



NaturePhile

Written/Published by: Your Trust-ed Staff

Volume #19/Issue #4 2021

The Balsam Mountain Trust inspires people to be responsible stewards of the natural and cultural resources of the Southern Blue Ridge Mountains through education and conservation leadership.



“Luck(chance) favors the prepared mind.” is a quote attributed to Louise Pasteur. I could’ve edited out the highway and vehicles but believe they are what helps put the photo in context with place and time. I’m thinking these were some form of stratocumulus clouds. Regardless, I was able to very carefully capture this image on the way home on I-26 in early December. Nature offers opportunities, often when you’re least expecting them, but it pays to be alert and have your camera at the ready! This was taken with an iPhone X.

We’re always looking forward to seeing nature images from BMP folks from your travels.

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From the Trailhead:

By Michael Skinner, Executive Director

Can We Count on Your Support This Year?

For those of us fortunate enough to have the financial wherewithal to be able to give to organizations we believe make a difference towards improving the human condition (which after all, whether it be an art museum or a nature center, can improve both our lives and the world in which we live and depend upon) the end of any calendar year is replete with asks related to this. The Trust is no different

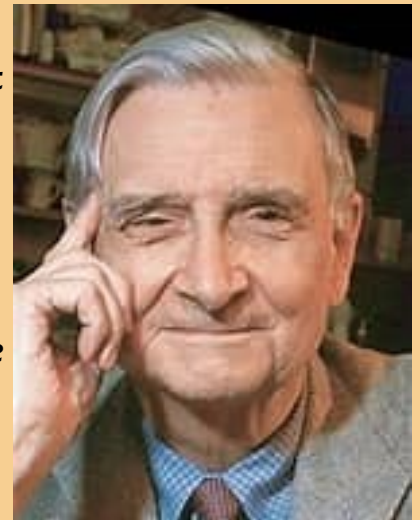
in this regard. Throughout its twenty one years, the Trust has been a consistent and steadfast purveyor of natural and cultural resources information offered to program participants meant to engage, enlighten and entertain (edutainment, if you will). All while attempting to meet its mission.

There is not shortage of people (thankfully), like the Trust staff and volunteers, who are committed to sharing the wonder of discovery about the natural world with others. I am fairly confident then, with the assumption that people who give to the Trust, support and participate in the wonder of discovery. And humanity has had myriad diplomats whose curiosity and fascination with the natural world has brought timeless dialogue to students interested in the discovery of the natural world—many of whom have been engaged with conservation nonprofits like the Trust.

Two of the diplomats were giants of the conservation stage, Edward (E.O.) Wilson, Ph. D. and Thomas Lovejoy, Ph. D., both who passed away in December, a day apart from one another. To write anything less than a page each about them in this publication would be a gross disservice to their memory and importance as natural history scientists so I will apologize that I won't be doing that here. What I will offer are some links for you to investigate, which should provide anyone interested with a pretty good treatise of their lives and works.

E.O. Wilson:

- 1) [E. O. Wilson: The extraordinary ant researcher and sociobiologist who warned of biodiversity crisis | New Scientist](#)
- 2) [E.O. Wilson, a Pioneer of Evolutionary Biology, Dies at 92 - The New York Times \(nytimes.com\)](#)



E.O. Wilson, Ph. D., above and Thomas Lovejoy, Ph. D., were both giants in the fields of ecology and conservation science—with each of them putting their indelible stamp on our understanding of the mechanisms of how the natural world works as well as our impacts and interactions with it.



3) [E.O. Wilson, 'Darwin's natural heir,' dies at age 92 \(nationalgeographic.com\)](http://nationalgeographic.com)

Thomas Lovejoy:

1) [Thomas Lovejoy, Wide-Ranging Ecologist and Amazon Rescuer, Dies at 80 - The New York Times \(nytimes.com\)](http://nytimes.com)

2) [Bad News: The Amazon Might Be Past the Point of Saving \(futurism.com\)](http://futurism.com)

3) [In Memoriam—Dr. Thomas Lovejoy | Press Releases | WWF \(worldwildlife.org\)](http://worldwildlife.org)

We live in, and are experiencing, what is being called the sixth mass extinction (the Anthropocene). This extinction being caused, and fueled by, anthropomorphic (human-shaped) effects. When you give to the Trust, or any conservation organization, you are providing fuel to propel conservation discovery and messages that will assist in keeping our living systems healthy and viable. Many climate scientists suggest we're either at, or have exceeded, the threshold of raising average temperatures beyond the point at which we might be able to stave off serious and consequential effects of the 'greenhouse effect'.

Please consider how the 'fuel' you provide the Trust will assist in 'propelling' our message to each program participant with which we interact.

And...Happy New Year!



A Tree-Within-A-Leaf. This shot of a yellow poplar leaf is intriguing in that the veins of the leaf appear as a tree within the matrix of the leaf. Nature is simply amazing!



Education Mewsings: Welcome Your New Wild Neighbors

By: Rose Wall, Co-Senior Naturalist/Education Director

A Tale of Diversity: Balsam Mountain Trust Pitches in to Support Diversity of Insects in the Wild and Diversity of People in the Field of Scientific Research.

Last year we awarded our fifth annual Walk for Wildlife grant. Dr. Jane Dell, Professor and Entomologist at Western Carolina University used the funds to do insect research on Balsam Mountain Preserve and throughout the region.

Dr. Dell's interest in diversity does not stop with insects. She is also dedicated to supporting diversity and inclusion of people in field-based sciences. Her passion for mentoring students is clear. Dr. Dell used the Walk for Wildlife grant she received from the Trust to support five undergraduate research assistants last year! One of these students was an African American woman, Sierra Croney. Sierra was one of Dr. Dell's "star students", but was hesitant to pursue research due to the fact that she had not met any black, female entomologists and was not sure she belonged. After joining Dr. Dell's project, she quickly realized that she did fit in. She loved the

work so much that she decided to pursue a career studying bugs and is now working on a Master's Degree in Entomology at the University of Maine.



enough." Dr. Jane Dell

Up and coming young scientists like Sierra Croney are vital to the future of our planet as environmental conservation becomes more and more important. While we often think of



Pictured above are some of the caterpillars Dr. Dell gets to research.

The Trust's 5th Annual Walk for Wildlife grant supported Sierra Croney (left) and four other undergraduate research assistants last year.

"It is no secret that the field-based sciences are significantly lacking in diversity, and supporting students like Sierra, is one of the best contributions we can make towards bringing equity and inclusion to the next round of conservation professionals! For this reason, I cannot thank you (The Trust)

animals like polar bears and pandas when we think of conservation, we miss out on some of the smaller beings like insects. Most people know that monarch butterflies and honey bees are in decline, but that's just the tip of the iceberg – all insect groups have experienced severe drops in diversity and in number in recent decades and that decline is only accelerating.

Dr. Dell's work focuses directly on how insects are connected to the rest of the ecosystem – as food for other creatures, as pollinators, etc. Understanding the connections helps us to understand the rippling effects that might occur across an ecosystem if, for example, a certain species of bug or the host plant for the bug were to disappear.

Here at the Preserve, Dr. Dell is analyzing ecosystem connections of caterpillars, their host food plants and parasites across different levels of disturbance. The primary disturbance history on BMP is of course timber extraction, with some plots having been logged a hundred years ago and some as recently as the 1990's. Dr. Dell hopes to see how this logging history, as well as clearing trees for home sites, has impacted the structure and function of these networks.

Her work has practical applications to forest stewardship at Balsam and beyond. But this is not just to be left in the hands of scientists and foresters – each of us has a part to play! Many insects don't travel any further than the length of a backyard in their lifetime, which means you can create a whole world with everything a bug needs. Jane gives the following basic tips as a start. Luckily, we are all already doing many of these things as a part of the BMP conservation ethos.

Reduce the size of your lawn, or better yet – get rid of it.

Plant native trees and flowers

Avoid pesticide use

Reduce unnecessary light pollution

Leave the leaves: over 90% of caterpillars drop to the ground and pupate within or under the duff on the ground – WOW!

Walk for Wildlife: A brief history

We created the Walk for Wildlife pedometer challenge with the hope of giving you all at Balsam a fun way to get out and get moving! But, this is also about giving back. Part of the Trust mission is to provide regional environmental leadership. The Walk for Wildlife Challenge (and associated grant) are one way we demonstrate our commitment to supporting conservation work on the ground. For every mile walked by participants, the Trust donates 15 cents (up to \$1,500). We are proud to have supported conservation projects across the region including migratory bird banding and education through Southern Appalachian Raptor Research; fish surveys, stream management and citizen science through Mainspring Conservation Trust; Hellbender research and conservation through Montreat College and creation of an outdoor classroom and field biology curriculum through Smokey Mountain High.