



ENDANGERED SPECIES SPOTLIGHT



Photo: © Chris Davidson

“New Jersey’s Little Lion”: Biologists Shed Light on Elusive Bobcat

With our eastern landscape largely devoid of top carnivores, bobcats are a throwback to the wild predators that once ruled our forests. No one understands that better than our partners from the New Jersey Endangered and Nongame Species Program (ENSP). The bobcat was listed as a state endangered species in June 1991, and habitat fragmentation in our densely populated state has made their recovery especially challenging. Biologists Mick Valent and Gretchen Fowles study bobcats in the wild, and here they generously share their insights on this remarkable creature.

What do you find most compelling about working with bobcats?

Mick Valent: I have worked with many species during my tenure with the Division of Fish and Wildlife including bald eagles, peregrine falcons, Allegheny woodrats and timber rattlesnakes, to name a few. However,

to me, none epitomize the “wild” in wildlife the way that bobcats do. To me, they are the ultimate New Jersey predator – highly adaptive, perfectly camouflaged, keen senses of sight and sound, blazing speed and quickness, razor sharp claws and teeth, and the ability to stalk their prey quietly or overrun them! Fierce and unyielding, when captured, they are truly New Jersey’s little lion!

Can you describe the feeling of your first bobcat sighting?

MV: As chance would have it, I went many years without seeing a bobcat in the “wild” in New Jersey – even as the population was apparently increasing. Despite spending many days afield tracking and trapping bobcats, it wasn’t until 2011 that I saw my first bobcat (aside from the ones that

by David Wheeler

I trapped and collared). I was in Allamuchy Township in January of 2011 searching for a suitable area to trap, when an adult bobcat bolted from a pile of tree stumps and logs right in front of me. A perfect spot for a bobcat to seek shelter during the daylight hours. And by the way, we were never able to catch that animal!

Are bobcats proving adaptable to New Jersey’s changing landscape and human development?

Gretchen Fowles: Bobcats seem to be increasing in northern New Jersey. In the past couple of years, there have been an increasing number of bobcat sightings south of Route 80 (though still north of Route 78), suggesting that they have been somewhat successful at passing through that tough Route 80 barrier. Our data

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A Note From the Executive Director

Each individual from a wildlife species is unique, which is a fascinating enough concept in its own right. Yet the pure, collective instincts that drive wildlife behaviors for entire species en masse are perhaps the most challenging for us humans to fathom. Nowhere is this more evident than the amazing concept of migration.

*A tiny shorebird flying every year from the furthest tip of South America all the way up to New Jersey is impressive. But continuing on to the Arctic, before starting the cycle all over again? **That's awe-inspiring!***

*Fragile, paper-thin Monarch Butterflies migrating from the mountains of Mexico across thousands of miles to New Jersey is incredible enough. But for these butterflies to undertake a single migration over the course of several migrations – with individuals flying segments like runners in a relay race? **That blows the mind!***

We often think of mass migrations in connection with the famed large mammals of Africa. But despite our small size, the Garden State is also a vital destination for a wide range of at-risk wildlife species. From migrating songbirds, shorebirds and raptors to migratory bats, marine mammals, and many fish species, New Jersey offers key life-cycle stops for so many wildlife visitors each year.

Even on a smaller scale within our borders, wildlife is constantly on the move. Amphibians cross roads to get to vernal pools. Diamondback terrapins crawl out of the marsh in search of nesting grounds. And bobcats travel through the wilds on their own wide-ranging journeys.

Changing technologies offer Conserve Wildlife Foundation's scientists and educators more insight than ever into wildlife migrations big and small – both in tracking those journeys themselves, and in presenting them engagingly to the public. Wildlife bandings, radio telemetry, geolocators, and acoustic monitoring are just some of the ways our scientists track the movements of rare wildlife to better understand their needs.

Exciting and interactive online offerings like Story Maps, raptor tracking data plots, and our various webcams help bring the world of wildlife in motion thrillingly to life online. Modern technology has become more critical than ever in carrying out the work necessary to keep New Jersey's rare wildlife in our future.

Together, let's celebrate the timeless and inspiring journeys of wildlife migration in New Jersey and beyond – and take a moment's respite from our own nonstop movement to treasure just how extraordinary wildlife migration really is.

David Wheeler
Executive Director

FREE E-BOOK CELEBRATES BALD EAGLES' ALL-AMERICAN RECOVERY

by David Wheeler

When bald eagles were down to only one nest in New Jersey just a few decades ago, it seemed unlikely that they could ever rebound to 20 nests – let alone the 200-plus we have today.

That recovery has inspired countless wildlife viewers across the state. But perhaps no region of New Jersey can celebrate that return quite like the Meadowlands – which has undergone its own extraordinary ecological recovery during that same period of time.

To celebrate that recovery, Conserve Wildlife Foundation has partnered with the New Jersey Meadowlands Commission (NJMC) to unveil our free downloadable e-book, "Bald Eagles in the Meadowlands & Beyond."

The 62-page lavishly illustrated book documents the bald eagle's comeback in northern New Jersey and across America. The full-color e-book includes chapters by Kathy Clark of the N.J. Endangered and Nongame Species Program, the American Eagle Foundation, and raptor expert Scott Weidensaul. Breathtaking images by 19

nature photographers and five illustrators enliven the pages, bringing this wonderful story to life.

The NJMC's Jim Wright edited the book, and CWF Executive Director David Wheeler wrote the foreword. CWF and the NJMC celebrated the book's publication with a talk, slide show and light reception on September 17 in the Meadowlands Environment Center at DeKorte Park in Lyndhurst.

To view the e-book visit our website www.ConserveWildlifeNJ.org and follow the link in our Media Center under New e-Books. Hard and soft cover books are also available.



ENDANGERED SPECIES SPOTLIGHT – Bobcat

suggest that bobcats are finding a way to move between core habitat areas in northern New Jersey. We have several males and females that have moved over 30 miles from year to year.

However, major roadways continue to be a problem. We have GPS collar data from a couple of bobcats that indicate that major roadways, such as Routes 80 and 206, seem to be perceived as complete barriers to these animals. The collars recorded movement patterns with location points going right up to and paralleling the road, but not crossing over it. We have been monitoring about 12 crossing structures under major roadways in northern New Jersey that bisect suitable bobcat habitat.

What are the worst threats to bobcats in New Jersey?

GF: Habitat fragmentation and roads are the worst threats, and they're getting worse. A young bobcat was hit by a car and was found on the shoulder of westbound Route 78 last year. So, they are trying to cross that barrier, but are having difficulty doing so. Another bobcat was hit by a car in Parsippany when attempting to cross Route 46. The final quarter of each year, between October and January, tends to be the peak period for bobcat road mortality, and it is important that people report these incidents to the ENSP. We are working on a project called Connecting Habitat Across New Jersey (CHANJ) that is aimed at reconnecting the landscape for terrestrial wildlife, like bobcats.

We have formed a multi-partner, multi-disciplinary working group to inform the development of this statewide connectivity plan that will help target local, regional, and state planning efforts and ultimately reconnect the landscape in New Jersey. We are mapping the core habitat areas in the state as well as the corridors that can serve to connect those areas together, and are working on a Guidance Document that will recommend ways in which those cores and corridors can be made more permeable through targeted land protection, habitat management and restoration, and road

mitigation efforts. We are also developing a bobcat recovery plan.

The constant threat from habitat loss and fragmentation, changes in land use, the existence of barriers to free movement between suitable habitats, and automobile collisions on our busy and abundant roadways will likely limit the growth of New Jersey's bobcat population. It is likely that bobcats will remain only locally abundant in areas of suitable habitat, primarily in the areas north of Interstate Route 80. Whether or not a few animals are successful at crossing our major roadways, they will always pose an impediment to free movement between suitable habitats and will continue to be a source of mortality to the population.

What are some of the ways you study bobcats in New Jersey? Are you still using dogs in this work?

GF: We continue to use Bear, a professionally trained working dog for wildlife who is used to locate and alert biologists to bobcat scats, to help us better understand the New Jersey bobcat population. Bear is now about 12 years old, but his nose still works!

DNA can be extracted from sloughed intestinal cells contained in bobcat scat and can provide a wealth of information. DNA analyses of scat, as well as the locations where the scats are found, allow biologists to identify individual animals, their sex and movements. The DNA data from scats and tissue samples that we collect from bobcats killed on the road, accidentally snared, or trapped by ENSP in order to fit with GPS collars, are being fed into analyses that will help us estimate survival rate, population size and structure, and sex ratio.

We also collared three bobcats this past winter near major roadways, and set the collars to collect locations every hour. We are excited to retrieve the data from these collars in a few months to evaluate how those major roadways may be influencing the cats' activity patterns and determine if, when and where they are crossing them. This information will help validate our

CHANJ mapping and inform our Guidance Document.

Is the big picture for bobcat populations any different nationally?

GF: A recent national status assessment conducted by the United States Fish and Wildlife Service found that bobcats were generally increasing throughout their North American range. This appears to be holding true in New Jersey in areas where we have suitable habitat that is accessible to the population.

Tell me about your most memorable encounter.

MV: My volunteer and I had responded to a call from a trapper who accidentally caught a bobcat in his cable restraint during one of those January cold spells. The bobcat was caught on the bank of a medium-sized stream next to a footbridge. As we approached, the animal was pacing along the stream bank and jumping up on the foot bridge. As my volunteer distracted the animal, I came in from behind and jabbed the cat in the rump with a jab pole loaded with a tranquilizing drug. We immediately backed off to let the drug take effect so we could remove the cable from the animal's neck. As the drug began to take effect the animal lost the ability to stand and slipped into the water – struggling to stay above the surface.

Without hesitation, we ran back to the stream. My volunteer arrived first, jumped into the frigid, chest-deep water, and grabbed the cat and pulled him to safety. Although the cat was not fully sedated, we were able to wrap him in a dry blanket, remove the snare from his neck and get him into the truck and off to a rehabilitation facility without incident. Everyone survived unscathed – although I'm certain the bobcat was much better prepared for going into the water than we were! 🦋

DID YOU KNOW?
The bobcat has the largest range of all native North American cats.

Tracking Ospreys With Project Redband

by Ben Wurst

Ospreys have made a remarkable recovery in New Jersey. Over the past 40 years we have seen the population grow tenfold from only 53 pairs in 1973 to 542 in 2013! Even with that recovery, ospreys face new and emerging threats, like contaminants such as mercury, lead, and prescription drugs.

Ospreys are an indicator species, providing a barometer for the health for our environment. We rely on our citizen scientists (Osprey Watchers) and volunteers to actively help monitor and manage that population. Without help from the public, the recovery of ospreys would likely be far less magnificent.

This summer, during osprey nesting surveys, we deployed 62 red bands on young ospreys – the first time in two decades that New Jersey ospreys have been banded. We banded the young at their nest sites in late June and early July, before they could fly.

Each red anodized aluminum rivet band bears a unique alpha-numeric code, so birders, osprey watchers, and wildlife photographers can now begin to identify these individual birds by their bands. The young can be re-sighted as they learn to hunt, soar, and eventually migrate south for the winter at their wintering grounds in the Caribbean, Central America, and their largest concentrations in Northern South America, they will remain there for the next two years.

This new public engagement project focuses on ospreys that nest in the Barnegat Bay watershed from Point Pleasant south to Little Egg Harbor. By collecting data from re-sightings, we learn about their dispersal, foraging habits, site fidelity, migration routes, and life-span.

In coming months, we will develop educational and interpretive materials to spread the word about Project RedBand, ospreys, and their importance in the coastal ecosystem along the Jersey Shore. 🗝

Ben Wurst is a biologist who manages CWF's osprey recovery program.

How You Can Help With Re-Sightings

Sequence: Red band with codes 00-100 over capital "C". All ospreys banded in New Jersey this summer wear a silver United States Geological Survey band on their left leg and a red band on their right leg.

Bands deployed in 2014: Band numbers 00/C through 62/C were deployed in 2014. Two of those bands were already recovered: 30/C and 31/C (which were blown from their nests at Sedge Islands Wildlife Management Area in late July).

Re-sighting details needed: date, time, location (GPS coordinates), closest town, red band code, and the observed behavior of the bird.

Re-sighting confirmation: Photos of red banded ospreys are in some cases critical to confirm your sighting. If possible, please try to get a high resolution photo of the band. Submit your red banded osprey photos and re-sighting details to Ben Wurst at ben.wurst@conservewildlifenj.org.

Learn more at:
www.ConserveWildlifeNJ.org/Protecting/Projects/Redband/

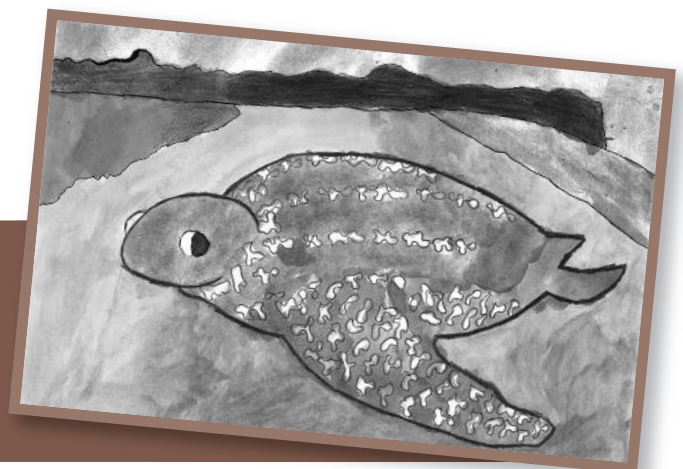


Attention 5th Graders Species Edge On The Edge Art & Essay Contest is Open

Choose an endangered animal that lives in New Jersey – draw a picture and write a short essay about it and send it in.

It's free to participate. Get your contest kit today at

www.ConserveWildlifeNJ.org. Entries must be postmarked by January 31, 2015.



American Oystercatcher “Story Map” Allows Viewers To Get Interactive Online

by David Wheeler

The American Oystercatcher is a one-of-a-kind bird. Its long orange beak, black head, sturdy size, loud calls, and gregarious behavior all but scream, “Look at me!”

Now you can look at oystercatchers in a way they’ve never been seen before – in a Wildlife Story Map on your computer screen!

CWF this month released our first online Wildlife Story Map - “American Oystercatchers Through the Seasons.” This interactive GIS platform tells an entertaining and informative story about this keystone New Jersey migratory bird species, following its journey along the Eastern Seaboard through data tracking.

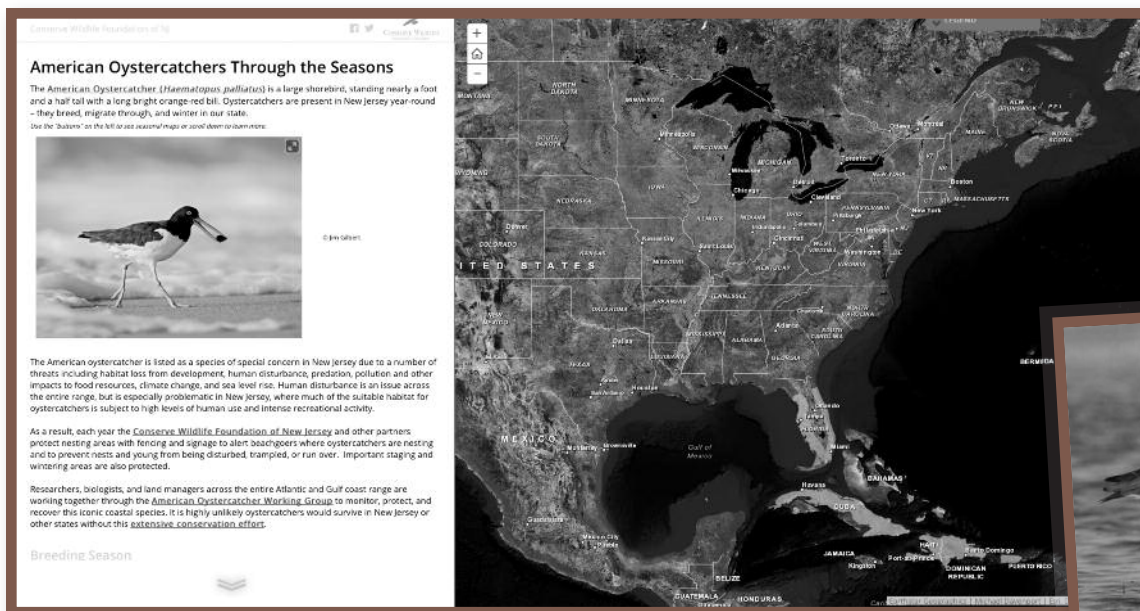
This Story Map is embedded with multimedia content, such as text, photographs, and video. To view the American Oystercatcher Story Map, visit our homepage.

The Oystercatcher Story Map provides stories about individual banded birds, which have been tracked as far afield as Florida and Massachusetts. Like all beach nesting birds and many other coastal

species, American Oystercatcher have faced the challenges of a changing shoreline in recent years, especially since Hurricane Sandy.

“The migration of American Oystercatchers is an exciting journey to bring to life online,” said CWF beach nesting birds biologist Todd Pover. “Our state is the northernmost limit of the species’ winter range. While many of New Jersey’s oystercatchers migrate during the winter to the Southeastern U.S. Atlantic coast and Gulf coast of Florida, some of those that breed north of our state during the summer end up spending their winter here in New Jersey.”

CWF developed the American Oystercatcher Story Map in tandem with GIS software developer ESRI, thanks to financial assistance provided in part by a grant from the New Jersey Division of Fish & Wildlife. We hope to utilize these dynamic maps for other charismatic wildlife species as well! 🦩



Our American Oystercatcher Story Map utilizes interactive pages like this one to bring you links, photos, videos, news stories, and maps with just a single click.



EXPLORATIONS

Sign up for Conserve Wildlife Foundation’s E-Newsletter! Get the inside scoop on all things wild in our state. We tell stories about New Jersey’s wildlife and the people who care for them.

If you would like to subscribe to our E-Newsletter, please send your email address to info@conservewildlifenj.org and put E-Newsletter in the subject line.

Wintertime means...Bats in Buildings!?!?

by MacKenzie Hall

The wintertime habits of bats can be difficult to observe and generalize. Many bats, like the well-known Little Brown Bats, hibernate in caves. Other bats make long southbound migrations. Still others pass the winter months alone beneath the leaf litter.

Big Brown Bats are among our most common northeast bat species *and* the most familiar “house bat” during summer - yet quite little is known about where they wait out the cold.

Buildings have been one suspected option. But how commonly do Big Brown Bats overwinter in buildings? What conditions do they need, and can they be detected?

We had a chance to explore these questions last winter with graduate student Oli Bose from Hunter College. Together we used acoustic detectors and temperature loggers to monitor four attic spaces (all of them known summer roosts for Big Browns) from November to mid-March.

Voila!

The acoustic detectors picked up ultrasonic bat chatter in three out of the four sites within a week. Recordings of bat activity continued pretty regularly all winter, even if just in blips on some days.

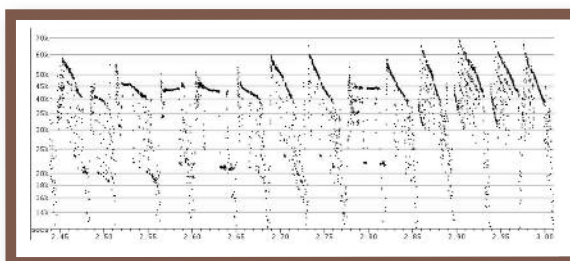
In an unheated barn loft in Burlington County, bat calls were recorded on all but 10 days out of 115. In the others, stretches of silence lasted up to 10 days before being broken by a little high-

pitched voice. So not only were bats home, they were making noise...noise that we could detect and learn from.

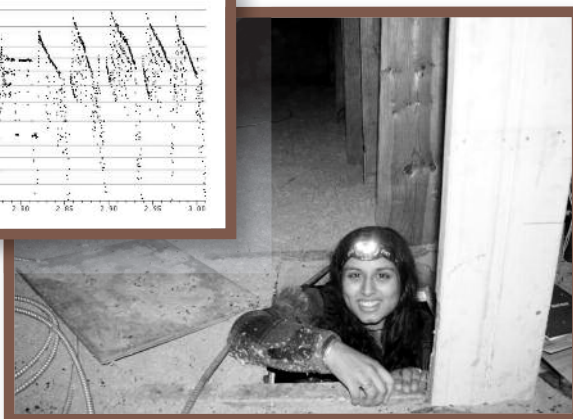
What surprised us most was the cold. The barn logged 36 days with temperatures below freezing. Another building we monitored was an unheated church in Sussex County, where the attic temperature dropped as low as -10°C and was sub-zero for 14 days in a row in January. We wouldn't have believed bats could survive that.

We've been sharing these findings with homeowners and pest control professionals regarding winter bat exclusion work, which could save a lot of bats from unintended harm.

This project was a good first step in studying the winter dynamics of Big Brown Bats. There's always plenty more to learn! ✈



A sonogram reveals the high-frequency chatter of a bat in a church attic this past March.



Volunteer Oli Bose, in one of the attic spaces across New Jersey we monitored for winter bat activity.

CWF UNVEILS SPECIES ON THE EDGE 2.0!

New Multimedia Contest open to High Schoolers Statewide

by Stephanie Feigin

Expanding on the success of our beloved Species on the Edge Art & Essay contest for fifth graders, CWF is thrilled to offer an additional free contest just for high schoolers across New Jersey.

This month we launched our new **Species on the Edge 2.0 High School Multimedia Contest**. This contest will engage and teach high school students about New Jersey's rare wildlife by capitalizing on high school students' fast-growing expertise with technology and providing them with the opportunity to show their creativity.

Species on the Edge 2.0 will offer high schoolers the chance to develop their expertise in STEM (Science, Technology, Engineering, and Mathematics) while also yielding project development experience that will benefit them in college and their career.

CWF invites all New Jersey high schoolers to submit an original video, app, podcast, digital graphic design, webpage, or other multimedia component showing why rare wildlife is important to protect in New Jersey. Thanks to our primary sponsor PSEG, participants have the chance to win up to \$1,000 in scholarship money toward their future dreams. The winner's project will also be featured on CWF's website and other outreach.

Deadline for the multimedia contest is April 30, 2015.



Enter this contest to help protect New Jersey's rare wildlife

For more information, contact us at education@conservewildlifenj.org

Photo: © Herb Houghton

Bring home a Piping Plover – So Cute, it's UNREAL!

Many of New Jersey's most beloved breeding birds have left for the season by now, migrating south for the winter. But thanks to *Unreal Birds*, some of these birds are available to you year-round.

Unreal Birds handcrafts plush stuffed animals from many of the at-risk species that Conserve Wildlife Foundation helps protect. In fact, our very own biologists worked with the birds' creator to help make them as real as possible.

These are not your ordinary stuffed animals. As their website notes, "They are one-of-a-kind plush re-creations of the coolest birds on the planet." Each animal is handmade in the U.S.A with the softest felt and other high quality all-natural materials of the highest craftsmanship.



Best of all, 20% of each animal purchased goes to Conserve Wildlife Foundation to help with our on-the-ground conservation efforts.

So far, the following birds are available: American Oystercatcher, Osprey, Piping Plover, and Snowy Owl. The oystercatcher comes with an egg to incubate, and the Plover with a chick to rear. More birds are in the works for the future.

These make a great gift any time of the year, but especially with the holiday shopping season right around the corner. Remember, these are not stuffed animals made just for kids. They were crafted with adults in mind, especially wildlife lovers.

For now they are only available online at www.UnrealBirds.com. Once you check them out, you'll understand why their fans say, "OMG they are absolutely Adorbz."

You might not use those exact words – but you'll surely find the birds as irresistible as we do. 🐦



Photos: © Jim Verhagen

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Our mission is to protect and preserve the rare and imperiled species of wildlife that live, breed, and migrate through our state by restoring habitat, managing species, educating and engaging citizens, and conducting research.



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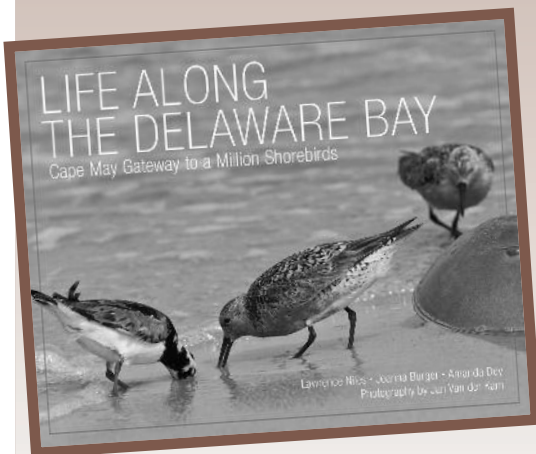
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Visit www.ConserveWildlifeNJ.org to check out our unique Adopt A Species Program and other great holiday gift ideas!

AT THE TOP OF YOUR LIST – *Life Along the Delaware Bay*

Written by CWF partner Larry Niles, in concert with Joanna Burger and Amanda Dey, and illustrated with beautiful images by renowned photographer Jan Van der Kam, this fascinating book celebrates the second largest and most diverse bay on the East Coast and the natural phenomena that make this place special. Over 300 stunning color photographs capture the beauty of this unique treasure.

\$24.95



SHOW YOUR SUPPORT FOR NJ'S RARE WILDLIFE – *CWF T-shirts*

Our vibrant, new Adopt-A-Species inspired t-shirts are perfect for a wildlife enthusiast.