



The Clifton Institute

August 2022





Note From The Directors



Many of you reading this newsletter have been to the Clifton Institute and met us and the other members of our team, but many of you are new readers so we wanted to (re)introduce ourselves. We, Eleanor and Bert Harris, are the married couple at the head of the Clifton Institute. We met when Eleanor was in graduate school and Bert was a postdoc at Princeton University. Eleanor was planning on an academic career and Bert on pursuing conservation in the tropics, but as we got to know each other we started forming a new dream: to work together at a research station where we could get to know the natural community in depth, restore the land, and teach people about nature and land management. We thought it was a pipe dream, something that we might be able to pursue in our old age. But when we were given the opportunity to run the Clifton Institute in 2018, our dream came true much sooner than we had ever hoped. In the four years since we became co-directors here, we have come to love this 900-acre property, the native species of the northern Virginia Piedmont, and the community of people who come here to learn about nature and to volunteer their time taking care of this place. If you haven't been here yet, come for a visit sometime! We'd love to meet you too.

In the last few months, we have hired new staff to provide additional education programs, to pursue new research projects, and to continue to restore habitat on this and other properties. We recently asked our full-time staff to share some of their favorite things in nature, hobbies, and bucket list trips and sightings. You can read their answers here and you can read about what they're working on in the following pages. You can help us teach people about nature and conservation, study how to conserve declining species, and restore habitat for native plants and animals by donating today. Thank you for your support!



Bert Harris, Executive Director
Hobbies: whitewater kayaking, rock climbing
Bucket List Wildlife Sighting: Giant Stag Beetle



Eleanor Harris, Managing Director
Hobbies: nature journaling, backpacking
Bucket List Wildlife Sighting: Wood Ducks fledging

Learn More

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You can support our work by donating at
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Meet Our Staff



Bridget Bradshaw, Education Associate
Favorite Bird: Turkey Vulture
Favorite Clifton Trail: Big Hickory



Feliecia Brooks, Administrator
Favorite Clifton landmark: the cabin



Andrew Eberly, Habitat Specialist
Favorite Clifton Trail: Turkey Gap
Dream Travel Destination: Kazakhstan



Jacob Ewert, Education Fellow
Bucket List Wildlife Sighting: elk
Hobbies: graphic design, photography



Marie Norwood, Land Management Outreach Associate
Favorite Plant: Skunk Cabbage
Dream Travel Destination: Lake Baikal



Kieran Paulsen, Communications Associate
Bucket List Wildlife Sighting: Great Grey Owl
Hobbies: horseback riding, writing



What's It Like on a Field Trip at the Clifton Institute?

We offer lots of field trips, and we reach thousands of students that way, but since they're not open to the public many people don't know what they're like. So we want to tell you all about them!

Our staff can all remember being outside as children and the magic of the first time we smelled skunk cabbage or identified a bird's song or rolled over a log and saw all the bugs living underneath. As adults, spending time in nature is not only the most fun part of our day but it's also an important way that we destress and connect to something bigger than ourselves. Our goal on field trips is to give young people an opportunity to find the same joy and wonder that we find in nature. The added benefits are that children become more curious and compassionate when they spend time outside, which is good not just for them but for our community too.

During the 2020-2021 school year, COVID restrictions prevented most schools from going on field trips, so we offered lots of programs for students in hybrid school models, homeschooled students, and families. Last fall we were so happy to start running field trips again and this spring they really took off. **The 2021-2022 school year turned into our busiest ever with 909 pre-K-12 students attending 30 field trips.**

Our field trips last about three hours and they usually take place in the morning. When students get off the school bus at our peach-colored-farmhouse headquarters, they are greeted by a beautiful and peaceful view of a five-acre-pond that is home to snapping turtles and dragonflies in the summer, ducks and otters

Students get a hands-on experience learning about geology in our greenstone woodlands.

in the winter, and beavers all year long. Besides that big farmhouse, there are no buildings in sight. As we like to tell the students, everything the light touches is theirs to explore. We spend some time giving introductory lessons on the lawn before we take the students for a hike.

The most important rule the students have to follow on the hike is to keep their eyes open! Our staff is lucky to be able to walk our trails almost daily, but walking with twenty-five observant elementary school children is a whole different experience. They see so much more than we do! And their enthusiasm over seeing plants and bugs that are new to them reminds us to stay excited about even the common species that we see all the time.

The Clifton Institute is unusual in being not just an education center but also a research station and a conservation organization. That means that students on our field trips have the unique opportunity to participate in real scientific research and to see ongoing restoration projects in action. This past school year, we started having students help us collect data on our native grassland restoration project and the amphibians breeding in our vernal pools.

After one such field trip, a teacher from Wakefield Country Day School wrote us the following: "This was one of the best educational trips I have taken my students on in a long time. Not only were the presentations informative, so were the staff interactions. The students loved being part of a research project. It made them feel that the activity had purpose."

We are really excited about this new type of field trip and next school year there are going to be five projects that students can participate in on their field trips here.



Eleanor helps students collect and identify insects in one of our fields.



Students look for salamanders and frogs in one of our vernal pools during a guided hike.



Middle school students conduct plant surveys in our native grassland restoration experiment.

You can learn more and sign up at cliftoninstitute.org/fieldtrips.

Trials By Fire

It will come as no surprise to you to hear that the Virginia Piedmont has warm weather. It's also a pretty wet place, generally receiving over 40 inches of precipitation a year. The long hot summer and abundant rain make it a great place for trees to grow. Unless there's something to prevent tree seedlings from growing up and shading out smaller plants, fields will turn into forests in just a few years. Fire is one of the things that can kill tree seedlings. One study estimates that there were wildfires in the Virginia Piedmont every 6 to 8 years from 1650-1850. These were ignited by lightning and also by Native Americans. Nowadays if a wildfire appears, it's likely to be put out or its spread will be impeded by roads, paved areas, and other manmade firebreaks. And there was another important factor keeping fields open in the past: bison! There is evidence that there were bison in Virginia up until the early eighteenth century. With few fires, no large grazing animals, and the decline of beavers, there are no natural mechanisms keeping fields open in the present.

If you drive around the Virginia Piedmont, you'll see plenty of cattle pastures and hay fields, though, so there would seem to be lots of grassland habitat around. The problem is that those fields are dominated by just a few species of non-native pasture grasses. Native grasslands, by contrast, are the most diverse plant communities in the entire state and they support a wide variety of pollinators and other wildlife. Furthermore, because of the disappearance of grasslands, grassland birds across North America are declining more quickly than birds in any other habitat, so it is vital to restore and conserve these habitats.

Below: A drone photo of one of the experimental fields during a prescribed burn.



In 2019, we started working to turn a 100-acre field that was dominated by non-native Tall Fescue into a native grassland. Along with collaborators at Virginia Working Landscapes and the Oak Spring Garden Foundation, we are testing four different native-plant establishment methods and two management methods to see which lead to the most diverse native grassland. The establishment methods are herbicide treatment, plowing, and planting seeds, and the management methods are prescribed burns and mowing. In March we burned two of our experimental plots totaling 20 acres. Anecdotally, we have noticed that fire seems to benefit native grasses, but it doesn't do much harm to fescue.

We planted some of the plots with a native seed mix in spring 2021 and we are going to give them plenty of time to establish before we burn or mow them. In the meantime, those fields are looking great. We planted five species of grasses and twenty-five species of wildflowers and we have seen nearly all of them blooming this year. We are looking forward to seeing if fire further improves native plant cover in those plots.

We are working with Jordan Coscia, Ph.D. student in the Restoration Ecology Lab at Virginia Tech, and Jackie Luu, Master's student at George Mason University, to measure the effects of the different experimental treatments on plants and insects. This summer will be especially exciting because it will be the first time the planted plots get surveyed. As we explained in our field trip story, we have also started having K-12 students help conduct plant surveys in the experimental fields and we will be analyzing their data over the next year. Come to one of our open-access days and see the fields for yourself!

Below: One of the planted plots full of wildflowers.





Turtles All the Way Down

This spring we launched an exciting new research project on Box Turtles. The goals of the project are to better understand how Box Turtles are doing at the Clifton Institute (where they are still common), why they are declining in the region, and how landowners can help turtles. We are especially interested in studying their movements in different kinds of habitats so that we can advise landowners on when and how to change mowing and haying practices to minimize turtle mortality.

A dedicated undergraduate student, Jordan Davis from Dr. Travis Gallo's lab at George Mason University, spent the summer working with our Habitat Specialist Andrew Eberly looking for turtles on our property. When we found one we notched its shell with a unique code so that we can identify it when we (hopefully) see it again. So far we have found 106 turtles! Jordan found 14 of those more than once; based on those numbers we estimate that roughly 370 turtles live on the 400 acres that Jordan surveyed. We have been amazed to find so many and we want to figure out what makes our property so turtle-friendly. As a pilot study, we attached radio transmitters to five of the turtles and tracked their movements. Five turtles won't tell us much, but the tracking worked well enough that we plan to expand to more turtles next year to get a better idea of where they're hanging out and when. We are collaborating with the Turtle Conservation Ecology group at the Smithsonian Conservation Biology Institute on this research. Thanks to our collaborators, to Jordan, and to the other volunteers who helped with this project!

**You can register for upcoming education programs at
cliftoninstitute.org/events.
We hope we'll see you soon!**