

THE RIVER AND FIELD CAMPUS 2022 ANNUAL REPORT



Washington College's River and Field Campus is dedicated to:

- **Mentoring our next generation** of field biologists through hands-on training and research experiences.
- **Restoring diverse wildlife habitats**, especially mid-Atlantic coastal grasslands within the agricultural landscape.
- **Designing studies and protocols** for the establishment and sustainable management of these wildlife habitats.
- **Conducting basic and applied research** on the flora and fauna that colonize these restored habitats.
- **Sustaining the Foreman's Branch Bird Observatory**, a year-round avian research and banding station.
- **Providing outreach and education** for K-12, undergraduate and graduate students, and members of society interested in the natural sciences.

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**River and Field Campus
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Chesapeake Conservation Corps
Fana Scott

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Senior Capstone Experiences

At Washington College, all graduates complete a Senior Capstone Experience (SCE), which in the sciences requires an independent laboratory or field research project, or writing a scientific monograph. In 2022 we were delighted to facilitate SCEs for three students on the River and Field Campus. **Emma Macturk '23** is double majoring in chemistry and environmental science. Her project "Assessing Phosphorus Transport in Natural Land's Project Agricultural Riparian Buffers in Queen Anne's County" required taking soil samples from buffers and agricultural fields and she used RAFC as one of her study sites. She hopes to evaluate if the length of a buffer affects the reduction of phosphorus that could enter a waterway.

Peter Walls '23 came to RAFC to conduct insect, plant, and bird surveys for his SCE "Effects of Land Use on General Biodiversity." The environmental science major surveyed two locations on RAFC- a planted tree buffer and a soy bean field. Continuing on the agricultural theme, environmental science major **Holly Meyers '23** collected water, stream detritus and aquatic insects for her thesis "Exploring how Agriculture Affects Aquatic Insect Detritivore Community Structure and Resultant Tipulidae Larvae Decompositional Ability." She set up tanks in the lab to monitor the larvae after exposure to pesticides. These "detrivorous shredders" such as stoneflies, caddisflies, and crane flies are an important part of stream ecosystems and play a crucial role in overall stream health.



Clockwise from left: Emma Macturk '23 collects soil samples in a buffer; Aquatic invert sampling stream site of Holly Meyers '23; Peter Walls '23 surveying soybeans for insects. (All photos by subjects)

Cover photo: Anasimyia sp. female. A rare species of syrphid fly discovered at RAFC. Samples from the College, and other Eastern Shore locations, have been sent to the Canadian National Collection of Insects where there is ongoing genetic testing to species. The life history of this species, all but unknown, is being brought to light through research at RAFC. (photo Pamela Cowart-Rickman)



Paperchase

The Washington College **Equestrian Club and Team** held two fundraising events at the River & Field Campus in 2022. Paperchases were held in the spring on April 24th and in the fall on

September 25th and attracted nearly 100 attendees. A paperchase is a scavenger hunt several miles long that follows a marked trail. Riders (and in this case also walkers) answer trivia questions and collect points through clues. While there is an "optimum time" to complete the course, that does not mean the fastest participant wins. The event is designed for riders to enjoy the course and appreciate the scenery. The club was pleased to use RAFC for the event. "Some of best parts of the paperchase at RAFC are the views- as you go along the trail you see fields, the gorgeous Chester River, and the woods." said **Jodi Eren '23** club

Chesapeake Conservation Corps

The Center for Environment & Society was pleased to welcome Chesapeake Conservation Corps member **Fana Scott** in August; she will work with us for 12 months. The Corps is sponsored by the Chesapeake Bay Trust, which places young adults in year long positions with organizations throughout the Bay watershed where they work on various environmental and natural resources projects. The highly competitive program is designed as a professional development opportunity as well, members work on "refining their professional goals" and "building the foundation to grow into experts, thought-leaders, and change-makers in their respective fields."

Fana grew up in Washington D.C. and graduated in 2022 from Eckerd College in St. Petersburg, FL with degrees in biology and environmental studies. She arrived with lots of field experience already- she'd conducted pollinator surveys, led an American Kestrel nest box program and worked on invasive plant removal.

During her year with CES, Fana will spend spring and fall working at the Foreman's Branch Bird Observatory during their migration bird banding seasons. In winter and summer, she'll be working on outreach, youth programming and other CES sponsored events. "I wanted to work at CES/FBBO because this position combined two of my career interests: birds and connecting people with the environment. I chose it from all other options because this position allowed me to divide up my time between working in the field and working in the office, providing me with the opportunity to develop a wide range of skills that will be beneficial to my career as a wildlife ecologist."

Vice President. **Leann Standridge '23** club President and Hunt Seat Team Captain observed that "The Equestrian Club has hosted events like this on RAFC for years and we wanted to keep this tradition. The ability to host such an event on a part of the college's campus is amazing as we are limited to what we can host on main campus." The event was the first time many of the students had visited the River & Field Campus. While those taking science labs often visit multiple times a semester, students in other disciplines may not have had the opportunity yet. Plans are already underway for the spring 2023 event.



Top left: Riders on the paperchase, photo courtesy of WC Equestrian Club. Above: CCC member Fana Scott with a Sharp-shinned Hawk.

Foreman's Branch Summary

It's hard to believe, but 2022 marked the 25th year of migration banding at Foreman's Branch Bird Observatory! We've grown so much since that day in March of 1998 when FBBO Founder and Director **Jim Gruber** banded the first bird at our current location, a Carolina Chickadee. What started as Jim and a few volunteers has grown into 7 months of intensive migration monitoring with up to three paid seasonal staff per season!

Spring of 2022 was above average in terms of birds banded (4,381), average for number of species banded (103), and slightly below average in terms of birds per 100 net hours (12.6). We operated for 85 days and were ably assisted by seasonal banders **Mathieu Landry** and **Alanis Bowman**.

During the spring season we captured ten species in record high numbers that were also significantly higher than our long term average: Sharp-shinned Hawk, Eastern Phoebe, Eastern Wood-pewee, Black-and-white Warbler, Northern Parula, Yellow Warbler, Ovenbird, Louisiana Waterthrush, Gray Catbird and Veery. No species were caught in record low numbers.

Fall of 2022 was slightly below average in terms of birds banded (10,163), slightly above average for number of species banded (123), and below average for birds per 100 net hours (23.5). During the 107 banding days of the fall season, Jim and Field Ecologist **Maren Gimpel** were joined by **Laura Porter**, **Emma Little**, **Nina Black '20** and **Alanis Bowman** as seasonal banders, intern **Libby Witham '24** and Chesapeake Conservation Corps member **Fana Scott** (see page 3 for more about Fana).

Two species were caught in record high numbers that were significantly above our long term average: Sharp-shinned Hawk and Brown-headed Cowbird. Species caught in record low or near-record low numbers included Great Crested Flycatcher, Chipping Sparrow, Blue Grosbeak, Western Palm Warbler and Golden-crowned Kinglet.

During the summer months, our glass tunnel technician **Meghan McHenry '20** switched jobs and banded to monitor the breeding season and Maren Gimpel monitored about 75 nest boxes on RAFC. Combining the summer and some winter effort, we banded a total of 16,471 birds of 132 species in 228 days in 2022.

Hosting Washington College interns remains a key part of our mission. In 2022, Sara Canas '23 and Mirabelle White '24 learned to identify birds, extract them from mist nets and were exposed to all aspects of running a banding station (see pages 14-15



of this newsletter for more on them). We also shared our work with over 450 visitors in over 75 demonstrations. 150 of those visitors were WC students who came with classes. Other visitors included 5th grade students from St. Anne's School in Middletown, DE, residents from Heron Point, the Kent School's bird club, members of the Caroline and Talbot County bird clubs and many others.

Our biggest collaboration in 2022 was the continued testing of bird friendly glass with the American Bird Conservancy. Over the course of two migration seasons 8,378 birds of about 65 species flew the tunnel and 63 glass samples from around the world were given scores to aid builders and consumers in choosing materials that are safer for birds.

We deployed radio tags for Luke DeGroote of Powdermill Avian Research Center who is also studying birds and glass. He hopes to determine if birds that have collided with buildings and been rehabilitated migrate as expected. We tagged birds in the control group, that have not hit buildings. The tags will hopefully be detected by the Motus network

which spans much of eastern North America. We collected ticks from birds for Dr. Holly Gaff of Old Dominion University who is studying how birds may be dispersing ticks and we collected fecal samples are part of a new collaboration with Joseph Elias of Bloomsburg University, who is studying microplastics in birds for his graduate work.

In addition to those already mentioned, a great number of people help us keep the station up and function. We are also grateful to **Erin Betancourt**, **Liv Butler '21**, **Joelle Carbonell-Bierbaum**, **Jonathan Irons**, **Brooke McAdory**, **Vanessa Merritt**, **Connor O'Hea**, **Liz Peterson**, **Hanson Robbins**, **Danielle Simmons**, **Nathan Simmons '18**, **Everett Smith**, **Sam Snowden** and **CareyJo Titus**.

Returns of Note

This year we captured 2,021 birds of 57 species that had been banded at FBBO during a previous season. Setting a new age record was **Eastern Kingbird** #2571-64803 banded as after hatch year on May 6, 2012 and was 11 when captured on June 17, 2022. Another age record was **Blue Grosbeak** #2571-64803. This bird broke the longevity record it set last year. It was now ten years and 11 months old on May 11, 2022. The oldest bird at FBBO this year was **Northern Cardinal** #2451-08675 which was 11 years and 2 months old at the time of the last capture on August 11, 2022. Other old birds of 2022 included a **White-throated Sparrow** that was 9 years and 10

months, an **Orchard Oriole** that was 8 years 11 months and a **Barn Swallow** that was 8 years 10 months. These elder birds have a combination of good genes are good luck to live to such old ages. We hope to see some of them back again in 2023.

Opposite page lower left: FBBO bander Mathieu Landry shows guests a Sharp-shinned Hawk.
Opposite page upper right: visitors observe banding.
This page right: Eastern Kingbird.



Top Ten Table – 2022 Spring and Fall Migration

Spring 2022			Fall 2022		
Species	Total	Last Year's Rank	Species	Total	Last Year's Rank
1. Gray Catbird	646	3	1. White-throated Sparrow	1,722	1
2. White-throated Sparrow	449	1	2. Song Sparrow	1,005	2
3. Red-winged Blackbird	439	4	3. Ruby-crowned Kinglet	662	6
4. Common Yellowthroat	394	2	4. Gray Catbird	581	5
5. American Goldfinch	211	5	5. Common Yellowthroat	420	4
6. Brown-headed Cowbird	202	7	6. Brown-headed Cowbird	346	-
7. Swamp Sparrow	173	6	7. Swamp Sparrow	297	7
8. American Robin	137	-	8. Slate-colored Junco	296	8
9. Northern Cardinal	117	10	9. Indigo Bunting	248	3
10. Song Sparrow	105	8	10. Hermit Thrush	232	9





Male Eastern Towhee.

Foreign Recaptures in 2022

Usually Northern Saw-whet Owls make up a lot of our foreign recaptures (birds that were banded by other banders at a different location). In 2022, despite having a good owl season, we didn't catch a single foreign owl. We did, however, have two other foreign recaps this year.

On July 23rd Brown-headed Cowbird #2791-52888 was captured in our nets. This bird was banded April 20, 2021 as a second year female at **Prince Edward Point Bird Observatory, Milford, Ontario**. This was extra exciting for us because Phillip Mercier who was one of our fall banders in 2020 now works at Prince Edward Point! That station is 330 miles north northwest of FBBO.

The second foreign recap of the year was a male hatch year Eastern Towhee #1272-19722 that FBBO captured on October 20th. This bird was banded just a month earlier on September 18, 2022 at the **Mark Blazis Research Station in Auburn, MA**, about 300 miles northeast of FBBO.

FBBO Recoveries

When a banded bird is found away from the banding location, banders call that bird a "recovery." These selected recoveries are of note due to the distance from FBBO or the circumstance in which they were encountered.

Species and Banding Date	Recovery Details
Song Sparrow October 14, 2018	Found dead, Saint-Marjorique-de-Grantham, Quebec, Canada August 5, 2022 (497 miles northeast of FBBO)
Purple Finch October 19, 2018	Found dead, August 13, 2022, Brooksville, ME (514 miles northeast of FBBO)
American Robin March 23, 2022	Found dead, June 2022, Hartley Settlement, New Brunswick, Canada (650 miles northeast of FBBO)
Worm-eating Warbler July 13, 2022	Captured and released alive by another banding station, Bill Baggs Cape Florida State Park, Miami, FL on September 18, 2022 (967 miles southwest of FBBO)
Barn Swallow July 16, 2022	Found dead on a ship 30 miles offshore from the Turks and Caicos, August 12, 2022 (1,240 miles south of FBBO)
Pine Siskin October 31, 2020	Found dead, Sturdies Bay, British Columbia, Canada, May 16, 2022 (2,403 miles northwest of FBBO)



Standout Captures

Arguably the best capture of 2022 at FBBO was the station's first **Broad-winged Hawk**, banded on September 25th. Broad-winged Hawks are uncommon migrants on the Eastern Shore, but your best chance to see one is in late September when they are leaving the deciduous forests of the Eastern United States and heading south to their wintering grounds in Central and South America. Broad-winged Hawk was the 179th species banded at FBBO. We banded our third ever **Rusty Blackbird** on November 10th. The previous two birds were banded in 2015 and 2010. Rusty Blackbirds look somewhat like a smaller Common Grackle with brown tipping. They breed across boreal Canada and in the very northernmost parts of New

England in wet forests and bogs (which makes them hard to study). This species has declined dramatically in recent decades- about 75% since 1966. In winter they can be found in much of Maryland, look for them in wet woods and swamps. A **Red-shouldered Hawk** we banded on September 19th was only the 5th banded at FBBO. This species can be found in Maryland year-round. They nest in forests and can sometimes be seen perched along roadways on wires. **Brewster's Warblers** are hybrids of Blue-winged and Golden-winged Warblers. Hybridization is increasing across their range, but is thought to have existed naturally for thousands of years. FBBO banded three Brewster's Warblers in 2022 making a total of 13 since 1998.



Top from left to right: Rusty Blackbird; Brewster's Warbler; Broad-winged Hawk. Above: Connor O'Hea Opposite: Radcliffe Creek School students visit FBBO.

Volunteer Spotlight

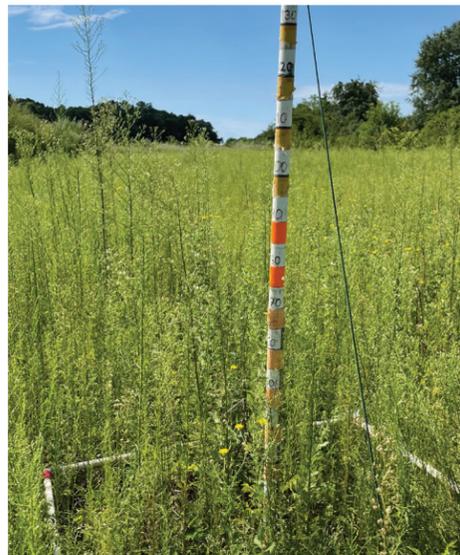
Connor O'Hea graduated from the University of Delaware in 2020 with a degree in biology and a concentration in wildlife ecology and conservation. He was pleased to get a 6-month internship with the Florida Keys Wild Bird Center. After that position ended, he returned home to Hartly, DE, looking for a way to continue working with wildlife. Just his luck, he realized that just 20 miles west of him was a major migratory bird banding station. Connor began volunteering with FBBO in Fall of 2021. He had bird handling experience, and had been exposed to banding through his coursework in college, but he was excited to learn more and improve

his skills. Connor returned to us in spring and fall of 2022 and by the end of 2022 he'd donated nearly 600 hours of his time. One of his favorite times at FBBO was the first American Woodcock he saw in the hand. He'd been told they were funny looking, and no offense to the woodcock, Connor agreed. A more breathtaking experience was the morning he "saw a big mass moving on the bottom of the net, so I started sprinting to prevent the hawk from escaping." His reward for the run was banding his first Cooper's Hawk. We are grateful for all Connor's help around FBBO and we suspect we haven't seen the last of him.

Grasslands Summary

The existence of the 200 acre grassland at the River & Field Campus in Queen Anne's County continues to amaze visitors, provide habitat for avian species in decline, and allow Washington College staff a premier research study plot. Grasslands were much more common in the past when wildfires burned, beavers flooded forests and agricultural land was sometimes left fallow. Now they are rare islands of habitat.

Associate Professor of Biology **Jennie Rinehimer** and Field Ecologist **Maren Gimpel** led the 9th year of research on Field Sparrows, a common grassland bird in decline. With a team of Washington College undergraduates they identified color banded birds, mapped breeding territories, and searched for and monitored Field Sparrow nests. Toll Fellow **Rory Miller '24**, and CES interns **Hannah McCarthy '23** and **Jeremy Liberman '25** spent ten weeks on the project starting at sunrise each day (see pages 14-5 of this newsletter for information about the interns).



The crew rotated throughout the study plot focusing on a different patch each day, noting the activities and behaviors of each pair of birds. Having color bands on adult birds allows us to know which bird is which without capturing them to read their numbered leg band. Nests were found primarily by observing bird behavior and territories were mapped by taking GPS points of singing males.

We monitored nests until they either failed or fledged and afterwards we collected a suite of vegetation measurements at the nest site and a paired random site.

"It's so rewarding for me to introduce students to field work, both the good and bad aspects of it, because it's something I've loved so much over the course of my career. Seeing an intern get really excited about finding a nest and knowing it might be the spark that changes the direction of their post graduate life is one of the best parts of this job." said Gimpel.

In 2022 we banded 84 nestlings from 70 nests and since the project began in 2014 we have banded 1,153 nestlings and documented 885 nests. We are interested in whether birds become "better" parents with increased experience. We are measuring this

based on nest success (did the nest fledge at least one Field Sparrow chick) and comparing the nest variables such as height, host plant, percent concealment to the ages of the parents. Once a large enough dataset has been collected, we'll statistically analyze the results for publication.

Many nestlings do not survive and those that do often disperse away from the breeding area. However, adult birds tend to show strong site fidelity and return to breed year after year, often in nearly the same area. Since the project began we have color banded 925 adult Field Sparrows. Our oldest sparrow on the plot this year was TWTX (named for his color



bands) who was banded as a second year in 2014 making him 9 years old this summer.

We continue to monitor Northern Bobwhite Quail and manage habitat for them. Natural Lands Project Coordinator Dan Small conducts standardized surveys in the breeding season and the fall, and the numbers continue to remain stable. Many visitors to the River & Field Campus remark on their joy of hearing bobwhite for the first time in many years.

Non-academic uses of the grasslands in 2022 included the Wicomico Hunt Club, who held several fox chases



Opposite clockwise from lower left: nest site vegetation measurement; Summer Field Sparrow crew; Field Sparrow Top left: Hatching Field Sparrow eggs Lower left: Color-banded Field Sparrow Above: Aerial view of RAFC grasslands Right: Spotted Lantern Fly immature, adult, and squashed.

during the winter, and a spring break camping trip by students in the campus garden club who stayed at the Wild Foods Outpost with advisor Shane Brill, Interim Director of Sustainability and Regenerative Living.

We also hosted participants in CES' Young Environmental Stewards Conference who came out for a morning to learn about our Field Sparrow research.

Field trips to the grasslands included a June field trip for members of the Lancaster Count Bird Club, hosted by Dan Small, Dr. Wayne Bell hosted bird walks for attendees of the Atlantic Estuarine Research Society in October and several RAFC tours were given during Fall Family Weekend.

Spotted Lanternfly

The latest invasive species to hit the news is the Spotted Lanternfly, a planthopper native to eastern Asia. It was first document in the U.S. in Pennsylvania in 2014 and has since spread throughout much of the eastern U.S. Agriculture officials fear they could be come a serious pest, especially to vineyards. Staff found a single individual on RAFC in fall 2021, but this past summer a larger infestation was found in the grasslands. We notified the Maryland Department of Agriculture who came to treat the area. For homeowners, the motto is "If you see it, squash it."



Natural Lands Project

The work NLP is doing is making a difference! The number of landowners hearing or seeing Northern Bobwhite increases each year as we continue to add early successional habitat to Maryland's Eastern Shore rural landscape. This is good news all around, especially for those less charismatic species that benefit from the efforts dedicated to quail. Connectivity and quantity are the key to making a difference. Neighboring properties participating in NLP often can have a larger impact to farmland wildlife as more habitat is added in close proximity to each other, this is critical for non-migratory species like Northern Bobwhite whose populations expand via dispersal rather than migration. Neighboring landowners also feel a sense of community, participating together to make a difference for a healthier, balanced rural landscape.

In 2022 we added 110 acres of meadows and buffers on private properties across the upper shore. Funding from this same grant, Chesapeake and Atlantic Coastal Bays Trust Fund, allowed our

partners, ShoreRivers, to restore 8.5 acres of wetlands. On the Lower Shore we created 46 acres of meadows with our partners Lower Shore Land Trust.

We added another new partner to the fold this past year. NLP and the Eastern Shore Land Conservancy were successful in securing funding to add an additional 225 acres of early successional habitat on the upper shore over the upcoming three years. We also partnered with Duck's Unlimited to restore around 15 acres of wetlands. By partnering with like-minded organizations on the shore our reach and impact is so much greater. NLP also partnered with the Maryland Park Service to transform 452 acres of cropland into wildlife habitat across four public properties. Habitat projects will take place at Tuckahoe State Park, Cypress Branch SP, Wye Island Natural Resources Management Area and Sassafras NRMA. Habitat work will be phased in starting in 2023 and NLP will oversee the establish and management of projects over the next five years.



*Top right: Sulphur Butterfly on Ironweed
Bottom left: Grasshopper Sparrow
Opposite left: Recently installed wetland on private farm in Talbot County.
Opposite right: Dan Small accepts a MD State Park Service Partner of the Year Award
Opposite bottom: Dan Small and Shore River members at Conquest Preserve (photo Pamela Cowart-Rickman)*



If you are interested in learning more about the Natural Lands Project please visit:

<https://www.facebook.com/NaturaLandsProject/>

or contact Dan Small:
dsmall2@washcoll.edu.

Project Site Update: Conquest Preserve

Conquest Preserve is a Queen Anne's County property located a few miles west of Centreville between the Corsica and Chester Rivers. NLP oversaw the transformation of 215 acres into meadows, wetlands and forest plantings in 2019. The newly planted 140 acres of meadows combined with approximately 100 acres of existing

grassland habitat is one of the largest public land open spaces on the shore and is attracting lots of grassland dependent wildlife. Grasshopper Sparrows, Field Sparrows and Eastern Meadowlarks are abundant, there has been several nesting pairs of Dickcissels, a Short-eared Owl has spent the last two winters cruising over the meadows and 100's of Bobolinks spend a

month or so in fall migration molting and refueling before continuing onto South America. Bobwhite numbers have increased dramatically since the change in management. The wetlands are filled with waterfowl throughout the winter months. The site is open to the public and have lots of walking trails. The current bird list stands at 195.

Faculty Spotlight: Dr. Rebecca Fox Associate Professor of Environmental Science & Studies

What are your research interests and what classes do you teach? My research centers around nutrients and greenhouse gases. I evaluate different agricultural best management practices (BMPs) in terms of nutrient reduction capabilities and the potential for a pollution trade-off from these BMPs of less nutrients in exchange for higher greenhouse gas fluxes. This past summer I expanded my research away from agriculture with **Emily Coleman '23**, and we measured greenhouse gas fluxes from the Chester River and from the cascading set of storm water runoff ponds by The Freeze in Chestertown. I teach many courses at WC, Field Methods in Environmental Science and Watershed Biogeochemistry, Climate Change, Sustainability and the Environment, and Introduction to Environmental Studies when needed. Amazingly, I also teach courses in Bermuda and Ecuador!

How have you been able to take advantage of the River and Field Campus (RAFC) in your classes? I take advantage of RAFC in nearly all of my classes. It is such a fantastic resource. When I teach Introduction to Environmental Studies (ENV 101), we visit the Foreman's Branch Bird Observatory, which is a particularly big hit with the students. In my upper-level courses, Field Methods in Environmental Science (ENV 311) and Watershed Biogeochemistry (ENV 312) we visit Foreman's Branch stream to measure stream discharge and groundwater flow. In ENV 312, we also do a comparative



study of the water chemistry of Foreman's Branch and a wetland also on RAFC. Since water flows in a stream and is stagnant in a wetland, different chemistry often exists. I have really appreciated the addition of the bird glass testing station for Field Methods. For that class, we visit the bird banding station to talk more specifically about banding methods (in comparison to ENV 101), but we can also talk about the experimental design behind the glass testing.

What does it mean to have access to a place like RAFC so close to campus? One thing that most people probably do not realize about field work is how difficult it can be to get landowner permission to sample or access land. In addition, it is easier to ask for land access if a few people are sampling for research than it is to ask for permission for a class of 16 to access land. RAFC allows us to access many different environments close to campus without having to find a site that will allow us land access. It is also nice to be able to get to RAFC quickly and to be able to repeatedly visit the sites throughout the years.

Do you have a favorite RAFC experience? Last year in ENV 312 we sampled Foreman's Branch stream in the snow. The day was actually quite warm for January, but there was still snow coverage. It was really pretty and made the lab memorable. I always like to get students in the field in various weather conditions as field work typically does not just happen on nice days, at least mine doesn't!

Top: Dr. Fox with students at Foreman's Branch.
(photo Pamela Cowart-Rickman)
Left: Dr. Fox with Emily Coleman '23.

Academic Engagement

It was a busy year for academic activity on the River & Field Campus. During the spring semester, **Dr. Leslie Sherman**, W. Alton Jones Associate Professor of Chemistry, and students enrolled in CHE 210 Environmental Chemistry compared soils from agricultural fields to those in the experimental grasslands.

Dr. Rebecca Fox, Associate Professor of Environmental Science & Studies and students in ENV 101 Introduction to Environmental Studies visited FBBO and she came to RAFC again with students in her Watershed Biogeochemistry ENV 312 to compare chemistry of a wetland to that of a flowing stream.

Long-term monitoring of salamanders continues to be a research project of **Dr. Robin Van Meter**, Associate Professor of Environmental Science & Studies and Biology. She checks study plots several times a year.

In late April **Professor Roy Kesey**, Associate Director of the Rose O'Neill Literary House and lecturer in English used RAFC with students in ENG 452 Advanced Fiction Workshop. Their visit to RAFC was an immersion experience: find one plant species with which to become obsessed, to do follow-up research on, and to include in their final fiction writing assignment.

The fall semester is our busiest season! The Chesapeake Semester students camped out and explored the Chester River during their orientation. CES hosted two first year Explore! Programs—"Bioblitz" and "Chesapeake Semester Crash Course." Those students also camped, cooked over a fire, visited

FBBO and the BioBlitz team roamed RAFC for days cataloging all the living things they could identify.

Dr. Raymond Lee, Visiting Assistant Professor of Environmental Science & Studies and students in ENV 141 Atmosphere, Ocean and Environment explored stream properties at Foreman's Branch.

Natural Lands Project Coordinator **Dan Small** hosted ENV 294 Advancing Environmental Science with **Tom Leigh**, Lecturer of Environmental Science & Studies. Those students toured the experimental grasslands and talked about management issues.

Dr. Fox and the ENV 311 Field Methods students practiced sampling for measures like dissolved nitrous oxide and stream velocity. On a second visit to RAFC they had an in depth visit to FBBO to learn about experimental design, the uses and limitations of bird banding and ways to study and monitor birds.

Students in BIO 206 Ecology visited RAFC twice. **Dr. Martin Connaughton** and **Dr. Jennie Rinehimer**, Associate Professors of Biology explored seed dispersal and forest tree diversity.



"Leaf packs" are a way the students in ENV 242 Applied Ecology surveyed for aquatic invertebrates with **Dr. Jill Bible**, Assistant Professor of Environmental Science & Studies. This class also visited RAFC to conduct stream sampling on several occasions.

FBBO hosted ENV 101 Introduction to Environmental Studies with **Dr. Lee** and Lecturer **Eden Kloetzli**. Students in three lab sections learned about the uses of bird banding. **Dr. Rinehimer** came again to FBBO with BIO 100 Diversity & Adaptation those 32 students enjoyed seeing birds up close. **Dr. Fox** with ENV 311 Field Methods also visited FBBO. Overall, RAFC hosted 481 student visits through WC coursework in 2022.

Top: Meghan McHenry'21 explains the glass testing tunnel to students
Middle: students measure stream discharge at Foreman's Branch.
Bottom: Dan Small and students attract nocturnal insects during Bioblitz.
(photo Pamela Cowart-Rickman)



Sara Canas '23 visited FBBO several times for lab when she took Ornithology with Dr. Rinehimer in fall 2021 and knew she wanted to get more involved. The biology major from Lovettsville, VA was a banding intern during the 2022 spring migration season. She learned to extract birds from mist nets, to identify less common birds and

learned about the various uses of banding data. She loved seeing all the birds up close. "There were so many species that I had either only seen in books, or only seen from very far away," she said. A favorite memory was the morning we banded a Green Heron "The collective excitement and joy of all the banders was immeasurable."



Rockville, MD native **Jeremy Liberman '25** was a member of the summer Field Sparrow crew. His tasks included nest searching and territory mapping. The biology and environmental science major had been interested in birds for years and was excited to study their behavior. "You can be taught a

million things about biology in the classroom, but you will never know what it is like to see and experience nature in action." He loved the thrill of finding his first nest by watching an individual's movements saying "I had learned a new language and managed to follow it into the birds' private world."



Environmental Studies major **Hannah McCarthy '23** was another member of the Field Sparrow crew. She learned to identify color banded birds and find their nests. The Hillsborough NJ native found the internship a perfect way to get a better

understanding of work she'd like to pursue after graduation. She reported that the experience gave her "a better understanding of how research actually plays out in the real world, which up until then had been somewhat abstract."



Rory Miller '24 was the third member of the 2022 Field Sparrow crew. The environmental science and political science double major from Henrico, VA was drawn to the internship as a way to get hands-on experience and

after the summer she knew would prefer outdoorsy work to that at a desk. She recommends the internship to any student who enjoys being in nature and to those interested in avian behavior.



Taneytown, MD native **Emma Smith '23** was one of two interns with the Natural Lands Project in spring 2022. She wanted the job to increase her knowledge about conservation and restoration work. Her work included transplanting native cedar trees

and invasive species removal. The environmental studies major especially loved working on the "food forest" at Conquest Beach Preserve and looks forward to visiting it in a few years when it's more established.



Ellicott City, MD native **Mirabelle White '24** was a banding intern at FBBO in spring of 2022. She wanted experience working with wildlife so one of her favorite parts of the job was learning to physically handle

birds as she extracted them from mist nets. The biology and environmental science double major really enjoyed seeing how data was collected and doing it outside and not in a lab was a bonus.



Libby Witham '24, an environmental science and biology double major from New Egypt, NJ was an intern in both spring at fall intern at FBBO. During spring she helped test bird friendly glass as part of our partnership with the American Bird Conservancy.

In fall she was a banding intern. Libby said that she benefitted from the staff at FBBO, "I learned a lot from the banders who were always willing to share their experience and give me career advice."



Emmett Wurster '24 from Virginia Beach, VA was an intern with the Natural Lands Project in spring 2022. The environmental science major was drawn to the internship to learn more about how farmland is converted

to natural grasslands. One of his favorite parts of the job was starting seeds of native plants in the college greenhouse that were planted in the meadow of Seamans-Griswold Hall at the end of the semester.

The Center for Environment & Society is dedicated to providing excellent, challenging and inspiring experiential internship opportunities.

For more information on our student internships, or to make a gift, please visit our website:

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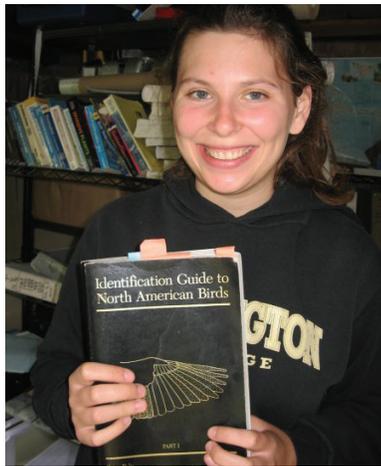
River and Field Campus 2022 Report

Eirik A.T. Blom Internships

Foreman's Branch Bird Observatory has been offering internships to Washington College students since 2008. During spring and fall migration banding, these students learn about how to identify, age and sex birds, and how to properly handle them. Working alongside staff, students are exposed to many facets of avian research from cutting edge technologies like radio tags and the Motus network, to our collaboration with the American Bird Conservancy to test bird friendly glass.

In 2022, this internship program was named in honor of Eirik A.T. Blom, a well-known Maryland ornithologist. Rick met his first wife and fellow student Bonnie Jean Kerr while attending Washington College and it was Bonnie who established this dedicated fund in Rick's name. Among Rick's many accomplishments were coordinating the Atlas of the Breeding Birds of Maryland and the District of Columbia, and serving as a consultant for several editions of the National Geographic Society Field Guide to the Birds of North America.

Any current Washington College student with a keen interest in wild birds is eligible for these internships. Students must have time in their schedule for early mornings at the FBBO banding station, an eagerness to be outdoors, and a passion for the environment. While most of the interns are majoring in biology, environmental science, and environmental studies, students of all majors are welcome to apply.



To support this program please visit:

<https://www.washcoll.edu/giving/> and click on the "Make a Gift" button. For the designation select "Other (Specify below)." And in the "If Other, please specify here" block, enter "Eirik A. T. Blom Ornithology Internship"



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Gifts may be earmarked for the River and Field Campus, or the Bird Observatory. Please contact Sherri Spray at sspray2@washcoll.edu or 410-810-8405. Thank you.

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