



Dr. Katy Barlow © Matt Kane/TNC

Profile of a Conservationist Katy Barlow, Ph.D. Restoration & Public Lands Manager

When Dr. Barlow was a graduate student at Penn State University pursuing a Ph.D. in Ecology, she became concerned that science projects too often conclude with non-specific recommendations for on-the-ground management decisions. At one point Dr. Barlow asked herself, “Are we really challenging ourselves as scientists to be practical about how that science can be applied to conservation?” Now, after more than three years with TNC, Dr. Barlow is in a position to make sure that the best conservation science is being applied at the field level.

As the Restoration Manager for TNC’s Central Appalachians program, Dr. Barlow works within the broad science community, and with TNC colleagues from Pennsylvania to Tennessee, to advance forest management and restoration projects in a landscape that TNC has prioritized on a global scale. One such restoration project is Dr. Barlow’s work to restore red spruce forests by using genetically diverse seedlings.

Read the full story here -->

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One of a genetically diverse group of red spruce seedlings planted at TNC’s Finzel Swamp Preserve in April 2021 © Matt Kane/TNC

Spruce Science Offers Restoration Solution

A new genetic diversity study improves red spruce restoration

Before the turn of the 20th century, red spruce forests dominated the high elevations of the central and northern portions of the Appalachian mountain range, which spans more than 2,000 miles from Alabama to Canada. Tragically, industrial-scale clear-cutting at the turn of the 20th century transformed the entire landscape. Red spruce timber was harvested at a devastating rate because of its high value in ship-building materials and furniture. As a result, mature red spruce forests are now scarce and fragmented, creating red spruce “islands” that have been cut off from one another, resulting in poor genetic diversity. The good news is that there is a broad and growing movement to restore red spruce forests across their native range, including a recent partnership that has been formed between The Nature Conservancy, academia and other partners to build genetic diversity into this massive restoration effort.

For the past four years, a team being led by the University of Vermont, in partnership with the University of Maryland Center for Environmental Science, the U.S. Forest Service and TNC has been working to study and implement a project designed to improve the genetic diversity of Appalachian red spruce forests. The project, sponsored by the Wildlife Conservation Society’s Climate Adaptation Fund, started with a focus on studying red spruce genetics, then using those findings to grow more genetically diverse red spruce seedlings in nurseries, and now strategically planting those seedlings in areas that will reconnect the isolated communities of mature red spruce. In the spring of 2021, this project touched down in Western Maryland, where TNC staff, partners and contractors planted more than 10,000 genetically diverse red spruce seedlings on TNC’s Finzel Swamp Preserve and Cranesville Swamp Preserve. These sites are now part of the larger initiative and will be continually monitored and studied in order to inform red spruce restoration in the future.

To learn more, visit: nature.org/mdforests



TNC Conservation Forester Kevin Yoder meets with a private landowner in Pennsylvania to talk about Family Forest Carbon eligibility. © American Forest Foundation

Family Forest Carbon Program Expands to Maryland

The Nature Conservancy and the American Forest Foundation have partnered to create The Family Forest Carbon Program (FFCP), an initiative that is a win-win for landowners, the environment and wildlife. The FFCP provides incentive payments to landowners who implement sustainable forest management practices that sequester additional carbon. This revenue helps landowners with the upkeep and long-term management of their land, which in turn means a healthier and more robust landscape for wildlife habitat and biodiversity.

Thanks to generous support from Amazon, the FFCP launched with a pilot in Pennsylvania in 2020 and has now expanded to West Virginia and Maryland. In Maryland, landowners that own between 30 and 2,400 forested acres in certain areas of Garrett, Allegany, Washington, Frederick or Carroll counties are now eligible to participate.

Nature has an incredible capacity for absorbing and storing carbon. A recent TNC-led study estimated that improved forest management could mitigate 267 million metric tons of carbon dioxide equivalent (CO₂e) per year in the United States. That is equivalent to taking 57 million cars off the road. The FFCP is an innovative new tool for harnessing the power of the nation's forests for climate mitigation by incentivizing family forest landowners to store more carbon on their land.

To learn more about the FFCP, or to check your eligibility as a family forest landowner, visit www.familyforestcarbon.org.

NATURE MARYLAND/DC

City Nature Challenge Spring 2021 Recap



Spiny Assassin Bug Eggs © Izabella Farr

What started as a friendly competition between San Francisco and Los Angeles in 2016 ended up blossoming into the world's largest BioBlitz known as the City Nature Challenge. Over a few scheduled days in April, people across the globe photograph and upload images of nature to iNaturalist.org to contribute to citizen science and to hopefully help their city win an accolade. This year, 419 cities across 44 countries participated.

The District of Columbia really rose to the occasion, ranking second globally in both number of participants (behind San Francisco) and number of observations (after Cape Town South Africa). The lovely native mayapple topped the list as the number one plant species observed. Other interesting finds in the area included silver-haired bats and alien-like eggs from the spiny assassin bug.

Baltimore saw a record high for number of observations and species identified since the city began participating in 2018. The number one reported plant species in Charm City was the common blue violet, and out of all 1,917 species observed in the city, 44 were considered protected, threatened or endangered.