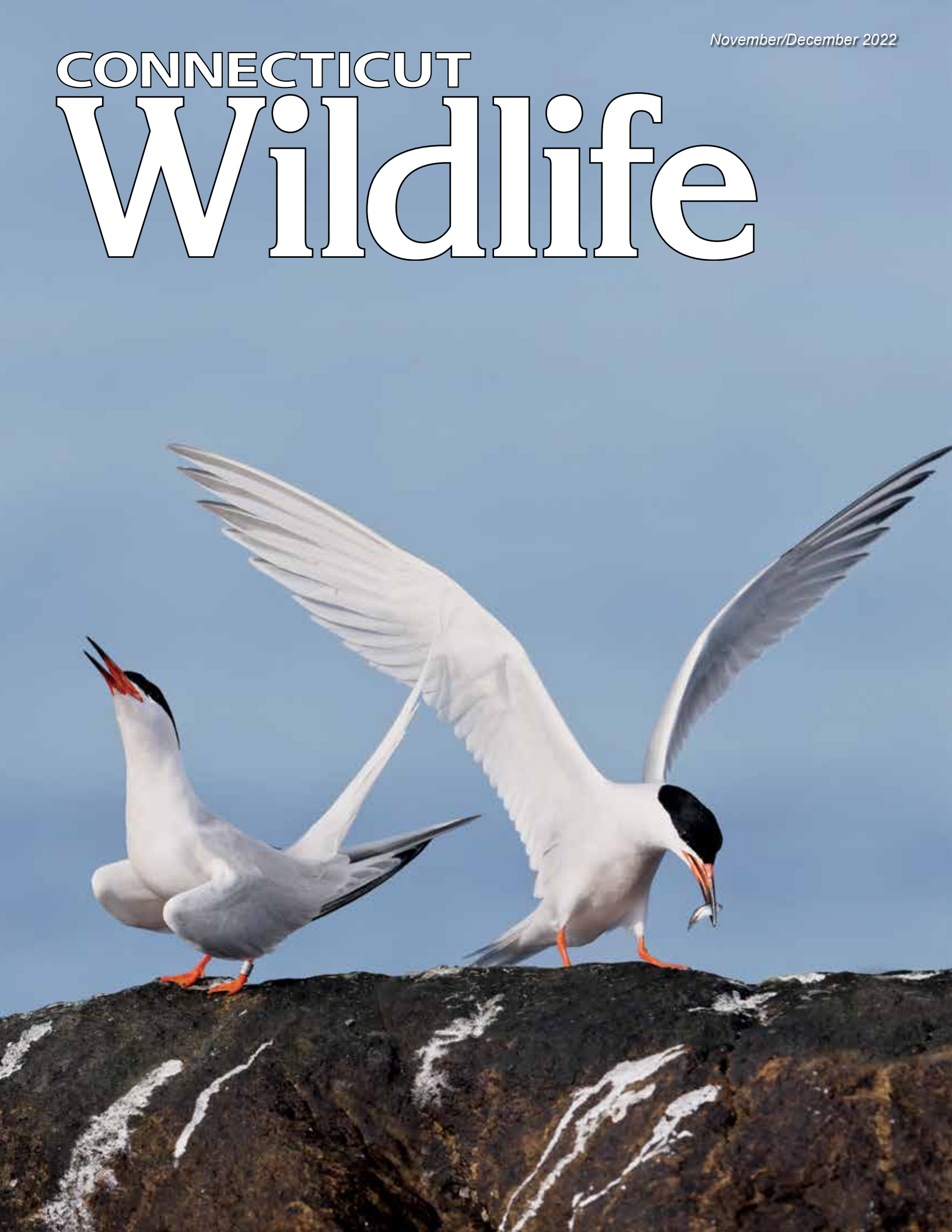
November/December 2022

CONNECTICUT Wildlife



From the Director

We want to start this issue with a huge "thank you" to all of you for your patience and understanding as the Wildlife Division has dealt with a large number of retirements and the process of recruiting, hiring, and training new staff. As these challenges impacted all divisions within the Bureau of Natural Resources, the Department as a whole, and many other state agencies, there have been few opportunities to gain extra support from other divisions and staff has had to temporarily juggle many additional duties. As a result, things that could wait, did and Connecticut Wildlife is a perfect example. With publication of the November/December 2022 issue, we are working to get back on track and you can expect the back issues to arrive more frequently over the next several months as we return to normal. While your issues will be dated to reflect the missed sequence, the content will be updated to reflect current issues or areas of interest.

Although late, this issue has lots to enjoy and important things to learn. Celebrating the wildlife conservation success that has been possible through the establishment of the federal Endangered Species Act is a great way to start. The majestic sight of bald eagles along our rivers, lakes, and coastline is one of many examples of a species that was close to extinction and, through conservation action, is once again thriving.

The importance of forest management as a way to help address climate change is significant. Our woodlands help sequester and store carbon. Keeping our forests healthy makes them more resilient, and having healthy habitats makes it easier for the fish and wildlife species to respond to climate change. And, that is just the beginning of the benefits of forest management!

We do have some challenges ahead. The 2023 State of the Bats Report indicated that over half of North America's bat species are at risk of severe population declines in the next 15 years. While many of our bat species have declined as a result of white-nose syndrome, many other factors are also contributing to the decline, including the impacts of climate change associated with droughts, food availability, and more. The spread of Hydrilla, an aquatic invasive species, is an urgent and emerging concern in many of our lakes and rivers. Read on to learn what to watch for and how you can help.

On a brighter note, there is a great article on how people who work for DEEP as seasonal employees can find a path to future careers in conservation, outdoor recreation, law enforcement, and more. You'll also get a sneak peek at three new wildlife staff members that will be helping Connecticut Wildlife reach all of you. Sydnee Foster and Tyler Mahard both joined our Outreach program last fall and have already been a tremendous help in getting things back on track and ready for publication. Jenna Lopardo and Craig Mira joined us as secretaries in our Sessions Woods and Franklin offices and will be helping behind the scenes to make what we do happen much more efficiently. If you call our offices, be sure to give them a warm welcome.

There will be many more changes and enhancements coming in 2024 and we look forward to sharing them with all of you.

Until then, enjoy some time in nature—recharge, relax, and appreciate the amazing diversity of wildlife, plants, and habitats Connecticut has to offer.

– Jenny Dickson, Acting Chief, Bureau of Natural Resources

Connecticut Wildlife

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Look for cedar waxwings feeding on persistent winter berries, such as winterberry. Photo courtesy of Paul Benjunas/CT DEEP Wildlife

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2023 marks the 50th Anniversary of the federal Endangered Species Act. Read the articles starting on page 4 about how this landmark legislation has worked to protect endangered species, including the roseate tern.

Photo courtesy Paul J. Fusco

50 Years of the Federal Endangered Species Act
1973 - 2023

Article by Braden Lynn, CT DEEP Land and Water Resources Division

2023 marks an important milestone in environmental legislation and conservation – the 50th anniversary of the passage of the federal Endangered Species Act (ESA) in 1973. On February 8, 1972, President Richard Nixon addressed Congress in a special message calling for legislation to make the taking of an endangered species a federal offense and allow protective measures to prevent certain species from extinction. President Nixon called for stronger legislation than the previously passed Endangered Species Preservation Act of 1966, which was later amended and renamed the Endangered Species Conservation Act in 1969.

PAUL J. FUSCO

The bald eagle was first declared an endangered species with the passage of the federal Endangered Species Act in 1973. Populations recovered enough due to several protection measures that the bald eagle was officially removed from the federal Endangered Species List in 2007. The bird is still a threatened species in Connecticut.

A year later, Senator Harrison A. Williams (D-NJ) introduced the Endangered Species Act in the U.S. Senate on June 12, 1973. The Senate unanimously approved the bill on July 24, and the U.S. House of Representatives approved a version of the bill on September 18. By December 19, a joint conference committee reported a bill reconciling the two versions, and it was approved by the House and Senate on the same day. On December 28, 1973, President Nixon signed the bill into law. The ESA was strongly bipartisan, with unanimous approval in the Senate and a 355-4 vote in the House.

Since its inception 50 years ago, the ESA has been a huge conservation success. According to the U.S. Department of the Interior, 99% of ESA-listed species are still around today thanks to collaboration between federal, state, local, and Tribal governments, as well as conservation organizations and private citizens.

> *"It has only been in recent years that efforts have been undertaken to list and protect those species of animals whose continued existence is in jeopardy. Starting with our national symbol, the bald eagle, we have expanded our concern over the extinction of these animals to include the present list of over 100. We have already found, however, that even the most recent act to protect endangered species, which dates only from 1969, simply does not provide the kind of management tools needed to act early enough to save a vanishing species."* – President Richard M. Nixon

Connecticut adopted additional legislation in 1989 to further conservation goals in the state, with Public Act 89-224, "An Act Establishing a Program for the Protection of Endangered and Threatened Species." The goal of the legislation, codified in Connecticut General Statutes Sections 26-303 through 26-317, is to conserve, protect, restore, and enhance any endangered or threatened species and their essential habitat. The law required the Commissioner of the Department of Energy and Environmental Protection (DEEP) to develop lists of endangered, threatened, and special concern species.

The federal Endangered Species Act and Connecticut Public Act 89-224 are two key pieces of legislation that have helped protect several endangered and threatened species in our state.

Previously published in DEEP's quarterly newsletter, Sound Outlook, Summer 2023.

Endangered, Threatened, and Special Concern Species of Coastal Connecticut

Article by Braden Lynn, DEEP Land and Water Resources Division

According to the National Oceanic and Atmospheric Administration (NOAA), Connecticut's coastal area is home to 2.2 million people, accounting for 61% of the state's total population. The shores and waters of Long Island Sound are also home to endangered and threatened species that rely on our coastal resources to provide food, as well as habitat for shelter, nesting, and migration. The high human population and intense land use within our state's coastal area and the number of sensitive species that rely on sharing that small space with us make the protection of endangered and threatened species that rely on Connecticut's shoreline habitat more important than ever.

Many state or federally endangered and threatened species found in Connecticut's coastal area are nesting shorebirds. The 2022 State of the Birds Report, released by the U.S. North American Bird Conservation Initiative (NABCI), has painted a dire picture for shorebirds in particular. Since 1970, shorebird populations have declined by 33%. Among "Tipping Point" species, such as the state threatened least tern and seaside sparrow, some declines exceed 70%. A "Tipping Point" species is one that is on a current trajectory to lose another 50% of its remaining population in the next 50 years. (Source: U.S North American Bird Conservation Initiative)

The federally and state endangered roseate tern nests on Falkner Island in Guilford, a designated Important Bird Area by the National Audubon Society and a protected unit of the Stewart B. McKinney National Wildlife Refuge. The species has suffered a decline due to human disturbance in coastal areas and on or near barrier islands. An increase in great black-backed and herring gull populations in the Northeast has also caused a decline in roseate tern productivity. Large, aggressive gulls have taken over most of the outer islands preferred by nesting terns. Falkner island now hosts the only roseate tern nesting colony in Connecticut and one of the largest roseate tern populations on the Atlantic coast. Spend some time watching the Menunkatuck Audubon Society's Falkner Island Tern Camera (*https://menunkatuck.org/falkner-island-tern-camera*) during the summer nesting season and you might spot a roseate tern among the thousands of common terns that also nest on the island.

The piping plover is a threatened species at the federal and state level that has struggled with habitat loss due to development, along with human disturbance, at their beach nest sites along Long Island Sound. *Photo courtesy of Paul J. Fusco.*

The great egret and snowy egret are members of the heron family that rely on coastal habitat in Connecticut for breeding. Both species are listed as state threatened and were hunted for their feathers for the millinery trade (the hat-making business) throughout the 1800s. Snowy egrets became extirpated (locally extinct) in Connecticut by the late 1800s. Thanks to protective laws, which put an end to the plume trade, and increased conservation efforts, both species can now be observed along the

coast, visiting and breeding in Connecticut in low numbers. You can tell the two species apart by their size, bills, and feet; snowy egrets are smaller with black bills and yellow feet, whereas great egrets have yellow bills and black feet. While feeding, the snowy egret uses one foot to stir up the bottom of shallow marshes and ponds to flush prey into view.

The piping plover is a threatened species at the federal and state level that has struggled with habitat loss due to development. These small shorebirds rely on beach dunes and tidal creeks for nesting and feeding, both of which have been fragmented by shoreline development, recreational beaches, and pedestrian traffic. You may see shorebird habitat delineated with string fencing and informative signs along coastal beaches to protect piping plover nests from disturbance and destruction by both humans and predators. On some beaches, DEEP staff and volunteers install welded wire fencing (called exclosures) around piping plover nests to protect the eggs and incubating adults. These exclosures are removed after the chicks hatch. The American oystercatcher, another state threatened species, also relies on similar shoreline habitat.

BRADEN LYNN/CT DEEP

Offshore islands in Long Island Sound provide critical nesting habitat for the state threatened snowy egret (pictured) and other state-listed waterbirds, like the great egret, glossy ibis, and little blue heron.

Some state endangered species rely on freshwater rivers and wetlands within the coastal area of Connecticut, including the American bittern, king rail (nesting populations), pied-billed grebe, sedge wren, common moorhen, and the owl-like northern harrier (often called the marsh hawk). The state threatened least bittern also relies on freshwater, saltwater, or brackish marshes.

Shorebirds aren't the only ones that rely on conservation efforts in Long Island Sound. Connecticut's coastal waters are used as migratory routes during warmer months by Atlantic ridley and leatherback sea turtles (both federally and state endangered), as well as Atlantic green and loggerhead sea turtles (both federally and state threatened). Conservation challenges for these species include habitat loss due to development, boat propeller strikes, ocean pollution, and commercial fishing and shrimping activities. Fortunately, federal legislation now requires all shrimp trawlers in the Atlantic Ocean to use turtle excluder devices (TEDs) year-round.

The federally and state endangered Atlantic sturgeon lives in saltwater during its adult life and enters freshwater rivers to spawn. This unique-looking fish occurs in Long Island Sound but is not known to breed in Connecticut, likely due to dam construction, overfishing, and pollution. The shortnose sturgeon, also federally and state endangered, spends most of its life in the Connecticut River and its estuary, occasionally straying out into Long Island Sound and neighboring rivers.

Protections for endangered and threatened species are just as important today as they were when the federal Endangered Species Act passed 50 years ago. While Connecticut's shorebirds are in decline, they may have been at a much higher risk of extirpation or extinction without federal and state efforts to preserve them. Not all populations of endangered or threatened species are declining. Due to federal and state protections, several endangered species populations have been able to reverse course.

The first success story that probably comes to mind is that of the bald eagle. The bald eagle was in danger of extinction and nesting populations were extirpated from Connecticut by the 1950s. When the ESA passed in 1973, the bald eagle was declared an endangered species. In Connecticut, the bald eagle was classified as endangered in 1992 when the first official state list of endangered species was created. That same year, the first successful nesting since the 1950s was docu-

mented in the state. Since then, nesting and wintering eagle populations in Connecticut have been increasing, and the bald eagle has been downlisted to a state threatened species and delisted federally. FirstLight Power, owner and operator of the Shepaug Hydroelectric Power Station in Southbury, offers viewings of bald eagles, along with dozens of other species of raptors and waterfowl, at the Shepaug Bald Eagle Observatory each winter.

The peregrine falcon was similarly listed as endangered by the ESA and had been completely extirpated from the eastern United States by 1975 as a direct result of organochlorine pesticides, such as DDT. However, breeding populations had been declining in Connecticut since the early 1900s. In the late 1940s, the last documented nesting in Connecticut for almost half a century occurred on the Travelers Tower in Hartford. Thanks to reintroduction efforts and the ban on DDT, small breeding populations were restored and the bird was delisted from the federal endangered species list in 1999. In 1997, a pair of peregrine falcons successfully fledged three chicks on the Travelers Tower once again, and today the birds nest across Connecticut in small numbers.

The purple martin was downlisted from a state threatened species to a species of special concern in 2015. A cooperative effort between private landowners and the Wildlife Division resulted in an increase in purple martin houses in appropriate habitat along the coast. This conservation effort helped increase the purple martin population in our state. To learn more about the purple martin monitoring program or if you are interested in hosting purple martin housing on your property, visit *https://portal.ct.gov/DEEP/Wildlife/Learn-About-Wildlife/Purple-Martins*.

COURTESY OF THE SOPELAK FAMILY

This state and federally endangered Atlantic ridley sea turtle was rescued by a Connecticut family (the Sopelak's) near the coast of Rhode Island. It was encased in a plastic wrapper for water bottles. The plastic was removed and the turtle was released unharmed into the ocean. Plastic pollution is a major threat to sea turtles.

While shorebirds and other listed species continue to experience population decline and face conservation challenges, the federal ESA and Connecticut endangered species legislation have helped these species continue to persist. The next time you spot a snowy egret wading along the shore, a piping plover nest fenced off at your local beach, or a bald eagle pair nesting above a Connecticut river, take a moment to reflect on the importance of conservation efforts and legislation to protect these amazing species.

Previously published in DEEP's quarterly newsletter, Sound Outlook, Summer 2023.

Once listed as a federally endangered species (still threatened in Connecticut), the recovery of the peregrine falcon is a conservation success story. *Photo courtesy of Paul J. Fusco.*

How the Wild Things Are:
Wild Trout Conservation and Management

Article by Mike Beauchene, DEEP Fisheries Division; photos courtesy of DEEP Fisheries Division

Connecticut's only native trout/charr is the brook trout (*Salvelinus fontinalis*), better known as a "brookie", "native", "speckled trout", or the "Aphrodite of the Hemlock". Renowned for the hypnotizing spots of red, yellow, and orange ringed in blue, the brookie inhabits Connecticut's cold, clear, and turbulent brooks. Surprisingly, this has not always been the case. Reports from the State Fish Commission (est. 1866) state the brook trout was nearly wiped from the landscape because of two human activities – damming rivers and deforestation. Historically, both of those activities were crucial in supporting the growing state. Damming waters was necessary to harness water power for industry and manufacturing. Deforestation occurred due to land clearing for agriculture and to provide wood for lumber used in construction and charcoal production for the iron industry.

In response to the loss of brook trout, early fisheries managers sought to replenish Connecticut's waters through stocking brook trout fry/fingerlings (fish that are recently hatched or are less than one year old). In addition to attempting to restore brook trout, the brown trout was introduced from Europe, as well as another new species, the rainbow trout from the western United States. Several other salmonid species, as well as a plethora of warmwater species, were introduced, each with varying levels of success or failure.

As Connecticut's human population shifted away from farming to manufacturing and the convenience of life in suburban and urban centers, the forests returned. So too the brookie, but this time with company – the brown trout. First introduced as a surrogate for the very sensitive brook trout, the brown trout has proven to be more tolerant of slightly warmer waters and waters of less quality. Throughout the 1950s and 1960s, brown trout became a focal point of hatchery production and stocking for recreational purposes. Over the decades, the brown trout, unlike the rainbow, which was also stocked in great numbers, took a liking to some of Connecticut's waters and established self-sustaining populations. Connecticut now has two self-sustaining species of trout.

Within "Connecticut's Salmonid Action Plan" is a focus on conservation and restoration of the self-sustaining (wild) populations. The actions evolved from data during the Statewide Stream Survey (1988-1995), which estimated wild trout were present in 4,000 miles of stream. Most of the waters were first order streams (2,800 miles; single branch headwaters), with the remainder in the second to third order range (very small brooks). Only 300 miles of stream covering 286 waters contained enough wild fish to support a significant amount of catch-and-release fishing. Within this subset, brook trout were found in 221 streams, brown trout in 22 streams, and a combination of the species in 43 streams. When it comes to supporting harvest-based angling, the number of streams with wild trout were 44 with brook trout, five with brown trout, and nine streams with both brook and brown trout. Based on these data, the Fisheries Division developed Wild Trout Management Areas (Classes 1, 2, and 3) to support recreational fishing for wild trout on lands with public access.

A probabilistic resample of the sites sampled during the statewide stream survey project was conducted during the summers of 2018-2019. This work showed a 36% reduction in the number of locations where brook trout were present since the

Connecticut's Plan for Conservation and Management of Wild Trout can be found at *https://portal.ct.gov/DEEP/Fishing/CT-Fishing*.

initial project (1988-1995). Additionally, a second finding was that in locations where wild brook trout were present, average densities decreased significantly from prior sampling.

In light of continued environmental changes, driven largely by human land use and climate change, a comprehensive management strategy is needed to protect and sustain Connecticut's existing wild trout populations. This strategy will include identifying cold water resources required by trout, protection of trout habitats and populations, restoration of degraded trout habitats through physical and chemical improvements, restoration of extirpated or declining populations, evaluation of trout stocking practices by DEEP and private entities, and education and outreach to promote protection and sustainable use of wild trout habitat and populations.

Continual monitoring of Connecticut's wild trout populations by the Fisheries Division is key to the conservation and management of both brook trout and brown trout.

The Connecticut Plan for Conservation and Management of Wild Trout was developed by DEEP Fisheries Division staff and presented to the public where comment was solicited, reviewed, and incorporated into the final document. This is the first wild trout comprehensive management plan developed by the State of Connecticut and it will serve as a guide to better manage the State's wild trout resources into the future. The plan is intended to be malleable and updateable as new issues arise. It focuses on two themes:

1. **Sustainability –** Conserve, protect, and enhance wild trout populations while increasing awareness and educating the public of the benefit of these efforts.
2. **Recreational fishing –** Promote responsible, sustainable, and equitable recreational fishing for wild trout.

The approach is supported by four pillars:

1. Conservation and restoration of wild trout habitat.
2. Conservation and restoration of wild trout populations.
3. Restoration of extirpated wild trout populations and expansion of wild trout population.
4. Education and dissemination of wild trout information.

The overarching goal of this 10-year management plan is to conserve, protect, enhance, and restore wild, naturally occurring trout populations throughout the state while simultaneously providing sustainable, equitable recreational fishing opportunities. Participants at the 2019 trout and salmon public discussions placed a high value on wild trout populations and were supportive of the Fisheries Division investing additional resources to protect and improve habitat, restore populations where practical, and identify additional catch-and-release fishing opportunities.

Environmentally, conditions that present challenges for brook trout may present opportunities for brown trout. As mentioned earlier, the brown trout is more tolerant of warmer water temperatures and slightly lower water qualities than the native brookie. Water conditions dictated by major drivers like air temperature, precipitation (amount, duration, timing, and frequency), ground water discharge, landscape development, and climate change may favor brown trout in the coming decades.

With the new comprehensive management plan serving as a roadmap for conservation, the Fisheries Division is focused on actions and strategies that will ensure the persistence of wild trout in Connecticut's streams and rivers for generations to come.

Let's Talk About Carbon

Article and photography by Jerry Milne, DEEP Forestry Division

There has been quite a bit of discussion about carbon in the news lately as it relates to global warming and ways to mitigate climate change. Carbon is a complex subject that is often misunderstood. The terms carbon sequestration and carbon storage are often used, and are definitely worth delving in to.

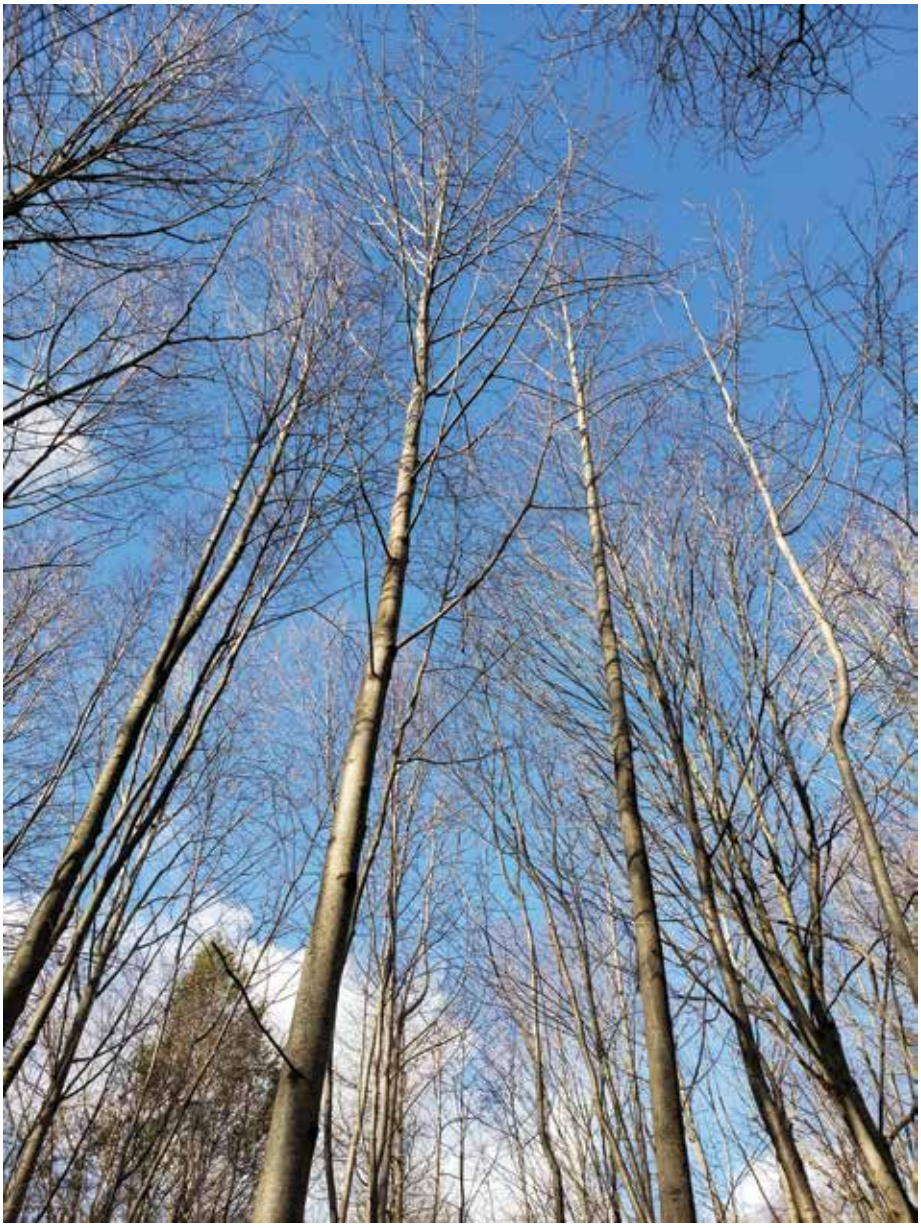
What is carbon sequestration? Trees remove carbon from the atmosphere (in the form of carbon dioxide) using what could be considered a natural type of "solar panels". These solar panels are called leaves!

The process is called photosynthesis, which uses solar energy to convert water and carbon dioxide into sugar and oxygen. This occurs within the leaves. Trees use the sugar to grow and make cellulose and lignin, the building blocks of wood. Wood is the trunks, branches, and roots of trees. It contains solar energy stored in a solid form.

In the northeastern United States, carbon sequestration typically peaks when forests are young to intermediate in age (30-70 years old), but forests continue to sequester and store carbon through their entire life.

Carbon storage refers to the carbon retained in a forest over time. Carbon is found in:

- Live tissue above the ground, such as trees, shrubs, and other plants;
- Live tissue below the ground (roots);
- Standing deadwood and downed logs;
- Leaves, needles, and small branches on the ground;
- Soil organic matter (invertebrates, decomposing leaves).



This fast-growing pole (young tree) stand is about to enter the initial phase of maximum carbon sequestration.

In the northeastern United States, carbon storage levels increase with forest age and typically peak when forests are about 200 years old. Wood is stored carbon.

Effects of Forest Age and Management

As forests get older, their overall growth slows as the trees compete for sunlight, water, and nutrients in the soil. Some trees inevitably start to die from wind and ice storms, insects, diseases, drought, and other stressors. When trees die, carbon is released back into the atmosphere. In an older forest, the overall amount of stored carbon, while still increasing, eventually starts to level off.

Older forests have higher carbon storage than younger forests, but have lower sequestration and are more susceptible to damage from hurricanes, drought, insects, and disease. Older forests with late successional characteristics, such as com-

plex stand structure, accumulation of dead, woody material, and many large, old trees, can provide biodiversity benefits.

Younger forests grow faster than older forests. They also provide biodiversity benefits in that many species of greatest conservation need in Connecticut require early successional or young forests to survive. Populations of birds, such as the blue-winged warbler, chestnut-sided warbler, eastern towhee, eastern whip-poor-will, and American woodcock, have declined because of a lack of young forest habitat in Connecticut. New England cottontail, our only native rabbit, also requires thickets of young forest to survive.

Passively managed forests, while important for many reasons, may be less resilient to disturbances. Carbon emissions from unmanaged forests can actually be greater than those from managed forests if the unmanaged forests are experiencing high rates of tree mortality. This can occur following tropical storms and due to infestations of spongy moth, emerald ash borer, hemlock woolly adelgid, and the recently-discovered beech leaf disease.

Forest resilience is the capacity of a forest to withstand and recover from climatic events and disruptions. Disturbances can include severe weather, insect infestations, disease outbreaks, invasive plants and animals, and insufficient regeneration because of deer browsing. Resilient forests are diverse. They consist of many different tree species of a variety of ages across the landscape.

Having a variety of forest conditions over time and space can provide the largest range of benefits, including carbon and resilience. "Don't put all your eggs in one basket!"

How Does Silviculture Help Mitigate Climate Change?

Silviculture is the art and science of controlling the establishment, growth, composition, health, and quality of forests to provide the benefits that society values on a sustainable basis. These benefits include wood, clean water, clean air, and wildlife habitat.

Silviculture creates diverse forests. One of the basic tenets of forest ecology is "Diversity = Resilience".

Removing some carbon in the form of wood products

This passively managed forest has been impacted by the invasive emerald ash borer. Because the logs were not salvaged for wood products, the carbon in them will be released as carbon dioxide into the atmosphere.

in the short-term can be best for stabilizing carbon storage in the long-term.

Another truism is that "forest time is not human time". In a world of instant messaging and instant coffee, we must realize that it takes time for trees and forests to grow. A managed forest achieves the goals of diversity and resilience over a long period of time.

Growing What We Need Where We Live

Wood is stored carbon. Local wood is local good! Connecticut has a responsibility to try to meet as much of its needs for wood as it can, just as we support local farms for our food. It has been estimated that in Connecticut, only 16% of the wood that we use is grown locally. There is great potential, and need, for expanding Connecticut's use of wood grown in our state.

Carbon "leakage" is the shift of carbon emissions from one place to another. When the wood we use in Connecticut is not grown and harvested here, it must come from someplace else, with greater environmental impacts. This is called "the illusion of preservation".

Wood is much more environmentally friendly than the alternatives of concrete or steel, which are fossil fuel intensive. Both of those products require mining a nonrenewable resource, and enormous amounts of energy to create and transport.

A variety of tree age classes across the landscape creates a more resilient forest.

A portable sawmill is used to cut Connecticut pine logs into boards.

Bottom line: *Growing, harvesting, and using locally-sourced wood is a responsible way to mitigate climate change.*

Path to a Park Ranger

Article and photography by Savannah Hoy, former DEEP Seasonal Resource Assistant

The asphalt driveway leading towards the main entrance gate at Gillette Castle State Park in East Haddam can often be unforgivably slick. This early in the morning, the sun has yet to peer over the hills to the east and warm the ground. I fiddle with the small brass lock until the familiar "click" of the releasing mechanism frees the spring and allows me to release the two chains that tie the wooden entrance gates together. I slowly lift both heavy gates open before carefully shimmying back to my car, my breath visible in the piercingly cold air (24°F). It was not my first time being up this early, and it is certainly not going to be my last. As a seasonal maintainer for the park, I am often at the will of when the sun rises and sets, which determines my working hours. It is the nature of my profession, early mornings and even longer afternoons, with glorious coffee breaks in between.

The author's National Park Service flat-hat and badge

Despite the sun's early morning absence and the frigid temperature, I am delighted to be at work. I have spent the last decade dreaming about working for state and federal parks. This stunning morning embodies the best parts of working at parks – solitude, wildlife sightings, and remarkable sunrises.

I grew up in a small Connecticut town known for its dairy farms, corn fields, and rich Revolutionary War history. Against this backdrop, I decided early on in life that becoming a veterinarian was my life's ambition. That was until 2011 when I visited my first national park – Yosemite. The colossal granite rock faces, the endless array of evergreen trees, the plentiful waterfalls, and the rich biodiversity within the landscape drew me in like a fish on a line. I was delighted to be caught within its grasp. My dreams of becoming a vet dissolved when I saw a park ranger dressed in their official uniform of forest green pants, a stiff gray button-up shirt with a gold badge, and the iconic flat-brimmed hat. Upon seeing the National Park ranger, I vowed that one day I would wear that uniform and become a federal park ranger. Only one problem remained; how does someone become a park ranger? Literature on the subject is limited and I did not know any park rangers to ask how they started. So, I focused my time and energy throughout high school and college on taking natural resource classes and participating in extracurriculars that I thought would advance me closer to my desired profession.

This effort included joining my local Future Farmers of America (FFA) chapter and volunteering for the Connecticut Department of Energy and Environmental Protection with the state's turkey former biologist, Mike Gregonis. My major break came in summer 2017 when I stayed with my sister in Jackson, Wyoming, and volunteered for Grand Teton National Park on the String Lake Brigade, which aims to prevent bear and human conflicts in a popular park section. I returned the following summer and eventually received The President's Volunteer Service Award for working 250 hours at String Lake. All my efforts paid off when I got a seasonal job with the CT DEEP at Dinosaur State Park as a naturalist and then at Gillette Castle State Park as a tour guide and maintainer.

Eleven years after that trip to Yosemite National Park, I finally fulfilled my dreams of wearing the green and gray by working for the National Park Service (NPS) as a seasonal Horse Management Ranger at Assateague Island National Seashore in Maryland. The journey there was long and, at times, challenging, but the daily adventures, smiles, and memories I made were priceless and well worth the wait.

During my time working at Assateague, I realized how

the staffing crisis that had spread across the country, similar to the Covid virus that caused it, had penetrated the park services. Theresa Pierno, President and CEO of the National Parks Conservation Association (NPCA), had this to say about the NPS staffing crisis: "...visitation reports continue to prove what we have long known to be true – America's beloved national parks are popular. At odds with this steady surge in visitation is an alarming decline in park staffing". An example of this unsustainable imbalance can be seen at Little River Canyon National Preserve in Alabama, which saw a 238% increase in visitation between 2011-2019 while simultaneously having an 18% drop in park staffing. With pandemic regulations winding down and adventure-thirsty Americans planning their next outdoor excursion, we can assume that state and federal parks will see record-breaking visitation in the upcoming years. To protect the people and resources, state and national parks need dedicated and passionate staff to do jobs ranging from maintenance, interpretation, and law enforcement.

Many people have approached me at state and federal parks expressing how working in these wild places is their dream, but they feel like it is too late for them or they need help knowing where to start. I was once there, and I know how helpless it can feel to navigate a profession where there are not many resources to help guide people in the right direction. Most rangers have vastly different stories about how they came to work for the park services.

So how does someone become a park ranger? There is no one-size-fits-all approach to getting a job in the park services, but there are broad steps you can take to start your journey .

1. Decide what kind of park ranger roles you are interested in. The park ranger position can often be ambiguous. It can range from law enforcement to maintenance to interpretation, and even to bio-technical jobs, making applying for jobs daunting. Determining what type of park ranger you want to be is a significant first step toward a career in park services. All you have to do is ask yourself, "what kind of work would I enjoy the most?" If you are passionate about upholding state and federal laws, consider looking into the law enforcement side of the park systems. If you want to research endangered shorebird populations or monitor the progress of a threatened plant in an ecosystem, then you would make an outstanding park biologist. An excellent resource to learn about the various types of park rangers and related fields is to explore the careers page for the U.S. Department of the Interior at *https://careers.doi.gov* or on the DEEP website at *https://portal.ct.gov/DEEP/Human-Resources/Seasonal/Seasonal-Job-Descriptions*.

2. Volunteer and participate in internships. Once you determine what category of park ranger you want to be, gaining the necessary skills and experiences to help you succeed is essential. One of the best ways to do this is to volunteer or intern at parks close to home, in positions comparable to those you wish to pursue full-time. Volunteering and internships can help you gain entry-level ranger skills, while also

The author, Savannah Hoy, with a little ranger at Grand Teton National Park in Wyoming.

The author when she worked as a seasonal with CT DEEP posing with "Blue", a blue-tongued skink at Dinosaur State Park in Rocky Hill.

expanding your professional network. An excellent resource for those interested in pursuing internships in conservation is the Student Conservation Association (SCA; *https://www.thesca.org*). Members of this organization can work and live in national parks while working on projects ranging from restoring habitats to educating the public in visitor centers. A website with broader opportunities for those in all age ranges is *https://volunteer.gov*, which has volunteer positions all over the country. If you are interested in volunteering at a specific state park in Connecticut, visit *https://portal.ct.gov/DEEP/Human-Resources/Volunteers-and-Interns/Volunteer-Opportunities*.

3. Earn a relevant college degree. Not all park ranger positions require a college degree, but obtaining one can increase your chances of being initially hired and receiving promotions. Because park rangers are entrusted with a wide range of responsibilities and duties, a variety of college programs can be relevant, including but not limited to Business Administration, Archeology, Biology, Conservation Biology, Ecology, History, Law Enforcement, Natural Resource Management, Parks and Recreation Management, and even Museum Sciences. Similarly to step one, this step in your path to becoming a park ranger should be based on your passions and interests.

4. Seek out entry-level positions. Every adventure has to start somewhere, and pursuing entry-level positions is a great way to begin your park ranger journey. The best website for finding positions in national parks is *https://www.usajobs.gov*, which is the government's official job search engine. Type in what location or organization you want, and watch the open jobs pop up! These positions may be only part-time or seasonal. Still, they can offer you a realistic glimpse into the park services and help bolster your resume, skills, and confidence. Seasonal positions with Connecticut DEEP are an excellent pathway for anyone pursuing a career as a park ranger or in natural resources and the environment. To learn more about open seasonal park positions in Connecticut, visit *https://portal.ct.gov/DEEP/Human-Resources/Seasonal/Seasonal-Employment*.

5. Be patient – it may take time. As with all things worth pursuing, becoming a park ranger takes time and effort. Seasonal positions usually open six months before entry, and annual budgets may restrict the number of hires a park can have in a given season. If you do not get a job your first time trying, do not lose hope. Keep pursuing relevant skills and experiences that will help you for the next application!

Parks across the United States, including those in Connecticut, are some of the most pristine and picturesque places in the world. Millions of people visit these public lands to enjoy their beauty, ecology, cultural and historical significance, and wildlife. Have you visited one of these unique places and thought about how you would love to preserve and protect it for future generations? If the answer is yes, you, too, may have a calling to be a park ranger. Like with any path you take, all you have to do is take those first few steps.

Learn about outdoor jobs for the U.S. Department of the Interior at https://careers.doi.gov or for DEEP at https://portal.ct.gov/DEEP/Human-Resources/Seasonal/Seasonal-Job-Descriptions.

Making Great Meadows Marshy Again

Partners restore a piece of the coast

Article by Lauri Munroe-Hultman, Northeast Region, U.S. Fish and Wildlife Service

Once big enough to fit 1,400 football fields, and a seasonal home to Indigenous peoples, Great Meadows Marsh has been through a lot in the last four centuries. Now half the size and ailing from historical efforts to drain and fill it, as well as invasion by non-native plants, the Stratford, Connecticut, salt marsh sits powerless against sea-level rise. All but 34 acres, that is.

In 2022, the U.S. Fish and Wildlife Service, Audubon Connecticut, Connecticut Department of Energy and Environmental Protection, National Oceanic and Atmospheric Administration, and the Town of Stratford completed a $4.65-million restoration of a portion of the marsh in the Great Meadows Marsh Unit of Stewart B. McKinney National Wildlife Refuge. The project cleared invasive plants, removed excess soil, regraded the site, and created new channels to allow seawater to move into and out of the marsh.

For the first time in decades, tides now regularly flood the area, nourishing newly planted native salt marsh grasses, wildflowers, and shrubs. With restoration comes increased resiliency to sea-level rise and climate change and renewed potential to support rare plants and animals—including saltmarsh sparrows, turtles, and marsh pink—for years to come.

Saltmarsh sparrow populations have fallen sharply in the last decade. At the site, researchers are testing an emerging technique for helping the sparrows. Experimental hummocks—mounds that mimic the high-marsh habitat the birds need—will offer them nesting sites above the rising sea.

The project has reconnected the community to its salt marsh. More than 150 volunteers and a dozen paid high school students planted native species on the reshaped landscape. A reopened trail and two new viewing platforms welcome hikers and bird watchers. Mosquitoes, once the bane of visitors and nearby residents, are fewer and farther between.

Nearly $1 million for the restoration came from Natural Resource Damage Assessment and Restoration settlements with General Electric Corporation, Lordship Point Gun Club, and Raymark Industries, who were responsible for contamination at three nearby sites. Using settlement money to restore the marsh to benefit fish, wildlife, and people helps compensate the community for environmental harm at these sites.

The project's benefits reach beyond its boundaries…to the community, the state, and the Atlantic Coast as a whole. Future restorations near and far will be better for the knowledge and experience gained at Great Meadows Marsh.

Read a multimedia ArcGIS StoryMap about the project. at *https://storymaps.arcgis.com/stories/24e64d93a2704efabb404abac4ecd2d3*.

Marsh pink blooming at Great Meadows Marsh. *Photo courtesy of U.S. Fish and Wildlife Service.*

North American State of the Bats

More than half of the 154 known bat species across North America are at risk of severe population decline in the next 15 years. This is according to the first-ever State of the Bats Report published by the North American Bat Conservation Alliance (NABCA), a multinational coalition from the United States, Mexico, and Canada, including Bat Conservation International.

Experts believe that as many as 82% of bat species in North America will be impacted by climate change in the next 15 years, especially by severe drought and temperature extremes. The other top threats to bats in North America include habitat loss, the bat disease white-nose syndrome (WNS), and mortality from wind turbines. As the scope and severity of these threats increase, so does the risk of losing some species forever.

PAUL BENJUNAS/CT DEEP WILDLIFE

White-nose syndrome has decimated Connecticut's little brown bat population to the point that it is now listed as a state endangered species.

The State of the Bats Report highlights the importance of bat conservation, not only for their biodiversity value, but for the ecosystem and economic services bats provide, including pest control, pollination, seed dispersal, ecotourism, and their contributions to innovation and science. Highlights from the report include:

- **Bats are threatened.** The forces of global change threaten bats worldwide. In North America, the top threats to bats include climate change, habitat loss, wind energy production, and WNS, which has killed millions of hibernating bats in the United States and Canada.
- **Bats need our help.** There are many ways to support bat conservation. Create and protect bat habitat in your own backyard, explore nature responsibly by avoiding disturbance of bats and spreading of pathogens, make climate-friendly choices to reduce your carbon footprint, speak up for bats by sharing the importance of bats and bat conservation with others, and supporting conservation efforts and policies that protect nature and wildlife.
- **Bats are diverse and beneficial.** They provide economic benefits to agriculture by consuming insect pests, improving crop yields, and reducing pesticide use. Bats contribute to forest health, and nectar-feeding bats pollinate plants. Each year, bat research leads to new scientific discoveries and technologies, and watching masses of bats emerge from caves and bridges generates ecotourism dollars in places like Austin, Texas and Carlsbad Caverns National Park.

This first State of the Bats Report was released as the federal Endangered Species Act in the United States turned 50 years old in 2023, demonstrating the ongoing value of public commitment to wildlife conservation and the success of conservation efforts to safeguard species from extinction. While the report demonstrates a continued and urgent need for bat conservation as threats escalate, experts also report that focused conservation efforts aided by data sharing and international collaboration can succeed in recovering bat populations. The lesser long-nosed bat, a migratory pollinator of agave and cacti, was once listed as endangered in both Mexico and the United States. Over the last 15 years the species has seen a 14% increase in its population, making it the first bat to be determined fully recovered and delisted in both countries. This rebound is evidence that collaborative conservation efforts can change the trajectory for bats.

The 2023 State of the Bats in North America report was produced by the North American Bat Conservation Alliance, representing a consortium of government agencies in Canada, the United States, and Mexico, as well as private organizations committed to bat conservation. Major contributors to this report include scientists from Bat Conservation International, the North American Bat Monitoring Program, the White-nose Syndrome Response Team, the U.S. Fish and Wildlife Service, the Canadian Wildlife Service (Environment and Climate Change Canada), and the National Autonomous University of Mexico.

Access the full report at *www.stateofthebats.org*.

Mountain Laurel vs Rhododendron
Providing habitat for wildlife

Article by Nathan Piché, DEEP Forestry Division

Connecticut's state flower is mountain laurel (*Kalmia latifolia*), a woody shrub that is distributed across the state and known for growing in dense thickets that are exceptionally difficult to walk through. However, every spring they bloom beautiful bouquets of white flowers that add vibrant color to the greening landscape. Rhododendrons (*Rhododendron spp.*) occupy a very similar niche within Connecticut's forests, and it can often be difficult to differentiate between these two woodland shrub species. The thickets created by both mountain laurel and rhododendron provide valuable cover for wildlife.

Mountain laurel is a broad-leafed evergreen shrub. It has waxy green elliptical leaves (3 to 6 inches in length) and an ever-twisting, meandering, non-linear woody stem of 1 to 4 inches in diameter with brown, flaky bark. The shrub averages 6 to 10 feet in height but it can grow as tall as 30 feet! Flowers appear in May and June and are white or pink in color. Individual flowers measure an inch across, are hexagonal, and grow in clusters 4 to 6 inches across. This shrub is native to the eastern United States and has other common names that include calico bush, mountain ivy, and spoonwood. Mountain laurel prefers acidic, well-drained soils and is most commonly found in hardwood forests in association with a variety of oak species, hickory, red maple, and black birch.

Rhododendron refers to a broad spectrum of shrubs comprised of hundreds of species and varieties due to its popularity as an ornamental. However, one of the most common varieties that is native and found in the wild throughout the eastern United States is known as great laurel (*Rhododendron maximum*). Other common names for it include great rhododendron, rosebay rhododendron, and American rhododendron. This shrub shares many characteristics with mountain laurel. It is a broad-leafed evergreen shrub; has a twisting and turning woody stem of 1 to 4 inches in diameter with brown, flaky bark; grows to an average height of 6 to 10 feet but can grow as tall as 30 feet; has white and pink hexagonal shaped flowers; and prefers acidic, well drained soils. Major differences between mountain laurel and rhododendron are that the leaves of rhododendron are narrow and oval, tapering to a point at each end, and average between 4 and 8 inches in length; the flowers are large, averaging between 3 and 6 inches across for each individual flower; and the shrub typically blooms in early to mid-summer in the months of June and July. Mountain laurel and rhododendron can often be found growing together on the same site. Although mountain laurel and native rhododendron both occur in Connecticut's forests statewide, mountain laurel is much more common.

Mountain laurel flowers appear in May and June and are white or pink in color. Individual flowers measure an inch across, are hexagonal in shape, and grow in clusters 4 to 6 inches across. ***Photo courtesy of Paul J. Fusco.***

Both shrub species provide significant value to wildlife, most notably as food and cover. Hummingbirds, butterflies, bees, and other pollinators are attracted to the

flowers. Due to their nature to grow into dense thickets, they provide ideal cover for white-tailed deer, wild turkeys, black bears, cottontail rabbits, songbirds, and other wildlife. The leaves of both species are browsed by deer, particularly during winter when many other food sources have been depleted.

The key habitat feature that these shrub species provide is cover. White-tailed deer are ruminants. This means that, like cows, partly digested food from their rumen (first stomach) is returned to the mouth for further chewing. To chew this regurgitated food (known as cud), deer need a place to bed down where they are safe from potential predators. Mountain laurel and rhododendron could provide this cover; however, the simple presence of these species does not necessarily equate to deer bedding cover, especially in areas where there are vast thickets of it. Deer prefer these shrubs as cover when they grow in areas that also provide a sight and/or olfactory advantage to further protect deer from potential predators. Also, preferred bedding locations can change based on changing food sources throughout the year.

Laurel serves as excellent cover for deer and other wildlife when growing on ridgetops, the points of ridges, and the leeward side of ridges. Areas such as these can be good places to search for deer sign. Also, areas that have acorns hitting the ground directly adjacent to dense laurel cover can be very active for deer. Lastly, because both mountain laurel and rhododendron grow in such dense thickets, there may be areas that are too thick for deer to effectively travel through. However, within these thickets, there will often be small open corridors that tunnel through the maze of woody shrubs. Many times, these corridors become wildlife trails because they are the path of least resistance. Plus, over time, these corridors will become more distinct wildlife trails because repeated travel by wildlife will compact soil and break branches, possibly widening the corridor.

Both mountain laurel and rhododendron (pictured) provide significant value to wildlife habitat, most notably in food and cover. Hummingbirds, butterflies, bees, and other pollinators are attracted to the flowers. *Photo courtesy of Kathy Herz*.

One major difference between mountain laurel and rhododendron (pictured) is that the leaves of rhododendron are narrow and oval, tapering to a point on each end, and average between 4 and 8 inches in length. *Photo courtesy of Nathan Piché*.

Mountain laurel and rhododendron fill a unique niche within our eastern hardwood forests and are incredibly valuable for wildlife. They grow so dense that it can be very challenging to walk through them. However, laurel thickets hold many secrets regarding the daily habits of deer and other wildlife species.

Connecticut River Hydrilla

Article from the U.S. Army Corps of Engineers, New England

The highly invasive aquatic plant, *Hydrilla verticillata*, known commonly as "hydrilla" or "water thyme", was first detected in the Connecticut River near Glastonbury, Connecticut, in 2016. In 2019 and 2020, a survey was conducted along the river from Agawam, Massachusetts, south to Long Island Sound. Hydrilla was found as far north as Agawam and as far south as Essex, Connecticut. It has also spread into the river's many coves, tributaries, and boat basins. The surveys confirmed that Hydrilla is spreading and that the risk of it spreading to other regional waterbodies is significant. Fragments of the plant, which are easily caught and transported by boats and boat trailers, can sprout roots and establish new populations. Fragments also float and are capable of dispersing via wind and water currents. Due to the importance of the Connecticut River as an environmental resource and driver of the local economy, stakeholders are seeking an aggressive eradication and management program.

The Connecticut River hydrilla is unique from other known hydrilla strains, as it is genetically distinct. The plant's biology is largely unknown at this time.

What Is Hydrilla?

Hydrilla is an aquatic plant that has earned the illustrious title "world's worst invasive aquatic plant". Listed as a federal noxious weed, hydrilla has made its home in just about every conceivable freshwater habitat, including rivers, streams, lakes, ponds, marshes, canals, ditches, and reservoirs. It was first discovered in the United States in the 1960s in Florida. Since then, it has spread to many parts of the United States.

Hydrilla can grow in a wide variety of water conditions (e.g., high/low nutrients, high/low turbidity, variable pH, up to 7% salinity) and water temperatures. Unlike most native aquatic plants, Hydrilla is capable of growing under extremely low light conditions. The plant is able to begin photosynthesizing much earlier in the morning than native plants, so it is able to capture most of the carbon dioxide in the water, thereby limiting growth of other plants. Hydrilla grows very rapidly (it can double its biomass every two weeks in summer) and has no natural predators or diseases to limit its population.

Hydrilla is an aquatic plant that has earned the illustrious title "world's worst invasive aquatic plant". It grows in long easily fragmented strands, which readily spread and develop into new plants. *Photos courtesy of Leslie J. Merhoff, UCONN, Bugwood. org.*

Why Is Hydrilla Management Important?

This invasive aquatic plant species can negatively affect local ecosystems. It forms dense stands underwater that can alter river flow, shade or crowd out all other native aquatic plants, replace habitat of sensitive species, alter water chemistry and pH, cause dramatic swings and reduction in dissolved oxygen levels, increase water temperatures, and negatively affect the diversity and

abundance of fish populations. Hydrilla also has negative impacts on recreation, including making it more difficult or even potentially dangerous for both boating and swimming due to the denseness of its growth. Hydrilla grows in long, easily fragmented strands, which readily spread and develop into new plants.

Hydrilla grows very rapidly (it can double its biomass every two weeks in summer) and has no natural predators or diseases to limit its population. Efforts are underway in the Connecticut River to treat the plant to suppress its growth and diminish negative effects to the river's ecology and the local economy.

How Is Hydrilla Being Managed in the Connecticut River?

The U.S. Army Corps of Engineers New England District and its Engineer Research and Development Center's (ERDC) Aquatic Plant Control Research Program are leading a demonstration project to determine the effectiveness of herbicides registered for aquatic use by the U.S. Environmental Protection Agency to safely reduce and control the spread of the Connecticut River Hydrilla. The project is investigating Hydrilla's growth patterns and water exchange dynamics in the Connecticut River. Additionally, herbicide efficacy is being evaluated in a laboratory setting to inform operational-scale field demonstrations of the herbicide's efficacy that will take place in 2024.

How Will Hydrilla Be Treated?

By treating Hydrilla to suppress its growth, the intent is to diminish the plant's negative effects and in turn benefit the Connecticut River's natural ecology and the local economy. The U.S. Army Corps of Engineers will be developing site-specific treatment plans for selected locations in the Connecticut River in summer 2024. The use of aquatic herbicides will be considered. There are several safe, well understood, and effective herbicides that are available for use. Selected herbicides will be listed on the Army Corp's Connecticut River Hydrilla webpage (*https://www.nae.usace.army.mil/Missions/Projects-Topics/Connecticut-River-Hydrilla/*), and shared with stakeholders once they have been chosen.

Post treatment monitoring surveys will be conducted in fall 2024 to assess the condition of the Hydrilla, as well as non-target impacts.

Will Treatment Impact Recreation and Fishing in the Connecticut River?

The treatment should have minimal to no impact to recreation in the Connecticut River. Other than when contractors are on-site carrying out treatment, where some restricted public access may be needed, no long-term closures or restricted access is currently anticipated with this work. Regarding fishing, the treatment is expected to have minimal to no effects on fishing or to fishing access.

Where Will the Demonstration Project Occur?

The exact locations of where the treatment would occur have not been selected yet, but the eight sites being considered are Keeney Cove, Mattabesset River, Portland Boat Works, Dart Island State Park, Chapman Pond, Chester Boat Basin, Selden Cove, and Deep River.

How Can You Help?

You can help prevent the spread of Hydrilla and other aquatic invasive plants by reporting infestations, engaging in public meetings, and becoming an active stakeholder. Most importantly, if you have a boat, kayak, canoe, or paddleboard, before leaving a boat launch or waterbody, practice the "Clean, Drain, Dry" technique.

Clean:

- Inspect and remove all visible plants, fish, and animals

as well as mud or other debris at the launch. Do not transport them beyond the boat launch.
- Check trailer, including axle and wheel areas, in and around the boat itself, as well as anchors, props and jet engines, ropes, boat bumpers, paddles, and anything that came in contact with the water.
- Rinse equipment and boat hulls with high pressure, hot water, when possible.
- Rinse interior compartments of boats with low pressure, hot water (120°F).
- Flush motor with hot water (120°F) for 2 minutes (or according to owner's manual).

Drain:

- Eliminate all water from every conceivable space and item before you leave the area you are visiting.
- Remove the drain plug from your boat and put the boat on an incline so all water drains out.
- Drain all water in live-wells, bilge, ballast tanks, transom wells, kayaks, canoes, rafts, motors, jet drives, boat hulls, scuba tanks and regulators, boots, waders, bait buckets, seaplane floats, and swimming floats.

Dry:

- Dry Equipment, if possible, allow for 5 days of drying time before entering new waters.

Learn about aquatic invasive species at https://portal.ct.gov/DEEP/Fishing/General-Information/Aquatic-Invasive-Species

STOP AQUATIC HITCHHIKERS!™

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Conservation Notes

2024 Hunting and Trapping and Fishing Guides

The 2024 Connecticut Hunting and Trapping Guide, Migratory Bird Hunting Guide, and 2024 Connecticut Fishing Guide contain specific hunting and fishing season dates and details. These guides, along with the Connecticut Boater's Guide, can be found on the DEEP website at *https://portal.ct.gov/DEEP-CT-Outdoor-Guides*. Printed guides are available in limited quantities at town halls and license vendors. Go to *https://portal.ct.gov/CTOutdoorLicenses* to obtain Connecticut hunting, trapping, and fishing licenses and boating certificates, as well as required permits and stamps. The system accepts payment by VISA or MasterCard.

Subscribe to Our Free Online Newsletters

The CT DEEP Bureau of Natural Resources publishes three electronic newsletters, in addition to *Connecticut Wildlife* magazine. These newsletters are free and sent to your email address on a regular basis, providing important news and information related to wildlife, fishing, hunting, and the outdoors. You can sign up through the DEEP website, but cancel at any time.

- **CT Fishin' Tips:** A monthly newsletter with information, pointers and tips, and news from DEEP's fisheries programs. Sign up and learn more at *https://portal.ct.gov/DEEP/Fishing/General-Information/CT-Fishin-Tips*.
- **Wildlife Highlights:** A monthly newsletter for anyone interested in Connecticut's wildlife and the outdoors. Sign up and learn more at *https://portal.ct.gov/DEEP/Wildlife/Wildlife-Highlights-Newsletter*.
- **Hunter Highlights:** This quarterly electronic newsletter provides information on hunting, trapping, and the outdoors in Connecticut. Sign up and learn more at *https://portal.ct.gov/DEEP/Hunting/Hunter-Highlights-Newsletter*.

Welcome New Wildlife Division Staff

PAUL BENJUNAS/CT DEEP WILDLIFE

(left to right) Tyler Mahard, Sydnee Foster, and Jenna Lopardo.

After the retirements of several Wildlife Division staff based at the Sessions Woods Wildlife Management Area and Conservation Education Center in Burlington, who worked with or assisted the Outreach Program, two new outreach wildlife biologists and a secretary were hired at the end of 2023.

The new secretary, Jenna Lopardo, is a former seasonal for the Wildlife Division who worked with both the Conservation Education/Firearms Safety and Furbearer Programs. She has also worked for Colorado Parks and Wildlife and on several research projects at UConn. Jenna brings past experience in the office, extensive experience answering public questions about wildlife, and a great sense of humor to our team.

Sydnee Foster, one of the new biologists with the Outreach Program, was an environmental educator for eight years at two nature centers in Connecticut. She earned her master's degree from Miami University, focusing on conservation, animal behavior, and environmental education. Sydnee also is the Vice President of the Hartford Audubon Society and enjoys yoga and cooking.

Tyler Mahard, the other new outreach biologist, has worked previously as a seasonal research assistant with DEEP's Wildlife Diversity Program. He completed his master's degree in New Hampshire, where he also spent some time working for the New Hampshire Fish and Game Department. Tyler's experiences have involved biology and conservation focused on turtles, snakes, amphibians, bobcats, cottontail rabbits, and bats.

Fred Becker of Connecticut Trappers Association Honored

KAREN STEWART-LINKHART/NATIONAL TRAPPERS ASSOC.

Fred Becker, President of the Connecticut Trappers Association, was recently honored by the National Trappers Association as Trapper of the Year – East for his "outstanding efforts on behalf of trappers and trapping." The award was presented to Fred by John Daniel, President of the National Trappers Association, at their 64th Annual Convention, which was held in Escanaba, Michigan, in 2023.

When Fred was presented with the award, John Daniel said, "The Becker family has been a stable force in trapping and conservation in Connecticut for decades and Fred is no exception to that tradition. Fred has been instrumental in promoting, defending, and educating the public about the need for meaningful trapping in modern times on both the state and national levels. The National Trappers Association is truly grateful to have Fred as a part of our team."

Fred's father, Fred Becker Sr., was instrumental in the establishment of the Connecticut Trappers Association (CTA) in 1967, along with several other founding members. Both father and son have played key roles in the organization. CTA is a non-profit organization of Connecticut sportsmen and women dedicated to the conservation of fur bearing animals and practical wildlife management. The CTA's motto of "Conservation Through Association" is the foundation of the organization.

Congratulations to Fred on his award and acknowledgement.

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More than half of the 154 known bat species across North America, including the tri-colored bat, are at risk of severe population decline in the next 15 years, according to the first-ever State of the Bats Report published by the North American Bat Conservation Alliance. See article on page 17 to learn more. *Photo courtesy of Paul Benjunas/CT DEEP Wildlife*.