May/June 2015

Connecticut Wildlife

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

Eye on the Wild

Volunteers Are Crucial!

While reading this issue of Connecticut Wildlife*, you will notice a common thread. Many of the articles highlight projects in which volunteers play an important role. The Wildlife Division is fortunate to have a long list of volunteers, whether they are a passionate individual or part of an organized group. These dedicated people are ready, willing, and able to help out, whenever we ask and even at a moment's notice. In this time of tight budgets and shrinking staff numbers, the assistance of these volunteers on various projects is invaluable, and for that, the Wildlife Division is extremely grateful.*

We would never survive without volunteers. They are not only critical to helping us implement Connecticut's Wildlife Action Plan (see page 3), they also help us leverage additional funds and, most importantly, assist with the stewardship of literally thousands of species in a multitude of habitats across our diverse state. The largest group of volunteers is the Conservation Education/Firearms Safety Instructors who spend thousands of hours teaching courses on firearms, bowhunting, and trapping. Another fantastic group of volunteers are the Master Wildlife Conservationists, who contribute to the Wildlife Division's outreach, habitat management, and research efforts (see page 11).

The list of volunteers is extensive. Some are "citizen scientists" that annually participate in frog and bird surveys; monitor nesting bald eagles, peregrine falcons, and ospreys; act as purple martin landlords (see page 4); coordinate bluebird nest box trails or a series of kestrel nest boxes; patrol shorebird beach nesting areas; band songbirds and raptors; participate in invasive plant removal; and the list goes on. There also are numerous groups and organizations (e.g., conservation organizations, sportsmen's clubs, land trusts, Audubon chapters, schools, nature centers, etc.) that take part in individual efforts or donate funds or services for large projects.

Some recent volunteer efforts to create young forest habitat for New England cottontails and other wildlife are highlighted in this issue (see articles starting on page 7 and 16). The work of four outstanding volunteers even received special recognition from the New England Chapter of The Wildlife Society.

There isn't enough room on this page to name all of the individuals and groups and what they do, but they know who they are. The Wildlife Division appreciates all of the volunteers for their dedication and passion and for wanting to "make a difference" for wildlife.

Kathy Herz, Editor

Cover:

Connecticut's shoreline tidal marshes are home to one of our most secretive and inconspicuous species of sparrow, the saltmarsh sparrow (*Ammodramus caudacutus*). Read about the challenges this little bird is facing on page 12.

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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Connecticut's 2015 Wildlife Action Plan Almost Complete

Written by Julie Victoria, Terwilliger Consulting Inc. Team and Retired Wildlife Division Biologist

Articles in recent issues of *Connecticut Wildlife* have highlighted revisions that DEEP is currently undertaking to update the 2005 Connecticut Comprehensive Wildlife Conservation Strategy, now called the Connecticut Wildlife Action Plan. The Wildlife Action Plan must be updated every 10 years to reflect changing conditions, and this first revision will be completed by September 30, 2015. Throughout the revision process DEEP has been seeking public input and participation. Public participation was a huge part of creating the original plan and continues to be important in 2015. Since the original plan was approved by the U.S. Fish and Wildlife Service in 2005, the Department and its partners have been able to integrate the management of natural resources, build valuable partnerships, and support regional and national efforts to secure long-term funding for fish and wildlife conservation. Some projects that have been conducted since 2005 have been highlighted in *Connecticut Wildlife* and, over the past year, public presentations and meetings have been held around the state to provide information and seek input from the public.

The DEEP Wildlife Division and its consultant, Terwilliger Consulting Inc., recently posted a complete draft of the 2015 Wildlife Action Plan on the DEEP website at www.ct.gov/deep/WildlifeActionPlan and everyone is encouraged to take a look. The comment period is winding down, edits are being incorporated, and the polished product is being prepared to go to the U.S. Fish and Wildlife Service for approval. You are encouraged to take this last opportunity to review the 2015 Wildlife Action Plan and participate in this important effort to create a vision for the future of fish and wildlife conservation in our state, and also help keep common species common.

State Wildlife Grants

P. J. FUSCO (2)

Connecticut's Wildlife Action Plan identifies 10 key habitats, one being freshwater aquatic.

In an effort to keep common species common, the scarlet tanager is identified in Connecticut's Wildlife Action Plan as "very important."

Since the creation of the original Wildlife Action Plan in 2005, volunteers have been critical to the successful implementation of conservation actions, ranging from songbird surveys to habitat management to helping fill data gaps on little known species.

More Sighting Reports of Banded Purple Martins Needed

Written by Geoff Krukar, DEEP Wildlife Division

Every spring, purple martins return from their wintering grounds in South America and form nesting colonies in Connecticut. Adult purple martins are thought to be loyal to an established site, returning to the same colony year after year. However, little is known about where juvenile martins go when they return for the first time. Do they follow the parents? Do they spread out and find other colonies to join? Will they select any empty box and start a new colony? To obtain answers to these questions, the DEEP Wildlife Division initiated a color banding study in 2011. Over the last four years, more than 3,600 purple martin chicks have been uniquely color banded in Connecticut to identify the sites where they were born. Now, these returning migrants are helping to shed some light on their dispersal patterns.

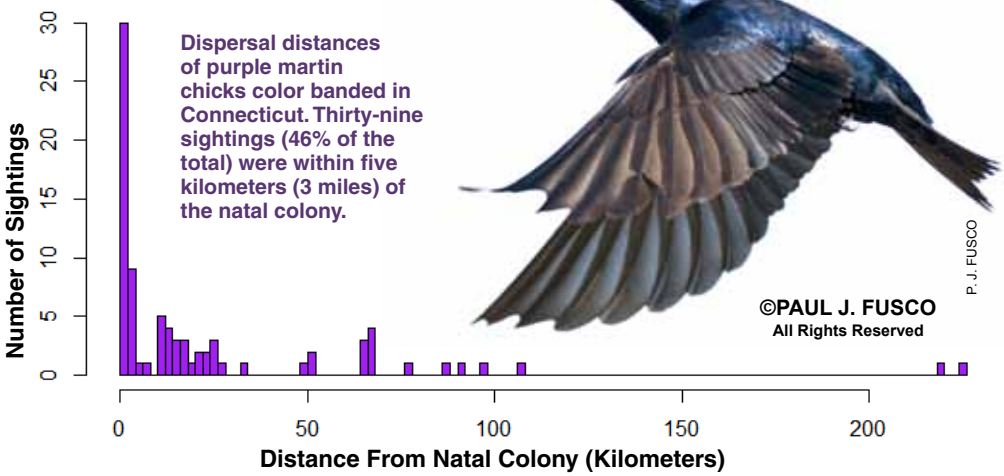
Every purple martin colony visited in 2014 had at least one banded bird, like this adult male (right) from Guilford.

Reported sightings of color banded adult and sub-adult purple martins have come from multiple locations across Connecticut, with a few even being reported from neighboring states. Some birds returned close to home. Twenty-four purple martins were observed at the exact same location where they were originally banded. Other birds made much further moves, with two joining a colony in New York and two joining colonies in Massachusetts. The overall average dispersal distance was 24.3 kilometers (km; 15 miles) with a maximum of 225.4 km (140 miles), but nearly half of all the sightings were within five km (3 miles) of the natal colonies (sites where they hatched).

While there appears to be some movement of birds between colonies clustered along the coast (same goes for inland colonies), to date there has not been much exchange between the coastal and inland colonies. The reasons for this are not clear. Presumably, sub-adult martins migrating north from their wintering grounds would arrive at the coast first where many of the colonies are still new or expanding. This would present opportunities for young birds to find nesting locations. However, over the course of this project, only one bird banded at an inland colony has been found nesting at a coastal colony. No birds banded at coastal colonies have been seen inland in Connecticut.

Key to the success of this project is increasing the number of sightings of color banded birds. During banding events in 2014, attempts were made to identify color-banded adult and sub-adult martins. When the nesting structures were lowered, the parent birds perched nearby, presenting opportunities to observe them with binoculars. At least one banded bird was observed at every colony visited, even at sites where banding had never occurred before. In addition, reports of banded purple martins have been solicited through newsletters and social media. However, the overall sighting (or recapture) rate is only 2.3%. With over 3,600 purple martin chicks colored banded during the last four years, this rate is surprisingly low. We need your help! Everyone, including volunteers and martin colony landlords, are encouraged to keep an eye out and report band colors and, if possible, band numbers of marked purple martins (deep.ctwildlife@ct.gov).

Purple Martin Dispersal Distances



Aerial Excitement in Connecticut

Written by Andy LaBonte, DEEP Wildlife Division

When snow blankets much of Connecticut, DEEP Wildlife Division biologists take to the sky to conduct aerial surveys of several species. Helicopters and fixed wing aircraft are used to fly surveys to evaluate the status of deer and waterfowl populations, and occasionally for locating research animals, such as moose, bear, woodcock, and grouse.

Population surveys for deer are scheduled annually during winter when the ground is completely covered with snow. The snowcover increases the detectability of deer on the landscape. Deer management zones (DMZs), 13 of which have been delineated in the state, are flown on a priority basis. DMZs contain 50-60 miles of transects that are flown using a two- or four-person helicopter at tree top level and at speeds of about 10 miles per hour. Areas of special interest are flown on occasion and special transects are delineated to encompass the target areas.

WILDLIFE DIVISION DEER MANAGEMENT PROGRAM (2)

Wildlife Division biologist Andrew LaBonte and a contracted pilot conducting a low level moose survey from a Robinson 22, two-person helicopter.

The midwinter waterfowl survey is flown in January to obtain an index of long-term wintering trends and provide reliable information on waterfowl distribution and habitat use. The survey also serves to provide data on population trends for some species that breed in remote areas and are difficult to survey using traditional methods. Waterfowl surveys are flown at low elevations along the coast and the three major river systems using a two-person helicopter. Deer and waterfowl surveys are flown every year or every couple of years to identify changes in population trends.

Biologists also use helicopters and fixed-wing aircraft to locate research animals fitted with very high frequency (VHF) transmitters that have moved great distances from their point of capture. Occasionally, animals that are difficult to capture, such as moose, require biologists to actually use a helicopter to fly close enough to the animal to fire a dart gun to tranquilize the animal, allowing a ground crew to locate the animal and place a transmitter on it.

The range of transmitters can be limited and varies with transmitter size. Transmitters placed on birds, such as waterfowl, woodcock, and grouse, have ranges of approximately one-half to two miles, while those on bear, deer, and moose have been heard up to 10 miles away with a direct line of sight. After establishing a thorough search radius from the surrounding roads on a missing animal, a search with an expanded radius can be conducted from the air, providing the best line of sight to aid in locating missing animals.

Although aerial survey work may sound exciting, there is potential danger. Wildlife biologists face a variety of job-related hazards that are unique to the profession. Low-level flight, such as that used for detecting research animals with transmitters and aerial wildlife observations, poses special difficulties. Aviation accidents involving fixed wing aircraft and helicopters accounted for 66% of documented fatalities in biologists (91) between 1937 and 2000 based on a study conducted in 2003. Of 38 accidents, mechanical failure, aerodynamic stall (inability to gain lift at low elevations and speed), and power-line collisions were the primary causes. In spite of the potential dangers associated with low-level flying, aerial surveys continue to provide managers with valuable information for research and management.

Prescribed Burns Conducted at Mohawk State Forest

Written by David Irvin, DEEP Forestry Division; photos provided by DEEP Forestry

DEEP Division of Forestry ignited a prescribed fire on the summit of Mohawk Mountain in Cornwall in late April. This popular overlook in Mohawk State Forest requires continuous vegetation management to maintain the vista on two sides of the mountain. In the past, time-consuming and labor intensive cutting was used to keep the vista open, as well as herbicide control of vegetation. The area is too steep and rocky for mowing.

Two sites on Mohawk Mountain, one on the north slope and one on the south slope of the summit, were treated with prescribed burns separately on the same day.

The DEEP State Parks Division requested assistance from the Division of Forestry to plan a prescribed burn to determine if it was a viable alternative to using herbicides. Fire is already used by DEEP as a management tool for maintenance of native grasslands and other wildlife habitats, and to help restore or regenerate forest types and ecosystems that are in decline in Connecticut. These forest types are often disturbance-dependent, such as pitch pine sand plain and oak forests.

Two sites at Mohawk Mountain, one on the north slope and one on the south slope of the summit, were burned separately on the same day. Even though the total size of the two areas was three acres, the preparation to safely and effectively implement the burns took several days. Preparation involved the creation of firebreaks, contingency lines, and escape routes for staff safety. The potential for mountaintop wind and upslope effects on fire behavior was considerable, requiring a great deal of planning and careful, skilled ignition patterns with drip torches to keep control and reduce the possibility of spot fires during the most intense burning.

The view from the lookout tower on Mohawk Mountain.

Eighteen DEEP staff members assisted in the burn, proving to be an effective professional collaboration between the DEEP Divisions of Forestry, Parks, Wildlife, and Support Services. Many are also part of the Connecticut Interstate Fire Crew (CIFC).

As with many prescribed burns, the fire was first lit to slowly back against the wind or downslope to create "black" safe areas at established control lines. Then each fire was slowly flanked by two different lighters working on opposite edges. Eventually, when approximately half to two-thirds of the areas had burned, the downslope edges were lit, closing the rings and finishing the operations. The fire burned out once fuels in the middle were consumed. All hot spots and "smokes" were cooled and mopped up before staff left for the day. The burns provided firefighter training opportunities and a refresher as the annual spring brush fire season began in Connecticut.

DEEP had the rare opportunity to post a safety "lookout" for the burns in a historic fire tower overlooking both sites. The last functioning fire tower actively used in Connecticut is on the summit of Mohawk Mountain (use was discontinued in the mid-1980s). Never in the past were fires observed so close to the tower and without the use of binoculars!

The Division of Forestry anticipates using prescribed fire in future ecosystem management, particularly in situations where benefits of burning cannot or should not be completely replaced by mechanical means or chemical use.

Aquarion Water Co. Volunteers Create Cottontail Habitat

Written by Judy Wilson, DEEP Wildlife Division

On May 6, 2015, 11 enthusiastic and hardworking Aquarion Water Company Earth Day Volunteers spent the day working alongside staff from the Great Mountain Forest in northwestern Connecticut (Norfolk and Canaan) to remove non-native invasive plants and build a kiosk to provide information to the public about the New England cottontail project recently completed at Great Mountain Forest this past March.

Great Mountain Forest is a privately-owned forest whose mission is to educate, conduct research, and provide recreation supported by a working, sustainable forest management program (www.greatmountainforest.org). Great Mountain Forest received a competitive grant to work in partnership with the DEEP Wildlife Division to create young forest habitat for the New England cottontail, a species whose population and habitat have declined so dramatically that it is now a candidate for listing under the federal Endangered Species Act.

Using specialized equipment on frozen ground this past winter, all but selected mature trees were harvested from an area just north of where New England cottontails have been documented. The resulting regrowth will be thick, dense seedlings and saplings, mixed with a variety of broadleaved plants, briars, and grasses. This habitat and low ground cover are ideal for the New England cottontail and many other species of greatest conservation need, such as the eastern towhee, ruffed grouse, woodcock, and eastern box turtle. The DEEP Wildlife Division has actively sought out and partnered with landowners, such as Great Mountain Forest, to create and restore habitat for New England cottontails and other young forest dependent species on their property as part of the New England Cottontail Initiative.

Preparation for the early May work date began with Great Mountain Forest staff cutting and milling native rot resistant red cedar logs into the timbers that would be used to build the informational kiosk. When the work day arrived, the volunteers notched the timbers so the kiosk could be assembled. They also cut and cleared downed logs from around the site where the kiosk was going to be installed, and dug holes for the kiosk posts. With the help of a tractor, the volunteers put up the kiosk posts and finished assembling the sign in place.

W. W. TIEDMANN, AQUARION WATER COMPANY

Aquarion Water Company Earth Day Volunteers and Great Mountain Forest staff stand near the informational kiosk they built and installed at Great Mountain Forest in Canaan to educate the public about a project to create young forest habitat for New England cottontails.

Volunteers also waded into thorny vegetation to cut and remove a variety of invasive plants, including barberry, buckthorn, and honeysuckle. The tree harvesting created a dramatic change on the landscape. The kiosk is critical to providing information to visitors about why this project was carried out – to create much needed dense, young seedling sapling forest habitat for the New England cottontail and many other species.

The work day at Great Mountain Forest was just one of eight projects that the Aquarion Water Company Earth Day Volunteers will be helping with this year, providing both labor and funding. Volunteers have assisted with other projects, including streamside buffers, raised garden plots, irrigation lines and fencing to promote new buffer plantings, trash cleanup, and even the installation of benches and plaques. In addition to enthusiasm, hard work, and a love of the outdoors, the volunteers bring a diverse skill set to the projects to get the job done. A variety of equipment also is used to accomplish projects, from hand tools to water trucks.

Aquarion Water Company is a public water supply company that provides water to more than 625,000 people in 51 cities in Fairfield, New Haven, Hartford, Litchfield, Middlesex, and New London Counties. The company supports the environment and sustainability through a variety of activities. For more information about the Aquarion Water Company, go to www.aquarionwater.com.

Thanks to a great partnership between Aquarion Water Company Earth Day Volunteers and staff from the Great Mountain Forest, non-native invasive plants were removed and a kiosk was installed to provide information about a project to create habitat for New England cottontails.

Filling a Niche: CT's Brown Trout Fry Stocking Program

By Michael Humphreys, DEEP Inland Fisheries Division

Connecticut is blessed with many beautiful free-flowing brooks and rivers. The majority of our moderate to large size streams are stocked with nine to 12-inch brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), or rainbow trout (*Oncorhynchus mykiss*) raised at one of three state hatcheries. These trout are stocked to enhance fishing in streams where natural reproduction is absent or inadequate, or into waters that provide a seasonal trout fishery. Many of our cold perennial streams support significant wild, naturally reproducing brook trout, brown trout, or both species.

Through extensive stream sampling in the early 1990s, it was determined that most of Connecticut's moderate-size cool water streams could potentially support many more trout than they currently were. In other words, we were finding good trout habitat, but much of it was empty. The DEEP Inland Fisheries Division identified that natural spawning was hampered by little if any suitable spawning gravel or high mortality rates (predation and other natural causes of death). As these factors prevented most fish from reaching spawning age (two or three years old for most females), it was clear that successful reproduction was the "bottleneck" for trout populations.

At a time when hatchery production of adult-size trout is at capacity, we sought ways to fill the empty stream habitat with trout. Fry are small fish (1-2 inches) that are capable of swimming and feeding on their own. By producing and incubating trout eggs in DEEP hatcheries, and then rearing the hatchlings to the fry stage, we found a way to bypass the reproductive bottleneck.

We began stocking fry in the late 1990s. Fish stocked as fry can then disperse and grow on a diet of natural food in the natural stream environment. Very quickly, stocked fry take on natural coloration and habits and become indistinguishable from wild-spawned fish. Over the past 15 years, our extensive study has proven that the fry stocking project has increased the number of trout in streams in a cost-effective manner by using the empty habitat to grow fish.

Many of these fry-stocked waters are now managed as "Wild Trout Management Areas" to maximize the benefit of the high-quality, wild-looking trout grown from fry (see the Connecticut Angler's Guide for specific streams). Many of these waters are also stocked in spring with adult-size trout, which are necessary to support high catch and harvest rates during the popular traditional spring trout fishery. A nine- or 12-inch minimum length limit regulation serves to protect the young fry-stocked trout from harvest for their first one to two years.

Consecutive years of fry stocking can

M. HUMPHREYS, INLAND FISHERIES DIVISION

Stocking brown trout fry into streams with vacant or under used trout habitat facilitates the production of "wild-like" fish that are more colorful than traditional stocked trout.

M. BEAUCHENE, INLAND FISHERIES DIVISION

On an annual basis, 250,000 to 400,000 brown trout fry are produced and stocked into 50-70 miles of stream habitat in 25 to 30 streams each spring.

produce multi-age populations that have densities and age/size distributions that are similar to those in Connecticut's best natural wild trout streams. Thus, fishable numbers of trout are created in streams that previously held very few or no wild trout. In streams that are stocked with both fry and adult trout, the adult-stocked trout are almost always rapidly depleted, leaving few if any remaining by mid-summer, while high densities of fry-stocked trout remain to use previously empty habitat and provide new year-round trout fishing opportunities. Due to the nature of natural trout population dynamics, younger and smaller trout predominate in populations established by fry stocking. However, most fry-stocked streams produce some trout over 12 inches, with a few trout up to 18-20 inches or more.

We continue to look for new opportunities to support trout fisheries. Some efforts include stocking fry in small tributaries that act as "nursery streams" where fish migrate downstream as they outgrow their habitat. For example, 13 tributaries to the upper Housatonic River are now regularly stocked with Farmington survivor brown trout fry to supplement trout fisheries in the two popular Housatonic Trout Management Areas. Other fry stocking efforts involve tributaries to some trout management lakes, Steele Brook (Watertown), and, most recently, due to improved public access, Pond Brook (Newtown) and Cobble Brook (Kent).

Brown trout fry stocking has proven to be an efficient means of increasing the cost effectiveness of Connecticut's trout program and the quantity and quality of stream trout fishing.

Currently, the fry stocking program is an established part of DEEP's stream trout management program. On an annual basis, 250,000 to 400,000 brown trout fry are produced and stocked into 50 to 70 miles of stream habitat in 25 to 30 streams each spring. Fry stocking will never replace the high value of Connecticut's remaining self-sustaining native wild brook trout populations. In fact, wild brook trout populations are judiciously avoided when considering possible fry stocking locations. Likewise, fry stocking will not replace the high catch rates and harvest opportunities generated by the adult trout stocking program. Even the best stream habitat cannot naturally sustain the liberal harvest of adult-size trout that is supported by our state hatchery system. However, brown trout fry stocking has proven to be an efficient means of increasing the cost effectiveness of Connecticut's trout program and the quantity and quality of stream trout fishing.

Jeffrey Klinefelter Wins 2015 CT Duck Stamp Art Contest

In an extremely close contest, a panel of judges recently selected wildlife artist Jeffrey Klinefelter's depiction of three Atlantic brant flying near the old New London lighthouse as the winner of the DEEP's 2015-2016 Connecticut Migratory Bird Conservation (Duck) Stamp Art Contest. Mr. Klinefelter, of Etna Green, Indiana, has entered a painting every year in the contest and finished third in last year's contest. Mr. Klinefelter's painting was chosen out of 11 entries submitted by artists from across the country, including two from Connecticut. The DEEP Wildlife Division encourages local artists to submit paintings for this contest. So far, few local artists have entered the contest or won the top prize.

Paintings were judged in five categories: originality, artistic composition, anatomical correctness, general rendering, and suitability for reproduction. Mr. Klinefelter's painting will be the image for the 2016 Connecticut Duck Stamp. A pair of Canada geese painted by Christine Clayton, of Sidney, Ohio, was voted a very close second and a painting of three bufflehead by Broderick Crawford, of Clayton, Georgia, placed third. The top three paintings are currently on display in the lobby of the DEEP headquarters at 79 Elm Street, Hartford, which is open to the public on Monday through Friday, from 8:00 AM to 5:00 PM.

Do your part for conservation. Buy a Connecticut Duck Stamp and contribute to habitat protection and restoration.

The Connecticut Duck Stamp Program was initiated in the early 1990s when concerned sportsmen worked with DEEP to develop legislation that would generate revenue for wetland conservation. Modeled after the federal Duck Stamp Program, Connecticut's program requires the purchase of a state Duck Stamp, along with a hunting license, to legally hunt waterfowl. By state law, funds generated from the sale of Duck Stamps can only be used for the development, management, preservation, conservation, acquisition, purchase, and maintenance of waterfowl habitat and wetlands, as well as the purchase and acquisition of recreational rights or interests relating to migratory birds.

A panel of judges recently selected wildlife artist Jeffrey Klinefelter's depiction of three Atlantic brant flying near the old New London lighthouse as the winner of the DEEP's 2015-2016 Connecticut Migratory Bird Conservation (Duck) Stamp Art Contest.

The Duck Stamp Program is a great example of how the North American Model of Wildlife Conservation works – users of the resource pay into funds whose monies are solely dedicated to conservation. The Connecticut Duck Stamp fund is a vital source of money for many of the wetland projects that are conducted in our state. Federal aid dollars from the hunter-funded Pittman-Robertson Program can also be used for wetland conservation.

The Duck Stamp Program has generated over $1.4 million for the enhancement of wetland and associated upland habitats, as well as garnered additional monies for Connecticut through matching grants from federal conservation initiatives. By combining Duck Stamp funds with these additional monies, over $4 million dollars have been available to complete wildlife conservation projects. Thus, Connecticut has received a 4:1 return on Duck Stamp monies. Over 3,445 acres of wetlands in the state have been restored or enhanced using Duck Stamp funds, mostly on state-owned wildlife management areas. The funds also have been used to purchase 75 acres of critical wildlife habitat and conduct habitat projects at over 50 sites statewide. These efforts have benefitted many of the approximately 274 birds, fish, amphibians, and reptiles of our state that rely upon clean, healthy wetlands.

Hunters are not the only ones who can purchase Connecticut Duck Stamps. Anyone who wishes to support wetland conservation and restoration in our state should buy a Duck Stamp. Stamps can be purchased for $13 each wherever hunting and fishing licenses are sold: participating town clerks, participating retail agents, DEEP License and Revenue (79 Elm Street in Hartford), and through the online Sportsmen's Licensing System (www.ct.gov/deep/sportsmenlicensing). Upon request, stamps can be sent through the mail. To learn more about the Connecticut Duck Stamp and the Art Contest, go to www.ct.gov/deep/ctduckstamp.

Reproduction prints of the winning Duck Stamps that are signed by the artists and suitable for framing are also available. Please contact the DEEP Wildlife Division's Migratory Bird Program at 860-418-5959 for more information on purchasing reproductions.

2015 Master Wildlife Conservationist Training Completed

Article written by Laura Rogers-Castro, DEEP Wildlife Division

Twenty-five individuals completed a 40-hour training program this past spring as a requirement for the DEEP Wildlife Division's Master Wildlife Conservationist Program (MWCP). This program is a free, adult volunteer training series sponsored by the Wildlife Division and offered biannually during spring at the Sessions Woods Conservation Education Center in Burlington. The intent of the program is to provide wildlife-related training to candidates willing to conduct volunteer activities for the Wildlife Division and other conservation organizations.

The program consists of classroom and field training. Topics include wildlife management, population ecology, Connecticut specific wildlife issues, forestry, interpretation, and communication skills. The classes are presented primarily by DEEP staff.

Upon completion of the classes and passing the examination, volunteers are required to provide 40 hours of service during the next year and 20 hours each subsequent year to remain in the program. Volunteer service can include leading wildlife-related walks, presenting educational programs, working on habitat enhancement projects at wildlife management areas, and assisting biologists with research projects. Other wildlife conservation projects initiated by candidates in their own communities, such as presenting wildlife programs, staffing wildlife-related displays at town festivals, or conservation commission-related work, also are considered valid volunteer service.

Since 2002, 272 participants have completed the Master Wildlife Conservationist Program series. Over 45,500 volunteer hours have been provided by MWCs. The Wildlife Division would like to thank all the MWCs for their dedicated volunteer efforts.

P. J. FUSCO (2)

Congratulations to the 2015 Master Wildlife Conservationist class. Back row (l to r) Dave Zabel (MWC Program Assistant), Eric Rahn, Theresa Nodine, Brianna Treichler, Lori Mendoza, Steve Johnson, Tina Forsberg, Joe Shea, Maureen Mauro DeSantie, Eugene Newell, Paul Colburn, Hugh Rogers, Christina Cerino, Andrew MacDonald, Mike DeGrego, Kevin Lamy (DEEP Maintainer), Laurette Saller, Monica Cazzetta. Front row (l to r) Joe Manfre, Suzanne Newell, Barry Scott Hubner, Jean Laughman, Jean Bouteiller, Peggy Lareau, Art Potwin, Laura Rogers-Castro (DEEP Educator and MWCP Coordinator), Rick Napierski (DEEP Maintainer).

Wildlife Division Director Rick Jacobson provided an introduction to wildlife conservation during the Master Wildlife Conservationist Program series.

Examples of MWC projects: present wildlife programs at libraries, schools, and senior centers; conduct invasive species removal projects at wildlife management areas; staff the Shepaug Dam Bald Eagle Observation Area in Southbury; monitor coastal areas for nesting piping plovers and least terns; assist with Canada goose banding efforts; and provide outreach at the Woodstock Fair.

The Saltmarsh Squeeze and the Sparrow

Article and photography by Paul Fusco, DEEP Wildlife Division

Connecticut's salt marsh habitat is home to one of our most secretive birds, the saltmarsh sparrow.

Connecticut's shoreline tidal marshes are home to one of our most secretive and inconspicuous species of sparrow, the saltmarsh sparrow (*Ammodramus caudacutus*). This iconic little bird nests here during the breeding season, with many individuals remaining into the fall before moving south for the winter.

This sparrow is entirely dependant on saltmarsh habitat. And, there is growing concern about what lies ahead for both the sparrow and its habitat.

In the fall, saltmarsh sparrows can be found in the taller grass within the marsh, where they often feed on the seeds of saltmarsh cordgrass (*Spartina alternaflora*).

Description

The saltmarsh sparrow is a small stocky bird with a rather long bill for a sparrow. Its beautiful yellow ochre facial triangle, along with a gray ear patch and gray nape, are diagnostic. The breast and flanks are white or buff with distinct dark streaking, while the gray crown is unstreaked. The back is dark olive-brown and gray with white striping. The tail has pointed feathers, referring to a former common name of saltmarsh sharp-tailed sparrow.

Saltmarsh sparrows have a complex song with a whispy quality made up of varied jumbles and buzzy trills. The faint song is so soft it is almost inaudible.

Habitat

Salt marshes are the only habitat these birds use. This heavy dependence on salt marshes has led to significant declines in the saltmarsh sparrow population over the last century as development pressures have destroyed much of Connecticut's original salt marsh habitat. Since the time of European settlement, between 30% and 50% of the estuarine marshland present in Connecticut has been lost.

Saltmarsh sparrows are most closely associated with the drier portions of the salt marsh where there is dense cover of saltmeadow grass (*Spartina patens*) or blackgrass (*Juncus gerardii*). These grasses grow low and dense in the drier, high marsh zone, and this is where the sparrows most often build their nests.

An open cup nest is built within the marsh grasses, just out of reach of the highest tides. The location of nests makes them highly vulnerable to extreme high tides and sea-level rise due to climate change. The typical clutch size is two to six speckled greenish eggs. Incubation takes 11 days, and fledging occurs about 10 days later.

Behavior

Saltmarsh sparrows are skulky and secretive. They spend much of their time on the ground within the marshes. If flushed, the bird's flight is weak and low. A sparrow will often fly a short distance, then drop back down, disappearing into the marsh grass.

Rather than hopping, saltmarsh sparrows can be seen running mouse-like through the grass as they forage for food or hide from a predator.

Males will sing from the tops of grass clumps but they are not territorial. They sometimes perform an aerial courtship display where they exhibit a brief flutter flight 10 feet above the marsh while singing.

Among the saltmarsh sparrow's preferred food items are flies and sand fleas, making this bird beneficial to anyone spending time in or near a salt marsh. The bird also will eat other insects, spiders, snails, and seeds from marsh grasses.

Note the yellow ochre facial triangle that completely surrounds the gray ear patch. The streaked breast and flanks, along with the white back striping, gives the saltmarsh sparrow the ability to blend into its habitat. Concealment, coupled with the sparrow's skulky behavior, make the saltmarsh sparrow a difficult bird to observe.

Conservation

The saltmarsh sparrow is a species of special concern on Connecticut's Endangered, Threatened and Special Concern Species List, and it is a species of greatest conservation need as outlined in the state's Wildlife Action Plan. The entire breeding range of the saltmarsh sparrow is along the narrow coastal strip of the northeastern United States from Maryland to southern Maine. In winter, most saltmarsh sparrows retreat from the northernmost part of their range to Atlantic coastal marshes along the southern United States, from Maryland south to Florida. They have been documented in Connecticut during winter; however, it is a very rare occurrence.

Connecticut is situated in the middle of the sparrow's breeding range, bestowing a global responsibility for the conservation of this species on our state. Wildlife conservationists face a difficult challenge as sea-level rise associated with climate change is expected to be a major threat to the Northeast's tidal marsh systems.

Saltmarsh sparrows typically nest in the salt meadow grass or black grass of the high marsh zone, which is inundated by tides less frequently than the wetter portions of the marsh where the taller cordgrass (*Spartina alternaflora*) dominates. The high marsh zone has a narrow margin for the sparrows to reproduce in. Flooding spring tides destroy many early season nests, but some of the most successful nesters are the ones that re-nest quickly after the lunar tide cycle. This gives them the necessary time to incubate and raise young before the next lunar tide cycle floods the high marsh again a few weeks later.

Many of these marshes are already heavily degraded from past ditching, filling, associated coastal development, and continuing encroachment. With sea levels rising as expected, there will be many uncertainties. But, the fact remains that there is little room for marsh systems to migrate inland, especially in Connecticut. High marsh ecosystems that are continually flooded by higher and higher tides will likely become more fragmented and gradually erode to low marsh and then mudflat, eventually being lost to open water. Marshes will be squeezed between the rising sea and existing coastal development and upland. Extensive areas of saltmeadow grass may be greatly reduced in size or eliminated altogether. This would severely impact the only nesting habitat that the saltmarsh sparrow has. Thus, this bird is extremely vulnerable to the effects of climate change and sea-level rise.

The sparrow is not the only species at risk. Other saltmarsh dependant wildlife that will likely be threatened by sea-level rise include rails, waterfowl, shorebirds, shellfish, crabs, and the state endangered least shrew. Fish populations would also be at risk because healthy marshes serve as important spawning nurseries for them. Many species of migratory birds depend on salt marshes as stopover habitats to refuel and rest during their journeys.

Since the mid-1990s, over 4,600 acres of tidal marsh have been restored by the Wildlife Division's Wetland Restoration Program. The funding to complete these projects has come from a number of conservation grants and partnership donations, including the Connecticut Duck Stamp Program.

Saltmarsh sparrows can be seen at some of the larger coastal marshes in Connecticut, including Hammonasset Beach State Park in Madison, Charles E. Wheeler Wildlife Management Area in Milford, and the Stewart B. McKinney National Wildlife Refuge/Great Meadows Marsh in Stratford. Look for the birds in the salt marsh when they sometimes pop up to the tops of the grass to watch for potential danger.

What Is Behind Those Minimum Sizes?

By Penny Howell, DEEP Marine Fisheries Division; photos provided by DEEP Marine Fisheries

This summer, thousands of anglers will be fishing in Long Island Sound in pursuit of the large diversity of fish species that are found there. In addition to being able to recognize which fish species they catch, anglers also have to know if there are limits on how big and how many they can take home. Every spring, DEEP publishes the Connecticut Angler's Guide Marine Section (www.ct.gov/deep/lib/deep/fishing/anglers_guide/anguide_part3.pdf) as an easy reference for marine and freshwater anglers, which includes identification keys and all pertinent regulations. What is missing from the guide is the vast amount of information that goes into setting regulations and monitoring the status of each species.

For example, regulations setting a minimum harvest length are based on a species' growth rate and age at maturity. DEEP Marine Fisheries Division staff use several techniques to age different species of fish so their rate of growth and age can be tracked. Fish grow faster when the water is warm, and they grow slower, or not at all, when the water is cold. Therefore, distinct growth periods show up differently on a fish's scales, bones, or other "hard parts." During fast growth periods, scale or bone is laid down thinly with little color. During slow growth periods, material is laid down more slowly leaving a thicker, and therefore darker, ring. Often, these rings can be seen by just holding a cleaned fish scale in front of a bright light. A more accurate count requires magnification. Thicker bones from very old fish may need to be cross-sectioned with a specially designed diamond-blade cutter. Fast-growing, short-lived species can be aged by looking at rings on their scales. Older, long-lived species require extracting a bone that is not damaged over the fish's life and is big enough to see the many annual rings. The accuracy of each structure to record age is verified by holding fish in captivity for many years or tagging and recapturing hundreds of wild fish over a long period of time.

Once the ages and growth rate of each species are documented, then a harvest rate for fish above a minimum size can be calculated so that the total mortality rate, from fishing and other sources, matches growth and reproduction rates. As long as these rates balance, the population can sustain itself with its full age structure. Most minimum harvest sizes correspond to a relatively young age, which allows the fish to reproduce at least once. However, many species can grow much older and larger. The minimum harvest size is just a beginning size which keeps the opportunity open to take home that trophy-sized fish.

This work is funded through Federal Aid in Sport Fish Restoration.

When cleaned and highly magnified, several light annual growth rings show up clearly on this summer flounder (fluke) scale.

The growth rings on this 10-year-old winter flounder otolith (ear bone) are clear only when it was cross-sectioned and highly magnified to reveal thick and thin rings.

Bones, like these operculars (gill covers) from a tautog, show large growth rings at the base when the fish was young and smaller rings on the edge when the fish was older and its growth slowed. A large bone is needed to age tautog because they can live up to 40 years of age.

Minimum Harvest Size of Long Island Sound Fish

Species Name	Minimum Harvest Size	Age at Min Size	Maximum Age
Scup (Porgy)	10" (25.4cm)	3	17
Striped Bass	28" (71.1cm)	6	30
Summer Flounder (Fluke)	18" (45.7cm)	4	14
Tautog (Blackfish)	16" (40.6cm)	7	40
White Perch	7" (17.8cm)	2	10
Winter Flounder	12" (30.5cm)	3	15

Data source:
Atlantic States Marine Fisheries Commission Species Profiles and American Fisheries Society Monograph 9: Connecticut River Ecological Study

Inline Water Control Structures in Connecticut

Written by Paul Capotosto, Roger Wolfe, and Bonnie Lathrop, DEEP Wildlife Division

The Wildlife Division's Wetlands Habitat and Mosquito Management (WHAMM) Program has been installing inline water control structures in several state-owned water impoundment areas to control beaver flooding. These inline structures are placed in the dike of an impoundment, not along the edge like some other structures, eliminating the sound of water flowing over the weir boards. When beavers hear the sound of flowing water, they instinctively try to build a dam to reduce or stop the flow. Usually, the old water control structures and weir boards are left in place so that the beavers will continue to block off the old structure, but not touch the underwater culverts of the new inline water control structures. This allows water levels to be controlled by the inline water control structures, without impediment by beavers. Inline structures come in many sizes, ranging from four- to 24-inch diameter pipe, and can be customized to whatever size is needed.

Inline water control structures were first used in Connecticut in 2005 at Davis Pond in Niantic. Several beach associations in the area wanted to re-establish saltwater flows to an old tidal salt pond. Historically, saltwater used to enter the site through an open channel. Over the years and due to several storms, this channel filled in with sand. The WHAMM Program had been restoring a tidal wetland to the north of the pond that was connected to tidal water. A new channel was created, but this would drain the pond of all water. Plus, there was no way to control water levels in the pond to keep the water high during certain times of the year. The beach associations were part of the discussion and decision on how to go ahead with the project and what kind of habitat would be created for migrating birds. Permits were obtained for installing two inline water control structures. Due to the presence of saltwater at the site, the structures were made of plastic with 18-inch diameter culverts. The structures have six- and eight-inch plastic weir boards, which can be raised or lowered to control water depths in the tidal pond. At certain times of the year, the weir boards are removed to drop the pond to low tide conditions for migratory shorebird habitat. While pulled out, the weir boards are repaired, if needed. Approximately 10 years later, the structures and the culverts are in good shape.

Since then, other inline structures have been installed throughout the state. In 2007, a six-inch diameter pipe and small inline water control structure were used on a dike, creating a small pond and wet meadow for waterbird habitat at the Connecticut Audubon Center in Pomfret. Funds were provided by Connecticut Audubon and the WHAMM Program.

In 2010, inline water control structures were installed (one at each area) at Bartlett Brook Wildlife Management Area (WMA) in Colchester and Mahoney Pond at Franklin WMA in North Franklin. Funds were provided by the Connecticut Duck Stamp Fund and the WHAMM Program.

In 2011, four inline water control structures were installed: two at Charter Marsh in Tolland, one at Oxbow Marsh in Haddam, and one at Keeney Marsh in Nehantic State Forest. Funds for the Charter Marsh project were provided by the U.S. Fish and Wildlife Service's North American Wetlands Conservation Act (NAWCA) and DEEP. Funds for the Oxbow and Keeney Marsh projects were provided by the Wildlife Division's Habitat Management and WHAMM Programs.

In the fall of 2014, four inline water control structures were installed; two at Pumpkin Hill WMA in Chaplin and two at Black Spruce WMA in Goodwin State Forest in Hampton. These structures were funded by NAWCA and DEEP. The WHAMM Program installed these structures, starting in the late summer into the fall of 2014 after beaver debris was removed. Maintenance had to be conducted at both sites to clear vegetation on the dike and spillways. Working together, the Wildlife Division's Migratory Bird and Habitat Management Programs will decide when to raise and lower the water levels to promote plant growth that will be beneficial to wetland wildlife using the areas.

B. LATHROP

View of a 24-inch diameter ADS N-12 pipe attached to an eight-foot Agri-Drain inline water control structure.

B. LATHROP

The old cement water control structure at Pumpkin Hill WMA with two plastic pipes.

R. WOLFE

Compaction has been completed on two inline water control structures.

Volunteers Awarded for New England Cottontail Projects

Written by Lisa Wahle, Wildlife Management Institute, and Judy Wilson, DEEP Wildlife Division

In May 2015, Beth Sullivan from the Avalonia Land Conservancy and Debbie Martin, Richard Martin, and John Baker of the Litchfield Hills Audubon Society (LHAS) were awarded Certificates of Recognition by the New England Chapter of The Wildlife Society (TWS). These certificates recognize an individual or group outside of the wildlife profession who has made a significant contribution to wildlife management in one of the following categories: habitat protection, public education, and wildlife policy and conservation. With these awards, TWS recognized the significant wildlife conservation and outstanding outreach efforts of these exceptional volunteers. The awards were given on behalf of all the partners involved in the regionwide New England Cottontail Initiative, including the DEEP Wildlife Division, U.S. Fish and Wildlife Service (USFWS), U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), and the Wildlife Management Institute (WMI).

Not only did these exceptional volunteers oversee their respective habitat management projects and troubleshoot problems as they arose, the awardees made an effort to learn about and articulate the importance of young forest habitat for the New England cottontail and other wildlife. They continue to be passionate advocates for young forest habitat management through their writings, interviews, and presentations.

As an example of the ongoing outreach by the Avalonia Land Conservancy, Beth Sullivan gave a presentation at a 2015 Connecticut Land Conservation Conference Workshop explaining the challenges of executing the largest habitat management project ever undertaken by the Conservancy – the never ending paperwork, legal hurdles of gaining access, and communications necessary for the project to be implemented.

At the same conference, Debbie and Rich Martin presented a historic tour of management at Boyd Woods, in Northfield. Their beautifully choreographed presentation took participants through time, from the last century when the previous owner, Margery Boyd, documented the bird species present on the open landscape, through the process of natural succession, and now the return of some areas to young forest and associated wildlife.

The three awardees have written extensively about their projects and continue to field questions and criticisms from those who are not quite convinced that cutting down trees can have great benefits, even as those areas fill with new life.

The Peck and Callahan Preserve Project

In 2011, after learning about the New England Cottontail Initiative, the Avalonia Land Conservancy began to consider undertaking a project to create New England cottontail habitat at the Peck and Callahan Preserves in Stonington. After much internal discussion, research, more discussion, and even some soul searching, the Conservancy agreed to move forward with the project. The USFWS provided extensive technical support to plan the project and helped secure a Long Island Sound Futures Fund grant. NRCS provided a Working Lands for Wildlife grant and the Wildlife Division provided certified forestry technical assistance in coordination with the Wildlife Management Institute. Dedicated Conservancy members spent months researching, planning, posting, remarking boundaries, and negotiating with neighbors to gain access to the site. They also gained permission from a major power company to access the site across their right-of-way under power lines.

J. SULLIVAN, AVALONIA LAND CONSERVANCY

Beth Sullivan of Avalonia Land Conservancy was awarded a Certificate of Recognition from the New England Chapter of The Wildlife Society for her extraordinary volunteer efforts to create young forest habitat and educate people about its value for the New England cottontails and many other wildlife species.

Finally, in 2013, the project began and all but selected mature trees were cleared from 22 acres. This site is adjacent to six acres of an existing powerline right-of-way that is dominated by grasses, broad-leaved plants, and small shrubs and trees. Once the newly-created habitat resprouted into a dense thicket of shrubs, small seedling, saplings, and various plants, there was a total of 28 acres of habitat for New England cottontails.

Through it all, Beth Sullivan championed the project within her own organization to ultimately gain approval from the Conservancy's Board of Directors. She was interviewed by the local newspaper, and wrote tirelessly about the experience in her blog (See Avalonia eTrails for all of her posts; www.avaloniaetrails.blogspot.com). What follows are excerpts from Beth's blog that describe her thoughts pre- and post-harvest.

"What remains isn't pretty at first glance. The long swath of the Peck Preserve is open now. From a distance, it is pretty brown, a little disconcerting to a self-described tree hugger but we looked closer. The machines used were designed to have a low impact on the earth so we do not have any large areas of torn up ground. The wetlands were respected and left buffered and the stream now runs clear and clean. Specially chosen trees remained standing to provide reseeding sources, mast for wildlife and some shelter. A nice diversity of species is still present. Understory shrubs lie unharmed in most areas. Blueberry and huckleberry

plants, as well as smaller seedlings, ground covering vines and small plants, will thrive in the open canopy. Referred to as slash, those tree tops and branches left on the ground provide instant cover for small mammals. The rough slash will also deter deer that will try to enter the new area of inviting shoots and greenery. The decomposition over time will provide nutrients for the soil. As part of the funding agreement, large brush piles were created. These will provide longer term shelter for many animals, and hopefully the New England cottontail will be one of them!

As we walked the entire site, we noticed new birds already. Several types of flycatchers, peewees, phoebes, and kingbirds were having a field day with the numerous dragonflies cruising around. Several butterflies made use of the now open areas: red-spotted purples, black swallowtails, and American coppers. We could see that the ferns, low plants, berry bushes and vines, such as greenbrier, were already beginning to grow up and fill in. On close inspection, it was wonderful to see the tree stumps already re-sprouting vigorous new shoots. Oaks, beeches, maples, birches and hickories all seem to be in a hurry to get a jump start on re-growing. It is this new growth that will provide the food and thick, dense cover that we aim for. ***(Beth Sullivan, Chairperson of the Stonington Town Committee–Avalonia Land Conservancy)***

Boyd Woods Audubon Sanctuary Project

The New England cottontail project got off to a bit of a rocky start with the Litchfield Hills Audubon Society (LHAS). Member John Baker applied to the NRCS Working Lands for Wildlife Program to do a project, but many LHAS members, including Debbie and Rich Martin, were strongly opposed to cutting so much forest down at the Boyd Woods Sanctuary. More than 20 members of LHAS attended the site visit with staff from NRCS, the Wildlife Division, and the Wildlife Management Institute to learn why anyone would want to cut down forest to create a different habitat. By the end of the walk, members who were completely opposed to cutting trees were discussing the possibility of doing a project. Debbie and Rich Martin, the stewards for Boyd Woods, quickly evolved into supporters. They, along with John Baker, became unwavering supporters and worked tirelessly to see the project through.

Litchfield Hills Audubon Society received a grant from the NRCS Working Lands for Wildlife Program to fund the project. The Wildlife Division and Wildlife Management Institute provided technical expertise to write a cutting plan, secured all necessary permits, and assisted with finding contractors with the specialized equipment needed to do the work.

Eight acres were cut in 2014 and four more acres were cut in 2015. These cleared areas are quickly growing into brushy habitat that is dense with seedlings and saplings – a habitat needed by New England cottontails and many other species of young forest wildlife. These 12 acres are adjacent to five acres cleared in 2005 under another NRCS grant, bringing the young forest total to 17 acres.

John, Debbie, and Rich remained steadfast supporters through every hurdle of the project. Debbie and Rich wrote extensively about the project, fielded criticisms, hosted the Connecticut New England Cottontail Land Management Team for a site walk, and created a choreographed presentation seen by many. What follows is an excerpt from their presentation.

"*The Litchfield Hills Audubon Society received the 102-acre Boyd property, in the Northfield section of Litchfield, in 1995. The former landowner, Margery Boyd, had resided on the property (which was then called Twin Brook Farm) from 1926 until 1992, and as an avid birder she kept daily records of every bird she saw there. These records show that species requiring a shrubby/young forest habitat were common during the time when Margery's farmland was reverting to a mature forest. By the time LHAS*

LITCHFIELD HILLS AUDUBON SOCIETY

(From left to right) John Baker, Debbie Martin, and Rich Martin are volunteer members of the Litchfield Hills Audubon Society and were awarded a Certificate of Recognition from the New England Chapter of The Wildlife Society for their outstanding efforts to create young forest habitat and provide outreach about the need for this habitat to support a variety of wildlife, including the New England cottontail, various birds, and butterflies.

acquired the land, it was 90% wooded – thus, the name Boyd Woods Audubon Sanctuary was chosen. The woods were beautiful, but quiet. It was obvious that as the trees took over, many birds commonly recorded in Margery's birding diary had disappeared. To add diversity to the landscape, LHAS had a five-acre Wildlife Habitat Incentives Program (WHIP) clearcut done in 2005. Half of this area was allowed to grow into an early-successional shrubland, and the other half was planted in conifers. Before long, a variety of birds discovered this new habitat. Chestnut-sided and blue-winged warblers, Eastern towhees, field sparrows and others were frequently heard and seen. Eastern cottontails were also a common sight."

In 2012, when LHAS was approached about creating habitat for the New England cottontail, many members strongly objected. We'd heard that a clearcut of 25 acres or more was required, and after visiting recently cut New England cottontail projects in neighboring towns, we were devastated by what we saw: treetops, logs, and huge piles of brush were left, strewn all over the place! Boyd Woods was a lovely, peaceful spot. We didn't want this mess on our property!

But we started to see things differently as we talked to the "experts' (foresters from the USDA NRCS and DEEP). We learned about the New England cottontail and 47 other species of greatest conservation need that struggle to survive due to the disappearance of young forest habitats. On this list were many of the birds that Margery Boyd had counted as common. We could help bring them back to Boyd Woods! As an Audubon Society committed to managing our sanctuary for the preservation of wildlife, how could we NOT participate in this project? A turning point came when we were told we could cut as little as 10-15 acres (not 25). Suddenly, we couldn't wait to get started.

It was impossible to think of the freshly cut areas as 'devastating' when spring arrived because, although messy in appearance, this new habitat was full of life. Eastern towhees sang from the brush piles, while indigo buntings, field sparrows and catbirds joined the chorus along the early successional/clearcut edge. On the Annual LHAS Evening Woodcock Walk, an amazing number of woodcock performed courtship flights over these newly-expanded openings.

Summer sunshine encouraged the growth of interesting plants and wildflowers which previously hadn't been present. Many of these were beneficial to butterflies and bees. In autumn, many plants went to seed or produced berries. Tracks in winter snow showed evidence of a variety of animals visiting the clearcut, and some were burrowing into the brush piles. We are confident that when the New England cottontails arrive, they too will find this area accommodating. (New England cottontails have been confirmed at a preserve three miles from Boyd Woods).

During this process, LHAS has learned about the importance of land management practices. Margery Boyd wanted her land to be used for education and the enjoyment of nature. We have a perfect opportunity to fulfill her wishes in this promising new habitat. A meandering path and two benches invite sanctuary visitors to notice and appreciate changes as they occur in the regenerating landscape. Guided walks also will be offered."

Debbie and Rich Martin will be giving their presentation in the coming months at the Great Mountain Forest in Norfolk. This non-profit, privately-owned forest is the largest of its kind in Connecticut and is dedicated to research and the application of knowledge to the development and use of all types of trees, forests, and other natural resources. To find out when the presentations are scheduled, go to www.greatmountainforest.org.

The Natural Resources Conservation Academy

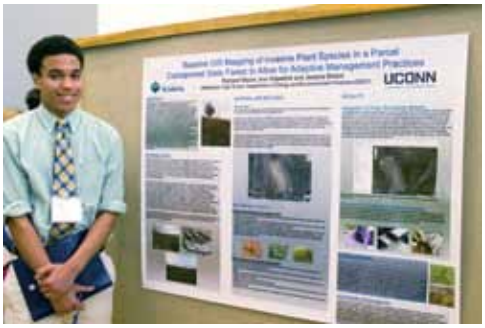
Training Connecticut's Next Generation of Conservation Ambassadors

Written by Jessica Bristol, DEEP Wildlife Division Seasonal Resource Assistant

The Natural Resources Conservation Academy (NRCA), run by the University of Connecticut's (UConn) Department of Natural Resources and the Environment, is a new field experience program for high school students interested in environmental science. Sixty-eight students from throughout Connecticut have participated in the program since its inception in 2012. The mission of the NRCA is to engage youth from a variety of backgrounds in an innovative process that provides them a thorough introduction to environmental and natural resources conservation issues, as well as actively encourages them to be part of the solutions.

The program begins in July each year with an intensive week-long field experience, where students learn from UConn professors and staff about a number of natural resource topics. Units in wildlife, fisheries, forestry, soils, freshwater, green infrastructure, and geospatial technology prepare students with knowledge and introductory skills in land use and natural resource conservation.

In the seven months following their field experience, NRCA students work under the mentorship of a local conservation leader to develop a conservation project in their hometown. Projects are incredibly diverse, ranging from field research to designing educational materials on a variety of environmental topics and issues for the local community. Toward the end of the seven-month period, students create a scientific poster detailing their project and highlighting key results to be presented to environmental professionals from throughout Connecticut.



L. CISNEROS, UCONN

NRCA student Ricky Moore poses next to the poster he prepared for the Connecticut Conference on Natural Resources, which was held at UConn in March 2015.

Student Richard (Ricky) Moore

Richard (Ricky) Moore, a sophomore at Middletown High School, conducted his community project under the mentorship of DEEP Eastern District Wildlife Biologist, Ann Kilpatrick, at the 50-acre

Aircraft Road parcel of Cockaponset State Forest in Middletown. This parcel of land has been extensively managed by DEEP through regular mowing, herbicide treatments, and native plantings starting in 2007 in an effort to enhance the native plant community. This work was funded through a Wildlife Habitat Incentive Program grant awarded by the U.S. Department of Agriculture (see article in the January/February 2010 issue of *Connecticut Wildlife*). Controlling invasive plants within Cockaponset State Forest has been especially challenging due to the high density of invasives on surrounding properties.

To help assess management efforts, Ricky's project focused on mapping patches of invasive plant species and native plant species to document the severity of invasion throughout the property. This baseline inventory can be used by DEEP to best adapt management practices and focus on particularly dense, potentially problematic patches of invasive plants. Ricky also had the opportunity to trap small mammals to evaluate the small mammal community. Ricky plans to continue educating the Middletown community on the importance of invasive plant management on private, residential properties.

M. ORTEGA, UCONN

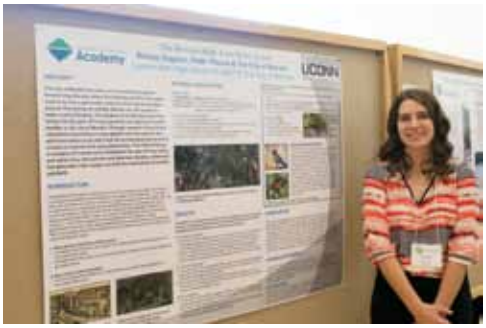
Natural Resources Conservation Academy students 2014-2015: (Top, right to left) Dr. John Volin, Naomi Robert, Joshua Goldwag, Sameena Shah, Brittany Marson, Moises Hernandez, Mari Cullerton, Eve Cullerton, Briana Gagnon, Carson Hill, Anna Meassick, Randy Kaufman, Richard Moore, Dr. Laura Cisneros. (Bottom, right to left): Megan Ryan, Shelby Burger, Jennifer Diaz, Maggie Yeung, Maureen McCarthy.

The mission of the NRCA is to engage youth from a variety of backgrounds in an innovative process that provides them a thorough introduction to environmental and natural resources conservation issues.

Student Briana Gagnon

Briana Gagnon, a junior at Lyman Hall High School in Wallingford, completed her community project under the guidance of DEEP Western District Wildlife Biologist, Peter Picone. Briana's project, entitled "The Meriden HUB: From Silver to Gold," researched the ecological, economic, and health benefits of parks on urban areas. In 2008, the City of Meriden approved final plans to convert the land which was previously home to the International Silver Company into a downtown green space. Due to past flooding problems, the land is no longer suitable for industry or retail development and standing buildings were demolished in 2007. Possible features of the new park include an outdoor amphitheater, pedestrian bridge, and green space for recreational activities.

Briana's research used a number of statistics to illustrate that the Meriden HUB will bring positive changes to the local community. Once completed, the HUB will serve as an island for wildlife, offering food and protection in an otherwise unsuitable habitat. The park will play a role in battling the urban heat effect and contribute to the diversion of damaging floodwaters. Parks also are associated with increased home values in the area and promote health through opportunities for "green exercise."



L. CISNEROS, UCONN

NRCA student Briana Gagnon poses next to the poster she prepared for the Connecticut Conference on Natural Resources, which was held at UConn in March 2015.

Connecticut Conservation Ambassadors

Each March, NRCA students present their projects at the Connecticut Conference on Natural Resources at the University of Connecticut. All students that complete both the field experience and community project components of the program graduate as "Connecticut Conservation Ambassadors" and are recognized for their hard work at a special award ceremony. The top three projects are awarded the Horace C. Eriksson Forestry Scholarship towards attendance to the Natural Resources and the Environment Department at UConn.

This year, the competition was intense, and judges awarded two candidates first place: Maureen McCarthy for "Pomperaug River Restoration Awareness" and Naomi Robert for "Examining the Effects of Tree Canopy and Japanese Barberry Management on Asian Jumping Worms at White Memorial." Third place was awarded to Randy Kaufman for his project entitled "Evaluating Changes in Size of Juvenile Horseshoe Crabs to Understand Environmental Effects on a Declining Species."

Congratulations to all of the NRCA participants for a job well done!

For additional information or to apply for the program, please visit the Natural Resources Conservation Academy website at www.nrca.uconn.edu/index.htm.

FROM THE FIELD

Deer Research Update, Winter 2015

This past winter, staff from the Wildlife Division's Deer Program, along with help from many volunteers, continued work on the white-tailed deer mortality project in northwest Connecticut. Twenty-six adult does were captured; seven in Cornwall and 19 in Canaan. Their ages ranged from two to eight years, with the average age being 3.5. Once captured, the deer were fitted with a VHF radio collar, cattle style ear tags, and vaginal implant transmitters (VIT). The VIT is a device which alerts researchers when the doe gives birth and, as in previous years, this effort was in preparation for fawn capture. Fawns will be captured from both the tagged does and opportunistically from other does beginning in mid-May. Captured fawns will be fitted with expandable radio collars and tracked daily throughout the summer, and three times a week for the remainder of the year. If a fawn dies, the remains will be recovered as soon as possible so that a cause of death can be determined.

As of this writing, one adult doe died from unknown causes 31 days after capture. Two others have moved approximately three miles from the capture site. Interestingly, one of the does moved from the Falls Village area to a previous winter capture site in Salisbury. For the first time in four years, no coyotes were seen or heard in the research area from January through March; however, numerous bobcats were observed.

Bill Embacher, Wildlife Management Institute

B. EMBACHER, DEER PROGRAM

Numerous bobcats were observed by researchers conducting a white-tailed deer study in northwest Connecticut this past winter. However, no coyotes were seen or heard in the research area from January through March.

Extinct Eastern Cougar Subspecies Proposed for Removal from Federal Endangered Species List

The eastern cougar (*Felis concolor couguar*) has likely been extinct for at least 70 years, according to a thorough review of data from researchers, states, and Canadian provinces across the subspecies' range. In response to the review, the U.S. Fish and Wildlife Service (USFWS) is proposing to remove the extinct subspecies from the endangered species list.

USFWS completed the formal review of the eastern cougar in 2011. During the review, USFWS examined the best available scientific and historic information, queried 21 states and eastern Canadian provinces, and reviewed hundreds of reports from the public. No states or provinces provided evidence of the existence of an eastern cougar population.

USFWS concluded that cougars occasionally occur in eastern North America, but that they are either Florida panthers, dispersing animals from western populations, or have been released or escaped from captivity. The conclusions are based on a review of more than 100 reports dating back to 1900.

The eastern cougar subspecies was listed as endangered in 1973. However, accounts suggest that most eastern cougars disappeared in the 1800s as European immigrants killed cougars to protect themselves and their livestock, as forests were harvested, and as white-tailed deer, the cougar's primary prey, nearly went extinct in eastern North America. The last records of eastern cougars are believed to be in Maine (1938) and New Brunswick (1932).

Extinct animals and plants cannot be protected under the Endangered Species Act, which is meant to recover imperiled species and their habitats. Additionally, under law, the eastern cougar listing cannot be used as a method to protect other cougar subspecies. The proposal is available for public inspection at https://www.federalregister.gov/public-inspection. From June 17 to August 17, 2015, the proposal will be available for review and comment at www.regulations.gov under docket no. FWS–R5–ES–2015–0001.

Wild cougar populations in the West have been expanding their range eastward in the last two decades, with individual cougars confirmed throughout the Midwest. Evidence of wild cougars dispersing farther east is extremely rare. In 2011, a solitary young male cougar traveled about 2,000 miles from South Dakota through Minnesota, Wisconsin, and New York, and was killed on a Connecticut highway. A cougar of unknown origin was also killed in Kentucky in December 2014.

USFWS's proposal to remove the eastern cougar from the endangered species list does not affect the status of the Florida panther, another cougar subspecies listed as endangered.

Additional information about eastern cougars, including frequently asked questions and cougar sightings, is at: http://www.fws.gov/northeast/ecougar. Find information about endangered species at http://www.fws.gov/endangered.

U.S. Fish and Wildlife Service

Avian Influenza

Since mid-December 2014, there have been several ongoing highly pathogenic avian influenza HPAI H5 incidents along the Pacific, Central, and Mississippi Flyways (or migratory bird paths). Avian influenza has not yet been documented in the Atlantic Flyway (which includes Connecticut). The Centers for Disease Control and Prevention (CDC) considers the risk to people from these HPAI H5 infections to be low. No human cases of these HPAI H5 viruses have been detected in the United States, Canada, or internationally.

To help you navigate important information related to these events, the U.S. Department of Agriculture (USDA) has launched a new avian influenza webpage with aggregated resources to keep you up-to-date and also provide guidance for backyard poultry owners (www.usda.gov/avianinfluenza). The USDA plans that are currently in place, which include surveillance, reporting, biosecurity, movement control, vaccination, and depopulation, can be adjusted and applied to effectively control any new virus outbreak. Look for more information to come on the DEEP website (www.ct.gov/deep/wildlife) about reporting bird mortalities and what to know for the upcoming migratory bird hunting seasons.

Banding Bald Eagles

In late May and early June, DEEP Wildlife Division biologists visited bald eagle nests to band the young. Banding takes place after the chicks have grown large enough to comfortably wear an aluminum leg band but before they can fly away.

While a climber starts up the tree toward the nest, the adults usually circle overhead or perch in a nearby tree. Once at the nest, the climber corrals the eagles chicks, places them in canvas bags, and carefully lowers them to the ground. Biologists weigh, measure, and attach two aluminum leg bands to each chick. The climber pulls the chicks back up and returns them to the nest. Soon after the team clears the area, the adults return and tend to the chicks.

Banding is an important tool for wildlife biologists. All adult bald eagles look similar regardless of age and sex, so banding is critical for differentiating individuals. Additionally, a re-sighted band can reveal a bird's age, sex, origin, distance travelled, identity of siblings, and identity of parents. Each eagle gets a federally-issued silver band with a unique nine-digit number and a state specific colored band with two or three large numbers and letters. Connecticut uses black bands with white letters.

P. J. FUSCO

Volunteer Larry Fischer holds a bald eagle chick while research assistant Colin Apanovich and biologist Jenny Dickson take measurements that help identify the age and sex of the young chick.

If you see a banded bald eagle, contact DEEP Wildlife Division biologist Brian Hess at Brian.Hess@ct.gov or call 860-424-3208. Banded birds of any species can be reported to the USGS Bird Banding Laboratory at https://www.pwrc.usgs.gov/bbl/.

Specially Trained EnCon Canine Detects First Illegal Possession of Fish

This past April, three DEEP Environmental Conservation (EnCon) Police Officers and their canine partners from the agency's K-9 Unit completed training in the detection of illegally caught fish. The canines were trained to detect certain species of sport fish that are commonly caught in Connecticut, such as trout and striped bass, and to search on vessels, under rocks, along shorelines, and other places illegally taken fish could be hidden.

The canines have been hard at work since completing their training. The first canine to detect illegally caught fish was "Saydee." On May 8, 2015, EnCon officers saw two men fishing on the Housatonic River in Milford and stopped to conduct a fishing compliance check. The men said they had not caught any fish, but the officers dispatched Saydee who searched the shoreline and indicated a "find" on a black trash bag tucked in a rocky embankment. An inspection of the bag revealed two striped bass that measured only 15 and 19 inches in length. State regulations limit the possession of striped bass to one fish per angler at a minimum length of 28" in an effort to protect the resource. The two men, both from Bridgeport, were charged with fishing violations.

The fish detection training, which was offered by the Connecticut State Police K-9 Unit, is the first of its kind within the New England State Police Administrator Compact (NESPAC.) No fish and game detection training curriculum existed within NESPAC until this training program. In the future, the unit will be trained to detect game species as well. The EnCon officers and their canine partners were originally certified in tracking and evidence recovery in June 2012. DEEP obtained the dogs from Connecticut Labrador Rescue Inc., in Haddam.

Report fish and wildlife violations to DEEP's Turn in Poachers (TIP) hotline at 1-800-842-HELP (toll free). Tips can be anonymous.

DEEP ENCON POLICE

EnCon K-9 unit Labrador Retriever "Saydee" with two striped bass she detected. The fish were under the minimum length requirement leading to two Bridgeport anglers being cited for violations while fishing on the Housatonic River in Milford this past May.

Noble Proctor: The Ultimate Naturalist

This past May, the Connecticut birding and conservation communities lost a valued member who left behind a legacy. Noble S. Proctor, Ph.D., of Branford, was a well-known professor of biology for 34 years at Southern Connecticut State University (SCSU) where he taught courses in ornithology, botany, and biogeography. However, his contributions go way beyond his years of teaching. Noble also was a wildlife photographer and has written and co-authored 10 books on birds and wildlife. For over 40 years, he led wildlife tours throughout the world, visiting 90 countries.

An ornithologist all of his life, Noble amassed a lifelong birding list of over 6,000 species worldwide, 814 species in North America and his most prized list of finding 512 species of North American bird nests. Noble worked with his close friend, artist, author, photographer Roger Tory Peterson during his revision of the *Eastern Field Guide to Birds*. He was among the founding members establishing the Roger Tory Peterson Institute for Natural History in Jamestown, New York.

Noble was a member of a variety of organizations, including the American Ornithologists Union, The American Birding Society, Connecticut Botanical Society, Connecticut Butterfly Association, and he was a member of the New Haven Bird Club for 46 years. His many awards include: Outstanding Professor of the Year (SCSU), Connecticut Environmentalist Award, Outstanding Conservationist Award from the Connecticut Botanical Society, Connecticut Ornithological Association Mabel Osgood Wright Award in 2002, and in 2013, the American Birding Association's Roger Tory Peterson Award.

PHOTO COURTESY P. LYNCH

Noble also was a member of the Connecticut Citizens Advisory Committee established in 1982 to examine the nongame wildlife program needs in our state. Through the efforts of Noble and several other notable Connecticut conservationists, including Roger Tory Peterson, S. Dillon Ripley, and Stephen Kellert, an 11-member Connecticut Wildlife Conservation Committee was formed to develop an approach for creating a nongame program in Connecticut. In 1986, these efforts led to Public Act 86-370, which established the *Conservation Program for Nonharvested Wildlife* in Connecticut. Noble served for many years on the Citizens Advisory Board for Nonharvested Wildlife. After establishment of the Connecticut Endangered Species Act, Noble served on the Avian Species Advisory Committee through the 2015 listing period.

For years, Noble volunteered for the program he helped establish. He scouted grassland bird habitats and routinely participated in the Midwinter Bald Eagle Survey. For many years during the midwinter eagle survey, he covered Lake Gaillard and Lake Saltonstall in the East Haven/ Branford area along with Gritt Ardwin. Regardless of the weather conditions or temperature in early January, he could always be relied on to cover his assigned area. It was with great delight that Noble called to report the first eagle nest in Guilford (2012) and immediately offered to keep tabs on the nesting pair. While birds were his forte, Noble was a versatile biologist who looked down as well as up and contributed several herpetological records to the Wildlife Division as well. We have lost a wonderful friend, colleague, and mentor, and Connecticut has lost an accomplished, dedicated biologist with Noble's passing.

The obituary published in the *New Haven Register* provided information for part of this article (www.legacy.com/obituaries/nhregister/obituary.aspx?n=noble-s-proctor&pid=174983755).

Memories of Noble Proctor

Written by Miley Bull, Connecticut Audubon Society

Noble Proctor was a very special and unique human being, that, if lucky, one runs into once in a lifetime. A supreme naturalist, Noble had that contagious enthusiasm that inspired hundreds of his students and turned many non-science majors into lifelong, die hard biologists.

Well known for his ornithological knowledge and expertise, Noble was one of the few existing complete naturalists in every sense of the word. Just when you thought he knew everything there is to know about birds, bugs, and herptiles, he would ask if you wanted to see his collection of slime molds!

A quintessential humanist, Noble was also one of those rare individuals who made you feel like you were one of his best friends, minutes after you met him. He never forgot your name, no matter how fleeting the introduction, and was always truly interested in what you were doing.

I was always amazed when birding in other countries from Africa to Antarctica when a local scientist or government official would ask me if I knew Noble Proctor. He was, indeed, a world-wide legend.

Like so many others, I only wish I had spent more time in and out of the field with Noble and regret the times I had to pass up some of those opportunities. The few times we spent in the field birding or collecting specimens with Dave Parsons from the Peabody Museum are just some of those special memories. I will always remember the time we were searching for a reported timber rattlesnake den on a high talus slope in Kent and Noble crawled into a deep rocky overhang and came out with a turkey vulture egg – 100% Noble, all the way!

Noble is gone now, but all who knew him are very lucky and truly blessed. Fortunately, I am one of the lucky ones.

Conservation Calendar

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

Programs at the Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by emailing 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.

July 10 .....**Forest Floor Exploration**, starting at 10:00 AM. Hidden in the shadows of the towering trees and bustling wildlife, the forest floor is an intriguing place filled with life that is often overlooked. This program offers a lesson on the nutrient cycle, the resources that the forest floor provides to insects and animals, a hands-on investigation of the forest floor contents and insect identification, and a walk around the inner loop trail, 0.5 miles.

July 18 .....**Butterfly Walk**, starting at 1:30 PM. Back by popular demand, Wildlife Division Natural Resource Educator Laura Rogers-Castro will provide participants with a lesson on the basics to butterfly identification, including tips on distinguishing the various butterfly families. Following a brief indoor program, Laura will guide the group on a walk to identify the local butterfly fauna at Sessions Woods. Meet in the classroom located in the exhibit room of the Education Center.

Aug. 6 .....**Forest Pests & Diseases Walk**, starting at 10:00 AM. There are many insects and diseases that plague the beautiful forests of the world, including northwestern Connecticut. This program offers a walk along the main trail to the beaver marsh and back (2 miles round trip), and a discussion on various pests and sicknesses that are leading to the decline of several vital tree species.

Aug. 18 .....**Stream Investigation**, starting at 1:30 PM. Come to Sessions Woods for a hands-on exploration of our streams! This program provides a lesson on basic stream ecology, conservation techniques, invertebrates who live in these waters, and how these invertebrates can tell us how healthy our streams are.

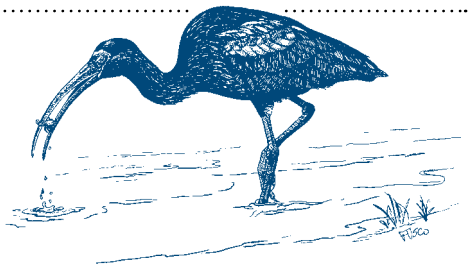
Sept. 26 .....**CT Hunting & Fishing Day**, from 10:00 AM - 4:00 PM. DEEP will be hosting the 5th Connecticut Hunting & Fishing Day at Sessions Woods. This year there will be a live birds of prey program and a raptor meet-and-greet by Master Class Falconer Lorrie Schumacher from Talons. The day features additional activities for all ages, including target shooting; hunting dog demonstrations; archery; children's crafts and activities; hunting and trapping tips; fishing demonstrations; and more! Equipment vendors, sporting clubs, fish and wildlife exhibits, and conservation organizations will also be present. And, it's all FREE! Visit www.ct.gov/deep/HuntFishDay for more details. Parking will be available at Lewis Mills High School, in Burlington. Pre-registration is not required for this special day

Fisheries is now on Twitter! @ctfishinginfo shares fish and fishing related information to maximize your fishing experience! Spread the word.

Summer is the best time to sign up for a Conservation Education/Firearms Safety class. Plan ahead before the hunting seasons start. Regularly check the DEEP website at www.ct.gov/deep/hunting to find out about upcoming classes.

Find us on Facebook **www.facebook.com/CTFishandWildlife**

Connecticut Wildlife



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A young piping plover chick feeds on a marine worm in the intertidal zone on the Connecticut shoreline. The chick needs to grow quickly in order to survive the many threats it will confront.