May/June 2021

CONNECTICUT Wildlife

From The Director

Something about spring seems both exciting and invigorating. It is probably tied to the reawakening of much of our natural world. Our landscapes are "greening up" quickly, spring wildflowers are coloring the landscape, and wildlife is on the move. A few moments outside can bring sensory overload with amazing sights, sounds, and fragrances.

Perhaps nothing signals the arrival of spring more than the return of many of our migratory birds. The morning is filled with warbling birds flashing brilliant colors as they refuel after long migrations or return to their Connecticut breeding homes to claim a territory, find a mate, and begin nesting. The evening hours bring peenting woodcock and hooting owls. This is an ideal time to learn more about the amazing diversity of birds Connecticut is fortunate to have. While you can get serious and geek out on gear, you can also enjoy spring migration in your backyard or local park. Binoculars help—some of those tiny warblers like to hang out in the treetops—but are not required for you to still enjoy the sounds and colors all around us this time of year. For more information on what is truly one of nature's wonders, I hope you will take a minute to read this month's Watchable Wildlife article on spring migratory birds.

As a country kid, the tiny fish in our lakes and streams were always a fascination as they swam about in pools of dappled sunlight. And yes, always curious, we would try to catch them—frequently by hand. Who knew micro fishing would become a sport and rival the birders with "life lists" of species? You will learn all about it as you read on. It is another way to enjoy the amazing diversity we find when we spend time in nature.

Spring is also a time when many of our turtles begin the arduous process of finding a good place to lay their eggs. It may be surprising to know that most turtles are not able to reproduce until they are about 10 years old. More surprising still is that many species can live for 50 or 60 years and still lay eggs. This long lifespan, combined with reaching reproductive potential later in life, makes the conservation of adult turtles critical for their survival. That is why spring and road mortality are such a conservation concern for our turtles. The turtle you see crossing the road in spring is most likely a female on her way to lay eggs or returning from doing so. Every turtle killed on a road represents not just the loss of that turtle, but literally the loss of decades of new turtles. We have got some great information on our website about how you can help turtles that are crossing roads. Please don't stop there. Learn more about the illegal trade in turtles that happens right here in Connecticut. That turtle crossing the road or the eggs she just laid could easily become part of rapidly growing global black market in turtles. This is a conservation challenge we need to work on together to solve.

Spring is also about hope and the promise of things yet to come. What could better embody those qualities than the introduction of the Recovering America's Wildlife Act in Congress. This legislation would provide permanent, stable funding for the proactive conservation of all wildlife species. It is a conservation legacy we need to enact to protect our natural heritage and help ensure that the sounds and colors of nature in springtime are here in their full glory for future generations to enjoy as much as we do.

Jenny Dickson, Director, CT DEEP Wildlife Division

Connecticut Wildlife

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CONNECTICUT Wildlife

Contents

May/June 2021

Saltmarsh habitat is beneficial for humans and wildlife alike. Read about the newest efforts to protect salt marsh habitat on page 4.
PHOTO BY P. J. FUSCO

IN THIS ISSUE

DEPARTMENTS

Cover:

Discover what makes the shy and secretive yellow-bellied sapsucker so special by reading the article on page 12.
Photo courtesy Paul Fusco

Funds to Shore Up Vanishing Marshes Along the Atlantic Coast

Partners Unite to Save Saltmarsh Sparrows

Written by U.S. Fish and Wildlife Service Staff; Photography by Paul Fusco, DEEP Wildlife Division

Federal and state agencies are investing $6 million in an Atlantic coastwide initiative to strengthen and restore 1,667 acres of salt marshes across five states by 2025, with the latest $1 million awarded by the U.S. Fish and Wildlife Service (USFWS) to the Connecticut Department of Energy and Environmental Protection. The award is shared with the states of Maine, Maryland, Massachusetts, Rhode Island, and Virginia.

The restoration effort will have far-reaching benefits for coastal communities, as healthy coastal marshes support clean water, storm and flood protection, and multi-billion dollar fishery, recreation, and tourism industries. These vital benefits are at risk, with more than half of the original salt marsh habitat in the U.S. already lost, and the sea level on the North Atlantic Coast expected to rise between 13 to 19 inches by 2050.

Scientists point to the disappearing saltmarsh sparrow as a warning sign of these changes and a call to action for restoration. A network of wildlife biologists, salt marsh ecologists, engineers, academic researchers, and non-governmental partners spanning 14 states are working together to restore tidal salt marshes for the wildlife that call them home and the communities that rely on them. The saltmarsh sparrow is listed as a species of special concern under Connecticut's Endangered Species Act and has also been identified as a Species of Greatest Conservation Need in the Connecticut Wildlife Action Plan.

The $1 million Competitive State Wildlife Grant will fund the implementation and testing of new management practices for restoring salt marsh across the six states. The grant is matched by $379,000 from these states, and adds to $4 million previously awarded from the U.S. Army Corps of Engineers and other federal funds for a total of $6,009,777. State wildlife agencies will manage projects in each of the six states in collaboration with many partners, including the National Audubon Society, The Trustees of Reservations, the Virginia Institute of Marine Science, the USFWS, and the Salt Marsh Habitat and Avian Research Program. Saltmarsh restoration was identified as a priority action under Connecticut's Governor's Council on Climate Change (GC3) planning effort.

Saltmarsh sparrows are declining at an alarming rate across our region. This project will test five of the most promising management techniques for retaining saltmarsh resilience, reducing high-marsh flooding, and increasing nesting success. The funding will support regional collaboration, an integral element of State Wildlife Action Plans, and will build on the conservation success of the State and Tribal Wildlife Program in protecting the saltmarsh sparrow and many other at-risk high marsh species.

Nesting exclusively in salt marsh habitat and feeding extensively on the seeds of *Spartina* during late summer and fall, the saltmarsh sparrow is highly dependent on healthy salt marsh habitat.

More than four out of every five saltmarsh sparrows have already disappeared since 1998 – an estimated population decline of 87 percent. The species is the only bird that breeds solely in the salt marshes of the Northeast, and rising sea levels and more frequent storms are increasingly flooding its nests. When nests flood, eggs float away, or chicks drown. Under historic conditions, sparrows had just enough time between spring high tide events to raise their chicks. Sea level rise has exacerbated the effects of historical stressors, such as ditching or draining marshes for development or agriculture.

The short-term goal of the Atlantic Coast Joint Venture (ACJV), the USFWS, and partners is to halt the decline of the sparrow by 2030 by providing 23,000 acres of high-quality breeding habitat. The long-term goal is to restore 80,000 acres of high-quality breeding habitat by 2069, which would support a population of 25,000 birds. Conservation recommendations are outlined in the ACJV's landmark Saltmarsh Sparrow Conservation Plan (*https://www.acjv.org/documents/SALS_plan_final.pdf*). The USFWS plans to assess the saltmarsh sparrow's status in 2023 to determine whether or not it warrants protection under the federal Endangered Species Act. More information about the salt marsh sparrow can be found on the ACJV (*https://acjv.org/saltmarsh-sparrow-2/*) and USFWS (*https://www.fws.gov/northeast/saltmarsh-sparrow/*) websites.

Stopping Illegal Wildlife Trafficking

How You Can Take Action

Writen by Kyle Testerman, Wildlife Management Institute

This is the third and final article in a series highlighting the illegal wildlife trade in Connecticut. In the first two articles, you learned about the scope of the problem, especially concerning our native turtles, one of the most severely impacted groups of species. You also learned about the type of work researchers, Wildlife Division biologists, conservation law enforcement officers, and others do to effectively combat wildlife trafficking. This article focuses on what you can do to help protect our native species from the threat of illegal collection and trade. Again, the focus is on turtles, but the same actions can apply to other groups of plants and animals.

The very first and easiest thing you can do is leave all turtle species where they are in the wild. Collecting native turtles is not only illegal in most circumstances, it also puts stress on the animal which can lead to disease and death. This applies to all life stages, including eggs and hatchlings. Even if you intend to release the turtle back to where it was collected, diseases from stressed or unhealthy animals can spread to the resident population.

Releasing captive turtles into the wild has led to the spread of non-native species, like this red-eared slider, which was found in a Connecticut city park. Their presence has affected native turtle populations in the state. Importing or releasing red-eared sliders is illegal in Connecticut.
PHOTO BY K. TESTERMAN

Another way to help stop wildlife trafficking is to not buy or sell turtles, especially those that are native to Connecticut. Again, in some situations it is illegal, as well as very difficult to track the turtle's true origins and verify that the turtle is truly from a captive-bred line, and not just the captive offspring from parents taken from the wild. Buying or selling jewelry, crafts, or other decorations made from turtles or turtle parts also has a long history of contributing to wildlife trafficking and should be avoided.

Not only do buying and selling live turtles encourage collection of native turtles, but all too frequently, pet turtles outlive their owner's interest in them. In these situations, people often feel compelled to release the turtles into the wild near local waterbodies. This again raises the concern for diseases being introduced into wild populations. Releasing turtles into Connecticut waters can also introduce non-native species, which can become invasive and outcompete native turtle species for limited resources like food and nesting sites. Rather than buying a turtle from a pet store or online, consider adopting an unwanted turtle. If you have a turtle you no longer want, find someone looking to have that type of pet.

Red-eared sliders are the most common species kept as pets in the United States, despite certain restrictions on their sale, including a ban on importing them into Connecticut and releasing them into the wild. This turtle species is native to parts of the Southeastern U.S., is not na-

K. TESTERMAN

Collection equipment, like nets and pillowcases, are used to capture and transport turtles from the field.

K. TESTERMAN

Finding unmarked turtle traps near a wetland could indicate poaching activity is taking place.

tive to Connecticut. Over the years, red-eared sliders have been released into waters outside of their native range, presumably by former pet owners. Red-eared sliders are now considered one of the "Top 100" most invasive species in the world, and unsurprisingly have become an issue for our native turtles already under conservation threat. Releasing captive turtles of native species is also problematic because they can introduce new and potentially harmful genes into local populations, resulting in the loss of native genetic diversity.

Reporting illegal activity is an important way of stopping poachers. For example, if you see traps in the water without identification or witness people taking or disturbing wildlife, report it immediately. Do not confront anyone involved. Rather, take note of the vehicle, description of clothing or equipment, what they were doing, and the location. This information will be helpful to law enforcement as they investigate your report. The more familiar you are with an area, the more likely you will notice when something is different, like finding plywood sheets on the ground. A keen eye for nature is why outdoor enthusiasts like anglers, hunters, birders, and hikers can be especially important in noticing and reporting poaching activity. While the impacts of wildlife trafficking reach across the globe, we all can help protect many of our own local, backyard species that are being targeted. Controlling and stopping the illegal wildlife trade takes cooperation and coordination from the public following Responsible Recreation ethics (*https://portal.ct.gov/DEEP/Natural-Resources/Responsible-Recreation*), law enforcement personnel investigating tips and enforcing laws, and biologists monitoring populations. It truly is a team effort.

P. BENJUNAS

Hunters and other outdoorsmen and women can help by reporting suspicious activity to DEEP Environmental Conservation Police Officers in the field, or by calling the phone numbers listed to the right.

What to Look for:

- **People with bags or nets, poking around in wetlands and along streams, or flipping over logs and rocks.**
- **Cars parked near forested areas with collection equipment – like nets, containers, and pillowcases – visible inside.**
- **Unattended backpacks or bags left in the woods, along a trail, or near roads.**
- **Unmarked traps set in wetlands. Traps for research will be clearly marked.**
- **Sheets of metal or plywood that have been laid on the ground to attract cold-blooded reptiles and amphibians.**

Save these Numbers!

Connecticut DEEP:

Wildlife Division – 860-424-3011

EnCon Police Dispatch (24 hours) – 860-424-3333 or email *Deep.Dispatch@ct.gov*

TIP – Turn In Poachers 24-hour hotline – 1-800-842-HELP (4357)

U.S. Fish and Wildlife Service:

Anonymous tip line – 1-844-397-8477 or email *FWS_TIPS@FWS.GOV*

Micro . . . What?

Discovering a New Way of Fishing

Written by Ed Machowski, DEEP Fisheries Division

It was a bright, sunny, and blistering hot mid-summer day many years ago as my college roommate/ fishing partner and I fruitlessly fly-fished a swift section of a world-renowned Catskill trout stream. The day was too nice and, given the conditions, I knew that no self-respecting trout would venture out from its shaded hiding spot into the bright sun to eat my offering. Necessity being the mother of invention, and the fact that I had time to kill between mid-day and sunset when the trout might be more cooperative, I set my sights on smaller quarry. I tied on the smallest fly in my box, adorned it with a tiny piece of worm which I found under a rock, and "wham" fish on! Well, "wham" might be a slight overstatement. My fishing partner watched from his downstream location with an amused expression and finally said, "What on earth are you doing?" My response, "I'm diddling for dace!" Granted, most of the blacknose dace and creek chubs that I caught did not put a huge bend in my fly rod, but they were a fun distraction on an otherwise fishless day. Welcome to micro fishing!

In the United States, micro fishing was largely unknown until National Public Radio (NPR) ran a piece on micro fishing back in October 2016 (transcript available on the NPR website). The irony is, micro fishing has always been around in the U.S., it just never had a name put to it. Like me standing in that Catskill stream (35 years ago), every kid with a fishing rod, as well as most adult anglers, have spent some time in a small stream or along a lake shoreline dropping bait on really small hooks in front of tiny fish you can see from shore. Little did anyone know that it would become a "movement."

L. GLYNOS / DEEP FISHERIES

Largemouth Bass caught in Oil Mill Brook, Waterford, Connecticut, on a size 14 hook using a small piece of worm.

John Geirach wrote: "Maybe your stature as a fly fisherman isn't determined by how big a trout you can catch, but by how small a trout you can catch without being disappointed." If you were to replace fly fisherman with fisherman, and trout with fish in Geirach's quote, you would be close to the definition of micro fishing.

Micro fishing is simply the pursuit of small, commonly overlooked fish that are typically less than six inches long.

The sport originated in Japan by fishing for Tanago. The term "Tanago" is often considered a style of fishing, but Tanago (or Bitterling in English) is actually a fish in Japan that is so small it would fit on a coin the size of a penny.

Micro fishing can include, but is not limited to, gamefish species. In fact, the typical angler may catch 20 or so fish species in his/her lifetime, while thousands of other fish species exist, making the angling possibilities almost limitless. Similar to a birder, the goal for most micro fishers is to develop the biggest life list as possible but, unlike a birder who just uses visual observation, micro fishermen use a fishing rod. . .and, really, really small hooks!

The majority of fish species in North America are minnows, darters, and killifish, most which rarely exceed five inches. From that list, there are more than 200 species of darters alone in the United States. While the fish might be small in size, many of the species that make up the minnow and darter families are breathtakingly beautiful – much more so than most any gamefish.

No special gear is required to become a micro fisherman, making entry into this sport very affordable. But, as with every fishing style (fly fishing, drop shot, center pinning, Tenkara, Keiryu, Seiryu) a specialized line of gear develops. For those anglers who have made micro fishing an obsession, they claim that the specialized gear really does add to the fishing experience. Websites such as *www.roughfish.com* and *www.microfishing.com* are excellent sources of information where micro fishing enthusiasts share information about their sport.

To get started, the gear is simple. A fishing license, fishing rod, fishing reel (optional; most people just tie the line to the end of the fishing rod), light line (1-2# fluorocarbon is best), an assortment of small hooks (size 16 or smaller fly tying hooks would work fine), very small split shot, bait, a good fish identification guide (i.e., *Peterson Field Guide to Fishes of North America* or *A Guide to Freshwater Fishes of Connecticut*, which is on the DEEP website at *https://portal.ct.gov/DEEP/Fishing/Freshwater/Freshwater-Fishes-of-Connecticut/Families-of-Connecticut-Freshwater-Fishes*), and some imagination and patience. If you are using a rod you might have laying around the house, you could gear up for less than $20!

Micro fishing is no different than fishing for larger quarry – the more successful fishermen do their homework. A given stream in Connecticut may have a dozen different minnow species, each with specialized habitat requirements. This demands a bit of research and creativity on the part of the angler to be successful. For example, if you were trying to add Gizzard Shad to your life list of fish species caught, what would you use for bait to catch a fish that primarily feeds on algae?

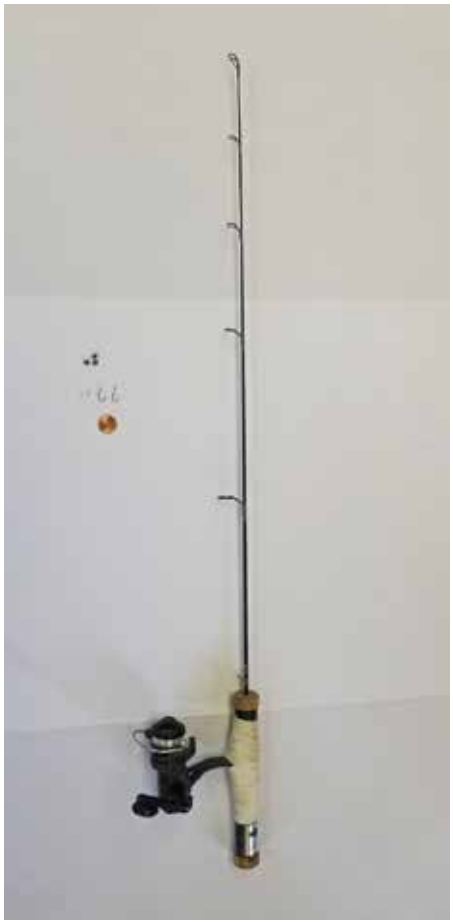
Over 60 freshwater fish species are found in Connecticut alone, and currently not all freshwater fish species are listed

Micro fishing is popular because it:

- **Is inexpensive to start;**
- **Is effective (an angler can catch hundreds of fish in a day);**
- **Can be an easy way to involve the whole family;**
- **Is sustainable (it is primarily a catch and release sport);**
- **Is practical (you can fish anywhere, even a small puddle may hold fish);**
- **Is something different; and**
- **Allows a person to connect or possibly reconnect with the natural world around them (something we all need to do more of).**

L. GLYNOS / DEEP FISHERIES (3)

(From left to right) Bluegill Sunfish caught in Dodge Pond, East Lyme; Blacknose Dace and juvenile Brown Trout, both caught in Oil Mill Brook, Waterford, on a small piece of worm.



Typical gear used by micro fishermen. Small ice fishing jig rods (far right) are excellent for targeting small fish and getting into over-grown streams.

Hook size comparison to a quarter. Hook on the far right is a size 16 straight shank hook and typical of the hook size used while micro fishing.

L. GLYNOS / DEEP FISHERIES

Bluegill Sunfish caught in its typical habitat in Dodge Pond, East Lyme.

in state regulations as legal to capture by rod and reel. A state statute requires that a fish species be specifically listed in the regulations for it to be fished for in inland waters, so some of the more obscure species may not be currently listed. In other cases, a particular species may not be listed for conservation reasons. If you want to try out micro fishing in Connecticut, the first steps are to purchase a fishing license and then **familiarize yourself with the different freshwater fish species you may encounter by using an identification key** as mentioned earlier. The *Connecticut Fishing Guide* has a specific section on regulations and definitions, and under the definition of bait species the following are legal to take by rod and reel: Common Shiner, Golden Shiner, Fallfish, Creek Chub, Spottail Shiner, Blacknose Dace, Longnose Dace, Pearl Dace, Bluntnose Minnow, Fathead Minnow, Cutlips Minnow, Chub Sucker, White Sucker, Killifish, Mummichog, Atlantic and Tidewater Silverside, and Sand Lance.

Just because small fish are being sought by micro fishermen does not mean they should garner less respect than any other gamefish species. Fishermen should practice good handling techniques and return the fish to the water unharmed. Some fish you may encounter (e.g., Slimy Sculpin or Bridle Shiner) could be listed as a species of special concern, threatened, or endangered. Even with catch and release fishing, some fish may die after being released and under heavy fishing pressure, even catch and release fishing could be very detrimental to the species. Most importantly, never move fish from one waterbody to another! Not only is this illegal, transplanting fish to other waters can be catastrophic to other fish species.

Flashback to that Catskill stream . . . As the afternoon wore on, I finally had my fill of catching countless creek chubs and blacknose dace, so I meandered downstream to find my fishing buddy. As I came around the stream bend, there he was standing with a smile and proudly holding a prize winning one-inch long creek chub! I asked, "What on earth are you doing?"

L. GLYNOS / DEEP FISHERIES (3)

(From left to right) Striped Killifish, Atlantic Silverside, and Mummichog all caught using a small piece of clam in Jordan Cove, Waterford.

Epizootic Hemorrhagic Disease
Virus Appeared in Deer in 2020

Written by Tim McKinney, Wildlife Management Institute

This past year was, without a doubt, tough for everyone. With the COVID-19 pandemic, we have had to make changes to the way we go about everyday life to stay free and clear of this new virus. Fortunately, we have doctors and scientists to guide us through these challenging times. When faced with disease, white-tailed deer are not as fortunate. Yet, biologists do their best to maintain healthy herds, although sometimes nothing can be done to prevent certain diseases from popping up.

Epizootic hemorrhagic disease (EHD) is a virus that is not easily controlled. The virus is transmitted to deer through the bite of an infected midge (also known as "no-see-um" or "gnat"). These midges live and breed near water or in moist environments, so most EHD outbreaks occur during periods of drought in late summer through early fall. Even though some deer may survive and develop an immunity to EHD, in areas where the virus is not common or when certain strains foreign to the area show up (i.e., EHD-6), most animals succumb to the virus. The disease progresses quickly in infected deer, with symptoms that include a swollen head, neck, tongue, or eyelids; bloody discharge from the nasal cavity; ulcers on the tongue; and hemorrhaging from the heart and lungs, followed by death within three to five days. The virus also causes high feverish conditions, causing deer to seek out a water source they can submerge themselves in, which often is how such outbreaks are identified as dead or impacted deer are typically found in or around water sources.

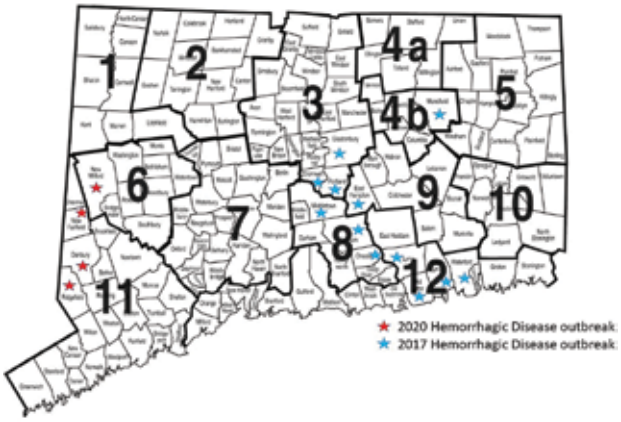
In 2017, the first ever cases of EHD were confirmed in central Connecticut where it is believed that upwards of 70 deer may have died. No infected animals were reported in 2018 and 2019. However, in 2020, EHD showed up again in Connecticut, and New York had over one thousand reports of sick or dead deer in the counties bordering our state. The DEEP Wildlife Division was able to confirm EHD in one deer from Ridgefield and another 20 or so suspected cases in neighboring towns. Fortunately, concerns about EHD are reduced after the first hard frost hits and typically kills the biting insects.

Large adult buck found dead in a stream with no visible injuries, suspected of dying from epizootic hemorrhagic disease.
PHOTO COURTESY K. BAUER

As terrible as this virus is for deer, it does not pose a threat to humans. There is no threat of infection by handling or eating venison from an infected deer or by being bitten by infected midges. However, hunters are encouraged not to shoot or consume any animal that appears to be sick. Whenever processing game, hunters should wear latex gloves and disinfect any instruments that come into contact with the animal.

This year, several hunters reported deer with abscesses and signs of infection (yellow puss filled sacs). Because infections are caused by bacteria (likely *Truperella pyogenes*), which when circulating in the deer's bloodstream can contaminate tissues elsewhere in the body, it is not recommended the animal be consumed. Also in 2020, Connecticut had its first report of a "Bullwinkle deer". This mysterious bacterial infection, classified by biologists as *Mannheimia granulomatis*, causes swelling of the soft tissue of the muzzle, giving the animal a moose-like appearance. Little is known about this condition, but in the few deer that have been tested in the U.S. since 2002 (25 white-tailed deer and 2 mule deer), lesions on the muzzles were documented and suspected as the causes of long-term bacterial infections. Although it is not believed that these infections cause mortality, deer with this condition may have trouble eating and breathing. Due to the bacterial infection, it is recommended that hunters not consume meat from animals that appear to suffer from this condition.

Hemorrhagic Disease Distribution in Connecticut, 2017-2020



In Pursuit of Sweetness

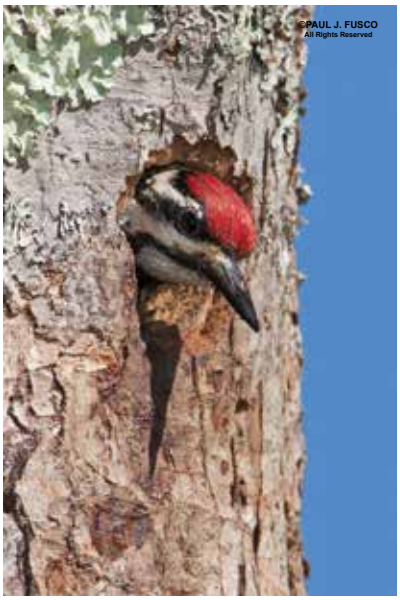
The Yellow-bellied Sapsucker

Article and photography by Paul Fusco, DEEP Wildlife Division

The yellow-bellied sapsucker is an uncommon bird that is found primarily in the northwestern part of Connecticut, where it can be seen in northern deciduous and mixed coniferous forest habitats. It especially favors areas with aspens, birches, and maples.

Sapsuckers are shy and secretive. They often reveal their presence by the numerous rows of horizontal and vertical holes they drill in trees. These "sap wells" are shallow holes about 1/4-inch in diameter and evenly spaced on the trunk or large branches of living trees. The wells fill with sugar water sap that flows within the cambium layer of the tree, just under the bark. Sapsuckers will lap the sugar water with their brush-tipped tongue and also consume insects that are attracted to the sap. The sap wells also will attract hummingbirds, warblers, and other woodpeckers that opportunistically feed on the sap or insects.

An important part of the ecosystem, woodpeckers help control insect populations and create nest cavities that are used by other birds and mammals who cannot excavate the cavities themselves. Nuthatches, screech owls, kestrels, starlings, squirrels, flying squirrels, deer mice, and raccoons all use woodpecker tree cavities.



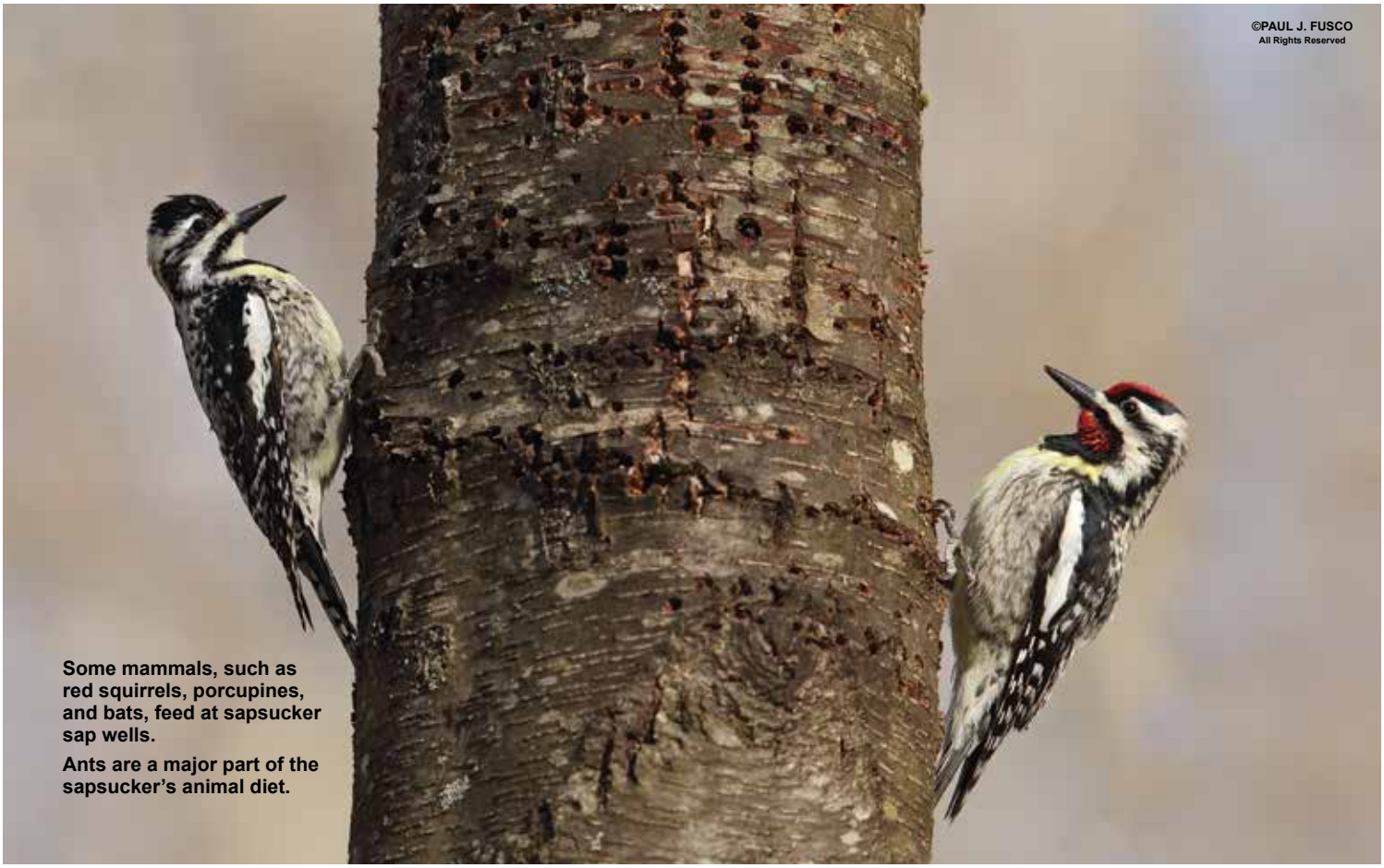
Note the white chin on this adult female sapsucker.

This small woodpecker (approximately 8 inches in length) is boldly marked with black and white checkerboard barring on the back, wings, and tail. It is our only woodpecker with a scarlet red forehead patch, which is present on both sexes. Males have a scarlet throat patch, while females have a white throat patch. Look for the long, white wing patch on otherwise black wings, which is diagnostic. Juveniles are dusky brown, but have the large white wing patch. The underparts are lemony yellow, most pronounced on males during the breeding season.

The normal breeding range includes the northern hardwood forest belt that extends across the northern United States and southern Canada. In the Northeast, including Connecticut, these birds have benefitted from reforestation. They have expanded their breeding range into Litchfield County from the north over the last century, and they continue to expand into more mid- to southern parts of Connecticut as the population grows. Sapsuckers are considered to be one of the most migratory of the woodpeckers. They migrate south to the mid-Atlantic region and the southern states for the winter to areas where tree sap is still available. Small numbers may be found in winter in the milder parts of Connecticut where the birds will feed on fruits, including berries and crab apples. Migrating and overwintering birds may come to backyard bird feeders that offer suet.

Behavior

While tree sap is an important energy source, sapsuckers will also feed on a variety of insects, including ants, wasps,



Some mammals, such as red squirrels, porcupines, and bats, feed at sapsucker sap wells.

Ants are a major part of the sapsucker's animal diet.

moths, beetles, caterpillars, and bark insects. By consuming large numbers of forest insects, sapsuckers, along with all woodpeckers, are considered to be an important part of the ecosystem. They are beneficial to human interests and the health of forest habitat. Woodpeckers also create nest cavities in dead, dying, or living den trees that are used by a multitude of other wildlife, including mammals and other birds. That being said, sapsuckers can cause tree damage that is sometimes extensive and serious, and may result in the death of trees.

Sapsucker calls are often loud and noisy. They seem to be out of place in the forest and orchards where the birds are found. Their cat-like mewing call is given year-round. The birds also produce a loud, squealing *keeyew* call that has a downward slur. Their calls are often likened to that from a blue jay or red-shouldered hawk. Drumming is distinctive and can be identified as sapsucker by a rapid tapping roll followed by 5 or 6 clearly separated taps at the end.

Nesting

Yellow-bellied sapsuckers show a preference to nest in live trees, especially aspen. The live tree will often have some kind of fungal infection that softens the heartwood, making it easier for the bird to drill into. The birds will also excavate nest cavities in dead or decaying trees. Nests may be 10 to 60 feet above the ground where the birds drill out a nest cavity that has a small 1½-inch opening and may be 10 inches deep. Females usually lay 5 to 6 white eggs on a soft base of wood chippings. Incubation lasts approximately 12 to 14 days and the young fledge after about 28 days.

Conservation

Yellow-bellied sapsuckers prefer younger forest habitats with smaller trees that have fast growth and thus good sap flow. They also typically use forest edges, suburban parks, backyards, orchards with fruit trees, and other semi-open habitats. They have shown a slight population increase over the last 50 years according to the U.S. Geological Survey's Breeding Bird Survey.

Adult male sapsuckers have a scarlet red chin.

Neotropical Migrant Songbirds

Little Birds with Superhuman Abilities

Article and photography by Paul Fusco, DEEP Wildlife Division

Many of our most familiar and favorite breeding birds are neotropical migrant songbirds. Among them are swallows, flycatchers, gnatcatchers, most thrushes, vireos, most warblers, tanagers, and orioles. Swifts, hummingbirds, cuckoos, and goatsuckers are also neotropical migrants, although not classified as songbirds.

Most of these birds are very small. They have long, arduous journeys that are fraught with danger. Their migrations require efforts that are as remarkable as they are herculean, yet the birds complete these travels every spring and fall. The lucky ones come back the following year, but as the dangers continue to become more numerous, the little birds themselves become less and less populous.

One of the most studied neotropical migrant songbirds is the wood thrush.

The Spring Migration

The spring bird migration is a spectacular occurrence. Much of it goes on without notice. Neotropical migrants evolved over the course of tens of thousands of years to travel from their Latin American homes of origin to their newly-discovered breeding grounds in North America. Here, they have less competition for nesting places and food, and are able to raise more young. All they have to do for this opportunity is to perfect their migration and complete the journey twice per year.

The spring migration for neotropical migrant songbirds in our part of the country typically extends from late April through the end of May. During this period, when a bird species migrates is varied and the birds are often grouped into "early" or "late" migrant categories. Early migrants for our area include blue-gray gnatcatcher, Louisiana waterthrush, and pine warbler, while later migrants include blackpoll, and bay-breasted warblers, along with most of the flycatchers.

Gear

Whether in forest habitat or backyards, binoculars are the most important part of your songbird watching gear. It is best to use binoculars that have a wider field of view and are bright. Something in the 7 or 8 power range is good for finding and viewing small birds that are active in forest trees. Binoculars with a higher power need a steadier hand and make it harder to follow flitting birds.

A spotting scope with a tripod will be cumbersome and slow to set up when compared to the fast viewing offered by binoculars. A spotting scope can be useful for small forest birds singing from a perch.

When it comes to the best clothing choices, many options are available. Personal preference would be the top consideration when planning to spend a good amount of time outdoors. Many spring mornings can be cold, and maybe wet. It would be a good idea to have a light fleece pullover and/or light rain jacket that can be easily stowed in a backpack. By midday, the temperatures can rise to an uncomfortable level, so you will want the option of removable layers.

A lightweight long sleeve shirt and a moisture wicking pair of pants would be good basics to wear. You may even want a pair of gloves for those cold mornings.

Rose-breasted grosbeaks prefer forested habitat with shrubby edges and openings.

Hiking shoes that are water resistant or waterproof with good hiking treads are a must. Shoes with a sturdy sole are good for rougher terrain, even though they might be a little heavier.

Stay away from white and brightly-colored clothing. Bright colors are highly noticeable to birds and would bring attention to yourself. Instead, choose more earthy colors that blend into the surroundings. Birds will still be aware of your presence but not be as alarmed as they might be with bright "out-of-place" clothing. Also, avoid "noisy" clothing, such as nylon.

A backpack can be used to not only store your extra clothing layers, but also essentials, including snacks and water. It is a good place to store other extra gear that might include camera accessories, a clean cloth, sunglasses, and sunscreen.

One neotropical migrant that is easily overlooked because of its drab markings is the warbling vireo. Note the striking wide, white "eyebrow" above the eye.

Gnats, biting flies, mosquitoes, and ticks can be annoying and sometimes raise health concerns. Long sleeve shirts and pants will help. Some people like to use insect spray containing DEET on their pant legs, sleeves, or hat. Others tuck their pant legs into their socks to keep ticks outside the pant legs, making the ticks easier to

Always move slowly and quietly when trying to observe birds. You may be treated with some great behavioral encounters, such as this Baltimore oriole feeding on nectar from flowering tree buds.

Many neotropical migrants depend on the availability of high protein food, such as caterpillars, to feed their young.

see. Light-colored pants also help make it easier to see ticks. After a day in the field, do a complete body tick-check once you get home. When walking in woods or fields, stay on established trails as much as possible. Try not to brush up against vegetation or kick up leaf litter.

Time of day and weather will make a difference. Cool or cold mornings will have fewer active biting flies and ticks. Mosquitoes are active in warm, moist conditions. Flies will be less annoying in breezy or windy conditions.

Most birds will be active in the early morning or late afternoon, close to sunrise or sunset. These times of greater activity make it easier to find birds and observe them as they are foraging or showing courtship behavior.

Choosing Locations to Visit

There are several great references you can use to find the best birding places to visit in Connecticut. Many good birding locations are state properties, including state parks, wildlife management areas, and state forests. Municipal parks, conservation areas, and backyards can also be great places to look for neotropical migrant songbirds. Many of the high profile locations can be very productive. Some can also be crowded with other birders, joggers, dog walkers, and other outdoor recreational users.

High profile places have advantages with typically larger tracts of habitat and more birders to provide assistance with identification. Do not overlook smaller properties that may be closer to home. These areas may not be overcrowded and have less disturbance than the high-traffic places. Casual birding can be a relaxing activity in your own backyard.

Conservation Concerns

Migratory birds are often talked about in terms of conservation and vulnerability. Most have experienced long-term population declines, primarily due to habitat loss and degradation on their Latin American wintering grounds, North American breeding grounds, and along migration paths. Add to that the stresses of long-distance migration, predation, and direct human-related impacts. As if all those impacts are not enough, perhaps one of the biggest threats has been added in recent years by climate change.

Severe weather can be one of the most dangerous natural threats to long-distance migrants. Tornadoes, hurricanes, fog, sudden freezes, and extreme temperatures take their toll, either directly or by affecting the birds' food supply.

Opportunistic predators take advantage of weak and vulnerable migrants, as they always have. Are any of those migrants weakened by lack of food because of habitat loss and degradation? Is their vulnerability increased by a shortage of quality stopover habitat? If there is an increase in depredation on migrant songbirds, by what factor is there an increase?

Human-related impacts to migratory birds have been increasingly concerning. Windows, communication towers, guy wires, lights, tall buildings, and wind-

mills all cause bird collisions and, coupled with bad weather, may lead to catastrophic losses. Human-related impacts from free-roaming pets, especially cats, directly cause staggering losses of bird life every year.

Despite all the dangers to migratory birds, they still come to Connecticut every year. They fly north from Central and South America and the Caribbean Islands to take advantage of a plentiful supply of protein-rich food that becomes available with spring and early summer insect hatches. The insect food surge allows these migrant songbirds to raise more young in the north than in the tropics.

Migratory Bird Workshops have been held every May at the Wildlife Division's Sessions Woods Wildlife Management Area in Burlington. Held as an advanced training for volunteer Master Wildlife Conservationists, the workshops are conducted as a way for educators to learn about neotropical migrants so they can help educate others.

Climate Change

The ongoing warming trend in climate has already proven to impact migratory birds. Their migration has always been timed to take advantage of food resources becoming available at the right time in their travels to maximize the progress of their journeys and reproduction. When temperatures average warmer over a period of years, buds open sooner, insects come out earlier, and some birds will miss their best opportunity. Some temperature averages are weeks ahead of what was normal in the past.

This female chestnut-sided warbler is collecting nest material from a tent caterpillar nest. Many migrants use silk from caterpillar nests or spider webs to build their nests. Their migration needs to be timed properly so that silk is available for nest-making.

The increasing severity of storms brought on by climate change has further impacted migrating birds. Some of the roughest weather occurs during spring and fall when bird migration is highest.

The CT Bird Atlas project (see *Connecticut Wildlife March/April 2021*) will provide very good data on the distribution and abundance of all the state's breeding species, including the forest interior breeders, many of which are neotropical migrant songbirds.

The Atlas is entering its last year of data collection, and statistics are showing some early trends that have developed with forest interior birds. Many of our most familiar neotropical migrants are showing big declines in the number of confirmed breeding survey blocks when compared to the first Atlas that was completed in 1986. Among the biggest and most troubling declines are wood thrush, scarlet tanager, black-throated green warbler, and red-eyed vireo.

Secondary Effects of the Use of Lead Ammunition on Wildlife

Written by Scott Williams, Connecticut Agricultural Experiment Station

From 1926 until 1986, the Lordship Gun Club operated on Lordship Point in Stratford at the mouth of the Housatonic River. For 60 years, firearms enthusiasts pumped an estimated 3 to 4.8 million pounds of lead throughout the site, which included multiple skeet and trap ranges that broadcasted and deposited toxic shot over the shoreline and into the open water of Long Island Sound. Operation was halted after it was determined that local blue mussels had high lead levels and black ducks using the site suffered from acute plumbism (lead poisoning).

In fall 2000 and spring 2001, 71,000 cubic yards of contaminated soil and sediment were processed at the site and yielded approximately 400 tons of lead. The total cost of the project was undisclosed by owner Corteva Agroscience, Inc., but the remediated property continues to be an important stopover site for migrating shorebirds and overwintering waterfowl.

Corteva Agroscience, Inc. currently contracts with the Connecticut/New York state offices of the National Audubon Society to manage the site, including monitoring waterfowl and enhancing habitat. Despite the massive effort and cost to achieve lead levels below a required threshold, the site is still not completely lead-free. Natural erosion of sediment over time has concentrated remaining lead, but "reef balls" and native salt marsh grasses installed in 2016 continue to accrete (grow by gradual accumulation of sediment) and have been successful in burying the lead to depths waterfowl cannot reach. Additionally, waterfowl seen loafing on site during non-migratory periods are dispersed to limit their exposure to remaining toxic lead. While a shocking amount of lead was broadcast at Lordship Point, it was concentrated in a relatively small area, making remediation efforts "easy" despite continued efforts decades later. What presents an impossible remediation task is millions of hunters nationwide broadcasting lesser volumes of lead over the landscape, but some action has been taken.

Dabbling waterfowl (ducks that feed by "tipping-up" in shallow water), such as mallards, American widgeon, American black ducks, northern pintails, and blue- and green-winged teal, are particularly vulnerable to plumbism. These species can ingest shot, mistaking it for a seed and/or a gastrolith (a rock held in the gizzard to aid in grinding food). A consumed lead pellet could then get ground into finer pieces by true gastroliths in the gizzard, permitting its rapid internal uptake.

In the early 1980s, Connecticut Waterfowl Biologist and retired Wild-

life Division Assistant Director Greg Chasko published the research paper "Toxicity of Lead Shot to Wild Black Ducks and Mallards Fed Natural Foods". The study found a mortality rate of 25% for ducks that were dosed with two #6 lead pellets and 50% for ducks dosed with five pellets. An analysis of gizzards collected from hunter-killed birds in Connecticut showed that 14% of mallards and 8% of black ducks had ingested lead shot. While the toxic effects of lead ingestion in waterfowl were known since the 1870s, use of lead shot to hunt waterfowl was still permitted until the 1980s. Recognizing this was an increasing problem, the then Connecticut Department of Environmental Protection was on the forefront of this issue and instituted non-lead shot requirements at several heavily-hunted waterfowl areas. Ultimately, the U.S. Fish and Wildlife Service phased in a national non-toxic shot requirement for waterfowl hunting in the late 1980s, finalizing the ban on lead in 1991. In the 1996-1997 hunting season, five to six years after the national lead ban, research showed that ingestion of lead pellets by waterfowl decreased by 78% and lead poisoning deaths declined 64% along the Mississippi Flyway. Hunters initially resisted the switch to non-toxic shot because it did not perform as well, but over the years, manufacturers perfected ballistics and some modern-day rounds now exhibit superior performance over lead.

A subadult golden eagle perches triumphantly on a deer carcass rib cage. The deer was harvested during the regulated hunting season with copper ammunition, and after processing, the carcass was placed in a wooded area and observed to document the animals that fed on it. The golden eagle was a rare sight to see feeding on the carcass.

A small conspiracy of ravens feeds on the deer carcass. Ravens are becoming more common in Connecticut.

Prior to the lead ban in waterfowl hunting, it was estimated that nationally two million ducks died annually from plumbism. While this unnecessary and avoidable source of mortality seems high, it was a relatively small fraction of the many millions of ducks that annually used America's four flyways at the time. Ironically, it was not this source of mortality that forced the lead ban but rather the push to recover eagle populations in the wake of the compounding negative effects birds of prey suffered from the use of the pesticide DDT, which altered calcium metabolism resulting in thin eggshells that could not support the weight of incubating adults. The presence of lead negatively affects brain and nervous system function; waterfowl suffering from lead ingestion were literal "sitting ducks" for predation by birds of prey. Higher-order predators like eagles were unknowingly targeting and consuming these poisoned ducks, resulting in the bioaccumulation of lead and ultimately, death in the eagles. The use of DDT was banned in Connecticut in 1969 and nationally in 1972, and eagles were classified as "endangered" in the

A subadult golden eagle guards a deer carcass from a subadult bald eagle trying to get access to a meal.

newly-signed federal Endangered Species Act of 1973. These protections, coupled with numerous eagle recovery plans enacted nationally throughout the 1980s, facilitated the ban on lead.

Despite the federal ban for waterfowl hunting, lead remains legal and is commonly used for upland small game and deer hunting, both nationally and in Connecticut. While the likelihood lead shot could be consumed directly by a terrestrial bird or mammal is less, hunters are still broadcasting a known toxic metal across the landscape. This could result in direct negative effects, not only to terrestrial animals, but also to the humans who consume them. In a Connecticut study, fellow UConn graduate Dr. Brian Hiller, found that the use of lead shot to harvest American woodcock increased the average concentration of lead and arsenic in the pectoral muscle tissue (breast meat) above that allowed by the FDA in beef and was significantly greater than in those woodcock harvested with non-toxic steel shot. Even prior to his dissertation work, Dr. Hiller has taken it upon himself to only use non-toxic ammunition when harvesting all species of game. Many other Connecticut hunters have voluntarily chosen to do the same, such as former DEEP Waterfowl Biologist Chasko and current DEEP Waterfowl Biologist Dr. Min Huang.

In western states, rodent species, such as ground squirrels and prairie dogs, are sometimes shot for damage control with rifles using highly frangible (break apart easily) lead rounds and their carcasses often left in the field. Avian and terrestrial scavengers, such as crows, magpies, ravens, vultures, hawks, owls, badgers, ferrets, foxes, and coyotes, consume the carrion and lead fragments. Similar lead uptake was causing endangered California condor populations to plummet to near extinction before then Governor Arnold Schwarzenegger banned the use of lead ammunition within the condor's range in 2007, which resulted in a statewide ban adopted in 2015. Similarly in Connecticut, if you harvest a deer with a lead round and dispose of the carcass outdoors after butchering, there is the potential that fishers, weasels, bobcats, foxes, coyotes, black vultures, turkey vultures, hawks, owls, crows, ravens, raccoons, opossums, and other types of scavengers could ingest the lead fragments and suffer ill effects.

Many years ago, I was dove hunting on my late father-in-law's farm in central Virginia. We were having some success and one of the doves I connected with using #7.5 lead shot started to fall. Before it hit the ground, a Cooper's hawk grabbed it out of the sky and consumed it in a tree on the field edge. To this day, I still wonder the fate of that Cooper's hawk.

To the contrary, just this past deer season, I had the good fortune of being on the receiving end of a tagged, mature doe that Rick Jacobson, Chief of the DEEP Bureau of Natural Resources, took with a fully non-toxic copper .270 round. After hanging for a week

A rather dark-colored eastern coyote inspects the deer carcass.

and butchering it, I placed a trail camera over its carcass to document and confirm species identification of scavengers feeding on it. Within 11 minutes of activating the camera, numerous ravens had found it. The raucous nature of an unkindness of feeding ravens (a group of ravens feeding on/defending carrion is called an "unkindness" or a "conspiracy") must have sounded the dinner bell because 82 minutes later, a subadult golden eagle arrived, and 34 minutes after that, a subadult bald eagle, and later that same evening, a mature bald eagle. For six days, ravens, crows, multiple bald eagles, multiple coyotes, and the golden eagle feasted on the carcass reducing it to bones, hide, and sinew. Rest assured, not one of them ingested any toxic lead fragments.

From Lordship Point, to the lead ban in waterfowl hunting, to the recognition of toxic effects in secondary consumers, it is clear attitudes on the use of lead in hunting are slowly shifting. As a Connecticut hunter concerned for the health of yourself, your family, and our environment, please consider using nontoxic shot for small game and copper for deer hunting following the examples set by Connecticut wildlife professionals Rick Jacobson, Greg Chasko, and Drs. Hiller and Huang. We, and Connecticut's wildlife, will be better off for it.

Lead Contamination in Bald Eagles

Bald eagles are well known as fish-eaters; however, they will eat mammals, birds, or any meat available, especially during winter when fishing opportunities are blocked by ice. Bald eagles are also scavengers and will not hesitate to take advantage of some already deceased food. Scavenging, while an efficient way to score some food, can expose eagles to tiny bits of lead that flake off as ammunition passes through tissue. As the population of bald eagles in Connecticut has increased in recent years, more have been taken in by wildlife rehabilitators with symptoms of lead poisoning. These birds are usually weak, emaciated, and have difficulty moving by the time they can receive care. Chelation therapy binds the lead and allows the animal to excrete it; however, this treatment is not always successful. Two simple steps to reduce this problem are to use non-lead ammunition or to bury the remaining gut pile after field-dressing a harvested animal.

P. J. FUSCO

Depending on the severity of the case, wildlife rehabilitators have methods for treating lead toxicity in bald eagles. If the eagle survives, it will have spent many weeks in captivity before it is ready to be released.

Another Threat to Eagles

Another threat to eagle populations is an emerging affliction known as vacuolar myelinopathy (VM) which was first discovered in Arkansas in 1994. VM is known to affect fish, frogs, snails, salamanders, turtles, and snakes, but because eagles feed on all these species, it can be easily concentrated and have a devastating impact on their well-being. The neurotoxin that causes VM is produced under certain conditions by a cyanobacteria associated with the invasive aquatic plant *Hydrilla verticillata*. While VM has only been detected in nine states from Virginia to Texas thus far, the Connecticut Agricultural Experiment Station's (CAES) Invasive Aquatic Plant Program recently documented nearly 800 acres of *Hydrilla* in the Connecticut River and its tributaries. CAES is currently exploring methods to determine if the cyanobacteria is present on *Hydrilla* in the Connecticut River and, if so, ways to determine if the VM neurotoxin is present. In the meantime, CAES is preparing to address this critical ecological impact to eagle populations should it occur. If you see an eagle unable to fly, stumbling, and falling down, it could be the result of VM. Please leave the animal alone and contact the Wildlife Division at 860-424-3011 immediately.

A mature bald eagle assumes a threatening posture towards fellow scavengers trying to feed on the deer carcass.

Recovering America's Wildlife Act Introduced in U.S. House of Representatives

The bipartisan Recovering America's Wildlife Act (RAWA) was introduced into the U.S. Congress on Earth Day, April 22, 2021. The proposed bill will dedicate $1.3 billion annually to state fish and wildlife agencies to implement their science-based wildlife action plans and an additional $97.5 million for tribal fish and wildlife managers to conserve fish and wildlife on tribal lands and waters. Connecticut's annual apportionment would be an estimated $11.8 million. This sustained revenue stream will allow state fish and wildlife agencies to implement proactive solutions to conserve those species in greatest need and prevent wildlife from becoming threatened or endangered without increasing taxes. Congresswoman Debbie Dingell (D-MI) and Congressman Jeff Fortenberry (R-NE) are to be commended for their leadership on introducing this bipartisan bill to tackle our nation's wildlife crisis.

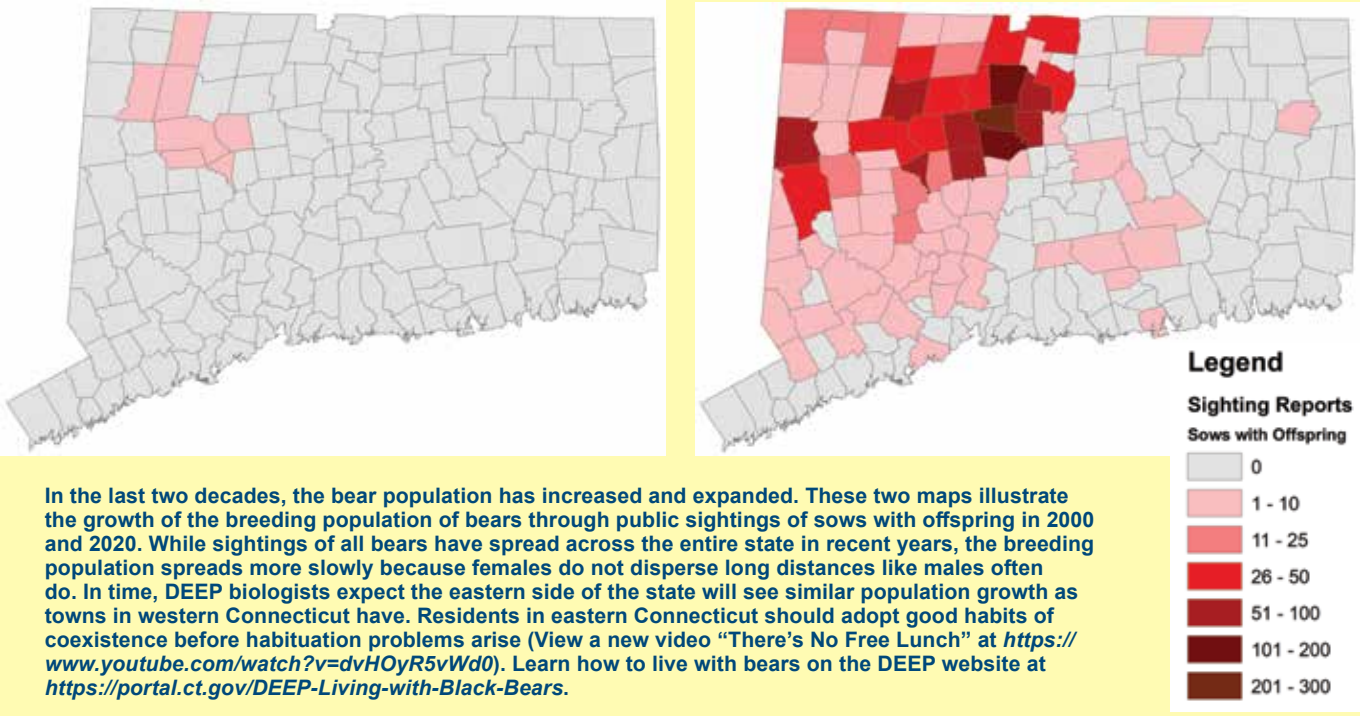
An unprecedented alliance of business, academic, tribal and conservation leaders have united to provide a solution to one of America's greatest threats—the decline of our fish and wildlife and their natural habitats. Scientists estimate that one-third of wildlife species in the United States are at risk of becoming threatened or endangered without much needed funding for their proactive conservation, this includes 567 species of greatest conservation need here in Connecticut. Healthy, sustainable fish and wildlife populations drive many sectors of our economy, especially the $788 billion outdoor recreation industry, which added $3.7 billion to Connecticut's GDP in 2019 and supported 49,000 jobs.

P. J. FUSCO

Recovery of CT's osprey population is an example of a wildlife success story that can be possible with the passage of RAWA.

Not since enactment of the Pittman-Robertson and Dingell-Johnson Acts, that provided critical funding for fish and wildlife on the brink of extinction, have we had an opportunity to pass legislation of such importance to protecting what is every American's birthright—our great natural heritage. The Recovering America's Wildlife Act is the most important conservation legislation in a generation.

Comparison of Black Bear Breeding Growth Between 2000 and 2020.



In the last two decades, the bear population has increased and expanded. These two maps illustrate the growth of the breeding population of bears through public sightings of sows with offspring in 2000 and 2020. While sightings of all bears have spread across the entire state in recent years, the breeding population spreads more slowly because females do not disperse long distances like males often do. In time, DEEP biologists expect the eastern side of the state will see similar population growth as towns in western Connecticut have. Residents in eastern Connecticut should adopt good habits of coexistence before habituation problems arise (View a new video "There's No Free Lunch" at *https://www.youtube.com/watch?v=dvHOyR5vWd0*). Learn how to live with bears on the DEEP website at *https://portal.ct.gov/DEEP-Living-with-Black-Bears*.

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Conservation Calendar

Mid-April - August ... Share the Shore! Respect fenced and posted shorebird and waterbird nesting areas when visiting the Connecticut shoreline. Also, keep dogs and cats off of shoreline beaches to avoid disturbing nesting birds.

Artwork for 2022 Connecticut Migratory Bird Conservation Stamp Revealed

An acrylic painting of a drake wood duck in flight created by Old Lyme resident, Sophie Archer (age 17), will be featured on the 2022 Connecticut Migratory Bird Conservation (Duck) Stamp. Sophie's beautifully illustrated painting was selected as the "Best in Show" for the 2021 Connecticut Junior Duck Stamp Art Competition, and it also won first place in the 10th-12th grade age category of the competition. The "Best in Show" winner was also an entry for the Federal Junior Duck Stamp Contest.

DEEP held an artistic contest starting in 2012 to select the images for the Connecticut Migratory Bird Conservation Stamp through 2020. However, beginning with the 2021 Connecticut Duck Stamp, the stamp now features the winner of the Connecticut Junior Duck Stamp Art Contest. This change was made to display artwork from Connecticut artists on the annual stamps, while at the same time encouraging conservation awareness in young people through the Federal Junior Duck Stamp Program. Every student, from kindergarten through high school, who participates in the Junior Duck Stamp Competition is provided with a limited curriculum on wetland conservation, waterfowl, and nature in general. The program encourages students to explore their natural world, invites them to investigate biology and wildlife management principles, and challenges them to express and share what they have learned with others.

The annual Junior Duck Stamp Art Competition is coordinated and sponsored by the Connecticut Waterfowl Association, in cooperation with the CT DEEP Wildlife Division. Over 15 different schools and home studios from across Connecticut (for a total of 54 entries) submitted artwork for this year's competition. Entries were divided into four age groups spanning from kindergarten through high school. Winners in each age group were then judged against each other to determine the overall state winner. The contest is open to all students, kindergarten through grade 12, who are Connecticut residents. To enter, students create and submit a drawing or painting featuring native waterfowl (ducks or geese). There is no cost to participate.

Sophie Archer, the "Best of Show" artist, has participated in the Junior Federal Duck Stamp competition from the age of six as a kindergartner. Her love of the arts runs in the family, her mother having graduated from Parson's School of Design, and her grandmother and sister both studying art and working as artists and designers in New York City. Aside from painting, Sophie studies ballet and enjoys baking, pottery, history, and classical literature. Having grown increasingly focused over the years on moving closer to and preserving nature, she feels particularly strongly about the conservation aspect of the Duck Stamp competition and the Connecticut Waterfowl Association's mission to preserve and protect the habitat of Connecticut's wildlife. She feels honored for the opportunity to participate in this ever-growing and ever important project.

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A juvenile clapper rail works its way through the thick vegetation in a restored Connecticut salt marsh. See page 4 to learn more about the investment and restoration work being done to improve salt marsh health and protect these critical habitats in our state.