Back the American Chestnut Tree" By Gabriel Popkin of the New York Times magazine describes the efforts of geneticists and others to create a chestnut tree resistant to a fungal blight brought to these shores in the early 1900s. The blight killed at least three billion trees directly; many more were cut down to take the lumber before the tree was damaged by the blight.

The chestnut is an almost perfect tree –strong, tall, produces excellent, non-rotting wood, and is an abundant food source; the nuts were so abundant in Appalachia that for many farmers, they were their largest cash crop. (Valley farmers used to bring their hogs up in the fall to feast on the nuts, hence the "hog walls" in Wintergreen to keep them from escaping). The U.S. government tried to breed a disease-resistant Chinese chestnut with an American chestnut while hoping to obtain the best features of both. The effort failed.

But with genetic engineering, specific genes can be selected for specific purposes, in this case, blight resistance. The article tells us of the successes and failures, the trials and tribulations and the painstaking safety and efficacy tests along the way in developing a version of the chestnut tree that could defend itself from the blight fungus. That tree now exists, but with three different federal agencies involved in approving it, the time horizon for commercial release is uncertain.

For those of you interested in how science progresses, or concerned about the possible danger of engineering nature itself, this is an article not to be missed. And it is equally informative for those who wish to learn more about the sad history of the chestnut tree blight and those moments of joy when a majestic, mature tree is discovered. Given all the other disruptions already endured: logging, mining, development, and the relentless assault of tree destroying insects and diseases, the article provides some hope for the future of our forests.

Article Found:

<https://www.nytimes.com/2020/04/30/magazine/american-chestnut.html?action=click&module=Top%20Stories&pgtype=Homepage>

