

September/October 2021

CONNECTICUT Wildlife



From The Director

It is hard to believe we are heading into fall. Spending some time outdoors is a reminder that change is indeed underway. Many wildlife species are very active now, taking full advantage of abundant natural



foods and preparing for migration or adding weight before hibernation. Some early migrants are beginning to stage, concentrating in large groups in key locations as they prepare for long journeys south. Many migrant shorebirds are among the first to begin their journey and our coastline offers many great opportunities to watch this spectacle unfold. The article on migrant shorebirds is a good primer for anyone wanting to learn more about this natural spectacle.

It may seem like fall arrived quickly this year, in part due to the abundant rainfall we enjoyed in our area. Many of our traditional summer activities were delayed or modified. Unfortunately, other areas of our country experienced prolonged drought and another season of catastrophic wildfires. We are fortunate that Connecticut has a highly-trained fire crew and their skill is reflected in our participation in the Interstate Fire Crew program. Connecticut sent members of our Interstate Fire Crew to locations across the country and even deployed one of our fire trucks to provide on-going help with the fires in Minnesota. To learn more about the work of the Interstate Fire Crew and the amazing work they have done this year, read on. Many staff within the Forestry, Fisheries, and Wildlife Divisions of DEEP put their lives on the line to help those directly impacted by the wildfires.

Some species enjoyed our damp summer. The elusive and mysterious Eastern spadefoot is a perfect example. This summer provided ideal breeding conditions for spadefoots who are considered explosive breeders—they respond quickly to the right weather conditions to mate, lay eggs, and have tadpoles mature quickly. This year was a record-setting breeding season for this state-endangered species; you will learn much more in this issue about all the things that need to fall into place to help this species thrive.

Our summer weather did nothing to diminish the fun of learning to fish. The article on the success of the mobile fishing trailer and our pop-up fishing events brought back many “fishing memories” for me, too. The first time I used a kid’s pole in the backyard with a weight to practice casting, the thrill of that very first fish—it was a bluegill and boy, did it look beautiful—the time spent with family and friends laughing and sharing tales of the one that got away. Probably no surprise to anyone, much of my “fishing time” was spent watching snakes, turtles, beavers, great blue herons, and everything else that is part of our aquatic ecosystems. Those memories are as vivid today as when they occurred and underscore the value in having those opportunities to get outdoors, experience the wonder of nature, and make some memories of your own. I challenge each of you to mentor someone else and share your love of the outdoors with others so that they have the chance to make that lasting connection with our natural world. The change in seasons presents the perfect opportunity. Go make some new memories!

Jenny Dickson, DEEP Wildlife Division Director

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Connecticut Interstate Fire Crew members of NorEast #2 heading out on assignments: (L to R) Frank Cervo, Lucio LaDuka, Sergio Liguori, Brian Rossiter, Andrzej Ramotowski, Mike Kronick, Ben Arnold, Aiden Quinn, Cody Mullen, Abigail Merchant, Rachel Holmes. PHOTO BY HELENE HOCHHOLZER

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Beginning in mid-July and continuing through October, Connecticut's sandbars, mudflats, and tidal marshes play host to a migration phenomenon, as thousands upon thousands of shorebirds, like the semipalmated sandpiper, make their way through Connecticut.

Photo courtesy Paul Fusco

Connecticut Interstate Fire Crew Provides Assistance in 2021

Photos provided by Connecticut Interstate Fire Crew

The DEEP Division of Forestry has managed the Connecticut Interstate Fire Crew (CIFC) since the 1970s. Today's fire crew is made up of both public and private sector personnel, trained to assist in fighting wildland fires nationwide as needed. The CIFC normally has about 60 to 80 trained personnel annually.

Every fire season, crew members travel to other parts of the country on assignment, making their mark using their training and specialized skills to assist in saving lives, homes, wildlife, and property. So far, 2021 has been a very busy mobilization season for the crew as the National Preparedness Level has been at a 5, the highest level, since mid-July. Not all members of the CIFC serve directly as a firefighter on the fireline. Individuals and crews have provided the following assistance:

- Small three- to four-person engine crews have assisted in firefighting in northern Minnesota and Washington with a CIFC Connecticut engine this summer. By early September, the



Members of a CIFC engine crew spent several days fighting a wildfire in the Boundary Waters Canoe Area Wilderness east of Ely, Minnesota. Float planes transported the crew and their equipment, including canoes, into the wilderness. Canoes were used to access the fire location each day.



Connecticut Engine Crew #6 was handpicked to be part of a select group to meet with the Governor of Minnesota, Tim Walz (in gray), as well as U.S. Senator Amy Klobuchar (in orange) and U.S. Senator Tina Smith (in red). The delegation offered their thanks and spoke one on one with the firefighters about their experiences and legislative items relevant to wildland firefighting.

engine had received its seventh crew swap.

- One individual served as a Helicopter Crew Member (HECM), assisting in a wide range of duties to support helicopter operations on fires in Arizona.
- Another person was assigned as an Air Base Radio Operator (ABRO) in Montana, assisting in take-off/landing coordination of aircraft and flights to ensure safe and smooth aviation operations on the Crooked Creek Fire.
- A crew member has served as a Personnel Time Recorder (PTRC), once in person as a trainee and a second time virtually, as part of the regional Incident Management Team in charge of various fires.
- A CIFC member served as a Medical Unit Leader (MEDL) trainee at the Greenwood Fire in Minnesota. Every morning, he gave the incident personnel a briefing for the day on medical information.
- A crew member worked as a RADO – Radio Operator – for multiple fires in the area of Winthrop, Washington. As a RADO, she was responsible for radio traffic and phone messages



Connecticut Engine Crew #6 poses for a photograph with Minnesota Governor Jim Walz.

between incident personnel, performed as a dispatcher for the incident, and documented important radio traffic.

- A CIFC member was mobilized as a Strike Team Leader Crew (STCR) trainee in Oregon on the Bootleg Fire. A STCR directs two crews of the same type in performing tactical missions on a division or segment of a division on wildland fire incidents.
- A crew member mobilized to Idaho as part of the Maine Type 3 Incident Management Team (IMT), managing multiple fires and working closely with the Pennsylvania IMT and the North Idaho IMT. A Type 3 IMT is a multi-agency/multi-jurisdictional team used for extended incidents, managed at the local, state, or tribal level.
- In the last week of July, 13 CIFC members were mobilized as part of a 20-person interagency initial attack hand crew out of the New England area. This crew, called NorEast #2 was led by a CIFC crew boss. Other NorEast #2 members included five from the State of New Hampshire, one from the White Mountain National Forest, and one from the State of Vermont. This crew went to the same general area in Minnesota that the CIFC engine and other resources have been stationed, as Minnesota's forests and



CT Engine Crew #4 participated in this burn out operation on the Whitmore Fire in Washington. This ½-mile linear burn was to connect various burn areas up to a road edge, making it easier and safer for firefighters to monitor and patrol.

grasslands continued to be plagued by unprecedented drought and increased fire activity. The crew was reassigned to Montana in early August after the fire in Minnesota they were assigned to was extinguished.

Some of these descriptions may not be what one expects when hearing about firefighting! But, it takes a variety of skills and training to manage large wildfires. Fires are managed through the Incident Command System, modeled after military structure, as are other emergencies and natural disasters. Within this framework, there are many different roles to ensure that fires are fought as strategically and effectively as possible. Connecticut expects to send more crews and personnel to other regions of the country as the fire season continues. More information is at <https://portal.ct.gov/DEEP/Forestry/Forest-Fire/Connecticut-Interstate-Fire-Crew>.



Controlled burn to remove fuels from around a structure that CT Engine Crew #5 protected on the Greenwood Fire, MN.

A Record Setting Breeding Season for the State Endangered Eastern Spadefoot

Article by Dennis P. Quinn, Quinn Ecological, LLC

The Eastern spadefoot (*Scaphiopus holbrookii*), the only member of the spadefoot family (Scaphiopodidae) east of the Mississippi River, is among the rarest amphibians in the northeastern United States. It is listed as endangered under Connecticut's Endangered Species Act and designated as Most Important in Connecticut's Wildlife Action Plan for Species of Greatest Conservation Need. Connecticut populations are scattered and disjunct, and found in low-lying river valleys within sandy, well-drained soils below 300-foot elevation. Some of these already localized populations have been extirpated, presumably related to urban/suburban development and impacts to their breeding pools, which are often not afforded wetland protection status due to their highly ephemeral (short-lived) nature.

Eastern spadefoots are fossorial, spending the majority of their time underground in burrows, emerging at night to forage and reproduce. Unlike many of Connecticut's amphibians, spadefoots do not have a traditional breeding season, but instead breed during heavy rainfall events between the late spring and late summer months. Their breeding pools are unconventional, often appearing more like puddles on the landscape than wetlands. These pools are highly ephemeral, holding water for a very short period of time, often measured in just weeks as opposed to months like the more recognizable vernal pools used for breeding by species such as spotted salamanders and wood frogs. The highly ephemeral nature of these pools



Eastern spadefoot tadpole developmental stages.

makes them very difficult to detect on the landscape because they do not often support wetland vegetation or hydric soils, used to classify wetlands in Connecticut. Rainfall accumulations greater than two inches are often required to fill spadefoot breeding pools and stimulate breeding activity. During years when weather conditions are not favorable, spadefoots do not breed. It is not unusual for spadefoots to go without breeding for one or more years at a time.

When weather conditions are favorable, spadefoots are explosive, colonial breeders. Males gather at breeding pools, attracting females with their distinctive CAW-CAW breeding call. Joining in amplexus (the clasping posture in fertilization of frogs and toads), the female spadefoot lays her eggs while the male fertilizes them. Eggs develop extremely fast, hatching in as little as 24 to 48 hours. Spadefoot tadpoles are voracious feeders; as they mature, individuals school together by the 100's or even 1,000's feeding on vegetation. During later stages of development, spadefoots may even turn cannibalistic by feeding on one another. With only a few short weeks before their breeding pool dries up, tadpoles undergo a rapid development, metamorphosing in as little as four weeks.

The 2021 breeding season was one for the record books



Eastern spadefoot egg mass.



Newly metamorphosed eastern spadefoots are very small, easily fitting on a penny.

D. QUINN (3)



Eastern spadefoot breeding pool with biologists counting egg masses.

for the eastern spadefoot in Connecticut. To put this breeding season into perspective, in the past five years spadefoots have only been documented breeding two times in Connecticut, once in 2017 and once in 2019. During 2021, however, spadefoots bred on three separate occasions on June 1, July 9, and September 1. These breeding events were triggered by heavy rains on May 31 with accumulations of 2.68 inches, followed by Tropical Storm Elsa on July 9 with accumulations of 3.97 inches, and Hurricane Ida on September 1 with accumulations of 7.5 inches of rain.

With the conservation efforts currently underway for the Eastern spadefoot, as well as studies and extensive population monitoring, the long-term survival of this rare amphibian in Connecticut is promising.



Eastern spadefoots in amplexus.

Unlike many of Connecticut's amphibians, spadefoots do not have a traditional breeding season, but instead breed during heavy rainfall events between the late spring and late summer months. Their breeding pools are unconventional, often appearing more like puddles on the landscape than wetlands.

Watchable Wildlife

Migrant Shorebirds

World Travelers Endure Climate Change

Article and photography by Paul Fusco, DEEP Wildlife Division

In a sudden burst of energy, a flock of birds takes flight from a sandbar. The flock tightens into a dense ball of light then dark as the birds twist and turn upwind and downwind. They will circle around and around, only to settle down a few yards from where they had taken off.

Calls emanating from the sandbar can be identified to a variety of migrant shorebirds, including black-bellied plovers, willets, dowitchers, turnstones, and semipalmated sandpipers. The shorebirds have gathered to share space on the shrinking sandbar while they rest, waiting for the tide to turn. Finally, the water slowly begins to retreat and the flock breaks up into smaller groups.

They disperse to feeding areas in nearby marshes, mudflats, and along the intertidal beach zone of the shoreline. This is a daily occurrence every summer in Connecticut as sandpipers and plovers move through the state from their northern breeding grounds on their journey south for the winter.

Beginning in mid-July and continuing through October, Connecticut's sandbars, mudflats, and tidal marshes play host to a migration phenomenon, as thousands upon thousands of shorebirds, representing close to 50 species, make their way through Connecticut. Most breed far to our north in Arctic and subarctic Canada and Alaska. Some will end up spending the winter in the southernmost habitats of South



Paul J. Fusco
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Careful and patient searches through large flocks of sandpipers can reveal the presence of uncommon birds, such as this Western sandpiper mixed in with semipalmated sandpipers. The western sandpiper is identified here (center facing right) by the longer bill that has a broad base and fine tip, and by the rufous colored feathering on the shoulder..

America. The annual migration made by the white-rumped sandpiper may cover over 16,000 miles to and from the breeding grounds, making this species one of the longest distance travelers of the shorebird family. Others in the longest distance category include the pectoral sandpiper, red knot, and American golden plover.

Migration stopover sites, also known as staging areas, are critical to shorebirds which depend on these locations along their migration route for food and rest. When not resting or preening to maintain their feathers, these birds will feed continuously on small crustaceans, worms, and insects, packing on fat reserves in preparation for the next leg of their journey. Connecticut has a

number of staging areas, with prominent locations spread along the entire coastline. Wetland habitat complexes at Barn Island Wildlife Management Area (WMA) in Stonington, the Connecticut River Estuary in Old Lyme, Hammonasset Beach State Park (SP) in Madison, Greater New Haven Harbor, Housatonic River Estuary in Milford and Stratford, Norwalk Harbor, and Greenwich Point Park, are just a few of the many great locations for wildlife watchers to find migrant shorebirds. Habitat combinations that include a mix of offshore sandbars, expansive mudflats, saltmarshes, and/or little disturbed open beach habitats will have the greatest diversity of shorebirds.

Some locations provide shorebird watching opportunities for those need-

ing handicapped access. Vehicle access at Barn Island WMA, Hammonasset Beach SP, and Sherwood Island SP is among the most convenient for shorebird watchers who choose not to or cannot walk long distances. Most other locations require varying amounts of walking and beach hiking in soft sand. Bring water for hydration, use sunscreen, and wear clothing that will protect from the sun when on a shorebird watching excursion. Also, be mindful of biting insects that can be aggressive at times, especially on humid days with little wind.

There always is a possibility that a Connecticut rarity may show up. Some of the most exciting and unusual shorebirds that have visited our state include rarities such as red-necked stint (Milford, July 2006), ruff (Madison, May 2012), snowy plover (West Haven, October 2004), and Pacific golden plover (Stratford, October 2020).

Shorebirds as a group make epic journeys in their migrations, routinely flying between hemispheres and riding the winds even in severe storms. Strong storms are known to force migrating shorebirds to shelter on the Connecticut coast or even at inland locations. There always is the potential for unexpected appearances due to the extensive movements and widespread distributions of migrant shorebirds. Look in wet meadows and flooded wetlands following strong rains. Any puddles that hold fresh water have the potential to produce great shorebird viewing opportunities. Freshwater rain puddles along the shoreline are a great attractant for migratory shorebirds.

Shorebird Identification Can Be Challenging

Most people have learned to identify birds they are familiar with by observing noticeable features, such as color or form. For instance, the red breast of the robin or the bold blue and white markings of the blue jay enable one to quickly identify these birds. Also, the body shape of a great blue heron can be diagnostic. When it comes to shorebirds, most species appear similar in color and form, so relying exclusively on such traits can make correct identification difficult. Compounding the difficulty is that in late summer and fall most adults are not sporting their best breeding plumage. They will be showing dull, worn feathers that are not pictured in most field guides. About two to three weeks after the first adults show up, the first juveniles will arrive. Having left their northern homes where they hatched and fledged, juvenile



White-rumped sandpipers are one of our longest-distance migrant shorebirds.



Short-billed dowitchers use their long bills to probe for worms and grubs.



A member of the curlew group, the whimbrel has a long down-curved bill that is often used for digging out fiddler crabs.

Paul J. Fusco
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Greater yellowlegs are fairly common migrants that use Connecticut's salt marshes in spring and fall.

shorebirds will have fresh, crisp plumage when they arrive here. Their feather patterns, with rich earthy colors are stunning and beautifully camouflaged for the surroundings. Not only will the juveniles be photogenic, but their new plumage will make it easy to separate them from the dull and worn plumage of the adults. Knowing this age difference can aid with identification.

Close inspection of shorebird anatomy will reveal differences in structural characteristics, such as bill length, bill shape, leg length, and relative body size. This is the first step to basic shorebird identification. For more advanced identification, observing differences in plumage, calls, and behavior may be required. Some identifications can be helped by habitat preference, such as a purple sandpiper's use of rocky shorelines and sanderling use of wave-induced intertidal habitat. The white-rumped sandpiper has a high-pitched insect-like call that differs markedly from other shorebirds. Calls also help to identify and differentiate between the dowitchers, yellowlegs, and large plovers.

Binoculars are a must for shorebird viewing and, because of the distances

involved, a spotting scope with tripod is recommended for improved viewing of distant flocks as the birds are resting or feeding. When it comes to binoculars, choose a higher power than what is normally good for songbirds. Something in the 10x range will be best for the shoreline as long as you have a steady hand. Most shorebird flocks, especially adults, are skittish and will usually fly off if you approach too closely.

Ethical considerations should always be at the forefront when viewing and photographing shorebirds. It is always best to maintain distance to not cause flocks to flush. When photographing shorebirds, keep a low profile and do not make sudden movements that will alert or flush the birds. A slow and low approach is best. Sandpipers and other shorebirds prefer wide open habitats; they do not feel comfortable with anything that sticks up above the horizon. Often, that means crawling on your belly to get close enough for photographing. The best approach is to let the birds move toward you rather than you toward the birds. Remember, if your presence causes a change in bird behavior or the birds make alarm calls,

you are likely too close and you should move back.

Conservation

Like many of the neotropical migratory songbirds that have been experiencing long-term population declines, so too are most of the shorebirds. According to The International Shorebird Surveys, coordinated by the Manomet Center for Conservation Sciences, population trends for most of Connecticut's regularly-occurring shorebird species show varying rates of decline. Some of the most common species, such as the semipalmated sandpiper, least sandpiper, and short-billed dowitcher, show the highest rates of decline. Loss and degradation of wetland habitat are the major factors in these declines.

Shorebird migration routes are made up of a series of wetlands where the birds can feed and rest. The loss or degradation of a wetland puts stress on the shorebirds by forcing them to fly longer distances between feeding and resting sites during migration. As wetland habitats continue to be lost, more and more birds become susceptible to the high energy demands of migration.

A percentage of these shorebirds will not be able to complete their migration or breed. Others may succumb along the way due to inadequate food availability. This situation has been playing out for years, resulting in the continued decline of many shorebird populations, most notably the red knot.

Sea Level Rise and Climate Change

Compounding the already significant problem of habitat loss is the effect of sea level rise due to climate change on stop-over habitat and Arctic breeding grounds. Sea level rise further constricts shorebird habitat, adding to pressures on populations both in breeding and migration.

Shorebirds, as a group, are well adapted to encountering bad weather, and are hardy birds. Being long-distance migrants, they regularly experience a certain amount of severe weather during their journeys. The question becomes, what is the limit for a small migrant bird when storms are becoming more severe and more frequent? Their instinct tells them they must proceed on their migrations. In fact, some birds wearing transmitters have been known to fly through or around hurricanes during their fall migration.

Extreme swings in temperatures can have an effect on food resources. Changing temperature averages can throw off the ecological timing of the availability of food sources, potentially weakening birds that need to remain strong in order to migrate and reproduce.

For the wildlife watcher, shorebirds are a challenging and inspiring group. One cannot help but wonder what these little birds have encountered and seen in their amazing journeys. Many have been on the remote Arctic tundra and have flown through the Amazon jungle. Some have flown through hurricanes and been chased by falcons, while others have survived being shot at in the swamps of the Caribbean. Many fly hundreds or thousands of miles non-stop over open oceans. Yes, shorebird migrations are truly remarkable and globally inspiring.

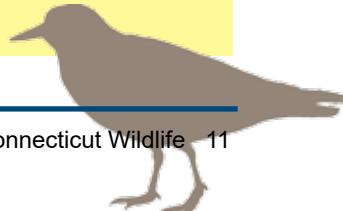


Stopover Significance

The *rufa* subspecies of the red knot provides a textbook example of what happens when a significant stopover site is compromised. This shorebird has historically evolved to be dependent on readily available and protein-rich horseshoe crab eggs in the Delaware Bay region where the bulk of the population stages during spring migration. Horseshoe crab eggs fuel the last leg of the birds' migration to their breeding ground in central Nearctic Canada. Historically, horseshoe crab eggs were available in great abundance when the knots and other shorebirds arrived in the region in May during their northward migration. The birds were able to pack on fat reserves by constantly feeding on horseshoe crab eggs for two weeks. They would double their body weight in preparation for completing the last leg of their journey to Arctic Canada.

However, horseshoe crab populations have declined dramatically since the 1980s, primarily due to overharvesting. Recent changes in fisheries management have helped protect horseshoe crab populations. For a while, this helped stabilize the *rufa* red knot population, although most recent surveys show the knot population is again declining.

Basically, with a much reduced food supply of horseshoe crab eggs, red knots have not been able to obtain enough food to reach their breeding grounds and the population has suffered accordingly. Other shorebirds, like the semipalmented sandpiper, sanderling, and ruddy turnstone, have been impacted as well. In recent years, the red knot population has plummeted by a staggering amount, landing the bird on the federal threatened species list in 2014 and raising questions about its long-term survivability.



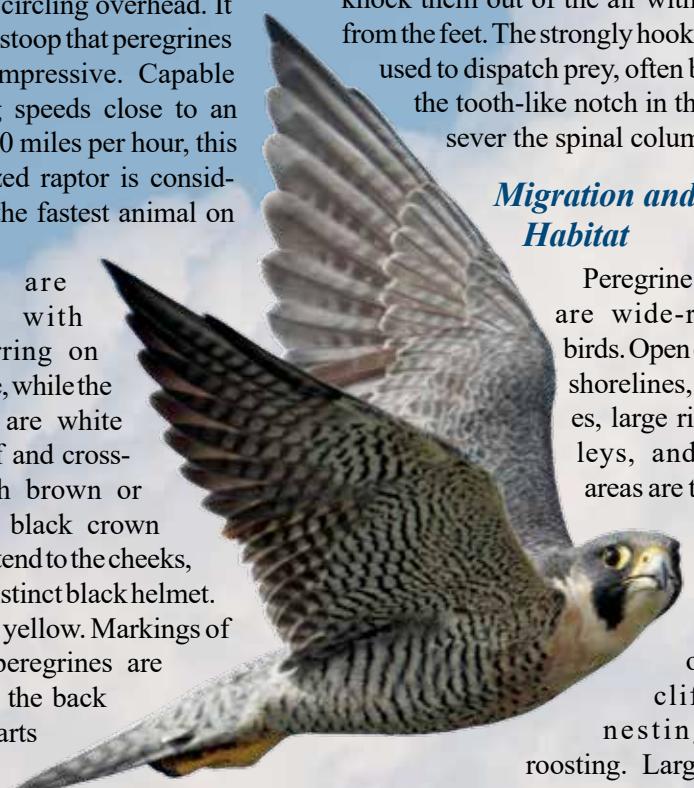
Flying High with the Peregrine Falcon in Connecticut

Article and photography by Paul Fusco, DEEP Wildlife Division

Often hunting from high in the sky, peregrine falcons will attack their prey by stooping (diving headfirst with wings tucked close to the body) or by chasing their quarry from above. There is nothing more frightening to a flock of shorebirds than to have a peregrine circling overhead. It is when in a stoop that peregrines are most impressive. Capable of reaching speeds close to an amazing 200 miles per hour, this medium-sized raptor is considered to be the fastest animal on the planet.

Adults are blue-gray with darker barring on their topside, while the underparts are white to light buff and cross-barred with brown or black. The black crown and nape extend to the cheeks, forming a distinct black helmet. The feet are yellow. Markings of immature peregrines are similar, but the back and underparts are dark brown and the throat is heavily streaked with brown. The legs and feet of immatures are pale blue/gray. Both adult and immature peregrines have a bold, dark, vertical whisker-like mark (mustachial mark) on the sides of the head.

Identifiable from a distance, the flight pattern of powerful, rapid, wing-beats is distinctive to peregrines. Long, pointed wings and long, rounded tails make them extremely fast and agile in the air. Peregrines will also hunt from steady, direct flight, or by coursing (turning and maneuvering in flight).



Occasionally, they may be seen soaring with spread wings and tail. Their main prey is medium-sized birds, including pigeons, blackbirds, sandpipers, and smaller ducks and gulls. Most kills are quick and efficient as peregrine falcons grab prey with strong, taloned feet, or knock them out of the air with a blow from the feet. The strongly hooked bill is used to dispatch prey, often by using the tooth-like notch in the bill to sever the spinal column.

Migration and Habitat

Peregrine falcons are wide-ranging birds. Open country, shorelines, beaches, large river valleys, and urban areas are their domain. They make use of rock cliffs for nesting and roosting. Large cities with tall buildings and bridges mimic the natural cliff habitat characteristics they are drawn to.

Some Arctic nesting peregrines may winter in southern South America, and are easily capable of traveling over 15,000 miles in a year. Fall migration is a good time for observers to see peregrines as they fly south. Coastal locations, such as Lighthouse Point Park in New Haven, are ideal for viewing.

Breeding in Connecticut

Nesting takes place on cliffside ledges or in artificial nest boxes, which are

readily used. Peregrine boxes are open-topped or open-fronted structures with a gravel floor. Boxes are placed under highway bridges and on tall building ledges to provide a safe place for the birds to lay eggs and raise young.

The typical clutch size is three or four cream-colored eggs with brownish markings. Incubation lasts about 28 days and young begin to fly after about 35 to 42 days after hatching. Juvenile peregrines will still be dependent on adults for six to 10 weeks after fledging.

Conservation

Peregrine falcon populations declined rapidly in the mid-twentieth century. By 1975, the population in the entire eastern United States was considered to be extirpated. The peregrine population crash is directly attributed to the deleterious effect of pesticides, particularly DDT, on breeding populations. On a massive scale, birds were unable to reproduce successfully because of the build-up of pesticide compounds in the environment and food chain. Subsequently, the peregrine falcon was one of the first species placed on the federal endangered species list when the Endangered Species Act became law in 1973.

Due to a federal ban on the use of DDT nationwide in 1972 (Connecticut banned its use in 1969) and a dedicated captive breeding and release program, mainly carried out by falconers and the U.S. Fish and Wildlife Service (USFWS), peregrine populations began a long, slow recovery in the eastern United States. Based on the success of the recovery program, the USFWS removed the peregrine falcon from the federal endangered species list in 1999.

In Connecticut, the peregrine was a regular nester through the early 1900s,



Peregrine falcons will use nest boxes placed on buildings and bridges.

but populations started to decline somewhat by the 1920s and 1930s. The decline continued until Connecticut lost its last breeding peregrines in the late 1940s. After a long absence from the state, a pair successfully raised three young in Hartford in 1997. Today, the peregrine remains on Connecticut's endangered species list as a threatened species, while the population continues to recover.

Currently, over a dozen pairs breed in Connecticut and the population is slowly increasing. Most of the nesting pairs are in urban areas that have close proximity to shoreline and/or large river open habitats. Some pairs nest and raise young on traditional cliff-side ledges.

Most raptors have a history of population declines stemming from years of indiscriminate shooting, egg collecting, and food chain contamination mainly

from DDT (see sidebar). Laws were passed early in the 20th century to protect migratory birds, including falcons. Widespread shooting continued into the 1930s, but tailed off due to public concern and conservation measures. Raptor populations experienced slow, but ongoing recovery after DDT was banned in North America in the early 1970s. North American peregrine falcon populations continue to be threatened by the use of DDT in the tropics where some spend the winter. Support for the advancement of alternative methods of pest control in developing nations will help not only the peregrine, but ospreys and a multitude of songbirds that nest in the United States and Canada and winter

What Is DDT?

DDT (Dichloro-diphenyl-trichloroethane) is a synthetic chemical in the family of organochlorine compounds. It is a persistent organic compound with long-lasting effects. The use of DDT as a nuisance insect pesticide was widespread in the 1940s through the 1960s. Its unintended effect on raptors, particularly North American populations of peregrine falcons, ospreys, and bald eagles, was devastating. Once DDT made its way into the food chain, concentrated levels of the pesticide built up in these top predators when they ate contaminated prey. High levels of DDE, a metabolite (breakdown product) of DDT, prevented normal calcium deposition during eggshell development, resulting in thin-shelled eggs that easily broke while being incubated. The birds were not able to reproduce successfully and their populations crashed.

in Central and South America.

Today's biggest threat for peregrines, along with most other wildlife, is the continuing loss of open space, large tracts of habitat, and migratory stopover sites throughout their range. Without healthy wild places, peregrines and many other wildlife will continue to be of conservation concern.



No “Daily Limit” for the Amount of Memories Caught!

Written by Samantha Embersits, Natalie Schafer, Mike Mecteau, and Dalton Quint; DEEP Fisheries Division
Photos courtesy DEEP Fisheries Division

Fish On! ...

... echoes across the pond, **Fish On!** followed by a variety of squeaks, squeals, and laughs. Fish On! is the familiar phrase heard countless times at our Connecticut Aquatic Resource Education (CARE) Program in-person fishing events. Fishing has a variety of rules and regulations that have been enacted to sustain fish populations for generations to come. However, there are no limits placed on the amount and type of memories which are captured at each and every fishing event facilitated by the talented summer seasonal staff and certified volunteer fishing instruc-

tors of the CARE Program.

Since 1986, the CARE Program has been introducing people to the many benefits fishing has to offer. Countless folks – both young and old alike - have participated in our *Introduction to Fishing* course, which includes a classroom learning session followed by a volunteer CARE Instructor led fishing trip.

In 2019, the CARE Program applied for and was one of 10 states selected to receive a “mobile fishing trailer” through the Recreational Boating and Fishing Foundation (RBFF). This attractive trailer came fully-equipped and ready to “pop-up” at a waterbody near you. The trailer was loaded with quality

fishing equipment to give away to those who stopped by to fish. The award of this trailer and equipment supports and validates the outstanding service CARE has provided over the past 30+ years.

Large gatherings, or any gatherings for the most part, were discouraged during the summer of 2020, which sidelined the intended roll out of our new trailer. Just like in fishing, patience and perseverance paid off and the summer of 2021 proved to be extra special.

Four talented young people were hired onto the CARE Program team as seasonal Interpretive Guides this past spring and were tasked with facilitating the 2021 community-based pop-up fish-





Over 50 “Pop-up Fishing Events” were facilitated by CARE staff and the RBFF fishing trailer in 2021. These events were offered all over the state and introduced more than 1,000 people to great fishing right in their neighborhoods.

ing events. They put in many hours each and every week from April through August to increase the awareness of resources that can be found right in your neighborhood, as all too often people pass by a particular waterbody day in and day out never realizing the amazing fishing opportunity right in their own “backyard”. The CARE fishing team led over two dozen fishing events across the state at various locations, including CT DEEP Fisheries specially designated “Community Fishing Waters”, “Trout Parks”, and “Enhanced Opportunity Shore Fishing Sites”. These in person events complemented the new **“Let’s Go Fishing” Online Fishing Course** based on our popular student workbook (found at <https://portal.ct.gov/DEEPCARE>).

Memories in their Own Words

Each of our staff reflected upon the summer’s work (if you can call it work) by telling the story of their favorite memory and how it influenced the people they assisted, as well as them personally.

Samantha (Sam): “The mobile fishing tour has proven itself to be a phenomenal resource for community engagement and enrichment. As instructors, we have helped create a new group of anglers of all ages who may now reap the benefits from our state parks and community fishing waters. My expectations for the mobile fishing tour were surpassed on day one; the employees and volunteers carry profound knowledge and passion for fishing and do not shy away from sharing. The highlight of any event is watching the

excitement of a participant reeling in their first fish, and when we see the same participants return to our events with more confidence.”

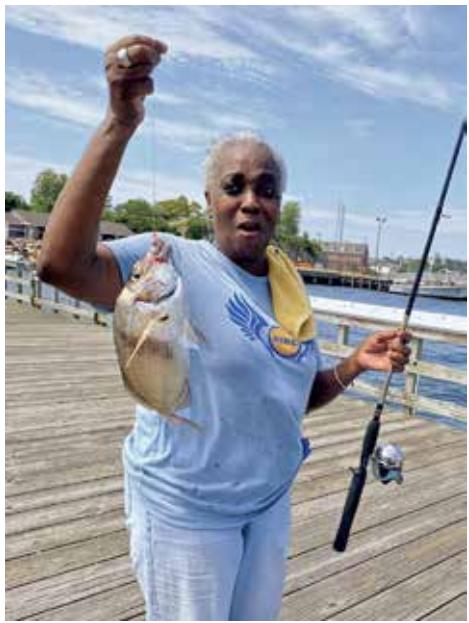
Natalie: “My experience with the CARE Program has personally been rewarding from seeing first successful casts to celebratory first catches. These Pop-Up Fishing Events are places where families and members of the community come to enjoy the outdoors and learn something new. One of the most memorable first catches for me was during a Pop-Up Fishing Event at Center Springs Pond in Manchester,



The Fisheries Division was one of 10 state agencies to receive a fully-equipped fishing trailer to use for “Pop-Up” fishing events.



Fishing is a perfect activity to do as a family unit. Catching time together beats any fish!



From freshwater to saltwater, these are just a few of the folks who came out and caught their first fish EVER through our CARE Program. Many of the "first timers" got hooked and returned to fish with CARE again later in the summer.

Connecticut. A mother and her daughter, who was about 6 or 7 years old, approached our registration table very excited and determined to catch a fish. This young girl could not wait to use her pink "Frozen" rod and wanted to show the entire seasonal staff her new princess-themed tackle box. After teaching her and her mother how to cast at our Practice Casting Station, she was ready to catch her first fish. While baiting their rods, her mother shared with me that they tried fishing a month or so

ago, but the daughter became very discouraged after having no luck with casting or catching a fish. As a single mother, she was trying to give her daughter an outdoors experience and find something that they could enjoy together. After a bit of instruction, she was feeling more confident that she and her daughter would have a more positive fishing experience. Once they got situated on the dock, the daughter casted and within 30 seconds she caught her very first fish! Her face lit up and she proudly reeled in a baby

largemouth bass that was maybe the length of my thumb. Though the fish was small, she was so incredibly happy to have caught something other than aquatic plants. She named the fish "Olaf", got a picture with it, and released it back into the water. She then caught nine other fish throughout the duration of the event. At the end of the event, the mother was so thankful and the daughter left wanting to fish every day and become a future angler. Since then, this mother-daughter duo have been frequent participants at our Pop-Up Fishing Events."

Mike: "The CARE Program has exceeded my expectations in its ability to get people involved in fishing who otherwise would not have access to it. The most memorable catch of the season came from a family who came to two of our events and had not caught anything, and then within the last hour of the class, the youngest son reeled in a 14-inch largemouth bass. The program has had a positive impact on the participants' lives by teaching them the fundamentals of fishing and getting them involved in a great sport, especially after such a tough year with the pandemic. The most rewarding event so far was our first trip to Mohegan Park Pond. We had a full roster of 35 people and a ton of walk-ons making it the largest event I have seen this season. Norwich Police came to volunteer as instructors and we had a massive giveaway of freshwater spinning rods to commemorate the passing of an avid fisherman who wrote fishing articles for the Norwich newspaper. It was such a powerful moment for everyone involved. Not to mention, everyone was catching trout! This program has allowed me to explore the different areas of Connecticut, interact with a diverse demographic of participants, and learn saltwater fishing techniques. I have always been an avid freshwater fisherman, but learning the ropes of saltwater has

been a blast. The biggest epic fail of the season was when I was hooked in the face by a participant who was trying to get their hook back after they snagged the bottom of the pond.”

Our crew veteran and leader, Dalton: “*One of the most rewarding parts about the CARE fishing events is being there to help someone catch their first fish. Whether it is an adult or child, their reactions are always priceless. It is a great feeling being there to help provide them with a memory they will have for the rest of their life. Creating special memories like these at our events will help pave the way for future anglers to get out and enjoy the waters of Connecticut.”*

A Few of the Many Notes from Participants

“Thanks again for coming to West Haven and offering the fishing program to West Haven Youth and Family Services special needs families. Even though weather conditions were extremely hot and humid, we had a great turnout and everyone caught a least one fish each! Your staff was awesome and interacted well with our group. Looking forward to partnering with you again!” – Diane, West Haven

“We attended the fishing last night at Candlewood Lake and the staff and volunteers were amazing, kind, and so helpful! It made such a great learning and fun experience. My son caught a few fish and all he said last night was he was so proud of himself! As a single mother, I couldn’t have asked for a better night with my son and look forward to attending more events.” – Stephanie, Danbury

“My boyfriend and I spent the day fishing at Fort Trumbull State Park with Dalton and crew. We had a great time! Everyone on the team was helpful and fun. As saltwater newbies who brought our own gear, they helped us rig it. We caught four porgies, which is awesome. We plan

Let’s Go Fishing!



CARE is pleased to announce our new online “Let’s Go Fishing” interactive learning module. This online course follows our traditional “Let’s Go Fishing” course and student workbook. However, anyone can now take the class anytime, anywhere, and at your convenience! After taking the course, be sure to join us at a special fishing event in 2022 and discover the fun of fishing.



The CARE pop-up fishing team of (l to r) Dalton, Mike, Diane Dietman (West Haven Youth and Family Services), Natalie, and Sam. We are proud of the effort put forth by this team to implement over 50 fishing events during the summer of 2021.

to fish on our own tomorrow, and they set us up with tackle. Thanks for organizing this great program and crew! Thanks again!” – Dawn and Josh, New Haven

“My son and I had a great morning at Wharton Brook State Park, thanks to you and the team of volunteers!!! It was well organized and everyone was so helpful, it created a wonderful memory. Thanks again” – Mindy, Darien

Anyone Can Try Fishing

The CARE Program is extremely proud to be able to introduce the many benefits of fishing to so many each year. Fishing is something anyone can do. It can be as simple as casting a “Frozen” themed pole or as complicated and

technical as you want to make it. There is a place for you and your family somewhere along this continuum. The one constant is that each fishing trip allows for time spent together where catching memories far outweighs the number, size, or type of fish caught.

For more information on the CARE Program, including how to have a program in your community; partner with CARE; or to join our team of talented fishing coaches—please reach out to Justin Wiggins at Justin.Wiggins@ct.gov and check out our webpage at <https://portal.ct.gov/DEEP/CARE>. The CARE Program will resume our Special Pop-Up Fishing Events in April 2022—check our website in March for a full schedule and to register for an event near you.



Sweat Bee Spotlight

Sweat bees bring added color to your garden

Article and photography by Kyle Testerman, DEEP Wildlife Division

Connecticut is home to over 300 species of bees. While bumble bees and non-native European honey bees are perhaps the most well-known, there are many families of bees with varying sizes, colors, and ecological specialties.

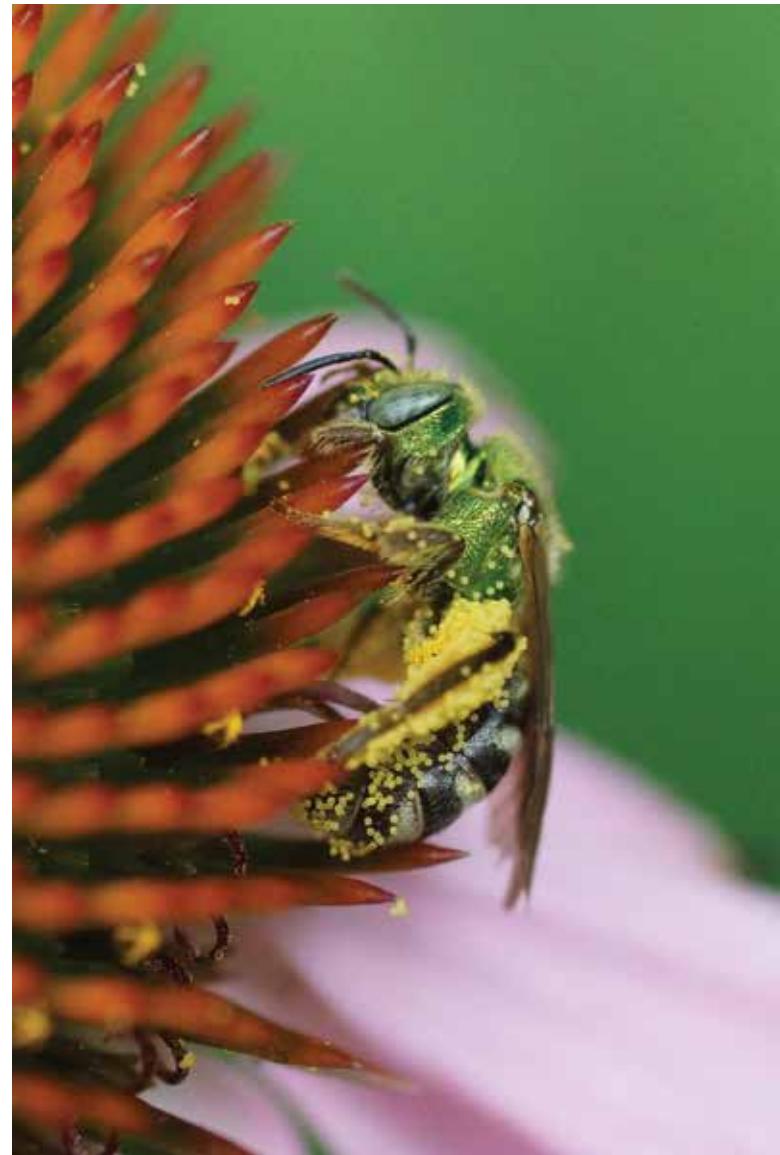
One such family of bees with many diverse members is called *Halictidae*. This family is also sometimes referred to as the sweat bees because they are known to land on humans and consume sweat for nourishment. This curious habit might seem alarming at first, but these native bees are very gentle and rarely sting.

There are many species to look for in the wild, but this article highlights four related groups that are worth looking out for in your garden or anywhere you might see flowers blooming. Most sweat bees are generalists, taking advantage of numerous types of flowering plants that bloom throughout the year. As a result, most sweat bees can be active from spring to fall and have multiple generations in a single year, which not all wild bees can do.

Agapostemon Bees

The first group of sweat bees to highlight are the striped sweat bees in the genus *Agapostemon*. These medium-sized bees are about $\frac{1}{4}$ -inch to $\frac{1}{2}$ -inch in length, with brilliant green bodies and stripes across their abdominal segments. Two common species in Connecticut include the silky sweat bee and the bi-colored sweat bee. Males of both species look very similar, with alternating yellow and black stripes down their abdomens, which might make you think they are a yellowjacket wasp with a shiny green head. Males also appear slightly smaller, as they lack the hairs that females have for collecting sticky pollen. Female silky sweat bees are completely green, with hairy white stripes across their abdomens, while female bicolored sweat bees have a green head and thorax with alternating black and white stripes across abdominal sections. Female sweat bees have long, back leg hairs called scopal hairs, which can help store large amounts of pollen. As with many of the following bees, look for clumps of yellow pollen on the back legs of foraging sweat bees.

Both species of striped sweat bee nest in the ground, where females lay eggs and leave stores of pollen for their developing young. They are generally solitary, but can nest



This female bicolored sweat bee works her way around a purple coneflower, gathering sticky yellow pollen onto long, back leg hairs, called scopa.

communally, sharing a nest entrance that leads to individual brood chambers.

Augochlorini Bees

Another group of remarkably colorful bees are the Augochlorini, a tribe comprised of three related genera in our area. Bees in this group tend to be slightly smaller than the striped sweat bees mentioned above, but have similar bright metallic green bodies. Unlike the striped sweat bees, Augo-

chlorini bees do not have striped abdominal segments, and their green bodies can look metallic with shades of blue, red, or copper. Most Augochlorini nest in the ground, while a few species use soft, rotting wood. Generally, these bees are solitary, but some are more social, with one female laying eggs while her first generation of daughters collects pollen and takes care of the next generation.

Lasioglossum Bees

The next group of sweat bees to look for are in the genus *Lasioglossum*. These bees range from medium-sized to very small, less than 1/8th of an inch, depending on the species. Some species of *Lasioglossum* are also metallic green, but much darker than the other groups mentioned earlier. Other *Lasioglossum* appear black with light stripes on their abdomens, appearing more long and slender compared to the other dark sweat bees, like *Halictus* (see next section). *Lasioglossum* are generally quite abundant and one of the busiest groups of bees each year, being active from early spring to late fall. This makes *Lasioglossum* one of the more important groups of pollinators, having a role in fruit, vegetable, and seed production through most of the growing season.

The majority of *Lasioglossum* nest in the ground, while sometimes using old beetle tunnels in stumps and rotting wood. Nests are created by a fertilized female who overwinters in the burrow. Each generation of daughters helps to expand the nest, creating a maze of tunnels, and cares for the developing brood. Unlike honey bees, where future queens are fed special provisions which help them grow larger than workers, any female *Lasioglossum* can become a queen and take up egg laying duties.

Halictus Bees

The final group of sweat bees to highlight are in the genus *Halictus*, and also called furrow bees. Visually, they may look similar to some larger *Lasioglossum*, but will often look blockier. The most common species of this group you are likely to find in our area is the ligated furrow bee. This species stands out with its dark body and black-and-white bands across its abdominal segments. Pollen-laden females, with their long scopa can look like they have big yellow back legs due to the amount of pollen they can store there.

Many *Halictus* species are also social bees, with colonies ranging from a few females to up to 200. As generalists, females gather pollen from different plants as they bloom throughout the growing season, allowing several generations in a year. The last generation will contain some males and next year's future queens, which will mate before the winter and hibernate in the nest.

Conservation Threats

Native bees and honey bees currently face a number of threats across Connecticut's landscape. Insecticides, both

Bee Family Halictidae



on commercial and residential scales, have plagued domesticated honey bees and wild bees alike. While aimed at reducing insects viewed as "pests," even products marketed as organic, natural, and non-toxic kill non-targeted insects, such as bees, butterflies, and their larvae, and can be deadly to birds. While applications of insecticides are usually done away from commercial bee hives and marketed as bee safe, the majority of wild bees nest unnoticed in the ground, in hollow plant stems or soft wood, or in areas of the yard where pesticide applications attempt to kill mosquitos and ticks.

Wild bees are also under threat from lost or degraded habitat. This might include a lack of suitable nesting sites, too few places to forage nearby, or destruction of overwintering sites. Many ornamental plants, even those having big bright flowers, often lack enough pollen and nectar to be useful to pollinators. Combined with large, mowed lawns, many yards have too few native flowering plants, which can create a food desert for wildlife, forcing bees to travel further to find food or abandon an area altogether.

Actions to Help

The best way to support bees is to promote a healthy food web, which starts with reducing or eliminating pesticide use and improving the habitat around you. Growing good habitat does not require a big yard, and even little changes can lead to big improvements. Planting native plants or helping existing ones in your yard flourish are the backbone of good habitat. Supporting bees requires a variety of native plants that flower at different times throughout the growing season; ones that flower early in spring, mid-summer, late summer, and into the fall will provide you with beautiful flowers all season and ensure there is a good source of pollen and nectar for bees throughout all three seasons. These same actions will help butterflies and their caterpillars, which feed on the leaves of many native plants. Birds also benefit from healthy populations of caterpillars, which they feed to their nestlings. Berries and seeds from pollinated flowers provide fall and winter

food for birds and mammals.

To take things a step further, prioritize plantings for specialist pollinators. The generalists, like sweat bees will still benefit, but so will the bees and butterflies that only use a select group of flowering plants for food. Goldenrods and asters are great fall flowers for specialists, as are milkweeds and sunflowers in the summer. In the springtime, many trees and shrubs, like apple, blueberry, chokecherry and serviceberry, provide food for early season pollinators and fruits for birds and people later in the year. Planting a vegetable garden among your native pollinator plants is another way to improve your garden's success while supporting bees.

Protecting wintering sites for bees is essential for sustaining bee populations year after year. If you do an intensive yard cleanup each fall and spring, the overwintering habitat for bees can be destroyed. As a result, fewer surviving bees will emerge during the next growing season. Instead, you will be relying on new bees colonizing your summer habitat only to have their offspring destroyed in the offseason. To prevent your backyard from becoming an ecological trap, leave some of the "mess" in your garden and yard edges. Leaving downed leaves and dead plant stems ensures bees and other beneficial insects that overwinter can survive until they emerge the following spring and early summer.

No matter the size or state of your backyard habitat, being more observant of the bees you see is a great way to increase your appreciation of the natural world around you. When you do see or take a picture of a colorful sweat bee collecting pollen, share it with our community science projects on iNaturalist. When you add a photo of a bee you saw, experts can help identify what kind of bee it is. Sharing your observations improves biologists' knowledge of bee distributions in Connecticut, and is a great way to catalog the birds, bees, plants, and other wildlife you see in your backyard and daily travels. This year alone, community scientists, like you, have found the first records of the black-and-gold bumble bee in Connecticut in over 100 years! Perhaps other rare bees are in your backyard waiting to be discovered! To find the Wildlife Division's iNaturalist projects, visit www.inaturalist.org/projects/discover-outdoor-connecticut.

While it is difficult to control what happens in your neighbor's yard or other areas around you, the actions you take in your own area are nonetheless important for sustaining healthy pollinator populations. You can learn more about Pollinators in Connecticut on the DEEP website at <https://portal.ct.gov/DEEP/Wildlife/Learn-About-Wildlife/Pollinators-in-Connecticut>.

The best way to support bees is to promote a healthy food web, which starts with reducing or eliminating pesticide use and improving the habitat around you.



Male *Agapostemon* sport black and yellow stripes with bright green heads and lack the leg and body hairs of females. Males visit flowers not to collect pollen, but to sip nectar and wait for potential mates.



A common visitor to pollinator gardens, the ligated furrow bee does not have brilliant green coloration. But, when its scopa are full of bright pollen, it certainly stands out among others.



Backyard vegetable gardens thrive when local pollinator populations are healthy. Here, a pumpkin flower is being visited by an Augochlorini.

Site Remediation Benefits Wildlife

Preserve Established on Former Industrial Site in North Haven near Quinnipiac River

Commissioner Katie Dykes and other staff from the Connecticut Department of Energy and Environmental Protection (DEEP) were joined by representatives from the U.S. Environmental Protection Agency (US EPA), Pfizer Inc. (Pfizer), the Town of North Haven, and North Haven community stakeholders to highlight the completion of remediation activities and the opening of a 57-acre preserve at the former Pharmacia & Upjohn Company site located at 41 Stiles Lane in North Haven. The 78-acre site has a long history of industrial use, dating back more than 125 years to its use as a clay mine and brickyard, and later when it was occupied by Carwin Chemical, Burndy

Corporation, Upjohn Chemical, Dow Chemical, and Pharmacia Corporation. These owners of the property manufactured products used in dyes and pigments; photographic chemicals; sunscreen agents; additives for soaps, perfumes and cosmetics; agricultural herbicides; pharmaceuticals and photo-initiators. All manufacturing ceased at the site in 1993. In 2003, Pfizer Inc. acquired Pharmacia Corporation and assumed responsibility for the site, though Pfizer never operated on the property.

An event was held in early September to mark the end of a decades-long remediation process, with Commissioner Dykes presenting Pfizer with a Stewardship Permit, which defines long-term obligations for maintaining the property, and a ribbon-cutting for Brick Yard Point, a 57-acre preserve and interpretive trail network adjacent to the Quinnipiac River. The US EPA deemed the remedy construction complete in September 2019. In March 2021, DEEP issued a Stewardship Permit for the site which covers ongoing operations and maintenance, including long-term groundwater extraction, treatment and monitoring; maintenance of protective barriers and covers, and maintenance of institutional controls and environmental land use restrictions.



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The Quinnipiac River and associated lands along its length are important wildlife habitats for many species, including northern harriers.

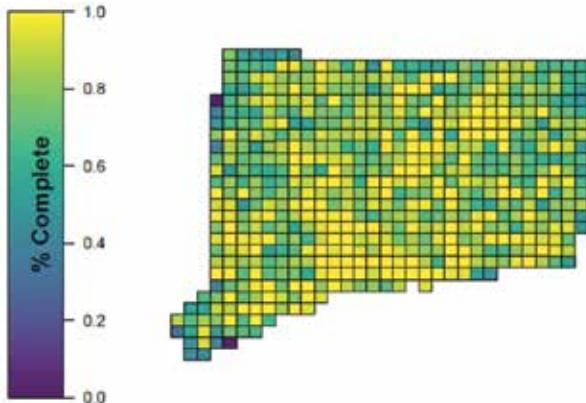
A key component of the remediation work was the restoration and preservation of over 57-acres of upland and wetland habitat on the banks of the Quinnipiac River, and creation of an interpretive trail system, totaling nearly two miles in length for self-guided viewing and interpretative environmental education. The Brick Yard Point interpretive trail system is currently open to the public by appointment on a limited basis. Approximately 17 acres of land on the western side of the property has been made available for future commercial or light industrial use.

The 40-mile-long Quinnipiac River and its adjacent habitat are vitally important to wildlife that depend on healthy wetland systems. One can find bald eagles, ospreys, and possibly northern harriers (a state endangered species) nesting along the river. The river also serves as an important migration corridor for migratory birds that travel between their summer homes in North America and winter homes farther south. Migratory birds will use various stopover sites along the corridor to find food and resting sites. Besides its importance to wildlife and wetland health, the Quinnipiac River corridor provides recreational opportunities such as paddling, hiking, and bird watching.

FROM THE FIELD



**CT Atlas block completeness
status as of June 15, 2021**



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Over 700 volunteers have logged a minimum of 20,000 hours during the last three breeding seasons to contribute data to this CT Bird Atlas Project. A total of 166 species have been confirmed as breeding in Connecticut.

State Lands Forester Ed McGuire Retires

State Lands Forester Ed McGuire retired from state service on August 1, 2021 after 25 years of overseeing state land forestry operations in the northeast quadrant of the state. Ed was primarily responsible for DEEP Division of Forestry activities in Shenipsit, Nipmuck, and Nye Holman State Forests and provided additional assistance in Natchaug and Goodwin State Forests, as well as state wildlife management areas and parks when needed.

As a dedicated and passionate silviculturist, Ed's legacy work restoring oak stands will provide ecological benefits across the region throughout the next century. Ed was also a dedicated wildland firefighter and readily responded to in-state wildfires regardless of the hour. Ed held numerous USDA Forest Service wildland firefighter qualifications – firefighter, Feller-2, Crew Boss, Field Observer, Heavy Equipment Operations Boss, and Dozer Boss – throughout his Connecticut Interstate Fire Crew (CIFC) career.

The staff of the Bureau of Natural Resources wishes Ed all the best in retirement.



State Lands Forester Ed McGuire checks successful oak regeneration after one of his many silvicultural treatments in a state forest. Photo courtesy of the DEEP Division of Forestry.

CONNECTICUT Wildlife

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Order on-line with a credit card through the DEEP Store at: <https://portal.ct.gov/DEEP-CT-Wildlife-Magazine>

Conservation Calendar

2021 Hunting Season Dates

- Sept. 15 Opening of the Fall Archery Deer and Turkey Season
- Oct. 2 AND Nov. 6 ..Junior Waterfowl Hunter Training Days. Learn more at <https://portal.ct.gov/DEEP-Junior-Hunting>.
- Oct. 9Junior Pheasant Hunter Training Day Learn about special junior pheasant hunting events at <https://portal.ct.gov/DEEP-Junior-Hunting>.
- Oct. 16Opening Day of the Small Game and Pheasant Hunting Season. Learn more details about pheasant hunting and stocking at <https://portal.ct.gov/DEEP/Hunting/Pheasant-Hunting>.
- Nov. 6-13Junior Deer Hunter Training Days (excluding Sunday). Learn more at <https://portal.ct.gov/DEEP-Junior-Hunting>.
- Nov. 17Opening Day of the Firearms Deer Hunting Season on state and private land.
- Dec. 8Opening Day of the Muzzleloader Deer Hunting Season on state and private land.

Consult the 2021 Connecticut Hunting and Trapping Guide, 2021-2022 Migratory Bird Hunting Guide, and 2021 Connecticut Fishing Guide for specific season dates and details. Guides are available at town halls and outdoor equipment stores, and also on the DEEP website (<https://portal.ct.gov/DEEPHunting>; <https://portal.ct.gov/DEEPFishing>). Go to <https://portal.ct.gov/CTOutdoorLicenses> to purchase Connecticut hunting, trapping, and fishing licenses, as well as required permits and stamps. The system accepts payment by VISA or MasterCard.

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You Can Help the Wildlife Division Keep Track of:

Bobcats Black Bears Fishers Moose Ruffed Grouse Wild Turkey Broods

Include the date, time, and exact location where the animals were observed.

Report bobcats, black bears, and moose at <https://portal.ct.gov/DEEP/Wildlife/Report-a-Wildlife-Sighting>.

Report fishers at deep.ctwildlife@ct.gov. Be sure to include the date, time, location, and any photos or video of your sighting. Report vehicle-killed fisher, as well, so they can be collected for research.

Report ruffed grouse at deep.franklinwildlife@ct.gov. Grouse sightings may consist of actual bird observations or drumming activity. Individuals are also asked to send in grouse wings and tails from hunter harvested or road-killed birds (send an email to get instructions). These items are used to determine the age and sex of grouse, which will assist in assessing productivity and harvest composition.

Report wild turkey broods (hens and poult only) from the period of June 1 to August 31 using our online form or a traditional paper form that can be submitted at the end of the season. Although the turkey brood reporting season has ended, keep this in mind for next summer. More details can be found on the DEEP website at <https://portal.ct.gov/DEEP/Wildlife/Community-Science-Volunteer-Opportunities-CT-Wildlife-Division#TBS>.

CONNECTICUT Wildlife

Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources / Wildlife Division
Sessions Woods Wildlife Management Area
P.O. Box 1550
Burlington, CT 06013-1550

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For the wildlife watcher, shorebirds are a challenging and inspiring group. These sanderlings may be on their way to the southernmost tip of Patagonia for the winter after having departed their breeding ground in the far northern reaches of Arctic Canada. They will encounter all kinds of challenges on their journey that will test their strength and endurance.