

CHESTER RIVER FIELD RESEARCH STATION

2016 ANNUAL NEWSLETTER



Located on Chino Farms, about five minutes from Washington College in Chestertown, Maryland, the Chester River Field Research Station is dedicated to:

- Large-scale restoration of diverse wildlife habitats, especially mid-Atlantic coastal grasslands, Delmarva bays and the Chester River (all suffering from the impact of agriculture and pasturing)
- Designing studies and protocols for sustainable management of these habitats, especially as they interact with on-going modern farming
- Conducting basic and applied research on the flora and fauna that colonize these restored habitats, to learn their natural requirements for survival, growth, and reproduction
- Sustaining the Foreman's Branch Bird Observatory, a year-round avian research and banding station
- Environmental education programs for K-12, undergraduate and graduate students, and people interested in the natural sciences

Grasslands Research



WASHINGTON COLLEGE
Center for Environment & Society

210 South Cross Street
Chestertown MD 21620
410-810-8405

CRFRS Annual Newsletter Issue No. 6 2016

Editor

Maren Gimpel

Photography

Maren Gimpel and Dan Small
unless otherwise noted

Director, Center for Environment & Society

John Seidel

Associate Director of Programs and Staff

Mike Hardesty

Field Station Staff

FBBO Banding Director

Jim Gruber

Field Ecologist and Outreach Coordinator

Maren Gimpel

Natural Lands Project Coordinator

Dan Small

Wildlife Ecologist and Bird Bander

Amanda Spears

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Grasslands Summary

2016 was the 18th year of research in our 228 acre restored grassland. This year's research focused on Field Sparrows, Northern Bobwhite and the management of native warm season grasses. We hosted several groups of visitors from youth birders to Washington College students to participants in a prescribed fire workshop (see page 16 for more on the workshop).

We completed our third and final season of research on Field Sparrow parental provisioning under the direction of **Field Ecologist Maren Gimpel** and **Assistant Professor of Biology Dr. Jennie Carr**. This study sought to take advantage of the numerous known-age birds at our study site.

We searched for and monitored Field Sparrow nests with our stellar field crew of Washington College undergraduates- **Erika Koontz**

'17, Travis Clevenstine '17, John Zhang '17 and Mike Hudson '18 (for more information on our team, please see their profiles on pages 14-15). After finding a nest and identifying the parents, we camouflaged a tripod and camera to film the nests for three mornings after chicks had hatched. The videos were then reviewed and the number of feeding trips each parent made to the nest was recorded, as well as the size of food they brought to their chicks.

We found a record-breaking 119 nests during the summer and the team watched hours and hours of video footage.

We are now analyzing the data collected from 2014-2016 by three seasons of WC students. We hope to determine whether older birds, with presumably more experience, are "better" parents, either by feeding their chicks more often or with more food per visit. We are also interested in how the ages of each parent might affect



Cover photo: Northern Saw-whet Owl, photo by Daniel Irons. Right: 2016 CRFRS summer field crew.

provisioning, for example, can one older parent compensate for an inexperienced one.

The population of Northern Bobwhite at the field site continues to rebound after having been decimated during the heavy snows of winter 2010 and is now about back to its robust pre-storm levels. **Dan Small, Natural Lands Project (NLP) Coordinator**, conducted two types of surveys on the farm. In summer, he counted males calling “BOB-white” and in fall he and a team counted coveys. The number of summer calling males was up for the seventh year in a row and was a record high. An average of 25 males was heard each survey morning. The team estimated 29 fall coveys. These numbers represent the highest-known concentration of bobwhite in Maryland and are a result of the quality of habitat found throughout the farm and the

management regime used to maintain it.

We continue to experiment with the best ways to manage established warm season grasses. Our tests here inform the recommendations we make to our NLP farms (see page 10 for more). Currently we are burning blocks of habitat every other year, but are also investigating differences between growing season and dormant season burns.

Because this habitat is now so uncommon, outreach is always a key priority and this year we hosted the West Chester County, PA bird club in June for a bird walk led by Dan Small. In early July, the Young Maryland



*Top: Field Sparrow nestlings about to fledge.
Bottom: Friend of the Field Station, Henry Davis.*

Ornithological Society’s summer camp (YMOS) spent a morning appreciating open country birds like Northern Bobwhite, Grasshopper Sparrows and Blue Grosbeaks. The YMOS group also enjoyed a banding demonstration and learned about the scientific uses of banding data. All in all it was another great year in the grasslands. See you in 2017!

Don’t Take Any Wooden Nickels

Staff at CRFRS, the Center for Environment & Society and Chino Farms lost a friend, mentor and invaluable asset with the death of **Henry Davis** in 2016. For over 30 years, Henry worked in various capacities at Chino Farms. For almost anything you needed help with outdoors, Henry was your man. Maybe you got the college mini van stuck in the mud - Henry would tow you out. Maybe an Osprey pair was determined to nest on the chimney of the field house - Henry encouraged them to move to a new platform he installed away from the house (where they have successfully nested ever since). Did you want a 30’ cedar tree moved? Henry could do that too. Henry helped manage our controlled burns, fixed the belts that came off the FBBO riding mower and he had a great collection of folksy phrases like “Whatever suits you, tickles me.” Our deepest sympathies to his family, and Henry, as you so often told all of us, “Don’t take any wooden nickels.”



Foreman's Branch Bird Observatory

Foreman's Branch Summary

Our 19th year at FBBO is in the books. The 2016 spring season was slightly below average in raw numbers, but above average based on effort by net hours. We banded 3,522 birds of 97 species (average spring diversity is 101 species). The fall season was also below average in raw numbers, but average based on effort - we banded 8,412 birds of 119 species (this diversity is right in line with our long term average).

In addition to our migratory banding, **FBBO director Jim Gruber** and wildlife ecologist Amanda Spears banded 657 birds during the breeding season. Concurrently, Maren Gimpel monitored 100 nest boxes on the farm and banded 207 birds, mostly nestling Tree Swallows, Eastern Bluebirds and Carolina Chickadees. Including birds banded as part of the summer CRFRS grasslands

research and some winter banding, the grand total of birds banded in 2016 was 13,138 of 131 species plus two races and one hybrid.

We also processed 5,879 birds that were previously banded. Of those, 1,478 of those birds had returned back to the banding area for the first time that season.

In the past year, we broke record highs for several species including Tree Swallow, Worm-eating Warbler, Cape May Warbler and Common Yellowthroat. We had a few notable misses as well. For the first time in ten years we banded no House Sparrows. New record lows included banding only one Hairy Woodpecker (the average is 11) and only 132 Ruby-throated Hummingbirds (the average is 218).

Our education efforts this year focused on our two Washington College interns, **Laura King '17** and **Hannah Sive '17** (for more information about them, please see page 15). We also have been training local brothers **Jonathan and Daniel Irons** at the station. Already excellent birders, the two are now learning how to extract and



band birds.

We've all heard the truism that you can't get a job without experience, but you can't get experience without a job. Well, this fall, recent Virginia Tech graduate **Jessica Majors** spent a month at FBBO getting advanced banding training. Jessica knew the basics when she arrived, but the intensive experience available at a high-volume migratory banding station such as ours is invaluable for getting lots of practice in a short amount of time. Jessica's next job will be in Montana working with Sharp-tailed Grouse. Good luck, Jess!

Professional certifications can be a good measure of one's skills. In the bird banding world, we recognize the North American Banding Council (NABC) as the organization that provides standardized training and unbiased evaluation of banders. In

Top right: Amanda Spears with a Red-tailed Hawk. Left: Brothers Jonathan and Daniel Irons with a Scarlet Tanager, photo by Amanda Spears.



Foreman's Branch Bird Observatory

September, **Amanda Spears** passed the rigorous written and field tests administered by the NABC and received certification at the bander level.

The NABC session also served as a mini Washington College reunion. **Margaret Rohde '12**, a CRFRS intern in summer 2011 also received bander certification. She now runs a MAPS station at the Wissahickon Valley Watershed Association in Ambler, PA, where she is the stewardship coordinator. CRFRS staff Maren Gimpel and Dan Small served as evaluators during the session.

As always, we hosted a variety of visitors to the station this year. Local bird and horticulture club members, Audubon youth program participants, Eastern Shore Land Conservancy members and local residents all enjoyed demonstrations. We gave 78 demonstrations to a total of 439 people. None of our banding or outreach efforts would be possible without our dedicated volunteers.



Top: Jim Gruber checks nets, photo courtesy of Will Parson / Chesapeake Bay Program.

Although we don't have space to name them all, we are truly grateful for our volunteers' interest, time and enthusiasm. Lastly, remember you don't have to wait until spring 2018 to hear what has happened at FBBO. Be sure to follow our social media accounts for current updates and lots of photos throughout the year.

To arrange a visit to FBBO please contact Maren Gimpel
mgimpel2@washcoll.edu

Top Ten Table — 2016 Spring and Fall Migrations

The 10 most commonly banded species at Foreman's Branch Bird Observatory during migration periods.

Spring 2016

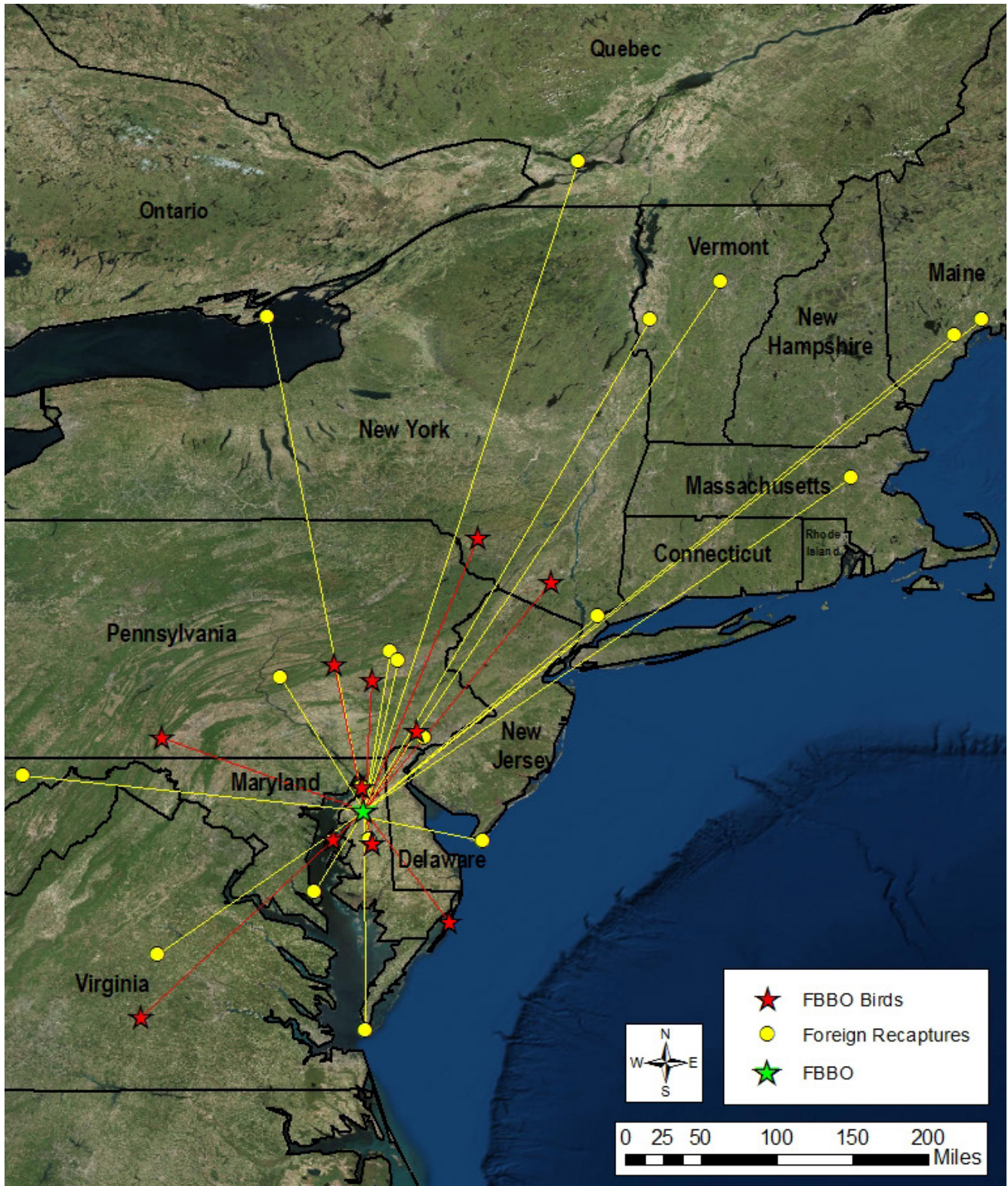
Fall 2016

Species	Total	Species	Total
Common Yellowthroat	481(5)	White-throated Sparrow	1,315 (2)
Red-winged Blackbird	454 (2)	Song Sparrow	907 (1)
American Goldfinch	394(1)	House Finch	487
Gray Catbird	394 (4)	Ruby-crowned Kinglet	481 (4)
White-throated Sparrow	291(3)	Common Yellowthroat	437 (3)
Brown-headed Cowbird	108 (7)	Slate-colored Junco	326 (7)
Yellow-rumped Warbler	88	Swamp Sparrow	300 (6)
Northern Cardinal	83	Gray Catbird	284 (5)
Field Sparrow	77	Purple Finch	245
Swamp Sparrow	65	Yellow-rumped Warbler	211

*Numbers in parentheses indicate last year's rank within the table

Foreman's Branch Bird Observatory

10 Years of Owl Banding at FBBO



Above: Map showing movements of Northern Saw-whet Owls to and from FBBO. Foreign recaptures are birds banded elsewhere, but captured at FBBO. Red stars are birds banded at FBBO that were encountered elsewhere.

Foreman's Branch Bird Observatory

Back in fall 2007, banders Maren Gimpel and Dan Small learned that the banding community was anticipating a large southward movement of Northern Saw-whet Owls in a matter of weeks and scrambled to join a continental-wide research program called Project Owl-net. Co-founded by MD Dept. of Natural Resources ecologist David Brinker, Project Owl-net developed protocols for capturing saw-whets by opening mist nets at night and broadcasting their mating calls. Back then we assembled a homemade caller with parts from Radio Shack, dubbed a cassette tape loop of the call, and were excited to band 46 owls.

Saw-whets are the smallest owl in eastern North America. They're not much bigger than a robin and weigh less than an iPhone or a bar of soap. These tiny raptors nest in the northern Appalachians and throughout the northern tier states and boreal forests. Following very successful breeding seasons, their natal habitats can't support the increased population and large numbers of owls move south in an "irruption" until the following

spring when they'll migrate back north to nest. The owl's breeding success is linked to its main food source, the Red-backed Vole. The populations of these two species are so predictably intertwined that a boom in vole populations results in subsequent high owl breeding success, followed by big southward irruptions. This typically occurs on a 4-year cycle, which is why in 2007 researchers predicted a big flight year.

*"Little did I expect that Project Owl-net would contribute so much to what is known about this captivating little owl."
-David Brinker, MD DNR*

Little has changed in our owl banding routine since our inaugural year in 2007. Though we now have a digital audio lure, we still return to the banding lab each weather-appropriate night from late October until mid-November. Our data is submitted to the federal Bird Banding Laboratory and the documentation of where the owls have moved has been fascinating. Putting a band on a bird is only one part of the story. It's often where the bird is subsequently recovered that can be so interesting,



but if no one is out there trying to capture owls, the information can go unrecorded. Luckily, there are about 125 other dedicated saw-whet banding stations scattered across the U.S., all contributing to the larger effort of understanding this charismatic species.

In ten years of saw-whet banding, we've banded **608 owls** and captured 41 owls that had been banded elsewhere. Additionally, 14 owls that we banded were recovered by others (see the map on the facing page for a depiction of where these owls were captured). Due to the cyclical nature of their migration, captures between the fall seasons can vary dramatically. The 10 year average works out to be 60 owls per year, but that's highly misleading. Our biggest year was in 2012 when we banded 284!

The nights in the lab are chilly and long, but if we're lucky enough to find a Northern Saw-whet Owl or two when we check the nets, it's all worth it.



Top: Banders look at the wing of a Northern Saw-whet Owl. Left: Owl wing under blacklight shows molt limits, hot pink feathers have been recently replaced.

Foreman's Branch Bird Observatory

Foreign Recaptures in 2016

A foreign recapture is a bird banded by someone else that we catch at our station. In 2016 we had 11 foreign recaps, but 10 of those were Northern Saw-whet Owls (see page 7 for more on owls). On April 11, 2016 we captured a second year female Sharp-shinned Hawk band #1623-51375. We learned from the Bird Banding Laboratory that this hawk was banded as a hatch year female near Cape May Point, New Jersey on October 30, 2015 by Arthur Nelson of the **Cape May Raptor Banding Project**. Cape May is famous for its bird numbers. As they are heading south, birds from across the east coast get funneled down the narrowing New Jersey coastline to the tip at Cape May. The birds hesitate to cross the Delaware Bay, sometimes creating large concentrations. The Cape May Raptor Banding Project has been in operation since 1966 and they've banded 148,969 birds to date! Their banding site is about 60 miles southeast of FBBO. When we netted this bird it would have been migrating northward again for the breeding season.



Above: Female Sharp-shinned Hawk originally banded in Cape May, New Jersey and recaptured at FBBO.

FBBO Recoveries

When a bird we've banded is encountered elsewhere, we say that that bird was recovered. These selected recoveries are of note due to the distance from FBBO or the circumstance in which they were encountered.

Species	Banding Data	Recovery Details
American Goldfinch	March 3, 2016	•Hit by a crop duster airplane near Sudlersville, Maryland (12 miles east of FBBO) in September, 2016
Brown-headed Cowbird	April 17, 2014	•Found dead in Moyock, North Carolina (190 miles south of FBBO) on February 28, 2016
Red-winged Blackbird	March 26, 2006	•Found dead in Moyock, North Carolina (190 miles south of FBBO) on November 16, 2015
American Robin	November 7, 2008	•Found dead in Wilton, New Hampshire (515 miles northeast of FBBO) on December 11, 2015
Hermit Thrush	October 10, 2011	•Killed by cat, Mont-Tremblant, Quebec (480 miles north of FBBO) on April 30, 2016
Common Yellowthroat	May 8, 2013	•Found dead in Saint-Julien, Quebec (550 miles northeast of FBBO) on May 30, 2016

Foreman's Branch Bird Observatory

Standout Captures

It's always very exciting to add a new species to the station list and it doesn't happen very often, but we lucked out in 2016. By far, the best individual capture of the year was this **Lark Sparrow**. Lark Sparrows breed in the farmlands and roadsides of the midwest and usually winter in the southcentral United States and throughout most of Mexico. Lark Sparrows are found annually in Maryland in the fall, but most of these records are from Worcester County on the Atlantic coast. On November 3rd, we captured a hatch year Lark Sparrow of unknown sex. While many sparrows present identification challenges, the bold and distinct patterning of Lark Sparrows are unmistakable. Not only was it new for us, it was only the second county record for the species in Queen Anne's County.



While we band **Purple Finches** every year, their numbers fluctuate wildly due to their migratory behavior. In some winters, they won't stray far from their northern breeding grounds. However, in other winters, poor seed and cone crops of conifers and deciduous trees send them looking for winter food sources far south of their breeding grounds. They begin to swarm southward in October and November. In spring 2016 we didn't band a single Purple Finch, but in the fall we banded 245, breaking our previous record of 242. For reference, in 2015 we banded only 12 the entire year. As these birds continued southward, their numbers tapered off and by mid-December they were uncommon in our area. Our Purple Finch numbers seem to alternate every other year, from boom to bust, so we don't expect many in 2017.

Pileated Woodpeckers are the largest woodpeckers in the country and they require large forest tracts and standing dead trees in which to excavate their distinctive rectangular nest cavities. Though they are widely distributed, they are not numerous. We seldom catch them despite seeing or hearing them virtually every day at the banding station, in part because they regularly fly higher than our mist nets. On May 28, 2016 we banded our 6th ever **Pileated Woodpecker**, an after third year female, meaning it hatched in 2013 or earlier. You can separate the sexes by the pattern of red on their heads. Unlike the female pictured, the red in a male's crown meets the top of the bill and the stripe leading from the base of the bill to the back of the neck is red in males, whereas it's black in females.



Top: Lark Sparrow, photo by Mike Hudson '18. Middle: Adult male Purple Finch. Bottom: Female Pileated Woodpecker, photo by Amanda Spears.

Natural Lands Project

Bobwhites Helping the Bay

The Natural Lands Project (NLP) completed a very successful first year in 2016. Our extensive outreach efforts resulted in the planting of 170 acres of native grasses and wildflowers and the creation of **16 acres of wetlands all in Kent County**. Clearly community members share our vision of an Eastern Shore with a diversified landscape which includes productive agricultural lands, healthy rivers and bays, and thriving upland habitats that benefit many wildlife species.

The **170 acres of native upland habitats** were planted on six different farms. Each property's habitat was designed in a way to complement existing priorities on the landscape so the number of acres, placement of the habitat, and configuration of the habitat varied between farms. The bottom line is that any marginal cropland taken out of production will improve water quality while providing much needed habitat for grassland birds. The latter benefit is of particular interest to NLP landowners.



Five wetland projects were completed during the summer of 2016. Projects ranged in size from one to four acres. All wetlands were specifically located in areas of fields with hydric unproductive soils poorly suited for growing crops. All wetlands were equipped with gates to allow for some control of water levels, which can be drawn down during the growing season to promote vegetation growth within the wetland and then flooded again when waterfowl populations arrive in the fall. This lush growth of wetland plants is highly attractive to wintering waterfowl.

(see page 2 for more information) and half her time working alongside Dan Small, NLP coordinator, on a variety of projects throughout the summer. One of her main tasks with NLP was determining where additional habitat can make the most difference for dwindling quail populations. She arrived before sunrise once a week at locations in Queen Anne's County to conduct calling count surveys for quail and then headed into the WC Geographic Information Systems (GIS) lab to map the landscape attributes surrounding each count location. Erika's second project was to adapt the protocols of the Monarch Research Institute in Iowa to rear **Monarch Butterflies**. It's estimated that only 10% of eggs and caterpillars survive to adulthood in the wild, so rearing them in a predator-free enclosure will allow for much greater breeding success. If we can develop a clear method to do this in our region, we hope that our member farms may also start

We added a Washington College student to our team for the summer. **Erika Koontz '17** spent half her time working in our restored grasslands



Top: A recently installed wetland in a soy bean field. Left: A contractor plants grass and wildflowers in a newly created buffer.

Natural Lands Project

rearing Monarchs on their properties within the newly created meadows and we can reverse the population decline of this iconic species. Dozens of bird surveys were conducted on newly enrolled properties throughout the summer. We are collecting baseline data to document avian use of the properties and will monitor how avian abundance and diversity changes as the habitat matures over the coming years. We are particularly interested in how these habitats affect grassland bird populations, including bobwhites, all of which are in steep decline. We also have established photo documentation points throughout each property to record habitat change within each growing season as well as across seasons.

Outreach and education are critical components of NLP. Public presentations were given to various organizations including Southern MD Audubon Society, Kent County Bird Club and Adkins Arboretum. By far the most rewarding outreach takes place when talking with landowners and farmers during farm visits. These face to face meetings are a great way to talk directly with

the farmer or landowner about the project's goals, but are also a great time to hear ideas, anecdotes and stories from their perspective. Often stories about bobwhite come up, but unfortunately most of these stories took place 15-30 years ago; but these stories provide insight and help us to understand how populations of quail have declined as each individual farm's landscape has changed through the years. **These unique conversations continue to provide motivation for us.** We know that when quail have access to great early successional habitat they thrive. Therefore adding upland habitat, including hedgerows, strategically throughout



the agricultural landscape will help bolster existing quail populations and provide room for these populations to grow.

If you are interested in learning more about the Natural Lands Project please visit www.washcoll.edu/nlp or contact Dan Small at dsmall2@washcoll.edu.



Top Right: Male Northern Bobwhite. Above: Native flowers included in buffer seed mixes improve diversity and attractiveness.



Senior Capstone Experience

Her summer experience with the NLP helped frame Erika's Senior Capstone Experience. She's combining her love of GIS with her excitement about field-based issues for a thesis examining the movement of water, sediment, nutrients and other pollutants over land. Using a GIS model, Erika will analyze the surface runoff in agricultural fields at CRFRS. One goal of the project will be to inform land managers about the best locations for BMPs such as grass waterways, to trap some of the pollutants before they reach waterways.

Do Street Lights Affect Migrating Birds?

An exciting new research collaboration began in 2016 between the Foreman's Branch Bird Observatory and a team of researchers at the University of Delaware. Graduate student **Sergio Cabrera-Cruz** and his advisor **Dr. Jeffrey Buler** are testing whether the behavior of birds migrating at night is affected by lights. Street lights are the most common source of light pollution in urban areas which are widespread in the Atlantic flyway. The team is comparing bird banding data from both spring and fall from several locations in Pennsylvania, Delaware and Maryland. Some locations are closer to major urban areas and considered to have high levels of light pollution, others are in very dark areas. FBBO is the experimental site in the study. We are in a very dark area, but the team has installed several street lights within our mist net array which will be turned on and off throughout the migration season. In addition to comparing capture data as it relates to the light schedule, the team is also using a tracking radar unit to document individual birds' reaction to the lights. Do the birds avoid a well-lit area? Are they drawn to the lights? The team collected data in both spring and fall of last year and we anticipate the study running through 2017.



It's For the Birds

In May **CES STEM Educator and Program Manager Jemima Clark** teamed up with CRFRS Field Ecologist Maren Gimpel to present a day-long professional development module for local teachers. The workshop was part of the **"Making STEM REAL"** NOAA BWET program managed by Dr. Douglas Levin and Clark. A cohort of 20 K-12 teachers spent 70 hours throughout the spring exploring how watershed issues can be addressed in the classroom. The It's For the Birds (IFTB) professional development module provided examples of how science and real data can be transformed into classroom lessons. With Gimpel's years of experience in avian research and Clark's extensive teaching background, the duo was uniquely qualified to both explain the science and to model inquiry-based lessons. The group began the day with an early morning visit to the Foreman's Branch Bird Observatory where they engaged in a bird banding demonstration and discussed the uses of the data generated at the observatory. After lunch, the group practiced several hands-on activities that use birds as indicators of climate change and sea-level rise. "FBBO is an amazing and unique resource to have in our own backyard and allows us to show teachers the direct application of field research and immediately translate it into engaging classroom lessons," said Clark.



Top: U. of Delaware's tracking radar. Left: Jemima Clark with STEM teachers. Opposite top: Dan Teano '18 and Kelly Dobroski '16 take soil samples. Opposite bottom: Ecology students work to key out tree species.

Academic Engagement

Hundreds of Washington College students took advantage of the fields, wetlands and forests that the field station has to offer in 2016. Here are some of the ways that we facilitated experiential learning opportunities out of the classroom.

In February **Dr. Robin Van Meter, Assistant Professor of Environmental Science and Biology** brought the 16 students enrolled in BIO 394 Wetlands Ecology to the station to compare soil profiles in riparian and upland habitats. The class returned twice more to the field station to delineate a wetland, using Army Corps of Engineers indicators.

In March, **Dr. Rebecca Fox, Assistant Professor of Environmental Studies and Science** brought two students from her ENV 394 Watershed Biogeochemistry class to collect soil samples to be used in a lab for the whole class investigating how phosphorus content varied with depth.



Nancy Weibell, Lecturer in Biology brought 4 sections of her BIO 104 Ecology of the Chesapeake Bay class to the Foreman's Branch Bird Observatory. The 64 students enjoyed a bird banding demonstration. During the fall semester, 30 more students in the course also visited.

Just before classes started in the fall, the 9 students in the **Chesapeake Semester** camped on the farm as part of their orientation. The group camped two more nights the following week and also had a tour of the restored grasslands where Dan Small spoke to them about land management issues.

We also gave a presentation to 13 Washington College freshman as part of their **pre-orientation** program. Students saw the banding station and grasslands and received an overview of the projects happening on the farm.

The fall semester began when **Dr. Jennie Carr, Assistant Professor of Biology** brought the 30 students enrolled in BIO 100 Diversity & Adaptation to FBBO where they saw examples of morphological variation in the bird species captured.

Drs. Rebecca Fox, **Leslie Sherman, W. Alton Jones Associate Professor of Chemistry** and **Shelly Thomas, Visiting Professor of Biology** each brought a section of ENV 101 Introduction to Environmental Studies to FBBO. The 43 students learned the scientific importance of bird



banding.

Dr. Thomas also brought the 28 students in BIO 100 Food & Energy to FBBO. These non-majors were exposed to basic principles of bird banding and the diversity of birds.

In September and October, the 61 students taking BIO 206 Ecology came out twice to the field station. Nancy Weibell, along with **Lecturers in Biology Kathy Thornton** and **Maren Gimpel**, led students through one lab exercise on seed dispersal and a second on forest tree diversity.

At the very end of the semester in November, Dr. Fox's 16 students of ENV 394 Field Methods in Environmental Science visited FBBO to learn how bird banding and other monitoring techniques are critical to avian conservation.

In total there were 382 student visits to the field station in 2016, which is our highest total to date. With a current enrollment of 1423, this represents nearly **27% of the study body**. We look forward to continuing to grow student engagement.

Washington College Interns

Student Internships



Travis Clevenstine '17 of Baltimore, MD was one of three full time members of our summer Field Sparrow research team and described it as an “amazing experience.” The Biology major spent his days searching for nests and reviewing videos of nest provisioning to quantify parental feeding behavior. He explained, “The best part of this internship was to visually collect data and witness the parental behavior of these birds and how it varies from individual to individual.” Travis appreciated getting hands-on field experience and learned a lot about birds and their behavior.

Environmental Studies major **Erika Koontz '17** returned to the field station in a new capacity this year. Last year she was one of the spring bird banding interns at FBBO. This summer she split her time between two CRFRS projects. Half her time was spent with the Natural Lands Project where she assisted with Northern Bobwhite Surveys and radio-tracking, Monarch Butterfly rearing, GIS mapping and speaking to landowners about improving wildlife habitat on their properties. The other half of her time was as part of the Field Sparrow research crew. She was drawn to the internship for its multi-disciplinary nature and diversity of responsibilities. “One of the best parts of the summer was when Dan Small and I were tracking a female quail and discovered her nest! It was an unexpected surprise and a very positive indicator that the quail population was thriving,” said Erika.



Familiar face **Mike Hudson '18** has become a regular fixture at the Field Station. The Biology major from Baltimore, MD volunteered at the Foreman’s Branch Bird Observatory during the spring semester. During the summer Mike split his time between working as a John Toll Science Fellow with Dr. Jennie Carr studying Ruby-throated Hummingbird behavior and working as part of the Field Sparrow team. Mike said, “I really enjoyed learning about different types of research techniques, such as nest-finding, color banding and color-band resighting. It was cool to compare these methods to what I had done at the banding station and to see how the methods complement each other. During the fall migration season, Mike returned to FBBO for another season.

Washington College Interns

One of our spring bird banding interns at the Foreman's Branch Bird Observatory was Rising Sun, MD native **Laura King '17**. Laura is double majoring in Biology and Spanish. Over the course of the spring season, Laura learned to identify bird species, record data and extract birds from mist nets. Laura was drawn to the internship to expand her experience in the biological sciences and was amazed to learn how many bird species are in our area. The experience even influenced her choice of senior thesis topic - biodiversity and conservation of birds in Peru. While our interns learn a lot, it's not all sweat and toil. "I enjoyed my experience much more than I ever expected to enjoy an internship," Laura admitted. Laura also returned for the busy fall season when her experience was of great help.



Hannah Sive '17 of Glenville, NY, was our second spring intern at FBBO. The Environmental Studies major spent several mornings a week learning about the scientific uses of bird banding, recording data and learning to extract birds from mist nets. Though the internship is only eight weeks long, we pack in a lot of education into that time. "I never thought I could learn so much in such a short amount of time," Hannah said. She's hoping to work in environmental education after graduation and we know she'll be great at passing along her newfound avian knowledge to all those she interacts with.

Another member of the summer breeding bird crew was Biology and Chemistry double major **Hao "John" Zhang '17**. The Shanghai, China native is considering a career in environmental chemistry, but is very interested in ecology, so he was eager to get some field research experience. He said of the work, "It might not be easy to track down Field Sparrows in the glaring humidity, but it was always rewarding to find the nest after hours of searching." John took ornithology last year and was excited to put the knowledge he learned in that class to work, things like identifying birds and learning their songs. John's energy and enthusiasm made him a fantastic part of our research team.



The Center for Environment & Society is dedicated to providing excellent, challenging and inspiring experiential internship opportunities. For more information on our internships or to apply please visit our website: www.washcoll.edu/centers/ces or call our office (410) 810-8405.



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CRFRS 2016 Newsletter



Prescribed fire is an important tool for managing warm season grasses, but proper use of it requires a bit of training. In December, the Center for Environment & Society hosted a two-day workshop for local community members and staff from several USDA NRCS offices interested in learning more about prescribed fire. The workshop was run by MD DNR regional fire manager Chris Robertson. There was a full day of classroom discussion about fire behavior, agency and municipal regulations, creating a burn plan and the benefits of fire to wildlife. On the second day, the 36 participants headed out to Chino Farms where the DNR burn crew burned a section of our restored grasslands as a demonstration. Bob Ingersoll, a fire workshop participant, was impressed. “While the book work that prefaced the burn was really needed, the actual hands on viewing of a burn was critical to place all the factors involved into the brain. If a picture is worth a thousand words, a functional burn is worth a thousand pictures.”

The Center for Environment & Society at Washington College supports interdisciplinary research and education, exemplary stewardship of natural and cultural resources, and the integration of ecological and social values. By managing precious resources over the long term, we can preserve the natural world and opportunities to study it for generations to come. One of our most important goals is to provide research opportunities for students. The Center awards 10-12 competitive internships each year, with many students choosing to work at the Chester River Field Research Station at Chino Farms.

Funds are needed to support a variety of programs and research projects. Gifts may be earmarked for the Center, the Field Research Station, or the Bird Observatory. Please contact Jenifer Emley at jemley2@washcoll.edu or 410-810-8405. Thank you.



210 South Cross Street
Chestertown, Maryland 21620