March/April 2017

Connecticut Wildlife

CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
BUREAU OF NATURAL RESOURCES
DIVISIONS OF WILDLIFE, FISHERIES, AND FORESTRY

Eye on the Wild

Winter is finally behind us, but this issue of Connecticut Wildlife *provides a look into some of the work that went on while most people were staying inside. Every January, a die-hard group of volunteers braves the winter weather, even if it is snowy, windy, or icy, to participate in the Midwinter Eagle Survey (page 3), helping the Wildlife Division collect important data on bald eagles. Division staff also was out in the cold to conduct the annual check of wood duck nest boxes on state land (page 10), when the boxes are thoroughly inspected, cleaned, and provided with new nesting material. A new feature highlights the important work conducted by the State Environmental Conservation Police Division. Officers are in the field year round – work definitely does not slow down in winter, as you will see on pages 18-19.*

*This issue also looks ahead to spring and summer. Is Connecticut facing another gypsy moth outbreak that could result in heavy tree defoliation (pages 6-7)? Are you heading to the beach this summer? With help from Audubon Connecticut, we provide tips on how to be bird friendly at the beach (page 14). Do you see wild turkeys during spring and summer? If so, we urge you to participate in the annual Wild Turkey Brood Survey (page 15). Volunteers record sightings of turkey poults and hens from June 1 through August 31 on a special data sheet that can be downloaded from the DEEP website (*www.ct.gov/deep/wildlife*; click on "Volunteer Opportunities"). Data submitted by "turkey observers" are tabulated at the end of the season to provide a window into the annual productivity of the state's wild turkey population. Are there black bears in your yard? See page 21 to find out how to avoid problems with bears. Do your spring and summer plans involve kayaking, canoeing, or jet skiing? Make sure you read page 22 to learn what to do if a mute swan nest is nearby.*

We also tackle some bold topics, such as "Busting the Myth about Sporting License Fees" (pages 8-9). This article answers questions anglers and hunters have about where their license fees go and what the money pays for. Another article examines the federal Endangered Species Act and its importance in keeping species from disappearing entirely (pages 4-5).

Most notably, this issue highlights the long and distinguished career of recently retired Marine Fisheries Division Biologist Penny Howell (pages 16-17). Penny started out her career as a biologist with the Wildlife Division more than 38 years ago, but soon after found her niche with Marine Fisheries where she had the opportunity to research Connecticut's marine life, including lobsters, winter flounder, and horseshoe crabs (just to name a few). Many of you also know Penny through the articles she wrote for Connecticut Wildlife *over the past six years as a Contributing Editor. Penny's absence will be felt in the Marine Fisheries Program; she also will be missed by the magazine staff. However, we are grateful for Penny's many years of service and we wish her well in retirement.*

Kathy Herz, Editor

Cover:

The y ellow-crowned night-heron is listed as a species of special concern in Connecticut. Learn more about endangered and threatened species on page 4.

Photo courtesy of Paul J. Fusco

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The Federal Aid in Wildlife Restoration Program was initiated by sportsmen and conservationists to provide states with funding for wildlife management and research programs, habitat acquisition, wildlife management area development, and hunter education programs. Connecticut Wildlife *contains articles reporting on Wildlife Division projects funded entirely or in part with federal aid monies.*

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Dedicated Volunteers Help with Midwinter Bald Eagle Survey

Written by Brian Hess, DEEP Wildlife Division

Animal magnetism – what else could get 240 volunteers outside in 20° F weather before sunrise on a weekend morning in early January? Fortunately, bald eagles have plenty of charisma and magnetism.

P. J. FUSCO

Winter is the perfect time to conduct a comprehensive count of eagles present in Connecticut because ice in northern latitudes drives eagles south. Our state hosts many wintering eagles along its larger rivers and tributaries.

These dedicated participants were conducting DEEP's annual Midwinter Eagle Survey. Each contributor woke up early and traveled to their assigned body of water to spend a few frigid hours counting eagles perched in trees and flying overhead.

The 2017 survey was conducted on January 14 from 7:00 to 11:00 AM. A record number of volunteers documented their observations at a record number of sites around the state. Those observers counted 139 eagles, a healthy number, especially considering the warmer than average winter.

Winter is the perfect time to conduct a comprehensive count because ice in northern latitudes drives eagles south. Eagles need open water to hunt for fish and become concentrated along rivers and lakes that have not frozen over. Connecticut hosts many wintering eagles along its larger rivers and tributaries.

The Midwinter Eagle Survey is a nationwide survey that started in 1979 with the goal of creating an index to monitor the wintering bald eagle population in the lower 48 states. An index is an indirect count that monitors a portion of a population or signs of a population; it may not provide a total population number, but is useful for demonstrating population trends.

Initially, the count was coordinated by the National Wildlife Federation. National coordination has shifted over the years to the Bureau of Land Management, National Biological Survey, U.S. Geological Survey (USGS), and U.S. Army Corps of Engineers (USACE). The USACE has run the survey in partnership with the USGS since 2007. DEEP has been a state partner since the beginning in 1979.

Drawbacks to this type of survey include inconsistencies from year to year in weather and volunteer participation. Sites are selected for convenience and legal access rather than at random. Some surveyors may be better at finding eagles than others, introducing bias. By carefully filtering and analyzing data, researchers are able to detect significant trends. From 1986 through 2010, Connecticut's numbers varied wildly from year to year, with a low of 33 in 1987 to a high of 128 in 1996. Through the noise, count numbers increased 2.3%, though that trend is not statistically significant.

Despite its limitations, the Midwinter Eagle Survey remains a vital long-term baseline dataset. It provides an important peek into an essential part of the eagles' life history that is more difficult to study and analyze than nesting.

The icing on the cake is the tradition of getting up early and braving the cold, drawn by the magnetism and charisma of an American icon.

2017 Midwinter Eagle Survey by the numbers:

Total eagles seen: 139
Volunteers: 240
Observation points covered: 151
Miles of shoreline checked: 585

DEEP would like to thank all the participants in this year's survey, along with staff from The Last Green Valley for their help coordinating and collecting quality data throughout the state.

The following was used as a reference for this article: Eakle, Wade L., et al. "Wintering Bald Eagle Count Trends in the Conterminous United States, 1986-2010." Journal of Raptor Research 49.3 (2015): 259-268.

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Endangered Species Act: *Keeping Species from Disappearing*

Article and photography by Paul Fusco, DEEP Wildlife Division

What do bald eagles, gray wolves, American alligators, and spotted owls have in common? All were once, or still are, on the federal Endangered Species List. The Endangered Species Act (ESA) offers protection and a chance for a species to recover. This landmark conservation law has benefitted numerous species of plants and animals that may have been driven to extinction. Without the ESA, many of these species would no longer exist.

Our national symbol, the bald eagle, was once close to becoming extirpated (eliminated) in the lower 48 states due to the use of harmful chemical pesticides and illegal shooting. The Endangered Species Act gave federal agencies the responsibility to protect and recover the population through regulatory authority, which allowed the bald eagle to be brought back from the precipice.

The law has worked as intended, and remains a catalyst for recovery for many additional species, including American alligator, peregrine falcon, Kirtland's warbler, wood stork, black-footed ferret, and others. However, the law has not been able to help or came too late for some species, like the now extinct passenger pigeon and heath hen. Still, after many years of being on the list, other species are continuing their long battle against the odds, such as the California condor, Florida panther, and whooping crane. Their recovery has been slow, expensive, and sometimes controversial. Each species has its own individual circumstances and requirements, making recovery difficult for listed species as a whole, especially lesser known plants and animals. The more charismatic larger species, such as the bald eagle, get more attention than less charismatic species, such as a pupfish. With greater attention comes more support for recovery actions.

Original legislation to protect species began when Congress passed the Endangered Species Preservation Act in 1966, which gave limited protections to species deemed to be endangered. The law also authorized the U.S. Fish and Wildlife Service to purchase land as habitat for endangered species. In 1973, the Endangered Species Act was passed by Congress and signed by President Richard Nixon, who was a driving force in getting the 1966 law strengthened and passed. The 1973 law offered greater protections and was more comprehensive than its 1966 predecessor. One of the most important aspects is the protection and acquisition of habitat, which is fundamental for the conservation and recovery of imperiled species. Habitat loss is the single major factor in the initial declines of most species on the list. The cost of recovery versus the cost of conservation before listing is a main focal point for wildlife managers and conservation organizations. It is much less costly to prevent a species from slipping to the point of being listed than it would be for recovery after it needs listing.

The cost of recovery for some species can be high when their populations are very low. Take into account the whooping crane, one of North America's largest and most spectacular birds. By 1941, due to habitat loss and overshooting, 21 cranes remained in existence. Through active conservation efforts, and with the help of the Endangered Species Act, the population has increased to approximately 600, with about 25% of those in captivity. The cost of maintaining and increasing the whooping crane's population since 1941 has been high. Each individual crane has a conservation value that could be calculated to include not only project money, but the time and labor of many people. Yet, almost every year, setbacks occur as one or more cranes are lost to illegal shooting along their migration path.

The Endangered Species Act is currently administered by the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration. When originally passed, the Endangered Species Act had almost unanimous bipartisan support in Congress. Today, the law is under pressure from detractors and negative influence from those with less conservation-minded attitudes.

A main criticism has been once a species goes on the list it never comes off. This is not true as many species have recovered and been removed from or downgraded on the list. A few examples

The brown pelican was first declared endangered in 1970 under the Endangered Species Preservation Act, a precursor to the current Endangered Species Act of 1973. After making an incredible recovery, the brown pelican was delisted in 2009.

Endangered vs. Threatened

Under the federal Endangered Species Act, species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct populations.

Endangered Species Act Successes

American alligator, delisted in 1987.

Peregrine falcon, delisted in 1999.

Bald eagle, delisted in 2007.

West Indian (Florida) manatee, downlisted to threatened in 2017.

include bald eagle (recovered 2007), peregrine falcon (recovered 1999), brown pelican (recovered 2009),West Indian manatee (downlisted 2017), and American alligator (recovered 1987).

When a species is listed, necessary recovery work is often arduous, proving that it is effective and cost-efficient to protect and conserve species proactively **before** they are in the dire situation of being added to the endangered and threatened list.

The Gray Wolf

The gray wolf presents a unique situation – its population in the lower 48 states has multiple designations, due in part to wolf reintroduction projects that have taken place in some western states.

In most of the United States, the gray wolf is listed as endangered. The Minnesota population is listed as threatened. In Wyoming, the wolf is listed as an experimental population due to a reintroduction project, while in other northern Rocky Mountain states the wolf is delisted due to recovery.

Connecticut's Endangered Species Act

In 1989, the Connecticut State Legislature passed Public Act 89-224 "An Act Establishing a Program for the Protection of Endangered and Threatened Species." The overall goal of the legislation is to conserve, protect, restore, and enhance any endangered, threatened, or special concern species and their essential habitat.

A list of imperiled species was developed by CT DEEP biologists and taxonomic experts, which led to the first list becoming official in 1992. DEEP is mandated to review and update the list every five years.

As part of this Program, DEEP Commissioner conducts studies of wildlife and plants to better understand their distribution, population, habitat needs, and limiting factors, which determine conservation and management actions.

For more information, visit the DEEP website, including an Endangered Species Slideshow at:

http://www.ct.gov/deep/lib/deep/wildlife/pdf_files/outreach/EndangeredSpecies.pdf

Another Spring of Heavy Gypsy Moth Defoliation Expected

May and June rains to determine effectiveness of beneficial fungus

A heavy presence of gypsy moth caterpillars is expected this spring along with significant defoliation of hardwood trees. Gypsy moth populations have been on the rise since 2014 with the greatest impacts so far in southeastern and south central Connecticut.

Dry spring weather in recent years has limited the effectiveness of a naturally occurring soil borne fungus, *Entomophaga maimaiga*, which is lethal to only gypsy moth caterpillars and normally keeps their populations in check.

The Connecticut Agricultural Experiment Station's (CAES) statewide gypsy moth egg mass survey shows large amounts of gypsy moth egg masses, especially in eastern Connecticut. This leads scientists to believe there will be a continued hatch and extensive caterpillar activity in 2017. Residents, arborists, and foresters have also reported large amounts of gypsy moth egg masses. Normal amounts of precipitation are needed in May or early June to activate the fungus and knock back the gypsy moth population. It is important to remember that Connecticut has experienced similar cyclical outbreaks, with the weather eventually favoring growth and effectiveness of the *Entomophaga maimaiga* fungus.

Annual forest pest and disease aerial surveys conducted by CAES documented that gypsy moth caterpillars defoliated 1,337 acres in 2014 and 175,273 acres in 2015. Two consecutive dry springs in 2015 and 2016 allowed a significant increase in gypsy moth populations, resulting in 204,167 acres defoliated in 2016, mostly in southeastern and south central Connecticut. While the total acreage impacted by gypsy moths was not dramatically higher in 2016, the degree of defoliation was more severe.

While most trees will refoliate initially, repeated attacks from gypsy moths can weaken a tree's natural ability to ward off secondary stressors, such as drought or other insects and disease. Oaks are the most preferred tree species. Under heavy infestation, gypsy moths will eat just about everything with green leaves and even needles. Some people may remember that nearly 1.5 million acres were defoliated by gypsy moths in 1981. While Connecticut lost trees, the forests recovered.

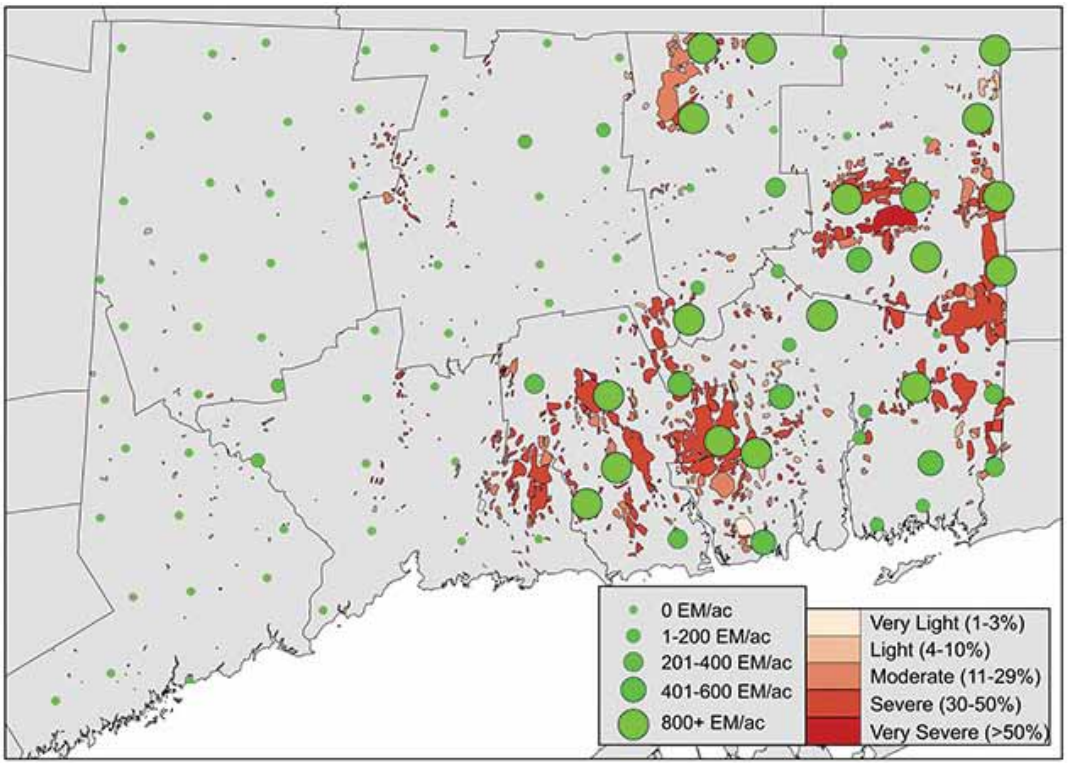
P. J. FUSCO

DEEP and CAES recognize homeowners are concerned with repeated summers devoid of leaf cover that provides beneficial cooling shade. Woodland owners also are concerned about widespread damage and even tree mortality from repeated gypsy moth defoliations.

Gypsy moth infestations are difficult to control over wide areas. While there are no plans for state-funded spraying, individuals interested in pursuing treatments should hire a certified arborist or licensed pesticide applicator to protect their trees in a safe and effective manner.

Information highlighting the history, life cycle, and impacts on trees and forests of gypsy moths, along with recommended management strategies, can be found on the DEEP website at www.ct.gov/deep/gypsymoths *and the CAES website (*www.ct.gov/caes/lib/caes/documents/publications/fact_sheets/entomology/gypsy_moth_fact_sheet.pdf*).*

2016-2017 Gypsy Moth Egg Mass Grid Survey Results



MAP PROVIDED BY CONNECTICUT AGRICULTURAL EXPERIMENT STATION

The Gypsy Moth: Outbreaks and Natural History

The gypsy moth was introduced to North America from Europe around 1868. In Europe, the moth has been known to be a problem since at least the 1600s. In North America, the gypsy moth is established in the northeastern parts of the United States and adjacent parts of Canada. It continues to spread west and south.

Outbreak Status

If the gypsy moth was to stay at low population levels, it would be of little more than a passing note among residents. At low levels, natural controls, such as predators and parasites work to keep the gypsy moth population in check. Wasps parasitize egg masses, while beetles, birds, and mammals consume each of the various gypsy moth life stages. Diseases are also a factor.

The gypsy moth has the ability to go into outbreak mode at regular intervals. In Connecticut, 1971 and 1981 are remembered as particularly bad years. In 1971, defoliation topped 650,000 acres, while in 1981 that number reached 1.5 million acres – nearly 80% of the state's 1.9 million acres of forestland.

Gypsy moth caterpillar feeding on oak leaf.
PHOTO: CONNECTICUT DEEP FILE

Gypsy moths kill or damage trees when their caterpillars consume all or almost all of the leaves.

Of Mice and Moths

It is not known for certain why the gypsy moth goes into outbreak mode. One hypothesis ties the start of an outbreak to a low year of mast production. Mast refers to the accumulated seeds of forest trees, such as acorns, beech nuts, and hickory nuts. Mast is a primary food for a variety of wildlife, including white-footed mice. Although gypsy moths are not a favorite food for white-footed mice, they do feed on gypsy moth larvae and pupae and help keep the population in check during non-outbreak years. With a decline in mast crops, the mouse population also drops. When this happens, the gypsy moth population, freed from consumption by mice, begins to increase. Once the gypsy moth population gets past a point at which mice are able to help keep it in check, growth of the gypsy moth population tends to accelerate, until it achieves outbreak status.

The pattern of collapse of the gypsy moth population on the other end of an outbreak is better known. At low moth population levels, a virus known as nuclear polyhedrosis virus (NPV) is often persistent within the population, also at low levels. After the moth population reaches outbreak status, NPV tends to spread widely within the moth population. However, there is usually a lag of two to three years. Once NPV catches up with the moth population, it infects and kills moths in great numbers. This infection occurs during the caterpillar stage. For most of the history of the gypsy moth in North America, NPV has caused the population to collapse.

The Maimaiga Fungus

The emergence of the maimaiga fungus (*Entomophaga maimaiga*) in 1989 changed this dynamic greatly. This fungus from Japan was released several times in the U.S. since 1910 as a potential biological control agent. After each trial, its effects on gypsy moths appeared to be minimal until 1989, when to the surprise of everyone, this fungus immediately began killing gypsy moth larvae on a wide scale. The spring of 1989 was exceptionally wet in Connecticut. Since then, the fungus has re-emerged on its own, proving that it is able to sustain itself in the wild. The maimaiga fungus is effective against gypsy moth caterpillars because the annual life cycles of the two organisms interconnect well. The fungus persists in the soil and leaf litter as a resting spore. In spring, when there is an adequate amount of rain, humidity in the soil and leaf litter activate the fungus.

Starting around the third instar, gypsy moth caterpillars spend a significant amount of time on the ground as they seek shelter during hotter parts of the day. When these larger caterpillars begin descending to the ground, activated spores of the fungus have no problem finding and infesting them. After being infested, caterpillars begin to climb back up a tree before succumbing to the fungus. From this perch, as dead caterpillars decompose, the fungus releases a second, wind-borne type of spore that spreads the disease even further among surrounding caterpillars. Once it gets going, the fungus tends to move quickly through the gypsy moth population.

At the end of the gypsy moth season, the fungus produces a resting spore which then accumulates in the soil and leaf litter to await the next year. These resting spores have been shown to remain viable in the soil and leaf litter for at least 10 years.

This cycle of infection has kept the gypsy moth population in Connecticut at a low level for the past two-and-half decades. Each time the population began to grow, the fungus managed to prevent it from becoming anything more than a localized outbreak. That is, until the recent drought.

Situation in 2016 and 2017

With much of Connecticut suffering under drought conditions in 2015 and 2016, the number of localized gypsy moth outbreaks has increased and begun to spread. This is attributed in large part to the inactivated maimaiga fungus. If 2017 is as dry as the previous two years, there is concern that gypsy moth activity could intensify.

There is one other aspect of the forest mast, mice, and gypsy moth story that deserves mention. While the number of gypsy moth larvae or pupae tends not to affect the mice population directly, the gypsy moth does influence how well oaks and other forest trees produce their seed crops. A sufficiently large outbreak of the gypsy moth can lead to a decreased forest mast crop in subsequent years, which will then lead to a decrease in the number of white-footed mice in the forest. Mice are known to be a main reservoir for the bacterium that causes Lyme disease. As a result, gypsy moth outbreaks have been associated with declines in the number of local cases of Lyme disease.

Busting the Myth about Sporting License Fees

Written by Mike Beauchene, DEEP Fisheries Division

More frequently than we would expect, and frankly would like, we are asked by anglers, "Why can't the money from our fishing license fees go to support fishing and not the state General Fund?" Our reply is, "It does, all of it, 100%." We then launch into an all-too-familiar but important explanation.

Each year anglers and hunters provide a large share (60%) of the total revenue to the Bureau of Natural Resources (BNR) and hence cover much of the cost of the programs (fish, wildlife, and forests). This money comes from the purchase of licenses, permits, tags, and stamps, along with dedicated contributions from the Wildlife and Sportfish Restoration Funds (a trust funded by federal excise tax paid on the purchase of equipment and motor boat fuels). The majority of the remaining 40% is comprised of Connecticut General Fund/taxpayer support. Anglers and hunters have clearly demonstrated a long-term and continued commitment to our natural resources, benefiting not just anglers and hunters, but all of the residents of Connecticut. All (100%) of the fees generated from the sale of licenses, tags, permits, and stamps must be allocated to the BNR by law (Connecticut General Statutes 26-15).

PHOTO COURTESY W. ARDUSSI

Revenue from the sale of fishing licenses has always provided much of the funding necessary to provide high-quality angling opportunities and the associated memories.

History of Sportsmen Support

Federal funding for conservation and restoration began for wildlife with the Pittman-Robertson Act (1937) and was greatly expanded to include fish with the Dingell-Johnson Act (1950) and the Wallop-Breaux Amendment (1984). These important federal laws provide the ability for the federal government to collect an excise tax on equipment, deposit the revenue into a trust, and award grants to states for fish and wildlife programs. Connecticut's first allocation in 1939 was $2,499.22, while in 2017 it was over $8.7 million.

In the 1920s, states, including Connecticut, enacted licenses, stamps, and tags to generate money to fund the expense of rearing or purchasing fish and small game for anglers and hunters to harvest. "Stocking" of fish and game was necessary, as natural populations of some game species were nearly non-existent due to a century of land use modification and resource exploitation (see our 150th Anniversary webpage at *www.ct.gov/deep/naturalresources150* for details of the early years of natural resource management). These dedicated funds were a welcome addition and provided sustainable revenue to augment the General Fund allocation (tax revenue from all residents) to the Connecticut Board of Fisheries and Game (now currently the DEEP Bureau of Natural Resources).

Today's Challenges

For over a 100 years, the formula of license sales, federal funds, and state General Funds have provided the necessary money to do important on-the-ground work to enhance habitat, acquire land, improve water quality, increase fish and wildlife populations, stock game, manage forests, and create a supportive and educated constituency. Our resources and residents have greatly benefited from this funding, and most fish, wildlife, and forests are flourishing.

The downside is since the late 1990s, the number of people who purchase a sporting license has been steadily declining. Therefore, while federal grant money remains stable, revenue from license sales has been dropping. Combine this with reduced allocations from General Fund taxpayer dollars and it is easy to see the difficulty the BNR has providing the same level of support for conservation, preservation, and recreation-based programs. From 2011 to 2016, the Fisheries Division has been working to reverse this trend. Through various initiatives, 15,000 more people age 16 or older participated in fishing in 2016 than in 2011, an increase of 8.7%. This is a good start; however, the important revenue from license sales only increased $1,513 or 0.9%. The difference between the increase in participation and the slight increase in license sales is at-

tributed to anglers reaching age 65 and obtaining a free fishing license (over 30,000 free licenses were distributed in 2016).

Moving Forward

Over the past decade, as a result of state budget challenges, there has been consistent pressure to reduce the allocation of taxpayer dollars from the General Fund. To help provide consistent funding independent of taxpayer money, the sales of fishing and hunting licenses are more important than ever. The simple act of purchasing a license, even if you never get to hunt or fish in that year, provides financial support needed to ensure our resources remain strong. The Bureau is also looking for new sources of revenue, including fees for a trout/salmon stamp and a discounted fishing license for seniors (currently free). Efforts to increase funding for fish and wildlife conservation are also underway at the national level where the Blue Ribbon Panel on Sustaining America's Diverse Fish and Wildlife Resources has recommended that the U.S. Congress dedicate up to $1.3 billion annually in existing revenue from the development of energy and mineral resources on federal lands and waters to the Wildlife Conservation Restoration Program.

All (100%) of the fees generated from the sale of licenses, tags, permits, and stamps must be allocated to the Bureau of Natural Resources by law (CT General Statutes 26-15).

What Can You Do?

- *Simply purchase a license every year. ALL of your money will support fish and wildlife.*
- *Continue to fish and hunt. Your purchase of equipment helps keep the federal trust funded.*
- *Spread the word to your hunting and fishing friends about the importance of license sales.*
- *Introduce/share your outdoor passion with a friend or family member. Engaging the next generation will be critical for long-term success.*

Thank you for your support.

M. BEAUCHENE, DEEP FISHERIES DIVISION

"Thanks for clearing up the misconception of where the sportsman's dollars are going. Nice to know our hard-earned dollars are going to the right place, and we as sportsmen are reaping the benefit. You will never hear me complain again about the cost of a license." Peter G.

Annual Wood Duck Box Checks Completed

Written by Kelly Kubik, DEEP Wildlife Division

In 2002, the Wildlife Division conducted an assessment of all wood duck nest boxes on DEEP properties. Based on those results, a survey protocol was developed that allows biologists to detect changes in both productivity and use from year to year (or between years). The results of this yearly analysis determine the Wildlife Division's management decisions concerning the wood duck nest box program.

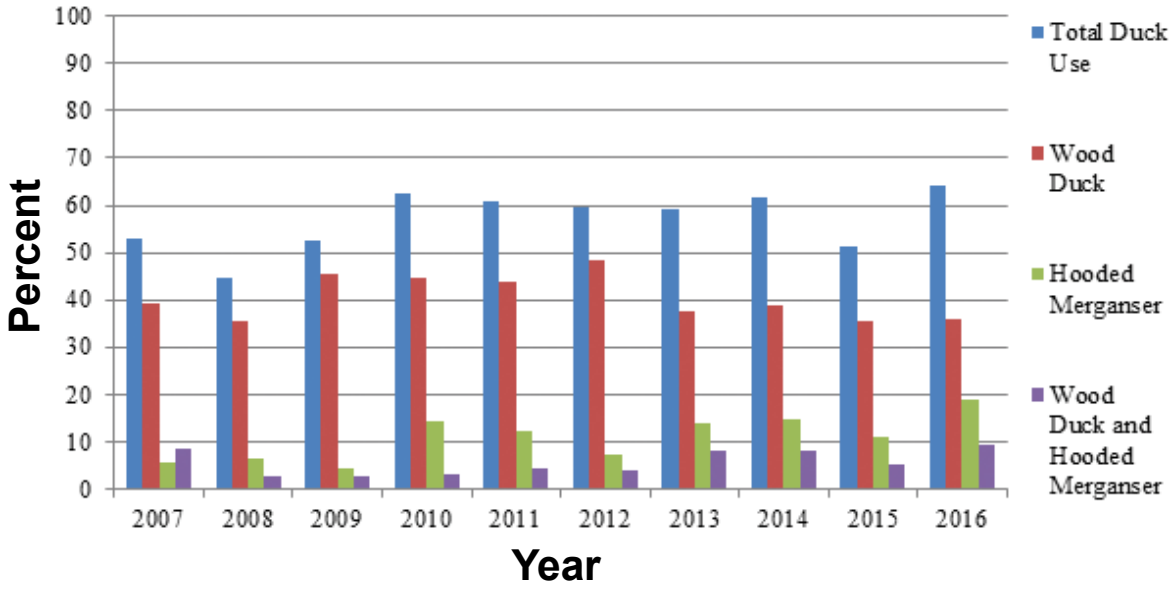
Due to the unpredictability of safe ice conditions in Connecticut, box checks and maintenance began in September with the use of a boat. Drought conditions made box checks challenging as some of the sites were inaccessible due to low water. A monitoring form was completed at each site after all of the boxes were thoroughly inspected, cleaned, and provided with new nesting material (about three to four inches of wood shavings).

A total of 427 boxes were checked at 144 sites this past season. Duck use of boxes was 64% in 2016. Use of boxes by ducks has varied over the last decade, but has remained above 50% for nine out of the last 10 years. A total of 1,271 ducklings hatched last year. Twenty-five boxes were replaced, 19 boxes were raised, five boxes were flashed, and eight boxes were removed.

A seasonal employee funded by the Connecticut Migratory Bird Conservation Stamp conducted the majority of the work associated with this project.

The wood duck is the third most abundant breeding waterfowl species in Connecticut, behind only the mallard and Canada goose.

Percent of Wood Duck Nest Boxes with Duck Use, 2007-2016



Eagle Scout Project for Wood Ducks

Colby Pitcher from Boy Scout Troop 35 of Goshen recently fulfilled the requirements for the rank of Eagle Scout. Colby's project involved the construction and subsequent installation of wood duck nest boxes in the Goshen section of Mohawk State Forest. The boxes will be monitored yearly as part of the Wildlife Division's wood duck nest box program. While working on his project, Colby exemplified all of the qualities necessary to become an Eagle Scout. His project not only benefited the community, but also wildlife. The Wildlife Division would like to thank Colby for his hard work and congratulate him on achieving the rank of Eagle Scout.

New Habitat Management Program Available to Private Forestland Owners

The DEEP Wildlife Division has an exciting new partnership with the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and the Wildlife Management Institute to cooperate on the Regional Young Forest Initiative for At-Risk Species. Over 50 of Connecticut's At-Risk species will benefit from these cooperative ambitions and efforts through the Regional Conservation Partnership Program (RCPP).

RCPP will increase the capacity to provide technical and financial assistance to non-industrial private forestland owners wishing to implement practices outlined in the USDA Environmental Quality Incentives Program. In Connecticut, the program will result in an increase in the quantity and quality of young forest habitat essential to New England cottontail rabbits, American woodcock, and over 50 other species associated with young forest habitat.

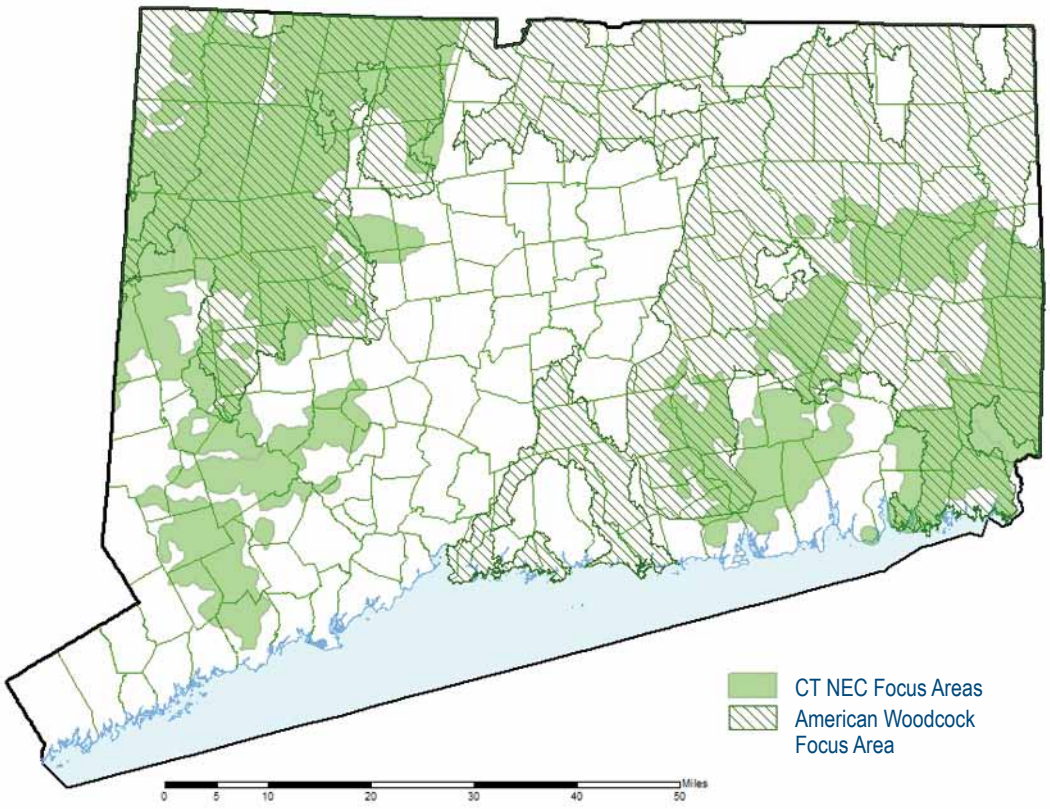
Participating states include Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.

Focus areas have been established based on species occurrence and landscape factors that deem certain specific geographic areas are most likely to result in positive responses to management treatments for these target wildlife species. Management practices that will create young forest habitat include a large array of treatments, including forest and wildlife planning, brush mowing, non-native invasive plant control, prescribed burning, tree/shrub plantings, early successional forest habitat management, and brush pile creation.

RCPP staff is currently reaching out for potential program participants. The process would include a site review and plan development by a Program Forester and Wildlife Biologist. **The first deadline for project applications is June 16, 2017.** After submission of applications, along with the associated resource plans, a ranking process will be conducted and successful applicants will be notified.

Those interested in the RCPP should contact Program Biologist Lisa Wahle (860-424-4138; *Lisa.wahle@ct.gov*) or Program Forester Nick Zito (860-424-4044; *Nick.zito@ct.gov*).

New England Cottontail and American Woodcock Focus Areas



The Regional Conservation Partnership Program, which was created by the 2014 Farm Bill, is a partner-driven, locally-led approach to conservation. It is not a grant program, but promotes coordination between the Natural Resources Conservation Service and partners to deliver assistance to agricultural producers and private landowners.

Chimney Swift Conservation Night in Willimantic

The fifth annual Chimney Swift Conservation Night will be at the Willimantic Brewing Co. (Main St. Café), 967 Main St., Willimantic, on Monday, May 22, 2017. This year, the event is happening at the height of the spring arrival for the birds. Past years have seen close to 1,000 birds descend into the Nathan Hale roost! Join swift researchers from CT DEEP and UConn for a wonderful meal, specialty brews – including "Flying Cigar Ale" – and the wonderful spectacle of hundreds, perhaps thousands, of chimneys swifts "tornadoeing" into two of Connecticut's largest summer roosts. DEEP and UConn researchers will be at the Brewing Co. starting at 5:30 PM. "Showtime" for the swifts is typically 20 minutes before sundown to 30 minutes after sundown (8:00 PM). Make sure you leave enough time to enjoy a truly fabulous menu and a few libations before the spectacle. Guided tours to the Nathan Hale roost and the adjacent Town Hall roost will occur around 7:40 PM. Dinner reservations are recommended for this special event – call 860-423-6777. Don't forget that the swifts are here all summer, so once you see them initially, you will certainly want to come back and see them again!

Meet the State Endangered Red-headed Woodpecker

Article and photography by Paul Fusco, DEEP Wildlife Division

The red-headed woodpecker is at the northeastern edge of its range in Connecticut. It is the only woodpecker in North America with an entirely red head and neck, and as such, its identification is unmistakable.

At approximately nine inches in length, the red-headed woodpecker is smaller than a flicker or red-bellied woodpecker. Its back and tail are solid black. The underside and rump are white. The otherwise black wings have highly visible white secondary feathers. These large white wing patches are visible when the bird is in flight and at rest. Plumage of both sexes is alike, and immature birds have a dusky brown head and neck in place of the red of adults.

Bold black and white plumage with a bright crimson head and neck are the unmistakable field marks of this charismatic bird.

Distribution and Habitat

The red-headed woodpecker is a bird of the central and eastern United States and parts of southern Canada. Its main habitat requirements are older mature lowland forests with a sufficient amount of standing dead trees and a somewhat open understory. Habitat components include old trees for nesting, open areas for flycatching and access to the ground, and large mast-producing trees such as oaks and beech. The birds are also found in river bottom, savannah, and agricultural habitats that have standing dead trees and mast-producing trees. They also will use orchards and parks with an open understory.

Red-headed woodpeckers are irregular short-distance migrants, and are often encountered in coastal locations during fall in Connecticut. They are somewhat nomadic, and so their distribution as a breeder in Connecticut is at a low density, widely scattered and somewhat unpredictable from year to year. The best places to look for them in Connecticut include open marshes with standing dead trees, parks with an open understory, and in cemeteries.

Behavior

Their varied diet includes hard mast, fruits, seeds, and insects. The birds are known to sometimes raid other bird nests for eggs and young. They will also eat mice. Historically, red-headed woodpeckers would get into trouble with farmers because of their fondness for fruits, such as cherries, grapes, and apples.

Flying insects make up an important part of the diet. A technique for catching flying insects is to spot them from a perch and then dart out to seize them in the air. This flycatching behavior is rare among woodpeckers. Flying insects in the woodpecker's diet include bees, wasps, beetles, and grasshoppers. Unlike other woodpeckers, the red-headed does not often feed on wood-boring insect larvae.

Another uncommon behavior by the red-headed woodpecker is its tendency to cache food. It will not only store food, but also try to hide it in the process. Acorns, insects, and seeds will get tightly jammed into cracks and crevices, and are often covered with pieces of tree bark. The birds will fiercely defend their food cache from potential thieves.

Red-headed woodpeckers frequently forage on the ground for insects, acorns, and fruit. Their flight is undulating and often low to the ground, which in some parts of their range has led to many birds being hit by automobiles.

Late winter into spring is the time that woodpeckers are drumming loudly on tree limbs or other resonate substrates as they announce territories and attract mates. Woodpeckers can often be identified by species based on the pattern of their jackhammering staccato. Differences in loudness, frequency, cadence, and force can help determine a species when visual identification is not possible. The drumming of red-headed woodpeckers is comparatively weak and short.

Red-headed woodpeckers have many variable calls. Their most common call is a loud, harsh "*quirr*," or "*churr*," which is repeated often. This call sounds similar to that of a red-bellied woodpecker, but is higher pitched. Other vocalizations include a variety of clucks, cackles, and shrill calls.

Nesting takes place in a tree cavity that is excavated mostly by the male in dead trees or dead branches on living trees. The female lays a clutch of three to 10 pure white eggs. Incubation lasts 12 to 14 days and young fledge after about 28 days. A pair may raise two broods in one season.

Conservation

Woodpeckers are an important part of Connecticut's ecosystem. They help control insect pests and drill tree holes that many other species use for nesting and shelter.

Once common in the Northeast, and now considered to be rare, red-headed

Once a common bird, the red-headed woodpecker has been declining throughout its range. Today, it is listed as an endangered species in Connecticut.

woodpeckers have shown long-term declines throughout their range. They are classified as "near threatened" by the International Union for Conservation of Nature and Bird Life International. In our region, they are listed as special concern in New York, threatened in New Jersey, and endangered in Connecticut. According to the North American Breeding Bird Survey, red-headed woodpeckers have declined at a rate of two percent per year since 1966. This has resulted in a cumulative decrease of approximately 70% over that time span.

Among the conservation concerns for red-headed woodpeckers is the lack of suitable nest sites, and with it, competition for nest holes from the invasive European starling. Starlings nest in tree holes, nest boxes, and crevices. They are aggressive and persistent in claiming nest holes, often ousting the resident nester, including woodpeckers.

Urban and suburban areas, once frequented by red-headed woodpeckers, have become less favorable over the years due to the cutting of dead and dying trees and trimming of dead branches. Open forest habitats have also become less desirable as dead trees are removed. Management of open forest areas which maintains snags as an important habitat component is beneficial to red-headed woodpeckers.

After flycatching a wasp, a red-headed woodpecker looks for a crevice in which to cache it.

How to Be Bird Friendly at the Beach

Article reprinted courtesy of Audubon Connecticut (ct.audubon.org)

Coastal areas have unique importance for many species of wildlife – especially birds – offering critical breeding sites as well as rich sources of food for migratory stopovers. Booming coastal development and recreational use of beaches are eroding vital habitat and greatly reducing the areas where birds can feed and nest. You can help birds, and other wildlife, by ensuring that use of the remaining areas is compatible with wildlife use. Here are some helpful tips to get you started.

P. J. FUSCO

Young piping plover chicks are tiny and difficult to see. They and other beach nesting shorebirds are vulnerable to unwitting human activity.

Keep Your Distance from Shorebird Habitat

Nesting and feeding areas are often posted with signs during breeding season. Even if these areas are not posted, be aware of the restrictions at your local beach and of activities that may not be appropriate for sensitive habitats.

Scaring a flock of feeding or roosting shorebirds—accidentally or on purpose—puts the birds in jeopardy, as shorebirds can feed only under certain tidal conditions. Disturbance prevents rest and feeding and can lead to reduced survival rates and reproduction. Never walk through an area where you see birds feeding, resting, or nesting. Instead, walk around, and you'll help wild birds thrive by not disturbing them.

As tempting as it might be to get a close look at the cute chicks, this should be avoided. Even a single disturbance can cause adult birds to leave their nests and abandon chicks, which can make chicks and eggs vulnerable to predators and overheating. You will know if you are too close to a nest or chicks, as the parents will defend their nest by dive-bombing you, calling loudly, or feigning a broken wing nearby. Be a responsible beachgoer and bring your binoculars or a zoom lens camera and admire the shorebirds from a distance.

Keep Pets Leashed

Playful pooches want everyone involved in the fun, but their playfulness can wreak havoc on shorebird colonies in a matter of seconds. Birds perceive dogs as predators, even if the dogs aren't chasing them. Respect the signs, and keep your pet leashed when near nesting, overwintering, resting, and feeding birds. There are some areas, such as wildlife preserves, that don't allow pets at all – even on a leash. Many towns also ban dogs/pets altogether from beaches for reasons beyond wildlife protection. Be sure to know and respect local dog/pet ordinances.

Take Your Trash with You

A mountain of trash is no fun for birds. Leftover food attracts predators that can attack nests and young birds. Litter also sometimes contains materials that are hazardous or toxic to birds. If you do not see covered or wildlife-proof recycling and trash containers at the beach, take your trash with you and dispose of it properly. **Don't ever bury your trash or picnic leftovers on the beach.**

Dispose of Fishing Line

Be sure to dispose of your fishing line properly in a monofilament recycling container. Birds can easily become entangled in loose line, which can trap, injure, or even kill them. Also remove bait and scraps from cleaned fish, which can attract predators.

Avoid Feeding Wildlife

This seemingly harmless activity can draw predators, such as rodents, raccoons, gulls, and crows, to nesting areas, where they will prey on eggs and chicks of beach-nesting birds.

Avoid Noisy Activities

Beach activities like flying kites and drones, throwing balls, building bonfires, exploding fireworks, or riding horses, bikes, and ATVs can be good fun – but they can cause birds to leave their nest or chicks unprotected. And remember, ATVs or ORVs are actually not permitted on any public beach in Connecticut. When planning your beach activities, put yourself in the feathers of a shorebird chick. How would you feel if you were the size of a cottonball, weighed two ounces, and couldn't fly away from danger? Help nesting shorebirds by avoiding these activities.

Volunteer to Be a Beach Steward

Nesting birds are a vital part of the ecosystem and a sign of a healthy beach. Teach others to appreciate beach-nesting birds. Contact the Audubon Alliance for Coastal Waterbirds at *ctwaterbirds@gmail.com* to learn how you can volunteer to contribute to Connecticut coastal stewardship efforts.

The Audubon Alliance for Coastal Waterbirds is an innovative partnership of Audubon Connecticut, the Roger Tory Peterson Institute of Natural History, the Connecticut Audubon Society, the Connecticut Department of Energy and Environmental Protection, and the U.S. Fish and Wildlife Service to conserve waterbirds and their habitats.

2016 Wild Turkey Brood Survey Provides Valuable Data

Written by Michael Gregonis, DEEP Wildlife Division

Wild turkey brood surveys are conducted every year in Connecticut by Wildlife Division staff and volunteers to provide data that are used to assess annual productivity of our state's wild turkey population. Scientific literature suggests that a brood index of three or more poults (young turkeys) per all hens, during the summer period, indicates an increasing population.

The 2016 brood index for Connecticut was 2.8 poults per adult for all hens observed and 4.0 poults per adult for hens observed with at least one poult. Fifty-seven survey cooperators reported 202 wild turkey observations, including 401 hens; 278 with broods and 123 without broods. The brood index was found to be variable throughout summer.

During 2015, the brood index was 2.9 poults per adult for all hens observed and 4.1 poults per adult for hens observed with at least one poult. Participants reported 266 observations, which included 530 hens and 1,560 poults.

Brood survey information indicates wild turkeys had fair productivity in Connecticut during 2016. Last year, spring weather last year was warm and very dry throughout the state, creating excellent conditions during both nesting and brooding periods.

The Wildlife Division encourages residents to participate in the annual Wild Turkey Brood Survey and submit their results at the end of summer. Those interested in participating can print a survey form from our website at *www.ct.gov/deep/wildlife* (click on "Volunteer Opportunities"). All participants are requested to record any and all observations of wild turkey hens and poults during the months of June, July, and August. Survey related questions can be forwarded to Wild Turkey Program Biologist, Michael Gregonis, at *michael.gregonis@ct.gov*.

Wild turkey brood survey data by month for Connecticut, 2016.

Month	Total Adults	Total Young	Young Per Adult	Number of Reports
June	118	304	2.6	65
July	161	523	3.2	85
August	122	293	2.4	52
Total	**401**	**1,120**	**2.8**	**202**

P. J. FUSCO (2)

Turkey hens lay a clutch of eight to 14 eggs at the rate of about one egg per day. The eggs are incubated for 28 days beginning when the final egg is laid. Once hatched, the poults will remain with the hen throughout summer, fall, and winter.

Wild turkey brood survey data for Connecticut, 2007-2016.

Year	Total Adults	Total Young	Total Adults and Young	Adults without Young	Young per Adult	Young per Adult with Young	Number of Reports
2007	731	1,900	2,631	270	2.6	4.1	405
2008	448	988	1,436	330	2.2	4.3	224
2009	611	1,049	1,660	177	1.7	2.4	323
2010	472	1,686	2,158	105	3.6	4.6	278
2011	685	1,919	2,604	118	2.8	3.4	375
2012	435	1,089	1,524	293	2.5	3.7	244
2013	337	843	1,180	115	2.5	3.7	200
2014	579	1,561	2,140	194	2.7	4.1	313
2015	530	1,560	2,091	152	2.9	4.1	266
2016	401	1,120	1,521	123	2.8	4.0	202
Tot./Avg.	**5,229**	**13,715**	**18,945**	**1,877**	**2.63**	**3.84**	**2,830**

Volunteer to help with the Wild Turkey Brood Survey!

Special Thanks to Penny Howell as She Retires!

Written by Colleen Bouffard, DEEP Marine Fisheries Program

After more than 38 years of service to the State of Connecticut, Penny Howell retired on March 1, 2017. Penny had a long and distinguished career with CT DEEP Marine Fisheries.

Penny began her career with Marine Fisheries collecting biological scup data aboard commercial trawling vessels in Long Island Sound. She often recalled her experiences working alongside commercial fishermen as the first woman hired in the Division. She was an integral part of a study examining the effects of trawling on lobster and was a contributing author to the legislative report required by Special Act 83-29 of the Connecticut General Assembly.

Another notable project Penny took on early in her career was to help design and implement the Long Island Sound (LIS) Trawl Survey in 1984, the Marine Fisheries Program's largest and second-longest running project. The LIS Trawl Survey monitors the abundance of over 100 marine finfish species and provides invaluable data for species stock assessments and studies that focus on the effect of environmental changes on species composition.

Penny always felt strongly the nearshore resources below the high tide line were of importance and in need of monitoring. To address that need, she developed a number of surveys to collect data on this essential habitat and the species that occupy it. This included the ongoing Estuarine Seine Survey (created in 1988) to document winter flounder spawning sites, among other items.

In the mid-1990s, Penny was tasked with evaluating white perch populations in the Connecticut River. She developed a tagging study to document the species' population levels and movement in the river. The information collected helped develop the recreational and commercial harvest restrictions for white perch in Connecticut.

With few resources, Penny established a horseshoe crab spawning survey along the Connecticut coast, enlisting the help of numerous volunteers, both from the public and scientific communities. These data were ultimately used to determine the commercial harvest quota for this species set in 2000, as well as areas that should be closed to commercial harvest in an effort to protect the food source of migrating shorebirds, such as the federally threatened red knot.

Penny has an unparalleled ability to talk about science and marine fisheries assessment on a level that all could understand. She developed a number of games for students of all ages, which broke down the most complex of population estimation methods and made learning fun. Penny was a familiar

Penny Howell hard at work conducting a marine fisheries survey aboard the *R/V John Dempsey* in April 2016.
PHOTO: D. PACILEO, DEEP MARINE FISHERIES PROGRAM

face, representing the Department on numerous Atlantic States Marine Fisheries Commission (ASMFC) committees, presenting at many professional conferences, and giving talks to public interest groups. Outreach and education efforts were a priority for Penny as she was always eager to engage the public and others to raise awareness of environmental and conservation issues.

Similarly, Penny's writing contributions spanned from describing intricate modeling methods for marine species stock assessment reports to publishing a number of articles in reputable, peer-reviewed journals, such as the *Journal of Shellfish Research*, *Transactions of the American Fisheries Society*, and *Marine and Coastal Fisheries*. For six years, Penny was also the contributing author and editor for the marine fisheries articles featured in *Connecticut Wildlife* magazine, highlighting Connecticut's marine species and the programs that monitor them.

For the last seven years of her career, Penny dedicated most of her time to the American lobster resource, serving as Connecticut's representative on ASMFCs American Lobster Technical Committee. She stepped into management of the species just after the catastrophic die-off in Long Island Sound, helping document the decline of the resource and continued recruitment failure of the species in Long Island Sound. Her first task was to manage a one million dollar study to determine the cause of large-scale mortalities of lobster, working with geneticists, pathologists, and a number of environmental researchers along the coast. One of the most notable findings from this work was documentation of the thermal stress point for lobster (68° F). Having learned the biological threshold for the species, Penny worked to find ways to monitor the bottom temperatures in Long Island Sound, documenting ongoing stressful conditions for lobster which have hampered the species' rebound. She also took the lead on evaluating the effects of changing environmental conditions on other notable species in the Sound, including winter flounder.

Penny established numerous professional relationships within DEEP, ASMFC, other State resource agencies, and the environmental community. As a highly respected scientist, Penny was always willing to help someone design a study, improve the way data was collected, or select the appropriate statistical test to analyze results.

Penny was a tremendous asset to the Marine Fisheries Division and, although we will surely miss her, we sincerely wish her well in her retirement.

P. J. FUSCO (2)

Penny was instrumental in conducting research that established horseshoe crab breeding area protection zones, which in turn have benefitted thousands of migrant shorebirds, including red knots and ruddy turnstones.

Helping the Wildlife Division

Penny Howell (right), pictured with long-time volunteer plover monitor Henriette Lachman, often took time out of her busy schedule with the Marine Fisheries Division to assist the Wildlife Division with several projects. Whenever she could, Penny would help the Wildlife Division and our dedicated volunteers erect string fencing at coastal shorebird areas.

The Wildlife Division is especially grateful to Penny for her invaluable assistance with revision of Connecticut's Wildlife Action Plan; for sharing her extensive knowledge of marine resources to advance the Northeast Association of Fish and Wildlife Agencies Regional Conservation Needs Program; and helping to identify Regional Species of Greatest Conservation Need.

CT State EnCon Police Officers Were Busy this Past Winter

Reports from Law Enforcement Activities

What do State Environmental Conservation (EnCon) Police Officers do in winter? They check waterfowl hunters and ice fishermen for proper licenses and stamps, walk trap lines, and patrol snowy trails. They even conduct bitter cold patrols on Long Island Sound, checking commercial fishermen on the water or at the docks. EnCon Officers also assist other agencies during winter storms, as well as disabled motorists. Many officers take time to conduct public outreach events and assist DEEP Wildlife Division biologists with their Winter Bear Den Study.

During January, officers investigated 279 inland fishing incidents (which includes ice fishing), 32 commercial fishing incidents, 137 waterfowl hunting incidents, 47 ATV/snowmobile incidents, 71 deer hunting incidents, and 130 boating enforcement patrols, and conducted 116 public safety assists. Officers also investigated incidents at state parks and forests.

In February, EnCon Officers investigated 290 inland fishing incidents (which included ice fishing), 107 wildlife incidents, 96 ATV/snowmobile incidents, and 140 boating enforcement patrols. Officers also conducted 12 K-9 Unit responses and 96 public safety assists, as well as investigated reported incidents at state parks and forests.

Marine District Highlights

On January 16, EnCon Officers assigned to the East Marine Sector were dispatched to Bluff Point State Park for a report of illegal dirt bike activity. The caller stated several individuals were riding dirt bikes along hiking paths where park patrons were trying to hike. Officers located the dirt bikes traveling along a trail and signaled for them to stop. The riders stopped, looked at the officers and then turned around, speeding off in the opposite direction. An officer tracked the dirt bikes to a nearby street and followed the muddy tracks to a shed located in an adjacent neighborhood. The officer made contact with the occupants and recognized them as the same dirt bike riders who fled earlier. The riders eventually admitted to operating in the park.

During the investigation, officers discovered one dirt bike had a mutilated Vehicle Identification Number (VIN). The dirt bike riders were charged with Interfering with an Officer and Operating a Motorcycle without a Proper Endorsement; one rider was charged with Operating a Motor Vehicle while under Suspension. The dirt bike with the mutilated VIN was seized as evidence for further investigation.

Eastern District Highlights

EnCon Officers assigned to the Southeast Sector responded to Lords Cove in Lyme off the Connecticut River for a report of hunter harassment. Responding officers found a father and his 11-year-old son were waterfowl hunting from a permanent blind when they were approached by a man in a powerboat who told them they were on "private waters" and "trespassing." The man told the hunters he would not leave, preventing them from hunting, and at one point picked up a shotgun from within the vessel. The hunters felt threatened by the unpredictable nature of the man's actions and called 911. The man from the vessel had left the scene prior to officers' arrival. Officers were able to locate the man later and speak with him. During the investigation, it was found that the man had been warned for similar behavior in 2010. Following a detailed investigation, including assistance from the DEEP Land Management office, an arrest warrant was applied for through New London Superior Court. The accused was arrested on January 8, 2017, and charged with Breach of Peace and Interfering with the Lawful Taking of Wildlife.

Two Western District State Environmental Conservation Police Officers standing ready for snow patrol during a winter storm.

PHOTO: CT STATE ENCON POLICE

On January 18, Southeast Officers responded to a group home in Colchester, where one client and two workers had sustained cuts and scratches by a large aggressive bobcat. A Colchester Police Officer was first on scene, found the aggressive bobcat and subsequently dispatched the animal in the interest of public safety. EnCon Police Officers transported the bobcat to the State Health Lab where it tested positive for rabies. All affected personnel were treated for rabies exposure.

On February 20, EnCon Police became aware of a lone kayaker who had been reported missing the night before in the Thames River, Montville/Ledyard area. A 31-year-old male from New London had apparently taken his 11-foot kayak out fishing from a Montville town launch on February 19 around 11:00 AM, and relatives reported to the State Police

about 12 hours later that he had not returned from his trip. The U.S. Coast Guard began searching the river and nearby Long Island Sound overnight, along with local fire department units and State Police. On February 20, Eastern District Officers from the Northeast and Southeast Sectors assisted with the search. Officers secured the kayak which had been found late the previous day in the same general area, and checked the missing person's vehicle at the launch, which contained one life jacket. The vessel had been found the first day with a fishing pole and gear and some of the missing person's belongings, which was later reported to authorities. Late on the night of February 20, the U.S. Coast Guard suspended their search; the State Police continued the missing person case while EnCon Police investigated it as a reportable boating accident. The body of the kayaker was found by U.S. Navy sailors on March 21, 2017, in the Thames River, near the Naval Submarine Base in Groton.

K-9 Baloo on patrol in Naugatuck State Forest.
PHOTO: CT STATE ENCON POLICE

Western District Highlights

On January 1, Southwest Sector Officers responded to a report of illegal deer hunting in Wallingford. The caller reported a man had just parked his vehicle and was bowhunting in the area. Wallingford is located in Deer Management Zone (DMZ) 7, and the archery deer hunting season for that zone ended on December 31. Upon arrival, officers located the hunter's vehicle, as well as several tree stands and a ground blind. EnCon Officer Kiely and his K-9 partner Baloo completed a successful track that located the accused in the ground blind. Next to the ground blind was a pile of bait used to attract deer. It is unlawful to bait for deer in DMZ 7. After speaking with the individual, it was found he did not have a 2017 archery permit or valid written consent forms. The accused was cited for Archery Hunting During a Closed Season, Illegal Deer Hunting over Bait, and Archery Deer Hunting without a Valid Permit. He was issued a verbal warning for Deer Hunting on Private Land w/o Written Permission. The accused's archery equipment was seized as evidence and he was scheduled to appear in Meriden Superior Court.

On January 3, Northwest Officers served an active arrest warrant which stemmed from an illegal deer hunting investigation on Kent Land Trust property in December 2015. During that time, officers developed probable cause that the accused (out-of-state resident) was actively deer hunting the Kent Land Trust property illegally. As a result of the investigation, officers applied for an arrest warrant through Bantam Superior Court. Following approval of the arrest warrant, officers had been unable to locate the accused until he was stopped by State Troopers from Troop L on a motor vehicle stop in Woodbury. Troop L took the accused into custody and turned him over to EnCon Police where he was charged with Negligent Hunting in the 3rd Degree, Hunting Deer on Private Land w/o Written Permission, Hunting Deer without a License, Illegal Deer Hunting, and Hunting w/o Orange.

Providing natural resource protection and public safety.

On January 6, a Southwest Officer was conducting fishing enforcement along the Housatonic River in Shelton when he observed an individual actively fishing from a vessel. The officer immediately recognized the angler as having an indefinitely suspended fishing license. When the angler came to shore, the EnCon Officer checked the motorized vessel and found it was not registered and contained no personal flotation devices (PFDs) as required by law. The individual was cited for Fishing While Suspended (subsequent offense), Insufficient PFDs, and Operating a Vessel without a Valid Registration.

On February 1, an off-duty Northwest Officer encountered a Burlington man with a dead bobcat in his possession. The off-duty officer was notified about a road-killed bobcat on the Bristol/Burlington town line after the story was posted on social media. Upon arriving at the scene, the officer stopped the suspect as he was leaving and questioned him. The suspect admitted he saw the bobcat story on social media and intended to skin out the bobcat. He admitted he knew it was a CITES (Convention on International Trade in Endangered Species) species. The suspect was cooperative and cited with a warning. The bobcat was seized and turned over to DEEP Wildlife Division.

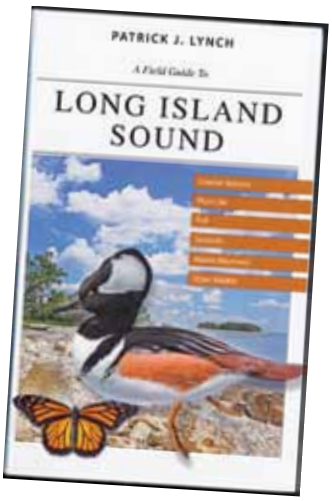
On February 2, DEEP Dispatch received a call from the Waterbury Police Department regarding possible illegal hunting at a parcel of Mattatuck State Forest in Waterbury. Multiple Southwest Sector Officers responded and obtained information that an individual wearing camouflage clothing and carrying a firearm was seen entering the woods.

EnCon Officer Kiely and his K-9 partner Baloo initiated a track from the vehicle and quickly located the person of interest as he exited the wood line. He was found in full camouflage clothing and not wearing fluorescent orange clothing as required. He explained to officers he was coyote hunting and "forgot" his orange clothing. The officer determined that the person did not have a valid hunting license and was a convicted felon, thus making him ineligible to possess a firearm. The person was taken into custody and charged with Criminal Possession of a Firearm by a Convicted Felon, Illegal Small Game Hunting without Fluorescent Orange, and Hunting without a License. He was held on bond and arraigned the following day in Waterbury Superior Court.

Western District K-9s Ellie Mae and Baloo were used six times for cases involving a lost hiker, suicidal persons, criminal tracking, and evidence search/recovery.

FROM THE FIELD

New Book About Long Island Sound by Local Author



Patrick J. Lynch, former senior digital officer in Yale University's Office of Public Affairs and Communications, recently published a comprehensive *Field Guide to Long Island Sound*. This is a much-needed resource for those interested in the geology, flora, fauna, and human history of the region. The illustrations, photographs, and paintings are amazing and most were created by Mr. Lynch. The book includes information on over 600 species, with more than 700 color illustrations and photographs and 36 detailed maps created just for the book. The book also includes a discussion on environmental issues in the region.

Wood Duck Nest Box Building

The annual wood duck nest box building day was held at DEEP's Flaherty Field Trial Area in East Windsor this past March. This was a collaborative effort between the Wildlife Division, DEEP Field Support Services Division, and the Connecticut Waterfowl Association (CWA). The Field Support Services Division supplied the wood. Wildlife Division staff cut the wood to the proper lengths and provided the hardware, while CWA members constructed boxes from the supplied materials. The finished boxes are installed on state lands by the Wildlife Division and monitored every year for use by wood ducks.

This year was an astonishing success, as 125 boxes were constructed. Thirteen members of CWA were present, along with five youths, including four members of Boy Scout Troop 444 from Middlebury. The Wildlife Division extends its appreciation to all those who participated and made this event a great success.

PHOTO: W. CASSIDY, DEEP WILDLIFE DIVISION

Plastic Litter Is Harmful to Wildlife

Wildlife photographer Bruce Morrell took this photo of an osprey in distress two years ago near Wethersfield Cove. A plastic bag was wrapped around its talons, making it difficult for the bird to feed the young chicks in its nest. Fortunately, the other adult osprey was able to feed the young. This is an all too common occurrence. Osprey are known to "decorate" their nests with carelessly discarded trash items, like plastic bags, wads of fishing line, balloon ribbon, and more. Adults and/or young often become tangled in these items, sometimes resulting in death. Please dispose of trash properly and do not litter. Make an effort to pick up items you find in natural areas or along beaches. Do your part for wildlife and make difference!

Glastonbury Shooting Range Re-opens

The Glastonbury Shooting Range opened for supervised public use on Saturdays and Sundays beginning Saturday, April 1 and will remain open through November 26. The range is located within the Meshomasic State Forest off of Toll Gate Road in Glastonbury. Supervision will be provided by DEEP certified range safety officers.

Reservations must be obtained through DEEP's Online Sportsmen Licensing System (*www.ct.gov/deep/sportsmenlicensing*) for shooters 18 and older on the Mondays prior to weekends. The range will be CLOSED on September 16 and October 8, 2017.

Those who are unable to make a reservation online can make a request one week in advance by calling the DEEP Glastonbury Range Reservation Line at 860-424-3737. Callers may make a single position and time slot reservation, which will be valid for up to three shooters in the same party. If making a reservation by phone, you must provide your full name, daytime contact information, town of residence, the specific day and range time period, and the names and town of residence of your guests. All requests will be confirmed by a call back from DEEP staff within two to three business days. Requests with incomplete information will not be accepted. Reservations are no longer being accepted through email.

Reservations Needed to Use Range: Range hours of operation will be from 10:00 AM – 2:00 PM on most Saturdays and Sundays only. The range will be closed to public use during all other times and DEEP Environmental Conservation Police officers will strictly enforce hours of operation. There is no fee to use the range.

More detailed information, new range rules for 2017, and directions are available on the DEEP website at *www.ct.gov/deep/hunting*, select "Shooting Ranges" under the 2017 Hunting Season menu.

The site is handicapped accessible, with a specially designed shooting bench for wheelchair access, and includes portable sanitary facilities. Walk-in shooters will be accommodated for unreserved positions or as space becomes available. The range may be closed due to severe weather and staffing availability.

Connecticut's Conservation Education/ Firearms Safety Program receives funding for site improvements, range equipment, and seasonal staffing through the Federal Aid in Wildlife Restoration Program. Under the Federal Aid program, sportsmen pay an excise fee on firearms, ammunition, and archery equipment. The funds are then distributed to the states for wildlife management and research, habitat acquisition, and hunter education programs.

WILDLIFE RESTORATION

Wanted: Connecticut Landowners Willing to Provide Public Hunting Access

The DEEP Wildlife Division recently received a $612,500 grant from the U.S. Department of Agriculture's Voluntary Public Access and Habitat Incentive Program to expand the Permit-Required Hunting Program and increase private land hunting opportunities. Under this program, landowners who own a **farm** or **forested** land can be paid between $3.00 to $20.00 per acre annually if the land is made available for hunting by the public.

The Division is looking to expand hunting opportunities on private lands in the following counties: Hartford, New Haven, and Fairfield. Landowners with at least 50 acres are eligible to enroll, though smaller properties may be considered.

This is a unique opportunity to help promote wildlife population management, support the local economy, reduce wildlife conflicts, and get paid to do it. Landowners will have the ability to choose which types of hunting are allowed on their lands; access will be controlled by permits; and the landowner will be protected from liability.

For more information, please contact Wildlife Division biologist Laurie Fortin at *laurie.fortin@ct.gov* or 860-424-3963.

P. J. FUSCO (2)

Black Bears Are Active and Looking for Food!

Connecticut residents are reminded to take steps to reduce encounters and potential conflicts with black bears. These steps are increasingly important because Connecticut's bear population continues to grow and expand. In 2016, approximately 6,700 bear sightings from 134 of Connecticut's 169 towns were reported to the DEEP Wildlife Division.

Bears should never be fed – either intentionally or unintentionally. They become habituated, losing their fear of humans, when attracted to homes by easily-accessible food sources. Such bears spend more time in neighborhoods and near people, increasing public safety fears and the likelihood that the bears may be hit and killed by cars or meet with some other misfortune.

The following steps should be taken to avoid problems with black bears:

- NEVER feed bears.
- Take down, clean, and put away birdfeeders by late March. Store the feeders until late fall. Clean up spilled seed from the ground.
- Store garbage in secure, airtight containers inside a garage or storage area. Double bagging and adding ammonia to cans and bags will reduce odors that attract bears. Periodically clean garbage cans with ammonia to reduce residual odor. Garbage for pickup should be put outside the morning of collection and not the night before.
- Protect beehives, livestock (including chickens), and berry bushes from bears with electric fencing.
- Supervise dogs at all times when outside. Keep dogs on a leash when walking and hiking. A roaming dog might be perceived as a threat to a bear or its cubs.
- Do not leave pet food outdoors.
- Keep barbecue grills clean. Store grills inside a garage or shed.
- Avoid placing meat scraps or sweet foods in compost piles.
- If you encounter a bear while hiking, make your presence known by yelling or making other loud noises. Never attempt to get closer to a bear to take a photo or video. If a bear does not retreat, slowly leave the area and find an alternate hiking route. If the bear persistently approaches, be offensive towards the bear – make loud noises, wave your arms, and throw sticks or rocks. Never run. While camping, keep a clean campsite and make sure food and garbage are inaccessible (for example, keep food in a cooler stored in the trunk of a car and never have food in your tent).
- In the rare instance when a bear appears to be aggressive toward people, residents should immediately contact DEEP's 24-hour dispatch line at 860-424-3333.

Bear sightings reported by the public provide valuable information to assist the Wildlife Division in monitoring the black bear population. Anyone who observes a black bear in Connecticut is encouraged to report the sighting on DEEP's website at *www.ct.gov/deep/blackbear* or call the Wildlife Division at 860-424-3011. Information on the presence or absence of ear tags, including tag color and numbers, is particularly valuable.

Report bear sightings to www.ct.gov/deep/blackbear.

Small Boat Users: Keep Distance from Nesting Swans

Kayakers, canoeists, jet skiers, and those in small boats are advised to be on the lookout for mute swans and use caution when near swan nesting territories during the nesting season (approximately late March into June). While nesting and raising young, mute swans will aggressively defend their territories against perceived threats, including people in small watercrafts. With wingspans that can reach six feet long, swans are capable of causing serious injury and possibly tipping over small boats. To protect yourself and the swans, stay away from nests, give swans a wide berth, and always wear a life jacket.

The Wildlife Division has developed a mute swan warning sign that can be downloaded from the DEEP website, laminated, and installed near a swan nesting territory to caution boaters and encourage them to avoid the swans. The sign can be found at *www.ct.gov/deep/wildlife*.

P. J. FUSCO

Wildlife-related Signs Available on DEEP Website

In addition to the mute swan caution sign, the Wildlife Division has also developed "Be Bear Aware" signs that can be downloaded from the DEEP website, laminated, and displayed at town halls, visitor centers, campgrounds, parks, schools, and other public buildings/locations. One of the signs is specific for hiking trails. The signs can be found at *www.ct.gov/deep/black bear*.

Help prevent disturbance to nesting ospreys. Private landowners, towns, organizations, and others can print or download a "Stay Away from Nesting Area" sign to post near osprey nesting platforms. The sign can be found at *www.ct.gov/deep/wildlife*. Use your printer menu to scale the sign to whatever size is needed. Signs should be laminated to prevent weather damage.

Need to Report an Incident or Illegal Activity?

Call the DEEP Dispatch Center in Hartford at 860-424-3333. This number is answered 24/7 to receive complaints and dispatch the nearest Connecticut State Environmental Conservation (EnCon) Police Officer.

The Emergency Dispatch Center (EDC) is 365-day operation, taking calls from the public, as well as other law enforcement and emergency service agencies throughout the state. In addition to the State Encon Police, the Emergency Dispatch Center also dispatches for all of DEEP State Parks field personnel, state foresters, the Forest Fire Crew, Lake Housatonic Authority, Candlewood Lake Authority, Emergency Spill Response Teams, Radiation Control Teams, as well as numerous other agency personnel.

The EDC annually dispatches over 25,000 calls for service, specifically for the EnCon Police, as well as over 8,000 oil, chemical, and hazardous materials release calls that occur statewide for the Emergency Spill Coordinators. The EDC routinely handles over 9,000 calls per month, ranging in nature from illegal hunting and fishing complaints, reckless boating incidents, injured or nuisance wildlife calls, to criminal incidents occurring in Connecticut's 110 state parks, forests, and wildlife management areas.

If you need to report an incident, please contact the Emergency Dispatch Center at 860-424-3333. The Wildlife Hotline is 800-842-4357 and Hazmat Spill hotline is 860-424-3338.

SAVE THE DATE! Connecticut Hunting and Fishing Day, Saturday, September 23, from 10:00 AM - 4:00 PM at Cabela's (475 East Hartford Blvd. N., in East Hartford). This FREE event is a cooperative effort between the DEEP Bureau of Natural Resources and Cabela's. Lots of fun activities for the whole family are planned. Stay tuned for details. ***www.ct.gov/deep/HuntFishDay***

Conservation Calendar

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

May 19..... **Endangered Species Day**, which was initiated by Congress in 2006, is an opportunity for people of all ages to learn about the importance of protecting endangered species and the everyday actions they can take to protect our nation's disappearing wildlife and last remaining open spaces. Learn more about this special day at *www.endangeredspecies.org*. Learn about endangered species in Connecticut at *www.ct.gov/deep/endangeredspecies*.

Hunting and Fishing Season Dates

April 26-May 27 ..... Spring Turkey Hunting Season on state and private land. Turkey hunters are reminded that they must obtain a **Resident Game Bird Conservation Stamp** in place of a turkey permit to hunt turkeys during this season. The stamp covers all turkey seasons for 2017, as well as seasons for pheasants, ruffed grouse, quail, and partridges.

June 18..... **Free Fishing License Day #1**. Statewide free fishing licenses for this special day are available at *www.ct.gov/deepsportsmenlicensing*.

August 12 ..... **Free Fishing License Day #2**. Statewide free fishing licenses for this special day are available at *www.ct.gov/deepsportsmenlicensing*.

*Consult the 2017 Connecticut Hunting and Trapping Guide and the 2017 Connecticut Angler's Guide for specific season dates and details. The guides are available at DEEP facilities, town halls, bait and tackle shops, and outdoor equipment stores, and also on the DEEP website (***www.ct.gov/deep/hunting** and **www.ct.gov/deep/fishing***). Go to* **www.ct.gov/deep/sportsmenlicensing** *to purchase Connecticut hunting, trapping, and fishing licenses, as well as required permits and stamps. The system accepts payment by VISA or MasterCard.*

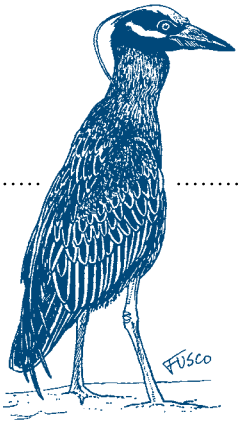
Programs at the Wildlife Division's Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by sending an email to **laura.rogers-castro@ct.gov** *or calling 860-424-3011 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Milford St. (Route 69) in Burlington.*

May 27, 2017 (Saturday), 9:30 AM to 3:00 PM, Open Center Day
The Sessions Woods Conservation Education Center will be open with a full day of fun activities for all ages. There will be guided walks, children's activities, a special art activity led by local artist Judy Bird from 10:30 AM to 12:30 PM, and an archery lesson sponsored by the Conservation Education/Firearms Safety Program. Best of all, it is FREE!

June 4, 2017 (Sunday) Connecticut Forest and Park Association, Connecticut Trails Day
9:00 AM to 12:00 PM, Trails Day Hike
Join Friends of Sessions Woods Board Member Jan Gatzuras for a moderately challenging 5.5-mile hike over varied terrain on the Blue-Blazed Tunxis Trail. This pretty woodland loop includes the Great Wall, a steep rock escarpment nearly 70 feet high. Bring water and a snack and meet in front of the Sessions Woods Conservation Education Center. Pre-registration is not required.
1:30 PM to 4:00 PM, Educational Walk
Join Wildlife Division Biologist Peter Picone and Burlington Land Trust Director Karen Geitz on a moderately challenging three-mile educational nature walk along some of the trails at Sessions Woods. Learn about wildlife, habitat, and local history. At 3:30 PM, a Connecticut falconry expert will showcase the sport of falconry. Pre-registration is required, please contact Peter Picone at 860-919-7236 or *peter.picone@ct.gov*.

Sign up to receive **Wildlife Highlights**, *a free electronic newsletter for anyone interested in Connecticut's wildlife and the outdoors!* **www.ct.gov/deep/WildlifeHighlights**



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A bobcat prowls through a Connecticut hayfield. Bobcat sightings are increasingly reported to the Wildlife Division.