


EXPLORING OUR ENVIRONMENT

# A Bird In Hand

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AT FOREMAN'S BRANCH BIRD OBSERVATORY, SCIENTISTS AND STUDENTS ARE LEARNING STORIES TOLD IN MILES, IN WINGBEATS AND IN WONDER. BY WENDY MITMAN CLARKE, PHOTOGRAPHY BY BRIAN PALMER



**I**N THE HAND, a ruby-throated hummingbird is a tiny, vulnerable thing, so insubstantial you'd feel more secure holding an egg than this wildly beating heart. Yet one of these birds captured at Foreman's Branch Bird Observatory flew about 450 miles to Quebec—an epic journey that would have gone unremarked but for a listing in one of dozens of binders on the observatory's bookshelf filled with numbers and notations on this bird, as well as hundreds of other species. We see them every day, take their fluttering songs for granted, but what could be more mysterious and miraculous than these fragile, fierce creatures? It's as much for this small wonder as it is for science that field researchers, biologists and Washington College students study and record as much as they can about tens of thousands of these intrepid travelers.



**CLOCKWISE FROM LEFT:** Maren Gimpel, field ecologist, gently retrieves a netted bird. Master bander Jim Gruber, who started the station at Foreman's Branch in 1998, uses a "photographer's grip" to present a female cardinal for the camera. In the pre-dawn light, Gruber opens the mist nets to ready them for the morning's work of catching birds. The nets, made of a fine synthetic mesh and still beaded with dew from the night, dance in the light breeze. Rachel Field '11, who started at the station as an environmental studies intern, holds one of the thousands of birds that are measured, banded, weighed, examined and released.



Part of Washington College's Center for Environment & Society, Foreman's Branch Bird Observatory at the Chester River Field Research Station on Chino Farms is the only station of its kind on the Eastern Shore. At a time when many stations are closing or limiting hours due to lack of funds or regulatory hurdles, Foreman's Branch is maintaining a steady, dependable presence in the study of migratory songbirds in particular, and all avian species in general. Since 1998, director Jim Gruber and a team of scientists have been catching, banding and recording information on hummingbirds and sparrows, goldfinches and waxwings, creating a long-term data set that can help begin to answer questions not only about birds, but about issues as varied as climate change and infectious disease. And there are a lot of questions, some as basic as—how long can these birds live?

"A lot of these stations aren't up long enough to know how

long these birds live," Gruber says. "There are eleven species this station holds as North American age records. Old

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friends. That's how I feel about some of them." There is the gray catbird, first banded in August 2002, its hatch year, and recaptured in October 2011, and the northern cardinal, banded in its hatch year in October 2003 and recaptured in November 2011. In 2010 the station captured the oldest known blue grosbeak in North America (6 years old), the oldest known indigo bunting (8 years old), and the oldest brown thrasher (just under 11 years old). No less remarkable is the wood thrush, band number 1781-

15727, banded first in May 2002, who has returned annually from wintering grounds in Central America to raise her young. "For

a bird that weighs only 45 grams, it is a remarkable feat to have accomplished this round trip 10 times," the observatory's 2010 annual report notes.

By the time the station closed out its banding season late last fall, Gruber, field ecologists Dan Small and Maren Gimpel, CES program and intern coordinator Rachel Field '11, and a small cadre of College interns had banded 17,228 birds for the year, representing 133 species. On one day in October they captured, weighed, measured,

banded and logged 71 ruby-crowned kinglets, 86 song sparrows and 153 white-throated sparrows. The station broke several of its own records—572 pine siskins, for instance, blowing away the record of 55 set in 2009, and 284 northern saw-whet owls, smashing 2010's record high of 94. Over a long period of time these sorts of numbers, all of which are shared with the Bird Banding Laboratory (the North American bird banding program operated jointly by the U.S. Geological Survey and the Canadian Wildlife Service) become a valuable source of information for scientists around the world.

"We're trying to find out as much as we can about any species, see where they're going, the timing [of their travel]; is the timing changing as far as migration goes with global warming?" Gruber says. Gimpel has been conducting a long-term tick survey for a team of professors from Yale University and the University of Richmond to try

and determine how birds could spread Lyme disease; her work has collected almost 10,000 ticks for the study. Researchers studying the influenza virus H5N1, commonly known as bird flu, asked Foreman's Branch scientists to sample birds for evidence of the virus to help track its spread. (They found none.)

"Because we're operating a long-term banding station and processing a large number of birds, other researchers can use us as a resource," Small says. "We may not have expertise in those particular fields, but we can, in non-invasive ways, help other researchers."

Along with its longevity and sheer numbers of birds recorded, Foreman's Branch is distinctive for several reasons. One, it's not located at a migratory choke point, as, say, a station at a cape along the coast. This means that a broader representation of birds are moving through the whole region, rather than

just a concentration of species that jam into a bottleneck due to weather events or migratory patterns. Many of the birds the scientists see are either summer or winter residents who return year after year to the rich foraging and protected habitat of Chino Farms. For instance, white-throated sparrows return

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here each autumn to winter over before heading back to Canada and New England in the spring. Routinely taking honors for the highest numbers banded, it's not unusual for more than 2,000 of the birds to be recorded annually.

That's not to say the station doesn't get some intriguing migrants who stop by. Every year, a small population of shorebirds—least, solitary and spotted sandpipers—return to Foreman's Branch to fuel up and forage before resuming their migration. Remarkably, they choose the same sliver of

water year after year, despite the wide, more easily identified and navigated expanses of the Chesapeake and Delaware bays right next door. "It's like having a favorite rest stop on the turnpike," Gimpel says.

Another way Foreman's

Branch is different, and what helps make it such a bird magnet, is its diversity of habitats. The Chester River Field Research Station's long-term project, begun in 1999 to restore native habitat alongside commercial agriculture, has helped create a veritable smorgasbord of food and shelter for a wide range of species, none so great as birds. A walk along the paths cleared for mist nets (the fine-meshed nets draped between metal poles to snag birds) leads through towering oaks, pines and tulip poplars, to switchgrass and grassland meadows, to seemingly impenetrable tangles of brush, to the shimmering water of Foreman's Branch itself, bordered in cattails, sweetflag and willow oaks.

"We band more than 120 species a year, and that's really high compared to other stations," Gimpel says. "Mostly that's because we have so many different habitats. We have this low



Looking west from the earthen dam of Foreman's Branch, the moon rises in the night sky.



Foreman's Branch Bird Observatory intern Ryan Risher '12 displays a Baltimore Oriole.

brushy stuff, then we have nets through the forest, we have nets along the water and along hedgerows beside the fields. So we get our water birds and our grassland birds and our forest birds.”

Along with science, the banding station's goal is edu-

cation. The station has two internship positions available each spring for Washington College students, which is how Field, who was an environmental studies major, ended up here. After taking Professor Donald Munson's ornithology

class, she got a summer internship working in the grasslands restoration at the Chester River Field Research Station, a project closely linked to the observatory's work. That led to a spring internship at the observatory, which eventually led to a fulltime fall banding fellowship after she graduated. “I liked it so much I kept coming back,” says Field. “It's just been pretty awesome. We're really lucky to have funding for undergraduates, to get the hands-on experience.”

The station opens its doors to birding groups, various organizations and local schools. The scientists explain why they band the birds, show visitors the process, take them around the nets, and sometimes let them release birds that have just been recorded. It's all an effort to give people a chance to see birds close up, and perhaps even to hold them after the banders have shown them the proper technique. It's often a moment of revelation and connection for people, particularly youngsters.

“Showing people birds in hand really gives them an appreciation,” Small says. “You see them up close and they're so intricate. A lot of people have no interest in sparrows, for instance, but then when you see them up close, they're beautiful.”

For school students and teachers, Gimpel says, birds are a captivating gateway into larger discussions of issues related to environment, habitat, ecology, biology and the effects of human activities on all of those things. “Education is the most consuming goal,” Gruber says, “just getting people to know what's going on around them.”

And after you've held in your hand these small wonders, you can't help but want to know more about the stories they write in a million wingbeats, in a thousand miles.

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Staff writer Wendy Mitman Clarke is an amateur birder herself. Images by Brian Palmer, Director of Digital Media Services, were part of a video project he created for the Kohl Gallery exhibition, “In Pursuit of Beauty.”