

Directors' Note

With our small team (eight full-time and two part-time staff) there is only so much we can do. In this issue we wanted to highlight a few of the many people who make what we do possible, some of the ways we're getting out into the community, and how we're training future generations of scientists and conservationists to join our ranks. If you'd like to get involved, you can come meet our staff at an education program, volunteer to help take care of the field station or run education programs, or donate to help make our work possible. Learn more at cliftoninstitute.org. Thank you for your support! We hope we'll see you out here soon!

Front cover: Co-Director Bert Harris, Dana Milbank, and Rea Manderino admire a hoverfly during a bioblitz (a volunteer-driven day-long biodiversity survey) at Sunnyside Farm this summer. Photo by Gardiner Lapham / Sunnyside Farm and Conservancy.

Clifton's Animal Community

We want to support the communities of both human and nonhuman creatures that live here in northern Virginia, but before we can take care of the animals that live around us we have to know who and where they are. Camera traps (motion-activated cameras) are a valuable way to monitor the wildlife moving across our landscape, and for the last four years Art Drauglis has been volunteering to manage our camera trap network. In addition to setting up and checking the cameras, reviewing the images, tallying up the species he sees, and sending us the highlights, Art also submits data from the cameras to Snapshot USA, a community science project run by the Smithsonian Institution to monitor mammal populations across the country. When we asked Art what got him interested in volunteering to run our camera traps, he told us "I figured 'well, I'm already going out there every few weeks, why not add some scientific value to my hiking?'." As for lessons learned from the camera traps, "I [have been] surprised to see how close some of these animals are to us; they're right there but we just don't see them most of the time. The camera at the lower spillway, for example, might catch Bridget teaching a class, and then half an hour later a bear wanders by. I think I did once say out loud while reviewing the photos, 'No, Bert! Don't go that way! A coyote was just there!""









Bringing Conservation Science to the Community

We're lucky to have a 900-acre property that serves as a giant laboratory where we can do our research projects. But we want people to feel empowered to do science wherever they are, and it's possible to do science on a much smaller scale. To that end, this past school year we started a new project called Lawn Lab to bring the kind of science we do here at the Clifton Institute to a schoolyard out in our community. In partnership with Fauquier County Public Schools, we set up a lawn mowing experiment on a two-acre field on the campus shared by Grace Miller Elementary School and Liberty High School in Bealeton. This past school year, we worked with 60 second grade students and 50 high school ecology students to study the plants and insects in the experimental field. In addition to getting K-12 students involved in conservation science, we also invited members of the public to participate in a bioblitz (an intensive effort to document biodiversity) in the fall. One species in abundance in the experimental field was the Common Buckeye: we found hundreds of caterpillars! Lawn Lab is a win for everyone: the students spend time outside getting hands-on experience doing scientific research, the county spends less money and emits less pollution by mowing less often, and the school campus is becoming better habitat for pollinators. We are grateful for support from the Chesapeake Bay Trust, the Commonwealth of Virginia Department of Conservation and Recreation, the Kortlandt Fund at the Northern Piedmont Community Foundation, the Volgenau Foundation, the Warrenton Garden Club, the William M. Backer Foundation, and individual donors for supporting Lawn Lab!



Get involved with Lawn Lab!

Come survey plants and insects with us at our next community bioblitz on October 25! Sign up at cliftoninstitute.org/events. No prior experience necessary. Or, if you'd like to volunteer with Lawn Lab or other K-12 programs, email Education Associate Bridget Bradshaw at bbradshaw@cliftoninstitute.org.

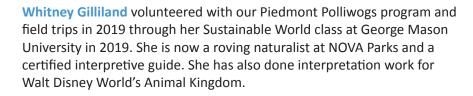


Where Are They Now?

Part of our mission is to support the next generation of scientists and conservationists, from the preschool children who attend Piedmont Polliwogs to college interns and post-graduate technicians who work with us on research projects. Through the years we've had the honor of working with an incredible group of young people, many of whom have gone on to pursue their passion for science and nature far beyond Clifton's boundaries. Here are just a few of our "graduates" memories of working here and updates on their successes since leaving Clifton!

Sarah Cain was part of our American Kestrel research team during the summer of 2021. She recently graduated with her Master's of Science in Natural Resource Ecology and Management from Oklahoma State University where she studied the interactions between humans, elk, moose, and mule deer. Sarah currently works as an Extension Associate in Wildland and Prescribed Fire at North Carolina State University.

"I learned a lot about the development and initiation of a research project while at Clifton," Sarah said. "That experience really helped me when I faced challenges with my own master's research. I also learned a lot about the best ways to communicate with people about scientific research. I liked getting people to care about what we were doing for the kestrels!"



Whitney said, "Clifton was a safe space to step out of my comfort zone. I remember being shy and scared. The staff was always patient with me and gave me opportunities to learn and grow. These positive experiences helped me find direction in what I wanted to study in college and eventually helped encourage my curiosity to change careers from zookeeping to interpretation."

Maggie Grady first came to us a student in our Young Scientists Research Experience, when she studied the parenting behaviors of Trumpeter Swans and the perching behavior of damselflies and dragonflies. She returned as a Young Scientists counselor and volunteered with our American Kestrel research project in 2023. Maggie is currently a rising senior at the University of Vermont and spent this summer as an undergraduate research assistant to Dr. Elizabeth Doran.

"After doing research at the Clifton Institute, both as a camper and a technician, I was assured that I was on the right track with my choice of major and career," Maggie said. "I loved the friendly and curious work environment that blended research with public outreach."

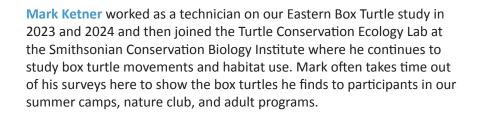






Sydney Jackson's first experience with Clifton was as a student at George Mason University, when she visited with her mammalogy class. She returned in the summer of 2023 as the nest-box camera technician for the American Kestrel project. Sydney currently works as the Outreach Assistant at the Potomac Environmental Research and Education Center in Woodbridge and she makes time to volunteer with our field trips.

Sydney said, "The most surprising skill I learned was social media management because I didn't expect that skill to carry into my next job! The posts I worked on not only showed off the adorable kestrels (and sometimes other animals) living in the nest boxes, but they also served as valuable research updates. It's vital that science is communicated to the public in ways that are engaging and informative."



Mark said, "I think that it's important to educate people on these underappreciated animals and I think getting experience in education is something I didn't think I would get here and I hadn't had before. Seeing people excited about turtles and seeing people change their behavior to help animals is really cool."

Megan Lemmo worked on the American Kestrel research project from 2023 to 2024, starting as a technician and then taking over as project manager. She had previously done field work with Spotted Owls and was looking to expand her skills. She's currently working on getting her master's at New Mexico State University, focusing on American Kestrels in the west.

"I think Clifton really embodies an outreach atmosphere, creating good working relationships with people in your community and landowners. I'm doing very similar work [in New Mexico] too: many of our boxes are on private land so I work with a lot of landowners. It's exciting to see people in the community get so interested in being supportive of the project."







Get involved!

- The Young Scientists Research Experience program we run in June is a great way for high school students to get experience doing scientific research. During the school year high school students can learn what's it's like to work at a field station at our monthly Nature Club. Learn more at cliftoninstitute.org/events.
- We take two to four high school and college interns each season to shadow our staff working on a number of different projects. Visit cliftoninstitute.org/about-us/internships to learn more.
- We hire summer research technicians in January. You can find openings at cliftoninstitute.org/about-us/employment/.

It Takes a Team to Track American Kestrels

American Kestrels have declined by twenty percent in North America in the last 10 years (eBird data). We have been studying kestrels since 2021 to try to figure out what land management practices might help reverse their decline in our area. And by "we" we mean a large group of people all working together to solve this conservation problem. First and foremost are our co-Principal Investigators on the project, Joe Kolowski at the Smithsonian National Zoo's Conservation Biology Institute and Alan Williams. We're in the process of writing up the biggest scientific paper to date about our data, but in the meantime we wanted to share some stories about the people who made this work possible.

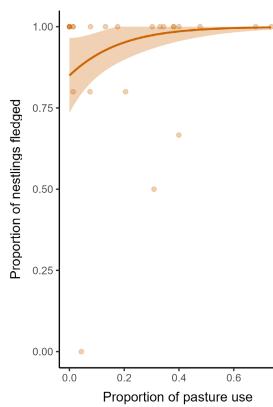
Since 2019 we have had an incredible crew of **14 research technicians and 27 volunteers and collaborators** out in the field collecting the data we need to help kestrels thrive. Caylen Wolfer was the lead technician from 2021 to 2023. She spent three summers attaching GPS transmitters to kestrels, downloading data from the transmitters, and coordinating the team of technicians responsible for various aspects of the project. Perhaps her most memorable task was spending many many hours measuring the height of the grass in the fields around kestrel boxes to see how it affected their behavior.

Caylen went on to graduate school at Virginia Tech and she recently defended her master's thesis. For her thesis, she used data from our 69 birds with GPS transmitters to examine the effects of different habitat types (pasture, hay, forest, meadow, row crop, and lawn) on kestrels' movements and breeding success. Here's what she found:

- Having more meadow or hay within about a half mile of a nest box reduced how far kestrels traveled, which suggests that they were finding the prey they needed closer to home.
- Nesting near cattle pastures seemed to improve the odds of fledgling success.







Top: Caylen Wolfer at her master's defense about American Kestrels. **Bottom:** This graph shows that baby kestrels being fed by males that used more cattle pasture were more likely to successfully fledge from the nest. **Left:** Research technician Sarah Cain, co-Pls Alan Williams and Joe Kolowski, and lead technician Caylen Wolfer monitoring kestrel boxes in summer 2021.

We only have six kestrel boxes here at Clifton. As glad as we are to provide homes for six nesting pairs of kestrels, the data from six boxes wouldn't tell us much. We rely on over a hundred landowners who generously allow us access to their properties to set up and visit kestrel boxes. One of our favorite kestrels in the study is a male we call Rabbit who we first tagged in 2022, when he and his mate were nesting at Clifton. He "commuted" almost every day to a field six miles away where he would hunt before returning home to Clifton! In 2024 we put up a box for Rabbit at that property, Pickett Mountain Farm, where he has stayed ever since.

We recently caught up with the owner of the farm, Susan Gendron, to ask her about her experience participating in the study. We asked her if having kestrel boxes on her property has changed how she thinks about and interacts with her property. She told us, "I now keep and rotate two fields each year for birds. I've watched the number and variety of birds grow over the years since the house was finished [in 2018.] I saw an oriole this year for the first time in my life." As for Susan's favorite part of having a kestrel box on her property, the answer was clear: "Seeing the babies in the summer!"

Thank you to Sue and all of the other landowners who have agreed to participate in the study! And thank you as always to the Raines Family Fund, the BAND Foundation, and Nick Lapham for financial support, and for the many volunteers and collaborators that make this work possible.

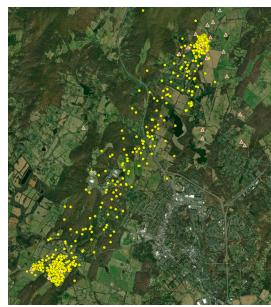
Get involved with kestrel conservation!

Use the QR code here to find our recommendations for how to put up a kestrel box. Keep in mind what habitat is available within about half a mile of the box location. Kestrels won't nest in wooded areas and they prefer short vegetation.









Top: Rabbit the American Kestrel. **Bottom:** This map shows Rabbit's daily commutes from the Clifton Institute in the top right to Pickett Mountain Farm in the bottom left. Each dot is a data point collected by his GPS transmitter. **Left:** Co-Director Bert Harris and technician Tyree Brown preparing to open Rabbit's nest box on Pickett Mountain Farm in order to put a leg band on him in summer 2025.

