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Winter 2019 • nature.org/marylanddc

Pabodha Galgamuwe © Matt Kane/TNC

Profile of a Conservationist

Pabodha Galgamuwe's love of nature started at a young age. Growing up in Sri Lanka, he was fascinated by the biodiversity of life in the nearby Sinharaja Rain Forest—a UNESCO World Heritage Site. Pabodha's mother—a high school biology teacher—was also an important influence, setting him on a path to an impressive education in the sciences: Pabodha has earned a B.Sc. in Agricultural Technology and Management and an M.Sc. in Environmental Forestry from the University of Peradeniya in Sri Lanka. He then came to the United States and earned a second master's and a Ph.D. in Horticulture and Natural Resources from Kansas State University.

Pabodha works out of The Nature Conservancy's Cumberland, Maryland, office where he manages science-based forestry projects that make Central Appalachian forests healthier and more resilient.

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A mature hardwood at The Nature Conservancy's Finzel Swamp Preserve in Western Maryland © Kent Mason

Restoring Old-Growth Forests

Science and Management Can Make Our Forests More Resilient

Old-growth was once the predominant natural forest condition across the Eastern United States before European settlement on the continent. Today, however, old-growth forests are one of the rarest habitats in our region, constituting less than 1 percent of our forests. The Nature Conservancy is using new science and management techniques to accelerate old growth conditions across the Central Appalachians, starting with a demonstration project in Savage River State Forest in Garrett County, Maryland.

Stepping into an old-growth forest can feel like traveling back in time. The most apparent feature are the old trees, which may be very large or show other signs of age like shaggy bark. There is structural diversity, which means trees of different species and age create a layered canopy. There are dead trees known as "snags" still standing, and there are dead trees on the ground that leave gaps in the canopy, allowing sunlight to reach the forest floor. These conditions create a habitat type that supports some of the most rare and charismatic wildlife species native to our region.

We can accelerate old-growth charecteristics in even-aged forests through specific management techniques that replicate the natural processes that create old-growth conditions. In Maryland, we are partnering with the Forest Service and the Wildlife and Heritage Service to increase the use of practices to accelerate the development of this under-represented forest habitat type on pubic and private lands. Throughout the Central Appalachians, we are helping forest managers create a healthy mix of forest habitat types so that our forests can more easily adapt to a changing climate.

Learn more at nature.org/mdforests

High school interns from Allegany county in Western Maryland explore careers in conservation at The Nature Conservancy's Finzel Swamp Preserve. © Matt Kane/TNC

Inspiring Tomorrow's Conservation Leaders in Western Maryland

Economic conditions in Central Appalachia have been turbulent for generations. Exploitation of the rich natural resources in the region have led to periods of both prosperity and poverty. During the Industrial Revolution, unregulated timber harvesting in Appalachia simultaneously fueled the growth of our nation while devastating one of Earth's most iconic and diverse ecosystems. In recent decades, shifting global energy markets have placed Central Appalachia at a critical juncture where many communities are working to determine their economic future. The Nature Conservancy believes in a world where both people and nature thrive together, and in Central Appalachia, we are working to create nature-based economic opportunities. For example, TNC science shows that natural climate solutions can provide 37 percent of the removal of carbon dioxide from the atmosphere needed in the next few decades, all while protecting the lands and waters on which so much life depends.

In order to create a stable, nature-based future economy in Central Appalachia, we must begin training tomorrow's conservation leaders. This past summer, TNC's Maryland/DC chapter hired six high school interns from Allegany county. The students had summer work adventures that exposed them to careers in conservation with TNC and many of our partners. The interns spent time working side-by-side with foresters, ecologists, park rangers, elected officials, photographers, videographers, university professors and land stewards. As these young adults embark on their career paths, we are confident that they will draw from their experience with TNC as they continue to grow as leaders in their communities.

Watch the video at nature.org/MDDCYouth

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Beavers and Oysters

TNC staff fix a beaver baffle on the Finzel Swamp preserve. © Matt Kane

Ecology is the science of studying how living things interact with each other and the environment. The first thing any ecologist will tell you is that everything is connected. In the Chesapeake Bay watershed, there is an untold connection between beavers and oysters.

Today, both beaver and oyster populations are merely a fraction of their precolonial numbers. A few hundred years ago, there were millions of beavers at work across the watershed, damming streams and rivers of all sizes. As a result, the water table of the entire region was much higher than it is today. Since fresh water used to stay on the land longer, salt water used to reach much higher in the Bay, creating the brackish conditions that were more favorable to oysters.

As we think about ecological restoration, it is important that we understand these historic connections.

Watch the video about our efforts to protect beaver habitat at: nature.org/chesapeakebay

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